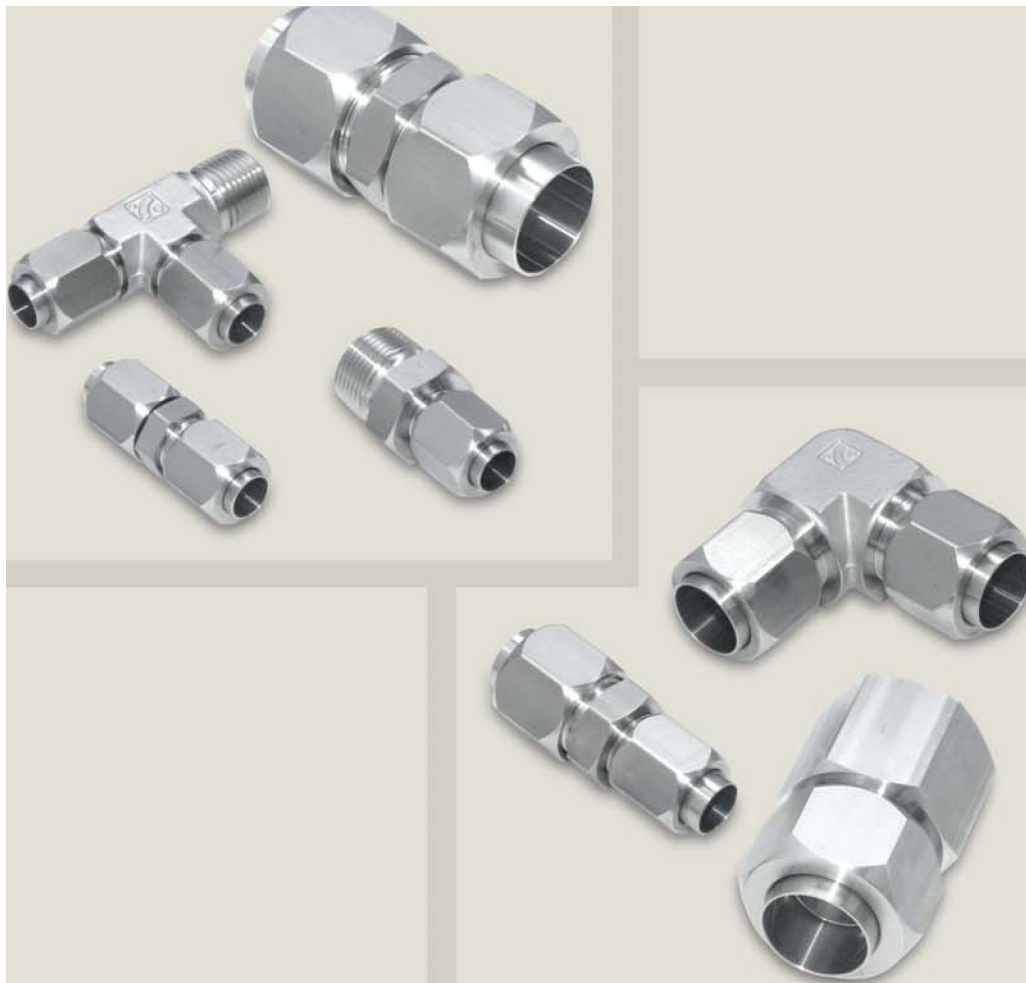




SUPERLOK USA

37° Flared Tube Fittings

High Technology Valve, Flange & Fitting Series



 SUPERLOK®



 SUPERLOK USA

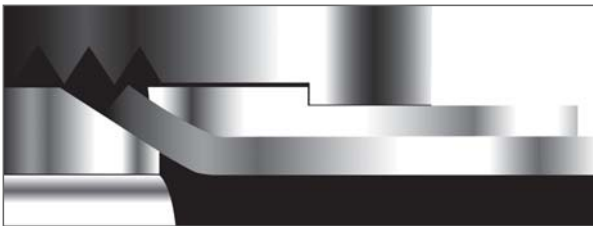
www.SuperlokUSA.com
5777 Olivas park Dr Unit G
Ventura, CA 93003

805-658-2043
sales@superlokusa.com

MEETS SAE STANDARD J514



Before tightening the nut



After tightening the nut

Figure.1

If required, see SAE Standard J514 for a complete list of dimensions. NPT Tapered Pipe Threads meet the requirements of ASME/ANSI B.1.20.1.

All 37° Flared tube fittings 3 piece tube assembly, can be used with metric tube by using a metric 37° sleeve, instead of an inch sleeve. Each dimension table shows which metric sleeve should be used for each size.

ASSEMBLY INSTRUCTIONS

1. Cut the tube to the proper length.
2. Slide the nut and sleeve onto the tube. (See Fig.1).
3. With a special flaring tool, form the flare to 37° dimension according to SAE J533. (see page 3).
4. Screw the nut onto the body until finger tight.
5. From this position, tighten the nut with a wrench 1/4" turn in order to make a leakproof metal-to-metal connection.

TUBING DATA FOR 37° FLARE THREE-PIECE TUBE ASSEMBLY

In order to ensure maximum fitting reliability and performance, please take great care when selecting the tube for each application.

Tubing should be a fully annealed, seamless and drawn, suitable for bending and flaring, according to standard ASTM-269, AISI 316 or 304.

QUALITY

Lengths of finished tubing should be reasonably straight and have smooth ends, free from burrs. Tubing should be free from scale and defects, and it should have a workman like finish. Surface imperfections such as handling marks, die marks, or shallow pits will not be considered injurious defects provided the imperfections are within the tolerances specified for diameter and wall thickness. The removal of such imperfections is not required. (Quality SAE J524).

TUBE HANDLING

Scratches on the tube might cause leaks. It is, therefore, important to handle the tube carefully to reduce the risk of leaks.

1. Tubes must not be dragged on the floor.
2. Tubes must not be dragged out of a tubing rack, especially in cases of large OD tubes.

TUBE CUTTING

Two different methods can be used to cut tubes:

1. Tube cutter
2. Hacksaw

TUBE CUTTER

To attain a leakfree connection, the tubing must be cut squarely.

A good quality tube cutter with the appropriate blade for the tubing material is recommended.

Do not try to reduce the time of cutting by taking deep cuts with each turn of the cutter.

The end of the tube must be deburred to avoid damage to the fitting and to ensure that the tube reaches the bottom of the fitting.

HACKSAW CUTTING

In order to cut the tube with a hacksaw and to attain square ends, the tube must be cut with guide blocks. This method of cutting requires deburring of the tube ends.

WARNING

Do not hold the tube in a vise in the place where it will be inserted into the fitting. The vise will leave a mark on the tube that may cause leaks and might cause ovality.

ASSEMBLY INSTRUCTIONS

Perform flaring according to SAE J533. See Fig. 2. See Table 1 below for dimensions .

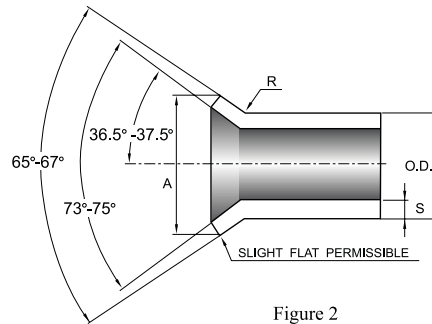


Figure 2

TABLE 1: FLARING

Nominal Tube O.D.	A single flare diameter				R		S	
	in		mm		in	mm	in	mm
	Max	Min	Max	Min	±0.02	±0.5		
1/8	0.20	0.18	5.08	4.58	0.03	0.8	0.035	0.88
3/16	0.28	0.26	7.11	6.61	0.03	0.8	0.035	0.88
1/4	0.36	0.34	9.14	8.64	0.03	0.8	0.065	1.65
5/16	0.43	0.40	10.92	10.16	0.03	0.8	0.065	1.65
3/8	0.49	0.46	12.44	11.69	0.04	1.0	0.065	1.65
1/2	0.66	0.63	16.76	16.01	0.06	1.5	0.083	2.10
5/8	0.79	0.76	20.06	19.31	0.06	1.5	0.095	2.41
3/4	0.95	0.92	24.13	23.37	0.08	2.0	0.109	2.76
7/8	1.07	1.04	27.17	26.42	0.08	2.0	0.109	2.76
1	1.20	1.17	30.48	29.72	0.09	2.3	0.120	3.04
1 1/8	1.38	1.35	35.05	34.92	0.09	2.3	0.120	3.04
1 1/4	1.51	1.48	38.35	37.60	0.09	2.3	0.120	3.04
1 1/2	1.73	1.70	43.94	43.18	0.11	2.8	0.120	3.04

DEBURRING PRIOR TO FLARING

To ensure satisfactory flares are produced, it may be necessary to deburr the tube end prior to flaring. It is usually necessary to break the inside corner smoothly before single flaring, and some non-ferrous tubing to eliminate is normally required to eliminate the cutoff burr which might otherwise create leakage paths across a substantial portion of the flare. It is acceptable to smoothly break the outside corner prior to single flaring, or both outside and inside corners prior to double flaring, on any tube material to minimize splitting.

Dimensions are for reference only, and are subject to change without notice.

TABLE 2 : ALLOWABLE WORKING PRESSURE RATINGS (CAPABLE OF 4" TO 1" MIN. BURST)

Nom.SAE Dash Size	Nom.Tube O.D Inches	37° Flare Straight Thread	Nom.Pipe Size	SAE St. Threads Union and Bulkhead (psi)	Fittings with Pipe Threads (psi)
2	1/8	5/16" - 24	1/8"	5000	5000
3	3/16	3/8" - 24	1/8"	5000	5000
4	1/4	7/16" - 20	1/8"	5000	5000
5	5/16	1/2" - 20	1/8"	5000	5000
6	3/8	9/16" - 18	1/4"	5000	5000
8	1/2	3/4" - 16	3/8"	4500	4000
10	5/8	7/8" - 14	1/2"	3500	3000
12	3/4	1 1/16" - 12	3/4"	3500	3000
14	7/8	1 3/16" - 12	3/4"	3000	2500
16	1	1 5/16" - 12	1"	3000	2000
20	1 1/4	1 5/8" - 12	1 1/4"	2500	1150
24	1 1/2	1 7/8" - 12	1 1/2"	2000	1000
32	2	2 1/2" - 12	2"	1500	1000

NOTE

Since many factors influence the pressure at which a system will or will not perform satisfactorily, values shown in Table 2 should not be construed as guaranteed minimum.

Design and Construction

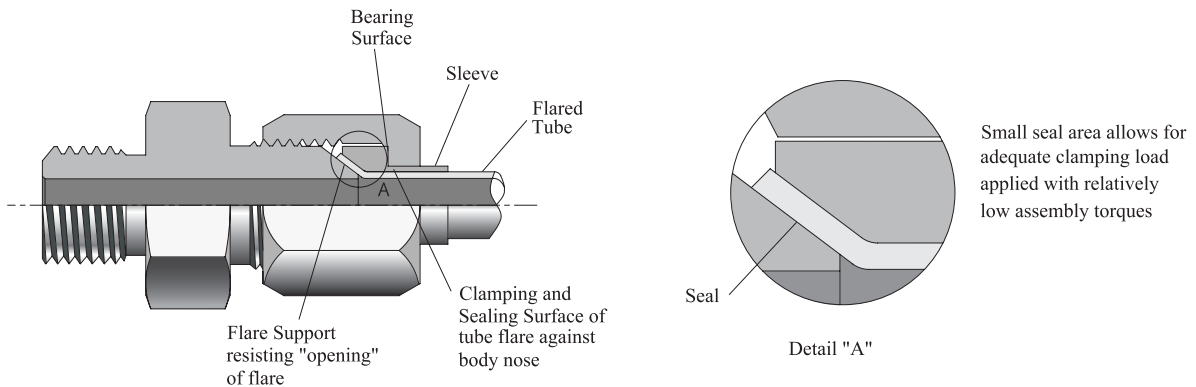


Figure 3.

The SAE 37° Flared Tube Fittings design is simple. It uses an easily produced flare at the tube end to seal and hold fluid under high pressure. The fitting consists of three pieces: the body, sleeve and nut. The tube end is flared at a 37° angle (74° included angle) and held between the fitting nose (seat) and the sleeve (support) with the nut as shown in Fig. 3, providing a very effective (single) seal between the fitting nose and the tube flare.

The design of SAE 37° Flared Tube Fittings is very efficient. The fitting incorporates the smallest seal area of all fitting types. This seal area, as seen in Fig. 3, is only slightly larger than the fluid flow area. The small seal area results in a compact design, low assembly torque, and a relatively high-pressure capability.

The primary difference between a two-piece flare fitting and the three-piece design is the flare support sleeve. The support sleeve provides several key functions:

1. It provides a clamping surface for the tube flare.
2. It provides a bearing surface for the tube nut. The sleeve isolates the tube from the nut, minimizing the tube twist during a assembly, a common problem of 2-piece flare fitting designs.
3. It provides support to the tube flare. The tapered fitting nose tends to wedge open the tube flare during assembly. The sleeve helps to resist this expansion, thus eliminating the possibility of tube flare and sleeve jamming inside the nut. This eliminates any waste of applied torque and allows for easy disassembly.
4. It makes the fitting adaptable to metric tube merely by changing its inside diameter.

Due to the popularity and simplicity of the 37° flare fitting, many manufacturers offer the product. Even though most manufacturers conform to the same dimensional standards, there are significant performance advantages with SUPERLOK SAE 37° Flared Tube Fittings due to SUPERLOK's optimized manufacturing methods and commitment to quality.

Thread Designator




































Pipe thread

THREAD TYPE	Thread Size								
	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
NPT	01N	02N	03N	04N	06N	08N	10N	12N	16N
ISO/BSP Parallel	01G	02G	03G	04G	06G	08G	10G	12G	16G
ISO/BSP Tapered	01R	02R	03R	04R	06R	08R	10R	12R	16R

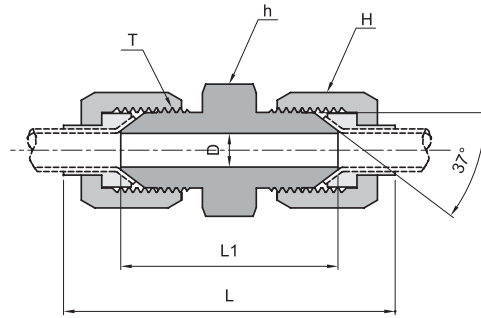
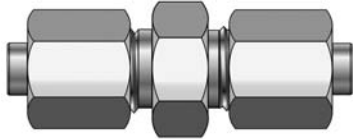
Unified thread

THREAD TYPE	Thread Size												
	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12
UNF/UN	02U	03U	04U	05U	06U	08U	10U	12U	14U	16U	20U	24U	32U

INDEX

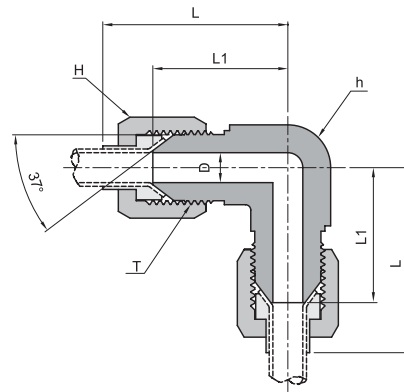
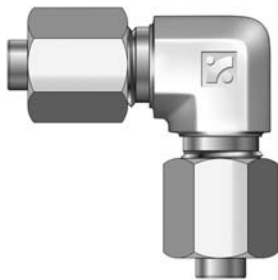
	Union6P JU		45° Male Elbow12P JHME		O-Ring Seal Male Swivel Connector JMSC-U18P
	Union Elbow6P JUE		Female Connector12P JFC		Female Swivel Connector JFSC18P
	Union Tee7P JUT		Female Elbow13P JFE		Swivel Elbow19P JSE
	Union Cross7P JUC		Female Run Tee13P JFRT		Swivel Run Tee19P JSRT
	Bulkhead Union8P JBHU		Female Branch Tee14P JFBT		Swivel Branch Tee ...20P JSBT
	Weld Bulkhead Union8P JBUW		O-Ring Seal Male Connector(PF) JMC-GO14P		Plug20P JP
	Bulkhead Female Connector JBFC9P		O-Ring Seal Male Connector.(UNFUN) JMC-U15P		Tube Cap20P JC
	Bulkhead Union Elbow9P JBUE		Positionable Male Elbow JPME-U15P		Reducer Adapter21P JRA
	Male Connector10P JMC		Positionable 45° Male Elbow JPHME-U16P		Blukhead Lock Nut ...21P JLN
	Male Elbow10P JME		Positionable Male Branch Tee JPMBT-U16P		Nut21P JN
	Male Run Tee11P JMRT		Positionable Male Run Tee JPMRT-U17P		Sleeve21P JS
	Male Branch Tee11P JMBT		Male Swivel Connector17P JMSC		

JU Union



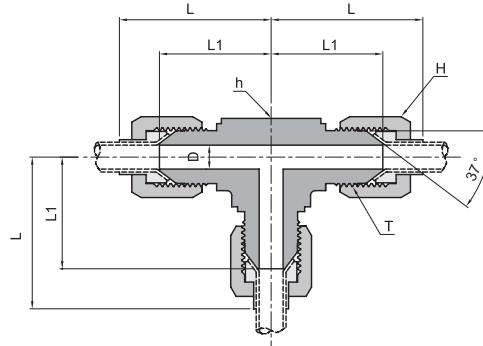
Part Number	Tube O.D.		T (UNF/UN)	D	h (HEX)	H (HEX)	L	L1
	Inch	Metric						
JU-2T	1/8	3	5/16 - 24	1.6	11.1	9.5	45.3	29.7
JU-3T	3/16	4	3/8 - 24	3.2	11.1	11.1	50.0	31.2
JU-4T	1/4	6	7/16 - 20	4.4	12.7	14.3	53.0	34.8
JU-5T	5/16	8	1/2 - 20	6.0	14.3	15.9	55.6	34.8
JU-6T	3/8	10	9/16 - 18	7.5	15.9	17.5	59.6	35.8
JU-8T	1/2	12	3/4 - 16	9.9	20.6	22.2	66.5	41.1
JU-10T	5/8	16	7/8 - 14	12.3	23.8	25.4	81.0	47.8
JU-12T	3/4	18	1 1/16 - 12	15.5	28.6	31.8	85.9	54.9
JU-14T	7/8	22	1 3/16 - 12	18.3	31.8	34.9	91.3	56.1
JU-16T	1	25	1 5/16 - 12	21.4	34.9	38.1	95.2	57.2
JU-20T	1 1/4	32	1 5/8 - 12	27.4	42.9	50.8	109.0	61.7
JU-24T	1 1/2	38	1 7/8 - 12	33.3	50.8	57.2	123.2	69.8
JU-32T	2	50	2 1/2 - 12	45.2	66.7	73.0	141.4	86.4

JUE Union Elbow



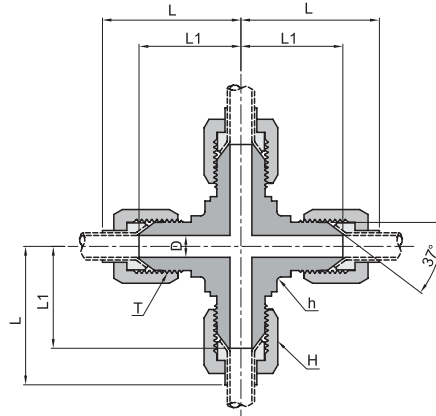
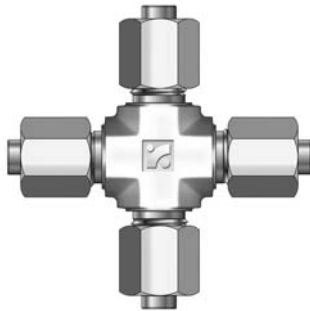
Part Number	Tube O.D.		T (UNF/UN)	D	h (HEX)	H (HEX)	L	L1
	Inch	Metric						
JUE-2T	1/8	3	5/16 - 24	1.6	11.1	9.5	27.4	19.6
JUE-3T	3/16	4	3/8 - 24	3.2	11.1	11.1	30.5	21.1
JUE-4T	1/4	6	7/16 - 20	4.4	11.1	14.3	31.7	22.6
JUE-5T	5/16	8	1/2 - 20	6.0	14.3	15.9	34.5	24.1
JUE-6T	3/8	10	9/16 - 18	7.5	14.3	17.5	38.8	26.9
JUE-8T	1/2	12	3/4 - 16	9.9	19.0	22.2	44.5	31.8
JUE-10T	5/8	16	7/8 - 14	12.3	22.2	25.4	53.4	36.8
JUE-12T	3/4	18	1 1/16 - 12	15.5	27.0	31.8	57.7	42.2
JUE-14T	7/8	22	1 3/16 - 12	18.3	33.3	34.9	63.3	45.7
JUE-16T	1	25	1 5/16 - 12	21.4	33.3	38.1	65.0	46.0
JUE-20T	1 1/4	32	1 5/8 - 12	27.4	41.3	50.8	70.8	52.3
JUE-24T	1 1/2	38	1 7/8 - 12	33.3	47.6	57.2	85.9	59.2
JUE-32T	2	50	2 1/2 - 12	45.2	63.5	73.0	105.2	77.7

JUT Union Tee



Part Number	Tube O.D.		T (UNF/UN)	D	h (HEX)	H (HEX)	L	L1
	Inch	Metric						
JUT-2T	1/8	3	5/16 - 24	1.6	11.1	9.5	27.4	19.6
JUT-3T	3/16	4	3/8 - 24	3.2	11.1	11.1	30.5	21.1
JUT-4T	1/4	6	7/16 - 20	4.4	11.1	14.3	31.7	22.6
JUT-5T	5/16	8	1/2 - 20	6.0	14.3	15.9	34.5	24.1
JUT-6T	3/8	10	9/16 - 18	7.5	14.3	17.5	38.8	26.9
JUT-8T	1/2	12	3/4 - 16	9.9	19.0	22.2	44.5	31.8
JUT-10T	5/8	16	7/8 - 14	12.3	22.2	25.4	53.4	36.8
JUT-12T	3/4	18	1 1/16 - 12	15.5	27.0	31.8	57.7	42.2
JUT-14T	7/8	22	1 3/16 - 12	18.3	33.3	34.9	63.3	45.7
JUT-16T	1	25	1 5/16 - 12	21.4	33.3	38.1	65.0	46.0
JUT-20T	1 1/4	32	1 5/8 - 12	27.4	41.3	50.8	70.8	52.3
JUT-24T	1 1/2	38	1 7/8 - 12	33.3	47.6	57.2	85.9	59.2
JUT-32T	2	50	2 1/2 - 12	45.2	63.5	73.0	105.2	77.7

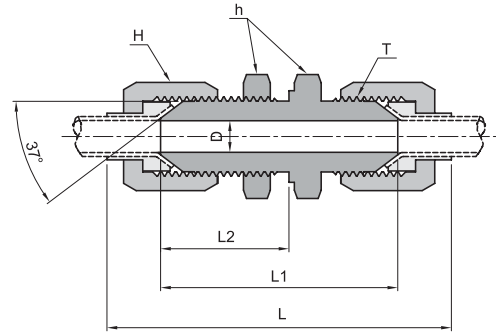
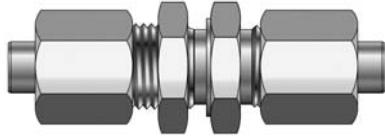
JUC Union Cross



Part Number	Tube O.D.		T (UNF/UN)	D	h (HEX)	H (HEX)	L	L1
	Inch	Metric						
JUC-2T	1/8	3	5/16 - 24	1.6	11.1	9.5	27.4	19.6
JUC-3T	3/16	4	3/8 - 24	3.2	11.1	11.1	30.5	21.1
JUC-4T	1/4	6	7/16 - 20	4.4	11.1	14.3	31.7	22.6
JUC-5T	5/16	8	1/2 - 20	6.0	14.3	15.9	34.5	24.1
JUC-6T	3/8	10	9/16 - 18	7.5	14.3	17.5	38.8	26.9
JUC-8T	1/2	12	3/4 - 16	9.9	19.0	22.2	44.5	31.8
JUC-10T	5/8	16	7/8 - 14	12.3	22.2	25.4	53.4	36.8
JUC-12T	3/4	18	1 1/16 - 12	15.5	27.0	31.8	57.7	42.2
JUC-14T	7/8	22	1 3/16 - 12	18.3	33.3	34.9	63.3	45.7
JUC-16T	1	25	1 5/16 - 12	21.4	33.3	38.1	65.0	46.0
JUC-20T	1 1/4	32	1 5/8 - 12	27.4	41.3	50.8	70.8	52.3
JUC-24T	1 1/2	38	1 7/8 - 12	33.3	47.6	57.2	85.9	59.2
JUC-32T	2	50	2 1/2 - 12	45.2	63.5	73.0	105.2	77.7

JBHU

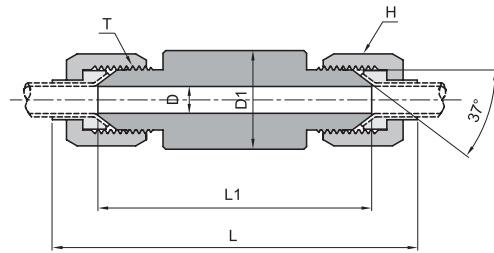
Bulkhead Union



Part Number	Tube O.D.		T (UNF/UN)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric							
JBHU-2T	1/8	3	5/16 - 24	1.6	14.3	9.5	63.1	47.5	28.2
JBHU-3T	3/16	4	3/8 - 24	3.2	15.9	11.1	67.1	48.3	28.2
JBHU-4T	1/4	6	7/16 - 20	4.4	17.5	14.3	70.8	52.6	30.5
JBHU-5T	5/16	8	1/2 - 20	6.0	19.1	15.9	73.4	52.6	30.5
JBHU-6T	3/8	10	9/16 - 18	7.5	20.6	17.5	79.2	55.4	32.5
JBHU-8T	1/2	12	3/4 - 16	9.9	25.4	22.2	87.4	62.0	36.6
JBHU-10T	5/8	16	7/8 - 14	12.3	28.6	25.4	102.8	69.6	40.1
JBHU-12T	3/4	18	1 1/16 - 12	15.5	34.9	31.8	109.5	78.5	44.4
JBHU-14T	7/8	22	1 3/16 - 12	18.3	38.1	34.9	114.4	79.2	44.4
JBHU-16T	1	25	1 5/16 - 12	21.4	41.3	38.1	117.8	79.8	44.4
JBHU-20T	1 1/4	32	1 5/8 - 12	27.4	47.6	50.8	121.1	84.1	45.7
JBHU-24T	1 1/2	38	1 7/8 - 12	33.3	54.0	57.2	142.8	89.4	46.0
JBHU-32T	2	50	2 1/2 - 12	45.2	69.9	73.0	161.7	106.7	53.1

JBUW

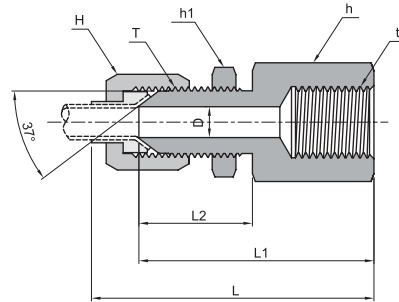
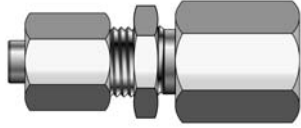
Weld Bulkhead Union



Part Number	Tube O.D.		T (UNF/UN)	D	D1	H (HEX)	L	L1
	Inch	Metric						
JBUW-2T	1/8	3	5/16 - 24	1.6	11.0	9.5	85.6	70.0
JBUW-3T	3/16	4	3/8 - 24	3.2	11.0	11.1	88.8	70.0
JBUW-4T	1/4	6	7/16 - 20	4.4	14.0	14.3	98.2	80.0
JBUW-5T	5/16	8	1/2 - 20	6.0	16.0	15.9	120.8	100.0
JBUW-6T	3/8	10	9/16 - 18	7.5	17.0	17.5	123.8	100.0
JBUW-8T	1/2	12	3/4 - 16	9.9	22.0	22.2	125.4	100.0
JBUW-10T	5/8	16	7/8 - 14	12.3	25.0	25.4	143.2	110.0
JBUW-12T	3/4	18	1 1/16 - 12	15.5	30.0	31.8	151.0	120.0
JBUW-14T	7/8	22	1 3/16 - 12	18.3	32.0	34.9	165.0	130.0
JBUW-16T	1	25	1 5/16 - 12	21.4	40.0	38.1	168.0	130.0
JBUW-20T	1 1/4	32	1 5/8 - 12	27.4	46.0	50.8	177.0	140.0
JBUW-24T	1 1/2	38	1 7/8 - 12	33.3	50.0	57.2	193.4	140.0
JBUW-32T	2	50	2 1/2 - 12	45.2	70.0	73.0	205.0	150.0

JBFC

Bulkhead Female Connector

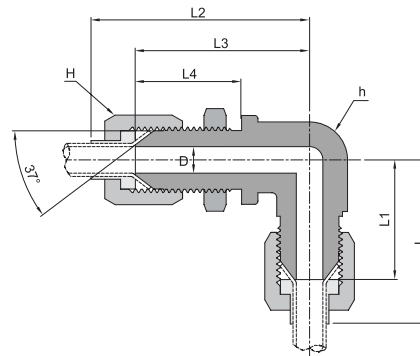
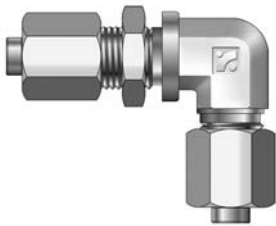


Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	h1 (HEX)	H (HEX)	L	L1	L2
	Inch	Metric									
JBFC-2T-01N	1/8	3	5/16 - 24	1/8	1.6	14.3	14.3	9.5	49.0	41.2	28.2
JBFC-3T-01N	3/16	4	3/8 - 24	1/8	3.2	14.3	15.9	11.1	50.6	41.2	28.2
JBFC-4T-01N	1/4	6	7/16 - 20	1/8	4.4	14.3	17.5	14.3	52.6	43.5	30.5
JBFC-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	19.1	15.9	53.9	43.5	30.5
JBFC-6T-02N	3/8	10	9/16 - 18	1/4	7.5	19.1	20.6	17.5	62.5	50.5	32.5
JBFC-8T-03N	1/2	12	3/4 - 16	3/8	9.9	22.2	25.4	22.2	69.3	56.6	36.6
JBFC-10T-04N	5/8	16	7/8 - 14	1/2	12.3	28.6	28.6	25.4	82.7	66.1	40.1
JBFC-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	34.9	34.9	31.8	86.0	71.4	44.4
JBFC-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	34.9	38.1	34.9	89.0	71.4	44.4
JBFC-16T-08N	1	25	1 5/16 - 12	1	21.4	41.3	41.3	38.1	94.4	75.4	44.4
JBFC-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	50.8	47.6	50.8	99.2	80.7	45.7
JBFC-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	60.3	54.0	57.2	107.7	81.0	46.0
JBFC-32T-16N	2	50	2 1/2 - 12	2	45.2	73.0	69.9	73.0	120.6	93.1	53.1

*ISO Taper Threads are available upon request.

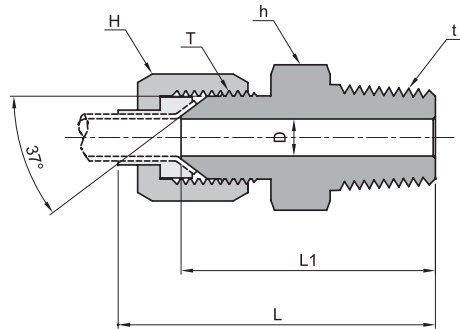
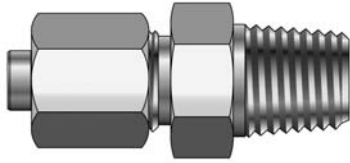
JBUE

Bulkhead Union Elbow



Part Number	Tube O.D.		T (UNF/UN)	D	h (HEX)	H (HEX)	L	L1	L2	L3	L4
	Inch	Metric									
JBUE-2T	1/8	3	5/16 - 24	1.6	11.1	9.5	30.2	22.4	45.9	38.1	23.4
JBUE-3T	3/16	4	3/8 - 24	3.2	11.1	11.1	33.3	23.9	47.5	38.1	23.4
JBUE-4T	1/4	6	7/16 - 20	4.4	11.1	14.3	33.7	24.6	49.5	40.4	25.9
JBUE-5T	5/16	8	1/2 - 20	6.0	14.3	15.9	37.3	26.9	54.1	43.7	25.9
JBUE-6T	3/8	10	9/16 - 18	7.5	14.3	17.5	39.6	27.7	57.9	46.0	27.7
JBUE-8T	1/2	12	3/4 - 16	9.9	19.0	22.2	47.2	34.5	66.3	53.6	31.8
JBUE-10T	5/8	16	7/8 - 14	12.3	22.2	25.4	56.2	39.6	77.3	60.7	35.8
JBUE-12T	3/4	18	1 1/16 - 12	15.5	27.0	31.8	60.7	45.2	83.1	67.6	39.6
JBUE-14T	7/8	22	1 3/16 - 12	18.3	33.3	34.9	66.4	48.8	88.7	71.1	39.6
JBUE-16T	1	25	1 5/16 - 12	21.4	33.3	38.1	68.3	49.3	90.1	71.1	39.6
JBUE-20T	1 1/4	32	1 5/8 - 12	27.4	41.3	50.8	73.6	55.1	97.7	79.2	40.9
JBUE-24T	1 1/2	38	1 7/8 - 12	33.3	47.6	57.2	86.1	59.4	113.6	86.9	41.1
JBUE-32T	2	50	2 1/2 - 12	45.2	63.5	73.0	100.9	73.4	131.9	104.4	48.5

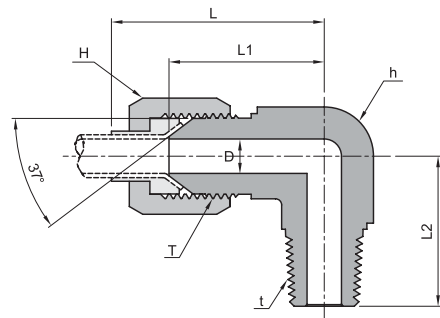
JMC Male Connector



Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1
	Inch	Metric							
JMC-2T-01N	1/8	3	5/16 - 24	1/8	1.6	11.1	9.5	36.0	28.2
JMC-3T-01N	3/16	4	3/8 - 24	1/8	3.2	11.1	11.1	38.4	29.0
JMC-4T-01N	1/4	6	7/16 - 20	1/8	4.4	12.7	14.3	40.1	31.0
JMC-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	15.9	41.4	31.0
JMC-6T-02N	3/8	10	9/16 - 18	1/4	7.5	15.9	17.5	48.2	36.3
JMC-8T-03N	1/2	12	3/4 - 16	3/8	9.9	20.6	22.2	51.6	38.9
JMC-10T-04N	5/8	16	7/8 - 14	1/2	12.3	23.8	25.4	64.6	48.0
JMC-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	28.6	31.8	67.8	52.3
JMC-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	31.8	34.9	70.7	53.1
JMC-16T-08N	1	25	1 5/16 - 12	1	21.4	34.9	38.1	77.4	58.4
JMC-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	42.9	50.8	80.7	62.2
JMC-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	50.8	57.2	94.8	67.8
JMC-32T-16N	2	50	2 1/2 - 12	2	45.2	66.7	73.0	106.5	79.0

*ISO Taper Threads are available upon request.

JME Male Elbow

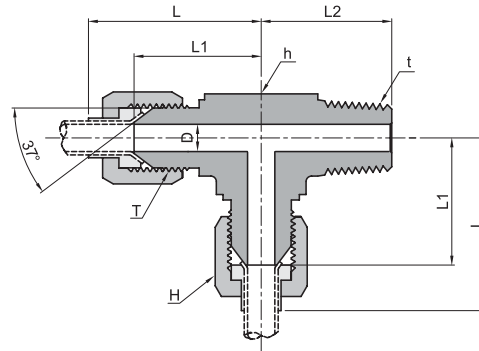
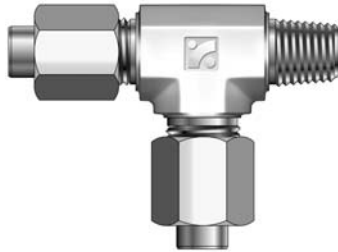


Part No.	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric								
JME-2T-01N	1/8	3	5/16 - 24	1/8	1.6	11.1	9.5	27.4	19.6	18.3
JME-3T-01N	3/16	4	3/8 - 24	1/8	3.2	11.1	11.1	30.5	21.1	18.3
JME-4T-01N	1/4	6	7/16 - 20	1/8	4.4	11.1	14.3	31.7	22.6	19.8
JME-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	15.9	34.5	24.1	19.8
JME-6T-02N	3/8	10	9/16 - 18	1/4	7.5	14.3	17.5	38.8	26.9	27.7
JME-8T-03N	1/2	12	3/4 - 16	3/8	9.9	19.0	22.2	44.5	31.8	31.0
JME-10T-04N	5/8	16	7/8 - 14	1/2	12.3	22.2	25.4	53.4	36.8	37.3
JME-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	27.0	31.8	57.7	42.2	40.4
JME-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	33.3	34.9	63.3	45.7	42.9
JME-16T-08N	1	25	1 5/16 - 12	1	21.4	33.3	38.1	65.0	46.0	50.0
JME-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	41.3	50.8	70.8	52.3	60.5
JME-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	47.6	57.2	85.9	59.2	67.1
JME-32T-16N	2	50	2 1/2 - 12	2	45.2	63.5	73.0	105.2	77.7	76.2

*ISO Taper Threads are available upon request.

JMRT

Male Run Tee

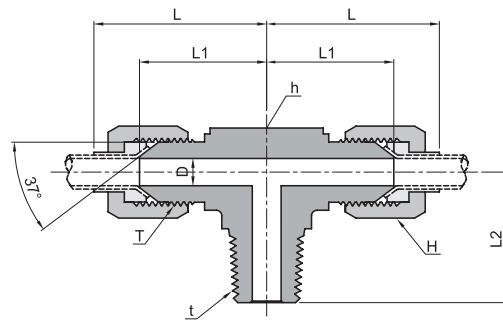


Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric								
JMRT-2T-01N	1/8	3	5/16 - 24	1/8	1.6	11.1	9.5	27.4	19.6	18.3
JMRT-3T-01N	3/16	4	3/8 - 24	1/8	3.2	11.1	11.1	30.5	21.1	18.3
JMRT-4T-01N	1/4	6	7/16 - 20	1/8	4.4	11.1	14.3	31.7	22.6	19.8
JMRT-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	15.9	34.5	24.1	19.8
JMRT-6T-02N	3/8	10	9/16 - 18	1/4	7.5	14.3	17.5	38.8	26.9	27.7
JMRT-8T-03N	1/2	12	3/4 - 16	3/8	9.9	19.0	22.2	44.5	31.8	31.0
JMRT-10T-04N	5/8	16	7/8 - 14	1/2	12.3	22.2	25.4	53.4	36.8	37.3
JMRT-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	27.0	31.8	57.7	42.2	40.4
JMRT-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	33.3	34.9	63.3	45.7	42.9
JMRT-16T-08N	1	25	1 5/16 - 12	1	21.4	33.3	38.1	65.0	46.0	50.0
JMRT-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	41.3	50.8	70.8	52.3	60.5
JMRT-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	47.6	57.2	85.9	59.2	67.1
JMRT-32T-16N	2	50	2 1/2 - 12	2	45.2	63.5	73.0	105.2	77.7	76.2

*ISO Taper Threads are available upon request.

JMBT

Male Branch Tee

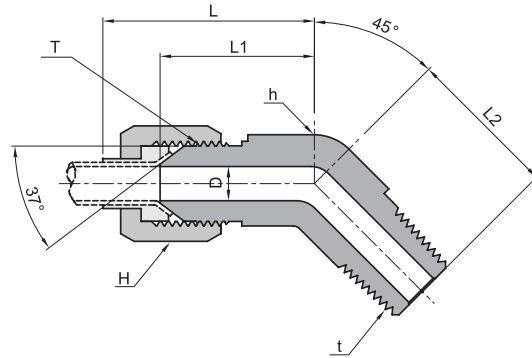
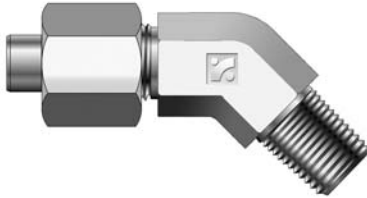


Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric								
JMBT-2T-01N	1/8	3	5/16 - 24	1/8	1.6	11.1	9.5	27.4	19.6	18.3
JMBT-3T-01N	3/16	4	3/8 - 24	1/8	3.2	11.1	11.1	30.5	21.1	18.3
JMBT-4T-01N	1/4	6	7/16 - 20	1/8	4.4	11.1	14.3	31.7	22.6	19.8
JMBT-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	15.9	34.5	24.1	19.8
JMBT-6T-02N	3/8	10	9/16 - 18	1/4	7.5	14.3	17.5	38.8	26.9	27.7
JMBT-8T-03N	1/2	12	3/4 - 16	3/8	9.9	19.0	22.2	44.5	31.8	31.0
JMBT-10T-04N	5/8	16	7/8 - 14	1/2	12.3	22.2	25.4	53.4	36.8	37.3
JMBT-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	27.0	31.8	57.7	42.2	40.4
JMBT-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	33.3	34.9	63.3	45.7	42.9
JMBT-16T-08N	1	25	1 5/16 - 12	1	21.4	33.3	38.1	65.0	46.0	50.0
JMBT-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	41.3	50.8	70.8	52.3	60.5
JMBT-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	47.6	57.2	85.9	59.2	67.1
JMBT-32T-16N	2	50	2 1/2 - 12	2	45.2	63.5	73.0	105.2	77.7	76.2

*ISO Taper Threads are available upon request.

JHME

45° Male Elbow

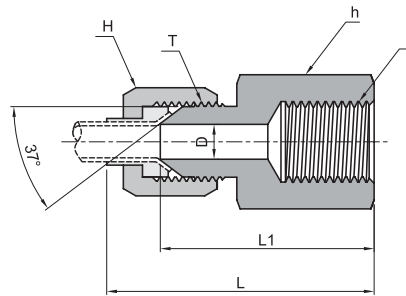
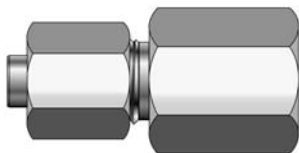


Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric								
JHME-2T-01N	1/8	3	5/16 - 24	1/8	1.6	11.1	9.5	25.3	17.5	13.2
JHME-3T-01N	3/16	4	3/8 - 24	1/8	3.2	11.1	11.0	26.9	17.5	13.2
JHME-4T-01N	1/4	6	7/16 - 20	1/8	4.4	11.1	14.3	27.4	18.3	16.3
JHME-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	15.9	30.0	19.6	16.3
JHME-6T-02N	3/8	10	9/16 - 18	1/4	7.5	14.3	17.5	33.0	21.1	21.8
JHME-8T-03N	1/2	12	3/4 - 16	3/8	9.9	19.0	22.2	37.6	24.9	24.1
JHME-10T-04N	5/8	16	7/8 - 14	1/2	12.3	22.2	25.4	44.8	28.2	29.7
JHME-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	27.0	31.8	48.0	32.5	30.5
JHME-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	33.3	34.9	54.4	36.8	33.0
JHME-16T-08N	1	25	1 5/16 - 12	1	21.4	33.3	38.1	56.3	37.3	37.6
JHME-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	41.3	50.8	58.9	40.4	42.4
JHME-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	47.6	57.2	71.9	45.2	45.0
JHME-32T-16N	2	50	2 1/2 - 12	2	45.2	63.5	73.0	83.9	56.4	53.6

*ISO Taper Threads are available upon request.

JFC

Female Connector

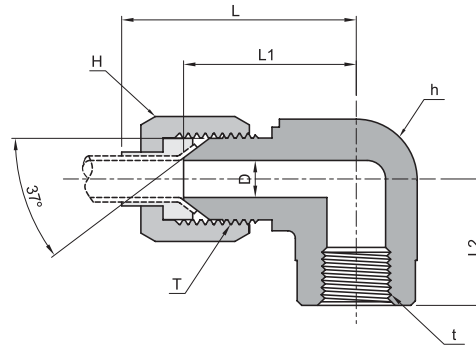
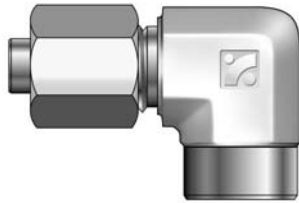


Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1
	Inch	Metric							
JFC-2T-01N	1/8	3	5/16 - 24	1/8	1.6	14.3	9.5	36.2	28.4
JFC-3T-01N	3/16	4	3/8 - 24	1/8	3.2	14.3	11.1	38.1	28.7
JFC-4T-01N	1/4	6	7/16 - 20	1/8	4.4	14.3	14.3	39.3	30.2
JFC-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	15.9	40.1	29.7
JFC-6T-02N	3/8	10	9/16 - 18	1/4	7.5	19.1	17.5	47.5	35.6
JFC-8T-03N	1/2	12	3/4 - 16	3/8	9.9	22.2	22.2	52.3	39.6
JFC-10T-04N	5/8	16	7/8 - 14	1/2	12.3	28.6	25.4	64.6	48.0
JFC-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	34.9	31.8	67.8	52.3
JFC-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	34.9	34.9	69.9	52.3
JFC-16T-08N	1	25	1 5/16 - 12	1	21.4	41.3	38.1	78.7	59.7
JFC-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	50.8	50.8	81.7	63.2
JFC-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	60.3	57.2	93.2	66.5
JFC-32T-16N	2	50	2 1/2 - 12	2	45.2	73.0	73.0	102.9	75.4

*ISO Taper Threads are available upon request.

JFE

Female Elbow

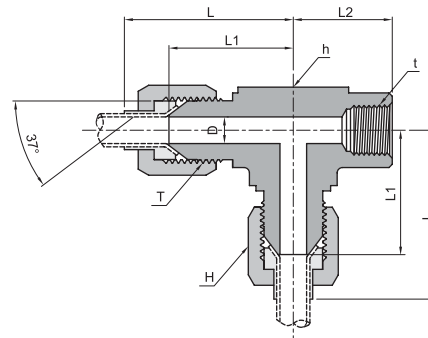
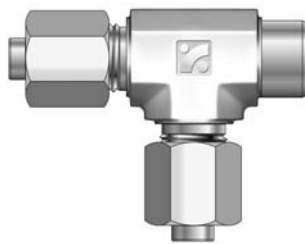


Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric								
JFE-2T-01N	1/8	3	5/16 - 24	1/8	1.6	14.3	9.5	33.2	25.4	16.8
JFE-3T-01N	3/16	4	3/8 - 24	1/8	3.2	14.3	11.1	35.6	26.2	16.8
JFE-4T-01N	1/4	6	7/16 - 20	1/8	4.4	14.3	14.3	36.5	27.4	16.8
JFE-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	15.9	37.8	27.4	16.8
JFE-6T-02N	3/8	10	9/16 - 18	1/4	7.5	19.0	17.5	43.1	31.2	22.4
JFE-8T-03N	1/2	12	3/4 - 16	3/8	9.9	22.2	22.2	48.8	36.1	25.9
JFE-10T-04N	5/8	16	7/8 - 14	1/2	12.3	27.0	25.4	58.3	41.7	31.2
JFE-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	33.3	31.8	63.5	48.0	34.5
JFE-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	33.3	34.9	64.8	47.2	36.1
JFE-16T-08N	1	25	1 5/16 - 12	1	21.4	41.3	38.1	74.1	55.1	41.1
JFE-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	47.6	50.8	77.7	59.2	43.2
JFE-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	65.1	57.2	100.1	73.4	52.8
JFE-32T-16N	2	50	2 1/2 - 12	2	45.2	71.4	73.0	111.3	83.8	60.7

*ISO Taper Threads are available upon request.

JFRT

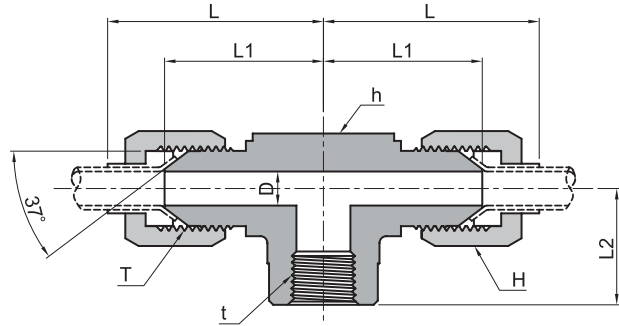
Female Run Tee



Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric								
JFRT-2T-01N	1/8	3	5/16 - 24	1/8	1.6	14.3	9.5	33.2	25.4	16.8
JFRT-3T-01N	3/16	4	3/8 - 24	1/8	3.2	14.3	11.1	35.6	26.2	16.8
JFRT-4T-01N	1/4	6	7/16 - 20	1/8	4.4	14.3	14.3	36.5	27.4	16.8
JFRT-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	15.9	37.8	27.4	16.8
JFRT-6T-02N	3/8	10	9/16 - 18	1/4	7.5	19.0	17.5	43.1	31.2	22.4
JFRT-8T-03N	1/2	12	3/4 - 16	3/8	9.9	22.2	22.2	48.8	36.1	25.9
JFRT-10T-04N	5/8	16	7/8 - 14	1/2	12.3	27.0	25.4	58.3	41.7	31.2
JFRT-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	33.3	31.8	63.5	48.0	34.5
JFRT-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	33.3	34.9	64.8	47.2	36.1
JFRT-16T-08N	1	25	1 5/16 - 12	1	21.4	41.3	38.1	74.1	55.1	41.1
JFRT-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	47.6	50.8	77.7	59.2	43.2
JFRT-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	65.1	57.2	100.1	73.4	52.8
JFRT-32T-16N	2	50	2 1/2 - 12	2	45.2	71.4	73.0	111.3	83.8	60.7

*ISO Taper Threads are available upon request.

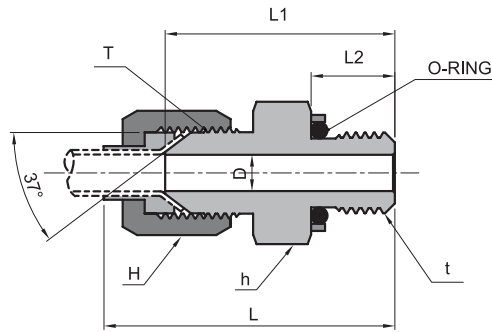
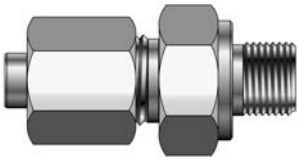
JFBT Female Branch Tee



Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric								
JFBT-2T-01N	1/8	3	5/16 - 24	1/8	1.6	14.3	9.5	33.2	25.4	16.8
JFBT-3T-01N	3/16	4	3/8 - 24	1/8	3.2	14.3	11.1	35.6	26.2	16.8
JFBT-4T-01N	1/4	6	7/16 - 20	1/8	4.4	14.3	14.3	36.5	27.4	16.8
JFBT-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	15.9	37.8	27.4	16.8
JFBT-6T-02N	3/8	10	9/16 - 18	1/4	7.5	19.0	17.5	43.1	31.2	22.4
JFBT-8T-03N	1/2	12	3/4 - 16	3/8	9.9	22.2	22.2	48.8	36.1	25.9
JFBT-10T-04N	5/8	16	7/8 - 14	1/2	12.3	27.0	25.4	58.3	41.7	31.2
JFBT-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	33.3	31.8	63.5	48.0	34.5
JFBT-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	33.3	34.9	64.8	47.2	36.1
JFBT-16T-08N	1	25	1 5/16 - 12	1	21.4	41.3	38.1	74.1	55.1	41.1
JFBT-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	47.6	50.8	77.7	59.2	43.2
JFBT-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	65.1	57.2	100.1	73.4	52.8
JFBT-32T-16N	2	50	2 1/2 - 12	2	45.2	71.4	73.0	111.3	83.8	60.7

*ISO Taper Threads are available upon request.

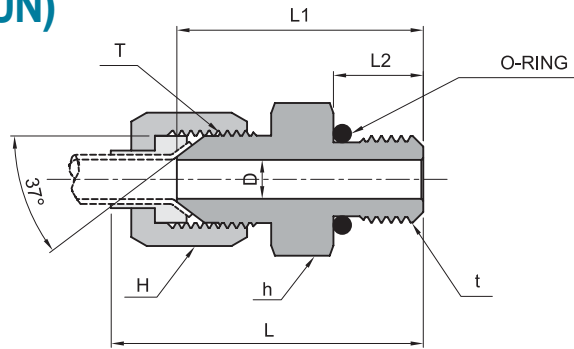
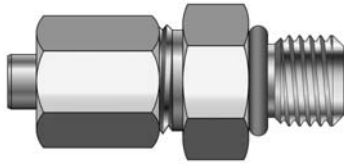
JMC-GO O-Ring Seal Male Connector(PF)



Part Number	Tube O.D.		T (UNF/UN)	t (PF)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric								
JMC-2T-01GO	1/8	3	5/16 - 24	1/8	1.6	11.1	9.5	35.3	27.5	8.0
JMC-3T-01GO	3/16	4	3/8 - 24	1/8	3.2	12.7	11.1	37.9	28.5	8.0
JMC-4T-01GO	1/4	6	7/16 - 20	1/8	4.4	14.2	14.3	39.3	30.2	8.0
JMC-5T-01GO	5/16	8	1/2 - 20	1/8	6.0	15.8	15.9	40.6	30.2	8.0
JMC-6T-02GO	3/8	10	9/16 - 18	1/4	7.5	17.4	17.5	46.9	35.0	12.0
JMC-8T-03GO	1/2	12	3/4 - 16	3/8	9.9	22.2	22.2	51.4	38.7	12.0
JMC-10T-04GO	5/8	16	7/8 - 14	1/2	12.3	25.4	25.4	61.1	44.5	14.0
JMC-12T-06GO	3/4	18	1 1/16 - 12	3/4	15.5	31.7	31.8	66.4	50.9	16.0
JMC-14T-06GO	7/8	22	1 3/16 - 12	3/4	18.3	34.9	34.9	69.0	51.4	16.0
JMC-16T-08GO	1	25	1 5/16 - 12	1	21.4	38.0	38.1	71.7	52.7	18.0
JMC-20T-10GO	1 1/4	32	1 5/8 - 12	1 1/4	27.4	42.8	50.8	78.5	60.0	20.0
JMC-24T-12GO	1 1/2	38	1 7/8 - 12	1 1/2	33.3	55.0	57.2	92.8	66.1	21.0
JMC-32T-16GO	2	50	2 1/2 - 12	2	45.2	70.0	73.0	108.0	80.5	25.0

JMC-U

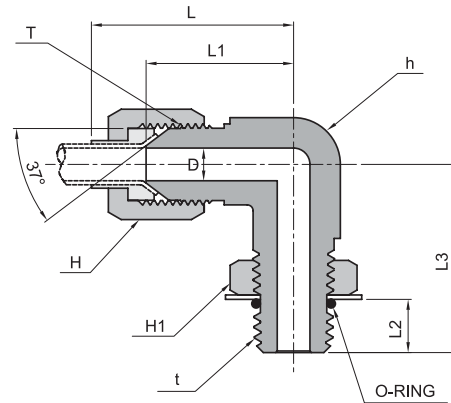
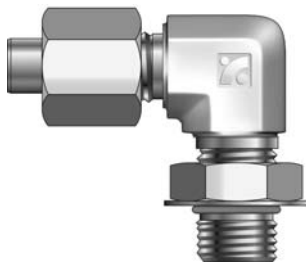
O-Ring Seal Male Connector (UNF/UN)



Part Number	Tube O.D.		T (UNF/UN)	t (UNF/UN)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric								
JMC-2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	11.1	9.5	34.7	26.9	7.5
JMC-3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	12.7	11.1	37.3	27.9	7.5
JMC-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	14.2	14.3	40.3	31.2	9.1
JMC-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	15.8	15.9	41.6	31.2	9.1
JMC-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	17.4	17.5	44.9	33.0	9.9
JMC-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	22.2	22.2	50.3	37.6	11.1
JMC-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	25.4	25.4	59.8	43.2	12.7
JMC-12T-12U	3/4	18	1 1/16 - 12	1 1/16 - 12	15.5	31.7	31.8	65.5	50.0	15.1
JMC-14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	34.9	34.9	68.1	50.5	15.1
JMC-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	38.1	38.1	70.8	51.8	15.1
JMC-20T-20U	1 1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	47.6	50.8	73.6	55.1	15.1
JMC-24T-24U	1 1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	53.9	57.2	86.9	60.2	15.1
JMC-32T-32U	2	50	2 1/2 - 12	2 1/2 - 12	45.2	69.8	73.0	98.1	70.6	15.1

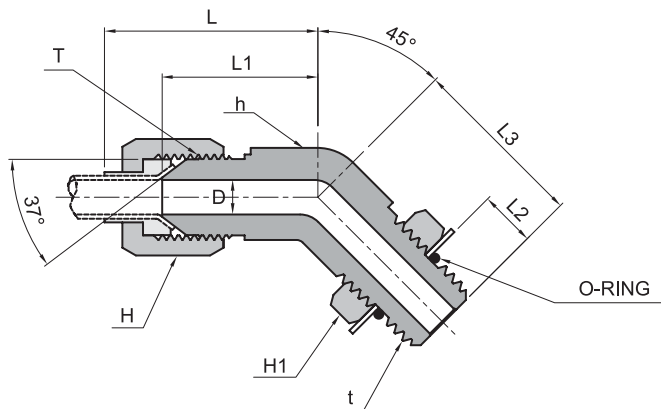
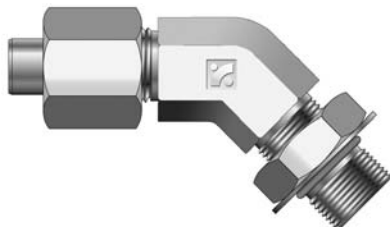
JPME-U

Positionable Male Elbow



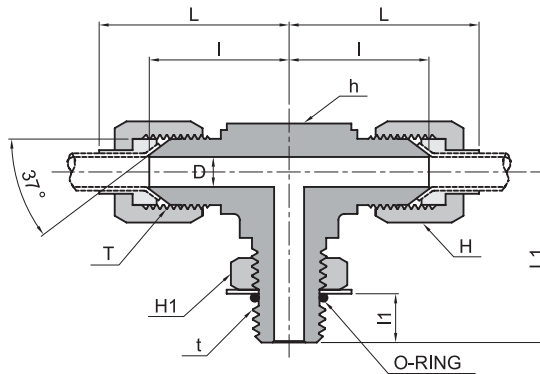
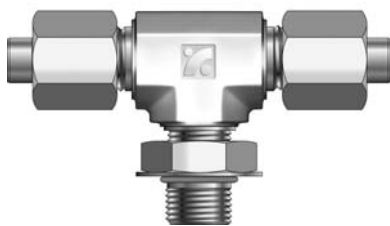
Part Number	Tube O.D.		T (UNF/UN)	t (UNF/UN)	D	h (HEX)	H (HEX)	H1 (HEX)	L	L1	L2	L3
	Inch	Metric										
JPME-2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	11.1	9.5	11.1	27.4	19.6	8.4	23.9
JPME-3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	11.1	11.1	12.7	30.5	21.1	8.4	23.9
JPME-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	11.1	14.3	14.3	31.7	22.6	9.8	26.2
JPME-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	14.3	15.9	15.9	34.5	24.1	9.8	28.7
JPME-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	14.3	17.5	17.5	38.8	26.9	9.9	31.8
JPME-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	19.0	22.2	22.2	44.5	31.8	11.0	36.8
JPME-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	22.2	25.4	25.4	53.4	36.8	12.5	43.2
JPME-12T-12U	3/4	18	1 1/16 - 12	1 1/16 - 12	15.5	27.0	31.8	31.8	57.7	42.2	16.5	49.3
JPME-14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	33.3	34.9	34.9	63.3	45.7	16.5	50.8
JPME-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	33.3	38.1	38.1	65.0	46.0	16.5	52.1
JPME-20T-20U	1 1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	41.3	50.8	47.6	70.8	52.3	16.5	57.2
JPME-24T-24U	1 1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	47.6	57.2	53.9	85.9	59.2	16.5	60.7
JPME-32T-32U	2	50	2 1/2 - 12	2 1/2 - 12	45.2	63.5	73.0	69.8	105.2	77.7	16.5	73.4

JPHME-U Positionable 45° Male Elbow



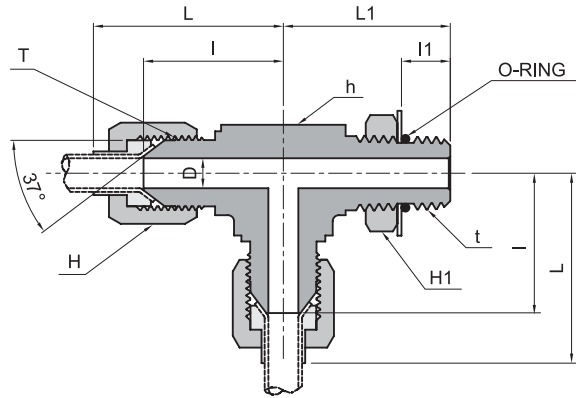
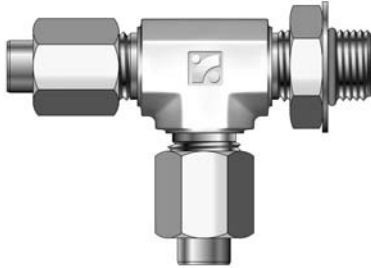
Part Number	Tube O.D.		T (UNF/UN)	t (UNF/UN)	D	h (HEX)	H (HEX)	H1 (HEX)	L	L1	L2	L3
	Inch	Metric										
JPHME-2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	11.1	9.5	11.1	25.3	17.5	8.4	23.9
JPHME-3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	11.1	11.1	12.7	26.9	17.5	8.4	23.9
JPHME-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	11.1	14.3	14.3	27.4	18.3	9.8	23.9
JPHME-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	14.3	15.9	15.9	30.3	19.6	9.8	25.4
JPHME-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	14.3	17.5	17.5	33.0	21.1	9.9	28.4
JPHME-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	19.0	22.2	22.2	37.6	24.9	11.0	32.5
JPHME-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	22.2	25.4	25.4	44.8	28.2	12.5	36.6
JPHME-12T-12U	3/4	18	1 1/16 - 12	1 1/16 - 12	15.5	27.0	31.8	31.8	48.0	32.5	16.5	43.9
JPHME-14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	33.3	34.9	34.9	54.4	36.8	16.5	45.7
JPHME-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	33.3	38.1	38.1	56.3	37.3	16.5	47.2
JPHME-20T-20U	1 1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	41.3	50.8	47.6	58.9	40.4	16.5	48.5
JPHME-24T-24U	1 1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	47.6	57.2	53.9	71.9	45.2	16.5	48.5
JPHME-32T-32U	2	50	2 1/2 - 12	2 1/2 - 12	45.2	63.5	73.0	69.8	83.9	56.4	16.5	47.2

JPMBT-U Positionable Male Branch Tee



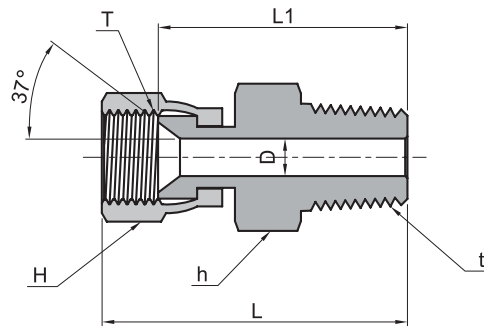
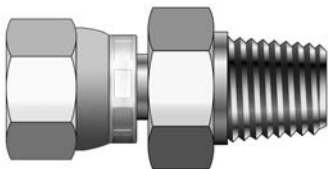
Part Number	Tube O.D.		T (UNF/UN)	t (UNF/UN)	D	h (HEX)	H (HEX)	H1 (HEX)	L	L1	I	I1
	Inch	Metric										
JPMBT-2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	11.1	9.5	11.1	27.4	23.9	19.6	8.4
JPMBT-3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	11.1	11.1	12.7	30.5	23.9	21.1	8.4
JPMBT-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	11.1	14.3	14.3	31.7	26.2	22.6	9.8
JPMBT-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	14.3	15.9	15.9	34.5	28.7	24.1	9.8
JPMBT-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	14.3	17.5	17.5	38.8	31.8	26.9	9.9
JPMBT-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	19.0	22.2	22.2	44.5	36.8	31.8	11.0
JPMBT-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	22.2	25.4	25.4	53.4	43.2	36.8	12.5
JPMBT-12T-12U	3/4	18	1 1/16 - 12	1 1/16 - 12	15.5	27.0	31.8	31.8	57.7	49.3	42.2	16.5
JPMBT-14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	33.3	35.0	34.9	63.3	50.8	45.7	16.5
JPMBT-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	33.3	38.0	38.1	65.0	52.1	46.0	16.5
JPMBT-20T-20U	1 1/4	32	1 5/8 - 12	1 5/8 - 12	37.5	41.3	50.8	47.6	70.8	57.2	52.3	16.5
JPMBT-24T-24U	1 1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	47.6	57.2	53.9	85.9	60.7	59.2	16.5
JPMBT-32T-32U	2	50	2 1/2 - 12	2 1/2 - 12	45.2	63.5	73.0	69.8	105.2	73.4	77.7	16.5

JPMRT-U Positionable Male Run Tee



Part Number	Tube O.D.		T (UNF/UN)	t (UNF/UN)	D	h (HEX)	H (HEX)	H1 (HEX)	L	L1	I	I1
	Inch	Metric										
JPMRT2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	11.1	9.5	11.1	27.4	23.9	19.6	8.4
JPMRT3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	11.1	11.1	12.7	30.5	23.9	21.1	8.4
JPMRT4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	11.1	14.3	14.3	31.7	26.2	22.6	9.8
JPMRT5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	14.3	15.9	15.9	34.5	28.7	24.1	9.8
JPMRT6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	14.3	17.5	17.5	38.8	31.8	26.9	9.9
JPMRT8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	19.0	22.2	22.2	44.5	36.8	31.8	11.0
JPMRT10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	22.2	25.4	25.4	53.4	43.2	36.8	12.5
JPMRT12T-12U	3/4	18	1 1/16 - 12	1 1/16 - 12	15.5	27.0	31.8	31.8	57.7	49.3	42.2	16.5
JPMRT14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	33.3	34.9	34.9	63.3	50.8	45.7	16.5
JPMRT16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	33.3	38.1	38.1	65.0	52.1	46.0	16.5
JPMRT20T-20U	1 1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	41.3	50.8	47.6	70.8	57.2	52.3	16.5
JPMRT24T-24U	1 1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	47.6	57.2	53.9	85.9	60.7	59.2	16.5
JPMRT32T-32U	2	50	2 1/2 - 12	2 1/2 - 12	45.2	63.5	73.0	69.8	105.2	73.4	77.7	16.5

JMSC Male Swivel Connector

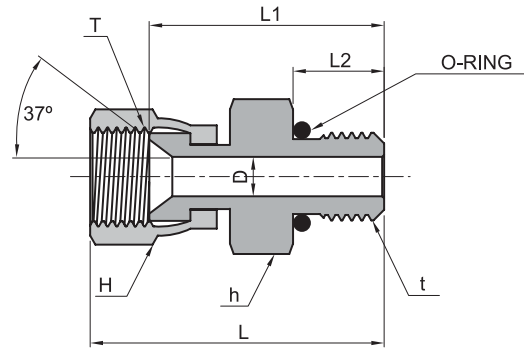
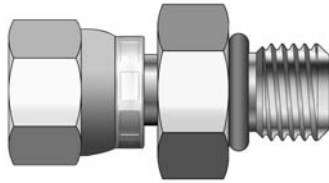


Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1
	Inch	Metric							
JMSC-2T-01N	1/8	3	5/16 - 24	1/8	1.6	11.1	11.1	30.0	22.0
JMSC-3T-01N	3/16	4	3/8 - 24	1/8	3.2	11.1	12.7	32.0	23.5
JMSC-4T-01N	1/4	6	7/16 - 20	1/8	4.4	12.7	14.3	34.2	25.5
JMSC-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.2	15.9	35.0	25.5
JMSC-6T-02N	3/8	10	9/16 - 18	1/4	7.5	16.0	17.5	40.2	30.7
JMSC-8T-03N	1/2	12	3/4 - 16	3/8	9.9	21.0	22.2	42.7	32.0
JMSC-10T-04N	5/8	16	7/8 - 14	1/2	12.3	23.8	25.4	51.3	38.6
JMSC-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	29.0	31.8	54.5	40.2
JMSC-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	32.0	34.9	56.0	41.2
JMSC-16T-08N	1	25	1 5/16 - 12	1	21.4	36.0	38.1	63.7	48.6
JMSC-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	46.0	50.8	68.9	53.0
JMSC-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	50.0	57.2	77.6	59.0
JMSC-32T-16N	2	50	2 1/2 - 12	2	45.2	66.7	73.0	92.9	69.1

*ISO Taper Threads are available upon request.

JMSC-U

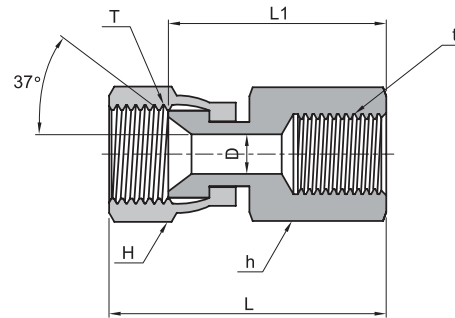
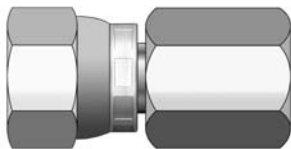
O-Ring Seal Male Swivel Connector



Part Number	Tube O.D.		T (UNF/UN)	t (UNF/UN)	D	h (HEX)	H (HEX)	L	L1	L2
	Inch	Metric								
JMSC-2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	11.1	11.1	30.4	22.5	7.5
JMSC-3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	12.7	12.7	31.0	22.7	7.5
JMSC-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	14.2	14.3	33.9	25.2	9.1
JMSC-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	15.8	15.9	35.7	26.2	9.1
JMSC-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	17.4	17.5	37.4	27.9	9.9
JMSC-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	22.2	22.2	41.6	30.9	11.1
JMSC-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	25.4	25.4	47.6	34.9	12.7
JMSC-12T-12U	3/4	18	1 1/16 - 12	1 1/16 - 12	15.5	31.8	31.8	54.4	40.1	15.1
JMSC-14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	34.9	34.9	55.6	40.9	15.1
JMSC-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	38.1	38.1	56.8	41.7	15.1
JMSC-20T-20U	1 1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	47.6	50.8	63.2	47.3	15.1
JMSC-24T-24U	1 1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	54.0	57.2	71.3	52.7	15.1
JMSC-32T-32U	2	50	2 1/2 - 12	2 1/2 - 12	45.2	70.0	73.0	72.5	58.7	15.1

JFSC

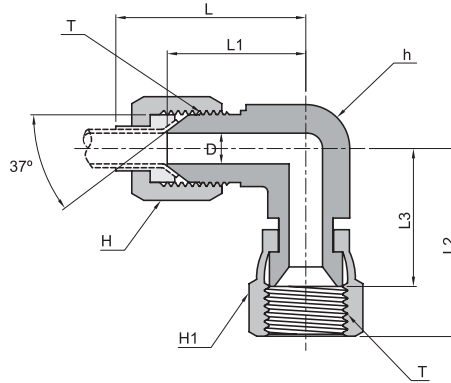
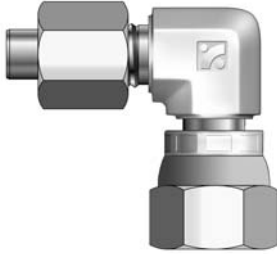
Female Swivel Connector



Part Number	Tube O.D.		T (UNF/UN)	*t (NPT)	D	h (HEX)	H (HEX)	L	L1
	Inch	Metric							
JFSC-2T-01N	1/8	3	5/16 - 24	1/8	1.6	14.3	11.1	36.1	28.2
JFSC-3T-01N	3/16	4	3/8 - 24	1/8	3.2	14.3	12.7	37.3	29.0
JFSC-4T-01N	1/4	6	7/16 - 20	1/8	4.4	14.3	14.3	39.7	31.0
JFSC-5T-01N	5/16	8	1/2 - 20	1/8	6.0	14.3	15.9	40.5	31.0
JFSC-6T-02N	3/8	10	9/16 - 18	1/4	7.5	19.1	17.5	45.8	36.3
JFSC-8T-03N	1/2	12	3/4 - 16	3/8	9.9	22.2	22.2	47.0	38.9
JFSC-10T-04N	5/8	16	7/8 - 14	1/2	12.3	28.6	25.4	51.6	48.0
JFSC-12T-06N	3/4	18	1 1/16 - 12	3/4	15.5	34.9	31.8	66.6	52.3
JFSC-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	34.9	34.9	67.8	53.1
JFSC-16T-08N	1	25	1 5/16 - 12	1	21.4	41.3	38.1	73.5	58.4
JFSC-20T-10N	1 1/4	32	1 5/8 - 12	1 1/4	27.4	50.8	50.8	78.1	62.2
JFSC-24T-12N	1 1/2	38	1 7/8 - 12	1 1/2	33.3	60.3	57.2	86.7	68.1
JFSC-32T-16N	2	50	2 1/2 - 12	2	45.2	73.0	73.0	89.3	65.5

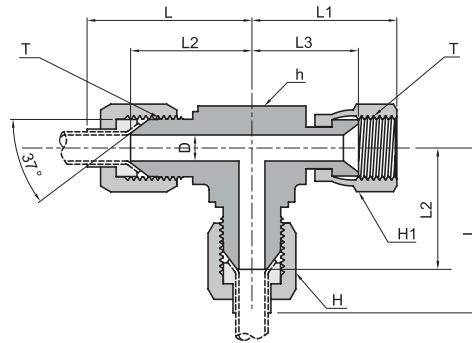
*ISO Taper Threads are available upon request.

JSE Swivel Elbow



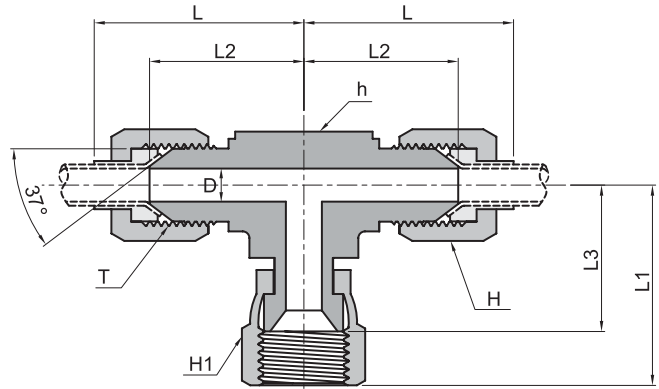
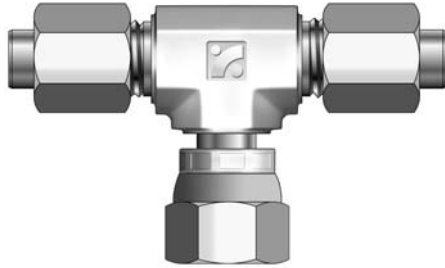
Part Number	Tube O.D.		T (UNF/UN)	D	h (HEX)	H (HEX)	H1 (HEX)	L	L1	L2	L3
	Inch	Metric									
JSE-2T	1/8	3	5/16 - 24	1.6	11.1	9.5	11.1	27.4	19.6	24.6	16.7
JSE-3T	3/16	4	3/8 - 24	3.2	11.1	11.1	12.7	30.5	21.1	25.4	17.1
JSE-4T	1/4	6	7/16 - 20	4.4	11.1	14.3	14.3	31.7	22.6	25.4	16.7
JSE-5T	5/16	8	1/2 - 20	6.0	14.3	15.9	15.9	34.5	24.1	26.9	17.4
JSE-6T	3/8	10	9/16 - 18	7.5	14.3	17.5	17.5	38.8	26.9	31.8	22.3
JSE-8T	1/2	12	3/4 - 16	9.9	19.0	22.2	22.2	44.5	31.8	35.1	24.4
JSE-10T	5/8	16	7/8 - 14	12.3	22.2	25.4	25.4	53.4	36.8	41.1	28.4
JSE-12T	3/4	18	1 1/16 - 12	15.5	27.0	31.8	31.8	57.7	42.2	44.4	30.1
JSE-14T	7/8	22	1 3/16 - 12	18.3	33.3	34.9	34.9	63.3	45.7	45.2	30.5
JSE-16T	1	25	1 5/16 - 12	21.4	33.3	38.1	38.1	65.0	46.0	50.8	35.7
JSE-20T	1 1/4	32	1 5/8 - 12	27.4	41.3	50.8	50.8	70.8	52.3	58.7	42.8
JSE-24T	1 1/2	38	1 7/8 - 12	33.3	47.6	57.2	57.2	85.9	59.2	65.8	47.2
JSE-32T	2	50	2 1/2 - 12	45.2	63.5	73.0	73.0	105.2	77.7	85.9	62.1

JSRT Swivel Run Tee



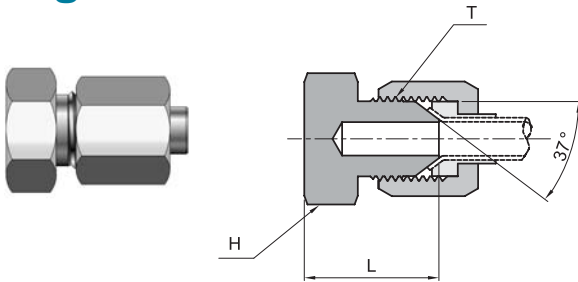
Part Number	Tube O.D.		T (UNF/UN)	D	h (HEX)	H (HEX)	H1 (HEX)	L	L1	L2	L3
	Inch	Metric									
JSRT-2T	1/8	3	5/16 - 24	1.6	11.1	9.5	11.1	27.4	24.6	19.6	16.7
JSRT-3T	3/16	4	3/8 - 24	3.2	11.1	11.1	12.7	30.5	25.4	21.1	17.1
JSRT-4T	1/4	6	7/16 - 20	4.4	11.1	14.3	14.3	31.7	25.4	22.6	16.7
JSRT-5T	5/16	8	1/2 - 20	6.0	14.3	15.9	15.9	34.5	26.9	24.1	17.4
JSRT-6T	3/8	10	9/16 - 18	7.5	14.3	17.5	17.5	38.8	31.8	26.9	22.3
JSRT-8T	1/2	12	3/4 - 16	9.9	19.0	22.2	22.2	44.5	35.1	31.8	24.4
JSRT-10T	5/8	16	7/8 - 14	12.3	22.2	25.4	25.4	53.4	41.1	36.8	28.4
JSRT-12T	3/4	18	1 1/16 - 12	15.5	27.0	31.8	31.8	57.7	44.4	42.2	30.1
JSRT-14T	7/8	22	1 3/16 - 12	18.3	33.3	34.9	34.9	63.3	45.2	45.7	30.5
JSRT-16T	1	25	1 5/16 - 12	21.4	33.3	38.1	38.1	65.0	50.8	46.0	35.7
JSRT-20T	1 1/4	32	1 5/8 - 12	27.4	41.3	50.8	50.8	70.8	58.7	52.3	42.8
JSRT-24T	1 1/2	38	1 7/8 - 12	33.3	47.6	57.2	57.2	85.9	65.8	59.2	47.2
JSRT-32T	2	50	2 1/2 - 12	45.2	63.5	73.0	73.0	105.2	85.9	77.7	62.1

JSBT Swivel Branch Tee



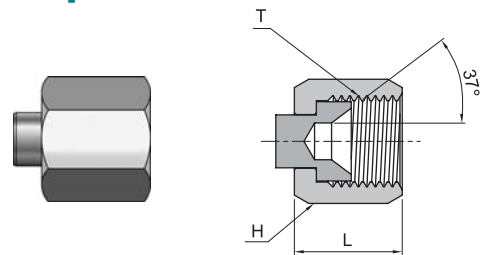
Part Number	Tube O.D.		T (UNF/UN)	D	h (HEX)	H (HEX)	H1 (HEX)	L	L1	L2	L3
	Inch	Metric									
JSBT-2T	1/8	3	5/16 - 24	1.6	11.1	9.5	11.1	27.4	24.6	19.6	16.7
JSBT-3T	3/16	4	3/8 - 24	3.2	11.1	11.1	12.7	30.5	25.4	21.1	17.1
JSBT-4T	1/4	6	7/16 - 20	4.4	11.1	14.3	14.3	31.7	25.4	22.6	16.7
JSBT-5T	5/16	8	1/2 - 20	6.0	14.3	15.9	15.9	34.5	26.9	24.1	17.4
JSBT-6T	3/8	10	9/16 - 18	7.5	14.3	17.5	17.5	38.8	31.8	26.9	22.3
JSBT-8T	1/2	12	3/4 - 16	9.9	19.0	22.2	22.2	44.5	35.1	31.8	24.4
JSBT-10T	5/8	16	7/8 - 14	12.3	22.2	25.4	25.4	53.4	41.1	36.8	28.4
JSBT-12T	3/4	18	1 1/16 - 12	15.5	27.0	38.1	31.8	57.7	44.4	42.2	30.1
JSBT-14T	7/8	22	1 3/16 - 12	18.3	33.3	34.9	34.9	63.3	45.2	45.7	30.5
JSBT-16T	1	25	1 5/16 - 12	21.4	33.3	38.1	38.1	65.0	50.8	46.0	35.7
JSBT-20T	1 1/4	32	1 5/8 - 12	27.4	41.3	50.8	50.8	70.8	58.7	52.3	42.8
JSBT-24T	1 1/2	38	1 7/8 - 12	33.3	47.6	57.2	57.2	85.9	65.8	59.2	47.2
JSBT-32T	2	50	2 1/2 - 12	45.2	63.5	73.0	73.0	105.2	85.9	77.7	62.1

JP Plug



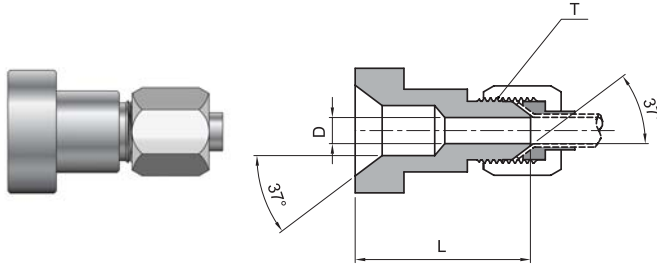
Part Number	Tube O.D.		T (UNF/UN)	H (HEX)	L
	Inch	Metric			
JP-2T	1/8	3	5/16 - 24	11.1	17.8
JP-3T	3/16	4	3/8 - 24	11.1	18.5
JP-4T	1/4	6	7/16 - 20	12.7	20.3
JP-5T	5/16	8	1/2 - 20	14.3	20.3
JP-6T	3/8	10	9/16 - 18	15.9	21.3
JP-8T	1/2	12	3/4 - 16	20.6	23.9
JP-10T	5/8	16	7/8 - 14	25.4	27.9
JP-12T	3/4	18	1 1/16 - 12	28.6	32.5
JP-14T	7/8	22	1 3/16 - 12	31.8	33.3
JP-16T	1	25	1 5/16 - 12	34.9	33.8
JP-20T	1 1/4	32	1 5/8 - 12	42.9	36.8
JP-24T	1 1/2	38	1 7/8 - 12	50.8	41.9
JP-32T	2	50	2 1/2 - 12	66.7	52.1

JC Tube Cap



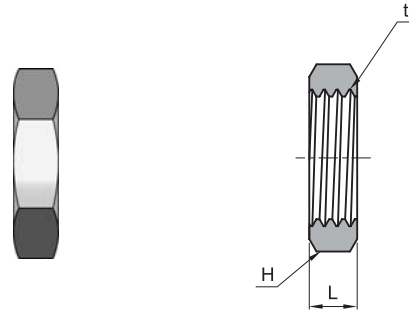
Part Number	Tube O.D.		T (UNF/UN)	H (HEX)	L
	Inch	Metric			
JC-2T	1/8	3	5/16 - 24	9.5	13.7
JC-3T	3/16	4	3/8 - 24	11.1	15.2
JC-4T	1/4	6	7/16 - 20	14.3	15.5
JC-5T	5/16	8	1/2 - 20	15.9	17.0
JC-6T	3/8	10	9/16 - 18	17.5	18.3
JC-8T	1/2	12	3/4 - 16	22.2	21.3
JC-10T	5/8	16	7/8 - 14	25.4	24.6
JC-12T	3/4	18	1 1/16 - 12	31.8	25.9
JC-14T	7/8	22	1 3/16 - 12	34.9	27.4
JC-16T	1	25	1 5/16 - 12	38.1	28.4
JC-20T	1 1/4	32	1 5/8 - 12	50.8	31.0
JC-24T	1 1/2	38	1 7/8 - 12	57.2	35.8
JC-32T	2	50	2 1/2 - 12	73.0	44.2

JRA Reducer Adapter



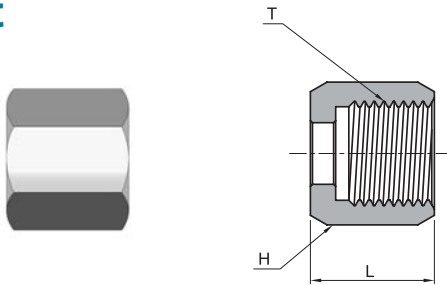
Part Number	Reducing Tube O.D.	T (UNF/UN)	D	L
JRA6T-4T	3/8 × 1/4	7/16 - 20	4.4	24.6
JRA8T-4T	1/2 × 1/4	7/16 - 20	4.4	25.4
JRA8T-6T	1/2 × 3/8	9/16 - 18	7.5	25.4
JRA10T-4T	5/8 × 1/4	7/16 - 20	4.4	26.2
JRA10T-6T	5/8 × 3/8	9/16 - 18	7.5	26.2
JRA12T-4T	3/4 × 1/4	7/16 - 20	4.4	27.7
JRA12T-6T	3/4 × 3/8	9/16 - 18	7.5	27.7
JRA12T-8T	3/4 × 1/2	3/4 - 16	10.0	30.2
JRA16T-12T	1 × 3/4	1 1/16 - 12	15.5	37.3
JRA20T-12T	1 1/4 × 3/4	1 1/16 - 12	15.5	38.3
JRA20T-16T	1 1/4 × 1	1 5/16 - 12	21.5	40.3
JRA24T-20T	1 1/2 × 1 1/4	1 5/8 - 12	27.5	42.9

JLN Bulkhead Lock Nut



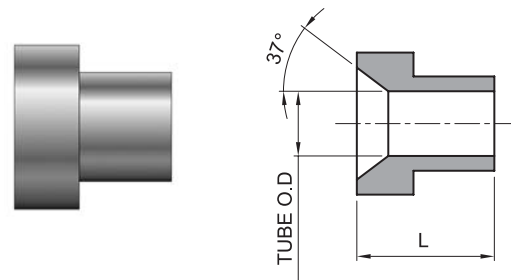
Part Number	Tube O.D.		T (UNF/UN)	H (HEX)	L
	Inch	Metric			
JLN-2T	1/8	3	5/16 - 24	14.3	5.6
JLN-3T	3/16	4	3/8 - 24	15.9	5.6
JLN-4T	1/4	6	7/16 - 20	17.5	7.1
JLN-5T	5/16	8	1/2 - 20	19.1	7.1
JLN-6T	3/8	10	9/16 - 18	20.6	6.9
JLN-8T	1/2	12	3/4 - 16	25.4	7.9
JLN-10T	5/8	16	7/8 - 14	28.6	9.1
JLN-12T	3/4	18	1 1/16 - 12	34.9	10.4
JLN-14T	7/8	22	1 3/16 - 12	38.1	10.4
JLN-16T	1	25	1 5/16 - 12	41.3	10.4
JLN-20T	1 1/4	32	1 5/8 - 12	47.6	10.4
JLN-24T	1 1/2	38	1 7/8 - 12	54.0	10.4
JLN-32T	2	50	2 1/2 - 12	69.9	10.4

JN Nut



Part Number	Tube O.D.		T (UNF/UN)	H (HEX)	L
	Inch	Metric			
JN-2T	1/8	3	5/16 - 24	9.5	14.0
JN-3T	3/16	4	3/8 - 24	11.1	15.5
JN-4T	1/4	6	7/16 - 20	14.3	15.8
JN-5T	5/16	8	1/2 - 20	15.9	17.3
JN-6T	3/8	10	9/16 - 18	17.5	18.5
JN-8T	1/2	12	3/4 - 16	22.2	21.6
JN-10T	5/8	16	7/8 - 14	25.4	24.9
JN-12T	3/4	18	1 1/16 - 12	31.8	26.2
JN-14T	7/8	22	1 3/16 - 12	34.9	27.7
JN-16T	1	25	1 5/16 - 12	38.1	28.7
JN-20T	1 1/4	32	1 5/8 - 12	50.8	31.2
JN-24T	1 1/2	38	1 7/8 - 12	57.2	36.1
JN-32T	2	50	2 1/2 - 12	73.0	44.5

JS Sleeve



Part Number		Tube O.D.		L	
Inch	Metric	Inch	Metric	Inch	Metric
JS-2T	JS-2MT	1/8	-	8.6	-
JS-3T	JS-3MT	3/16	-	8.6	-
JS-4T	JS-6MT	1/4	6	10.4	10.4
JS-5T	JS-8MT	5/16	8	11.2	11.2
JS-6T	JS-10MT	3/8	10	12.7	12.7
JS-8T	JS-12MT	1/2	12	14.2	14.2
JS-10T	JS-16MT	5/8	16	16.8	16.8
JS-12T	JS-18MT	3/4	18	17.3	17.3
JS-14T	JS-22MT	7/8	22	19.3	19.3
JS-16T	JS-25MT	1	25	19.8	19.8
JS-20T	JS-32MT	1 1/4	32	23.1	23.1
JS-24T	JS-38MT	1 1/2	38	28.4	28.4
JS-32T	JS-50MT	2	50	30.2	30.2

※ Metric Sleeves are used with standard nuts & bodies



TUBE FITTINGS (COMPRESSION TYPE)



BITE TYPE TUBE FITTINGS (DIN2353)



BITE TYPE TUBE FITTINGS (JIS B2351)



37 FLARED TUBE FITTINGS (SAE J514)



FORGED FITTINGS



INSTRUMENT THREAD FITTINGS



O-RING FACE SEAL FITTINGS



PUSH-ON HOSE FITTINGS



HYDRAULIC FLANGE (SAE J518 & ISO6164)



KEY OPERATION BALL VALVES



KEY OPERATION NEEDLE VALVES



BALL VALVE SBV120 SERIES



BALL VALVE SBV210 SERIES



BALL VALVE SBV360 SERIES



HIGH PRESSURE BALL VALVES



CRYOGENIC NEEDLE VALVES



HYDRAULIC BALL VALVES



CHECK VALVES



HIGH PRESSURE CHECK VALVES



RELIEF VALVES



INTEGRAL BONNET NEEDLE VALVES



UNION BONNET NEEDLE VALVES



HIGH PRESSURE NEEDLE VALVES



PLUG VALVES



MICRON IN-LINE FILTERS



SWING-OUT BALL VALVES



TRUNNION BALL VALVES



TOGGLE VALVES



BLEED & PURGE VALVES



GAUGE ROOT VALVES



MANIFOLD VALVES



DOUBLE BLOCK & BLEED VALVES



QUICK CONNECTORS



WATER REGULATORS



FLEXIBLE METAL HOSES



VACUUM CLAMPS