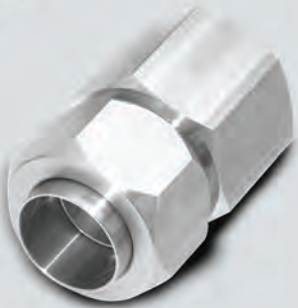







































**SUPERLOK<sup>®</sup>**

# 37° Flared Tube Fittings (SAE J514)



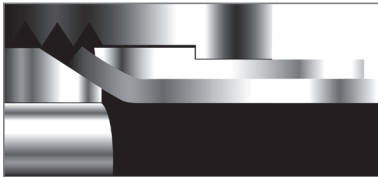
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## Meets SAE Standard J514



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 B1.20.1.

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 every 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.

### 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 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.

### Quality

Lengths of finished tubing should be reasonably straight and have smooth ends, free from burrs. Tubing should be free from scale and injurious defects, and it should have a workmanlike 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 Cutting

Two different methods can be used to cut tubes:

1. Tube cutter
2. Hacksaw

### 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.

## Ordering Information

|                |            |          |           |          |            |          |            |
|----------------|------------|----------|-----------|----------|------------|----------|------------|
| <b>Example</b> | <b>JMC</b> | <b>-</b> | <b>8T</b> | <b>-</b> | <b>04N</b> | <b>-</b> | <b>36L</b> |
|                | <u>1</u>   |          | <u>2</u>  |          | <u>3-1</u> |          | <u>3-2</u> |
|                |            |          |           |          | <u>3-2</u> |          | <u>4</u>   |

1. 37° Flared Tube Fitting
2. Type of Fitting- Refer to catalogue Index

### 3. Size of Fitting

#### 3-1. Tube O.D

|                 |             |     |      |     |      |      |      |      |      |      |      |       |       |      |
|-----------------|-------------|-----|------|-----|------|------|------|------|------|------|------|-------|-------|------|
| Fractional Tube | O.D (Inch)  | 1/8 | 3/16 | 1/4 | 5/16 | 3/8  | 1/2  | 5/8  | 3/4  | 7/8  | 1    | 1-1/4 | 1-1/2 | 2    |
|                 | Designation | 2T  | 3T   | 44  | 5T   | 6T   | 8T   | 10T  | 12T  | 14T  | 16T  | 20T   | 24T   | 32T  |
| Metric Tube     | O.D (mm)    | 2   | 3    | 6   | 8    | 10   | 12   | 16   | 18   | 22   | 25   | 32    | 38    | 50   |
|                 | Designation | 2MT | 3MT  | 6MT | 8MT  | 10MT | 12MT | 16MT | 18MT | 22MT | 25MT | 32MT  | 38MT  | 50MT |

#### 3-2. Pipe Thread Size or tube size

|               |     |     |     |     |     |     |       |       |
|---------------|-----|-----|-----|-----|-----|-----|-------|-------|
| Size (inch)   | 1/8 | 1/4 | 3/8 | 1/2 | 3/4 | 1   | 1-1/4 | 1-1/2 |
| ISO Tapered   | 01R | 02R | 03R | 04R | 06R | 08R | 10R   | 12R   |
| NPT           | 01N | 02N | 03N | 04N | 06N | 08N | 10N   | 12N   |
| ISO Parallel  | 01G | 02G | 03G | 04G | 06G | 08G | 10G   | 12G   |
| Unified Screw | 02U | 04U | 06U | 08U | 12U | 16U | 20U   | 24U   |

### 4. Material

|          |                     |                      |       |                   |                   |
|----------|---------------------|----------------------|-------|-------------------|-------------------|
| Material | 316 Stainless Steel | 316L Stainless Steel | Brass | Carbon Steel A105 | Carbon Steel S45C |
| Identify | 316                 | 36L                  | B     | 15                | S45C              |

# Assembly Instructions

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

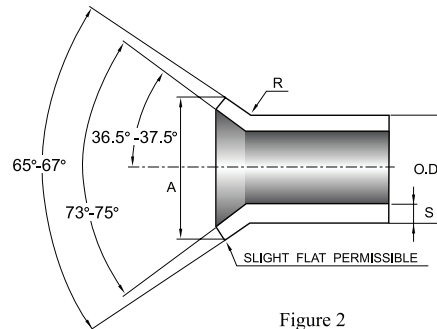


Figure 2

TABLE 1: Laring

| Nominal Tube O.D. | A<br>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.

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

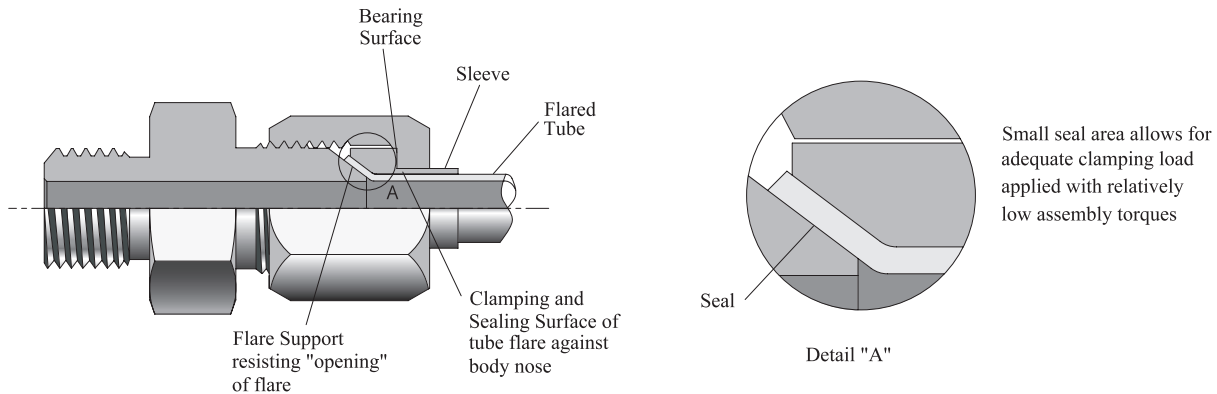


Figure 3.

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

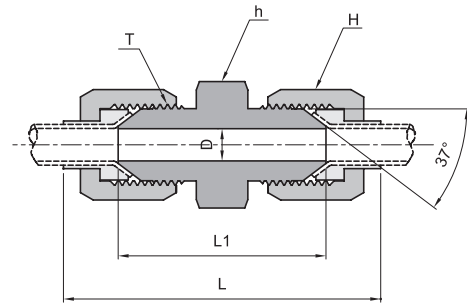
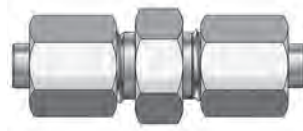
### Pipe Thread

| 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

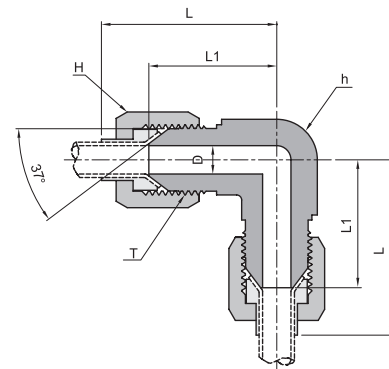
| Thread Type | Thread Size |        |         |        |         |        |        |           |           |           |          |          |          |
|-------------|-------------|--------|---------|--------|---------|--------|--------|-----------|-----------|-----------|----------|----------|----------|
|             | 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      |

**JU**  
Union



| Part Number | Tube O.D. |        | T<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(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 |

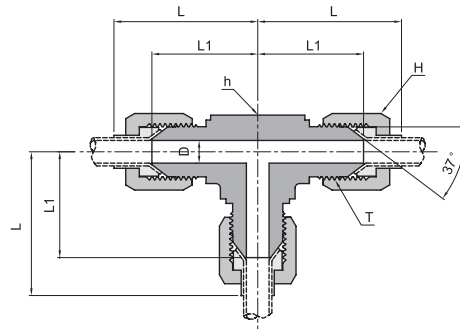
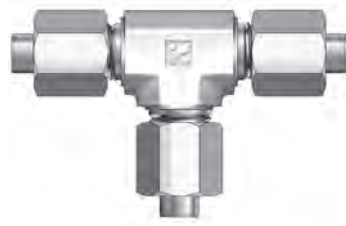
**JUE**  
Union Elbow



| Part Number | Tube O.D. |        | T<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(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 |

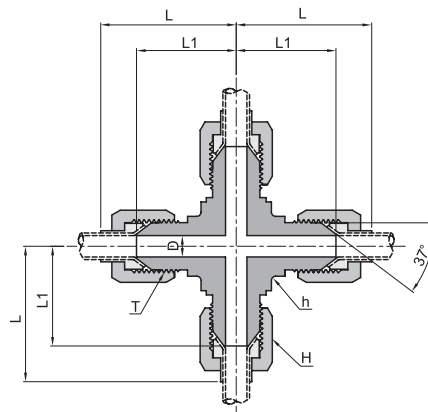
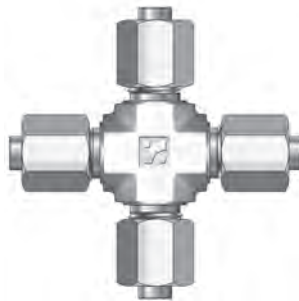


**JUT**  
Union Tee



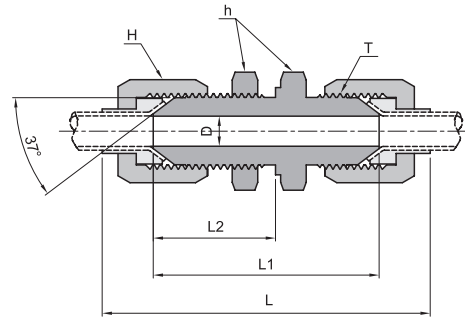
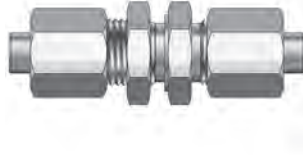
| Part Number | Tube O.D. |        | T<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(HEX) | L     | L1   |
|-------------|-----------|--------|---------------|------|------------|------------|-------|------|
|             | Inch      | Metric |               |      |            |            |       |      |
| 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



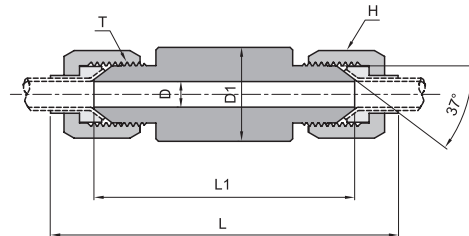
| Part Number | Tube O.D. |        | T<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(HEX) | L     | L1   |
|-------------|-----------|--------|---------------|------|------------|------------|-------|------|
|             | Inch      | Metric |               |      |            |            |       |      |
| 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<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(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 |

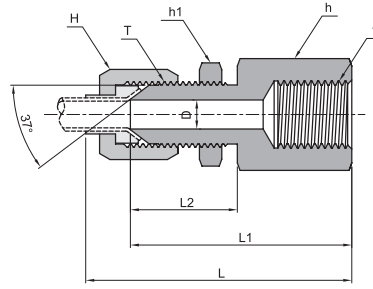
## JBUW Weld Bulkhead Union



| Part Number | Tube O.D. |        | T<br>(UNF/UN) | D    | D1   | H<br>(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 |



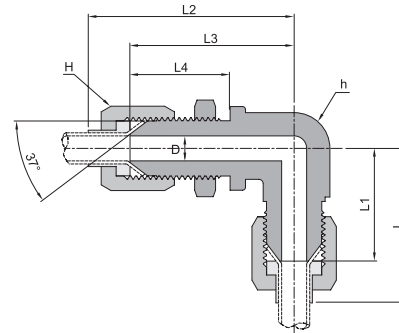
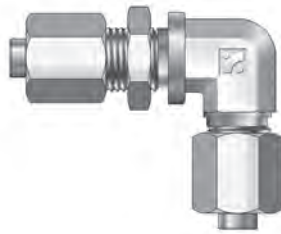
**JBFC**  
Bulkhead  
Female Connector



| Part Number  | Tube O.D. |        | T<br>(UNF/UN) | *t<br>(NPT) | D    | h<br>(HEX) | h1<br>(HEX) | H<br>(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 |

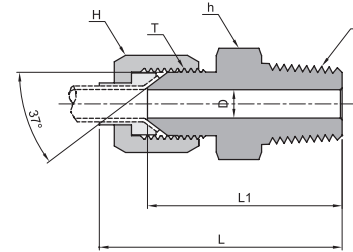
\*ISO Taper Threads are available upon request.

**JBUE**  
Bulkhead Union Elbow



| Part Number | Tube O.D. |        | T<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(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 |

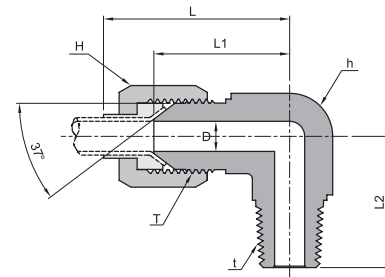
## JMC Male Connector



| Part Number | Tube O.D. |        | T<br>(UNF/UN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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.

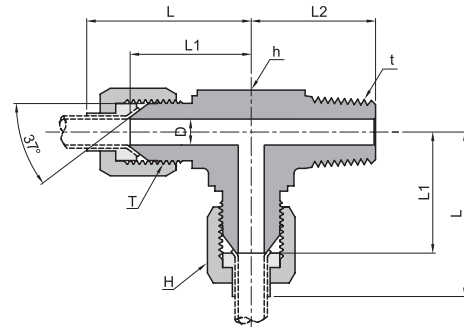
## JME Male Elbow



| Part Number | Tube O.D. |        | T<br>(UNF/UN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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.

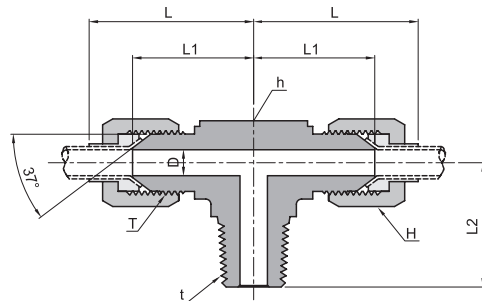
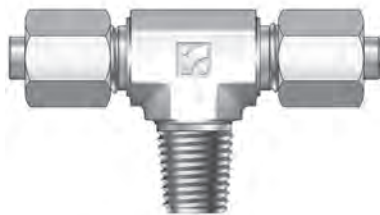
**JMRT**  
Male Run Tee



| Part Number  | Tube O.D. |        | T<br>(UNF/JN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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.

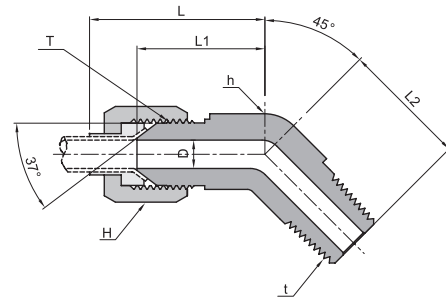
**JMBT**  
Male Branch Tee



| Part Number  | Tube O.D. |        | T<br>(UNF/JN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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.

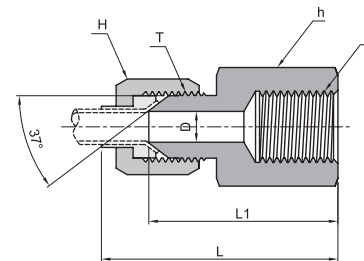
## JHME 45° Male Elbow



| Part Number  | Tube O.D. |        | T<br>(UNF/UN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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.

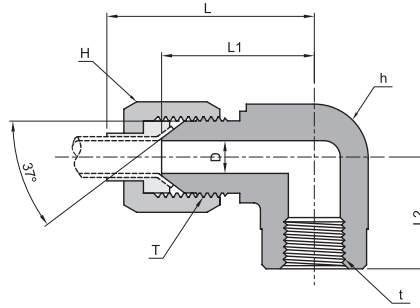
## JFC Female Connector



| Part Number | Tube O.D. |        | T<br>(UNF/UN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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.

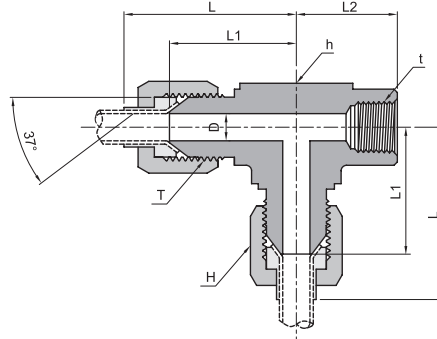
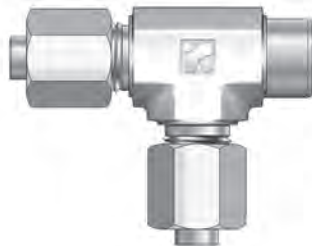
**JFE**  
Female Elbow



| Part Number | Tube O.D. |        | T<br>(UNF/UN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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.

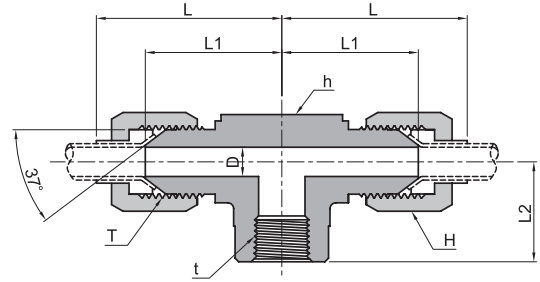
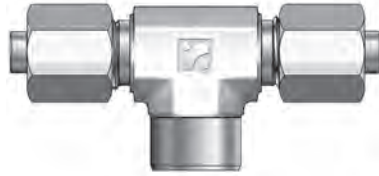
**JFRT**  
Female Run Tee



| Part Number  | Tube O.D. |        | T<br>(UNF/UN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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.

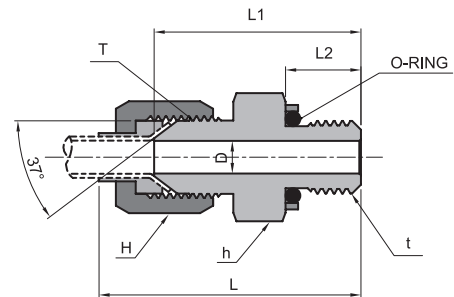
## JFBT Female Branch Tee



| Part Number  | Tube O.D. |        | T<br>(UNF/UN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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)



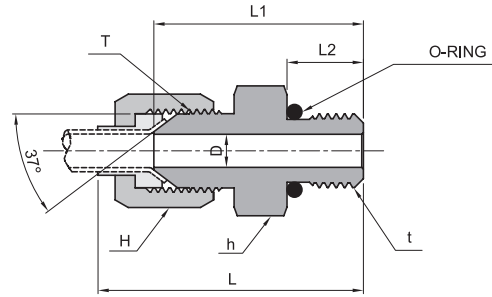
| Part Number  | Tube O.D. |        | T<br>(UNF/UN) | t<br>(PF) | D    | h<br>(HEX) | H<br>(HEX) | L     | L1   | L2   |
|--------------|-----------|--------|---------------|-----------|------|------------|------------|-------|------|------|
|              | Inch      | Metric |               |           |      |            |            |       |      |      |
| 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

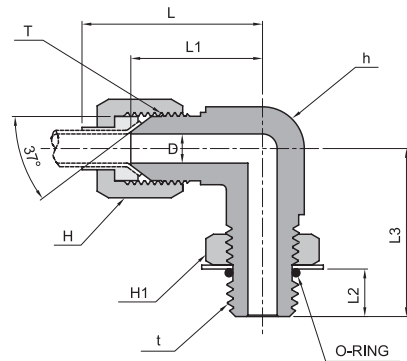
Male Connector (UNF/UN)



| Part Number | Tube O.D. |        | T<br>(UNF/UN) | t<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(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 |

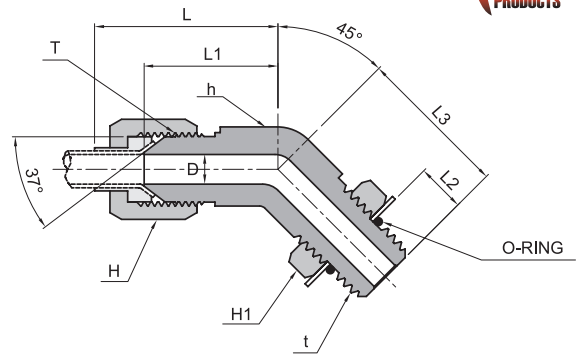
## JPME-U

Positionable Male Elbow



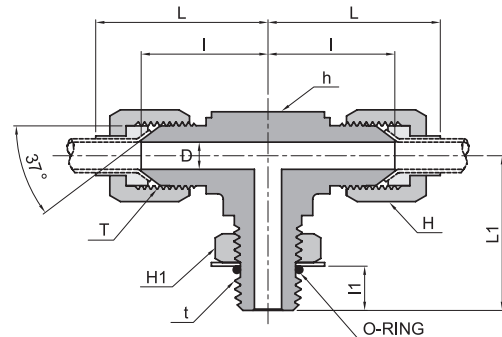
| Part Number  | Tube O.D. |        | T<br>(UNF/UN) | t<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(HEX) | H1<br>(HEX) | L     | L1   | L2   | L3   |
|--------------|-----------|--------|---------------|---------------|------|------------|------------|-------------|-------|------|------|------|
|              | 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



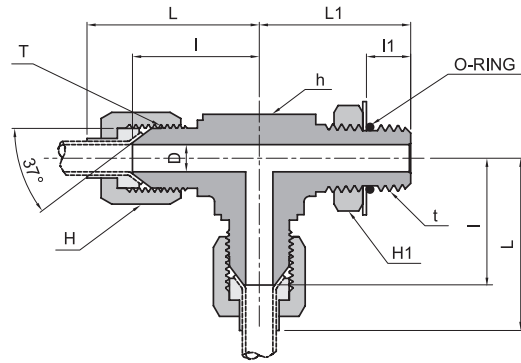
| Part Number   | Tube O.D. |        | T<br>(UNF/UN) | t<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(HEX) | H1<br>(HEX) | L    | L1   | L2   | L3   |
|---------------|-----------|--------|---------------|---------------|------|------------|------------|-------------|------|------|------|------|
|               | 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



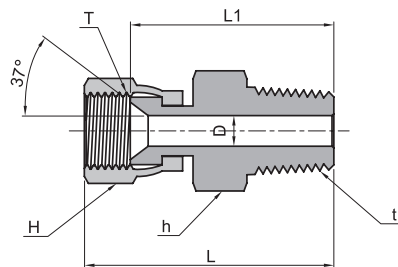
| Part Number   | Tube O.D. |        | T<br>(UNF/UN) | t<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(HEX) | H1<br>(HEX) | L     | L1   | I    | I1   |
|---------------|-----------|--------|---------------|---------------|------|------------|------------|-------------|-------|------|------|------|
|               | 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    | 27.4 | 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<br>(UNF/UN) | t<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(HEX) | H1<br>(HEX) | L     | L1   | I    | I1   |
|---------------|-----------|--------|---------------|---------------|------|------------|------------|-------------|-------|------|------|------|
|               | Inch      | Metric |               |               |      |            |            |             |       |      |      |      |
| JPMRT-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  |
| JPMRT-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  |
| JPMRT-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  |
| JPMRT-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  |
| JPMRT-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  |
| JPMRT-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 |
| JPMRT-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 |
| JPMRT-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 |
| JPMRT-14T-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 |
| JPMRT-16T-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 |
| JPMRT-20T-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 |
| JPMRT-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 |
| JPMRT-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 |

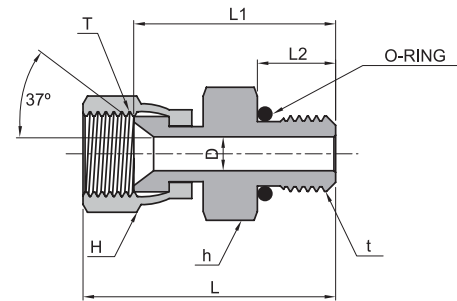
**JMSC**  
Male Swivel Connector



| Part Number  | Tube O.D. |        | T<br>(UNF/UN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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 |

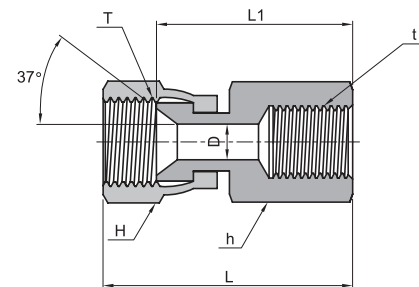
\*ISO Taper Threads are available upon request.

## JMSC-U O-Ring Seal Male Swivel Connector



| Part Number  | Tube O.D. |        | T<br>(UNF/UN) | t<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(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 |

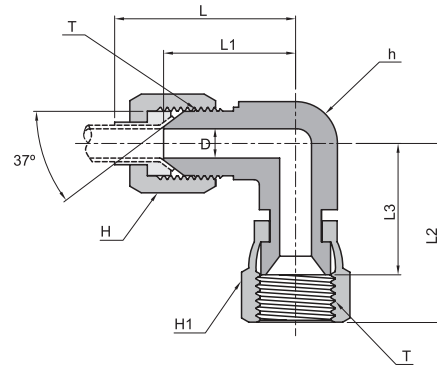
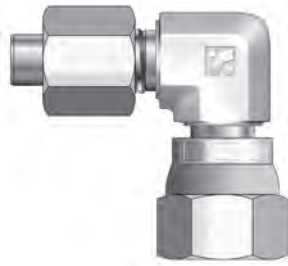
## JFSC Female Swivel Connector



| Part Number  | Tube O.D. |        | T<br>(UNF/UN) | *t<br>(NPT) | D    | h<br>(HEX) | H<br>(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 |

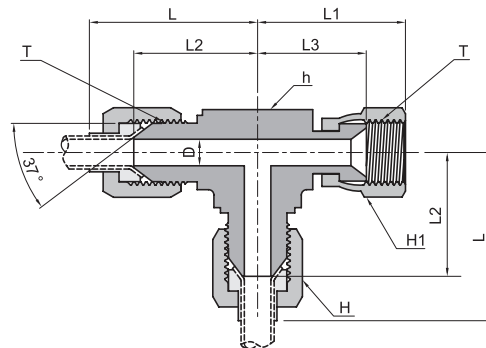
\*ISO Taper Threads are available upon request.

**JSE**  
Swivel Elbow



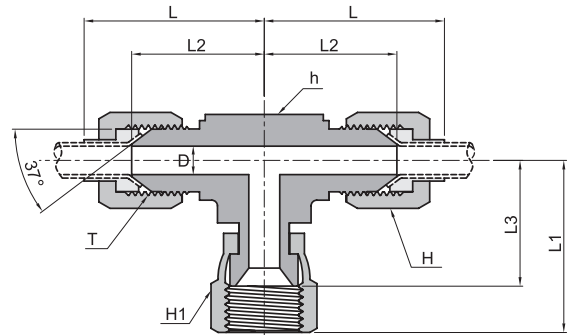
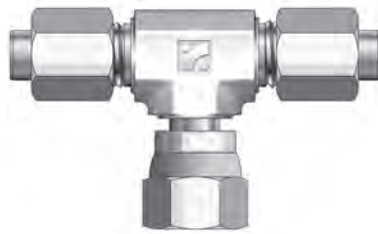
| Part Number | Tube O.D. |        | T<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(HEX) | H1<br>(HEX) | L     | L1   | L2   | L3   |
|-------------|-----------|--------|---------------|------|------------|------------|-------------|-------|------|------|------|
|             | Inch      | Metric |               |      |            |            |             |       |      |      |      |
| 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



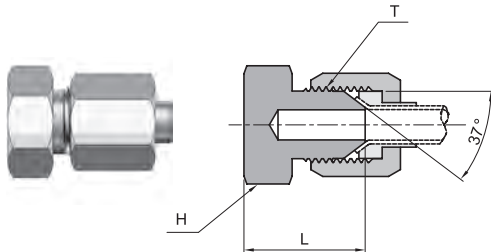
| Part Number | Tube O.D. |        | T<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(HEX) | H1<br>(HEX) | L     | L1   | L2   | L3   |
|-------------|-----------|--------|---------------|------|------------|------------|-------------|-------|------|------|------|
|             | Inch      | Metric |               |      |            |            |             |       |      |      |      |
| 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



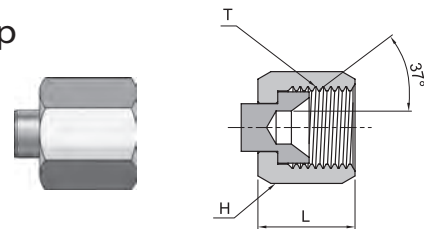
| Part Number | Tube O.D. |        | T<br>(UNF/UN) | D    | h<br>(HEX) | H<br>(HEX) | H1<br>(HEX) | L     | L1   | L2   | L3   |
|-------------|-----------|--------|---------------|------|------------|------------|-------------|-------|------|------|------|
|             | Inch      | Metric |               |      |            |            |             |       |      |      |      |
| 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<br>(UNF/UN) | H<br>(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 |

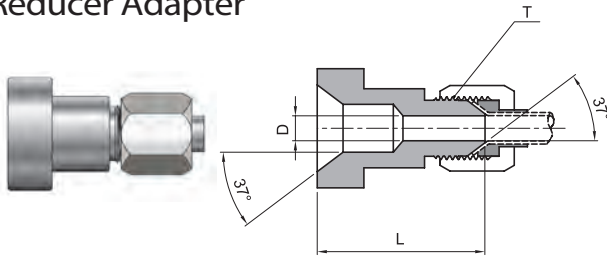
### JC Tube Cap



| Part Number | Tube O.D. |        | T<br>(UNF/UN) | H<br>(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 |

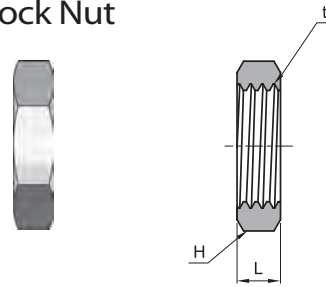


### JRA Reducer Adapter



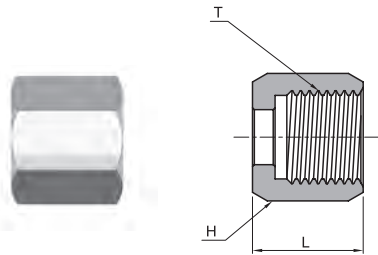
| Part Number | Reducing Tube O.D. | T (UNF/UN)  | D    | L    |
|-------------|--------------------|-------------|------|------|
| JRA-6T-4T   | 3/8 x 1/4          | 7/16 - 20   | 4.4  | 24.6 |
| JRA-8T-4T   | 1/2 x 1/4          | 7/16 - 20   | 4.4  | 25.4 |
| JRA-8T-6T   | 1/2 x 3/8          | 9/16 - 18   | 7.5  | 25.4 |
| JRA-10T-4T  | 5/8 x 1/4          | 7/16 - 20   | 4.4  | 26.2 |
| JRA-10T-6T  | 5/8 x 3/8          | 9/16 - 18   | 7.5  | 26.2 |
| JRA-12T-4T  | 3/4 x 1/4          | 7/16 - 20   | 4.4  | 27.7 |
| JRA-12T-6T  | 3/4 x 3/8          | 9/16 - 18   | 7.5  | 27.7 |
| JRA-12T-8T  | 3/4 x 1/2          | 3/4 - 16    | 10.0 | 30.2 |
| JRA-16T-12T | 1 x 3/4            | 1 1/16 - 12 | 15.5 | 37.3 |
| JRA-20T-12T | 1 1/4 x 3/4        | 1 1/16 - 12 | 15.5 | 38.3 |
| JRA-20T-16T | 1 1/4 x 1          | 1 5/16 - 12 | 21.5 | 40.3 |
| JRA-24T-20T | 1 1/2 x 1 1/4      | 1 5/8 - 12  | 27.5 | 42.9 |

### JLN Bulkhead Lock Nut



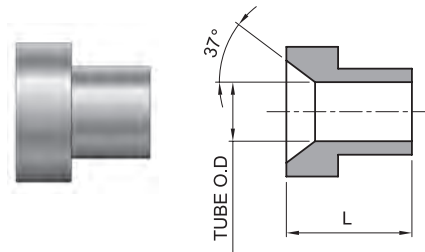
| Part Number | Tube O.D. |        | T (UNF/UN)  | H (HEX) | L    |
|-------------|-----------|--------|-------------|---------|------|
|             | Inch      | Metric |             |         |      |
| JLN-2T      | 1/8       | 3      | 5/16 - 24   | 14.3    | 5.6  |
| JLN-3T      | 3/16      | 4      | 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 |    |      |      |
| 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



## 37° Flared Tube Fittings (SAE J514)