


























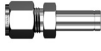






















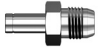



**SUPERLOK Tube Fitting Index**

| UNION   |   |     | TEE   |  |     | O-RING SEAL   |   |     |
|---|---|-----|---|--|-----|---|---|-----|
|    | <b>SU</b><br>Union                                    | 15P |    | <b>SUT</b><br>Union Tee                        | 37P |    | <b>SOSC</b><br>O-Seal Straight Thread Connector | 55P |
|    | <b>SRU</b><br>Reducing Union                          | 16P |    | <b>SRUT</b><br>Reducing Union Tee              | 38P |    | <b>SOPC</b><br>O-Seal Pipe Thread Connector     | 55P |
|    | <b>SBHRU</b><br>Bulkhead Reducing Union               | 17P |    | <b>SMBT</b><br>Male Branch Tee                 | 39P |    | <b>SSMC</b><br>SAE/MS Male Connector            | 56P |
|    | <b>SBHU</b><br>Bulkhead Union                         | 18P |    | <b>SPMBT</b><br>Positionable Male Branch Tee   | 40P | <b>WELD END</b>   |   |     |
| <b>CONNECTOR</b>  |   |     |    | <b>SMRT</b><br>Male Run Tee                    | 41P |    | <b>SPWC</b><br>Male Pipe Weld Connector         | 60P |
|    | <b>SMC</b><br>Male Connector                          | 19P |    | <b>SPMRT</b><br>Positionable Male Run Tee      | 42P |    | <b>SMPWE</b><br>Male Pipe Weld Elbow            | 61P |
|    | <b>SMC-GM</b><br>Male Connector for Metal Gasket Seal | 23P |    | <b>SFBT</b><br>Female Branch Tee               | 43P |    | <b>SSWC</b><br>Tube Socket Weld Connector       | 61P |
|    | <b>SGMC</b><br>Male Connector for Bonded Washer Seal  | 24P |    | <b>SFRT</b><br>Female Run Tee                  | 44P |   | <b>SSWE</b><br>Tube Socket Weld Elbow           | 61P |
|  | <b>SFC</b><br>Female Connector                        | 25P |   | <b>SUC</b><br>Union Cross                      | 45P | <b>PLUG &amp; CAP</b>   |   |     |
|  | <b>SGC</b><br>Gauge Connector                         | 27P | <b>STUB TUBE CONNECTOR</b>  |  |     |  | <b>SP</b><br>Plug                               | 62P |
|  | <b>SMCB</b><br>Bulkhead Male Connector                | 28P |  | <b>SR</b><br>Reducer                           | 46P |  | <b>SC</b><br>Cap                                | 62P |
|  | <b>SFCB</b><br>Bulkhead Female Connector              | 28P |  | <b>SRB</b><br>Bulkhead Reducer                 | 48P | <b>SPARE PART</b>   |   |     |
| <b>ELBOWS</b>   |   |     |  | <b>SMA</b><br>Male Adapter                     | 49P |  | <b>SN</b><br>Nut                                | 63P |
|  | <b>SUE</b><br>Union Elbow                             | 29P |  | <b>SFA</b><br>Female Adapter                   | 51P |  | <b>SFF</b><br>Front Ferrule                     | 63P |
|  | <b>SME</b><br>Male Elbow                              | 30P |  | <b>SPC</b><br>Port Connector                   | 51P |  | <b>SBF</b><br>Back Ferrule                      | 64P |
|  | <b>SHME</b><br>45° Male Elbow                         | 33P |  | <b>SRPC</b><br>Reducing Port Connector         | 52P |  | <b>SFS</b><br>Ferrule Set                       | 64P |
|  | <b>SPHME</b><br>45° Positionable Male Elbow           | 34P |  | <b>SFTC</b><br>Lap Joint Flange Tube Connector | 53P | <b>AN TUBE</b>  |   |     |
|  | <b>SPME</b><br>Positionable Male Elbow                | 34P |  | <b>SAF</b><br>An Flare                         | 53P |  | <b>SI</b><br>Insert                             | 64P |
|  | <b>SFE</b><br>Female Elbow                            | 36P |  | <b>SAU</b><br>An Union                         | 54P |  | <b>SBHR</b><br>Bulkhead Retainer                | 65P |
|   |   |     |  | <b>SAA</b><br>An Adapter                       | 54P |  | <b>SVP</b><br>Vent Protector                    | 65P |

## Ordering Information

Example :  $\frac{\text{SMC}}{1} - \frac{8}{2-1} - \frac{8N}{2-2} - \frac{B}{3}$

### 1. Type of Fitting

Please refer to SUPERLOK tube fitting index on page 8.

**Example :**

- SU** = Union
- SMC** = Male Connector
- SUE** = Union Elbow
- SUT** = Union Tee
- SWC** = Weld connector
- SR** = Reducer
- SAU** = An union
- SP** = Plug

### 2. Size of Fitting

#### 2-1. Tube O.D

|                 |            |      |     |      |     |      |     |     |     |     |     |     |       |       |     |
|-----------------|------------|------|-----|------|-----|------|-----|-----|-----|-----|-----|-----|-------|-------|-----|
| Fractional Tube | OD (Inch)  | 1/16 | 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   |
|                 | Designator | 1    | 2   | 3    | 4   | 5    | 6   | 8   | 10  | 12  | 14  | 16  | 20    | 24    | 32  |
| Metric Tube     | OD (mm)    | 2    | 3   | 4    | 6   | 8    | 10  | 12  | 16  | 20  | 22  | 25  | 28    | 32    | 38  |
|                 | Designator | 2M   | 3M  | 4M   | 6M  | 8M   | 10M | 12M | 16M | 20M | 22M | 25M | 28M   | 32M   | 38M |

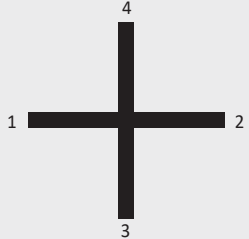
#### 2-2. Pipe Thread Size or tube size

| Size (inch)   | 1/8 | 1/4 | 3/8 | 1/2 | 3/4 | 1   | Standards                              |
|---------------|-----|-----|-----|-----|-----|-----|--|
| ISO Tapered   | 2R  | 4R  | 6R  | 8R  | 12R | 16R | JIS B0203(PT), DIN2999, BSPT           |
| NPT           | 2N  | 4N  | 6N  | 8N  | 12N | 16N | ANSI B1.20.1                           |
| ISO Parallel  | 2G  | 4G  | 6G  | 8G  | 12G | 16G | JIS B0202(PF), ISO 228/1, BSPP         |
| Unified Screw | 2U  | 4U  | 6U  | 8U  | 12U | 16U | AMERICAN STANDARD UNIFIED SCREW THREAD |

### 3. Material

- (Blank)** = 316 Stainless Steel
- 15** = Carbon Steel A105
- 825** = Alloy 825
- 36L** = 316L Stainless Steel
- S45C** = Carbon Steel S45C
- 625** = Alloy 625
- B** = Brass
- M40** = Monel Alloy 400
- 276** = Alloy C-276
- AL** = Aluminum

#### Ordering numbers for Tees and Crosses



- TEE: First indicate the size of the run (1 to 2) and then the size of the branch (3).
- CROSS: First indicate the size of the run (1 to 2) and then the size of the branch (3 to 4).

**Ex. 1) SMBT - 6 - 6N**  
Male Branch Tee, 3/8" x 3/8" NPT, Stainless Steel 316

**Ex. 2) SUC - 8 - M40**  
Union Cross, 1/2"x1/2", Monel 400

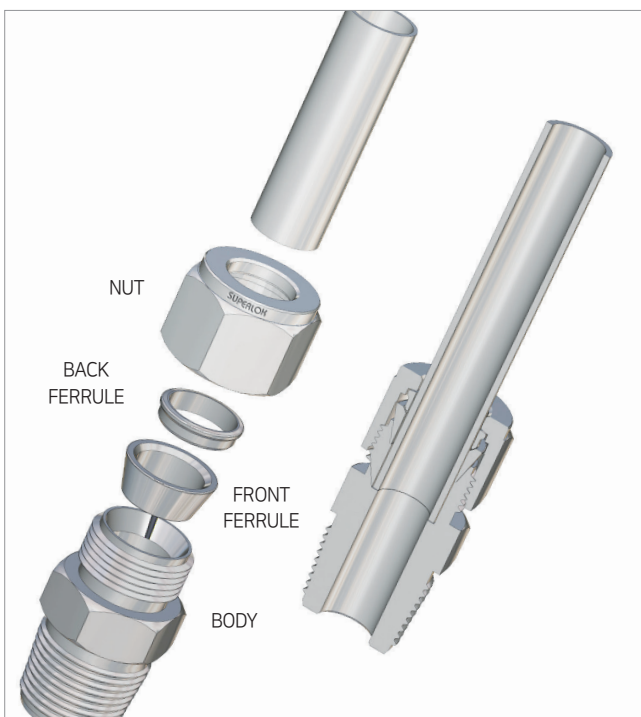
※ For special sizes and configurations, please consult BMT (SUPERLOK) sales representative.

## Features of SUPERLOK Tube Fittings



### Structure of SUPERLOK

SUPERLOK Tube Fittings consist of four precision parts that are manufactured under the strictest of quality control. These four precision parts together make up the BEST Tube Fitting in the world. SUPERLOK Tube Fittings secure leak free connections providing customers with confidence and appreciation of overall reliability of the installed systems.



### SUPERLOK Installation Instruction

#### 1. Installation under 1 inch or 25MM

SUPERLOK Tube Fittings shall be delivered to the customer completely assembled and ready for installation. Turning the nut to the finger tight position is the only requirement before starting the installation. Fittings should not be disassembled before installation to maintain cleanliness and prevent unwanted foreign material from entering the system. Care in the proper selection of tubing also contributes to a safe and reliable installation.

#### Step 1

Insert the tubing into the SUPERLOK Tube Fitting making sure the tubing is bottomed out and is in complete contact with the shoulder of the fitting. Also, the nut should be in the finger-tight position at this time.

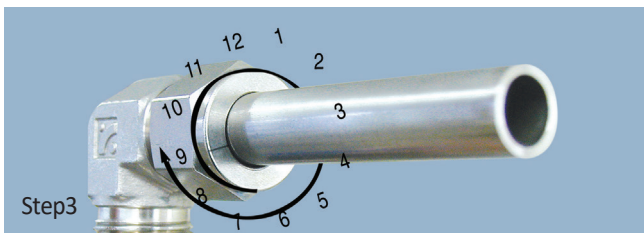
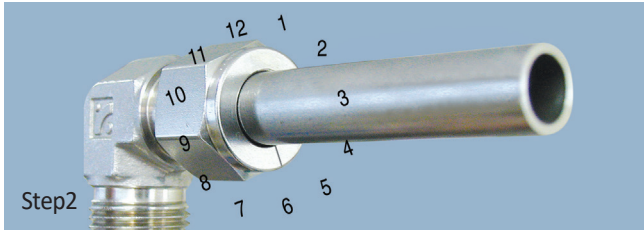
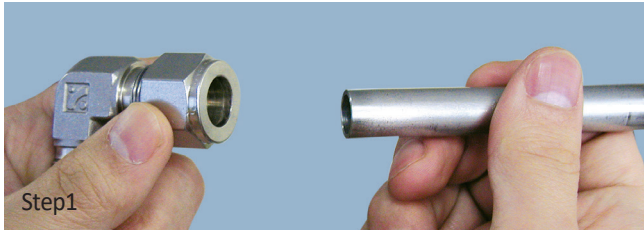
#### Step 2

Before tightening, mark the SUPERLOK nut at the 6 o'clock position.

#### Step 3

Hold the fitting body safely with a back-up wrench and tighten the nut 1-1/4 turns until your mark reaches the 9 o'clock position.

Note: For 1/16", 1/8" and 3/16 inch; 2, 3 and 4 mm tube fittings, tighten the nut 3/4 of a turn to the 3 o'clock position.



**Gaugeability**

On initial installation, the SUPERLOK Inspection Gauge assures the installer or inspector that a fitting has been sufficiently tightened.

Position the SUPERLOK Inspection Gauge next to the gap between the nut and the body.

- If the gauge will not enter the gap, the fitting is sufficiently tightened.
- If the gauge will enter the gap, additional tightening is required.



**2. Installation for high pressure or severe service systems**

Since tubing has different O.D. tolerances, it is important to have a common starting point to take out in dimensional variations. This is done by tightening the fitting slightly until the tubing can not freely rotate in the fitting as it can in the finger-tight position. At this point tighten the nut 1-1/4 turns.

**Safety Considerations on Installations for High Pressure Systems**

1. Make sure the proper tubing wall thickness is selected in accordance with pressure ratings. (See Page 14) Tubing should have a hardness of HRB 80 or less.

2. Do not assemble or disassemble fittings when the system is pressurized.

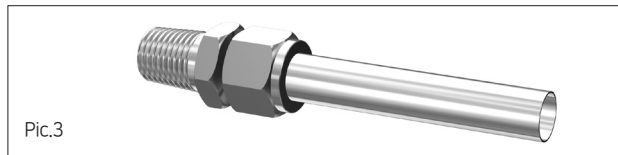
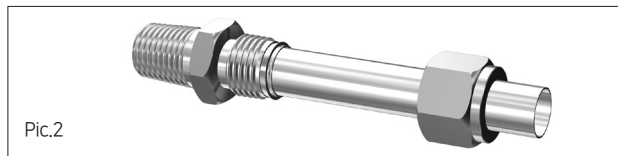
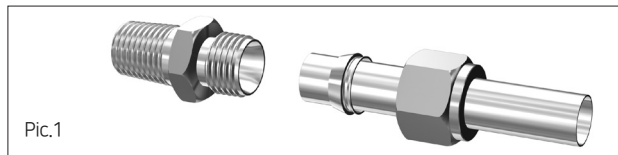
**3. Re-tightening Instructions**

**Step 1**

Pic. 1 shows the fitting in the disconnected position. Insert the tubing with the pre-swaged ferrules into the fitting body making sure the front ferrule is firmly seated as shown in Pic. 2

**Step 2**

Finger-tighten the nut and then with a wrench turn the nut to the original 9 o'clock position. At this point a slight change of resistance will be felt. Tighten the nut slightly more as the change in resistance is felt and the installation is complete as shown in Pic. 3 by tightening slightly more.



**Technical Information**

**Hardness Limitation**

High quality stainless steel tubing that is fully annealed; Seamless or Welded per ASTM A269, A213 or equivalent should be used with SUPERLOK Tube fittings. The tubing must be a maximum hardness of HRB 90 or less on the Rockwell Scale, however HRB 80 is more suitable for bending and offers a greater difference in hardness to the ferrules. This difference in hardness offers more ease in assembly and better interaction between the ferrules and the tubing.

**Compatibility**

SUPERLOK Tube fittings are designed and manufactured to be interchangeable with other Tube Fittings manufactured by other industry leading manufacturers. When required compatibility testing can be performed by an independent third party and the reports can be provided. Please consult BMT(SUPERLOK) sales representative for compatibility

### Gas System Application

SUPERLOK Tube Fittings are appropriate for Gas Systems, but the implementation of certain standards mentioned below should be adhered to just as in other systems.

1. Tubing hardness must be less than that of the ferrules.
2. Tubing should be free of surface imperfections, defects and round in shape.
3. Refer to Table 2 on page 14 for selection of the appropriate wall thickness. (Only shaded areas should be selected for Gas Systems)
4. Tubing ends must be cut squarely and perpendicular to the center-line of the tubing. After the tubing is cut it must be deburred on both the inside and outside with a High quality fully sharpened deburring tool.
5. Follow the SUPERLOK Installation Instructions from pages 10 to 11 in the catalog.
6. Do not attempt to bend the tubing after a fitting has been Installed in a fixed position.
7. Tubing Systems should be installed to allow for adequate expansion and contraction as well as ease of maintenance.

### Material

| Material               | Bar Stock              | Forging   |
|------------------------|------------------------|-----------|
| 316 SS                 | ASTM A479<br>ASTM A276 | ASTM A182 |
| Monel, Alloy 400       | ASTM B164              | ASTM B564 |
| Inconel, Alloy 600     | ASTM B166              | ASTM B564 |
| Hastelloy, Alloy C-276 | ASTM B574              | ASTM B564 |
| Brass                  | ASTM B16<br>ASTM B453  | ASTM B283 |

SUPERLOK tube fitting are available as standard in stainless steel, brass, and alloy material. Straight fittings are machined from cold finished bar stock and shaped bodies are from forgings Specifications for fitting materials are listed above. For special applications, contact your local distributors.

### Maximum Temperature by Materials

|          |         |        |
|----------|---------|--------|
| Aluminum | 400 °F  | 204 °C |
| Copper   | 400 °F  | 204 °C |
| Steel    | 375 °F  | 191 °C |
| SUS304   | 1000 °F | 538 °C |
| SUS316   | 1200 °F | 649 °C |
| MONEL    | 800 °F  | 427 °C |

Please refer to ASME B31.3 concerning the detailed information about the maximum & minimum temperature of various materials.

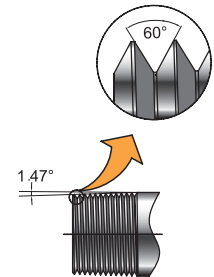
### Vacuum, Cryogenic and High Temperature Applications

SUPERLOK Tube Fittings have been tested in vacuum, Cryogenic and High Temperatures insuring repeatable and reliable performance in the severest of applications.

#### Threads

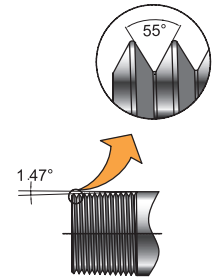
##### 1. NPT (National Pipe Thread)

- Thread angle 60°
- Tapered angle 1° 47'
- Manufactured by the standard of ASME B 1.20.1



##### 2. ISO 7/1 Tapered Thread

- Thread angle 55°
- Tapered angle 1° 47'
- Equivalent to the standard of DIN2999, BS21(BSPT) and JIS B0203(PT).

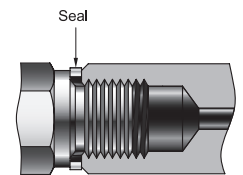


##### 3. ISO 228/1 Parallel Thread

- Thread angle 55°
- Equivalent to the standard of BS 2779 (BSPP), JIS B0202 (PF).
- As the thread in accordance with ISO 228/1 cannot be sealed perfectly, the sealing shall be done by the following method.
- Use a gasket or O-Ring to seal.

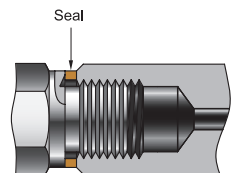
##### ① Bonded Washer Seal

Be sealed by contacting the inclined surface of the hex body of male thread to the surface of the female thread. In case of sealing, a washer which composed of metal and elastic material is located at the center of tapered surface.



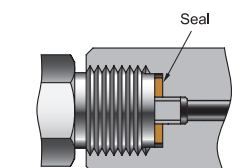
##### ② Metal Gasket Seal

A Metal gasket (generally copper) is sealed between the body of male thread and the surface of female thread.



##### ③ Metal Gasket Seal

This is a method to insert a gasket into the flat surface of thread's inside. The sealing shall be completed with pushing the gasket by male thread surface.



**4. UNF Thread**

- Thread angle 60°
- This is classified into UN, UNC and UNF. The standard is classified by the diameter of thread and the number of threads per inch.
- ASME B 1.1

**Tube Standard Information**

**Tube Selection**

Suitable tubing selection is essential in performance of tubing system. When selecting tubing material, size and wall thickness, customer must consider pressure, flux (flow), temperature, environment and compatibility of system.

**Consideration facts at the selection of tube**

1. Quality of the tube materials & manufacturing method.
2. Thickness and outer diameter of tube.
3. Surface treatment of tube.
4. Hardness of tube.
5. Concentricity of tube.

**Tube Bending**

Tubing must have a minimum straight length before the start of any bend when inserting the tube into a SUPERLOK Tube Fitting. Tubing where the minimum straight length is not adhered can result in leakage and jeopardize the integrity of the system. See the chart below for minimum straight lengths.

**The recommended straight line length of tube in Tube bending**

| Tube OD (inch) | 1/8   | 3/16  | 1/4   | 5/16  | 3/8   | 1/2   | 5/8   | 3/4   | 7/8   | 1     |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| *L(mm)         | 12.70 | 18.25 | 19.05 | 20.63 | 22.20 | 23.81 | 30.16 | 31.75 | 33.30 | 38.10 |

\*L: The straight line length of tubing from the ending part of tubing to the beginning part of bending

**Quality of Tubing Material**

Tubing must be free of surface imperfections and suitable for Bending.

**Carbon steel tubing**

- ASTM A179 or equivalent.
- Carbon steel tubing for an oil pressure usage of high quality, annealed and seamless.
- Maximum hardness : HRB72.

- Tubing must be free from scars and shall be suitable for bending and expansion works.

**Copper tubing**

- ASTM B68, B75 or equivalent.
- Copper tubing of high quality, annealed and seamless.

**Stainless steel tubing**

- ASTM A213, A269 or equivalent.
- Stainless steel tubing of high quality, annealed and seamless. (316, 304, 321, etc.)
- Hardness : below HRB 80.
- Tubing must be free from scars and shall be suitable for bending and expansion works.

**Monel tubing**

- ASTM B165 or equivalent.
- 400 alloy tubing of high quality, annealed and seamless
- Hardness : below HRB 75.
- Tubing must be free from scars and shall be suitable for bending and expansion works.

**A pressure Grade Coefficient of Tubing owing to Temperature Change.**

**Table 1**

| ° F  | ° C | Copper | 304SS | 316SS | Monel |
|------|-----|--------|-------|-------|-------|
| 200  | 93  | 0.80   | 1.00  | 1.00  | 0.88  |
| 400  | 204 | 0.50   | 0.93  | 0.96  | 0.79  |
| 600  | 316 | ---    | 0.82  | 0.85  | 0.79  |
| 800  | 427 | ---    | 0.76  | 0.79  | 0.76  |
| 1000 | 538 | ---    | 0.69  | 0.76  | ---   |
| 1200 | 649 | ---    | 0.30  | 0.37  | ---   |

Multiply the allowable working pressure in Table 2 by the coefficient in Table1 in order to decide allowable pressure at high temperature. ( See page 13, 14 )

**Example**

SS316  
 (3/8" O.D of tube) X (0.049" wall thickness)  
 1200F : 4800 psi X 0.37 = 1776 psi

The applicable operation pressure of SS 316 tubing for wall thickness 3/8" O.D x 0.049" is 1776 psi at 1200F.

**Table 2 Stainless Steel Tubing**

Stainless Steel tubing which is high quality (such as 304, 316, 316L and so on), fully annealed and seamless ASTM A269, A213 or equivalent.

**STAINLESS STEEL FRACTIONAL TUBE**

| Tube OD<br>(inch) | TUBE WALL THICKNESS (inch) |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                   | 0.010                      | 0.012 | 0.014 | 0.016 | 0.020 | 0.028 | 0.035 | 0.049 | 0.065 | 0.083 | 0.095 | 0.109 | 0.120 |
| 1/16              | 5600                       | 6800  | 8100  | 9400  | 12000 |       |       |       |       |       |       |       |       |
| 1/8               |                            |       |       |       |       | 8500  | 10900 |       |       |       |       |       |       |
| 3/16              |                            |       |       |       |       | 5400  | 7000  | 10200 |       |       |       |       |       |
| 1/4               |                            |       |       |       |       | 4000  | 5100  | 7500  | 10200 |       |       |       |       |
| 5/16              |                            |       |       |       |       |       | 4000  | 5800  | 8000  |       |       |       |       |
| 3/8               |                            |       |       |       |       |       | 3300  | 4800  | 6500  |       |       |       |       |
| 1/2               |                            |       |       |       |       |       | 2600  | 3700  | 5100  | 6700  |       |       |       |
| 5/8               |                            |       |       |       |       |       |       | 2900  | 4000  | 5200  | 6000  |       |       |
| 3/4               |                            |       |       |       |       |       |       | 2400  | 3300  | 4200  | 4900  | 5800  |       |
| 7/8               |                            |       |       |       |       |       |       | 2000  | 2800  | 3600  | 4200  | 4800  |       |
| 1                 |                            |       |       |       |       |       |       |       | 2400  | 3100  | 3600  | 4200  | 4700  |

\* 가스용 Tubing working pressure(psi) / 허용상용압력(psi)

**STAINLESS STEEL METRIC TUBE**

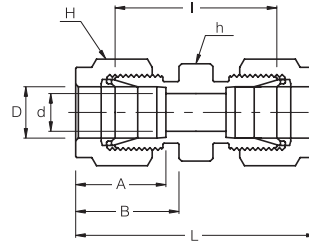
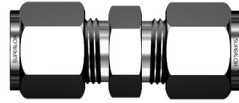
| Tube OD<br>(mm) | TUBE WALL THICKNESS (mm) |       |       |       |       |       |      |      |      |      |      |      |      |
|-----------------|--------------------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|
|                 | 0.71                     | 0.89  | 1.00  | 1.25  | 1.50  | 1.65  | 2.00 | 2.11 | 2.41 | 2.50 | 2.77 | 3.00 | 3.05 |
| 3               | 10800                    | 13800 | 15300 |       |       |       |      |      |      |      |      |      |      |
| 4               | 7900                     | 10100 | 11500 | 14400 |       |       |      |      |      |      |      |      |      |
| 6               | 5000                     | 6500  | 7400  | 9400  | 11500 | 12700 |      |      |      |      |      |      |      |
| 8               |                          | 4700  | 5800  | 6800  | 8400  | 9300  |      |      |      |      |      |      |      |
| 10              |                          | 3700  | 4200  | 5300  | 6500  | 7300  |      |      |      |      |      |      |      |
| 12              |                          | 3000  | 3400  | 4400  | 5300  | 5900  | 6800 | 7200 |      |      |      |      |      |
| 16              |                          |       | 2500  | 3200  | 3900  | 4300  | 5300 | 5700 | 6600 | 6800 |      |      |      |
| 18              |                          |       |       | 2800  | 3400  | 3800  | 4700 | 5000 | 5800 | 6000 | 6700 |      |      |
| 20              |                          |       |       | 2500  | 3000  | 3400  | 4200 | 4400 | 5100 | 5300 | 6000 |      |      |
| 22              |                          |       |       | 2300  | 2800  | 3000  | 3800 | 4000 | 4600 | 4800 | 5400 |      |      |
| 25              |                          |       |       | 2000  | 2400  | 2700  | 3300 | 3500 | 4000 | 4200 | 4700 | 5100 | 5200 |

\* 가스용 Tubing working pressure(psi) / 허용상용압력(psi)

Allowable stress value between -20°F and 100°F (-28.9°C ~ 37.8°C) is 19,500 psi  
 Safety factor is 4 (Ultimate tensile strength is 75,000 psi)

- The above data are based on the minimum wall thickness and the maximum O. D. allowed by and under the standard of ASTM A269.
- The dimensions are not considered to erosion or corrosion.

# SU Union



## Connects Fractional Tubes

| Part No. | Tube OD<br>D (inch) | d<br>Min | Width Across Flat |          | A     | B     | I     | L      |
|----------|---------------------|----------|-------------------|----------|-------|-------|-------|--------|
|          |                     |          | h (inch)          | H (inch) |       |       |       |        |
| SU - 1   | 1/16                | 1.27     | 5/16              | 5/16     | 8.63  | 10.92 | 17.52 | 25.15  |
| SU - 2   | 1/8                 | 2.28     | 7/16              | 7/16     | 12.70 | 15.24 | 22.35 | 35.56  |
| SU - 3   | 3/16                | 3.04     | 7/16              | 1/2      | 13.71 | 16.00 | 24.13 | 37.33  |
| SU - 4   | 1/4                 | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 26.16 | 40.89  |
| SU - 5   | 5/16                | 6.35     | 9/16              | 5/8      | 16.25 | 18.54 | 28.19 | 42.92  |
| SU - 6   | 3/8                 | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 30.22 | 44.95  |
| SU - 8   | 1/2                 | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 30.98 | 51.30  |
| SU - 10  | 5/8                 | 12.70    | 15/16             | 1        | 24.38 | 21.84 | 31.75 | 52.07  |
| SU - 12  | 3/4                 | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 33.27 | 53.59  |
| SU - 14  | 7/8                 | 18.28    | 1-3/16            | 1-1/4    | 25.90 | 21.84 | 34.79 | 55.11  |
| SU - 16  | 1                   | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 40.38 | 64.77  |
| SU - 20  | 1-1/4               | 27.69    | 1-3/4             | 1-7/8    | 41.15 | 38.86 | 48.00 | 92.20  |
| SU - 24  | 1-1/2               | 34.04    | 2-1/8             | 2-1/4    | 50.04 | 45.21 | 53.59 | 107.95 |
| SU - 32  | 2                   | 45.97    | 2-3/4             | 3        | 67.56 | 62.74 | 74.68 | 149.35 |

## Connects Metric Tubes

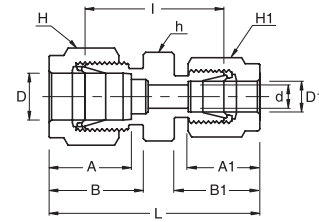
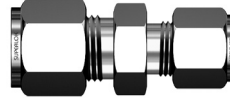
| Part No. | Tube OD<br>D | d<br>Min | Width Across Flat |    | A    | B    | I    | L    |
|----------|--------------|----------|-------------------|----|------|------|------|------|
|          |              |          | h                 | H  |      |      |      |      |
| SU - 2M  | 2            | 1.7      | 12                | 12 | 12.9 | 15.3 | 22.4 | 35.6 |
| SU - 3M  | 3            | 2.4      | 12                | 12 | 12.9 | 15.3 | 22.1 | 35.3 |
| SU - 4M  | 4            | 2.4      | 12                | 12 | 13.7 | 16.1 | 24.1 | 37.3 |
| SU - 6M  | 6            | 4.8      | 14                | 14 | 15.3 | 17.7 | 26.2 | 41.0 |
| SU - 8M  | 8            | 6.4      | 15                | 16 | 16.2 | 18.6 | 28.2 | 43.2 |
| SU - 10M | 10           | 7.9      | 18                | 19 | 17.2 | 19.5 | 31.0 | 46.2 |
| SU - 12M | 12           | 9.5      | 22                | 22 | 22.8 | 22.0 | 31.0 | 51.2 |
| SU - 15M | 15           | 11.9     | 24                | 25 | 24.4 | 22.0 | 31.8 | 52.0 |
| SU - 16M | 16           | 12.7     | 24                | 25 | 24.4 | 22.0 | 31.8 | 52.0 |
| SU - 18M | 18           | 15.1     | 27                | 30 | 24.4 | 22.0 | 33.3 | 53.5 |
| SU - 20M | 20           | 15.9     | 30                | 32 | 26.0 | 22.0 | 34.8 | 55.0 |
| SU - 22M | 22           | 18.3     | 30                | 32 | 26.0 | 22.0 | 34.8 | 55.0 |
| SU - 25M | 25           | 21.8     | 35                | 38 | 31.3 | 26.5 | 40.4 | 65.0 |

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 - Sizes, pressure classes, and end connections not listed are available upon request.  
 - Dimensions shown with SUPERLOK nuts finger-tight, where applicable.



# SRU

## Reducing Union



### Connects Fractional Tubes

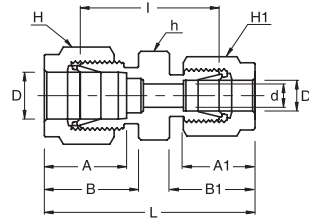
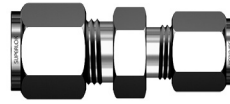
| Part No.     | Tube OD  |           | d Min | Width Across Flat |          |           | A     | A1    | B     | B1    | I     | L     |
|--------------|----------|-----------|-------|-------------------|----------|-----------|-------|-------|-------|-------|-------|-------|
|              | D (inch) | D1 (inch) |       | h (inch)          | H (inch) | H1 (inch) |       |       |       |       |       |       |
| SRU - 2 - 1  | 1/8      | 1/16      | 1.27  | 7/16              | 7/16     | 5/16      | 12.7  | 8.63  | 15.24 | 10.92 | 20.60 | 31.00 |
| SRU - 3 - 2  | 3/16     | 1/8       | 2.28  | 7/16              | 1/2      | 7/16      | 13.71 | 12.70 | 16.00 | 15.24 | 23.36 | 36.57 |
| SRU - 4 - 2  | 1/4      | 1/8       | 2.28  | 1/2               | 9/16     | 7/16      | 15.24 | 12.70 | 17.78 | 15.24 | 24.63 | 38.60 |
| SRU - 4 - 3  | 1/4      | 3/16      | 3.04  | 1/2               | 9/16     | 1/2       | 15.24 | 13.71 | 17.78 | 16.00 | 25.40 | 39.37 |
| SRU - 5 - 2  | 5/16     | 1/8       | 2.28  | 9/16              | 5/8      | 7/16      | 16.25 | 12.70 | 18.54 | 15.24 | 25.90 | 39.87 |
| SRU - 5 - 4  | 5/16     | 1/4       | 4.82  | 9/16              | 5/8      | 9/16      | 16.25 | 15.24 | 18.54 | 17.78 | 27.43 | 42.16 |
| SRU - 6 - 2  | 3/8      | 1/8       | 2.28  | 5/8               | 11/16    | 7/16      | 16.76 | 12.70 | 19.30 | 15.24 | 26.92 | 40.89 |
| SRU - 6 - 4  | 3/8      | 1/4       | 4.82  | 5/8               | 11/16    | 9/16      | 16.76 | 15.24 | 19.30 | 17.78 | 28.44 | 43.18 |
| SRU - 6 - 5  | 3/8      | 5/16      | 6.35  | 5/8               | 11/16    | 5/8       | 16.76 | 16.25 | 19.30 | 18.54 | 29.46 | 44.19 |
| SRU - 8 - 2  | 1/2      | 1/8       | 2.28  | 13/16             | 7/8      | 7/16      | 22.86 | 12.70 | 21.84 | 15.24 | 28.44 | 45.21 |
| SRU - 8 - 4  | 1/2      | 1/4       | 4.82  | 13/16             | 7/8      | 9/16      | 22.86 | 15.24 | 21.84 | 17.78 | 29.46 | 46.99 |
| SRU - 8 - 6  | 1/2      | 3/8       | 7.11  | 13/16             | 7/8      | 11/16     | 22.86 | 16.76 | 21.84 | 19.30 | 30.98 | 48.51 |
| SRU -10 - 6  | 5/8      | 3/8       | 7.11  | 15/16             | 1        | 11/16     | 24.38 | 16.76 | 21.84 | 19.30 | 31.75 | 49.27 |
| SRU -10 - 8  | 5/8      | 1/2       | 10.41 | 15/16             | 1        | 7/8       | 24.38 | 22.86 | 21.84 | 21.84 | 31.75 | 52.07 |
| SRU -12 - 4  | 3/4      | 1/4       | 4.82  | 1-1/16            | 1-1/8    | 9/16      | 24.38 | 15.24 | 21.84 | 17.78 | 31.75 | 49.27 |
| SRU -12 - 6  | 3/4      | 3/8       | 7.11  | 1-1/16            | 1-1/8    | 11/16     | 24.38 | 16.76 | 21.84 | 19.30 | 33.27 | 50.80 |
| SRU -12 - 8  | 3/4      | 1/2       | 10.41 | 1-1/16            | 1-1/8    | 7/8       | 24.38 | 22.86 | 21.84 | 21.84 | 33.27 | 53.59 |
| SRU -12 - 10 | 3/4      | 5/8       | 12.70 | 1-1/16            | 1-1/8    | 1         | 24.38 | 24.38 | 21.84 | 21.84 | 33.27 | 53.59 |
| SRU -16 - 8  | 1        | 1/2       | 10.41 | 1-3/8             | 1-1/2    | 7/8       | 31.24 | 22.86 | 26.41 | 21.84 | 39.50 | 63.24 |
| SRU -16 - 12 | 1        | 3/4       | 15.74 | 1-3/8             | 1-1/2    | 1-1/8     | 31.24 | 24.38 | 26.41 | 21.84 | 39.00 | 62.73 |

### Connects Metric Tubes

| Part No.        | Tube OD |    | d Min | Width Across Flat |    |    | A    | A1   | B    | B1   | I    | L    |
|-----------------|---------|----|-------|-------------------|----|----|------|------|------|------|------|------|
|                 | D       | D1 |       | h                 | H  | H1 |      |      |      |      |      |      |
| SRU - 6M - 3M   | 6       | 3  | 2.4   | 14                | 14 | 12 | 15.3 | 12.9 | 17.7 | 15.3 | 24.6 | 38.6 |
| SRU - 6M - 4M   | 6       | 4  | 2.4   | 14                | 14 | 12 | 15.3 | 13.7 | 17.7 | 16.1 | 25.4 | 39.4 |
| SRU - 8M - 6M   | 8       | 6  | 4.8   | 15                | 16 | 14 | 16.2 | 15.3 | 18.6 | 17.7 | 27.4 | 42.3 |
| SRU - 10M - 6M  | 10      | 6  | 4.8   | 18                | 19 | 14 | 17.2 | 15.3 | 19.5 | 17.7 | 29.5 | 44.5 |
| SRU - 10M - 8M  | 10      | 8  | 6.4   | 18                | 19 | 16 | 17.2 | 16.2 | 19.5 | 18.6 | 30.0 | 45.1 |
| SRU - 12M - 6M  | 12      | 6  | 4.8   | 22                | 22 | 14 | 22.8 | 15.3 | 22.0 | 17.7 | 29.5 | 47.0 |
| SRU - 12M - 8M  | 12      | 8  | 6.4   | 22                | 22 | 16 | 22.8 | 16.2 | 22.0 | 18.6 | 30.2 | 47.8 |
| SRU - 12M - 10M | 12      | 10 | 7.9   | 22                | 22 | 19 | 22.8 | 17.2 | 22.0 | 19.5 | 31.0 | 48.7 |
| SRU - 16M - 12M | 16      | 12 | 9.5   | 24                | 25 | 22 | 24.4 | 22.8 | 22.0 | 22.0 | 31.8 | 52.0 |
| SRU - 25M - 18M | 25      | 18 | 15.1  | 35                | 38 | 30 | 31.3 | 24.4 | 26.5 | 22.0 | 38.6 | 61.0 |
| SRU - 25M - 20M | 25      | 20 | 15.9  | 35                | 38 | 32 | 31.3 | 26.0 | 26.5 | 22.0 | 39.9 | 62.3 |

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- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

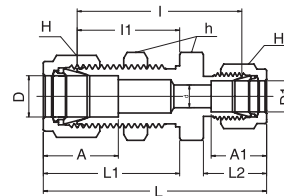
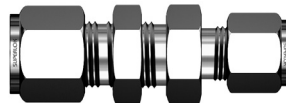
## SRU Reducing Union



### Connects Fractional Tubes To Metric Tubes

| Part No.       | Tube OD   |    | d<br>Min | Width Across Flat |    |      | A    | A1   | B    | B1   | I    | L    |
|----------------|-----------|----|----------|-------------------|----|------|------|------|------|------|------|------|
|                | D1 (inch) | D  |          | h                 | H  | H    |      |      |      |      |      |      |
| SRU - 2 - 3M   | 1/8       | 3  | 2.4      | 12                | 12 | 11.1 | 12.9 | 12.8 | 15.3 | 15.2 | 22.1 | 35.2 |
| SRU - 2 - 4M   | 1/8       | 4  | 2.4      | 12                | 12 | 11.1 | 13.7 | 12.8 | 16.1 | 15.2 | 23.4 | 36.5 |
| SRU - 4 - 4M   | 1/4       | 4  | 2.4      | 14                | 12 | 14.3 | 13.7 | 15.3 | 16.1 | 17.7 | 25.4 | 39.4 |
| SRU - 2 - 6M   | 1/8       | 6  | 2.4      | 14                | 14 | 11.1 | 15.3 | 12.8 | 17.7 | 15.2 | 24.6 | 38.5 |
| SRU - 4 - 6M   | 1/4       | 6  | 4.8      | 14                | 14 | 14.3 | 15.3 | 15.3 | 17.7 | 17.7 | 26.2 | 41.0 |
| SRU - 5 - 6M   | 5/16      | 6  | 4.8      | 14                | 14 | 15.9 | 15.3 | 16.2 | 17.7 | 18.6 | 27.4 | 42.3 |
| SRU - 4 - 8M   | 1/4       | 8  | 4.8      | 15                | 16 | 14.3 | 16.2 | 15.3 | 18.6 | 17.7 | 27.4 | 42.3 |
| SRU - 2 - 10M  | 1/8       | 10 | 2.4      | 18                | 19 | 11.1 | 17.2 | 12.8 | 19.5 | 15.2 | 27.7 | 41.8 |
| SRU - 4 - 10M  | 1/4       | 10 | 4.8      | 18                | 19 | 14.3 | 17.2 | 15.3 | 19.5 | 17.7 | 29.5 | 44.5 |
| SRU - 5 - 10M  | 5/16      | 10 | 6.4      | 18                | 19 | 15.9 | 17.2 | 16.2 | 19.5 | 18.6 | 30.0 | 45.1 |
| SRU - 6 - 10M  | 3/8       | 10 | 7.1      | 18                | 19 | 17.5 | 17.2 | 16.9 | 19.5 | 19.2 | 31.0 | 45.9 |
| SRU - 5 - 12M  | 5/16      | 12 | 6.4      | 22                | 22 | 15.9 | 22.8 | 16.2 | 22.0 | 18.6 | 30.2 | 47.8 |
| SRU - 6 - 12M  | 3/8       | 12 | 7.1      | 22                | 22 | 17.5 | 22.8 | 16.9 | 22.0 | 19.2 | 31.0 | 48.4 |
| SRU - 8 - 12M  | 1/2       | 12 | 9.5      | 22                | 22 | 22.2 | 22.8 | 22.8 | 22.0 | 22.0 | 31.0 | 51.2 |
| SRU - 8 - 15M  | 1/2       | 15 | 10.3     | 24                | 25 | 22.2 | 24.4 | 22.8 | 22.0 | 22.0 | 31.8 | 52.0 |
| SRU - 10 - 16M | 5/8       | 16 | 12.7     | 24                | 25 | 25.4 | 24.4 | 24.4 | 22.0 | 22.0 | 31.8 | 52.0 |
| SRU - 12 - 18M | 3/4       | 18 | 15.1     | 27                | 30 | 28.6 | 24.4 | 24.4 | 22.0 | 22.0 | 33.3 | 53.5 |
| SRU - 12 - 20M | 3/4       | 20 | 15.9     | 30                | 32 | 28.6 | 26.0 | 24.4 | 22.0 | 22.0 | 34.8 | 54.9 |
| SRU - 16 - 20M | 1         | 20 | 15.9     | 35                | 32 | 38.1 | 26.0 | 31.2 | 22.0 | 26.4 | 40.4 | 62.8 |
| SRU - 16 - 25M | 1         | 25 | 21.8     | 35                | 38 | 38.1 | 31.3 | 31.3 | 26.5 | 26.5 | 40.4 | 65.0 |

## SBHRU Bulkhead Reducing Union



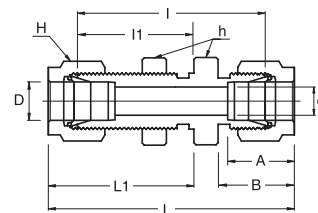
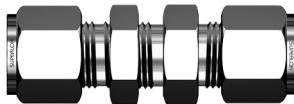
### Connects Fractional Tubes

| Part No.      | Tube OD  |           | d<br>Min | Width Across Flat |          |           | A     | A1    | I     | I1    | L     | L1    | L2    | Panel<br>Hole<br>Drill Size | Panel<br>Max.<br>Thickness |
|---------------|----------|-----------|----------|-------------------|----------|-----------|-------|-------|-------|-------|-------|-------|-------|-----------------------------|----------------------------|
|               | D (inch) | D1 (inch) |          | h (inch)          | H (inch) | H1 (inch) |       |       |       |       |       |       |       |                             |                            |
| SBHRU - 4 - 2 | 1/4      | 1/8       | 2.28     | 5/8               | 9/16     | 7/16      | 15.24 | 12.70 | 41.14 | 26.16 | 55.11 | 33.52 | 15.24 | 11.50                       | 10.16                      |
| SBHRU - 6 - 4 | 3/8      | 1/4       | 4.82     | 3/4               | 11/16    | 9/16      | 16.76 | 15.24 | 45.97 | 29.46 | 60.70 | 36.57 | 17.78 | 14.68                       | 11.17                      |
| SBHRU - 8 - 4 | 1/2      | 1/4       | 4.82     | 15/16             | 7/8      | 9/16      | 22.86 | 15.24 | 49.27 | 31.75 | 66.80 | 41.91 | 17.78 | 19.44                       | 12.70                      |

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# SBHU

## Bulkhead Union



### Connects Fractional Tubes

| Part No.  | Tube O.D. D (inch) | d Min | Width Across Flat |          | A     | B     | I     | I1    | L     | L1    | Panel Hole Drill Size | Panel Max. Thickness |
|-----------|--------------------|-------|-------------------|----------|-------|-------|-------|-------|-------|-------|-----------------------|----------------------|
|           |                    |       | h (inch)          | H (inch) |       |       |       |       |       |       |                       |                      |
| SBHU - 1  | 1/16               | 1.27  | 5/16              | 5/16     | 8.63  | 10.92 | 23.87 | 13.46 | 31.50 | 17.27 | 5.16                  | 3.05                 |
| SBHU - 2  | 1/8                | 2.28  | 1/2               | 7/16     | 12.70 | 15.24 | 38.10 | 24.63 | 51.30 | 31.24 | 8.33                  | 12.70                |
| SBHU - 3  | 3/16               | 3.04  | 9/16              | 1/2      | 13.71 | 16.00 | 40.38 | 25.40 | 53.59 | 32.00 | 9.92                  | 12.70                |
| SBHU - 4  | 1/4                | 4.82  | 5/8               | 9/16     | 15.24 | 17.78 | 42.92 | 26.16 | 57.65 | 33.52 | 11.50                 | 10.16                |
| SBHU - 5  | 5/16               | 6.35  | 11/16             | 5/8      | 16.25 | 18.54 | 45.97 | 28.44 | 60.70 | 35.81 | 13.09                 | 11.17                |
| SBHU - 6  | 3/8                | 7.11  | 3/4               | 11/16    | 16.76 | 19.30 | 47.49 | 29.46 | 62.23 | 36.83 | 14.68                 | 11.17                |
| SBHU - 8  | 1/2                | 10.41 | 15/16             | 7/8      | 22.86 | 21.84 | 50.80 | 31.75 | 71.12 | 41.91 | 19.44                 | 12.70                |
| SBHU - 10 | 5/8                | 12.70 | 1-1/16            | 1        | 24.38 | 21.84 | 52.32 | 32.51 | 72.64 | 42.67 | 22.62                 | 12.70                |
| SBHU - 12 | 3/4                | 15.74 | 1-3/16            | 1-1/8    | 24.38 | 21.84 | 58.67 | 37.33 | 78.99 | 47.49 | 25.79                 | 16.76                |
| SBHU - 14 | 7/8                | 18.28 | 1-3/8             | 1-1/4    | 25.90 | 21.84 | 64.26 | 42.92 | 84.58 | 53.08 | 28.97                 | 19.05                |
| SBHU - 16 | 1                  | 22.35 | 1-5/8             | 1-1/2    | 31.24 | 26.41 | 71.37 | 45.21 | 95.75 | 57.40 | 33.73                 | 19.05                |

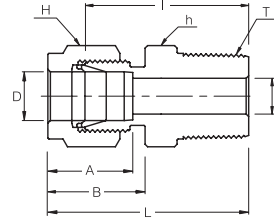
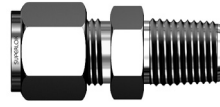
### Connects Metric Tubes

| Part No.   | Tube O.D. D | d Min | Width Across Flat |      |    | A    | B    | I    | I1   | L    | L1   | Panel Hole Drill Size | Panel Max. Thickness |
|------------|-------------|-------|-------------------|------|----|------|------|------|------|------|------|-----------------------|----------------------|
|            |             |       | h                 | h1*  | H  |      |      |      |      |      |      |                       |                      |
| SBHU - 3M  | 3           | 2.4   | 14                | 12.7 | 12 | 12.9 | 15.3 | 38.1 | 24.6 | 51.3 | 31.2 | 8.3                   | 12.7                 |
| SBHU - 4M  | 4           | 2.4   | 14                | 14.3 | 12 | 13.7 | 16.1 | 40.4 | 25.4 | 53.6 | 32.0 | 9.9                   | 12.7                 |
| SBHU - 6M  | 6           | 4.8   | 16                | 15.9 | 14 | 15.3 | 17.7 | 42.9 | 26.2 | 57.7 | 33.6 | 11.5                  | 10.2                 |
| SBHU - 8M  | 8           | 6.4   | 18                | 17.5 | 16 | 16.2 | 18.6 | 46.0 | 28.6 | 61.0 | 36.1 | 13.1                  | 11.2                 |
| SBHU - 10M | 10          | 7.9   | 22                | 22.0 | 19 | 17.2 | 19.5 | 48.5 | 29.4 | 63.7 | 37.0 | 16.2                  | 11.2                 |
| SBHU - 12M | 12          | 9.5   | 24                | 23.8 | 22 | 22.8 | 22.0 | 50.8 | 31.8 | 71.0 | 41.9 | 19.5                  | 12.7                 |
| SBHU - 15M | 15          | 11.9  | 27                | 27.0 | 25 | 24.4 | 22.0 | 52.3 | 32.5 | 72.5 | 42.6 | 22.8                  | 12.7                 |
| SBHU - 16M | 16          | 12.7  | 27                | 27.0 | 25 | 24.4 | 22.0 | 52.3 | 32.5 | 72.5 | 42.6 | 22.8                  | 12.7                 |
| SBHU - 18M | 18          | 15.1  | 30                | 30.0 | 30 | 24.4 | 22.0 | 58.7 | 37.3 | 78.9 | 47.4 | 26.0                  | 16.8                 |
| SBHU - 20M | 20          | 15.9  | 35                | 35.0 | 32 | 26.0 | 22.0 | 64.3 | 42.9 | 84.5 | 53.0 | 29.0                  | 17.0                 |
| SBHU - 22M | 22          | 18.3  | 35                | 35.0 | 32 | 26.0 | 22.0 | 64.3 | 42.9 | 84.5 | 53.0 | 29.0                  | 19.1                 |
| SBHU - 25M | 25          | 21.8  | 41.3              | 41.3 | 38 | 31.3 | 26.5 | 71.4 | 45.2 | 95.9 | 57.5 | 33.7                  | 19.1                 |

h1\* : Metric Tubes Bulkhead Hexagon application only

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

**SMC**  
Male Connector



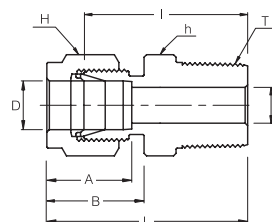
**Connects Fractional Tubes To Female NPT Thread**

| Part No.       | Tube OD<br>D (inch) | T<br>(NPT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L      |
|----------------|---------------------|------------|----------|-------------------|----------|-------|-------|-------|--------|
|                |                     |            |          | h (inch)          | H (inch) |       |       |       |        |
| SMC - 1 - 1N   | 1/16                | 1/16       | 1.27     | 5/16              | 5/16     | 8.63  | 10.92 | 20.00 | 23.83  |
| SMC - 1 - 2N   | 1/16                | 1/8        | 1.27     | 7/16              | 7/16     | 8.63  | 10.92 | 22.35 | 26.23  |
| SMC - 2 - 2N   | 1/8                 | 1/8        | 2.28     | 7/16              | 7/16     | 12.70 | 15.24 | 23.87 | 30.48  |
| SMC - 2 - 4N   | 1/8                 | 1/4        | 2.28     | 9/16              | 7/16     | 12.70 | 15.24 | 28.95 | 35.56  |
| SMC - 2 - 6N   | 1/8                 | 3/8        | 2.28     | 11/16             | 7/16     | 12.70 | 15.24 | 29.21 | 35.81  |
| SMC - 2 - 8N   | 1/8                 | 1/2        | 2.28     | 7/8               | 7/16     | 12.70 | 15.24 | 35.56 | 42.16  |
| SMC - 3 - 2N   | 3/16                | 1/8        | 3.04     | 7/16              | 1/2      | 13.71 | 16.00 | 24.63 | 31.24  |
| SMC - 3 - 4N   | 3/16                | 1/4        | 3.04     | 9/16              | 1/2      | 13.71 | 16.00 | 29.71 | 36.32  |
| SMC - 4 - 2N   | 1/4                 | 1/8        | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 25.40 | 32.76  |
| SMC - 4 - 4N   | 1/4                 | 1/4        | 4.82     | 9/16              | 9/16     | 15.24 | 17.78 | 30.48 | 37.84  |
| SMC - 4 - 6N   | 1/4                 | 3/8        | 4.82     | 11/16             | 9/16     | 15.24 | 17.78 | 30.98 | 38.35  |
| SMC - 4 - 8N   | 1/4                 | 1/2        | 4.82     | 7/8               | 9/16     | 15.24 | 17.78 | 37.33 | 44.70  |
| SMC - 4 - 12N  | 1/4                 | 3/4        | 4.82     | 1-1/16            | 9/16     | 15.24 | 17.78 | 38.86 | 46.22  |
| SMC - 5 - 2N   | 5/16                | 1/8        | 4.82     | 9/16              | 5/8      | 16.25 | 18.54 | 26.67 | 34.03  |
| SMC - 5 - 4N   | 5/16                | 1/4        | 6.35     | 9/16              | 5/8      | 16.25 | 18.54 | 31.24 | 38.60  |
| SMC - 5 - 6N   | 5/16                | 3/8        | 6.35     | 11/16             | 5/8      | 16.25 | 18.54 | 31.75 | 39.11  |
| SMC - 6 - 2N   | 3/8                 | 1/8        | 4.82     | 5/8               | 11/16    | 16.76 | 19.30 | 27.94 | 35.30  |
| SMC - 6 - 4N   | 3/8                 | 1/4        | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 32.51 | 39.87  |
| SMC - 6 - 6N   | 3/8                 | 3/8        | 7.11     | 11/16             | 11/16    | 16.76 | 19.30 | 32.51 | 39.87  |
| SMC - 6 - 8N   | 3/8                 | 1/2        | 7.11     | 7/8               | 11/16    | 16.76 | 19.30 | 38.86 | 46.22  |
| SMC - 6 - 12N  | 3/8                 | 3/4        | 7.11     | 1-1/16            | 11/16    | 16.76 | 19.30 | 40.38 | 47.75  |
| SMC - 8 - 2N   | 1/2                 | 1/8        | 4.82     | 13/16             | 7/8      | 22.86 | 21.84 | 28.70 | 38.86  |
| SMC - 8 - 4N   | 1/2                 | 1/4        | 7.11     | 13/16             | 7/8      | 22.86 | 21.84 | 33.27 | 43.43  |
| SMC - 8 - 6N   | 1/2                 | 3/8        | 9.65     | 13/16             | 7/8      | 22.86 | 21.84 | 33.27 | 43.43  |
| SMC - 8 - 8N   | 1/2                 | 1/2        | 10.41    | 7/8               | 7/8      | 22.86 | 21.84 | 38.86 | 49.02  |
| SMC - 8 - 12N  | 1/2                 | 3/4        | 10.41    | 1-1/16            | 7/8      | 22.86 | 21.84 | 40.38 | 50.54  |
| SMC - 8 - 16N  | 1/2                 | 1          | 10.41    | 1-3/8             | 7/8      | 22.86 | 21.84 | 46.99 | 57.15  |
| SMC - 10 - 6N  | 5/8                 | 3/8        | 9.65     | 15/16             | 1        | 24.38 | 21.84 | 34.03 | 44.19  |
| SMC - 10 - 8N  | 5/8                 | 1/2        | 11.93    | 15/16             | 1        | 24.38 | 21.84 | 38.86 | 49.02  |
| SMC - 10 - 12N | 5/8                 | 3/4        | 12.70    | 1-1/16            | 1        | 24.38 | 21.84 | 40.38 | 50.54  |
| SMC - 12 - 8N  | 3/4                 | 1/2        | 11.93    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 40.38 | 50.54  |
| SMC - 12 - 12N | 3/4                 | 3/4        | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 40.38 | 50.54  |
| SMC - 12 - 16N | 3/4                 | 1          | 15.74    | 1-3/8             | 1-1/8    | 24.38 | 21.84 | 46.99 | 57.15  |
| SMC - 14 - 12N | 7/8                 | 3/4        | 15.74    | 1-3/16            | 1-1/4    | 25.90 | 21.84 | 40.38 | 50.54  |
| SMC - 14 - 16N | 7/8                 | 1          | 18.28    | 1-3/8             | 1-1/4    | 25.90 | 21.84 | 46.99 | 57.15  |
| SMC - 16 - 8N  | 1                   | 1/2        | 11.93    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 45.21 | 57.40  |
| SMC - 16 - 12N | 1                   | 3/4        | 15.74    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 45.21 | 57.40  |
| SMC - 16 - 16N | 1                   | 1          | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 50.03 | 62.23  |
| SMC - 20 - 16N | 1-1/4               | 1          | 22.35    | 1-3/4             | 1-7/8    | 41.15 | 38.86 | 55.12 | 77.22  |
| SMC - 20 - 20N | 1-1/4               | 1-1/4      | 27.69    | 1-3/4             | 1-7/8    | 41.15 | 38.86 | 55.12 | 77.22  |
| SMC - 24 - 24N | 1-1/2               | 1-1/2      | 34.04    | 2-1/8             | 2-1/4    | 50.04 | 45.21 | 61.72 | 88.90  |
| SMC - 32 - 32N | 2                   | 2          | 45.97    | 2-3/4             | 3        | 67.56 | 62.74 | 76.20 | 113.54 |

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

# SMC

## Male Connector



### Connects Fractional Tube To Female ISO Tapered Thread

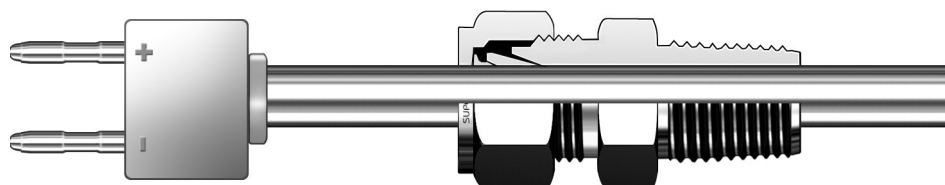
| Part No.       | Tube OD<br>D (inch) | T<br>R (PT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     |
|----------------|---------------------|-------------|----------|-------------------|----------|-------|-------|-------|-------|
|                |                     |             |          | h (inch)          | H (inch) |       |       |       |       |
| SMC - 2 - 2R   | 1/8                 | 1/8         | 2.28     | 7/16              | 7/16     | 12.70 | 15.24 | 23.87 | 30.48 |
| SMC - 2 - 4R   | 1/8                 | 1/4         | 2.28     | 9/16              | 7/16     | 12.70 | 15.24 | 28.95 | 35.56 |
| SMC - 4 - 2R   | 1/4                 | 1/8         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 25.40 | 32.76 |
| SMC - 4 - 4R   | 1/4                 | 1/4         | 4.82     | 9/16              | 9/16     | 15.24 | 17.78 | 30.48 | 37.84 |
| SMC - 4 - 6R   | 1/4                 | 3/8         | 4.82     | 11/16             | 9/16     | 15.24 | 17.78 | 30.98 | 38.35 |
| SMC - 4 - 8R   | 1/4                 | 1/2         | 4.82     | 7/8               | 9/16     | 15.24 | 17.78 | 37.33 | 44.70 |
| SMC - 5 - 2R   | 5/16                | 1/8         | 4.82     | 9/16              | 5/8      | 16.25 | 18.54 | 26.67 | 34.03 |
| SMC - 5 - 4R   | 5/16                | 1/4         | 6.35     | 9/16              | 5/8      | 16.25 | 18.54 | 31.24 | 38.60 |
| SMC - 6 - 2R   | 3/8                 | 1/8         | 4.82     | 5/8               | 11/16    | 16.76 | 19.30 | 27.94 | 35.30 |
| SMC - 6 - 4R   | 3/8                 | 1/4         | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 32.51 | 39.87 |
| SMC - 6 - 6R   | 3/8                 | 3/8         | 7.11     | 11/16             | 11/16    | 16.76 | 19.30 | 32.51 | 39.87 |
| SMC - 6 - 8R   | 3/8                 | 1/2         | 7.11     | 7/8               | 11/16    | 16.76 | 19.30 | 38.86 | 46.22 |
| SMC - 8 - 4R   | 1/2                 | 1/4         | 7.11     | 13/16             | 7/8      | 22.86 | 21.84 | 33.27 | 43.43 |
| SMC - 8 - 6R   | 1/2                 | 3/8         | 9.65     | 13/16             | 7/8      | 22.86 | 21.84 | 33.27 | 43.43 |
| SMC - 8 - 8R   | 1/2                 | 1/2         | 10.41    | 7/8               | 7/8      | 22.86 | 21.84 | 38.86 | 49.02 |
| SMC - 8 - 12R  | 1/2                 | 3/4         | 10.41    | 1-1/16            | 7/8      | 22.86 | 21.84 | 40.38 | 50.54 |
| SMC - 12 - 12R | 3/4                 | 3/4         | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 40.38 | 50.54 |
| SMC - 16 - 16R | 1                   | 1           | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 50.03 | 62.23 |

### Bored - Through Fittings for Thermocouples

SUPERLOK Bored-Through MALE CONNECTORS accommodate thermocouples or dip tubes.

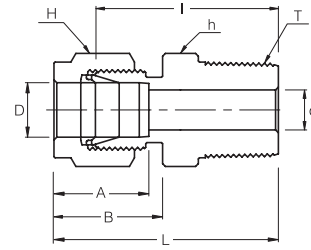
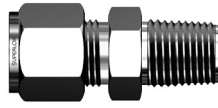
To order suffix “-TM” to the Size designator. (Example : SU-8-TM, SMC-8-8N-TM-B)

Note - The root diameter of the pipe thread end of male connectors makes it impractical to bore through all male connectors.



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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

**SMC**  
Male Connector

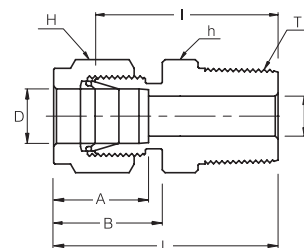


**Connects Metric Tube To Female NPT Thread**

| Part No.        | Tube OD<br>D | T<br>(NPT) | d<br>Min | Width Across Flat |    | A    | B    | I    | L    |
|-----------------|--------------|------------|----------|-------------------|----|------|------|------|------|
|                 |              |            |          | h                 | H  |      |      |      |      |
| SMC - 2M - 2N   | 2            | 1/8        | 1.7      | 12                | 12 | 12.9 | 15.3 | 23.9 | 30.5 |
| SMC - 3M - 2N   | 3            | 1/8        | 2.4      | 12                | 12 | 12.9 | 15.3 | 23.9 | 30.5 |
| SMC - 3M - 4N   | 3            | 1/4        | 2.4      | 14                | 12 | 12.9 | 15.3 | 29.0 | 35.6 |
| SMC - 4M - 2N   | 4            | 1/8        | 2.4      | 12                | 12 | 13.7 | 16.1 | 24.6 | 31.2 |
| SMC - 4M - 4N   | 4            | 1/4        | 2.4      | 14                | 12 | 13.7 | 16.1 | 29.7 | 36.3 |
| SMC - 6M - 2N   | 6            | 1/8        | 4.8      | 14                | 14 | 15.3 | 17.7 | 25.4 | 32.8 |
| SMC - 6M - 4N   | 6            | 1/4        | 4.8      | 14                | 14 | 15.3 | 17.7 | 30.5 | 37.9 |
| SMC - 6M - 6N   | 6            | 3/8        | 4.8      | 18                | 14 | 15.3 | 17.7 | 31.0 | 38.4 |
| SMC - 6M - 8N   | 6            | 1/2        | 4.8      | 22                | 14 | 15.3 | 17.7 | 37.3 | 44.7 |
| SMC - 8M - 2N   | 8            | 1/8        | 4.8      | 15                | 16 | 16.2 | 18.6 | 26.7 | 34.2 |
| SMC - 8M - 4N   | 8            | 1/4        | 6.4      | 15                | 16 | 16.2 | 18.6 | 31.2 | 38.7 |
| SMC - 8M - 6N   | 8            | 3/8        | 6.4      | 18                | 16 | 16.2 | 18.6 | 31.8 | 39.3 |
| SMC - 8M - 8N   | 8            | 1/2        | 6.4      | 22                | 16 | 16.2 | 18.6 | 38.1 | 45.6 |
| SMC - 10M - 2N  | 10           | 1/8        | 4.8      | 18                | 19 | 17.2 | 19.5 | 28.7 | 36.3 |
| SMC - 10M - 4N  | 10           | 1/4        | 7.9      | 18                | 19 | 17.2 | 19.5 | 33.3 | 40.9 |
| SMC - 10M - 6N  | 10           | 3/8        | 7.9      | 18                | 19 | 17.2 | 19.5 | 33.3 | 40.9 |
| SMC - 10M - 8N  | 10           | 1/2        | 7.9      | 22                | 19 | 17.2 | 19.5 | 38.9 | 46.5 |
| SMC - 12M - 2N  | 12           | 1/8        | 4.8      | 22                | 22 | 22.8 | 22.0 | 28.7 | 38.8 |
| SMC - 12M - 4N  | 12           | 1/4        | 7.1      | 22                | 22 | 22.8 | 22.0 | 33.3 | 43.4 |
| SMC - 12M - 6N  | 12           | 3/8        | 9.5      | 22                | 22 | 22.8 | 22.0 | 33.3 | 43.4 |
| SMC - 12M - 8N  | 12           | 1/2        | 9.5      | 22                | 22 | 22.8 | 22.0 | 38.9 | 49.0 |
| SMC - 12M - 12N | 12           | 3/4        | 9.5      | 27                | 22 | 22.8 | 22.0 | 40.4 | 50.5 |
| SMC - 14M - 4N  | 14           | 1/4        | 7.1      | 24                | 25 | 24.4 | 22.0 | 34.0 | 44.1 |
| SMC - 14M - 6N  | 14           | 3/8        | 9.5      | 24                | 25 | 24.4 | 22.0 | 34.0 | 44.1 |
| SMC - 14M - 8N  | 14           | 1/2        | 11.1     | 24                | 25 | 24.4 | 22.0 | 38.9 | 49.0 |
| SMC - 16M - 6N  | 16           | 3/8        | 9.5      | 24                | 25 | 24.4 | 22.0 | 34.0 | 44.1 |
| SMC - 16M - 8N  | 16           | 1/2        | 11.9     | 24                | 25 | 24.4 | 22.0 | 38.9 | 49.0 |
| SMC - 16M - 12N | 16           | 3/4        | 12.7     | 27                | 25 | 24.4 | 22.0 | 40.4 | 50.5 |
| SMC - 18M - 8N  | 18           | 1/2        | 11.9     | 27                | 30 | 24.4 | 22.0 | 40.4 | 50.5 |
| SMC - 18M - 12N | 18           | 3/4        | 15.1     | 27                | 30 | 24.4 | 22.0 | 40.4 | 50.5 |
| SMC - 20M - 8N  | 20           | 1/2        | 11.9     | 30                | 32 | 26.0 | 22.0 | 42.2 | 52.3 |
| SMC - 20M - 12N | 20           | 3/4        | 15.9     | 30                | 32 | 26.0 | 22.0 | 42.2 | 52.3 |
| SMC - 22M - 12N | 22           | 3/4        | 15.9     | 30                | 32 | 26.0 | 22.0 | 42.2 | 52.3 |
| SMC - 22M - 16N | 22           | 1          | 18.3     | 35                | 32 | 26.0 | 22.0 | 47.0 | 57.1 |
| SMC - 25M - 12N | 25           | 3/4        | 15.9     | 35                | 38 | 31.3 | 26.5 | 45.2 | 57.5 |
| SMC - 25M - 16N | 25           | 1          | 21.8     | 35                | 38 | 31.3 | 26.5 | 50.0 | 62.3 |
| SMC - 28M - 16N | 28           | 1          | 21.8     | 41                | 46 | 36.6 | 36.6 | 51.6 | 72.4 |
| SMC - 28M - 20N | 28           | 1-1/4      | 21.8     | 44.4              | 46 | 36.6 | 36.6 | 52.3 | 73.1 |
| SMC - 30M - 20N | 30           | 1-1/4      | 26.2     | 46                | 50 | 39.6 | 39.2 | 55.6 | 77.2 |
| SMC - 32M - 20N | 32           | 1-1/4      | 28.6     | 46                | 50 | 42.0 | 41.6 | 56.6 | 79.6 |
| SMC - 38M - 24N | 38           | 1-1/2      | 33.7     | 55                | 60 | 49.4 | 47.9 | 64.0 | 91.6 |

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

**SMC**  
Male Connector



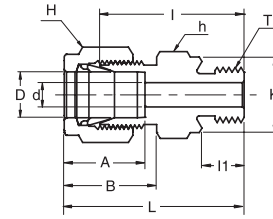
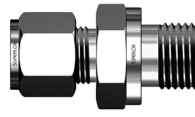
**Connects Metric Tube To Female ISO Tapered Thread**

| Part No.        | Tube OD<br>D | T<br>R (PT) | d<br>Min | Width Across Flat |    | A    | B    | I    | L    |
|-----------------|--------------|-------------|----------|-------------------|----|------|------|------|------|
|                 |              |             |          | h                 | H  |      |      |      |      |
| SMC - 2M - 2R   | 2            | 1/8         | 1.7      | 12                | 12 | 12.9 | 15.3 | 23.9 | 30.5 |
| SMC - 3M - 2R   | 3            | 1/8         | 2.4      | 12                | 12 | 12.9 | 15.3 | 23.9 | 30.5 |
| SMC - 3M - 4R   | 3            | 1/4         | 2.4      | 14                | 12 | 12.9 | 15.3 | 29.0 | 35.6 |
| SMC - 4M - 2R   | 4            | 1/8         | 2.4      | 12                | 12 | 13.7 | 16.1 | 24.6 | 31.2 |
| SMC - 4M - 4R   | 4            | 1/4         | 2.4      | 14                | 12 | 13.7 | 16.1 | 29.7 | 36.3 |
| SMC - 6M - 2R   | 6            | 1/8         | 4.8      | 14                | 14 | 15.3 | 17.7 | 25.4 | 32.8 |
| SMC - 6M - 4R   | 6            | 1/4         | 4.8      | 14                | 14 | 15.3 | 17.7 | 30.5 | 37.9 |
| SMC - 6M - 6R   | 6            | 3/8         | 4.8      | 18                | 14 | 15.3 | 17.7 | 31.0 | 38.4 |
| SMC - 6M - 8R   | 6            | 1/2         | 4.8      | 22                | 14 | 15.3 | 17.7 | 37.3 | 44.7 |
| SMC - 8M - 2R   | 8            | 1/8         | 4.8      | 15                | 16 | 16.2 | 18.6 | 26.7 | 34.2 |
| SMC - 8M - 4R   | 8            | 1/4         | 6.4      | 15                | 16 | 16.2 | 18.6 | 31.2 | 38.7 |
| SMC - 8M - 6R   | 8            | 3/8         | 6.4      | 18                | 16 | 16.2 | 18.6 | 31.8 | 39.3 |
| SMC - 8M - 8R   | 8            | 1/2         | 6.4      | 22                | 16 | 16.2 | 18.6 | 38.1 | 45.6 |
| SMC - 10M - 2R  | 10           | 1/8         | 4.8      | 18                | 19 | 17.2 | 19.5 | 28.7 | 36.3 |
| SMC - 10M - 4R  | 10           | 1/4         | 7.9      | 18                | 19 | 17.2 | 19.5 | 33.3 | 40.9 |
| SMC - 10M - 6R  | 10           | 3/8         | 7.9      | 18                | 19 | 17.2 | 19.5 | 33.3 | 40.9 |
| SMC - 10M - 8R  | 10           | 1/2         | 7.9      | 22                | 19 | 17.2 | 19.5 | 38.9 | 46.5 |
| SMC - 12M - 4R  | 12           | 1/4         | 7.1      | 22                | 22 | 22.8 | 22.0 | 33.3 | 43.4 |
| SMC - 12M - 6R  | 12           | 3/8         | 9.5      | 22                | 22 | 22.8 | 22.0 | 33.3 | 43.4 |
| SMC - 12M - 8R  | 12           | 1/2         | 9.5      | 22                | 22 | 22.8 | 22.0 | 38.9 | 49.0 |
| SMC - 12M - 12R | 12           | 3/4         | 9.5      | 27                | 22 | 22.8 | 22.0 | 40.4 | 50.5 |
| SMC - 15M - 8R  | 15           | 1/2         | 11.9     | 24                | 25 | 24.4 | 22.0 | 38.9 | 49.0 |
| SMC - 16M - 4R  | 16           | 1/4         | 7.1      | 24                | 25 | 24.4 | 22.0 | 34.0 | 44.1 |
| SMC - 16M - 6R  | 16           | 3/8         | 9.5      | 24                | 25 | 24.4 | 22.0 | 34.0 | 44.1 |
| SMC - 16M - 8R  | 16           | 1/2         | 11.9     | 24                | 25 | 24.4 | 22.0 | 38.9 | 49.0 |
| SMC - 16M - 12R | 16           | 3/4         | 12.7     | 27                | 25 | 24.4 | 22.0 | 40.4 | 50.5 |
| SMC - 18M - 8R  | 18           | 1/2         | 11.9     | 27                | 30 | 24.4 | 22.0 | 40.4 | 50.5 |
| SMC - 18M - 12R | 18           | 3/4         | 15.1     | 27                | 30 | 24.4 | 22.0 | 40.4 | 50.5 |
| SMC - 20M - 8R  | 20           | 1/2         | 11.9     | 30                | 32 | 26.0 | 22.0 | 42.2 | 52.3 |
| SMC - 20M - 12R | 20           | 3/4         | 15.9     | 30                | 32 | 26.0 | 22.0 | 42.2 | 52.3 |
| SMC - 22M - 12R | 22           | 3/4         | 15.9     | 30                | 32 | 26.0 | 22.0 | 42.2 | 52.3 |
| SMC - 22M - 16R | 22           | 1           | 18.3     | 35                | 32 | 26.0 | 22.0 | 47.0 | 57.1 |
| SMC - 25M - 12R | 25           | 3/4         | 15.9     | 35                | 38 | 31.3 | 26.5 | 45.2 | 57.5 |
| SMC - 25M - 16R | 25           | 1           | 21.8     | 35                | 38 | 31.3 | 26.5 | 50.0 | 62.3 |
| SMC - 28M - 16R | 28           | 1           | 21.8     | 41                | 46 | 36.6 | 36.6 | 51.6 | 72.4 |
| SMC - 28M - 20R | 28           | 1-1/4       | 21.8     | 44.4              | 46 | 36.6 | 36.6 | 52.3 | 73.1 |
| SMC - 30M - 20R | 30           | 1-1/4       | 26.2     | 46                | 50 | 39.6 | 39.2 | 55.6 | 77.2 |
| SMC - 32M - 20R | 32           | 1-1/4       | 28.6     | 46                | 50 | 42.0 | 41.6 | 56.6 | 79.6 |
| SMC - 38M - 24R | 38           | 1-1/2       | 33.7     | 55                | 60 | 49.4 | 47.9 | 64.0 | 91.6 |

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 - Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

## SMC - GM

Male Connector  
For Metal Gasket Seal



### Connects Metric Tube To Female ISO Parallel Thread

| Part No.         | Tube OD<br>D | T<br>G (PF) | d<br>Min | Width Across Flat |    | A    | B    | I    | I1   | L    | K    |
|------------------|--------------|-------------|----------|-------------------|----|------|------|------|------|------|------|
|                  |              |             |          | h                 | H  |      |      |      |      |      |      |
| SMC - 3M - 2GM   | 3            | 1/8         | 2.4      | 14                | 12 | 12.9 | 15.3 | 23.4 | 8.0  | 30.0 | 14.0 |
| SMC - 3M - 4GM   | 3            | 1/4         | 2.4      | 19                | 12 | 12.9 | 15.3 | 28.7 | 12.0 | 35.3 | 18.0 |
| SMC - 4M - 2GM   | 4            | 1/8         | 2.4      | 14                | 12 | 13.7 | 16.1 | 24.1 | 8.0  | 30.7 | 14.0 |
| SMC - 6M - 2GM   | 6            | 1/8         | 4.0      | 14                | 14 | 15.3 | 17.7 | 24.9 | 8.0  | 32.3 | 14.0 |
| SMC - 6M - 4GM   | 6            | 1/4         | 4.8      | 19                | 14 | 15.3 | 17.7 | 30.2 | 12.0 | 37.6 | 18.0 |
| SMC - 6M - 6GM   | 6            | 3/8         | 4.8      | 22                | 14 | 15.3 | 17.7 | 31.5 | 12.0 | 38.9 | 22.0 |
| SMC - 6M - 8GM   | 6            | 1/2         | 4.8      | 27                | 14 | 15.3 | 17.7 | 37.3 | 14.0 | 44.7 | 26.0 |
| SMC - 8M - 2GM   | 8            | 1/8         | 4.0      | 15                | 16 | 16.2 | 18.6 | 25.7 | 8.0  | 33.2 | 14.0 |
| SMC - 8M - 4GM   | 8            | 1/4         | 6.4      | 19                | 16 | 16.2 | 18.6 | 31.0 | 12.0 | 38.5 | 18.0 |
| SMC - 8M - 6GM   | 8            | 3/8         | 6.4      | 22                | 16 | 16.2 | 18.6 | 32.3 | 12.0 | 39.8 | 22.0 |
| SMC - 8M - 8GM   | 8            | 1/2         | 6.4      | 27                | 16 | 16.2 | 18.6 | 38.1 | 14.0 | 45.6 | 26.0 |
| SMC - 10M - 4GM  | 10           | 1/4         | 5.9      | 19                | 19 | 17.2 | 19.5 | 31.8 | 12.0 | 39.4 | 18.0 |
| SMC - 10M - 6GM  | 10           | 3/8         | 7.9      | 22                | 19 | 17.2 | 19.5 | 33.0 | 12.0 | 40.6 | 22.0 |
| SMC - 10M - 8GM  | 10           | 1/2         | 7.9      | 27                | 19 | 17.2 | 19.5 | 38.9 | 14.0 | 46.5 | 26.0 |
| SMC - 12M - 4GM  | 12           | 1/4         | 5.9      | 22                | 22 | 22.8 | 22.0 | 32.5 | 12.0 | 42.6 | 18.0 |
| SMC - 12M - 6GM  | 12           | 3/8         | 7.9      | 22                | 22 | 22.8 | 22.0 | 33.0 | 12.0 | 43.1 | 22.0 |
| SMC - 12M - 8GM  | 12           | 1/2         | 9.5      | 27                | 22 | 22.8 | 22.0 | 38.9 | 14.0 | 49.0 | 26.0 |
| SMC - 12M - 12GM | 12           | 3/4         | 9.5      | 35                | 22 | 22.8 | 22.0 | 42.7 | 16.0 | 52.8 | 32.0 |
| SMC - 15M - 8GM  | 15           | 1/2         | 11.9     | 27                | 25 | 24.4 | 22.0 | 38.9 | 14.0 | 49.0 | 26.0 |
| SMC - 16M - 6GM  | 16           | 3/8         | 7.9      | 24                | 25 | 24.4 | 22.0 | 33.8 | 12.0 | 43.9 | 22.0 |
| SMC - 16M - 8GM  | 16           | 1/2         | 11.9     | 27                | 25 | 24.4 | 22.0 | 38.9 | 14.0 | 49.0 | 26.0 |
| SMC - 18M - 8GM  | 18           | 1/2         | 11.9     | 27                | 30 | 24.4 | 22.0 | 38.9 | 14.0 | 49.0 | 26.0 |
| SMC - 18M - 12GM | 18           | 3/4         | 15.1     | 35                | 30 | 24.4 | 22.0 | 42.7 | 16.0 | 52.8 | 32.0 |
| SMC - 20M - 8GM  | 20           | 1/2         | 11.9     | 30                | 32 | 26.0 | 22.0 | 40.4 | 14.0 | 50.5 | 26.0 |
| SMC - 20M - 12GM | 20           | 3/4         | 15.9     | 35                | 32 | 26.0 | 22.0 | 42.7 | 16.0 | 52.8 | 32.0 |
| SMC - 22M - 12GM | 22           | 3/4         | 15.9     | 35                | 32 | 26.0 | 22.0 | 42.7 | 16.0 | 52.8 | 32.0 |
| SMC - 22M - 16GM | 22           | 1           | 18.3     | 41                | 32 | 26.0 | 22.0 | 45.2 | 18.0 | 55.3 | 39.0 |
| SMC - 25M - 12GM | 25           | 3/4         | 15.9     | 35                | 38 | 31.3 | 26.5 | 45.2 | 16.0 | 57.5 | 32.0 |
| SMC - 25M - 16GM | 25           | 1           | 19.8     | 41                | 38 | 31.3 | 26.5 | 47.8 | 18.0 | 60.1 | 39.0 |

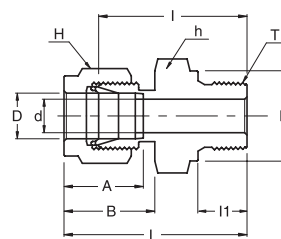
\* See page 12 for Explanation of ISO Pipe Thread.

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.



# SGMC

Male Connector  
For Bonded Washer Seal



## Connects Metric Tubes To Female ISO Parallel Thread

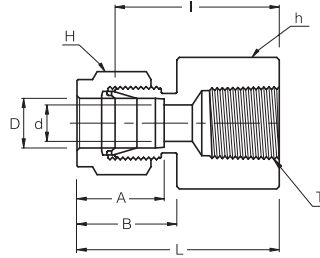
| Part No.         | Tube OD<br>D | T<br>G (PF) | d<br>Min | Width Across Flat |    | A    | B    | I    | I1   | L    | K    |
|------------------|--------------|-------------|----------|-------------------|----|------|------|------|------|------|------|
|                  |              |             |          | h                 | H  |      |      |      |      |      |      |
| SGMC - 3M - 2G   | 3            | 1/8         | 2.4      | 14                | 12 | 12.9 | 15.3 | 23.4 | 8.0  | 30.0 | 14.0 |
| SGMC - 3M - 4G   | 3            | 1/4         | 2.4      | 19                | 12 | 12.9 | 15.3 | 28.7 | 12.0 | 35.3 | 18.0 |
| SGMC - 4M - 2G   | 4            | 1/8         | 2.4      | 14                | 12 | 13.7 | 16.1 | 24.1 | 8.0  | 30.7 | 14.0 |
| SGMC - 6M - 2G   | 6            | 1/8         | 4.0      | 14                | 14 | 15.3 | 17.7 | 24.9 | 8.0  | 32.3 | 14.0 |
| SGMC - 6M - 4G   | 6            | 1/4         | 4.8      | 19                | 14 | 15.3 | 17.7 | 30.2 | 12.0 | 37.6 | 18.0 |
| SGMC - 6M - 6G   | 6            | 3/8         | 4.8      | 22                | 14 | 15.3 | 17.7 | 31.5 | 12.0 | 38.9 | 22.0 |
| SGMC - 6M - 8G   | 6            | 1/2         | 4.8      | 27                | 14 | 15.3 | 17.7 | 37.3 | 14.0 | 44.7 | 26.0 |
| SGMC - 8M - 2G   | 8            | 1/8         | 4.0      | 15                | 16 | 16.2 | 18.6 | 25.7 | 8.0  | 33.2 | 14.0 |
| SGMC - 8M - 4G   | 8            | 1/4         | 6.4      | 19                | 16 | 16.2 | 18.6 | 31.0 | 12.0 | 38.5 | 18.0 |
| SGMC - 8M - 6G   | 8            | 3/8         | 6.4      | 22                | 16 | 16.2 | 18.6 | 32.3 | 12.0 | 39.8 | 22.0 |
| SGMC - 8M - 8G   | 8            | 1/2         | 6.4      | 27                | 16 | 16.2 | 18.6 | 38.1 | 14.0 | 45.6 | 26.0 |
| SGMC - 10M - 4G  | 10           | 1/4         | 5.9      | 19                | 19 | 17.2 | 19.5 | 31.8 | 12.0 | 39.4 | 18.0 |
| SGMC - 10M - 6G  | 10           | 3/8         | 7.9      | 22                | 19 | 17.2 | 19.5 | 33.0 | 12.0 | 40.6 | 22.0 |
| SGMC - 10M - 8G  | 10           | 1/2         | 7.9      | 27                | 19 | 17.2 | 19.5 | 38.9 | 14.0 | 46.5 | 26.0 |
| SGMC - 12M - 4G  | 12           | 1/4         | 5.9      | 22                | 22 | 22.8 | 22.0 | 32.5 | 12.0 | 42.6 | 18.0 |
| SGMC - 12M - 6G  | 12           | 3/8         | 7.9      | 22                | 22 | 22.8 | 22.0 | 33.0 | 12.0 | 43.1 | 22.0 |
| SGMC - 12M - 8G  | 12           | 1/2         | 9.5      | 27                | 22 | 22.8 | 22.0 | 38.9 | 14.0 | 49.0 | 26.0 |
| SGMC - 12M - 12G | 12           | 3/4         | 9.5      | 35                | 22 | 22.8 | 22.0 | 42.7 | 16.0 | 52.8 | 32.0 |
| SGMC - 16M - 6G  | 16           | 3/8         | 7.9      | 24                | 25 | 24.4 | 22.0 | 33.8 | 12.0 | 43.9 | 22.0 |
| SGMC - 16M - 8G  | 16           | 1/2         | 11.9     | 27                | 25 | 24.4 | 22.0 | 38.9 | 14.0 | 49.0 | 26.0 |
| SGMC - 18M - 8G  | 18           | 1/2         | 11.9     | 27                | 30 | 24.4 | 22.0 | 38.9 | 14.0 | 49.0 | 26.0 |
| SGMC - 18M - 12G | 18           | 3/4         | 15.1     | 35                | 30 | 24.4 | 22.0 | 42.7 | 16.0 | 52.8 | 32.0 |
| SGMC - 20M - 8G  | 20           | 1/2         | 11.9     | 30                | 32 | 26.0 | 22.0 | 40.4 | 14.0 | 50.5 | 26.0 |
| SGMC - 20M - 12G | 20           | 3/4         | 15.9     | 35                | 32 | 26.0 | 22.0 | 42.7 | 16.0 | 52.8 | 32.0 |
| SGMC - 22M - 12G | 22           | 3/4         | 15.9     | 35                | 32 | 26.0 | 22.0 | 42.7 | 16.0 | 52.8 | 32.0 |
| SGMC - 22M - 16G | 22           | 1           | 18.3     | 41                | 32 | 26.0 | 22.0 | 45.2 | 18.0 | 55.3 | 39.0 |
| SGMC - 25M - 12G | 25           | 3/4         | 15.9     | 35                | 38 | 31.3 | 26.5 | 45.2 | 16.0 | 57.5 | 32.0 |
| SGMC - 25M - 16G | 25           | 1           | 19.8     | 41                | 38 | 31.3 | 26.5 | 47.8 | 18.0 | 60.1 | 39.0 |

\* See page 12 for Explanation of ISO Pipe Thread.

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

# SFC

## Female Connector



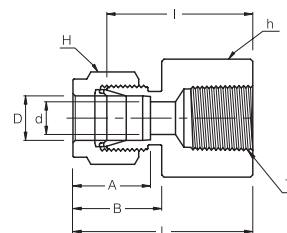
### Connects Fractional Tubes To Male NPT Thread

| Part No.      | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     |
|---------------|---------------------|-------------|----------|-------------------|----------|-------|-------|-------|-------|
|               |                     |             |          | h (inch)          | H (inch) |       |       |       |       |
| SFC - 2 - 2N  | 1/8                 | 1/8         | 2.28     | 9/16              | 7/16     | 12.70 | 15.24 | 22.09 | 28.70 |
| SFC - 2 - 4N  | 1/8                 | 1/4         | 2.28     | 3/4               | 7/16     | 12.70 | 15.24 | 26.92 | 33.52 |
| SFC - 3 - 2N  | 3/16                | 1/8         | 3.04     | 9/16              | 1/2      | 13.71 | 16.00 | 23.11 | 29.71 |
| SFC - 4 - 2N  | 1/4                 | 1/8         | 4.82     | 9/16              | 9/16     | 15.24 | 17.78 | 23.87 | 31.24 |
| SFC - 4 - 4N  | 1/4                 | 1/4         | 4.82     | 3/4               | 9/16     | 15.24 | 17.78 | 28.44 | 35.81 |
| SFC - 4 - 6N  | 1/4                 | 3/8         | 4.82     | 7/8               | 9/16     | 15.24 | 17.78 | 30.22 | 37.59 |
| SFC - 4 - 8N  | 1/4                 | 1/2         | 4.82     | 1-1/16            | 9/16     | 15.24 | 17.78 | 35.05 | 42.41 |
| SFC - 5 - 2N  | 5/16                | 1/8         | 6.35     | 9/16              | 5/8      | 16.25 | 18.54 | 24.63 | 32.00 |
| SFC - 5 - 4N  | 5/16                | 1/4         | 6.35     | 3/4               | 5/8      | 16.25 | 18.54 | 29.46 | 36.83 |
| SFC - 6 - 2N  | 3/8                 | 1/8         | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 25.40 | 32.76 |
| SFC - 6 - 4N  | 3/8                 | 1/4         | 7.11     | 3/4               | 11/16    | 16.76 | 19.30 | 30.22 | 37.59 |
| SFC - 6 - 6N  | 3/8                 | 3/8         | 7.11     | 7/8               | 11/16    | 16.76 | 19.30 | 31.75 | 39.11 |
| SFC - 6 - 8N  | 3/8                 | 1/2         | 7.11     | 1-1/16            | 11/16    | 16.76 | 19.30 | 36.57 | 43.94 |
| SFC - 6 - 12N | 3/8                 | 3/4         | 7.11     | 1-5/16            | 11/16    | 16.76 | 19.30 | 40.38 | 47.75 |
| SFC - 8 - 4N  | 1/2                 | 1/4         | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 30.22 | 40.38 |
| SFC - 8 - 6N  | 1/2                 | 3/8         | 10.41    | 7/8               | 7/8      | 22.86 | 21.84 | 31.75 | 41.91 |
| SFC - 8 - 8N  | 1/2                 | 1/2         | 10.41    | 1-1/16            | 7/8      | 22.86 | 21.84 | 36.57 | 46.73 |
| SFC - 8 - 12N | 1/2                 | 3/4         | 10.41    | 1-5/16            | 7/8      | 22.86 | 21.84 | 38.10 | 48.26 |
| SFC -10 - 6N  | 5/8                 | 3/8         | 12.70    | 15/16             | 1        | 24.38 | 21.84 | 31.75 | 41.91 |
| SFC -10 - 8N  | 5/8                 | 1/2         | 12.70    | 1-1/16            | 1        | 24.38 | 21.84 | 36.57 | 46.73 |
| SFC -12 - 8N  | 3/4                 | 1/2         | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 36.57 | 46.73 |
| SFC -12 - 12N | 3/4                 | 3/4         | 15.74    | 1-5/16            | 1-1/8    | 24.38 | 21.84 | 38.10 | 48.26 |
| SFC -14 - 12N | 7/8                 | 3/4         | 18.28    | 1-5/16            | 1-1/4    | 25.90 | 21.84 | 39.62 | 49.78 |
| SFC -16 - 12N | 1                   | 3/4         | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 41.14 | 53.34 |
| SFC -16 - 16N | 1                   | 1           | 22.35    | 1-5/8             | 1-1/2    | 31.24 | 26.41 | 50.03 | 62.23 |

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# SFC

## Female Connector



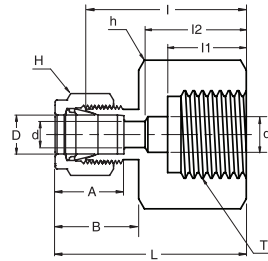
### Connects Metric Tubes To Male ISO Tapered Thread

| Part No.        | Tube OD<br>D | T*<br>R (PT) | d<br>Min | Width Across Flat |    | A    | B    | I    | L    |
|-----------------|--------------|--------------|----------|-------------------|----|------|------|------|------|
|                 |              |              |          | h                 | H  |      |      |      |      |
| SFC - 3M - 2R   | 3            | 1/8          | 2.4      | 14                | 12 | 12.9 | 15.3 | 22.1 | 28.7 |
| SFC - 3M - 4R   | 3            | 1/4          | 2.4      | 19                | 12 | 12.9 | 15.3 | 26.9 | 33.5 |
| SFC - 4M - 2R   | 4            | 1/8          | 2.4      | 14                | 12 | 13.7 | 16.1 | 23.1 | 29.7 |
| SFC - 6M - 2R   | 6            | 1/8          | 4.8      | 14                | 14 | 15.3 | 17.7 | 23.9 | 31.3 |
| SFC - 6M - 4R   | 6            | 1/4          | 4.8      | 19                | 14 | 15.3 | 17.7 | 28.4 | 35.8 |
| SFC - 6M - 6R   | 6            | 3/8          | 4.8      | 22                | 14 | 15.3 | 17.7 | 30.2 | 37.6 |
| SFC - 6M - 8R   | 6            | 1/2          | 4.8      | 27                | 14 | 15.3 | 17.7 | 35.1 | 42.5 |
| SFC - 8M - 2R   | 8            | 1/8          | 6.4      | 15                | 16 | 16.2 | 18.6 | 24.6 | 32.1 |
| SFC - 8M - 4R   | 8            | 1/4          | 6.4      | 19                | 16 | 16.2 | 18.6 | 29.5 | 37.0 |
| SFC - 8M - 6R   | 8            | 3/8          | 6.4      | 22                | 16 | 16.2 | 18.6 | 31.0 | 38.5 |
| SFC - 8M - 8R   | 8            | 1/2          | 6.4      | 27                | 16 | 16.2 | 18.6 | 35.8 | 43.3 |
| SFC - 10M - 2R  | 10           | 1/8          | 7.9      | 18                | 19 | 17.2 | 19.5 | 25.4 | 33.0 |
| SFC - 10M - 4R  | 10           | 1/4          | 7.9      | 19                | 19 | 17.2 | 19.5 | 30.2 | 37.8 |
| SFC - 10M - 6R  | 10           | 3/8          | 7.9      | 22                | 19 | 17.2 | 19.5 | 31.8 | 39.4 |
| SFC - 10M - 8R  | 10           | 1/2          | 7.9      | 27                | 19 | 17.2 | 19.5 | 36.6 | 44.2 |
| SFC - 12M - 2R  | 12           | 1/8          | 8.3      | 22                | 22 | 22.8 | 22.0 | 25.4 | 35.5 |
| SFC - 12M - 4R  | 12           | 1/4          | 9.5      | 22                | 22 | 22.8 | 22.0 | 30.2 | 40.3 |
| SFC - 12M - 6R  | 12           | 3/8          | 9.5      | 22                | 22 | 22.8 | 22.0 | 31.8 | 41.9 |
| SFC - 12M - 8R  | 12           | 1/2          | 9.5      | 27                | 22 | 22.8 | 22.0 | 36.6 | 46.7 |
| SFC - 12M - 12R | 12           | 3/4          | 9.5      | 35                | 22 | 22.8 | 22.0 | 38.9 | 49.0 |
| SFC - 15M - 8R  | 15           | 1/2          | 11.9     | 27                | 25 | 24.4 | 22.0 | 36.6 | 46.7 |
| SFC - 16M - 8R  | 16           | 1/2          | 12.7     | 27                | 25 | 24.4 | 22.0 | 36.8 | 46.9 |
| SFC - 20M - 8R  | 20           | 1/2          | 15.9     | 30                | 32 | 26.0 | 22.0 | 37.8 | 47.9 |
| SFC - 20M - 12R | 20           | 3/4          | 15.9     | 35                | 32 | 26.0 | 22.0 | 39.6 | 49.7 |
| SFC - 22M - 12R | 22           | 3/4          | 18.3     | 35                | 32 | 26.0 | 22.0 | 39.6 | 49.7 |
| SFC - 22M - 16R | 22           | 1            | 18.3     | 41                | 32 | 26.0 | 22.0 | 47.8 | 57.9 |
| SFC - 25M - 12R | 25           | 3/4          | 21.8     | 35                | 38 | 31.3 | 26.5 | 41.1 | 53.4 |
| SFC - 25M - 16R | 25           | 1            | 21.8     | 41                | 38 | 31.3 | 26.5 | 50.0 | 62.3 |

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# SGC

## Gauge Connector



### Connects Fractional Tubes To ISO Parallel Thread

| Part No.     | Tube OD<br>D (inch) | T<br>G (PF) | d<br>Min | d1   | Width Across Flat |          | A     | B     | I     | I1    | I2    | L     |
|--------------|---------------------|-------------|----------|------|-------------------|----------|-------|-------|-------|-------|-------|-------|
|              |                     |             |          |      | h (inch)          | H (inch) |       |       |       |       |       |       |
| SGC - 4 - 4G | 1/4                 | 1/4         | 4.82     | 5.58 | 3/4               | 9/16     | 15.24 | 17.78 | 30.22 | 13.00 | 17.00 | 37.59 |
| SGC - 4 - 6G | 1/4                 | 3/8         | 4.82     | 6.60 | 15/16             | 9/16     | 15.24 | 17.78 | 30.22 | 14.20 | 20.30 | 37.59 |
| SGC - 4 - 8G | 1/4                 | 1/2         | 4.82     | 6.60 | 1-1/16            | 9/16     | 15.24 | 17.78 | 36.07 | 18.80 | 24.90 | 43.43 |
| SGC - 5 - 4G | 5/16                | 1/4         | 5.58     | -    | 3/4               | 5/8      | 16.25 | 18.54 | 30.98 | 13.00 | -     | 38.35 |
| SGC - 5 - 8G | 5/16                | 1/2         | 7.11     | -    | 1-1/16            | 5/8      | 16.25 | 18.54 | 33.53 | 18.80 | -     | 40.89 |
| SGC - 6 - 4G | 3/8                 | 1/4         | 5.58     | -    | 3/4               | 11/16    | 16.76 | 19.30 | 31.75 | 13.00 | -     | 39.12 |
| SGC - 6 - 6G | 3/8                 | 3/8         | 6.60     | -    | 15/16             | 11/16    | 16.76 | 19.30 | 31.24 | 14.20 | -     | 38.61 |
| SGC - 6 - 8G | 3/8                 | 1/2         | 7.11     | -    | 1-1/16            | 11/16    | 16.76 | 19.30 | 34.54 | 18.80 | -     | 41.91 |
| SGC - 8 - 4G | 1/2                 | 1/4         | 5.58     | -    | 7/8               | 7/8      | 22.86 | 21.84 | 31.80 | 13.00 | -     | 41.95 |
| SGC - 8 - 6G | 1/2                 | 3/8         | 6.60     | -    | 15/16             | 7/8      | 22.86 | 21.84 | 34.29 | 14.20 | -     | 44.45 |
| SGC - 8 - 8G | 1/2                 | 1/2         | 7.11     | 7.11 | 1-1/16            | 7/8      | 22.86 | 21.84 | 38.10 | 18.80 | -     | 48.26 |

### Connects Metric Tubes To ISO Parallel Thread

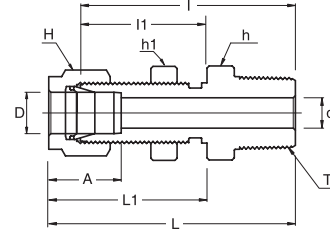
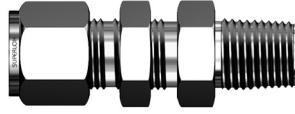
| Part No.       | Tube OD<br>D (inch) | T<br>G (PF) | d<br>Min | d1  | Width Across Flat |    | A    | B    | I    | I1 | I2 | L    |
|----------------|---------------------|-------------|----------|-----|-------------------|----|------|------|------|----|----|------|
|                |                     |             |          |     | h                 | H  |      |      |      |    |    |      |
| SGC - 3M - 4G  | 3                   | 1/4         | 2.4      | 5.5 | 19                | 12 | 12.9 | 15.3 | 28.7 | 13 | 17 | 35.3 |
| SGC - 6M - 4G  | 6                   | 1/4         | 4.8      | 5.5 | 19                | 14 | 15.3 | 17.7 | 30.2 | 13 | 17 | 37.6 |
| SGC - 6M - 6G  | 6                   | 3/8         | 4.8      | 6.5 | 24                | 14 | 15.3 | 17.7 | 30.2 | 14 | 20 | 37.6 |
| SGC - 6M - 8G  | 6                   | 1/2         | 4.8      | 7.0 | 27                | 14 | 15.3 | 17.7 | 36.1 | 19 | 25 | 43.5 |
| SGC - 8M - 4G  | 8                   | 1/4         | 5.5      | 5.5 | 19                | 16 | 16.2 | 18.6 | 31.0 | 13 | -  | 38.5 |
| SGC - 8M - 6G  | 8                   | 3/8         | 6.5      | 6.5 | 24                | 16 | 16.2 | 18.6 | 28.7 | 14 | -  | 36.2 |
| SGC - 8M - 8G  | 8                   | 1/2         | 7.0      | 7.0 | 27                | 16 | 16.2 | 18.6 | 33.5 | 19 | -  | 41.0 |
| SGC - 10M - 4G | 10                  | 1/4         | 5.5      | 5.5 | 19                | 19 | 17.2 | 19.5 | 31.8 | 13 | -  | 39.4 |
| SGC - 10M - 6G | 10                  | 3/8         | 6.5      | 6.5 | 24                | 19 | 17.2 | 19.5 | 31.2 | 14 | -  | 38.8 |
| SGC - 10M - 8G | 10                  | 1/2         | 7.0      | 7.0 | 27                | 19 | 17.2 | 19.5 | 34.5 | 19 | -  | 42.1 |
| SGC - 12M - 4G | 12                  | 1/4         | 5.5      | 5.5 | 22                | 22 | 22.8 | 22.0 | 31.8 | 13 | -  | 41.9 |
| SGC - 12M - 6G | 12                  | 3/8         | 6.5      | 6.5 | 24                | 22 | 22.8 | 22.0 | 34.3 | 14 | -  | 44.4 |
| SGC - 12M - 8G | 12                  | 1/2         | 7.0      | 7.0 | 27                | 22 | 22.8 | 22.0 | 38.1 | 19 | -  | 48.2 |
| SGC - 20M - 8G | 20                  | 1/2         | 7.0      | 7.0 | 30                | 32 | 26.0 | 22.0 | 44.2 | 19 | -  | 54.3 |
| SGC - 22M - 8G | 22                  | 1/2         | 7.0      | 7.0 | 30                | 32 | 26.0 | 22.0 | 44.2 | 19 | -  | 54.3 |

\* See page 12 for Explanation of ISO Pipe Thread.

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

### SMCB

Bulkhead Male Connector

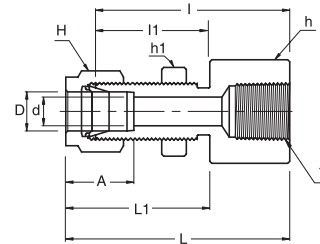
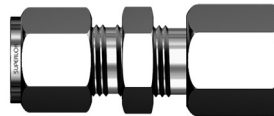


Connects Fractional Tubes To Female NPT Thread

| Part No.        | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |           |          | A     | I     | I1    | L     | L1    | Panel<br>Hole<br>Drill Size | Panel<br>Max.<br>Thickness |
|-----------------|---------------------|-------------|----------|-------------------|-----------|----------|-------|-------|-------|-------|-------|-----------------------------|----------------------------|
|                 |                     |             |          | h (inch)          | h1 (inch) | H (inch) |       |       |       |       |       |                             |                            |
| SMCB - 2 - 2N   | 1/8                 | 1/8         | 2.28     | 1/2               | 1/2       | 7/16     | 12.70 | 39.87 | 24.63 | 46.48 | 31.24 | 8.33                        | 12.70                      |
| SMCB - 4 - 2N   | 1/4                 | 1/8         | 4.82     | 5/8               | 5/8       | 9/16     | 15.24 | 42.16 | 26.16 | 49.53 | 33.52 | 11.50                       | 10.16                      |
| SMCB - 4 - 4N   | 1/4                 | 1/4         | 4.82     | 5/8               | 5/8       | 9/16     | 15.24 | 46.73 | 26.16 | 54.10 | 33.52 | 11.50                       | 10.16                      |
| SMCB - 6 - 4N   | 3/8                 | 1/4         | 7.11     | 3/4               | 3/4       | 11/16    | 16.76 | 50.03 | 29.46 | 57.40 | 36.83 | 14.68                       | 11.17                      |
| SMCB - 6 - 6N   | 3/8                 | 3/8         | 7.11     | 3/4               | 3/4       | 11/16    | 16.76 | 50.03 | 29.46 | 57.40 | 36.83 | 14.68                       | 11.17                      |
| SMCB - 6 - 8N   | 3/8                 | 1/2         | 7.11     | 7/8               | 3/4       | 11/16    | 16.76 | 56.38 | 29.46 | 63.75 | 36.83 | 14.68                       | 11.17                      |
| SMCB - 8 - 6N   | 1/2                 | 3/8         | 9.65     | 15/16             | 15/16     | 7/8      | 22.86 | 53.08 | 31.75 | 63.24 | 41.91 | 19.44                       | 12.70                      |
| SMCB - 8 - 8N   | 1/2                 | 1/2         | 10.41    | 15/16             | 15/16     | 7/8      | 22.86 | 58.67 | 31.75 | 68.83 | 41.91 | 19.44                       | 12.70                      |
| SMCB - 12 - 12N | 3/4                 | 3/4         | 15.74    | 1-3/16            | 1-3/16    | 1-1/8    | 24.38 | 66.04 | 37.33 | 76.20 | 47.49 | 25.79                       | 16.76                      |
| SMCB - 16 - 16N | 1                   | 1           | 22.35    | 1-5/8             | 1-5/8     | 1-1/2    | 31.24 | 81.02 | 45.21 | 93.21 | 57.40 | 33.73                       | 19.05                      |

### SFCB

Bulkhead Female Connector



Connects Fractional Tubes To Male NPT Thread

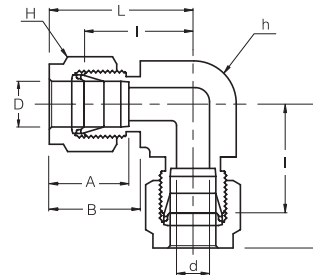
| Part No.        | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |           |          | A     | I     | I1    | L     | L1    | Panel<br>Hole<br>Drill Size | Panel<br>Max.<br>Thickness |
|-----------------|---------------------|-------------|----------|-------------------|-----------|----------|-------|-------|-------|-------|-------|-----------------------------|----------------------------|
|                 |                     |             |          | h (inch)          | h1 (inch) | H (inch) |       |       |       |       |       |                             |                            |
| SFCB - 2 - 2N   | 1/8                 | 1/8         | 2.28     | 9/16              | 1/2       | 7/16     | 12.70 | 38.10 | 24.63 | 44.70 | 31.24 | 8.33                        | 12.70                      |
| SFCB - 4 - 2N   | 1/4                 | 1/8         | 4.82     | 5/8               | 5/8       | 9/16     | 15.24 | 39.62 | 26.16 | 46.99 | 33.52 | 11.50                       | 10.16                      |
| SFCB - 4 - 4N   | 1/4                 | 1/4         | 4.82     | 3/4               | 5/8       | 9/16     | 15.24 | 44.45 | 26.16 | 51.81 | 33.52 | 11.50                       | 10.16                      |
| SFCB - 6 - 4N   | 3/8                 | 1/4         | 7.11     | 3/4               | 3/4       | 11/16    | 16.76 | 47.75 | 29.46 | 55.11 | 36.83 | 14.68                       | 11.17                      |
| SFCB - 8 - 6N   | 1/2                 | 3/8         | 10.41    | 15/16             | 15/16     | 7/8      | 22.86 | 51.56 | 31.75 | 61.72 | 41.91 | 19.44                       | 12.70                      |
| SFCB - 8 - 8N   | 1/2                 | 1/2         | 10.41    | 1-1/16            | 15/16     | 7/8      | 22.86 | 56.38 | 31.75 | 66.54 | 41.91 | 19.44                       | 12.70                      |
| SFCB - 12 - 12N | 3/4                 | 3/4         | 15.74    | 1-1/4             | 1-3/16    | 1-1/8    | 24.38 | 63.60 | 37.33 | 73.51 | 47.49 | 25.79                       | 16.76                      |

Connects Metric Tubes To Male NPT Thread

| Part No.        | Tube<br>OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |      |    | A    | I    | I1   | L     | L1    | Panel<br>Hole<br>Drill Size | Panel<br>Max.<br>Thickness |
|-----------------|------------------------|-------------|----------|-------------------|------|----|------|------|------|-------|-------|-----------------------------|----------------------------|
|                 |                        |             |          | h                 | h1   | H  |      |      |      |       |       |                             |                            |
| SFCB - 6M - 2N  | 6                      | 1/8         | 4.8      | 15.8              | 15.8 | 14 | 15.3 | 39.6 | 27.7 | 46.90 | 35.00 | 11.5                        | 10.2                       |
| SFCB - 6M - 4N  | 6                      | 1/4         | 4.8      | 19.0              | 16.0 | 14 | 15.3 | 44.4 | 26.2 | 51.80 | 33.60 | 11.5                        | 10.2                       |
| SFCB - 8M - 4N  | 8                      | 1/4         | 6.3      | 19.0              | 17.4 | 16 | 16.2 | 46.7 | 28.4 | 53.85 | 35.55 | 13.1                        | 11.2                       |
| SFCB - 12M - 8N | 12                     | 1/2         | 9.5      | 27.0              | 24.0 | 22 | 22.8 | 56.4 | 31.8 | 66.50 | 41.90 | 19.5                        | 12.7                       |

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

**SUE**  
Union Elbow



**Connects Fractional Tubes**

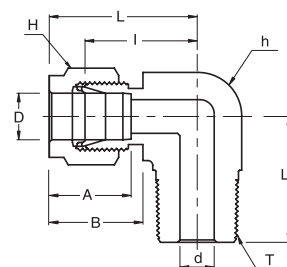
| Part No. | Tube OD<br>D (inch) | d<br>Min | Width Across Flat |          | A     | B     | I     | L      |
|----------|---------------------|----------|-------------------|----------|-------|-------|-------|--------|
|          |                     |          | h (inch)          | H (inch) |       |       |       |        |
| SUE - 1  | 1/16                | 1.27     | 3/8               | 5/16     | 8.63  | 10.92 | 14.00 | 18.03  |
| SUE - 2  | 1/8                 | 2.28     | 3/8               | 7/16     | 12.70 | 15.24 | 15.74 | 22.35  |
| SUE - 3  | 3/16                | 3.04     | 1/2               | 1/2      | 13.71 | 16.00 | 18.54 | 25.14  |
| SUE - 4  | 1/4                 | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 20.10 | 27.40  |
| SUE - 5  | 5/16                | 6.35     | 5/8               | 5/8      | 16.25 | 18.54 | 22.35 | 29.71  |
| SUE - 6  | 3/8                 | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 30.48  |
| SUE - 8  | 1/2                 | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06  |
| SUE - 10 | 5/8                 | 12.70    | 15/16             | 1        | 24.38 | 21.84 | 27.94 | 38.10  |
| SUE - 12 | 3/4                 | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 29.71 | 39.87  |
| SUE - 14 | 7/8                 | 18.28    | 1-3/8             | 1-1/4    | 25.90 | 21.84 | 34.54 | 44.70  |
| SUE - 16 | 1                   | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 36.83 | 49.02  |
| SUE - 20 | 1-1/4               | 27.69    | 1-11/16           | 1-7/8    | 41.15 | 38.86 | 44.45 | 66.55  |
| SUE - 24 | 1-1/2               | 34.04    | 2                 | 2-1/4    | 50.04 | 45.21 | 50.80 | 77.98  |
| SUE - 32 | 2                   | 45.97    | 2-3/4             | 3        | 67.56 | 62.74 | 69.85 | 107.19 |

**Connects Metric Tubes**

| Part No.  | Tube OD<br>D | d<br>Min | Width Across Flat |    | A    | B    | I    | L    |
|-----------|--------------|----------|-------------------|----|------|------|------|------|
|           |              |          | h                 | H  |      |      |      |      |
| SUE 2M    | 2            | 1.7      | 9.5               | 12 | 12.9 | 15.3 | 15.7 | 22.3 |
| SUE - 3M  | 3            | 2.4      | 9.5               | 12 | 12.9 | 15.3 | 15.7 | 22.3 |
| SUE - 4M  | 4            | 2.4      | 12.7              | 12 | 13.7 | 16.1 | 18.8 | 25.4 |
| SUE - 6M  | 6            | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 |
| SUE - 8M  | 8            | 6.4      | 15.9              | 16 | 16.2 | 18.6 | 22.4 | 29.9 |
| SUE - 10M | 10           | 7.9      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 |
| SUE - 12M | 12           | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 |
| SUE - 15M | 15           | 11.9     | 23.8              | 25 | 24.4 | 22.0 | 27.9 | 38.8 |
| SUE - 16M | 16           | 12.7     | 23.8              | 25 | 24.4 | 22.0 | 27.9 | 38.0 |
| SUE - 18M | 18           | 15.1     | 27.0              | 30 | 24.4 | 22.0 | 29.7 | 39.8 |
| SUE - 20M | 20           | 15.9     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 |
| SUE - 22M | 22           | 18.3     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 |
| SUE - 25M | 25           | 21.8     | 34.9              | 38 | 31.3 | 26.5 | 36.8 | 49.1 |
| SUE - 28M | 28           | 21.8     | 41                | 46 | 36.6 | 36.6 | 43.2 | 64.0 |
| SUE - 30M | 30           | 26.2     | 42.9              | 50 | 39.6 | 39.2 | 48.3 | 69.9 |
| SUE - 32M | 32           | 28.6     | 42.9              | 50 | 42.0 | 41.6 | 49.3 | 72.3 |
| SUE - 38M | 38           | 33.7     | 55                | 60 | 49.4 | 47.9 | 56.4 | 84.0 |

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**SME**  
Male Elbow

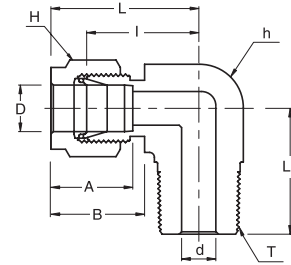


**Connects Metric Tubes To Female NPT Thread**

| Part No.        | Tube OD<br>D | T<br>(NPT) | d<br>Min | Width Across Flat |    | A    | B    | I    | L    | L1   |
|-----------------|--------------|------------|----------|-------------------|----|------|------|------|------|------|
|                 |              |            |          | h                 | H  |      |      |      |      |      |
| SME - 3M - 2N   | 3            | 1/8        | 2.4      | 12.7              | 12 | 12.9 | 15.3 | 17.0 | 23.6 | 17.8 |
| SME - 3M - 4N   | 3            | 1/4        | 2.4      | 12.7              | 12 | 12.9 | 15.3 | 18.0 | 24.6 | 23.4 |
| SME - 4M - 2N   | 4            | 1/8        | 2.4      | 12.7              | 12 | 13.7 | 16.1 | 18.8 | 25.4 | 18.8 |
| SME - 4M - 4N   | 4            | 1/4        | 2.4      | 12.7              | 12 | 13.7 | 16.1 | 18.8 | 25.4 | 23.4 |
| SME - 6M - 2N   | 6            | 1/8        | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 18.8 |
| SME - 6M - 4N   | 6            | 1/4        | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 23.4 |
| SME - 6M - 6N   | 6            | 3/8        | 4.8      | 15.9              | 14 | 15.3 | 17.7 | 22.4 | 29.8 | 26.2 |
| SME - 6M - 8N   | 6            | 1/2        | 4.8      | 20.6              | 14 | 15.3 | 17.7 | 24.4 | 31.8 | 33.0 |
| SME - 8M - 2N   | 8            | 1/8        | 4.8      | 14.3              | 16 | 16.2 | 18.6 | 21.3 | 28.8 | 19.8 |
| SME - 8M - 4N   | 8            | 1/4        | 6.4      | 14.3              | 16 | 16.2 | 18.6 | 21.3 | 28.8 | 24.4 |
| SME - 8M - 6N   | 8            | 3/8        | 6.4      | 15.9              | 16 | 16.2 | 18.6 | 23.1 | 30.6 | 26.2 |
| SME - 8M - 8N   | 8            | 1/2        | 6.4      | 20.6              | 16 | 16.2 | 18.6 | 25.1 | 32.6 | 33.0 |
| SME - 10M - 2N  | 10           | 1/8        | 4.8      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 | 21.6 |
| SME - 10M - 4N  | 10           | 1/4        | 7.1      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 | 26.2 |
| SME - 10M - 6N  | 10           | 3/8        | 7.9      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 | 26.2 |
| SME - 10M - 8N  | 10           | 1/2        | 7.9      | 20.6              | 19 | 17.2 | 19.5 | 25.9 | 33.5 | 33.0 |
| SME - 12M - 4N  | 12           | 1/4        | 7.1      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 28.2 |
| SME - 12M - 6N  | 12           | 3/8        | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 28.2 |
| SME - 12M - 8N  | 12           | 1/2        | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 33.0 |
| SME - 12M - 12N | 12           | 3/4        | 9.5      | 27.0              | 22 | 22.8 | 22.0 | 29.7 | 39.8 | 36.8 |
| SME - 16M - 6N  | 16           | 3/8        | 9.5      | 23.8              | 25 | 24.4 | 22.0 | 27.9 | 38.0 | 30.2 |
| SME - 16M - 8N  | 16           | 1/2        | 11.9     | 23.8              | 25 | 24.4 | 22.0 | 27.9 | 38.0 | 35.1 |
| SME - 16M - 12N | 16           | 3/4        | 12.7     | 27.0              | 25 | 24.4 | 22.0 | 29.7 | 39.8 | 36.8 |
| SME - 18M - 8N  | 18           | 1/2        | 11.9     | 27.0              | 30 | 24.4 | 22.0 | 29.7 | 39.8 | 36.8 |
| SME - 18M - 12N | 18           | 3/4        | 15.1     | 27.0              | 30 | 24.4 | 22.0 | 29.7 | 39.8 | 36.8 |
| SME - 20M - 8N  | 20           | 1/2        | 11.9     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 | 41.7 |
| SME - 20M - 12N | 20           | 3/4        | 15.9     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 | 41.7 |
| SME - 22M - 12N | 22           | 3/4        | 15.9     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 | 41.7 |
| SME - 22M - 16N | 22           | 1          | 18.3     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 | 46.5 |
| SME - 25M - 12N | 25           | 3/4        | 15.9     | 34.9              | 38 | 31.3 | 26.5 | 36.8 | 49.1 | 41.7 |
| SME - 25M - 16N | 25           | 1          | 21.8     | 34.9              | 38 | 31.3 | 26.5 | 36.8 | 49.1 | 46.5 |
| SME - 30M - 20N | 30           | 1-1/4      | 26.2     | 42.9              | 50 | 39.6 | 39.2 | 48.3 | 69.9 | 53.1 |
| SME - 32M - 20N | 32           | 1-1/4      | 27.8     | 42.9              | 50 | 42.0 | 41.6 | 49.3 | 72.3 | 53.1 |
| SME - 38M - 24N | 38           | 1-1/2      | 33.7     | 55                | 60 | 49.4 | 47.9 | 56.4 | 84.0 | 60.4 |

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**SME**  
Male Elbow



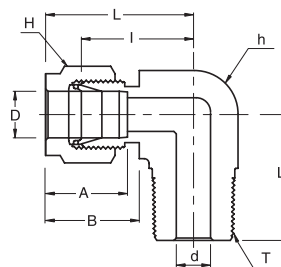
**Connects Metric Tubes To Female ISO Tapered Thread**

| Part No.        | Tube OD<br>D | T<br>R (PT) | d<br>Min | Width Across Flat |    | A    | B    | I    | L    | L1   |
|-----------------|--------------|-------------|----------|-------------------|----|------|------|------|------|------|
|                 |              |             |          | h                 | H  |      |      |      |      |      |
| SME - 3M - 2R   | 3            | 1/8         | 2.4      | 12.7              | 12 | 12.9 | 15.3 | 17.0 | 23.6 | 17.8 |
| SME - 3M - 4R   | 3            | 1/4         | 2.4      | 12.7              | 12 | 12.9 | 15.3 | 18.0 | 24.6 | 23.4 |
| SME - 4M - 2R   | 4            | 1/8         | 2.4      | 12.7              | 12 | 13.7 | 16.1 | 18.8 | 25.4 | 18.8 |
| SME - 4M - 4R   | 4            | 1/4         | 2.4      | 12.7              | 12 | 13.7 | 16.1 | 18.8 | 25.4 | 23.4 |
| SME - 6M - 2R   | 6            | 1/8         | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 18.8 |
| SME - 6M - 4R   | 6            | 1/4         | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 23.4 |
| SME - 6M - 6R   | 6            | 3/8         | 4.8      | 15.9              | 14 | 15.3 | 17.7 | 22.4 | 29.8 | 26.2 |
| SME - 6M - 8R   | 6            | 1/2         | 4.8      | 20.6              | 14 | 15.3 | 17.7 | 24.4 | 31.8 | 33.0 |
| SME - 8M - 2R   | 8            | 1/8         | 4.8      | 14.3              | 16 | 16.2 | 18.6 | 21.3 | 28.8 | 19.8 |
| SME - 8M - 4R   | 8            | 1/4         | 6.4      | 14.3              | 16 | 16.2 | 18.6 | 21.3 | 28.8 | 24.4 |
| SME - 8M - 6R   | 8            | 3/8         | 6.4      | 15.9              | 16 | 16.2 | 18.6 | 23.1 | 30.6 | 26.2 |
| SME - 8M - 8R   | 8            | 1/2         | 6.4      | 20.6              | 16 | 16.2 | 18.6 | 25.1 | 32.6 | 33.0 |
| SME - 10M - 4R  | 10           | 1/4         | 7.1      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 | 26.2 |
| SME - 10M - 6R  | 10           | 3/8         | 7.9      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 | 26.2 |
| SME - 10M - 8R  | 10           | 1/2         | 7.9      | 20.6              | 19 | 17.2 | 19.5 | 25.9 | 33.5 | 33.0 |
| SME - 12M - 2R  | 12           | 1/8         | 4.8      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 23.6 |
| SME - 12M - 4R  | 12           | 1/4         | 7.1      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 28.2 |
| SME - 12M - 6R  | 12           | 3/8         | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 28.2 |
| SME - 12M - 8R  | 12           | 1/2         | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 33.0 |
| SME - 12M - 12R | 12           | 3/4         | 9.5      | 27.0              | 22 | 22.8 | 22.0 | 29.7 | 39.8 | 36.8 |
| SME - 16M - 6R  | 16           | 3/8         | 9.5      | 23.8              | 25 | 24.4 | 22.0 | 27.9 | 38.0 | 30.2 |
| SME - 16M - 8R  | 16           | 1/2         | 11.9     | 23.8              | 25 | 24.4 | 22.0 | 27.9 | 38.0 | 35.1 |
| SME - 18M - 8R  | 18           | 1/2         | 11.9     | 27.0              | 30 | 24.4 | 22.0 | 29.7 | 39.8 | 36.8 |
| SME - 18M - 12R | 18           | 3/4         | 15.1     | 27.0              | 30 | 24.4 | 22.0 | 29.7 | 39.8 | 36.8 |
| SME - 20M - 8R  | 20           | 1/2         | 11.9     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 | 41.7 |
| SME - 20M - 12R | 20           | 3/4         | 15.9     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 | 41.7 |
| SME - 22M - 12R | 22           | 3/4         | 15.9     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 | 41.7 |
| SME - 22M - 16R | 22           | 1           | 18.3     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 | 46.5 |
| SME - 25M - 12R | 25           | 3/4         | 15.9     | 34.9              | 38 | 31.3 | 26.5 | 36.8 | 49.1 | 41.7 |
| SME - 25M - 16R | 25           | 1           | 21.8     | 34.9              | 38 | 31.3 | 26.5 | 36.8 | 49.1 | 46.5 |

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 - Dimensions shown with SUPERLOK nuts finger-tight, where applicable.



**SME**  
Male Elbow

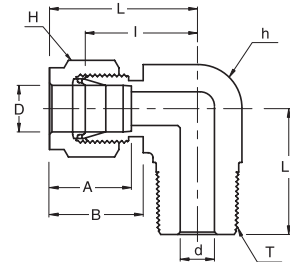


**Connects Fractional Tube To Female NPT Thread**

| Part No.        | Tube OD<br>D (inch) | T<br>(NPT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L      | L1    |
|-----------------|---------------------|------------|----------|-------------------|----------|-------|-------|-------|--------|-------|
|                 |                     |            |          | h (inch)          | H (inch) |       |       |       |        |       |
| SME - 2 - 2N    | 1/8                 | 1/8        | 2.28     | 1/2               | 7/16     | 12.70 | 15.24 | 18.00 | 24.30  | 18.80 |
| SME - 2 - 4N    | 1/8                 | 1/4        | 2.28     | 1/2               | 7/16     | 12.70 | 15.24 | 18.00 | 24.30  | 23.36 |
| SME - 3 - 2N    | 3/16                | 1/8        | 3.04     | 1/2               | 1/2      | 13.71 | 16.00 | 18.79 | 25.40  | 18.79 |
| SME - 3 - 4N    | 3/16                | 1/4        | 3.04     | 1/2               | 1/2      | 13.71 | 16.00 | 18.79 | 25.40  | 23.36 |
| SME - 4 - 2N    | 1/4                 | 1/8        | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92  | 18.79 |
| SME - 4 - 4N    | 1/4                 | 1/4        | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92  | 23.36 |
| SME - 4 - 6N    | 1/4                 | 3/8        | 4.82     | 5/8               | 9/16     | 15.24 | 17.78 | 22.35 | 29.71  | 26.16 |
| SME - 4 - 8N    | 1/4                 | 1/2        | 4.82     | 13/16             | 9/16     | 15.24 | 17.78 | 24.38 | 31.75  | 33.02 |
| SME - 5 - 2N    | 5/16                | 1/8        | 4.82     | 9/16              | 5/8      | 16.25 | 18.54 | 21.33 | 28.70  | 19.81 |
| SME - 5 - 4N    | 5/16                | 1/4        | 6.35     | 9/16              | 5/8      | 16.25 | 18.54 | 21.33 | 28.70  | 24.38 |
| SME - 5 - 6N    | 5/16                | 3/8        | 6.35     | 11/16             | 5/8      | 16.25 | 18.54 | 23.11 | 30.48  | 26.16 |
| SME - 6 - 2N    | 3/8                 | 1/8        | 4.82     | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 30.48  | 20.82 |
| SME - 6 - 4N    | 3/8                 | 1/4        | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 30.48  | 25.40 |
| SME - 6 - 6N    | 3/8                 | 3/8        | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.87 | 31.24  | 26.16 |
| SME - 6 - 8N    | 3/8                 | 1/2        | 7.11     | 13/16             | 11/16    | 16.76 | 19.30 | 25.90 | 33.27  | 33.02 |
| SME - 6 - 12N   | 3/8                 | 3/4        | 7.11     | 1-1/16            | 11/16    | 16.76 | 19.30 | 29.71 | 37.08  | 36.83 |
| SME - 8 - 4N    | 1/2                 | 1/4        | 7.11     | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06  | 28.19 |
| SME - 8 - 6N    | 1/2                 | 3/8        | 9.65     | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06  | 28.19 |
| SME - 8 - 8N    | 1/2                 | 1/2        | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06  | 33.02 |
| SME - 8 - 12N   | 1/2                 | 3/4        | 10.41    | 1-1/16            | 7/8      | 22.86 | 21.84 | 29.71 | 39.87  | 36.83 |
| SME - 10 - 6N   | 5/8                 | 3/8        | 9.65     | 15/16             | 1        | 24.38 | 21.84 | 27.94 | 38.10  | 30.22 |
| SME - 10 - 8N   | 5/8                 | 1/2        | 11.93    | 15/16             | 1        | 24.38 | 21.84 | 27.94 | 38.10  | 35.10 |
| SME - 10 - 12N  | 5/8                 | 3/4        | 12.70    | 1-1/16            | 1        | 24.38 | 21.84 | 29.71 | 39.87  | 36.83 |
| SME - 12 - 8N   | 3/4                 | 1/2        | 11.93    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 29.71 | 39.87  | 36.83 |
| SME - 12 - 12N  | 3/4                 | 3/4        | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 29.71 | 39.87  | 36.83 |
| SME - 14 - 12N  | 7/8                 | 3/4        | 15.74    | 1-3/8             | 1-1/4    | 25.90 | 21.84 | 34.54 | 44.70  | 41.65 |
| SME - 16 - 1 2N | 1                   | 3/4        | 15.74    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 36.83 | 49.02  | 41.65 |
| SME - 16 - 16N  | 1                   | 1          | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 36.83 | 49.02  | 46.48 |
| SME - 20 - 20N  | 1-1/4               | 1-1/4      | 27.69    | 1-11/16           | 1-7/8    | 41.15 | 38.86 | 44.45 | 66.55  | 47.75 |
| SME - 24 - 24N  | 1-1/2               | 1-1/2      | 34.04    | 2                 | 2-1/4    | 50.04 | 45.21 | 50.80 | 77.98  | 60.45 |
| SME - 32 - 32N  | 2                   | 2          | 45.97    | 2-3/4             | 3        | 67.56 | 62.74 | 69.85 | 107.19 | 70.61 |

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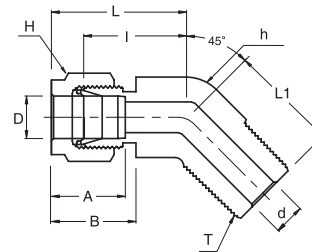
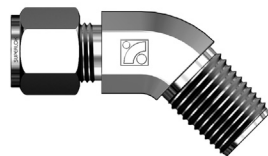
**SME**  
Male Elbow



**Connects Fractional Tubes To Female ISO Tapered Thread**

| Part No.     | Tube OD<br>D (inch) | T<br>R (PT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     | L1    |
|--------------|---------------------|-------------|----------|-------------------|----------|-------|-------|-------|-------|-------|
|              |                     |             |          | h (inch)          | H (inch) |       |       |       |       |       |
| SME - 4 - 2R | 1/4                 | 1/8         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92 | 18.79 |
| SME - 4 - 4R | 1/4                 | 1/4         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92 | 23.36 |
| SME - 4 - 6R | 1/4                 | 3/8         | 4.82     | 5/8               | 9/16     | 15.24 | 17.78 | 22.35 | 29.71 | 26.16 |
| SME - 4 - 8R | 1/4                 | 1/2         | 4.82     | 13/16             | 9/16     | 15.24 | 17.78 | 24.38 | 31.75 | 33.02 |
| SME - 5 - 4R | 5/16                | 1/4         | 6.35     | 9/16              | 5/8      | 16.25 | 18.54 | 21.33 | 28.70 | 24.38 |
| SME - 6 - 4R | 3/8                 | 1/4         | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 30.48 | 25.40 |
| SME - 6 - 6R | 3/8                 | 3/8         | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.87 | 31.24 | 26.16 |
| SME - 8 - 6R | 1/2                 | 3/8         | 9.65     | 13/16             | 7/8      | 22.86 | 21.84 | 25.91 | 36.07 | 28.20 |
| SME - 8 - 8R | 1/2                 | 1/2         | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.91 | 36.07 | 33.02 |

**SHME**  
45° Male Elbow



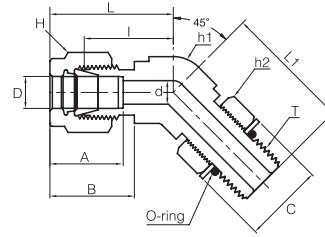
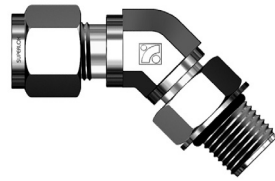
**Connects Fractional Tubes To Female NPT Thread**

| Part No.      | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     | L1    |
|---------------|---------------------|-------------|----------|-------------------|----------|-------|-------|-------|-------|-------|
|               |                     |             |          | h (inch)          | H (inch) |       |       |       |       |       |
| SHME - 4 - 2N | 1/4                 | 1/8         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 17.27 | 24.63 | 16.51 |
| SHME - 4 - 4N | 1/4                 | 1/4         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 17.27 | 24.63 | 21.08 |
| SHME - 6 - 2N | 3/8                 | 1/8         | 4.82     | 5/8               | 11/16    | 16.76 | 19.30 | 20.57 | 27.94 | 18.28 |
| SHME - 6 - 4N | 3/8                 | 1/4         | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 20.57 | 27.94 | 22.86 |
| SHME - 6 - 6N | 3/8                 | 3/8         | 7.11     | 13/16             | 11/16    | 16.76 | 19.30 | 21.84 | 29.21 | 24.13 |
| SHME - 8 - 6N | 1/2                 | 3/8         | 9.65     | 13/16             | 7/8      | 22.86 | 21.84 | 21.84 | 32.00 | 24.13 |
| SHME - 8 - 8N | 1/2                 | 1/2         | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 21.84 | 32.00 | 28.95 |

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### SPHME

#### 45° Positionable Male Elbow

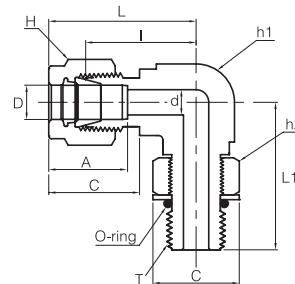


#### Connects Fractional Tubes To SAE/MS Straight Thread

| Part No.         | Tube OD<br>D (inch) | T<br>(U)  | d<br>Min | Width Across Flat |          |         | A     | B     | I     | L     | L1    | C     |
|------------------|---------------------|-----------|----------|-------------------|----------|---------|-------|-------|-------|-------|-------|-------|
|                  |                     |           |          | h1(inch)          | h2(inch) | H(inch) |       |       |       |       |       |       |
| SPHME - 4 - 4U   | 1/4                 | 7/16-20   | 4.83     | 1/2               | 9/16     | 9/16    | 15.24 | 17.78 | 18.29 | 25.64 | 25.65 | 16.51 |
| SPHME - 6 - 6U   | 3/8                 | 9/16-18   | 7.11     | 5/8               | 11/16    | 11/16   | 16.76 | 19.30 | 20.57 | 27.94 | 28.19 | 20.07 |
| SPHME - 8 - 8U   | 1/2                 | 3/4-16    | 10.41    | 13/16             | 7/8      | 7/8     | 22.86 | 21.84 | 21.84 | 32.00 | 32.26 | 25.65 |
| SPHME - 12 - 12U | 3/4                 | 1-1/16-12 | 15.75    | 1-1/8             | 1-1/4    | 1-1/8   | 24.38 | 24.84 | 29.72 | 39.88 | 47.24 | 36.58 |
| SPHME - 16 - 16U | 1                   | 1-5/16-12 | 22.35    | 1-3/8             | 1-1/2    | 1-1/2   | 31.24 | 26.42 | 35.31 | 47.50 | 50.55 | 43.94 |

### SPME

#### Positionable Male Elbow



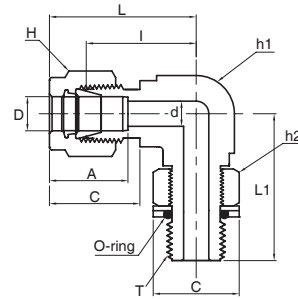
#### Connects Fractional Tubes To SAE/MS Straight Thread

| Part No.        | Tube OD<br>D (inch) | T<br>(U)  | d<br>Min | Width Across Flat |          |         | A     | B     | I     | L      | L1    | C     |
|-----------------|---------------------|-----------|----------|-------------------|----------|---------|-------|-------|-------|--------|-------|-------|
|                 |                     |           |          | h1(inch)          | h2(inch) | H(inch) |       |       |       |        |       |       |
| SPME - 4 - 4U   | 1/4                 | 7/16-20   | 4.83     | 1/2               | 9/16     | 9/16    | 15.24 | 17.78 | 21.08 | 28.45  | 28.45 | 16.51 |
| SPME - 4 - 6U   | 1/4                 | 9/16-18   | 4.83     | 5/8               | 11/16    | 9/16    | 15.24 | 17.78 | 23.11 | 30.48  | 32.26 | 20.07 |
| SPME - 5 - 5U   | 5/16                | 1/2-20    | 5.84     | 9/16              | 5/8      | 5/8     | 16.26 | 18.54 | 23.60 | 30.23  | 29.46 | 18.29 |
| SPME - 6 - 6U   | 3/8                 | 9/16-18   | 7.11     | 5/8               | 11/16    | 11/16   | 16.76 | 19.30 | 24.64 | 32.00  | 32.26 | 20.07 |
| SPME - 6 - 8U   | 3/8                 | 3/4-16    | 7.11     | 13/16             | 7/8      | 11/16   | 16.76 | 19.30 | 27.43 | 34.80  | 37.85 | 25.65 |
| SPME - 8 - 8U   | 1/2                 | 3/4-16    | 10.41    | 13/16             | 7/8      | 7/8     | 22.86 | 21.84 | 27.43 | 37.59  | 37.85 | 25.65 |
| SPME - 10 - 10U | 5/8                 | 7/8-14    | 12.70    | 15/16             | 1        | 1       | 24.38 | 21.84 | 27.90 | 39.62  | 43.43 | 29.46 |
| SPME - 12 - 12U | 3/4                 | 1-1/16-12 | 15.75    | 1-1/16            | 1-1/4    | 1-1/8   | 24.38 | 21.84 | 29.70 | 41.40  | 48.77 | 36.58 |
| SPME - 14 - 14U | 7/8                 | 3/16-12   | 18.29    | 1-3/16            | 1-3/8    | 1-1/4   | 25.91 | 21.84 | 33.02 | 43.18  | 50.55 | 40.39 |
| SPME - 16 - 16U | 1                   | 1-5/16-12 | 22.35    | 1-3/8             | 1-1/2    | 1-1/2   | 31.24 | 26.42 | 36.80 | 50.55  | 53.59 | 43.94 |
| SPME - 20 - 20U | 1-1/4               | 1-5/8-12  | 27.69    | 1-11/16           | 1-7/8    | 1-7/8   | 41.15 | 38.86 | 45.72 | 67.82  | 58.17 | 54.86 |
| SPME - 24 - 24U | 1-1/2               | 1-7/8-12  | 34.04    | 2                 | 2-1/8    | 2-1/4   | 50.04 | 45.21 | 50.80 | 77.98  | 60.45 | 62.23 |
| SPME - 32 - 32U | 2                   | 2-1/2-12  | 45.97    | 2-3/4             | 2-3/4    | 3       | 67.56 | 62.74 | 69.85 | 107.19 | 71.63 | 80.26 |

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# SPME

## Positionable Male Elbow



### Connects Fractional Tubes To Female ISO Parallel Thread

| Part No.        | Tube OD<br>D (inch) | T<br>(PF) | d<br>Min | Width Across Flat |          |         | A     | B     | I     | L     | L1    | C     |
|-----------------|---------------------|-----------|----------|-------------------|----------|---------|-------|-------|-------|-------|-------|-------|
|                 |                     |           |          | h1(inch)          | h2(inch) | H(inch) |       |       |       |       |       |       |
| SPME - 4 - 2G   | 1/4                 | 1/8       | 4.06     | 1/2               | 9/16     | 9/16    | 15.24 | 17.78 | 19.56 | 26.92 | 26.42 | 17.27 |
| SPME - 4 - 4G   | 1/4                 | 1/4       | 4.83     | 5/8               | 3/4      | 9/16    | 15.24 | 17.78 | 21.59 | 28.96 | 32.26 | 22.86 |
| SPME - 6 - 4G   | 3/8                 | 1/4       | 5.84     | 5/8               | 3/4      | 11/16   | 16.76 | 19.30 | 23.60 | 30.48 | 32.26 | 22.86 |
| SPME - 6 - 6G   | 3/8                 | 3/8       | 7.11     | 13/16             | 7/8      | 11/16   | 16.76 | 19.30 | 25.91 | 33.27 | 37.08 | 26.42 |
| SPME - 8 - 4G   | 1/2                 | 1/4       | 5.84     | 13/16             | 3/4      | 7/8     | 22.86 | 21.84 | 25.91 | 36.07 | 35.05 | 26.42 |
| SPME - 8 - 6G   | 1/2                 | 3/8       | 7.87     | 13/16             | 7/8      | 7/8     | 22.86 | 21.84 | 25.91 | 36.07 | 37.08 | 22.86 |
| SPME - 8 - 8G   | 1/2                 | 1/2       | 10.41    | 15/16             | 1-1/16   | 7/8     | 22.86 | 21.84 | 27.94 | 38.10 | 43.43 | 26.42 |
| SPME - 10 - 8G  | 5/8                 | 1/2       | 11.94    | 15/16             | 1-1/16   | 1       | 24.38 | 21.84 | 27.94 | 38.10 | 43.43 | 32.00 |
| SPME - 12 - 8G  | 3/4                 | 1/2       | 11.94    | 1-1/16            | 1-1/16   | 1-1/8   | 24.38 | 21.84 | 29.72 | 39.88 | 45.21 | 32.00 |
| SPME - 12 - 12G | 3/4                 | 3/4       | 15.75    | 1-1/16            | 1-3/8    | 1-1/8   | 24.38 | 21.84 | 29.72 | 39.88 | 48.77 | 41.15 |
| SPME - 16 - 12G | 1                   | 3/4       | 15.75    | 1-3/8             | 1-3/8    | 1-1/2   | 31.24 | 26.42 | 36.83 | 49.02 | 53.34 | 41.15 |
| SPME - 16 - 16G | 1                   | 1         | 19.81    | 1-3/8             | 1-5/8    | 1-1/2   | 31.24 | 26.42 | 36.83 | 49.02 | 53.59 | 48.51 |

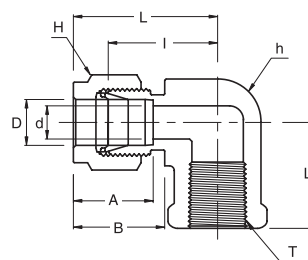
### Connects Metric Tubes To Female ISO Parallel Thread

| Part No.         | Tube OD<br>D | T<br>(PF) | d<br>Min | Width Across Flat |          |    | A    | B    | I    | L    | L1   | C    |
|------------------|--------------|-----------|----------|-------------------|----------|----|------|------|------|------|------|------|
|                  |              |           |          | h1(inch)          | h2(inch) | H  |      |      |      |      |      |      |
| SPME - 6M - 2G   | 6            | 1/8       | 4.0      | 1/2               | 9/16     | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 26.4 | 17.3 |
| SPME - 6M - 4G   | 6            | 1/4       | 4.8      | 5/8               | 3/4      | 14 | 15.3 | 17.7 | 21.6 | 29.0 | 32.3 | 22.9 |
| SPME - 8M - 2G   | 8            | 1/8       | 4.0      | 9/16              | 9/16     | 16 | 16.2 | 18.6 | 21.3 | 28.8 | 27.4 | 17.3 |
| SPME - 8M - 4G   | 8            | 1/4       | 5.9      | 5/8               | 3/4      | 16 | 16.2 | 18.6 | 22.4 | 29.9 | 32.2 | 22.9 |
| SPME - 10M - 4G  | 10           | 1/4       | 5.9      | 13/16             | 3/4      | 19 | 17.2 | 19.5 | 25.9 | 33.5 | 35.0 | 22.9 |
| SPME - 10M - 6G  | 10           | 3/8       | 7.9      | 13/16             | 7/8      | 19 | 17.2 | 19.5 | 25.9 | 33.5 | 37.1 | 26.4 |
| SPME - 12M - 4G  | 12           | 1/4       | 5.9      | 13/16             | 3/4      | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 35.0 | 22.9 |
| SPME - 12M - 6G  | 12           | 3/8       | 7.9      | 13/16             | 7/8      | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 37.1 | 26.4 |
| SPME - 12M - 8G  | 12           | 1/2       | 9.5      | 15/16             | 1-1/16   | 22 | 22.8 | 22.0 | 27.9 | 38.0 | 43.4 | 32.0 |
| SPME - 12M - 12G | 12           | 3/4       | 9.5      | 1-1/16            | 1-3/8    | 22 | 22.8 | 22.0 | 29.7 | 39.8 | 48.8 | 41.1 |

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 - Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

**SFE**

Female Elbow



**Connects Fractional Tubes To Male NPT Thread**

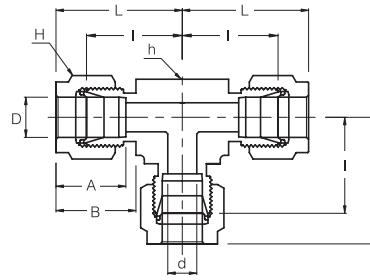
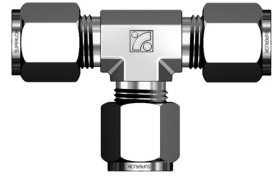
| Part No.       | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     | L1    |
|----------------|---------------------|-------------|----------|-------------------|----------|-------|-------|-------|-------|-------|
|                |                     |             |          | h (inch)          | H (inch) |       |       |       |       |       |
| SFE - 2 - 2N   | 1/8                 | 1/8         | 2.28     | 1/2               | 7/16     | 12.70 | 15.24 | 18.03 | 24.63 | 23.40 |
| SFE - 2 - 4N   | 1/8                 | 1/4         | 2.28     | 11/16             | 7/16     | 12.70 | 15.24 | 20.82 | 27.43 | 29.00 |
| SFE - 3 - 2N   | 3/16                | 1/8         | 3.04     | 1/2               | 1/2      | 13.71 | 16.00 | 18.79 | 25.40 | 23.40 |
| SFE - 4 - 2N   | 1/4                 | 1/8         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92 | 23.40 |
| SFE - 4 - 4N   | 1/4                 | 1/4         | 4.82     | 11/16             | 9/16     | 15.24 | 17.78 | 22.35 | 29.71 | 29.00 |
| SFE - 4 - 6N   | 1/4                 | 3/8         | 4.82     | 13/16             | 9/16     | 15.24 | 17.78 | 24.38 | 31.75 | 22.35 |
| SFE - 4 - 8N   | 1/4                 | 1/2         | 4.82     | 1                 | 9/16     | 15.24 | 17.78 | 27.17 | 34.54 | 37.00 |
| SFE - 5 - 2N   | 5/16                | 1/8         | 6.35     | 9/16              | 5/8      | 16.25 | 18.54 | 21.33 | 28.70 | 19.05 |
| SFE - 5 - 4N   | 5/16                | 1/4         | 6.35     | 11/16             | 5/8      | 16.25 | 18.54 | 23.11 | 30.48 | 29.00 |
| SFE - 6 - 2N   | 3/8                 | 1/8         | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 30.48 | 19.05 |
| SFE - 6 - 4N   | 3/8                 | 1/4         | 7.11     | 11/16             | 11/16    | 16.76 | 19.30 | 23.87 | 31.24 | 29.00 |
| SFE - 6 - 6N   | 3/8                 | 3/8         | 7.11     | 13/16             | 11/16    | 16.76 | 19.30 | 25.90 | 33.27 | 22.35 |
| SFE - 6 - 8N   | 3/8                 | 1/2         | 7.11     | 1                 | 11/16    | 16.76 | 19.30 | 28.70 | 36.06 | 37.00 |
| SFE - 8 - 4N   | 1/2                 | 1/4         | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06 | 22.35 |
| SFE - 8 - 6N   | 1/2                 | 3/8         | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06 | 22.35 |
| SFE - 8 - 8N   | 1/2                 | 1/2         | 10.41    | 1                 | 7/8      | 22.86 | 21.84 | 28.70 | 38.86 | 37.00 |
| SFE - 10 - 6N  | 5/8                 | 3/8         | 12.70    | 15/16             | 1        | 24.38 | 21.84 | 27.94 | 38.10 | 22.35 |
| SFE - 10 - 8N  | 5/8                 | 1/2         | 12.70    | 1-1/16            | 1        | 24.38 | 21.84 | 29.71 | 39.87 | 28.44 |
| SFE - 12 - 8N  | 3/4                 | 1/2         | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 29.71 | 39.87 | 28.44 |
| SFE - 12 - 12N | 3/4                 | 3/4         | 15.74    | 1-3/8             | 1-1/8    | 24.38 | 21.84 | 34.54 | 44.70 | 31.75 |
| SFE - 14 - 12N | 7/8                 | 3/4         | 18.28    | 1-3/8             | 1-1/4    | 25.90 | 21.84 | 34.54 | 44.70 | 31.75 |
| SFE - 16 - 12N | 1                   | 3/4         | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 36.83 | 49.02 | 31.75 |
| SFE - 16 - 16N | 1                   | 1           | 22.35    | 1-11/16           | 1-1/2    | 31.24 | 26.41 | 41.40 | 53.59 | 38.10 |

**Connects Metric Tubes To Male NPT Thread**

| Part No.       | Tube OD<br>D | T*<br>(NPT) | d<br>Min | Width Across Flat |    | A    | B    | I    | L    | L1    |
|----------------|--------------|-------------|----------|-------------------|----|------|------|------|------|-------|
|                |              |             |          | h                 | H  |      |      |      |      |       |
| SFE - 6M - 4N  | 6            | 1/4         | 4.8      | 17.46             | 14 | 15.3 | 17.7 | 22.4 | 29.8 | 22.40 |
| SFE - 6M - 6N  | 6            | 3/8         | 4.8      | 20.63             | 14 | 15.3 | 17.7 | 24.4 | 31.7 | 22.40 |
| SFE - 6M - 8N  | 6            | 1/2         | 4.8      | 25.40             | 14 | 15.3 | 17.7 | 27.2 | 34.6 | 37.00 |
| SFE - 8M - 4N  | 8            | 1/4         | 6.4      | 17.46             | 16 | 16.2 | 18.6 | 23.1 | 30.6 | 29.00 |
| SFE - 8M - 8N  | 8            | 1/2         | 6.4      | 25.40             | 16 | 16.2 | 18.6 | 28.0 | 35.2 | 37.00 |
| SFE - 10M - 4N | 10           | 1/4         | 7.9      | 17.46             | 19 | 17.2 | 19.5 | 25.9 | 33.5 | 29.00 |
| SFE - 10M - 6N | 10           | 3/8         | 7.9      | 20.63             | 19 | 17.2 | 19.5 | 25.9 | 33.5 | 22.40 |
| SFE - 10M - 8N | 10           | 1/2         | 7.9      | 25.40             | 19 | 17.2 | 19.5 | 28.7 | 36.1 | 37.00 |
| SFE - 12M - 6N | 12           | 3/8         | 9.5      | 20.63             | 22 | 22.8 | 22.0 | 25.9 | 36.2 | 22.35 |
| SFE - 12M - 8N | 12           | 1/2         | 9.5      | 25.40             | 22 | 22.8 | 22.0 | 28.7 | 38.8 | 37.00 |

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

**SUT**  
Union Tee



**Connects Fractional Tubes**

| Part No. | Tube OD<br>D (inch) | d<br>Min | Width Across Flat |          | A     | B     | I     | L      |
|----------|---------------------|----------|-------------------|----------|-------|-------|-------|--------|
|          |                     |          | h (inch)          | H (inch) |       |       |       |        |
| SUT - 1  | 1/16                | 1.27     | 3/8               | 5/16     | 8.63  | 10.92 | 14.00 | 18.03  |
| SUT - 2  | 1/8                 | 2.28     | 3/8               | 7/16     | 12.70 | 15.24 | 15.80 | 22.35  |
| SUT - 3  | 3/16                | 3.04     | 1/2               | 1/2      | 13.71 | 16.00 | 18.54 | 25.14  |
| SUT - 4  | 1/4                 | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 20.10 | 27.40  |
| SUT - 5  | 5/16                | 6.35     | 5/8               | 5/8      | 16.25 | 18.54 | 22.35 | 29.71  |
| SUT - 6  | 3/8                 | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 30.48  |
| SUT - 8  | 1/2                 | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06  |
| SUT - 10 | 5/8                 | 12.70    | 1                 | 1        | 24.38 | 21.84 | 28.70 | 38.86  |
| SUT - 12 | 3/4                 | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 29.71 | 39.87  |
| SUT - 14 | 7/8                 | 18.28    | 1-3/8             | 1-1/4    | 25.90 | 21.84 | 34.54 | 44.70  |
| SUT - 16 | 1                   | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 36.83 | 49.02  |
| SUT - 20 | 1-1/4               | 27.69    | 1-11/16           | 1-7/8    | 41.15 | 38.86 | 44.45 | 66.55  |
| SUT - 24 | 1-1/2               | 34.04    | 2                 | 2-1/4    | 50.04 | 45.21 | 50.80 | 77.98  |
| SUT - 32 | 2                   | 45.97    | 2-3/4             | 3        | 67.56 | 62.74 | 69.85 | 107.19 |

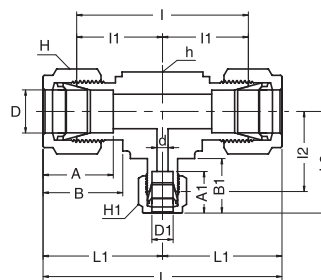
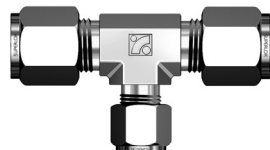
**Connects Metric Tubes**

| Part No.  | Tube OD<br>D | d<br>Min | Width Across Flat |    | A    | B    | I    | L    |
|-----------|--------------|----------|-------------------|----|------|------|------|------|
|           |              |          | h                 | H  |      |      |      |      |
| SUT - 2M  | 2            | 1.7      | 9.5               | 12 | 12.9 | 15.3 | 15.7 | 22.3 |
| SUT - 3M  | 3            | 2.4      | 9.5               | 12 | 12.9 | 15.3 | 15.7 | 22.3 |
| SUT - 4M  | 4            | 2.4      | 12.7              | 12 | 13.7 | 16.1 | 18.8 | 25.4 |
| SUT - 6M  | 6            | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 |
| SUT - 8M  | 8            | 6.4      | 15.9              | 16 | 16.2 | 18.6 | 22.4 | 29.9 |
| SUT - 10M | 10           | 7.9      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 |
| SUT - 12M | 12           | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 |
| SUT - 15M | 15           | 11.9     | 25.4              | 25 | 24.4 | 22.0 | 28.7 | 38.8 |
| SUT - 16M | 16           | 12.7     | 25.4              | 25 | 24.4 | 22.0 | 28.7 | 38.8 |
| SUT - 18M | 18           | 15.1     | 27.0              | 30 | 24.4 | 22.0 | 29.7 | 38.8 |
| SUT - 20M | 20           | 15.9     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 |
| SUT - 22M | 22           | 18.3     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 |
| SUT - 25M | 25           | 21.8     | 34.9              | 38 | 31.3 | 26.5 | 36.8 | 49.1 |
| SUT - 28M | 28           | 21.8     | 41                | 46 | 36.6 | 36.6 | 43.2 | 64.0 |
| SUT - 30M | 30           | 26.2     | 42.9              | 50 | 39.6 | 39.2 | 48.3 | 69.9 |
| SUT - 32M | 32           | 28.6     | 42.9              | 50 | 42.0 | 41.6 | 49.3 | 72.3 |
| SUT - 38M | 38           | 33.7     | 55                | 60 | 49.4 | 47.9 | 56.4 | 84.0 |

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# SRUT

## Reducing Union Tee



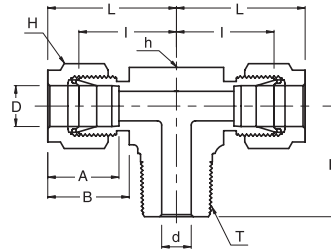
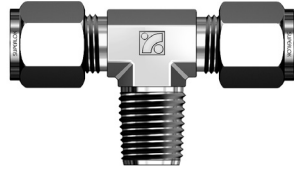
### Connects Fractional Tubes

| Part No.       | Tube OD  |           | d<br>Min | Width Across Flat |          |           | A     | A1    | B     | B1    | I     | I1    | I2    | L     | L1    | L2    |
|----------------|----------|-----------|----------|-------------------|----------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                | D (inch) | D1 (inch) |          | h (inch)          | H (inch) | H1 (inch) |       |       |       |       |       |       |       |       |       |       |
| SRUT - 6 - 4   | 3/8      | 1/4       | 4.82     | 5/8               | 11/16    | 9/16      | 16.76 | 15.24 | 19.30 | 17.78 | 46.22 | 23.11 | 21.59 | 60.96 | 30.48 | 28.95 |
| SRUT - 8 - 4   | 1/2      | 1/4       | 4.82     | 13/16             | 7/8      | 9/16      | 22.86 | 15.24 | 21.84 | 17.78 | 51.81 | 25.90 | 24.38 | 72.13 | 36.06 | 31.75 |
| SRUT - 8 - 6   | 1/2      | 3/8       | 7.11     | 13/16             | 7/8      | 11/16     | 22.86 | 16.76 | 21.84 | 19.30 | 51.81 | 25.90 | 25.90 | 72.13 | 36.06 | 33.27 |
| SRUT - 10 - 6  | 5/8      | 3/8       | 7.11     | 1                 | 1        | 11/16     | 24.38 | 16.76 | 21.84 | 19.30 | 57.40 | 28.70 | 28.70 | 77.72 | 38.86 | 36.06 |
| SRUT - 12 - 6  | 3/4      | 3/8       | 7.11     | 1 1/16            | 1 1/8    | 11/16     | 24.38 | 16.76 | 21.84 | 19.30 | 59.43 | 29.71 | 29.71 | 79.75 | 39.87 | 37.08 |
| SRUT - 12 - 8  | 3/4      | 1/2       | 10.41    | 1 1/16            | 1 1/8    | 7/8       | 24.38 | 22.86 | 21.84 | 21.84 | 59.43 | 29.71 | 29.71 | 79.75 | 39.87 | 39.87 |
| SRUT - 16 - 6  | 1        | 3/8       | 7.11     | 1 3/8             | 1 1/2    | 1 1/16    | 31.24 | 16.76 | 26.41 | 19.30 | 73.66 | 36.83 | 34.54 | 98.04 | 49.02 | 41.91 |
| SRUT - 16 - 8  | 1        | 1/2       | 10.41    | 1 3/8             | 1 1/2    | 7/8       | 31.24 | 21.84 | 26.41 | 22.86 | 73.66 | 36.83 | 34.54 | 98.04 | 49.02 | 44.70 |
| SRUT - 16 - 12 | 1        | 3/4       | 15.74    | 1 3/8             | 1 1/2    | 1 1/8     | 31.24 | 24.38 | 26.41 | 21.84 | 73.66 | 36.83 | 34.54 | 98.04 | 49.02 | 44.70 |

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# SMBT

## Male Branch Tee



### Connects Fractional Tubes To Female NPT Thread

| Part No.        | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     | L1    |
|-----------------|---------------------|-------------|----------|-------------------|----------|-------|-------|-------|-------|-------|
|                 |                     |             |          | h (inch)          | H (inch) |       |       |       |       |       |
| SMBT - 2 - 2N   | 1/8                 | 1/8         | 2.28     | 1/2               | 7/16     | 12.70 | 15.24 | 18.30 | 24.91 | 18.90 |
| SMBT - 2 - 4N   | 1/8                 | 1/4         | 2.28     | 1/2               | 7/16     | 12.70 | 15.24 | 18.03 | 24.63 | 23.36 |
| SMBT - 3 - 2N   | 3/16                | 1/8         | 3.04     | 1/2               | 1/2      | 13.71 | 16.00 | 17.78 | 25.40 | 18.79 |
| SMBT - 4 - 2N   | 1/4                 | 1/8         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92 | 18.79 |
| SMBT - 4 - 4N   | 1/4                 | 1/4         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92 | 23.36 |
| SMBT - 5 - 2N   | 5/16                | 1/8         | 4.82     | 5/8               | 5/8      | 16.25 | 18.54 | 22.35 | 29.71 | 20.82 |
| SMBT - 6 - 4N   | 3/8                 | 1/4         | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 30.48 | 25.40 |
| SMBT - 6 - 6N   | 3/8                 | 3/8         | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.10 | 30.48 | 28.19 |
| SMBT - 8 - 6N   | 1/2                 | 3/8         | 9.65     | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06 | 28.19 |
| SMBT - 8 - 8N   | 1/2                 | 1/2         | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06 | 33.02 |
| SMBT - 10 - 8N  | 5/8                 | 1/2         | 11.93    | 1                 | 1        | 24.38 | 21.84 | 28.70 | 38.86 | 35.81 |
| SMBT - 12 - 12N | 3/4                 | 3/4         | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 29.71 | 39.87 | 36.83 |

### Connects Metric Tubes To Female ISO Tapered Thread

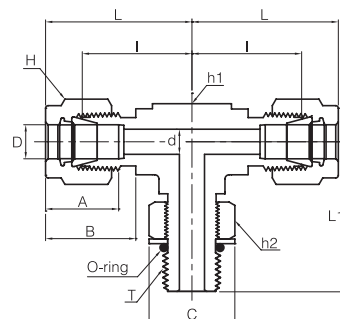
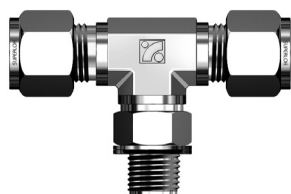
| Part No.         | Tube OD<br>D | T*<br>R (PT) | d<br>Min | Width Across Flat |    | A    | B    | I    | L    | L1   |
|------------------|--------------|--------------|----------|-------------------|----|------|------|------|------|------|
|                  |              |              |          | h                 | H  |      |      |      |      |      |
| SMBT - 3M - 2R   | 3            | 1/8          | 2.4      | 12.7              | 12 | 12.9 | 15.3 | 17.0 | 23.6 | 17.8 |
| SMBT - 3M - 4R   | 3            | 1/4          | 2.4      | 12.7              | 12 | 12.9 | 15.3 | 18.0 | 24.6 | 23.4 |
| SMBT - 4M - 2R   | 4            | 1/8          | 2.4      | 12.7              | 12 | 13.7 | 16.1 | 18.8 | 25.4 | 18.8 |
| SMBT - 6M - 2R   | 6            | 1/8          | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 18.8 |
| SMBT - 6M - 4R   | 6            | 1/4          | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 23.4 |
| SMBT - 8M - 2R   | 8            | 1/8          | 4.8      | 15.9              | 16 | 16.2 | 18.6 | 22.4 | 29.9 | 20.8 |
| SMBT - 8M - 4R   | 8            | 1/4          | 6.4      | 15.9              | 16 | 16.2 | 18.6 | 22.4 | 29.9 | 25.4 |
| SMBT - 10M - 4R  | 10           | 1/4          | 7.1      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 | 28.2 |
| SMBT - 10M - 6R  | 10           | 3/8          | 7.9      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 | 28.2 |
| SMBT - 12M - 4R  | 12           | 1/4          | 7.1      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 28.2 |
| SMBT - 12M - 6R  | 12           | 3/8          | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 28.2 |
| SMBT - 12M - 8R  | 12           | 1/2          | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 33.0 |
| SMBT - 16M - 6R  | 16           | 3/8          | 9.5      | 25.4              | 25 | 24.4 | 22.0 | 27.9 | 38.0 | 30.2 |
| SMBT - 16M - 8R  | 16           | 1/2          | 11.9     | 25.4              | 25 | 24.4 | 22.0 | 27.9 | 38.0 | 35.1 |
| SMBT - 20M - 12R | 20           | 3/4          | 15.9     | 31.8              | 32 | 26.0 | 22.0 | 34.5 | 44.6 | 41.7 |

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# SPMBT

## Positionable Male Branch Tee



### Connects Fractional Tubes To Female ISO Parallel Thread

| Part No.         | Tube OD<br>D (inch) | T<br>(PF) | d<br>Min | Width Across Flat |          |         | A     | B     | I     | L     | L1    | C     |
|------------------|---------------------|-----------|----------|-------------------|----------|---------|-------|-------|-------|-------|-------|-------|
|                  |                     |           |          | h1(inch)          | h2(inch) | H(inch) |       |       |       |       |       |       |
| SPMBT - 4 - 2G   | 1/4                 | 1/8       | 4.06     | 1/2               | 9/16     | 9/16    | 15.24 | 17.78 | 19.56 | 26.92 | 26.42 | 17.27 |
| SPMBT - 4 - 4G   | 1/4                 | 1/4       | 4.83     | 5/8               | 3/4      | 9/16    | 15.24 | 17.78 | 21.59 | 28.96 | 32.26 | 22.86 |
| SPMBT - 6 - 4G   | 3/8                 | 1/4       | 5.08     | 5/8               | 3/4      | 11/16   | 15.24 | 19.30 | 23.11 | 30.48 | 32.26 | 22.86 |
| SPMBT - 8 - 6G   | 3/8                 | 3/8       | 7.87     | 13/16             | 7/8      | 7/8     | 22.86 | 21.84 | 25.91 | 36.07 | 37.08 | 26.42 |
| SPMBT - 8 - 8G   | 1/2                 | 1/2       | 10.41    | 15/16             | 1-1/16   | 7/8     | 22.86 | 21.84 | 27.94 | 38.10 | 43.43 | 32.00 |
| SPMBT - 10 - 8G  | 5/8                 | 1/2       | 11.94    | 15/16             | 1-1/16   | 1       | 24.38 | 21.84 | 27.94 | 38.10 | 43.43 | 32.00 |
| SPMBT - 12 - 8G  | 3/4                 | 1/2       | 11.94    | 1-1/16            | 1-1/16   | 1-1/8   | 24.38 | 21.84 | 29.72 | 39.88 | 45.21 | 32.00 |
| SPMBT - 12 - 12G | 3/4                 | 3/4       | 15.75    | 1-1/16            | 1-3/8    | 1-1/8   | 24.38 | 21.84 | 29.72 | 39.88 | 48.77 | 41.15 |
| SPMBT - 16 - 16G | 1                   | 1         | 19.81    | 1-3/8             | 1-5/8    | 1-1/2   | 31.24 | 26.42 | 36.83 | 49.02 | 53.59 | 48.51 |

### Connects Metric Tubes To Female ISO Parallel Thread

| Part No.         | Tube OD<br>D | T<br>(PF) | d<br>Min | Width Across Flat |          |    | A    | B    | I    | L    | L1   | C    |
|------------------|--------------|-----------|----------|-------------------|----------|----|------|------|------|------|------|------|
|                  |              |           |          | h1(inch)          | h2(inch) | H  |      |      |      |      |      |      |
| SPMBT - 6M - 2G  | 6            | 1/8       | 4.0      | 1/2               | 9/16     | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 26.4 | 17.3 |
| SPMBT - 6M - 4G  | 6            | 1/4       | 4.8      | 5/8               | 3/4      | 14 | 15.3 | 17.7 | 21.6 | 29.0 | 32.3 | 22.9 |
| SPMBT - 8M - 2G  | 8            | 1/8       | 4.0      | 9/16              | 9/16     | 16 | 16.2 | 18.6 | 21.3 | 28.8 | 27.4 | 17.3 |
| SPMBT - 8M - 4G  | 8            | 1/4       | 5.9      | 5/8               | 3/4      | 16 | 16.2 | 18.6 | 22.4 | 29.9 | 32.2 | 22.9 |
| SPMBT - 10M - 4G | 10           | 1/4       | 5.9      | 13/16             | 3/4      | 19 | 17.2 | 19.5 | 25.9 | 33.5 | 35.0 | 22.9 |
| SPMBT - 12M - 6G | 10           | 3/8       | 7.9      | 13/16             | 7/8      | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 37.1 | 26.4 |
| SPMBT - 12M - 8G | 12           | 1/4       | 9.5      | 15/16             | 1-1/16   | 22 | 22.8 | 22.0 | 27.9 | 38.0 | 43.4 | 32.0 |

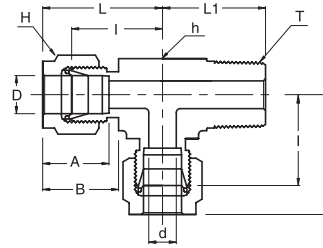
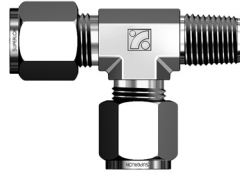
### Connects Fractional Tubes To SAE/MS Straight Thread Boss

| Part No.         | Tube OD<br>D (inch) | T<br>(U)  | d<br>Min | Width Across Flat |          |         | A     | B     | I     | L      | L1    | C     |
|------------------|---------------------|-----------|----------|-------------------|----------|---------|-------|-------|-------|--------|-------|-------|
|                  |                     |           |          | h1(inch)          | h2(inch) | H(inch) |       |       |       |        |       |       |
| SPMBT - 4 - 4U   | 1/4                 | 7/16-20   | 4.83     | 1/2               | 9/16     | 9/16    | 15.24 | 17.78 | 21.08 | 28.45  | 28.45 | 16.51 |
| SPMBT - 6 - 6U   | 3/8                 | 9/16-18   | 7.11     | 5/8               | 11/16    | 11/16   | 16.76 | 19.30 | 24.64 | 32.00  | 32.26 | 20.07 |
| SPMBT - 8 - 8U   | 1/2                 | 3/4-16    | 10.41    | 13/16             | 7/8      | 7/8     | 22.86 | 21.84 | 27.43 | 37.59  | 37.85 | 25.65 |
| SPMBT - 12 - 12U | 3/4                 | 1-1/16-12 | 15.75    | 1-1/16            | 1-1/4    | 1-1/8   | 24.38 | 21.84 | 31.24 | 41.40  | 48.77 | 36.58 |
| SPMBT - 16 - 16U | 1                   | 1-5/16-12 | 22.35    | 1-3/8             | 1-1/2    | 1-1/2   | 31.24 | 26.42 | 38.35 | 50.55  | 53.59 | 43.94 |
| SPMBT - 20 - 20U | 1-1/4               | 1-5/8-12  | 27.69    | 1-11/16           | 1-7/8    | 1-7/8   | 41.15 | 38.86 | 45.72 | 67.82  | 58.17 | 54.86 |
| SPMBT - 24 - 24U | 1-1/2               | 1-7/8-12  | 34.04    | 2                 | 2-1/8    | 2-1/4   | 50.04 | 45.21 | 50.80 | 77.98  | 60.45 | 62.23 |
| SPMBT - 32 - 32U | 2                   | 2-1/2-12  | 45.97    | 2-3/4             | 2-3/4    | 3       | 67.56 | 62.74 | 69.85 | 107.19 | 71.63 | 80.26 |

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- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

# SMRT

## Male Run Tee



### Connects Fractional Tubes To Female NPT Thread

| Part No.        | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     | L1    |
|-----------------|---------------------|-------------|----------|-------------------|----------|-------|-------|-------|-------|-------|
|                 |                     |             |          | h (inch)          | H (inch) |       |       |       |       |       |
| SMRT - 2 - 2N   | 1/8                 | 1/8         | 2.28     | 1/2               | 7/16     | 12.70 | 15.24 | 18.30 | 24.91 | 18.90 |
| SMRT - 2 - 4N   | 1/8                 | 1/4         | 2.28     | 1/2               | 7/16     | 12.70 | 15.24 | 18.03 | 24.63 | 23.36 |
| SMRT - 3 - 2N   | 3/16                | 1/8         | 3.04     | 1/2               | 1/2      | 13.71 | 16.00 | 17.78 | 25.40 | 18.79 |
| SMRT - 4 - 2N   | 1/4                 | 1/8         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92 | 18.79 |
| SMRT - 4 - 4N   | 1/4                 | 1/4         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92 | 23.36 |
| SMRT - 5 - 2N   | 5/16                | 1/8         | 4.82     | 5/8               | 5/8      | 16.25 | 18.54 | 22.35 | 29.71 | 20.82 |
| SMRT - 6 - 4N   | 3/8                 | 1/4         | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 30.48 | 25.40 |
| SMRT - 6 - 6N   | 3/8                 | 3/8         | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.10 | 30.48 | 28.19 |
| SMRT - 8 - 6N   | 1/2                 | 3/8         | 9.65     | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06 | 28.19 |
| SMRT - 8 - 8N   | 1/2                 | 1/2         | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06 | 33.02 |
| SMRT - 10 - 8N  | 5/8                 | 1/2         | 11.93    | 1                 | 1        | 24.38 | 21.84 | 28.70 | 38.86 | 35.81 |
| SMRT - 12 - 12N | 3/4                 | 3/4         | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 29.71 | 39.87 | 36.83 |

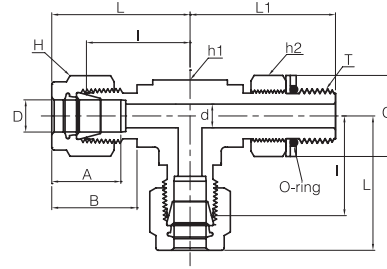
### Connects Metric Tubes To Female ISO Tapered Thread

| Part No.         | Tube OD<br>D | T*<br>R (PT) | d<br>Min | Width Across Flat |    | A    | B    | I    | L    | L1   |
|------------------|--------------|--------------|----------|-------------------|----|------|------|------|------|------|
|                  |              |              |          | h                 | H  |      |      |      |      |      |
| SMRT - 3M - 2R   | 3            | 1/8          | 2.4      | 12.7              | 12 | 12.9 | 15.3 | 17.0 | 23.6 | 17.8 |
| SMRT - 3M - 4R   | 3            | 1/4          | 2.4      | 12.7              | 12 | 12.9 | 15.3 | 18.0 | 24.6 | 23.4 |
| SMRT - 4M - 2R   | 4            | 1/8          | 2.4      | 12.7              | 12 | 13.7 | 16.1 | 18.8 | 25.4 | 18.8 |
| SMRT - 6M - 2R   | 6            | 1/8          | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 18.8 |
| SMRT - 6M - 4R   | 6            | 1/4          | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 23.4 |
| SMRT - 8M - 2R   | 8            | 1/8          | 4.8      | 15.9              | 16 | 16.2 | 18.6 | 22.4 | 29.9 | 20.8 |
| SMRT - 8M - 4R   | 8            | 1/4          | 6.4      | 15.9              | 16 | 16.2 | 18.6 | 22.4 | 29.9 | 25.4 |
| SMRT - 10M - 4R  | 10           | 1/4          | 7.1      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 | 28.2 |
| SMRT - 10M - 6R  | 10           | 3/8          | 7.9      | 17.5              | 19 | 17.2 | 19.5 | 23.9 | 31.5 | 28.2 |
| SMRT - 12M - 4R  | 12           | 1/4          | 7.1      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 28.2 |
| SMRT - 12M - 6R  | 12           | 3/8          | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 28.2 |
| SMRT - 12M - 8R  | 12           | 1/2          | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 33.0 |
| SMRT - 16M - 6R  | 16           | 3/8          | 9.5      | 25.4              | 25 | 24.4 | 22.0 | 27.9 | 38.0 | 30.2 |
| SMRT - 16M - 8R  | 16           | 1/2          | 11.9     | 25.4              | 25 | 24.4 | 22.0 | 27.9 | 38.0 | 35.1 |
| SMRT - 20M - 12R | 20           | 3/4          | 15.9     | 31.8              | 32 | 26.0 | 22.0 | 34.5 | 44.6 | 41.7 |

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

# SPMRT

## Positionable Male Run Tee



### Connects Fractional Tubes To Female ISO Parallel Thread

| Part No.         | Tube OD<br>D (inch) | T<br>(PF) | d<br>Min | Width Across Flat |          |         | A     | B     | I     | L     | L1    | C     |
|------------------|---------------------|-----------|----------|-------------------|----------|---------|-------|-------|-------|-------|-------|-------|
|                  |                     |           |          | h1(inch)          | h2(inch) | H(inch) |       |       |       |       |       |       |
| SPMRT - 4 - 2G   | 1/4                 | 1/8       | 4.06     | 1/2               | 9/16     | 9/16    | 15.24 | 17.78 | 19.56 | 26.92 | 26.42 | 17.27 |
| SPMRT - 4 - 4G   | 1/4                 | 1/4       | 4.83     | 5/8               | 3/4      | 9/16    | 15.24 | 17.78 | 21.59 | 28.96 | 32.26 | 22.86 |
| SPMRT - 6 - 4G   | 3/8                 | 1/4       | 5.84     | 5/8               | 3/4      | 11/16   | 16.76 | 19.30 | 23.11 | 30.48 | 32.26 | 22.86 |
| SPMRT - 8 - 6G   | 1/4                 | 3/8       | 7.87     | 13/16             | 7/8      | 7/8     | 22.86 | 21.84 | 25.91 | 36.07 | 37.08 | 26.42 |
| SPMRT - 8 - 8G   | 3/8                 | 1/2       | 10.41    | 15/16             | 1-1/16   | 7/8     | 22.86 | 21.84 | 27.94 | 38.10 | 43.43 | 32.00 |
| SPMRT - 10 - 8G  | 1/2                 | 1/2       | 11.94    | 15/16             | 1-1/16   | 1       | 24.38 | 21.84 | 27.94 | 38.10 | 43.43 | 32.00 |
| SPMRT - 12 - 8G  | 3/4                 | 1/2       | 11.94    | 1-1/16            | 1-1/16   | 1-1/8   | 24.38 | 21.84 | 29.72 | 39.88 | 45.21 | 32.00 |
| SPMRT - 12 - 12G | 3/4                 | 3/4       | 15.75    | 1-1/16            | 1-3/8    | 1-1/8   | 24.38 | 21.84 | 29.72 | 39.88 | 48.77 | 41.15 |
| SPMRT - 16 - 16G | 1                   | 1         | 19.81    | 1-3/8             | 1-5/8    | 1-1/2   | 31.24 | 26.42 | 36.83 | 49.02 | 53.59 | 48.51 |

### Connects Metric Tubes To Female ISO Parallel Thread

| Part No.         | Tube OD<br>D | T<br>(PF) | d<br>Min | Width Across Flat |          |    | A    | B    | I    | L    | L1   | C    |
|------------------|--------------|-----------|----------|-------------------|----------|----|------|------|------|------|------|------|
|                  |              |           |          | h1(inch)          | h2(inch) | H  |      |      |      |      |      |      |
| SPMRT - 6M - 2G  | 6            | 1/8       | 4.0      | 1/2               | 9/16     | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 26.4 | 17.3 |
| SPMRT - 6M - 4G  | 6            | 1/4       | 4.8      | 5/8               | 3/4      | 14 | 15.3 | 17.7 | 21.6 | 29.0 | 32.2 | 22.9 |
| SPMRT - 8M - 2G  | 8            | 1/8       | 4.0      | 9/16              | 9/16     | 16 | 16.2 | 18.6 | 21.3 | 28.8 | 27.4 | 17.3 |
| SPMRT - 8M - 4G  | 8            | 1/4       | 6.4      | 5/8               | 3/4      | 16 | 16.2 | 18.6 | 22.4 | 29.9 | 32.2 | 22.9 |
| SPMRT - 10M - 4G | 10           | 1/4       | 5.9      | 13/16             | 3/4      | 19 | 17.2 | 19.5 | 25.9 | 33.5 | 35.0 | 22.9 |
| SPMRT - 12M - 6G | 10           | 3/8       | 7.9      | 13/16             | 7/8      | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 37.1 | 26.4 |
| SPMRT - 12M - 8G | 12           | 1/2       | 9.5      | 15/16             | 1-1/16   | 22 | 22.8 | 22.0 | 27.9 | 38.0 | 43.4 | 22.9 |

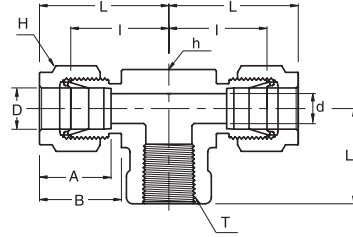
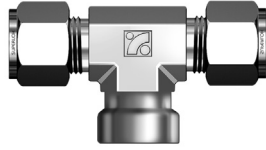
### Connects Fractional Tubes To SAE/MS Straight Thread

| Part No.         | Tube OD<br>D (inch) | T<br>(U)  | d<br>Min | Width Across Flat |          |         | A     | B     | I     | L      | L1    | C     |
|------------------|---------------------|-----------|----------|-------------------|----------|---------|-------|-------|-------|--------|-------|-------|
|                  |                     |           |          | h1(inch)          | h2(inch) | H(inch) |       |       |       |        |       |       |
| SPMRT - 4 - 4U   | 1/4                 | 7/16-20   | 4.83     | 1/2               | 9/16     | 9/16    | 15.24 | 17.78 | 21.08 | 28.45  | 28.45 | 16.51 |
| SPMRT - 6 - 6U   | 3/8                 | 9/16-18   | 7.11     | 5/8               | 11/16    | 11/16   | 16.76 | 19.30 | 24.64 | 32.00  | 32.26 | 20.07 |
| SPMRT - 8 - 8U   | 1/2                 | 3/4-16    | 10.41    | 13/16             | 7/8      | 7/8     | 22.86 | 21.84 | 27.43 | 37.59  | 37.85 | 25.65 |
| SPMRT - 12 - 12U | 3/4                 | 1-1/16-12 | 15.75    | 1-1/16            | 1-1/4    | 1-1/8   | 24.38 | 21.84 | 31.24 | 41.40  | 48.77 | 36.58 |
| SPMRT - 16 - 16U | 1                   | 1-5/16-12 | 22.35    | 1-3/8             | 1-1/2    | 1-1/2   | 31.24 | 26.42 | 38.35 | 50.55  | 53.59 | 43.94 |
| SPMRT - 20 - 20U | 1-1/4               | 1-5/8-12  | 27.69    | 1-11/16           | 1-7/8    | 1-7/8   | 41.15 | 38.86 | 45.72 | 67.82  | 58.17 | 54.86 |
| SPMRT - 24 - 24U | 1-1/2               | 1-7/8-12  | 34.04    | 2                 | 2-1/8    | 2-1/4   | 50.04 | 45.21 | 50.80 | 77.98  | 60.45 | 62.23 |
| SPMRT - 32 - 32U | 2                   | 2-1/2-12  | 45.97    | 2-3/4             | 2-3/4    | 3       | 67.56 | 62.74 | 69.85 | 107.19 | 71.63 | 80.26 |

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

# SFBT

## Female Branch Tee



### Connects Fractional Tubes To Male NPT Thread

| Part No.        | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     | L1    |
|-----------------|---------------------|-------------|----------|-------------------|----------|-------|-------|-------|-------|-------|
|                 |                     |             |          | h (inch)          | H (inch) |       |       |       |       |       |
| SFBT - 2 - 2N   | 1/8                 | 1/8         | 2.28     | 1/2               | 7/16     | 12.70 | 15.24 | 18.03 | 24.63 | 19.05 |
| SFBT - 4 - 2N   | 1/4                 | 1/8         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92 | 19.05 |
| SFBT - 4 - 4N   | 1/4                 | 1/4         | 4.82     | 11/16             | 9/16     | 15.24 | 17.78 | 22.35 | 29.71 | 22.35 |
| SFBT - 6 - 4N   | 3/8                 | 1/4         | 7.11     | 11/16             | 11/16    | 16.76 | 19.30 | 23.87 | 31.24 | 22.35 |
| SFBT - 6 - 6N   | 3/8                 | 3/8         | 7.11     | 13/16             | 11/16    | 16.76 | 19.30 | 25.90 | 33.27 | 22.35 |
| SFBT - 6 - 8N   | 3/8                 | 1/2         | 7.11     | 1                 | 11/16    | 16.76 | 19.30 | 28.70 | 36.07 | 28.45 |
| SFBT - 8 - 4N   | 1/2                 | 1/4         | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06 | 22.35 |
| SFBT - 8 - 6N   | 1/2                 | 3/8         | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06 | 22.35 |
| SFBT - 8 - 8N   | 1/2                 | 1/2         | 10.41    | 1                 | 7/8      | 22.86 | 21.84 | 28.70 | 38.86 | 28.44 |
| SFBT - 10 - 8N  | 5/8                 | 1/2         | 12.70    | 1                 | 1        | 24.38 | 21.84 | 28.70 | 38.86 | 28.44 |
| SFBT - 12 - 12N | 3/4                 | 3/4         | 15.74    | 1-3/8             | 1-1/8    | 24.38 | 21.84 | 34.54 | 44.70 | 31.75 |
| SFBT - 16 - 12N | 1                   | 3/4         | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 36.83 | 49.02 | 31.75 |
| SFBT - 16 - 16N | 1                   | 1           | 22.35    | 1-11/16           | 1-1/2    | 31.24 | 26.41 | 41.40 | 53.59 | 38.10 |

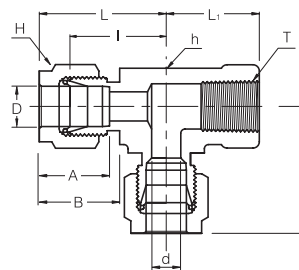
### Connects Metric Tubes To Male NPT Thread

| Part No.        | Tube OD<br>D | T*<br>(NPT) | d<br>Min | Width Across Flat |    | A    | B    | I    | L    | L1   |
|-----------------|--------------|-------------|----------|-------------------|----|------|------|------|------|------|
|                 |              |             |          | h                 | H  |      |      |      |      |      |
| SFBT - 6M - 2N  | 6            | 1/8         | 4.8      | 12.70             | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 19.0 |
| SFBT - 6M - 4N  | 6            | 1/4         | 4.8      | 17.46             | 14 | 15.3 | 17.7 | 22.4 | 29.8 | 22.4 |
| SFBT - 6M - 6N  | 6            | 3/8         | 4.8      | 20.63             | 14 | 15.3 | 17.7 | 24.4 | 31.7 | 22.4 |
| SFBT - 6M - 8N  | 6            | 1/2         | 4.8      | 25.40             | 14 | 15.3 | 17.7 | 27.2 | 34.5 | 28.4 |
| SFBT - 8M - 2N  | 8            | 1/8         | 6.4      | 15.87             | 16 | 16.2 | 18.6 | 22.4 | 29.9 | 19.0 |
| SFBT - 8M - 4N  | 8            | 1/4         | 6.4      | 17.46             | 16 | 16.2 | 18.6 | 23.1 | 30.6 | 22.4 |
| SFBT - 8M - 6N  | 8            | 3/8         | 6.4      | 20.63             | 16 | 16.2 | 18.6 | 25.2 | 32.4 | 22.4 |
| SFBT - 8M - 8N  | 8            | 1/2         | 6.4      | 25.40             | 16 | 16.2 | 18.6 | 28.0 | 35.2 | 28.4 |
| SFBT - 10M - 4N | 10           | 1/4         | 7.9      | 20.63             | 19 | 17.2 | 19.5 | 25.9 | 33.5 | 22.4 |
| SFBT - 10M - 6N | 10           | 3/8         | 7.9      | 20.63             | 19 | 17.2 | 19.5 | 25.9 | 33.3 | 22.4 |
| SFBT - 10M - 8N | 10           | 1/2         | 9.5      | 25.40             | 19 | 17.2 | 19.5 | 26.2 | 33.6 | 22.4 |
| SFBT - 12M - 4N | 12           | 1/4         | 9.5      | 20.63             | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 22.4 |
| SFBT - 12M - 6N | 12           | 3/8         | 9.5      | 20.63             | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 22.4 |
| SFBT - 12M - 8N | 12           | 1/2         | 9.5      | 25.40             | 22 | 22.8 | 22.0 | 29.7 | 40.0 | 28.4 |
| SFBT - 16M - 8N | 16           | 1/2         | 12.7     | 25.40             | 25 | 24.4 | 22.0 | 28.7 | 38.8 | 28.4 |

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# SFRT

## Female Run Tee



### Connects Fractional Tubes To Male NPT Thread

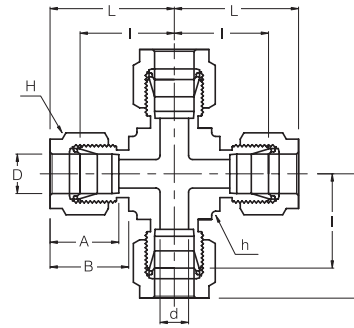
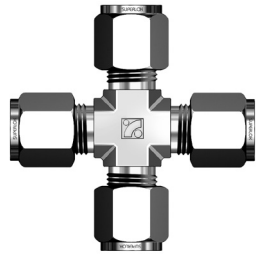
| Part No.        | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     | L1    |
|-----------------|---------------------|-------------|----------|-------------------|----------|-------|-------|-------|-------|-------|
|                 |                     |             |          | h (inch)          | H (inch) |       |       |       |       |       |
| SFRT - 2 - 2N   | 1/8                 | 1/8         | 2.28     | 1/2               | 7/16     | 12.70 | 15.24 | 18.03 | 24.63 | 19.05 |
| SFRT - 4 - 2N   | 1/4                 | 1/8         | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92 | 19.05 |
| SFRT - 4 - 4N   | 1/4                 | 1/4         | 4.82     | 11/16             | 9/16     | 15.24 | 17.78 | 22.35 | 29.71 | 22.35 |
| SFRT - 6 - 4N   | 3/8                 | 1/4         | 7.11     | 11/16             | 11/16    | 16.76 | 19.30 | 23.87 | 31.24 | 22.35 |
| SFRT - 8 - 6N   | 1/2                 | 3/8         | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06 | 22.35 |
| SFRT - 8 - 8N   | 1/2                 | 1/2         | 10.41    | 1                 | 7/8      | 22.86 | 21.84 | 28.70 | 39.87 | 28.44 |
| SFRT - 12 - 12N | 3/4                 | 3/4         | 15.74    | 1-3/8             | 1-1/8    | 24.38 | 21.84 | 34.54 | 44.70 | 31.75 |
| SFRT - 16 - 12N | 1                   | 3/4         | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 36.83 | 49.02 | 31.75 |
| SFRT - 16 - 16N | 1                   | 1           | 22.35    | 1-11/16           | 1-1/2    | 31.24 | 26.41 | 41.40 | 53.59 | 38.10 |

### Connects Metric Tubes To Male NPT Thread

| Part No.        | Tube OD<br>D | T*<br>(NPT) | d<br>Min | Width Across Flat |    | A    | B    | I    | L    | L1   |
|-----------------|--------------|-------------|----------|-------------------|----|------|------|------|------|------|
|                 |              |             |          | h                 | H  |      |      |      |      |      |
| SFRT - 6M - 2N  | 6            | 1/8         | 4.8      | 12.70             | 14 | 15.3 | 17.7 | 19.6 | 27.0 | 19.0 |
| SFRT - 6M - 4N  | 6            | 1/4         | 4.8      | 17.46             | 14 | 15.3 | 17.7 | 22.4 | 29.8 | 22.4 |
| SFRT - 6M - 8N  | 6            | 1/2         | 4.8      | 25.40             | 14 | 15.3 | 17.7 | 27.2 | 34.5 | 28.4 |
| SFRT - 8M - 2N  | 8            | 1/8         | 6.4      | 15.87             | 16 | 16.2 | 18.6 | 22.4 | 29.9 | 19.0 |
| SFRT - 8M - 4N  | 8            | 1/4         | 6.4      | 17.46             | 16 | 16.2 | 18.6 | 23.1 | 30.6 | 22.4 |
| SFRT - 8M - 6N  | 8            | 3/8         | 6.4      | 20.63             | 16 | 16.2 | 18.6 | 25.2 | 32.4 | 22.4 |
| SFRT - 8M - 8N  | 8            | 1/2         | 6.4      | 25.40             | 16 | 16.2 | 18.6 | 28.0 | 35.2 | 28.4 |
| SFRT - 12M - 4N | 12           | 1/4         | 9.5      | 20.63             | 22 | 22.8 | 22.0 | 25.9 | 33.5 | 22.4 |
| SFRT - 12M - 6N | 12           | 3/8         | 9.5      | 20.63             | 22 | 22.8 | 22.0 | 25.9 | 36.0 | 22.4 |
| SFRT - 12M - 8N | 12           | 1/2         | 9.5      | 25.40             | 22 | 22.8 | 22.0 | 29.7 | 40.0 | 28.4 |
| SFRT - 16M - 8N | 16           | 1/2         | 12.7     | 25.40             | 25 | 24.4 | 22.0 | 29.7 | 39.8 | 28.4 |

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**SUC**  
Union Cross



**Connects Fractional Tubes**

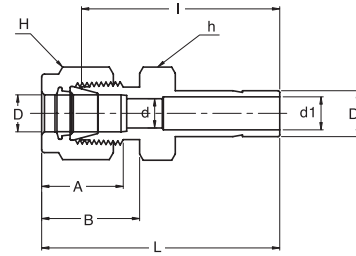
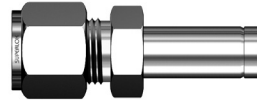
| Part No. | Tube OD<br>D (inch) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     |
|----------|---------------------|----------|-------------------|----------|-------|-------|-------|-------|
|          |                     |          | h (inch)          | H (inch) |       |       |       |       |
| SUC - 1  | 1/16                | 1.27     | 3/8               | 5/16     | 8.63  | 10.92 | 14.00 | 18.03 |
| SUC - 2  | 1/8                 | 2.28     | 3/8               | 7/16     | 12.70 | 15.24 | 15.74 | 22.35 |
| SUC - 3  | 3/16                | 3.04     | 1/2               | 1/2      | 13.71 | 16.00 | 18.54 | 25.14 |
| SUC - 4  | 1/4                 | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 26.92 |
| SUC - 5  | 5/16                | 6.35     | 5/8               | 5/8      | 16.25 | 18.54 | 22.35 | 29.71 |
| SUC - 6  | 3/8                 | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 30.48 |
| SUC - 8  | 1/2                 | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 36.06 |
| SUC - 10 | 5/8                 | 12.70    | 15/16             | 1        | 24.38 | 21.84 | 28.70 | 38.80 |
| SUC - 12 | 3/4                 | 15.74    | 1                 | 1-1/8    | 24.38 | 21.84 | 29.71 | 39.87 |
| SUC - 14 | 7/8                 | 18.28    | 1-3/8             | 1-1/4    | 25.90 | 21.84 | 34.54 | 44.70 |
| SUC - 16 | 1                   | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 36.83 | 49.02 |

**Connects Metric Tubes**

| Part No.  | Tube OD<br>D | d<br>Min | Width Across Flat |    | A    | B    | I    | L    |
|-----------|--------------|----------|-------------------|----|------|------|------|------|
|           |              |          | h                 | H  |      |      |      |      |
| SUC - 3M  | 3            | 2.4      | 9.5               | 12 | 12.9 | 15.3 | 15.7 | 22.3 |
| SUC - 6M  | 6            | 4.8      | 12.7              | 14 | 15.3 | 17.7 | 19.6 | 27.0 |
| SUC - 8M  | 8            | 6.4      | 15.9              | 16 | 16.2 | 18.6 | 22.4 | 29.9 |
| SUC - 10M | 10           | 7.9      | 20.6              | 19 | 17.2 | 19.5 | 25.9 | 33.5 |
| SUC - 12M | 12           | 9.5      | 20.6              | 22 | 22.8 | 22.0 | 25.9 | 36.0 |
| SUC - 16M | 16           | 12.7     | 23.8              | 25 | 24.4 | 22.0 | 26.9 | 37.0 |
| SUC - 18M | 18           | 15.1     | 25.4              | 30 | 24.4 | 22.0 | 28.2 | 38.3 |
| SUC - 20M | 20           | 15.9     | 34.9              | 32 | 26.0 | 22.0 | 34.5 | 44.6 |
| SUC - 25M | 25           | 21.8     | 34.9              | 38 | 31.3 | 26.5 | 36.8 | 49.1 |

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**SR**  
Reducer

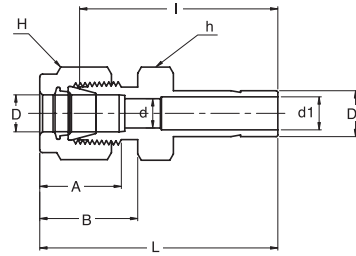
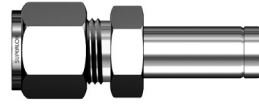


**Connects Fractional Tubes To Fractional SUPERLOK® Port**

| Part No.     | Tube OD  |           | d<br>Min | d1<br>Min | Width Across Flat |          | A     | B     | I     | L     |
|--------------|----------|-----------|----------|-----------|-------------------|----------|-------|-------|-------|-------|
|              | D (inch) | D1 (inch) |          |           | h (inch)          | H (inch) |       |       |       |       |
| SR - 2 - 1   | 1/8      | 1/16      | 2.28     | 0.8       | 7/16              | 7/16     | 12.70 | 15.24 | 22.35 | 28.95 |
| SR - 2 - 2   | 1/8      | 1/8       | 2.28     | 2.1       | 7/16              | 7/16     | 12.70 | 15.24 | 26.92 | 33.52 |
| SR - 2 - 3   | 1/8      | 3/16      | 2.28     | 3.0       | 7/16              | 7/16     | 12.70 | 15.24 | 27.68 | 34.29 |
| SR - 2 - 4   | 1/8      | 1/4       | 2.28     | 4.4       | 7/16              | 7/16     | 12.70 | 15.24 | 29.46 | 36.06 |
| SR - 2 - 6   | 1/8      | 3/8       | 2.28     | 6.9       | 7/16              | 7/16     | 12.70 | 15.24 | 30.98 | 37.59 |
| SR - 2 - 8   | 1/8      | 1/2       | 2.28     | 9.4       | 9/16              | 7/16     | 12.70 | 15.24 | 37.59 | 44.19 |
| SR - 3 - 2   | 3/16     | 1/8       | 3.04     | 2.03      | 7/16              | 1/2      | 13.71 | 16.00 | 28.19 | 34.79 |
| SR - 3 - 4   | 3/16     | 1/4       | 3.04     | 4.4       | 7/16              | 1/2      | 13.71 | 16.00 | 30.48 | 37.08 |
| SR - 4 - 2   | 1/4      | 1/8       | 4.83     | 2.1       | 1/2               | 9/16     | 15.24 | 17.78 | 29.46 | 36.83 |
| SR - 4 - 3   | 1/4      | 3/16      | 4.83     | 3.0       | 1/2               | 9/16     | 15.24 | 17.78 | 30.22 | 37.59 |
| SR - 4 - 4   | 1/4      | 1/4       | 4.83     | 4.4       | 1/2               | 9/16     | 15.24 | 17.78 | 31.75 | 39.11 |
| SR - 4 - 5   | 1/4      | 5/16      | 4.83     | 5.6       | 1/2               | 9/16     | 15.24 | 17.78 | 32.51 | 39.87 |
| SR - 4 - 6   | 1/4      | 3/8       | 4.83     | 6.9       | 1/2               | 9/16     | 15.24 | 17.78 | 33.27 | 40.64 |
| SR - 4 - 8   | 1/4      | 1/2       | 4.83     | 9.4       | 9/16              | 9/16     | 15.24 | 17.78 | 38.86 | 46.22 |
| SR - 4 - 10  | 1/4      | 5/8       | 4.83     | 12.0      | 11/16             | 9/16     | 15.24 | 17.78 | 40.64 | 48.00 |
| SR - 4 - 12  | 1/4      | 3/4       | 4.83     | 14.8      | 13/16             | 9/16     | 15.24 | 17.78 | 41.40 | 47.75 |
| SR - 5 - 6   | 5/16     | 3/8       | 6.35     | 6.9       | 9/16              | 5/8      | 16.25 | 18.54 | 34.54 | 41.91 |
| SR - 5 - 8   | 5/16     | 1/2       | 6.35     | 9.4       | 9/16              | 5/8      | 16.25 | 18.54 | 40.13 | 47.49 |
| SR - 6 - 4   | 3/8      | 1/4       | 7.11     | 4.4       | 5/8               | 11/16    | 16.76 | 19.30 | 34.03 | 41.40 |
| SR - 6 - 6   | 3/8      | 3/8       | 7.11     | 6.9       | 5/8               | 11/16    | 16.76 | 19.30 | 35.81 | 43.18 |
| SR - 6 - 8   | 3/8      | 1/2       | 7.11     | 9.4       | 5/8               | 11/16    | 16.76 | 19.30 | 41.14 | 48.51 |
| SR - 6 - 10  | 3/8      | 5/8       | 7.11     | 12.0      | 11/16             | 11/16    | 16.76 | 19.30 | 42.92 | 50.29 |
| SR - 6 - 12  | 3/8      | 3/4       | 7.11     | 14.8      | 13/16             | 11/16    | 16.76 | 19.30 | 42.92 | 50.29 |
| SR - 8 - 4   | 1/2      | 1/4       | 10.41    | 4.4       | 13/16             | 7/8      | 22.86 | 21.84 | 34.79 | 44.95 |
| SR - 8 - 6   | 1/2      | 3/8       | 10.41    | 6.9       | 13/16             | 7/8      | 22.86 | 21.84 | 36.57 | 46.73 |
| SR - 8 - 8   | 1/2      | 1/2       | 10.41    | 9.4       | 13/16             | 7/8      | 22.86 | 21.84 | 42.16 | 52.32 |
| SR - 8 - 10  | 1/2      | 5/8       | 10.41    | 12.0      | 13/16             | 7/8      | 22.86 | 21.84 | 43.68 | 53.84 |
| SR - 8 - 12  | 1/2      | 3/4       | 10.41    | 14.8      | 13/16             | 7/8      | 22.86 | 21.84 | 43.68 | 53.84 |
| SR - 8 - 16  | 1/2      | 1         | 10.41    | 20.4      | 1-1/16            | 7/8      | 22.86 | 21.84 | 50.03 | 60.19 |
| SR - 10 - 12 | 5/8      | 3/4       | 12.70    | 14.8      | 15/16             | 1        | 24.38 | 21.84 | 44.45 | 54.61 |
| SR - 10 - 14 | 5/8      | 7/8       | 12.70    | 17.0      | 15/16             | 1        | 24.38 | 21.84 | 45.97 | 56.13 |
| SR - 10 - 16 | 5/8      | 1         | 12.70    | 20.4      | 1-1/16            | 1        | 24.38 | 21.84 | 50.80 | 60.96 |
| SR - 12 - 8  | 3/4      | 1/2       | 15.74    | 9.4       | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 44.45 | 54.61 |
| SR - 12 - 16 | 3/4      | 1         | 15.74    | 20.4      | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 52.32 | 62.48 |

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**SR**  
Reducer



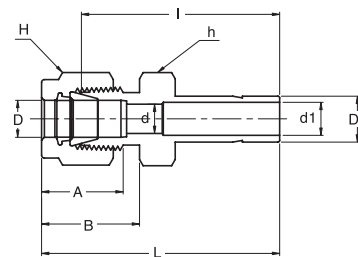
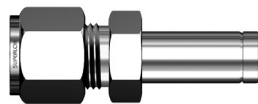
**Connects Metric Tubes To Metric SUPERLOK® Port**

| Part No.      | Tube OD |    | d Min | d1 Min | Width Across Flat |    | A    | B    | I    | L    |
|---------------|---------|----|-------|--------|-------------------|----|------|------|------|------|
|               | D       | D1 |       |        | h                 | H  |      |      |      |      |
| SR - 3M- 4M   | 3       | 4  | 2.4   | 2.2    | 12                | 12 | 12.9 | 15.3 | 28.4 | 35.0 |
| SR - 3M- 6M   | 3       | 6  | 2.4   | 4.1    | 12                | 12 | 12.9 | 15.3 | 29.5 | 36.1 |
| SR - 3M- 10M  | 3       | 10 | 2.4   | 7.1    | 14                | 12 | 12.9 | 15.3 | 31.8 | 38.4 |
| SR - 4M- 6M   | 4       | 6  | 2.4   | 4.1    | 12                | 12 | 13.7 | 16.1 | 30.5 | 37.1 |
| SR - 6M- 3M   | 6       | 3  | 4.8   | 1.8    | 14                | 14 | 15.3 | 17.7 | 29.5 | 36.9 |
| SR - 6M- 8M   | 6       | 8  | 4.8   | 5.6    | 14                | 14 | 15.3 | 17.7 | 32.5 | 39.9 |
| SR - 6M- 10M  | 6       | 10 | 4.8   | 7.1    | 14                | 14 | 15.3 | 17.7 | 33.3 | 40.7 |
| SR - 6M- 12M  | 6       | 12 | 4.8   | 8.8    | 14                | 14 | 15.3 | 17.7 | 38.9 | 46.3 |
| SR - 8M- 6M   | 8       | 6  | 6.4   | 4.1    | 15                | 16 | 16.2 | 18.6 | 32.8 | 40.3 |
| SR - 8M- 10M  | 8       | 10 | 6.4   | 7.1    | 15                | 16 | 16.2 | 18.6 | 34.5 | 42.0 |
| SR - 8M- 12M  | 8       | 12 | 6.4   | 8.8    | 15                | 16 | 16.2 | 18.6 | 40.1 | 47.6 |
| SR - 10M- 6M  | 10      | 6  | 7.9   | 4.1    | 18                | 19 | 17.2 | 19.5 | 34.8 | 42.4 |
| SR - 10M- 8M  | 10      | 8  | 7.9   | 5.6    | 18                | 19 | 17.2 | 19.5 | 35.8 | 43.4 |
| SR - 10M- 12M | 10      | 12 | 7.9   | 8.8    | 18                | 19 | 17.2 | 19.5 | 42.2 | 49.8 |
| SR - 10M- 15M | 10      | 15 | 7.9   | 11.2   | 18                | 19 | 17.2 | 19.5 | 43.7 | 51.3 |
| SR - 10M- 18M | 10      | 18 | 7.9   | 13.9   | 22                | 19 | 17.2 | 19.5 | 43.7 | 51.3 |
| SR - 12M- 6M  | 12      | 6  | 9.5   | 4.1    | 22                | 22 | 22.8 | 22.0 | 34.8 | 44.9 |
| SR - 12M- 8M  | 12      | 8  | 9.5   | 5.6    | 22                | 22 | 22.8 | 22.0 | 35.8 | 45.9 |
| SR - 12M- 10M | 12      | 10 | 9.5   | 7.1    | 22                | 22 | 22.8 | 22.0 | 36.6 | 46.7 |
| SR - 12M- 16M | 12      | 16 | 9.5   | 12.0   | 22                | 22 | 22.8 | 22.0 | 43.7 | 53.8 |
| SR - 12M- 18M | 12      | 18 | 9.5   | 13.9   | 22                | 22 | 22.8 | 22.0 | 43.7 | 53.8 |
| SR - 12M- 20M | 12      | 20 | 9.5   | 15.5   | 22                | 22 | 22.8 | 22.0 | 46.0 | 56.1 |
| SR - 12M- 22M | 12      | 22 | 9.5   | 17.9   | 24                | 22 | 22.8 | 22.0 | 46.0 | 56.1 |
| SR - 12M- 25M | 12      | 25 | 9.5   | 19.9   | 27                | 22 | 22.8 | 22.0 | 52.3 | 62.4 |
| SR - 16M- 12M | 16      | 12 | 12.7  | 8.8    | 27                | 25 | 24.4 | 22.0 | 42.9 | 53.0 |
| SR - 18M- 12M | 18      | 12 | 15.1  | 8.8    | 27                | 30 | 24.4 | 22.0 | 44.5 | 54.6 |
| SR - 18M- 16M | 18      | 16 | 15.1  | 12.0   | 27                | 30 | 24.4 | 22.0 | 46.0 | 56.1 |
| SR - 18M- 20M | 18      | 20 | 15.1  | 15.5   | 27                | 30 | 24.4 | 22.0 | 47.5 | 57.6 |
| SR - 18M- 22M | 18      | 22 | 15.1  | 17.9   | 30                | 30 | 24.4 | 22.0 | 47.5 | 57.6 |
| SR - 18M- 25M | 18      | 25 | 15.1  | 19.9   | 30                | 30 | 24.4 | 22.0 | 52.3 | 62.4 |
| SR - 20M- 16M | 20      | 16 | 15.9  | 12.0   | 30                | 32 | 26.0 | 22.0 | 47.8 | 57.9 |
| SR - 20M- 18M | 20      | 18 | 15.9  | 13.9   | 30                | 32 | 26.0 | 22.0 | 47.8 | 57.9 |
| SR - 20M- 22M | 20      | 22 | 15.9  | 17.9   | 30                | 32 | 26.0 | 22.0 | 49.3 | 59.4 |
| SR - 20M- 25M | 20      | 25 | 15.9  | 19.9   | 30                | 32 | 26.0 | 22.0 | 54.1 | 64.2 |
| SR - 22M- 18M | 22      | 18 | 18.3  | 13.9   | 30                | 32 | 26.0 | 22.0 | 47.8 | 57.9 |
| SR - 22M- 20M | 22      | 20 | 18.3  | 15.5   | 30                | 32 | 26.0 | 22.0 | 49.3 | 59.4 |
| SR - 22M- 25M | 22      | 25 | 18.3  | 19.9   | 30                | 32 | 26.0 | 22.0 | 54.1 | 64.2 |
| SR - 25M- 18M | 25      | 18 | 21.8  | 13.9   | 35                | 38 | 31.3 | 26.5 | 50.8 | 63.1 |
| SR - 25M- 20M | 25      | 20 | 21.8  | 15.5   | 35                | 38 | 31.3 | 26.5 | 52.3 | 64.6 |

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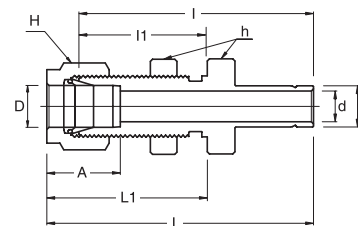
**SR**  
Reducer



**Connects Metric Tubes To Fractional SUPERLOK® Port**

| Part No.      | Tube OD |           | d<br>Min | d1<br>Min | Width Across Flat |    | A    | B    | I    | L    |
|---------------|---------|-----------|----------|-----------|-------------------|----|------|------|------|------|
|               | D       | D1 (inch) |          |           | h                 | H  |      |      |      |      |
| SR - 3M - 2   | 3       | 1/8       | 2.4      | 2.1       | 12                | 12 | 12.9 | 15.3 | 26.9 | 33.5 |
| SR - 3M - 4   | 3       | 1/4       | 2.4      | 4.4       | 12                | 12 | 12.9 | 15.3 | 29.5 | 36.1 |
| SR - 6M - 4   | 6       | 1/4       | 4.8      | 4.4       | 14                | 14 | 15.3 | 17.7 | 31.8 | 39.2 |
| SR - 6M - 5   | 6       | 5/16      | 4.8      | 5.6       | 14                | 14 | 15.3 | 17.7 | 32.5 | 39.9 |
| SR - 6M - 6   | 6       | 3/8       | 4.8      | 6.9       | 14                | 14 | 15.3 | 17.7 | 33.3 | 40.7 |
| SR - 6M - 8   | 6       | 1/2       | 4.8      | 9.4       | 14                | 14 | 15.3 | 17.7 | 38.9 | 46.3 |
| SR - 8M - 6   | 8       | 3/8       | 6.4      | 6.9       | 15                | 16 | 16.2 | 18.6 | 34.5 | 42.0 |
| SR - 8M - 8   | 8       | 1/2       | 6.4      | 9.4       | 15                | 16 | 16.2 | 18.6 | 40.1 | 47.6 |
| SR - 10M - 6  | 10      | 3/8       | 7.9      | 6.9       | 18                | 19 | 17.2 | 19.5 | 36.6 | 44.2 |
| SR - 10M - 8  | 10      | 1/2       | 7.9      | 9.4       | 18                | 19 | 17.2 | 19.5 | 42.2 | 49.8 |
| SR - 12M - 8  | 12      | 1/2       | 9.5      | 9.4       | 22                | 22 | 22.8 | 22.0 | 42.2 | 52.3 |
| SR - 12M - 12 | 12      | 3/4       | 9.5      | 14.8      | 22                | 22 | 22.8 | 22.0 | 43.7 | 53.8 |
| SR - 18M - 12 | 18      | 3/4       | 15.1     | 14.8      | 27                | 30 | 24.4 | 22.0 | 46.0 | 56.1 |
| SR - 18M - 16 | 18      | 1         | 15.1     | 20.4      | 27                | 30 | 24.4 | 22.0 | 52.3 | 62.4 |

**SRB**  
Bulkhead Reducer



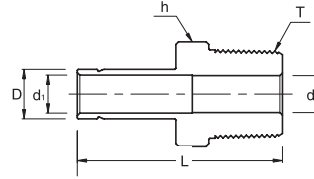
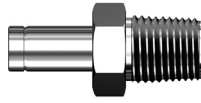
**Connects Fractional Tubes To Fractional SUPERLOK® Port**

| Part No.      | Tube<br>O.D.<br>D (inch) | d<br>Min | Width Across Flat |          | A     | I     | I1    | L      | L1    | Panel<br>Hole<br>Drill Size | Panel<br>Max.<br>Thickness |
|---------------|--------------------------|----------|-------------------|----------|-------|-------|-------|--------|-------|-----------------------------|----------------------------|
|               |                          |          | h (inch)          | H (inch) |       |       |       |        |       |                             |                            |
| SRB - 2 - 2   | 1/8                      | 2.1      | 1/2               | 7/16     | 12.70 | 42.92 | 24.63 | 49.53  | 31.24 | 8.33                        | 12.70                      |
| SRB - 4 - 4   | 1/4                      | 4.4      | 5/8               | 9/16     | 15.24 | 48.51 | 26.16 | 55.88  | 33.52 | 11.50                       | 10.16                      |
| SRB - 6 - 6   | 3/8                      | 6.9      | 3/4               | 11/16    | 16.76 | 53.84 | 29.46 | 61.21  | 36.83 | 14.68                       | 11.17                      |
| SRB - 8 - 8   | 1/2                      | 9.4      | 15/16             | 7/8      | 22.86 | 62.73 | 31.75 | 72.89  | 41.91 | 19.44                       | 12.70                      |
| SRB - 10 - 10 | 5/8                      | 12.0     | 1-1/16            | 1        | 24.38 | 65.02 | 32.51 | 75.18  | 42.67 | 22.62                       | 12.70                      |
| SRB - 16 - 16 | 1                        | 20.4     | 1-5/8             | 1-1/2    | 31.24 | 88.13 | 45.21 | 100.33 | 57.40 | 33.73                       | 19.05                      |

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## SMA

### Male Adapter



### Connects Fractional SUPERLOK® Port To Female NPT Thread

| Part No.       | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>(Min) | d1    | Width Across Flat<br>h (inch) | L     |
|----------------|---------------------|-------------|------------|-------|-------------------------------|-------|
| SMA - 2 - 2N   | 1/8                 | 1/8         | 4.82       | 2.10  | 7/16                          | 29.50 |
| SMA - 2 - 4N   | 1/8                 | 1/4         | 7.11       | 2.10  | 9/16                          | 34.80 |
| SMA - 3 - 2N   | 3/16                | 1/8         | 4.82       | 3.04  | 7/16                          | 30.22 |
| SMA - 3 - 4N   | 3/16                | 1/4         | 7.11       | 3.04  | 9/16                          | 35.56 |
| SMA - 4 - 2N   | 1/4                 | 1/8         | 4.40       | 4.40  | 7/16                          | 31.80 |
| SMA - 4 - 4N   | 1/4                 | 1/4         | 4.40       | 4.40  | 9/16                          | 37.08 |
| SMA - 4 - 6N   | 1/4                 | 3/8         | 4.40       | 4.40  | 11/16                         | 37.84 |
| SMA - 4 - 8N   | 1/4                 | 1/2         | 4.40       | 4.40  | 7/8                           | 43.43 |
| SMA - 5 - 2N   | 5/16                | 1/8         | 4.82       | 5.60  | 7/16                          | 32.76 |
| SMA - 5 - 4N   | 5/16                | 1/4         | 6.35       | 5.60  | 9/16                          | 38.10 |
| SMA - 6 - 2N   | 3/8                 | 1/8         | 4.82       | 6.90  | 7/16                          | 33.50 |
| SMA - 6 - 4N   | 3/8                 | 1/4         | 6.90       | 6.90  | 9/16                          | 38.90 |
| SMA - 6 - 6N   | 3/8                 | 3/8         | 6.90       | 6.90  | 11/16                         | 39.60 |
| SMA - 6 - 8N   | 3/8                 | 1/2         | 6.90       | 6.90  | 7/8                           | 45.20 |
| SMA - 8 - 4N   | 1/2                 | 1/4         | 7.11       | 9.40  | 9/16                          | 44.50 |
| SMA - 8 - 6N   | 1/2                 | 3/8         | 9.40       | 9.40  | 11/16                         | 45.20 |
| SMA - 8 - 8N   | 1/2                 | 1/2         | 9.40       | 9.40  | 7/8                           | 50.80 |
| SMA - 10 - 6N  | 5/8                 | 3/8         | 9.90       | 12.00 | 11/16                         | 47.40 |
| SMA - 10 - 8N  | 5/8                 | 1/2         | 12.00      | 12.00 | 7/8                           | 52.30 |
| SMA - 10 - 12N | 5/8                 | 3/4         | 14.98      | 12.00 | 1-1/16                        | 52.30 |
| SMA - 12 - 8N  | 3/4                 | 1/2         | 11.94      | 14.80 | 7/8                           | 52.30 |
| SMA - 12 - 12N | 3/4                 | 3/4         | 14.80      | 14.80 | 1-1/16                        | 52.30 |
| SMA - 12 - 16N | 3/4                 | 1           | 20.32      | 14.80 | 1-3/8                         | 57.91 |
| SMA - 14 - 12N | 7/8                 | 3/4         | 14.98      | 17.27 | 1-1/16                        | 54.30 |
| SMA - 16 - 12N | 1                   | 3/4         | 15.74      | 20.40 | 1-1/16                        | 58.70 |
| SMA - 16 - 16N | 1                   | 1           | 20.40      | 20.40 | 1-3/8                         | 66.00 |

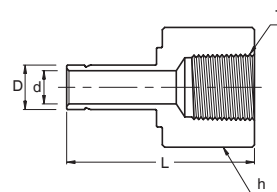
### Connects Metric SUPERLOK® Port To Female NPT Thread

| Part No.        | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>(Min) | d1   | Width Across Flat<br>h (inch) | L    |
|-----------------|---------------------|-------------|------------|------|-------------------------------|------|
| SMA - 6M - 2N   | 6                   | 1/8         | 4.1        | 4.1  | 12                            | 32.8 |
| SMA - 6M - 4N   | 6                   | 1/4         | 4.1        | 4.1  | 14                            | 38.1 |
| SMA - 8M - 4N   | 8                   | 1/4         | 5.6        | 5.6  | 14                            | 39.1 |
| SMA - 10M - 4N  | 10                  | 1/4         | 7.1        | 7.1  | 14                            | 39.9 |
| SMA - 10M - 6N  | 10                  | 3/8         | 7.1        | 7.1  | 18                            | 40.6 |
| SMA - 10M - 8N  | 10                  | 1/2         | 11.9       | 7.1  | 22                            | 46.2 |
| SMA - 12M - 4N  | 12                  | 1/4         | 7.1        | 8.8  | 16                            | 46.5 |
| SMA - 12M - 8N  | 12                  | 1/2         | 11.9       | 8.8  | 22                            | 52.0 |
| SMA - 18M - 12N | 18                  | 3/4         | 15.9       | 13.9 | 27                            | 54.8 |

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**SFA**

## Female Adapter

**Connects Fractional SUPERLOK® Port To Male NPT Thread**

| Part No.       | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>(Min) | Width Across Flat<br>h (inch) | L     |
|----------------|---------------------|-------------|------------|-------------------------------|-------|
| SFA - 2 - 2N   | 1/8                 | 1/8         | 2.10       | 9/16                          | 31.50 |
| SFA - 2 - 4N   | 1/8                 | 1/4         | 2.10       | 3/4                           | 35.30 |
| SFA - 3 - 2N   | 3/16                | 1/8         | 3.04       | 9/16                          | 32.00 |
| SFA - 3 - 4N   | 3/16                | 1/4         | 3.04       | 3/4                           | 35.81 |
| SFA - 4 - 2N   | 1/4                 | 1/8         | 4.40       | 9/16                          | 33.02 |
| SFA - 4 - 4N   | 1/4                 | 1/4         | 4.40       | 3/4                           | 37.10 |
| SFA - 4 - 6N   | 1/4                 | 3/8         | 4.40       | 7/8                           | 39.37 |
| SFA - 4 - 8N   | 1/4                 | 1/2         | 4.40       | 1-1/16                        | 45.50 |
| SFA - 5 - 2N   | 5/16                | 1/8         | 5.60       | 9/16                          | 34.29 |
| SFA - 5 - 4N   | 5/16                | 1/4         | 5.60       | 3/4                           | 37.59 |
| SFA - 6 - 2N   | 3/8                 | 1/8         | 6.90       | 9/16                          | 34.29 |
| SFA - 6 - 4N   | 3/8                 | 1/4         | 6.90       | 3/4                           | 38.10 |
| SFA - 6 - 6N   | 3/8                 | 3/8         | 6.90       | 7/8                           | 40.38 |
| SFA - 6 - 8N   | 3/8                 | 1/2         | 6.90       | 1-1/16                        | 46.73 |
| SFA - 8 - 4N   | 1/2                 | 1/4         | 9.40       | 3/4                           | 43.43 |
| SFA - 8 - 6N   | 1/2                 | 3/8         | 9.40       | 7/8                           | 45.46 |
| SFA - 8 - 8N   | 1/2                 | 1/2         | 9.40       | 1-1/16                        | 51.80 |
| SFA - 10 - 6N  | 5/8                 | 3/8         | 12.00      | 7/8                           | 48.26 |
| SFA - 10 - 8N  | 5/8                 | 1/2         | 12.00      | 1-1/16                        | 53.08 |
| SFA - 12 - 8N  | 3/4                 | 1/2         | 14.80      | 1-1/16                        | 52.83 |
| SFA - 12 - 12N | 3/4                 | 3/4         | 14.80      | 1-5/16                        | 54.86 |
| SFA - 12 - 16N | 3/4                 | 1           | 14.80      | 1-5/8                         | 58.42 |
| SFA - 14 - 12N | 7/8                 | 3/4         | 17.27      | 1-5/16                        | 57.15 |
| SFA - 16 - 12N | 1                   | 3/4         | 20.40      | 1-5/16                        | 60.70 |
| SFA - 16 - 16N | 1                   | 1           | 20.40      | 1-5/8                         | 64.26 |

**Connects Metric SUPERLOK® Port To Male NPT Thread**

| Part No.        | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>(Min) | Width Across Flat<br>h (inch) | L    |
|-----------------|---------------------|-------------|------------|-------------------------------|------|
| SFA - 3M - 2N   | 3                   | 1/8         | 1.8        | 14                            | 31.2 |
| SFA - 6M - 2N   | 6                   | 1/8         | 4.1        | 14                            | 32.5 |
| SFA - 6M - 4N   | 6                   | 1/4         | 4.1        | 19                            | 37.1 |
| SFA - 8M - 4N   | 8                   | 1/4         | 5.6        | 19                            | 37.6 |
| SFA - 10M - 4N  | 10                  | 1/4         | 7.1        | 19                            | 38.1 |
| SFA - 10M - 6N  | 10                  | 3/8         | 7.1        | 22                            | 40.1 |
| SFA - 10M - 8N  | 10                  | 1/2         | 7.1        | 27                            | 46.5 |
| SFA - 12M - 4N  | 12                  | 1/4         | 8.8        | 19                            | 43.7 |
| SFA - 12M - 6N  | 12                  | 3/8         | 8.8        | 22                            | 46.0 |
| SFA - 12M - 8N  | 12                  | 1/2         | 8.8        | 27                            | 52.3 |
| SFA - 18M - 12N | 18                  | 3/4         | 13.9       | 32                            | 54.8 |

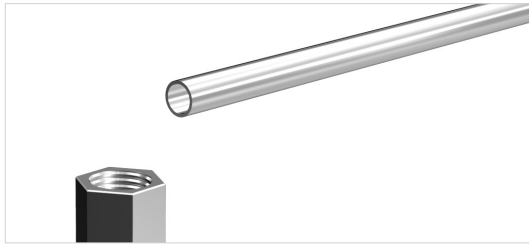
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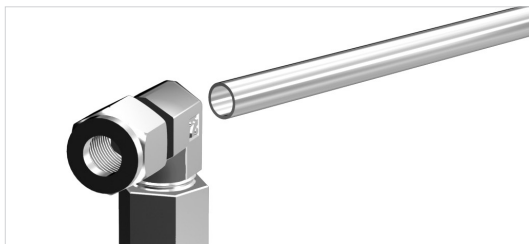
## To Solve Adapter Alignment Problems



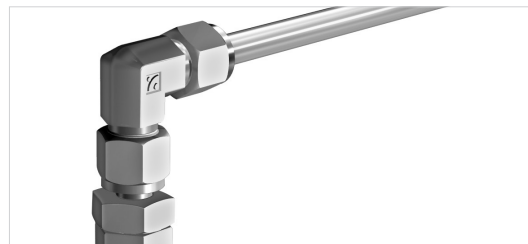
1. Required installation is to connect tubing in direction shown, to a female port.



3. To connect this situation, merely tighten pipe thread of male adapter into female port.

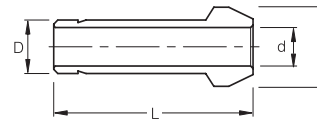


2. With pipe connection tight, the male elbow is pointing in the wrong direction for desired tubing run.



4. Connect union elbow to adapter by tightening SUPERLOK connection with wrench while holding elbow pointing in desired direction. Then insert tubing into the other end of the Union Elbow and connect tubing.

## SPC Port Connector



### Connects Fractional SUPERLOK® Ports

| Part No. | Tube OD<br>D (inch) | d<br>(Min) | E     | L     |
|----------|---------------------|------------|-------|-------|
| SPC - 2  | 1/8                 | 2.1        | 6.09  | 22.35 |
| SPC - 4  | 1/4                 | 4.4        | 9.39  | 25.30 |
| SPC - 5  | 5/16                | 5.6        | 10.92 | 25.90 |
| SPC - 6  | 3/8                 | 6.9        | 12.70 | 26.70 |
| SPC - 8  | 1/2                 | 9.4        | 15.74 | 35.81 |
| SPC - 12 | 3/4                 | 14.8       | 22.09 | 38.10 |
| SPC - 16 | 1                   | 20.4       | 28.44 | 48.00 |

### Connects Metric SUPERLOK® Ports

| Part No.  | Tube OD<br>D (inch) | d<br>(Min) | E    | L    |
|-----------|---------------------|------------|------|------|
| SPC - 3M  | 3                   | 1.9        | 6.0  | 22.2 |
| SPC - 6M  | 6                   | 4.1        | 9.0  | 24.6 |
| SPC - 8M  | 8                   | 5.6        | 11.0 | 28.5 |
| SPC - 10M | 10                  | 7.1        | 13.1 | 26.1 |
| SPC - 12M | 12                  | 8.8        | 15.0 | 35.8 |
| SPC - 16M | 16                  | 12.0       | 19.0 | 37.4 |

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# SRPC

## Reducing Port Connector

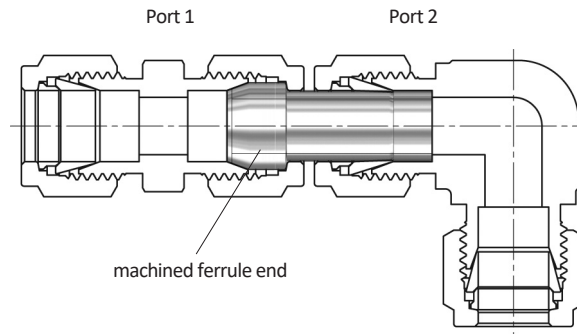


### Connects Fractional SUPERLOK® Port To Male AN

| Part No.       | Tube O.D. D1 (inch) | Reduced Tube O.D. D (inch) | d     | E     | I     | I1   | L     |
|----------------|---------------------|----------------------------|-------|-------|-------|------|-------|
| SRPC - 2 - 1   | 1/8                 | 1/16                       | 0.76  | 6.09  | 8.63  | 2.03 | 17.27 |
| SRPC - 4 - 1   | 1/4                 | 1/16                       | 0.76  | 9.39  | 8.63  | 3.55 | 18.03 |
| SRPC - 4 - 2   | 1/4                 | 1/8                        | 2.10  | 9.39  | 13.46 | 3.30 | 22.60 |
| SRPC - 6 - 2   | 3/8                 | 1/8                        | 2.10  | 12.70 | 13.46 | 3.81 | 23.11 |
| SRPC - 6 - 4   | 3/8                 | 1/4                        | 4.40  | 12.70 | 15.74 | 3.30 | 24.89 |
| SRPC - 8 - 4   | 1/2                 | 1/4                        | 4.40  | 15.74 | 15.74 | 3.81 | 29.21 |
| SRPC - 8 - 6   | 1/2                 | 3/8                        | 6.90  | 15.74 | 17.52 | 3.30 | 30.48 |
| SRPC - 12 - 8  | 3/4                 | 1/2                        | 9.40  | 22.09 | 24.38 | 3.81 | 37.84 |
| SRPC - 16 - 8  | 1                   | 1/2                        | 9.40  | 28.44 | 24.38 | 4.82 | 42.67 |
| SRPC - 16 - 12 | 1                   | 3/4                        | 14.80 | 28.44 | 25.90 | 4.06 | 43.43 |

## Installation Instructions

### Port Connector

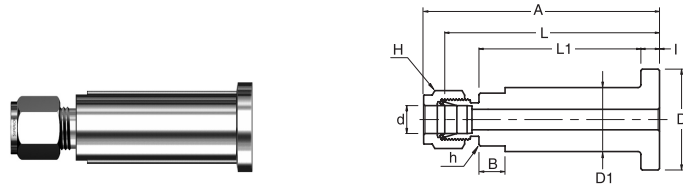


- Remove nut and ferrules from the first of two SUPERLOK ports to be connected.
- Slip nut ( no ferrules) over machined ferrule end of port connector.
- Insert port connector into SUPERLOK port 1 and snug by hand.  
Tighten with wrench 1/4 turn only. For 1/8 and 3/16 in., 2, 3, and 4mm tube fittings, tighten only 1/8 turn. Subsequent connections are made by tightening slightly with a wrench after snugging the nut by hand.
- Insert other end of port connector into SUPERLOK port 2 and tighten nut 1-1/4 turns from finger-tight. For 1/16, 1/8 and 3/16 in., 2, 3, and 4mm tube fittings, only 3/4 turn from finger-tight is necessary.

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# SFTC

## Lap Joint Flange Tube Connector



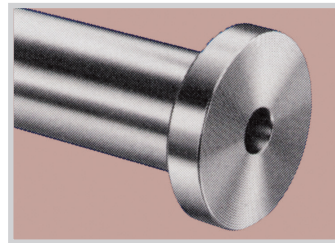
### Connects Fractional Tubes

| Part No.      | Tube Size (inch) | Flange Seat | Dimensions |     |      |      |     |          |          |      |      |         |
|---------------|------------------|-------------|------------|-----|------|------|-----|----------|----------|------|------|---------|
|               |                  |             | A          | B   | L1   | L    | I   | h (inch) | H (inch) | D    | D1   | d (Min) |
| SFTC - 4 - SM | 1/4              | SM          | 80.8       | 8.9 | 56.5 | 74.9 | 6.5 | 11/16    | 9/16     | 34.5 | 21.1 | 4.8     |
| SFTC - 4 - SR | 1/4              | SR          | 80.8       | 8.9 | 56.5 | 74.9 | 6.5 | 11/16    | 9/16     | 34.5 | 21.1 | 4.8     |
| SFTC - 6 - SM | 3/8              | SM          | 82.3       | 8.9 | 56.5 | 74.9 | 6.5 | 11/16    | 11/16    | 34.5 | 21.1 | 7.1     |
| SFTC - 6 - SR | 3/8              | SR          | 82.3       | 8.9 | 56.5 | 74.9 | 6.5 | 11/16    | 11/16    | 34.5 | 21.1 | 7.1     |
| SFTC - 8 - SM | 1/2              | SM          | 85.1       | 8.9 | 56.5 | 74.9 | 6.5 | 3/4      | 7/8      | 34.5 | 21.1 | 10.4    |
| SFTC - 8 - SR | 1/2              | SR          | 85.1       | 8.9 | 56.5 | 74.9 | 6.5 | 3/4      | 7/8      | 34.5 | 21.1 | 10.4    |

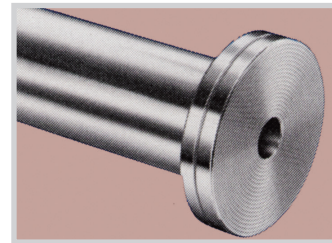
Lap joint flange tube connector provides easy joint between process lines and instruments designed for use with 1/2in Lap joint flanges to ANSI B 16.5 or BS 1560

### Flange Seal Finish

Two surface finishes, smooth or serrated, are available on the sealing surface of the stub end.



**Smooth**  
Identifier : SM  
Ra 3.2 ~ 6.3 micrometer

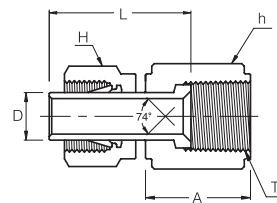


**Serrated**  
Identifier : SR  
Ra 6.3 ~ 12.5 micrometer

\*Note : GROOVE identifies serrated surface finish

# SAF

## An Flare



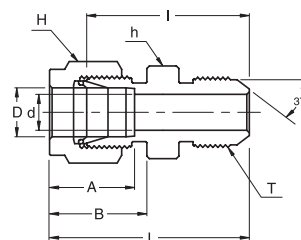
### Connects Fractional SUPERLOK® Port To Male AN

| Part No.     | Tube O.D. D (inch) | AN Tube Flare Size (inch) | Straight Thread T (U) | Width Across Flat |          | A     | L     |
|--------------|--------------------|---------------------------|-----------------------|-------------------|----------|-------|-------|
|              |                    |                           |                       | h (inch)          | H (inch) |       |       |
| SAF - 2 - 2U | 1/8                | 1/8                       | 5/16-24               | 3/8               | 7/16     | 13.71 | 18.54 |
| SAF - 2 - 4U | 1/8                | 1/4                       | 7/16-20               | 9/16              | 7/16     | 15.74 | 19.05 |
| SAF - 4 - 4U | 1/4                | 1/4                       | 7/16-20               | 9/16              | 9/16     | 15.74 | 23.20 |
| SAF - 6 - 6U | 3/8                | 3/8                       | 9/16-18               | 11/16             | 11/16    | 18.28 | 27.30 |
| SAF - 8 - 8U | 1/2                | 1/2                       | 3/4-16                | 7/8               | 7/8      | 21.59 | 34.50 |

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## SAU

An Union

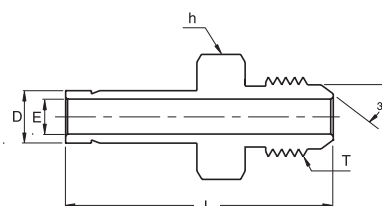
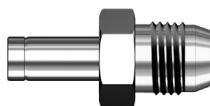


### Connects Fractional Tubes To An Flared Tubes

| Part No.       | Tube OD<br>D (inch) | AN Tube<br>Flare Size<br>(inch) | Straight<br>Thread<br>T (U) | d<br>Min | Width Across Flat |          | A     | B     | I     | L     |
|----------------|---------------------|---------------------------------|-----------------------------|----------|-------------------|----------|-------|-------|-------|-------|
|                |                     |                                 |                             |          | h (inch)          | H (inch) |       |       |       |       |
| SAU - 2 - 2U   | 1/8                 | 1/8                             | 5/16-24                     | 1.52     | 7/16              | 7/16     | 12.70 | 15.24 | 25.65 | 32.25 |
| SAU - 2 - 4U   | 1/8                 | 1/4                             | 7/16-20                     | 2.28     | 1/2               | 7/16     | 12.70 | 15.24 | 28.44 | 35.05 |
| SAU - 4 - 4U   | 1/4                 | 1/4                             | 7/16-20                     | 4.31     | 1/2               | 9/16     | 15.24 | 17.78 | 30.22 | 37.59 |
| SAU - 5 - 5U   | 5/16                | 5/16                            | 1/2-20                      | 5.84     | 9/16              | 5/8      | 16.25 | 18.54 | 30.98 | 38.35 |
| SAU - 6 - 4U   | 3/8                 | 1/4                             | 7/16-20                     | 4.31     | 5/8               | 11/16    | 16.76 | 19.30 | 32.25 | 39.62 |
| SAU - 6 - 6U   | 3/8                 | 3/8                             | 9/16-18                     | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 32.25 | 39.62 |
| SAU - 8 - 8U   | 1/2                 | 1/2                             | 3/4-16                      | 9.90     | 13/16             | 7/8      | 22.86 | 21.84 | 35.81 | 45.97 |
| SAU - 12 - 12U | 3/4                 | 3/4                             | 1-1/16-12                   | 15.49    | 1-1/8             | 1-1/8    | 24.38 | 21.84 | 43.18 | 53.34 |
| SAU - 16 - 16U | 1                   | 1                               | 1-5/16-12                   | 21.33    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 49.27 | 61.46 |

## SAA

An Adapter



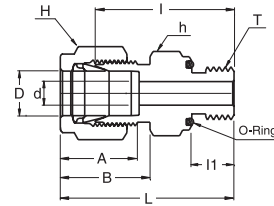
### Connects Fractional SUPERLOK® Port To AN Flared Tubes

| Part No.       | Tube OD<br>D<br>(inch) | AN Tube<br>Flare Size<br>(inch) | Straight<br>Thread<br>T (U) | Width Across Flat<br>h<br>(inch) | E     | L     |
|----------------|------------------------|---------------------------------|-----------------------------|----------------------------------|-------|-------|
| SAA - 4 - 4U   | 1/4                    | 1/4                             | 7/16-20                     | 1/2                              | 4.40  | 37.08 |
| SAA - 6 - 4U   | 3/8                    | 1/4                             | 7/16-20                     | 1/2                              | 6.90  | 38.86 |
| SAA - 6 - 6U   | 3/8                    | 3/8                             | 9/16-18                     | 5/8                              | 6.90  | 39.62 |
| SAA - 8 - 8U   | 1/2                    | 1/2                             | 3/4-16                      | 13/16                            | 9.40  | 48.51 |
| SAA - 12 - 12U | 3/4                    | 3/4                             | 1-1/16-12                   | 1-1/8                            | 14.80 | 56.13 |
| SAA - 16 - 16U | 1                      | 1                               | 1-5/16-12                   | 1-3/8                            | 20.40 | 65.53 |

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## SOSC

### O-ring Straight Thread Connector

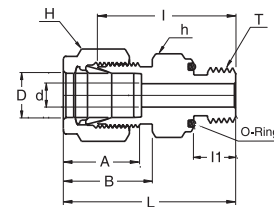


#### Connects Fractional Tube To Female Straight Thread

| Part No.       | Tube OD<br>D (inch) | Straight<br>Thread<br>T (U) | d<br>Min | Width Across Flat |          | A     | B     | I     | I1    | L     | O-Ring<br>Uniform<br>Size Number |
|----------------|---------------------|-----------------------------|----------|-------------------|----------|-------|-------|-------|-------|-------|----------------------------------|
|                |                     |                             |          | h (inch)          | H (inch) |       |       |       |       |       |                                  |
| SOSC - 2 - 2U  | 1/8                 | 5/16-24                     | 2.28     | 9/16              | 7/16     | 12.70 | 15.24 | 26.16 | 8.63  | 32.76 | -011                             |
| SOSC - 3 - 3U  | 3/16                | 3/8-24                      | 3.05     | 5/8               | 1/2      | 13.71 | 16.00 | 27.68 | 9.65  | 34.29 | -012                             |
| SOSC - 4 - 4U  | 1/4                 | 7/16-20                     | 4.82     | 3/4               | 9/16     | 15.24 | 17.78 | 30.98 | 10.41 | 38.35 | -111                             |
| SOSC - 5 - 5U  | 5/16                | 1/2-20                      | 6.35     | 7/8               | 5/8      | 16.25 | 18.54 | 33.27 | 11.17 | 40.64 | -112                             |
| SOSC - 6 - 6U  | 3/8                 | 9/16-18                     | 7.11     | 15/16             | 11/16    | 16.76 | 19.30 | 35.05 | 11.93 | 42.41 | -114                             |
| SOSC - 8 - 8U  | 1/2                 | 3/4-16                      | 10.41    | 1-1/8             | 7/8      | 22.86 | 21.84 | 35.81 | 11.93 | 45.97 | -116                             |
| SOSC -12 - 12U | 3/4                 | 1-1/16-12                   | 15.75    | 1-1/2             | 1-1/8    | 24.38 | 21.84 | 42.16 | 14.22 | 52.32 | -215                             |
| SOSC -16 - 16U | 1                   | 1-5/16-12                   | 22.35    | 1-3/4             | 1-1/2    | 31.24 | 26.41 | 45.97 | 14.22 | 58.16 | -219                             |

## SOPC

### O-Seal Pipe Thread Connector



#### Connects Fractional Tube To Female NPT Thread

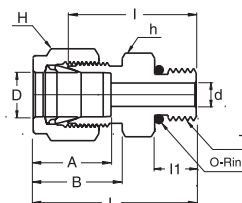
| Part No.      | Tube OD<br>D (inch) | T*<br>(NPT) | d<br>Min | Width Across Flat |          | A     | B     | I     | I1    | L     | O-Ring<br>Uniform<br>Size Number |
|---------------|---------------------|-------------|----------|-------------------|----------|-------|-------|-------|-------|-------|----------------------------------|
|               |                     |             |          | h (inch)          | H (inch) |       |       |       |       |       |                                  |
| SOPC - 2 - 2N | 1/8                 | 1/8         | 2.28     | 3/4               | 7/16     | 12.70 | 15.24 | 26.16 | 7.11  | 32.76 | -111                             |
| SOPC - 4 - 2N | 1/4                 | 1/8         | 4.82     | 3/4               | 9/16     | 15.24 | 17.78 | 27.68 | 7.11  | 35.05 | -111                             |
| SOPC - 4 - 4N | 1/4                 | 1/4         | 4.82     | 15/16             | 9/16     | 15.24 | 17.78 | 30.98 | 9.65  | 38.35 | -113                             |
| SOPC - 6 - 4N | 3/8                 | 1/4         | 7.11     | 15/16             | 11/16    | 16.76 | 19.30 | 32.51 | 9.65  | 39.87 | -113                             |
| SOPC - 6 - 6N | 3/8                 | 3/8         | 7.11     | 1-1/8             | 11/16    | 16.76 | 19.30 | 34.03 | 10.41 | 41.40 | -116                             |
| SOPC - 6 - 8N | 3/8                 | 1/2         | 7.11     | 1-5/16            | 11/16    | 16.76 | 19.30 | 39.62 | 13.46 | 46.99 | -212                             |
| SOPC - 8 - 8N | 1/2                 | 1/2         | 10.41    | 1-5/16            | 7/8      | 22.86 | 21.84 | 39.62 | 13.46 | 49.78 | -212                             |

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# SSMC

## SAE/MS Male Connector



### Connects Fractional Tubes To SAE/MS Straight Thread Boss

| Part No.        | Tube OD<br>D (inch) | Straight<br>Thread<br>T (U) | d<br>Min | Width Across Flat |          | A     | B     | I     | I1    | L     | O-Ring<br>Uniform<br>Size Number |
|-----------------|---------------------|-----------------------------|----------|-------------------|----------|-------|-------|-------|-------|-------|----------------------------------|
|                 |                     |                             |          | h (inch)          | H (inch) |       |       |       |       |       |                                  |
| SSMC - 2 - 2U   | 1/8                 | 5/16-24                     | 2.28     | 7/16              | 7/16     | 12.70 | 15.24 | 23.36 | 7.62  | 29.97 | 3-902                            |
| SSMC - 4 - 4U   | 1/4                 | 7/16-20                     | 4.82     | 9/16              | 9/16     | 15.24 | 17.78 | 26.67 | 9.14  | 34.03 | 3-904                            |
| SSMC - 4 - 6U   | 1/4                 | 9/16-18                     | 4.82     | 11/16             | 9/16     | 15.24 | 17.78 | 28.19 | 9.90  | 35.56 | 3-906                            |
| SSMC - 4 - 8U   | 1/4                 | 3/4-16                      | 4.82     | 7/8               | 9/16     | 15.24 | 17.78 | 30.22 | 11.17 | 37.59 | 3-908                            |
| SSMC - 4 - 10U  | 1/4                 | 7/8-14                      | 4.82     | 1                 | 9/16     | 15.24 | 17.78 | 33.27 | 12.70 | 40.64 | 3-910                            |
| SSMC - 5 - 5U   | 5/16                | 1/2-20                      | 6.35     | 5/8               | 5/8      | 16.25 | 18.54 | 27.43 | 9.14  | 34.79 | 3-905                            |
| SSMC - 6 - 4U   | 3/8                 | 7/16-20                     | 5.08     | 5/8               | 11/16    | 16.76 | 19.30 | 28.19 | 9.14  | 35.56 | 3-904                            |
| SSMC - 6 - 6U   | 3/8                 | 9/16-18                     | 7.11     | 11/16             | 11/16    | 16.76 | 19.30 | 29.71 | 9.90  | 37.08 | 3-906                            |
| SSMC - 6 - 8U   | 3/8                 | 3/4-16                      | 7.11     | 7/8               | 11/16    | 16.76 | 19.30 | 31.75 | 11.17 | 39.11 | 3-908                            |
| SSMC - 6 - 10U  | 3/8                 | 7/8-14                      | 7.11     | 1                 | 11/16    | 16.76 | 19.30 | 34.79 | 12.70 | 42.16 | 3-910                            |
| SSMC - 8 - 6U   | 1/2                 | 9/16-18                     | 7.11     | 13/16             | 7/8      | 22.86 | 21.84 | 28.95 | 9.90  | 39.11 | 3-906                            |
| SSMC - 8 - 8U   | 1/2                 | 3/4-16                      | 10.41    | 7/8               | 7/8      | 22.86 | 21.84 | 31.75 | 11.17 | 41.91 | 3-908                            |
| SSMC - 8 - 10U  | 1/2                 | 7/8-14                      | 10.41    | 1                 | 7/8      | 22.86 | 21.84 | 34.79 | 12.70 | 44.95 | 3-910                            |
| SSMC - 8 - 12U  | 1/2                 | 1-1/16-12                   | 10.41    | 1-1/4             | 7/8      | 22.86 | 21.84 | 38.86 | 14.98 | 49.02 | 3-912                            |
| SSMC - 10 - 8U  | 5/8                 | 3/4-16                      | 10.66    | 15/16             | 1        | 24.38 | 21.84 | 31.75 | 11.17 | 41.91 | 3-908                            |
| SSMC - 10 - 10U | 5/8                 | 7/8-14                      | 12.70    | 1                 | 1        | 24.38 | 21.84 | 35.05 | 12.70 | 45.21 | 3-910                            |
| SSMC - 12 - 8U  | 3/4                 | 3/4-16                      | 10.66    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 35.81 | 11.17 | 45.97 | 3-908                            |
| SSMC - 12 - 12U | 3/4                 | 1-1/16-12                   | 15.74    | 1-1/4             | 1-1/8    | 24.38 | 21.84 | 38.86 | 14.98 | 49.02 | 3-912                            |
| SSMC - 14 - 14U | 7/8                 | 1-3/16-12                   | 18.28    | 1-3/8             | 1-1/4    | 25.90 | 21.84 | 38.86 | 14.98 | 49.02 | 3-914                            |
| SSMC - 16 - 12U | 1                   | 1-1/16-12                   | 16.76    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 41.14 | 14.98 | 53.34 | 3-912                            |
| SSMC - 16 - 16U | 1                   | 1-5/16-12                   | 22.35    | 1-1/2             | 1-1/2    | 31.24 | 26.41 | 42.16 | 14.98 | 54.35 | 3-916                            |

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## Mounting Dimensions for O-Seal Connectors

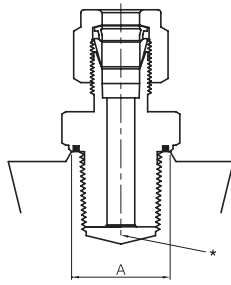


Figure 1

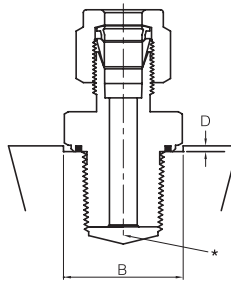


Figure 2

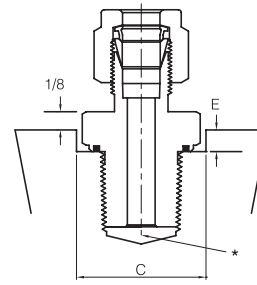


Figure 3

\*ALLOW CLEARANCE FOR FULL THREAD

### Installation Instruction

In order to prevent the leakage with SUPERLOK O-Seal Fittings, the surface perpendicular to the axis of the thread should be flat.

When installing an O-Seal fitting, turn it until finger-tight. (The squeeze on O-Ring can be felt during the last 1/4 turn). After finger-tight installation, snug lightly with a wrench.

When connecting the tubing to the SUPERLOK connector, always use a back-up wrench on the O-Seal fitting hex so it does not turn while the nut is being tightened. Also use a back-up wrench when disconnecting a tubing connection.

For a raised surface, such as Figure 1, it is recommended that the flat surface have a diameter at least as large as dimension "A" for the various size O-Seal fittings. This diameter is sufficient to allow metal-to-metal contact outside of the O-Ring sealing diameter and to prevent O-Ring extrusion at high pressure.

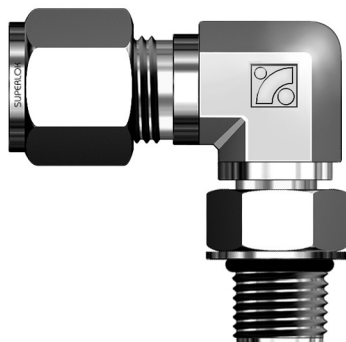
Figure 2 is an O-Seal fitting using with a counter bored or recessed hole. In this case, the diameter "B" is sufficient to allow the round shoulder of the O-seal to clear for proper installation. "D" gives the maximum depth that can be used with this diameter.

Figure 3 shows the usage at deeper grooved or concaved area and "E" is the maximum depth that will allow a thin wrench (1/8") to hold the O-Seal fitting while the SUPERLOK connection is made to the tubing. The diameter "C" is sufficient to allow the hex of the fitting to turn in the recessed hole.

| Basic Ordering Number | Straight Thread | Pipe Thread | A Min. Dia. | B Min. Dia. | C Min. Dia. | D Min. Dia. | E Min. Dia. |
|-----------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| SOSC - 1 - 2U         | 5/16-24         | -           | 12.7        | 15.0        | 16.8        | 2.3         | 4.1         |
| SOSC - 2 - 2U         | 5/16-24         | -           | 12.7        | 15.0        | 16.8        | 2.3         | 5.6         |
| SOPC - 2 - 2N         | -               | 1/8 NPT     | 17.5        | 19.8        | 22.4        | 4.1         | 7.1         |
| SOSC - 3 - 3U         | 3/8-24          | -           | 14.2        | 16.8        | 19.1        | 2.3         | 5.6         |
| SOSC - 4 - 4U         | 7/16-20         | -           | 17.5        | 19.8        | 22.4        | 4.1         | 7.1         |
| SOPC - 4 - 2N         | -               | 1/8 NPT     | 17.5        | 19.8        | 22.4        | 4.1         | 7.1         |
| SOPC - 4 - 4N         | -               | 1/4 NPT     | 22.1        | 24.6        | 27.7        | 4.1         | 7.9         |
| SOSC - 5 - 5U         | 1/2-20          | -           | 19.1        | 23.1        | 26.2        | 4.1         | 7.9         |
| SOSC - 6 - 6U         | 9/16-18         | -           | 20.6        | 24.6        | 27.7        | 4.1         | 7.9         |
| SOPC - 6 - 4N         | -               | 1/4 NPT     | 22.1        | 24.6        | 27.7        | 4.1         | 7.9         |
| SOPC - 6 - 6N         | -               | 3/8 NPT     | 25.4        | 29.5        | 33.3        | 4.1         | 8.6         |
| SOPC - 6 - 8N         | -               | 1/2 NPT     | 31.0        | 34.0        | 38.9        | 5.6         | 11.2        |
| SOSC - 8 - 8U         | 3/4-16          | -           | 25.4        | 29.5        | 33.3        | 4.1         | 8.6         |
| SOPC - 8 - 8N         | -               | 1/2 NPT     | 31.0        | 34.0        | 38.9        | 5.6         | 11.2        |
| SOSC - 12 - 12U       | 1-1/16-12       | -           | 35.8        | 38.9        | 44.5        | 5.6         | 12.7        |
| SOSC - 16 - 16U       | 1-5/16-12       | -           | 42.9        | 45.2        | 51.6        | 5.6         | 14.2        |

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## SAE/MS Straight Thread Positionable Elbows and Tees



### Installation instructions

1. Lubricate O-Ring with the lubricant which is applicable for the system fluid, environment and O-Ring material. (Standard O-Ring materials is viton. Other O-Ring materials are also available).
2. Turn the fittings into the straight thread boss until the metal back-up washer contacts the face of the boss. At this moment, O-Ring gets into inclined groove.
3. Until SUPERLOK's end is oriented in the proper direction, position the fittings by turning to counter clockwise. (no more than 1 turning)
4. Until the washer contacts to the face of the bosses, tighten the fittings with wrench and back-up wrench .

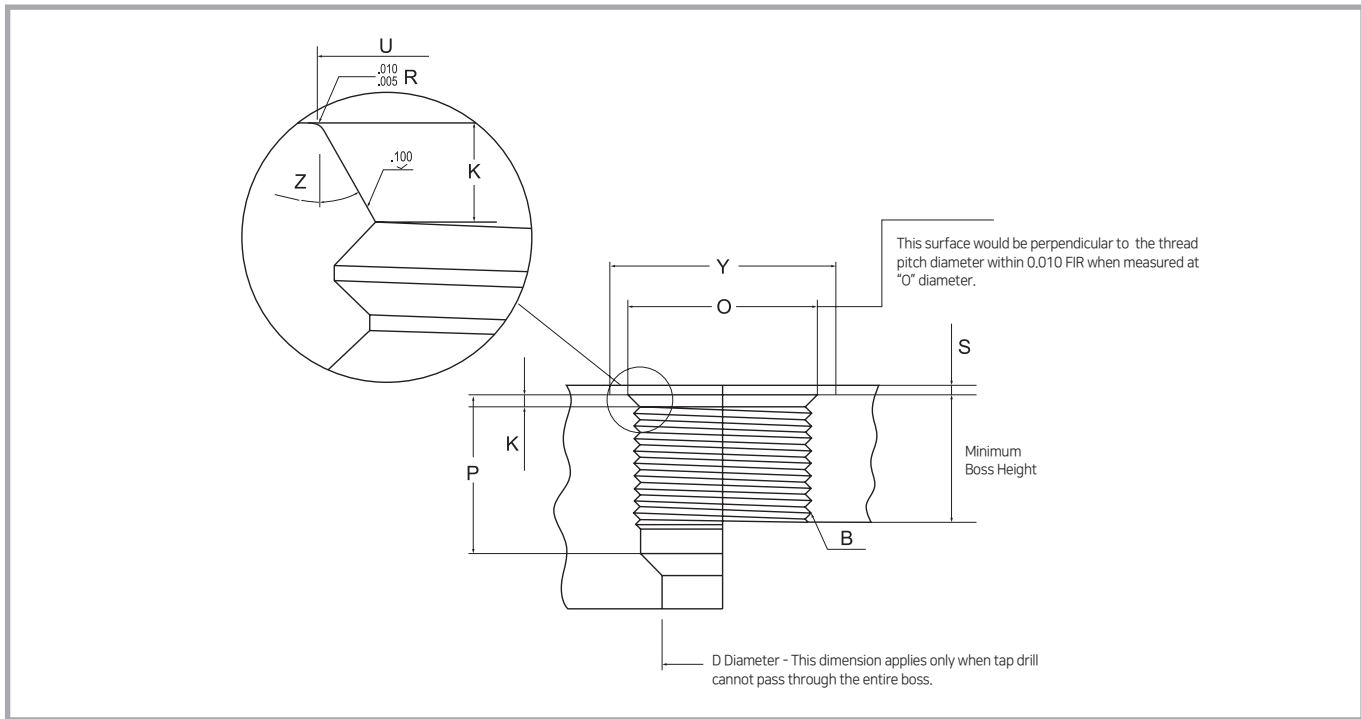
※ Note: SAE/MS's POSITIONABLE TEE and ELBOWS shall be compatible with SAE J1926, MS16142, or O-Ring female straight thread for JIS boss.

## O-Ring for SAE/MS Fittings Bosses

| Thread size | Inside Dimension (mm) | Cross Section (mm) | O-Ring Size No. | Thread size | Inside Dimension (mm) | Cross Section (mm) | O-Ring Size No. |
|-------------|-----------------------|--------------------|-----------------|-------------|-----------------------|--------------------|-----------------|
| 5/16-24     | 6.07                  | 1.63               | 3-902           | 3/4-16      | 16.36                 | 2.21               | 3-908           |
| 3/8-24      | 7.65                  | 1.63               | 3-903           | 7/8-14      | 19.18                 | 2.46               | 3-910           |
| 7/16-20     | 8.92                  | 1.83               | 3-904           | 1-1/16-12   | 23.47                 | 2.95               | 3-912           |
| 1/2-20      | 10.52                 | 1.83               | 3-905           | 1-3/16-12   | 26.59                 | 2.95               | 3-914           |
| 9/16-18     | 11.89                 | 1.98               | 3-906           | 1-5/16-12   | 29.74                 | 2.95               | 3-916           |

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### SAE/MS Internal Straight Thread Boss



#### Data for SAE/MS Straight Thread Boss

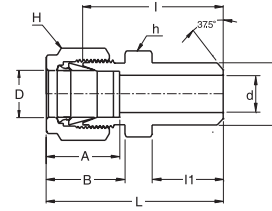
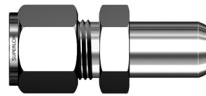
| Nom. Tube O.D | Thread Size | B / Straight Thread |        |           |       | D Dia | Full Thread Depth | K     | O Dia | P <sup>④</sup> | S <sup>②③</sup> | U <sup>②</sup> Dia | Y <sup>①</sup> Dia | Z  |
|---------------|-------------|---------------------|--------|-----------|-------|-------|-------------------|-------|-------|----------------|-----------------|--------------------|--------------------|----|
|               |             | Pitch Dia           |        | Minor Dia |       |       |                   |       |       |                |                 |                    |                    |    |
|               |             | Min                 | Max    | Min       | Max   |       |                   |       |       |                |                 |                    |                    |    |
| 1/8           | 5/16 - 24   | 0.2854              | 0.2902 | 0.267     | 0.277 | 0.062 | 0.390             | 0.074 | 0.438 | 0.468          | 0.062           | 0.358              | 0.672              | 12 |
| 3/16          | 3/8 - 24    | 0.3479              | 0.3528 | 0.330     | 0.340 | 0.125 | 0.390             | 0.074 | 0.500 | 0.468          | 0.062           | 0.421              | 0.750              | 12 |
| 1/4           | 7/16 - 20   | 0.4050              | 0.4104 | 0.383     | 0.395 | 0.172 | 0.454             | 0.093 | 0.563 | 0.547          | 0.062           | 0.487              | 0.828              | 12 |
| 5/16          | 1/2 - 20    | 0.4675              | 0.4731 | 0.446     | 0.457 | 0.234 | 0.454             | 0.093 | 0.625 | 0.547          | 0.062           | 0.550              | 0.906              | 12 |
| 3/8           | 9/16 - 18   | 0.5624              | 0.5323 | 0.502     | 0.515 | 0.297 | 0.500             | 0.097 | 0.688 | 0.609          | 0.062           | 0.616              | 0.969              | 12 |
| 1/2           | 3/4 - 16    | 0.7094              | 0.7159 | 0.682     | 0.696 | 0.391 | 0.562             | 0.100 | 0.875 | 0.688          | 0.094           | 0.811              | 1.188              | 15 |
| 5/8           | 7/8 - 14    | 0.8286              | 0.8356 | 0.798     | 0.614 | 0.484 | 0.656             | 0.100 | 1.000 | 0.781          | 0.094           | 0.942              | 1.344              | 15 |
| 3/4           | 1-1/16 - 12 | 1.0084              | 1.0158 | 0.972     | 0.990 | 0.609 | 0.750             | 1.130 | 1.250 | 0.906          | 0.094           | 1.148              | 1.625              | 15 |
| 7/8           | 1-3/16 - 12 | 1.1334              | 1.1409 | 1.097     | 1.115 | 0.719 | 0.750             | 1.130 | 1.375 | 0.906          | 0.094           | 1.273              | 1.765              | 15 |
| 1             | 1-5/16 - 12 | 1.2584              | 1.2659 | 1.222     | 1.240 | 0.844 | 0.750             | 0.130 | 1.500 | 0.906          | 0.125           | 1.398              | 1.910              | 15 |
| 1-1/4         | 1-5/8 - 12  | 1.5709              | 1.5785 | 1.535     | 1.553 | 1.078 | 0.750             | 0.132 | 1.875 | 0.906          | 0.125           | 1.713              | 2.270              | 15 |
| 1-1/2         | 1-7/8 - 12  | 1.8209              | 1.8287 | 1.785     | 1.803 | 1.312 | 0.750             | 0.132 | 2.125 | 0.906          | 0.125           | 1.962              | 2.560              | 15 |
| 2             | 2-1/2 - 12  | 2.4459              | 2.4540 | 2.410     | 2.428 | 1.781 | 0.750             | 0.132 | 2.750 | 0.906          | 0.125           | 2.587              | 3.480              | 15 |

- ① Diameter U shall be concentric with thread pitch diameter within 0.005 full indicator reading (FIR) and shall be free from longitudinal and spiral tool marks. Annular tool marks shall be less than 100micro inches.
- ② This is the maximum recommended spotface depth to permit sufficient wrench grip for proper tightening of the fitting or locknut
- ③ If the surface of boss surface is machined, dimensions Y and S does not need to be applied.
- ④ Bottoming tap shall be used to satisfy the tap drill depth. Where standard taps are used, the drill depths must be increased accordingly.

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 - Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

# SPWC

## Male Pipe Weld Connector



### Connects Fractional Tubes To Pipe

| Part No.        | Tube O.D.<br>D (inch) | Male Pipe Size<br>p |       | d<br>Min | Width Across Flat |          | A     | B     | I     | I1    | L     |
|-----------------|-----------------------|---------------------|-------|----------|-------------------|----------|-------|-------|-------|-------|-------|
|                 |                       | Nom.                | O.D.  |          | h (inch)          | H (inch) |       |       |       |       |       |
|                 |                       |                     |       |          |                   |          |       |       |       |       |       |
| SPWC - 3 - 2P   | 3/16                  | 1/8                 | 10.30 | 3.04     | 7/16              | 1/2      | 13.71 | 16.00 | 24.63 | 9.65  | 31.24 |
| SPWC - 4 - 2P   | 1/4                   | 1/8                 | 10.30 | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 25.40 | 9.65  | 32.76 |
| SPWC - 4 - 4P   | 1/4                   | 1/4                 | 13.70 | 4.82     | 9/16              | 9/16     | 15.24 | 17.78 | 30.48 | 14.22 | 37.84 |
| SPWC - 5 - 2P   | 5/16                  | 1/8                 | 10.30 | 5.08     | 9/16              | 5/8      | 16.25 | 18.54 | 26.67 | 9.65  | 34.03 |
| SPWC - 5 - 4P   | 5/16                  | 1/4                 | 13.70 | 6.35     | 9/16              | 5/8      | 16.25 | 18.54 | 31.24 | 14.22 | 38.60 |
| SPWC - 6 - 4P   | 3/8                   | 1/4                 | 13.70 | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 32.51 | 14.22 | 39.87 |
| SPWC - 6 - 6P   | 3/8                   | 3/8                 | 17.10 | 7.11     | 11/16             | 11/16    | 16.76 | 19.30 | 32.51 | 14.22 | 39.87 |
| SPWC - 6 - 8P   | 3/8                   | 1/2                 | 21.30 | 7.11     | 7/8               | 11/16    | 16.76 | 19.30 | 38.86 | 19.05 | 46.22 |
| SPWC - 8 - 6P   | 1/2                   | 3/8                 | 17.10 | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 33.27 | 14.22 | 43.43 |
| SPWC - 8 - 8P   | 1/2                   | 1/2                 | 21.30 | 10.41    | 7/8               | 7/8      | 22.86 | 21.84 | 38.86 | 19.05 | 49.02 |
| SPWC - 8 - 12P  | 1/2                   | 3/4                 | 26.67 | 10.41    | 1-1/16            | 7/8      | 22.86 | 21.84 | 40.38 | 19.05 | 50.54 |
| SPWC - 10 - 8P  | 5/8                   | 1/2                 | 21.30 | 12.70    | 15/16             | 1        | 24.38 | 21.84 | 38.86 | 19.05 | 49.02 |
| SPWC - 12 - 12P | 3/4                   | 3/4                 | 26.67 | 15.74    | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 40.38 | 19.05 | 50.54 |
| SPWC - 16 - 16P | 1                     | 1                   | 33.40 | 22.35    | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 50.03 | 23.87 | 62.23 |

### Connects Metric Tubes To Pipe

| Part No.        | Tube O.D.<br>D | Male Pipe Size<br>p |      | d<br>Min | Width Across Flat |    | A    | B    | I    | I1   | L    |
|-----------------|----------------|---------------------|------|----------|-------------------|----|------|------|------|------|------|
|                 |                | Nom.                | O.D. |          | h                 | H  |      |      |      |      |      |
|                 |                |                     |      |          |                   |    |      |      |      |      |      |
| SPWC - 4M - 2P  | 4              | 1/8                 | 10.3 | 2.4      | 12                | 12 | 13.7 | 16.1 | 24.6 | 9.7  | 31.2 |
| SPWC - 6M - 2P  | 6              | 1/8                 | 10.3 | 4.8      | 14                | 14 | 15.3 | 17.7 | 25.4 | 9.7  | 32.8 |
| SPWC - 6M - 4P  | 6              | 1/4                 | 13.7 | 4.8      | 14                | 14 | 15.3 | 17.7 | 30.5 | 14.2 | 37.9 |
| SPWC - 8M - 2P  | 8              | 1/8                 | 10.3 | 5.1      | 15                | 16 | 16.2 | 18.6 | 26.7 | 9.7  | 34.2 |
| SPWC - 8M - 4P  | 8              | 1/4                 | 13.7 | 6.4      | 15                | 16 | 16.2 | 18.6 | 31.2 | 14.2 | 38.7 |
| SPWC - 8M - 8P  | 8              | 1/2                 | 21.3 | 6.4      | 22                | 16 | 16.2 | 18.6 | 38.1 | 19.0 | 45.6 |
| SPWC - 10M - 4P | 10             | 1/4                 | 13.7 | 7.1      | 18                | 19 | 17.2 | 19.5 | 33.3 | 14.2 | 40.9 |
| SPWC - 10M - 6P | 10             | 3/8                 | 17.1 | 7.9      | 18                | 19 | 17.2 | 19.5 | 33.3 | 14.2 | 40.9 |
| SPWC - 10M - 8P | 10             | 1/2                 | 21.3 | 7.9      | 22                | 19 | 17.2 | 19.5 | 38.9 | 19.0 | 46.5 |
| SPWC - 12M - 4P | 12             | 1/4                 | 13.7 | 7.1      | 22                | 22 | 22.8 | 22.0 | 33.3 | 14.2 | 43.4 |
| SPWC - 12M - 6P | 12             | 3/8                 | 17.1 | 9.5      | 22                | 22 | 22.8 | 22.0 | 33.3 | 14.2 | 43.4 |
| SPWC - 12M - 8P | 12             | 1/2                 | 21.3 | 9.5      | 22                | 22 | 22.8 | 22.0 | 38.9 | 19.0 | 49.0 |
| SPWC - 15M - 8P | 15             | 1/2                 | 21.3 | 11.9     | 24                | 25 | 24.4 | 22.0 | 38.9 | 19.0 | 49.0 |
| SPWC - 16M - 8P | 16             | 1/2                 | 21.3 | 12.7     | 24                | 25 | 24.4 | 22.0 | 38.9 | 19.0 | 49.0 |
| SPWC - 18M - 8P | 18             | 1/2                 | 21.3 | 13.5     | 27                | 30 | 24.4 | 22.0 | 40.4 | 19.0 | 50.5 |

Note : SUPERLOK® weld ends are constructed per schedule 80 wall thickness or greater. Weld End : ANSI B31.1 and B31.3

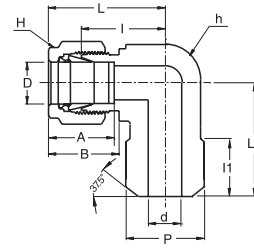
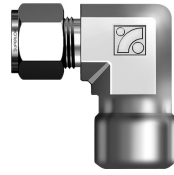
### Weld end SUPERLOK® Usage Informations :

- Do weld after removing nut and ferrules from body to protect them from weld heat.
- Do protect thread end or pot and seat area of SUPERLOK® body with another nut and plug.(for easy disassembly just finger tighten it)
- Correct weld procedure is required during welding and after weld completion. suitable heat treatment must be carried out in accordance with industry or your own standard.

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## SMPWE

### Male Pipe Weld Elbow

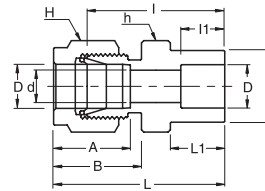
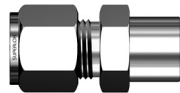


#### Connects Fractional Tubes To Pipe

| Part No.       | Tube OD<br>D (inch) | Pipe Size (P) |       | d<br>Min | Width Across Flat |          | A     | B     | I     | I1    | L     | L1    |
|----------------|---------------------|---------------|-------|----------|-------------------|----------|-------|-------|-------|-------|-------|-------|
|                |                     | Nom.          | O.D.  |          | h (inch)          | H (inch) |       |       |       |       |       |       |
| SMPWE - 4 - 4P | 1/4                 | 1/4           | 13.70 | 4.82     | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 14.22 | 26.90 | 23.37 |
| SMPWE - 6 - 4P | 3/8                 | 1/4           | 13.70 | 7.11     | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 14.22 | 30.48 | 25.40 |
| SMPWE - 8 - 8P | 1/2                 | 1/2           | 21.30 | 10.41    | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 19.05 | 36.06 | 33.02 |

## SSWC

### Tube Socket Weld Connector

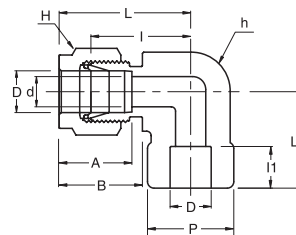


#### Connects Fractional Tubes

| Part No.  | Tube OD<br>D (inch) | d<br>Min | P     | Width Across Flat |          | A     | B     | I     | I1    | L     | L1    |
|-----------|---------------------|----------|-------|-------------------|----------|-------|-------|-------|-------|-------|-------|
|           |                     |          |       | h (inch)          | H (inch) |       |       |       |       |       |       |
| SSWC - 2  | 1/8                 | 2.28     | 7.87  | 7/16              | 7/16     | 12.70 | 15.24 | 22.35 | 6.35  | 28.95 | 8.63  |
| SSWC - 4  | 1/4                 | 4.82     | 11.17 | 1/2               | 9/16     | 15.24 | 17.78 | 26.16 | 7.87  | 33.52 | 10.41 |
| SSWC - 6  | 3/8                 | 7.11     | 15.74 | 5/8               | 11/16    | 16.76 | 19.30 | 30.22 | 9.65  | 37.59 | 11.93 |
| SSWC - 8  | 1/2                 | 10.41    | 19.05 | 13/16             | 7/8      | 22.86 | 21.84 | 30.98 | 12.70 | 41.14 | 11.93 |
| SSWC - 12 | 3/4                 | 15.74    | 26.67 | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 33.27 | 14.22 | 43.43 | 11.93 |
| SSWC - 16 | 1                   | 22.35    | 33.27 | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 40.38 | 19.05 | 52.57 | 14.22 |

## SSWE

### Tube Socket Weld Elbow

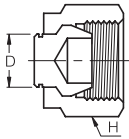


#### Connects Fractional Tubes

| Part No.  | Tube OD<br>D (inch) | d<br>Min | P     | Width Across Flat |          | A     | B     | I     | I1    | L     | L1    |
|-----------|---------------------|----------|-------|-------------------|----------|-------|-------|-------|-------|-------|-------|
|           |                     |          |       | h (inch)          | H (inch) |       |       |       |       |       |       |
| SSWE - 4  | 1/4                 | 4.82     | 12.70 | 1/2               | 9/16     | 15.24 | 17.78 | 19.55 | 7.87  | 26.92 | 19.55 |
| SSWE - 6  | 3/8                 | 7.11     | 15.75 | 5/8               | 11/16    | 16.76 | 19.30 | 23.11 | 9.65  | 30.48 | 23.11 |
| SSWE - 8  | 1/2                 | 10.41    | 20.57 | 13/16             | 7/8      | 22.86 | 21.84 | 25.90 | 12.70 | 36.06 | 25.90 |
| SSWE - 12 | 3/4                 | 15.74    | 26.92 | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 29.71 | 14.22 | 39.87 | 29.71 |
| SSWE - 16 | 1                   | 22.35    | 35.05 | 1-3/8             | 1-1/2    | 31.24 | 26.41 | 36.83 | 19.05 | 49.02 | 36.83 |

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**SP**  
Plug



Plug provides plugging fitting port

Installation instruction

1. With wrench, 1/4 turn from finger-tight position.  
(1/8 turn for 1/8", 3/16", 2, 3, 4 size plug)
2. Remove nut and ferrules from body

**Fractional**

| Part No. | Tube OD D (inch) | Width Across Flat H (inch) | Part No. | Tube OD D (inch) | Width Across Flat H (inch) |
|----------|------------------|----------------------------|----------|------------------|----------------------------|
| SP - 2   | 1/8              | 7/16                       | SP - 8   | 1/2              | 7/8                        |
| SP - 3   | 3/16             | 1/2                        | SP - 10  | 5/8              | 1                          |
| SP - 4   | 1/4              | 9/16                       | SP - 12  | 3/4              | 1-1/8                      |
| SP - 5   | 5/16             | 5/8                        | SP - 14  | 7/8              | 1-1/4                      |
| SP - 6   | 3/8              | 11/16                      | SP - 16  | 1                | 1-1/2                      |

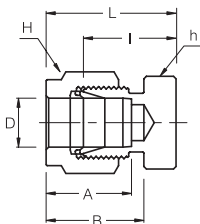
Plugs Unused port of Metric SUPERLOK fittings

**Metric**

| Part No. | Tube OD D (inch) | Width Across Flat H | Part No. | Tube OD D (inch) | Width Across Flat H |
|----------|------------------|---------------------|----------|------------------|---------------------|
| SP - 2M  | 2                | 12                  | SP - 15M | 15               | 25                  |
| SP - 3M  | 3                | 12                  | SP - 16M | 16               | 25                  |
| SP - 4M  | 4                | 12                  | SP - 18M | 18               | 30                  |
| SP - 6M  | 6                | 14                  | SP - 20M | 20               | 32                  |
| SP - 8M  | 8                | 16                  | SP - 22M | 22               | 32                  |
| SP - 10M | 10               | 19                  | SP - 25M | 25               | 38                  |
| SP - 12M | 12               | 22                  |          |                  |                     |

Plugs Unused port of Fractional SUPERLOK fittings

**SC**  
Cap



Installation instruction

1. With wrench, 1-1/4 turn from finger-tight position.  
(3/4 turn for 1/8", 3/16", 3mm, 4mm)
2. Insert tube end into cap

**Connects Caps End of Fractional Tubes**

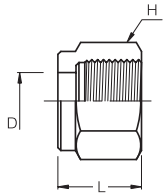
| Part No. | Tube OD D (inch) | Width Across Flat |          | A     | B     | I     | L     |
|----------|------------------|-------------------|----------|-------|-------|-------|-------|
|          |                  | h (inch)          | H (inch) |       |       |       |       |
| SC - 1   | 1/16             | 5/16              | 5/16     | 8.63  | 10.92 | 11.20 | 14.98 |
| SC - 2   | 1/8              | 7/16              | 7/16     | 12.70 | 15.24 | 13.46 | 20.06 |
| SC - 3   | 3/16             | 7/16              | 1/2      | 13.71 | 16.00 | 14.73 | 21.33 |
| SC - 4   | 1/4              | 1/2               | 9/16     | 15.24 | 17.78 | 16.00 | 23.36 |
| SC - 5   | 5/16             | 9/16              | 5/8      | 16.25 | 18.54 | 17.01 | 24.38 |
| SC - 6   | 3/8              | 5/8               | 11/16    | 16.76 | 19.30 | 18.28 | 25.65 |
| SC - 8   | 1/2              | 13/16             | 7/8      | 22.86 | 21.84 | 19.05 | 29.21 |
| SC - 10  | 5/8              | 15/16             | 1        | 24.38 | 21.84 | 19.81 | 29.97 |
| SC - 12  | 3/4              | 1-1/16            | 1-1/8    | 24.38 | 21.84 | 23.33 | 33.49 |
| SC - 14  | 7/8              | 1-3/16            | 1-1/4    | 25.90 | 21.84 | 23.87 | 34.03 |
| SC - 16  | 1                | 1-3/8             | 1/1/2    | 31.24 | 26.41 | 26.16 | 38.35 |

**Connects Metric Tubes**

| Part No. | Tube O.D. D | Width Across Flat |    | A    | B    | I    | L    | Part No. | Tube O.D. D | Width Across Flat |    | A    | B    | I    | L    |
|----------|-------------|-------------------|----|------|------|------|------|----------|-------------|-------------------|----|------|------|------|------|
|          |             | h                 | H  |      |      |      |      |          |             | h                 | H  |      |      |      |      |
| SC - 2M  | 2           | 12                | 12 | 12.9 | 15.3 | 13.5 | 20.1 | SC - 15M | 15          | 24                | 25 | 24.4 | 22.0 | 19.8 | 29.9 |
| SC - 3M  | 3           | 12                | 12 | 12.9 | 15.3 | 13.5 | 20.1 | SC - 16M | 16          | 24                | 25 | 24.4 | 22.0 | 19.8 | 29.9 |
| SC - 4M  | 4           | 12                | 12 | 13.7 | 16.1 | 14.7 | 21.3 | SC - 18M | 18          | 27                | 30 | 24.4 | 22.0 | 21.3 | 31.4 |
| SC - 6M  | 6           | 14                | 14 | 15.3 | 17.7 | 15.7 | 23.1 | SC - 20M | 20          | 30                | 32 | 26.0 | 22.0 | 23.9 | 34.0 |
| SC - 8M  | 8           | 15                | 16 | 16.2 | 18.6 | 17.0 | 24.5 | SC - 22M | 22          | 30                | 32 | 26.0 | 22.0 | 23.9 | 34.0 |
| SC - 10M | 10          | 18                | 19 | 17.2 | 19.5 | 19.0 | 26.6 | SC - 25M | 25          | 35                | 38 | 31.3 | 26.5 | 26.2 | 38.5 |
| SC - 12M | 12          | 22                | 22 | 22.8 | 22.0 | 19.0 | 29.1 |          |             |                   |    |      |      |      |      |

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**SN**  
Nut



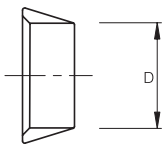
**Fractional**

| Part No. | Tube OD D (inch) | Width Across Flat H (inch) | L     | Part No. | Tube OD D (inch) | Width Across Flat H (inch) | L     |
|----------|------------------|----------------------------|-------|----------|------------------|----------------------------|-------|
| SN - 1   | 1/16             | 5/16                       | 7.90  | SN - 8   | 1/2              | 7/8                        | 17.30 |
| SN - 2   | 1/8              | 7/16                       | 11.93 | SN - 10  | 5/8              | 1                          | 17.52 |
| SN - 3   | 3/16             | 1/2                        | 11.93 | SN - 12  | 3/4              | 1-1/8                      | 17.52 |
| SN - 4   | 1/4              | 9/16                       | 12.70 | SN - 14  | 7/8              | 1-1/4                      | 17.52 |
| SN - 5   | 5/16             | 5/8                        | 13.50 | SN - 16  | 1                | 1-1/2                      | 20.60 |
| SN - 6   | 3/8              | 11/16                      | 14.22 |          |                  |                            |       |

**Metric**

| Part No. | Tube OD D | Width Across Flat H | L     | Part No. | Tube OD D | Width Across Flat H | L     |
|----------|-----------|---------------------|-------|----------|-----------|---------------------|-------|
| SN - 2M  | 2         | 12                  | 11.90 | SN - 14M | 14        | 25                  | 17.50 |
| SN - 3M  | 3         | 12                  | 11.90 | SN - 15M | 15        | 25                  | 17.50 |
| SN - 4M  | 4         | 12                  | 11.90 | SN - 16M | 16        | 25                  | 17.50 |
| SN - 6M  | 6         | 14                  | 12.70 | SN - 18M | 18        | 30                  | 17.50 |
| SN - 8M  | 8         | 16                  | 13.50 | SN - 20M | 20        | 32                  | 17.50 |
| SN - 10M | 10        | 19                  | 15.10 | SN - 22M | 22        | 32                  | 17.50 |
| SN - 12M | 12        | 22                  | 17.50 | SN - 25M | 25        | 38                  | 20.60 |

**SFF**  
Front Ferrule



**Fractional**

| Part No. | Tube OD D (inch) | Part No. | Tube OD D (inch) |
|----------|------------------|----------|------------------|
| SFF - 1  | 1/16             | SFF - 8  | 1/2              |
| SFF - 2  | 1/8              | SFF - 10 | 5/8              |
| SFF - 3  | 3/16             | SFF - 12 | 3/4              |
| SFF - 4  | 1/4              | SFF - 14 | 7/8              |
| SFF - 5  | 5/16             | SFF - 16 | 1                |
| SFF - 6  | 3/8              |          |                  |

**Metric**

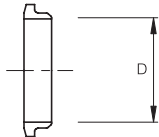
| Part No.  | Tube OD D | Part No.  | Tube OD D |
|-----------|-----------|-----------|-----------|
| SFF - 2M  | 2         | SFF - 14M | 14        |
| SFF - 3M  | 3         | SFF - 15M | 15        |
| SFF - 4M  | 4         | SFF - 16M | 16        |
| SFF - 6M  | 6         | SFF - 18M | 18        |
| SFF - 8M  | 8         | SFF - 20M | 20        |
| SFF - 10M | 10        | SFF - 22M | 22        |
| SFF - 12M | 12        | SFF - 25M | 25        |

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**SBF**

Back Ferrule



**Fractional**

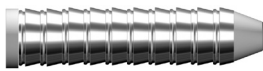
| Part No. | Tube OD D (inch) | Part No. | Tube OD D (inch) | Part No. | Tube OD D (inch) |
|----------|------------------|----------|------------------|----------|------------------|
| SBF - 1  | 1/16             | SBF - 5  | 5/16             | SBF - 12 | 3/4              |
| SBF - 2  | 1/8              | SBF - 6  | 3/8              | SBF - 14 | 7/8              |
| SBF - 3  | 3/16             | SBF - 8  | 1/2              | SBF - 16 | 1                |
| SBF - 4  | 1/4              | SBF - 10 | 5/8              |          |                  |

**Metric**

| Part No. | Tube OD D (inch) | Part No.  | Tube OD D (inch) | Part No.  | Tube OD D (inch) |
|----------|------------------|-----------|------------------|-----------|------------------|
| SBF - 2M | 2                | SBF - 10M | 10               | SBF - 18M | 18               |
| SBF - 3M | 3                | SBF - 12M | 12               | SBF - 20M | 20               |
| SBF - 4M | 4                | SBF - 14M | 14               | SBF - 22M | 22               |
| SBF - 6M | 6                | SBF - 15M | 15               | SBF - 25M | 25               |
| SBF - 8M | 8                | SBF - 16M | 16               |           |                  |

**SFS**

Ferrule Set



**Fractional**

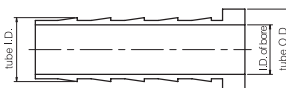
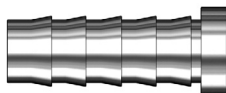
| Part No. | Tube OD D (inch) | Part No. | Tube OD D (inch) | Part No. | Tube OD D (inch) |
|----------|------------------|----------|------------------|----------|------------------|
| SFS - 1  | 1/16             | SFS - 5  | 5/16             | SFS - 12 | 3/4              |
| SFS - 2  | 1/8              | SFS - 6  | 3/8              | SFS - 14 | 7/8              |
| SFS - 3  | 3/16             | SFS - 8  | 1/2              | SFS - 16 | 1                |
| SFS - 4  | 1/4              | SFS - 10 | 5/8              |          |                  |

**Metric**

| Part No. | Tube OD D (inch) | Part No.  | Tube OD D (inch) | Part No.  | Tube OD D (inch) |
|----------|------------------|-----------|------------------|-----------|------------------|
| SFS - 2M | 2                | SFS - 10M | 10               | SFS - 20M | 20               |
| SFS - 3M | 3                | SFS - 12M | 12               | SFS - 22M | 22               |
| SFS - 4M | 4                | SFS - 15M | 15               | SFS - 25M | 25               |
| SFS - 6M | 6                | SFS - 16M | 16               |           |                  |
| SFS - 8M | 8                | SFS - 18M | 18               |           |                  |

**SI**

Insert

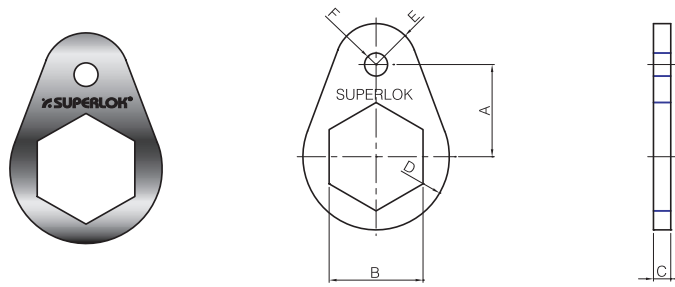


**Fractional**

| Part No.   | Tube OD D (inch) | Tube I.D. (inch) | I.D. of Bore | Part No.   | Tube OD D (inch) | Tube I.D. (inch) | I.D. of Bore |
|------------|------------------|------------------|--------------|------------|------------------|------------------|--------------|
| SI - 3 - 2 | 3/16             | 1/8              | 2.28         | SI 8 - 4   | 1/2              | 1/4              | 4.82         |
| SI - 4 - 2 | 1/4              | 1/8              | 2.28         | SI 8 - 6   | 1/2              | 3/8              | 7.87         |
| SI - 4 - 3 | 1/4              | 3/16             | 3.55         | SI 10 - 6  | 5/8              | 3/8              | 7.87         |
| SI - 5 - 2 | 5/16             | 1/8              | 2.28         | SI 10 - 8  | 5/8              | 1/2              | 11.17        |
| SI - 5 - 3 | 5/16             | 3/16             | 3.04         | SI 12 - 8  | 3/4              | 1/2              | 11.17        |
| SI - 5 - 4 | 5/16             | 1/4              | 4.82         | SI 12 - 10 | 3/4              | 5/8              | 14.22        |
| SI - 6 - 3 | 3/8              | 3/16             | 3.04         | SI 16 - 12 | 1                | 3/4              | 17.52        |
| SI - 6 - 4 | 3/8              | 1/4              | 4.82         |            |                  |                  |              |

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 - Unless otherwise specified, all dimensions are in millimeters.  
 - Sizes, pressure classes, and end connections not listed are available upon request.  
 - Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

## SBHR Bulkhead Retainer



| Part No.    | A (inch) | B (inch) | C (inch) | D Dia (inch) | E Dia (inch) | F Dia (inch) |
|-------------|----------|----------|----------|--------------|--------------|--------------|
| SBHR - 1    | 3/8      | 5/16     | 1/8      | 5/16         | 5/32         | 5/32         |
| SBHR - 2    | 1/2      | 1/2      | 1/8      | 13/32        | 7/32         | 5/32         |
| SBHR - 3    | 9/16     | 9/16     | 1/8      | 15/32        | 1/4          | 5/32         |
| SBHR - 4 ①  | 5/8      | 5/8      | 1/8      | 1/2          | 9/32         | 5/32         |
| SBHR - 5    | 1/16     | 11/16    | 1/8      | 9/16         | 5/16         | 5/32         |
| SBHR - 6    | 3/4      | 3/4      | 1/8      | 5/8          | 11/32        | 5/32         |
| SBHR - 8 ②  | 15/16    | 15/16    | 1/8      | 3/4          | 13/32        | 7/32         |
| SBHR - 10 ③ | 1        | 1-1/16   | 1/8      | 13/16        | 13/32        | 7/32         |
| SBHR - 12 ④ | 1-1/16   | 1-3/16   | 1/8      | 29/32        | 15/32        | 7/32         |
| SBHR - 14   | 1-1/8    | 1-5/16   | 1/8      | 1-1/32       | 17/32        | 7/32         |
| SBHR - 16   | 1-9/32   | 1-5/8    | 1/8      | 1-5/32       | 9/16         | 7/32         |
| SBHR - 8M   | 11/16    | 18 mm    | 1/8      | 9/16         | 5/16         | 5/32         |
| SBHR - 10M  | 15/16    | 22 mm    | 1/8      | 3/4          | 13/32        | 7/32         |

- ① Can be used with 6mm bulkheads
- ② Can be used with 12mm bulkheads
- ③ Can be used with 15mm and 16mm bulkheads
- ④ Can be used with 18mm bulkheads

## SVP Vent Protector



| Part No.  | T (NPT) | L     | L1    | d     | H (inch) |
|-----------|---------|-------|-------|-------|----------|
| SVP - 4N  | 1/4     | 19.81 | 14.22 | 7.11  | 9/16     |
| SVP - 6N  | 3/8     | 20.57 | 14.22 | 10.41 | 11/16    |
| SVP - 8N  | 1/2     | 26.16 | 19.05 | 12.70 | 7/8      |
| SVP - 12N | 3/4     | 26.92 | 19.05 | 18.29 | 1-1/16   |

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 - Sizes, pressure classes, and end connections not listed are available upon request.  
 - Dimensions shown with SUPERLOK nuts finger-tight, where applicable.