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# SUPERLOK Tube Fitting

- Double/Single Ferrule Compression Fittings
- Tubing Tools



## SUPERLOK Tube Fitting Index

UNION			TEE			AN TUBE		
	<b>SU</b> Union	9P		<b>SUT</b> Union Tee	34P		<b>SAF</b> An Flare	51P
	<b>SRU</b> Reducing Union	10P		<b>SRUT</b> Reducing Union Tee	35P		<b>SAU</b> An Union	52P
	<b>SBHRU</b> Bulkhead Reducing Union	11P		<b>SMBT</b> Male Branch Tee	36P		<b>SAA</b> An Adapter	52P
	<b>SBHU</b> Bulkhead Union	12P		<b>SPMBT</b> Positionable Male Branch Tee	37P	<b>O-RING SEAL</b>		
<b>CONNECTOR</b>				<b>SMRT</b> Male Run Tee	38P		<b>SOSC</b> O-Seal Straight Thread Connector	53P
	<b>SMC</b> Male Connector	13P		<b>SPMRT</b> Positionable Male Run Tee	39P		<b>SOPC</b> O-Seal Pipe Thread Connector	53P
	<b>SMC-GM</b> Male Connector for Metal Gasket Seal	17P		<b>SFBT</b> Female Branch Tee	40P		<b>SSMC</b> SAE/MS Male Connector	54P
	<b>SGMC</b> Male Connector for Bonded Washer Seal	18P		<b>SFRT</b> Female Run Tee	41P	<b>WELD END</b>		
	<b>SFC</b> Female Connector	19P		<b>SABT</b> Adjustable Branch Tee	42P		<b>SPWC</b> Male Pipe Weld Connector	58P
	<b>SGC</b> Gauge Connector	21P		<b>SART</b> Adjustable Run Tee	42P		<b>SMPWE</b> Male Pipe Weld Elbow	59P
	<b>SMCB</b> Bulkhead Male Connector	22P		<b>SUC</b> Union Cross	43P		<b>SSWC</b> Tube Socket Weld Connector	59P
	<b>SFCB</b> Bulkhead Female Connector	23P	<b>STUB TUBE CONNECTOR</b>				<b>SSWE</b> Tube Socket Weld Elbow	59P
<b>ELBOWS</b>				<b>SR</b> Reducer	44P	<b>PLUG &amp; CAP</b>		
	<b>SUE</b> Union Elbow	24P		<b>SRB</b> Bulkhead Reducer	46P		<b>SP</b> Plug	60P
	<b>SHUE</b> 45° Union Elbow	25P		<b>SMA</b> Male Adapter	47P		<b>SC</b> Cap	60P
	<b>SME</b> Male Elbow	26P		<b>SFA</b> Female Adapter	48P	<b>SPARE PART</b>		
	<b>SHME</b> 45° Male Elbow	29P		<b>SPC</b> Port Connector	49P		<b>SN</b> Nut	61P
	<b>SPHME</b> 45° Positionable Male Elbow	30P		<b>SRPC</b> Reducing Port Connector	50P		<b>SFF</b> Front Ferrule	61P
	<b>SPME</b> Positionable Male Elbow	30P		<b>SFTC</b> Lap Joint Flange Tube Connector	51P		<b>SBF</b> Back Ferrule	62P
	<b>SFE</b> Female Elbow	32P					<b>SFS</b> Ferrule Set	62P
	<b>SAE</b> Adjustable Elbow	33P					<b>SI</b> Insert	62P
							<b>SBHR</b> Bulkhead Retainer	63P
							<b>SVP</b> Vent Protector	63P

## Ordering Information

Example :

**SMC - 8 - 8N - B**  
                   1      2-1      2-2      3

### 1. Type of Fitting

Please refer to SUPERLOK tube fitting index on page 2.

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

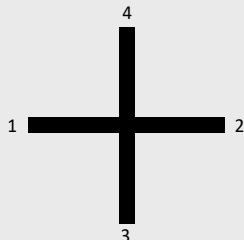
#### 2-2. Pipe Thread Size or tube size

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

## 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 / 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.

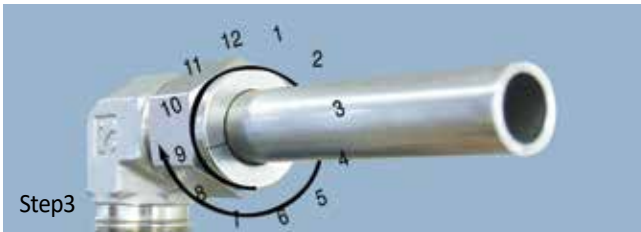
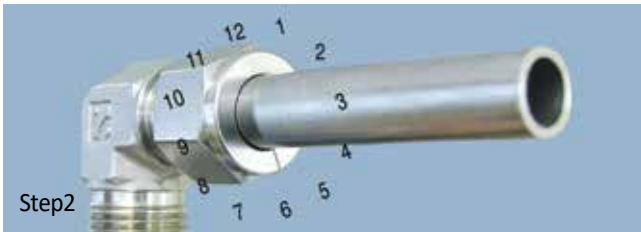
#### Step 2

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"; 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.



\* To order the gap inspection gauges, please refer to page 66.

**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 8). Tubing should have a hardness of HRB 80 or less.

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

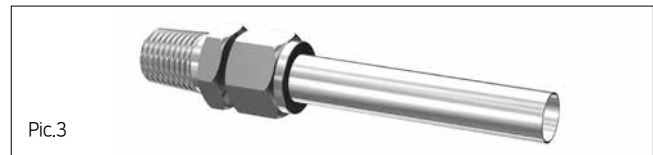
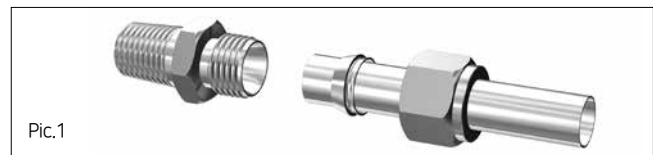
**3. Re-tightening Instructions**

**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 independant 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 and Marking

Material	Bar Stock	Forging	Body Marking
SS316, SS316/316L	ASTM A479, ASTM A276	ASTM A182	316
SS316L	ASTM A479, ASTM A276	ASTM A182	316L
6-MO	ASTM A479	ASTM A182	6MO
Monel, Alloy 400	ASTM B164	ASTM B564	M40
Inconel, Alloy 600	ASTM B166	ASTM B564	600
Inconel, Alloy 625	ASTM B446	ASTM B564	625
Incoloy, Alloy 825	ASTM B425	ASTM B564	825
Hastelloy, Alloy C-276	ASTM B574	ASTM B564	276
Brass	ASTM B16, ASTM B453	ASTM B283	BRA (Bar Stock), BRASS (Forging)

SUPERLOK tube fittings are available in various materials - but are not limited to – the materials listed in the above table.

The standard material is 316/316L stainless steel.

Straight fittings are machined from cold finished bar stock and shaped bodies (elbows, crosses, and tees) are machined from forgings. For materials not listed above, please contact BMT head quarter or your SUPERLOK representative.

### 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.

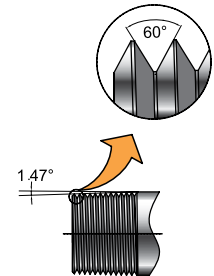
### Vacuum, Cryogenic and High Temperature Applications

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

#### Threads

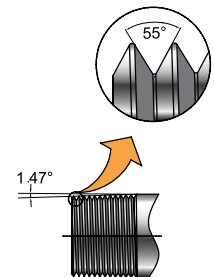
##### 1. NPT (National Pipe Thread)

- 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).

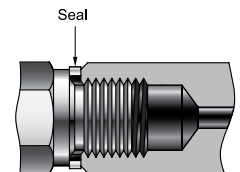


##### 3. ISO 228/1 Parallel Thread

- 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.

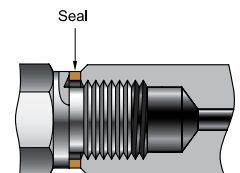
##### ① Bonded Washer Seal

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.



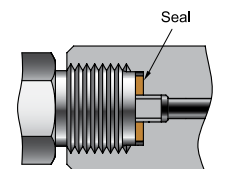
##### ② Metal Gasket Seal

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 7 and 8)

**Example**

SS316  
 (3/8" O.D of tube) X (0.049" wall thickness)  
 1200°F : 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 1200°F.

**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 (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 (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

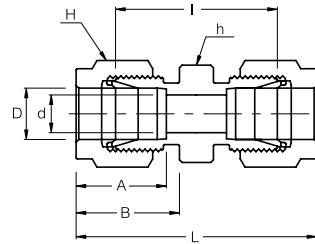
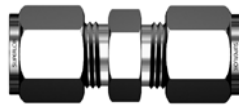
Safety factor is 4 (Ultimate tensile strength is 75,000 psi)

- 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 D (inch)	d 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

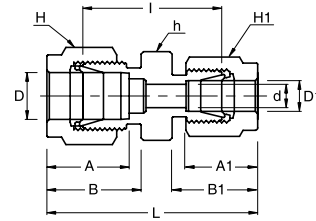
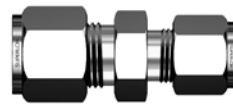
### Connects Metric Tubes

Part No.	Tube OD D	d 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

- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- 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.

# 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

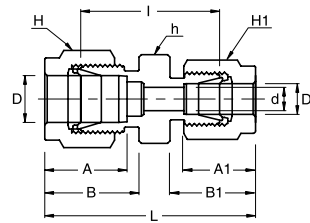
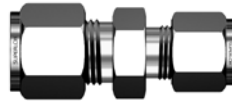
### Connects Metric Tubes

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

# SRU

## Reducing Union

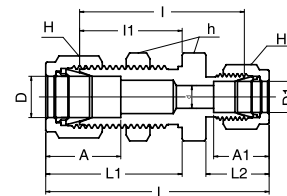


### Connects Fractional Tube To Metric Tube

Part No.	Tube OD		d 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



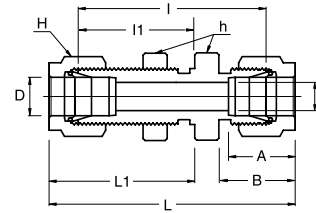
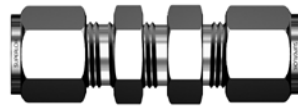
### Connects Fractional Tubes

Part No.	Tube OD		d Min	Width Across Flat			A	A1	I	I1	L	L1	L2	Panel Hole Drill Size	Panel Max. 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

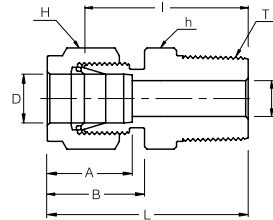
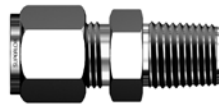
Part No.	Tube O.D. D	d Min	Width Across Flat			A	B	I	I1	L	L1	Panel Hole Drill Size	Panel Max. Thickness
			h	h1*	H								
SBHU - 3M	3	2.4	14	12.7	12	12.9	15.3	38.1	24.6	51.3	31.2	8.3	12.7
SBHU - 4M	4	2.4	14	14.3	12	13.7	16.1	40.4	25.4	53.6	32.0	9.9	12.7
SBHU - 6M	6	4.8	16	15.9	14	15.3	17.7	42.9	26.2	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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# SMC

## Male Connector



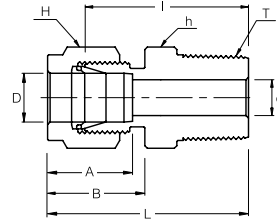
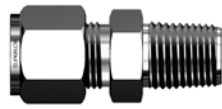
### Connects Fractional Tube To Female NPT Thread

Part No.	Tube OD D (inch)	T (NPT)	d 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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# SMC

## Male Connector



### Connects Fractional Tube To Female ISO Tapered Thread

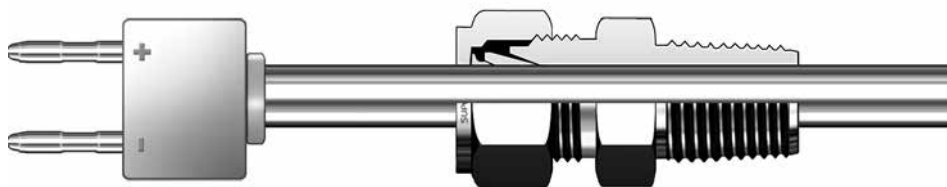
Part No.	Tube OD D (inch)	T R (PT)	d Min	Width Across Flat		A	B	I	L
				h (inch)	H (inch)				
SMC - 2 - 2R	1/8	1/8	2.28	7/16	7/16	12.70	15.24	23.87	30.48
SMC - 2 - 4R	1/8	1/4	2.28	9/16	7/16	12.70	15.24	28.95	35.56
SMC - 4 - 2R	1/4	1/8	4.82	1/2	9/16	15.24	17.78	25.40	32.76
SMC - 4 - 4R	1/4	1/4	4.82	9/16	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)

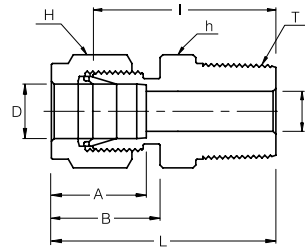
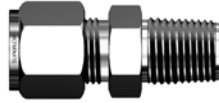
Note - The root diameter of the pipe thread end of male connectors makes it impractical to bore through all male connectors.



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**SMC**

## Male Connector

**Connects Metric Tube To Female NPT Thread**

Part No.	Tube OD D	T (NPT)	d 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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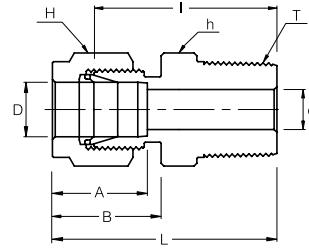
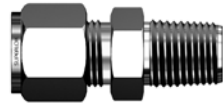
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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

# SMC

## Male Connector



### Connects Metric Tube To Female ISO Tapered Thread

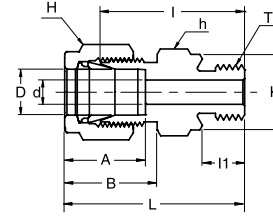
Part No.	Tube OD D	T R (PT)	d Min	Width Across Flat		A	B	I	L
				h	H				
SMC - 2M - 2R	2	1/8	1.7	12	12	12.9	15.3	23.9	30.5
SMC - 3M - 2R	3	1/8	2.4	12	12	12.9	15.3	23.9	30.5
SMC - 3M - 4R	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
SMC - 4M - 2R	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
SMC - 4M - 4R	4	1/4	2.4	14	12	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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**SMC - GM**

Male Connector  
For Metal Gasket Seal

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

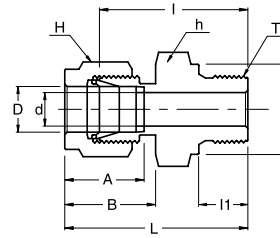
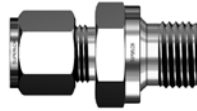
Part No.	Tube OD D	T G (PF)	d Min	Width Across Flat		A	B	I	I1	L	K
				h	H						
SMC - 3M - 2GM	3	1/8	2.4	14	12	12.9	15.3	23.4	8.0	30.0	14.0
SMC - 3M - 4GM	3	1/4	2.4	19	12	12.9	15.3	28.7	12.0	35.3	18.0
SMC - 4M - 2GM	4	1/8	2.4	14	12	13.7	16.1	24.1	8.0	30.7	14.0
SMC - 6M - 2GM	6	1/8	4.0	14	14	15.3	17.7	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 6 for Explanation of ISO Pipe Thread.

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# SGMC

Male Connector  
For Bonded Washer Seal



## Connects Metric Tube To Female ISO Parallel Thread

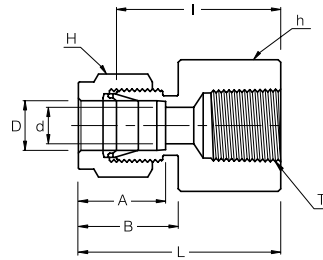
Part No.	Tube OD D	T G (PF)	d Min	Width Across Flat		A	B	I	I1	L	K
				h	H						
SGMC - 3M - 2G	3	1/8	2.4	14	12	12.9	15.3	23.4	8.0	30.0	14.0
SGMC - 3M - 4G	3	1/4	2.4	19	12	12.9	15.3	28.7	12.0	35.3	18.0
SGMC - 4M - 2G	4	1/8	2.4	14	12	13.7	16.1	24.1	8.0	30.7	14.0
SGMC - 6M - 2G	6	1/8	4.0	14	14	15.3	17.7	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 6 for Explanation of ISO Pipe Thread.

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**SFC**

## Female Connector

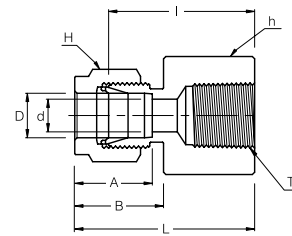
**Connects Fractional Tube To Male NPT Thread**

Part No.	Tube OD D (inch)	T* (NPT)	d 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



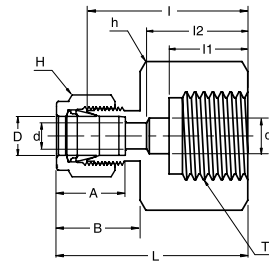
### Connects Metric Tube To Male ISO Tapered Thread

Part No.	Tube OD D	T* R (PT)	d 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 Tube To ISO Parallel Thread

Part No.	Tube OD D (inch)	T G (PF)	d 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 Tube To ISO Parallel Thread

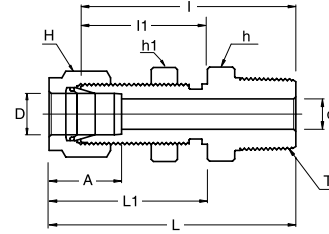
Part No.	Tube OD D (inch)	T G (PF)	d Min	d1	Width Across Flat		A	B	I	I1	I2	L
					h	H						
SGC - 3M - 4G	3	1/4	2.4	5.5	19	12	12.9	15.3	28.7	13	17	35.3
SGC - 6M - 4G	6	1/4	4.8	5.5	19	14	15.3	17.7	30.2	13	17	37.6
SGC - 6M - 6G	6	3/8	4.8	6.5	24	14	15.3	17.7	30.2	14	20	37.6
SGC - 6M - 8G	6	1/2	4.8	7.0	27	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 6 for Explanation of ISO Pipe Thread.

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# SMCB

## Bulkhead Male Connector



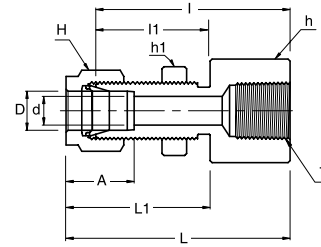
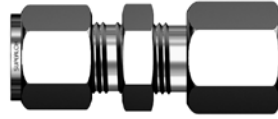
### Connects Fractional Tube To Female NPT Thread

Part No.	Tube OD D (inch)	T* (NPT)	d Min	Width Across Flat			A	I	I1	L	L1	Panel Hole Drill Size	Panel Max. 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

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## SFCB

### Bulkhead Female Connector



#### Connects Fractional Tube To Male NPT Thread

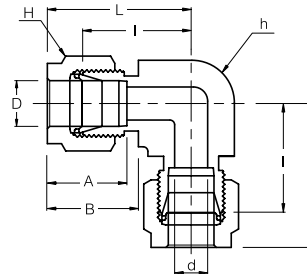
Part No.	Tube OD D (inch)	T* (NPT)	d Min	Width Across Flat			A	I	I1	L	L1	Panel Hole Drill Size	Panel Max. Thickness
				h (inch)	h1 (inch)	H (inch)							
SFCB - 2 - 2N	1/8	1/8	2.28	9/16	1/2	7/16	12.70	38.10	24.63	44.70	31.24	8.33	12.70
SFCB - 4 - 2N	1/4	1/8	4.82	5/8	5/8	9/16	15.24	39.62	26.16	46.99	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 Tube To Male NPT Thread

Part No.	Tube OD D (inch)	T* (NPT)	d Min	Width Across Flat			A	I	I1	L	L1	Panel Hole Drill Size	Panel Max. 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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**SUE**  
Union Elbow



**Connects Fractional Tubes**

Part No.	Tube OD D (inch)	d 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**

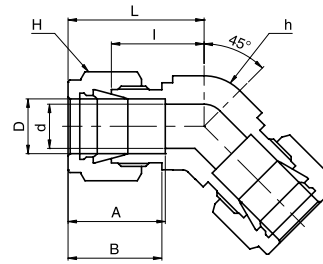
Part No.	Tube OD D	d Min	Width Across Flat		A	B	I	L
			h	H				
SUE 2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
SUE - 3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
SUE - 4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
SUE - 6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
SUE - 8M	8	6.4	15.9	16	16.2	18.6	22.4	29.9
SUE - 10M	10	7.9	17.5	19	17.2	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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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.



# SHUE

## 45° Union Elbow



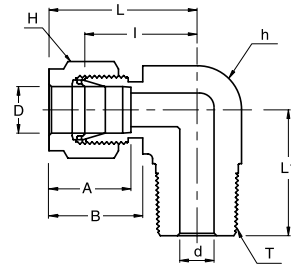
### Connects Fractional Tubes

Part No.	Tube OD D (inch)	d Min	Width Across Flat		A	B	I	L
			h (inch)	H (inch)				
SHUE - 2	1/8	2.28	1/2	7/16	12.70	15.00	15.70	22.00
SHUE - 4	1/4	4.82	1/2	9/16	15.24	17.78	17.27	24.63
SHUE - 6	3/8	7.11	5/8	11/16	15.76	19.30	20.57	27.94
SHUE - 8	1/2	10.41	13/16	7/8	22.86	21.84	21.84	32.00
SHUE - 12	3/4	15.74	1-1/16	1-1/8	24.38	21.88	21.30	31.48
SHUE - 16	1	22.35	1-3/8	1-1/2	31.24	26.44	28.20	40.39

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# SME

## Male Elbow

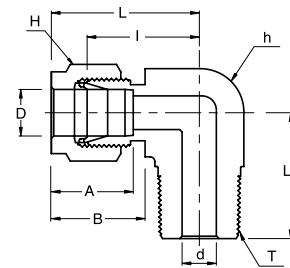


### Connects Metric Tube To Female NPT Thread

Part No.	Tube OD D	T (NPT)	d 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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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

**SME**  
Male Elbow



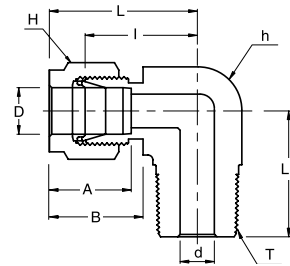
**Connects Metric Tube To Female ISO Tapered Thread**

Part No.	Tube OD D	T R (PT)	d 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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# SME

## Male Elbow



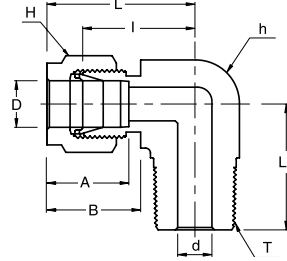
### Connects Fractional Tube To Female NPT Thread

Part No.	Tube OD D (inch)	T (NPT)	d 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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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

## SME

### Male Elbow

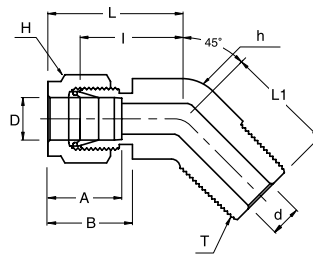
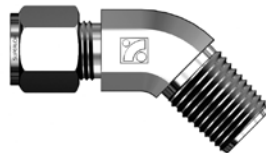


#### Connects Fractional Tube To Female ISO Tapered Thread

Part No.	Tube OD D (inch)	T R (PT)	d 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



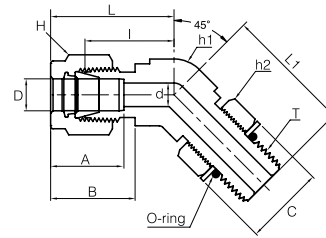
#### Connects Fractional Tube To Female NPT Thread

Part No.	Tube OD D (inch)	T* (NPT)	d 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

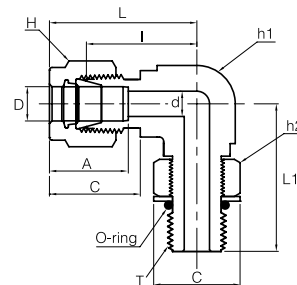


### Connects Fractional Tube To SAE/MS Straight Thread

Part No.	Tube OD D (inch)	T (U)	d 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



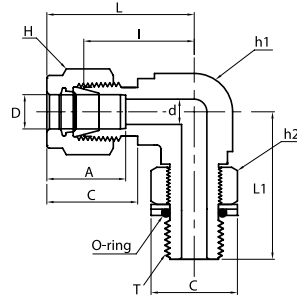
### Connects Fractional Tube To SAE/MS Straight Thread

Part No.	Tube OD D (inch)	T (U)	d 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 Tube To Female ISO Parallel Thread

Part No.	Tube OD D (inch)	T (PF)	d 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

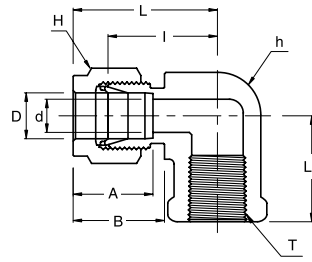
### Connects Metric Tube To Female ISO Parallel Thread

Part No.	Tube OD D	T (PF)	d 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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**SFE**

Female Elbow



**Connects Fractional Tube To Male NPT Thread**

Part No.	Tube OD D (inch)	T* (NPT)	d 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 Tube To Male NPT Thread**

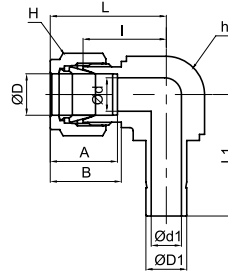
Part No.	Tube OD D	T* (NPT)	d Min	Width Across Flat		A	B	I	L	L1
				h	H					
SFE - 6M - 4N	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
SFE - 6M - 6N	6	3/8	4.8	20.63	14	15.3	17.7	24.4	31.7	22.40
SFE - 6M - 8N	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.6	37.00
SFE - 8M - 4N	8	1/4	6.4	17.46	16	16.2	18.6	23.1	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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# SAE

## Adjustable Elbow

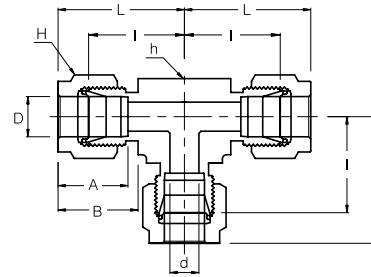


### Connects Fractional Tubes To Fractional SUPERLOK® Port

Part No.	Tube OD		d Min	d1 Min	Width Across Flat		A	B	I	L	L1
	D (inch)	D1 (inch)			h (inch)	H (inch)					
SAE - 4	1/4	1/4	4.83	4.4	1/2	9/16	15.24	17.78	19.6	26.92	25
SAE - 6	3/8	3/8	7.11	6.9	5/8	11/16	16.76	19.30	23.9	31.24	29.5
SAE - 8	1/2	1/2	10.41	9.4	13/16	13/16	22.86	21.84	25.9	36.06	37.8
SAE - 10	5/8	5/8	12.7	12	15/16	1	24.38	21.84	27.9	38.10	41.7
SAE - 12	3/4	3/4	15.74	14.8	1-1/16	1-1/16	24.38	21.84	29.7	39.87	43
SAE - 16	1	1	22.35	20.4	1-3/8	1-3/8	31.24	26.41	36.8	49.02	53

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

**SUT**  
Union Tee



**Connects Fractional Tubes**

Part No.	Tube OD D (inch)	d 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

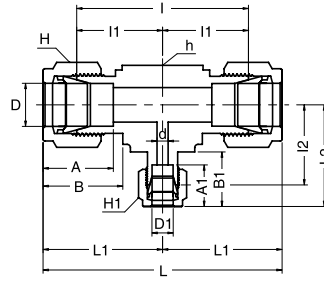
**Connects Metric Tubes**

Part No.	Tube OD D	d 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



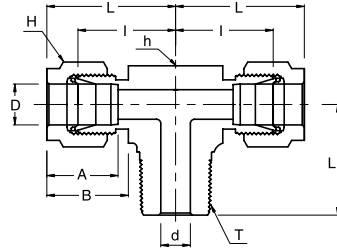
### Connects Fractional Tubes

Part No.	Tube OD		d 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 Tube To Female NPT Thread

Part No.	Tube OD D (inch)	T* (NPT)	d 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

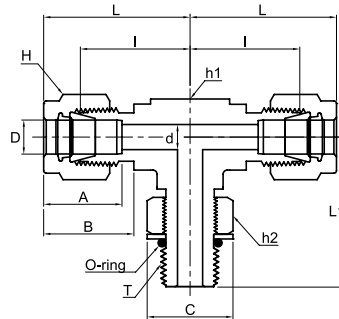
### Connects Metric Tube To Female ISO Tapered Thread

Part No.	Tube OD D	T* R (PT)	d 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 Tube To Female ISO Parallel Thread

Part No.	Tube OD D (inch)	T (PF)	d 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	1/2	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 Tube To Female ISO Parallel Thread

Part No.	Tube OD D	T (PF)	d 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	12	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

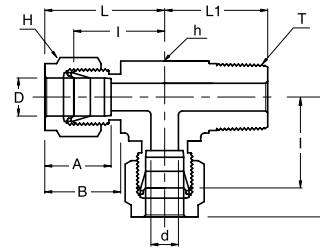
### Connects Fractional Tube To SAE/MS Straight Thread

Part No.	Tube OD D (inch)	T (U)	d 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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 - Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

# SMRT

## Male Run Tee



### Connects Fractional Tube To Female NPT Thread

Part No.	Tube OD D (inch)	T* (NPT)	d 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

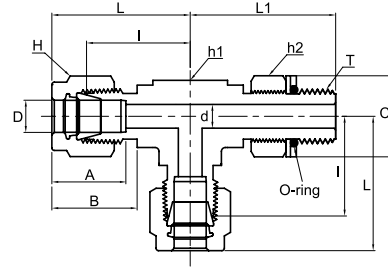
### Connects Metric Tube To Female ISO Tapered Thread

Part No.	Tube OD D	T* R (PT)	d 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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# SPMRT

## Positionable Male Run Tee



### Connects Fractional Tube To Female ISO Parallel Thread

Part No.	Tube OD D (inch)	T (PF)	d 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	1/2	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	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
SPMRT - 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
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 Tube To Female ISO Parallel Thread

Part No.	Tube OD D	T (PF)	d 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

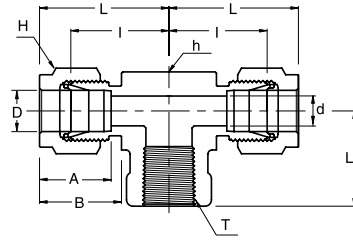
### Connects Fractional Tube To SAE/MS Straight Thread

Part No.	Tube OD D (inch)	T (U)	d 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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# SFBT

## Female Branch Tee



### Connects Fractional Tube To Female NPT Thread

Part No.	Tube OD D (inch)	T* (NPT)	d 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 Tube To Female NPT Thread

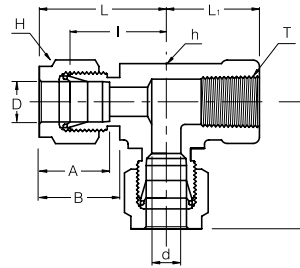
Part No.	Tube OD D	T* (NPT)	d Min	Width Across Flat		A	B	I	L	L1
				h	H					
SFBT - 6M - 2N	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.0
SFBT - 6M - 4N	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.4
SFBT - 6M - 6N	6	3/8	4.8	20.63	14	15.3	17.7	24.4	31.7	22.4
SFBT - 6M - 8N	6	1/2	4.8	25.40	14	15.3	17.7	27.2	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 Tube To Female NPT Thread

Part No.	Tube OD D (inch)	T* (NPT)	d 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

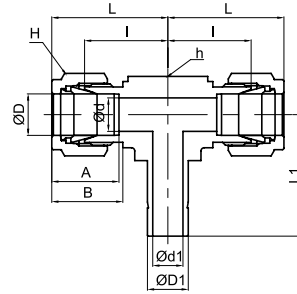
### Connects Metric Tube To Female NPT Thread

Part No.	Tube OD D	T* (NPT)	d 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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## SABT

Adjustable Branch Tee

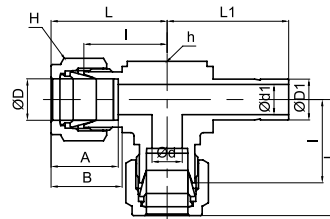


Connects Fractional Tubes To Fractional SUPERLOK® Port

Part No.	Tube OD		d Min	d1 Min	Width Across Flat		A	B	I	L	L1
	D	D1			h (inch)	H (inch)					
SABT - 4	1/4	1/4	4.83	4.4	1/2	9/16	15.24	17.78	20.1	27.34	26.2
SABT - 6	3/8	3/8	7.11	6.9	5/8	11/16	16.76	19.30	23.9	31.24	29.5
SABT - 8	1/2	1/2	10.41	9.4	13/16	13/16	22.86	21.84	25.9	36.06	37.8
SABT - 12	3/4	3/4	15.74	14.8	1-1/16	1-1/16	24.38	21.84	29.7	39.87	43.0
SABT - 16	1	1	22.35	20.4	1-3/8	1-3/8	31.24	26.41	36.8	49.02	53.0

## SART

Adjustable Run Tee

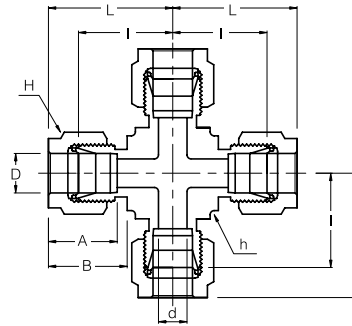


Connects Fractional Tubes To Fractional SUPERLOK® Port

Part No.	Tube OD		d Min	d1 Min	Width Across Flat		A	B	I	L	L1
	D	D1			h (inch)	H (inch)					
SART - 4	1/4	1/4	4.83	4.4	1/2	9/16	15.24	17.78	20.1	27.34	26.2
SART - 6	3/8	3/8	7.11	6.9	5/8	11/16	16.76	19.30	23.9	31.24	29.5
SART - 8	1/2	1/2	10.41	9.4	13/16	13/16	22.86	21.84	25.9	36.06	37.8
SART - 12	3/4	3/4	15.74	14.8	1-1/16	1-1/16	24.38	21.84	29.7	39.87	43.0
SART - 16	1	1	22.35	20.4	1-3/8	1-3/8	31.24	26.41	36.8	49.02	53.0

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**SUC**  
Union Cross



**Connects Fractional Tubes**

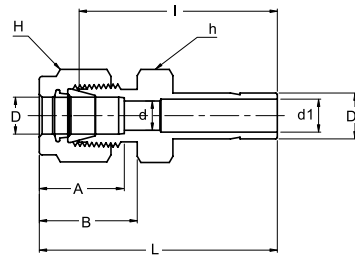
Part No.	Tube OD D (inch)	d Min	Width Across Flat		A	B	I	L
			h (inch)	H (inch)				
SUC - 1	1/16	1.27	3/8	5/16	8.63	10.92	14.00	18.03
SUC - 2	1/8	2.28	3/8	7/16	12.70	15.24	15.74	22.35
SUC - 3	3/16	3.04	1/2	1/2	13.71	16.00	18.54	25.14
SUC - 4	1/4	4.82	1/2	9/16	15.24	17.78	19.55	26.92
SUC - 5	5/16	6.35	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 D	d 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

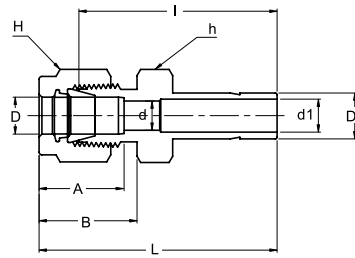


**Connects Fractional Tube To Fractional SUPERLOK® Port**

Part No.	Tube OD		d Min	d1 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

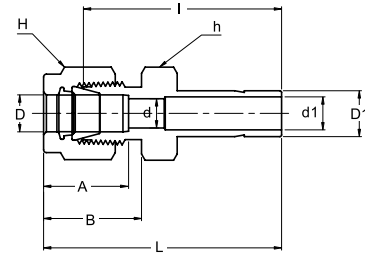


**Connects Metric Tube To Metric SUPERLOK® Port**

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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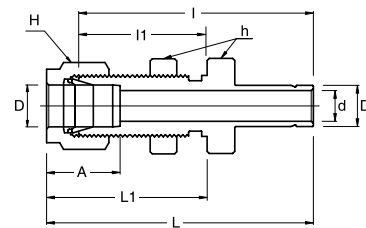
**SR**  
Reducer



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

Part No.	Tube OD		d Min	d1 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



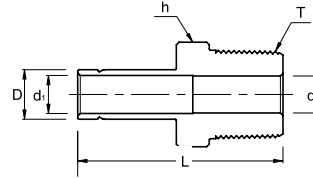
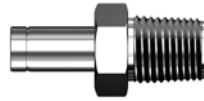
**Connects Fractional Tube To Fractional SUPERLOK® Port**

Part No.	Tube O.D. D (inch)	d Min	Width Across Flat		A	I	I1	L	L1	Panel Hole Drill Size	Panel Max. 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 D (inch)	T* (NPT)	d (Min)	d1	Width Across Flat 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

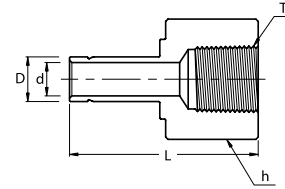
**Connects Metric SUPERLOK® Port To Female NPT Thread**

Part No.	Tube OD D (inch)	T* (NPT)	d (Min)	d1	Width Across Flat 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	7.1	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 D (inch)	T* (NPT)	d (Min)	Width Across Flat 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

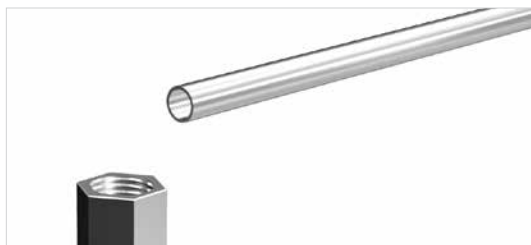
#### Connects Metric SUPERLOK® Port To Male NPT Thread

Part No.	Tube OD D (inch)	T* (NPT)	d (Min)	Width Across Flat 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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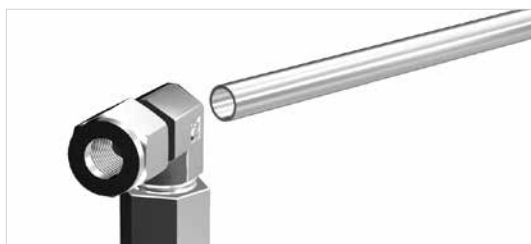
## To Solve Adapter Alignment Problems



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.



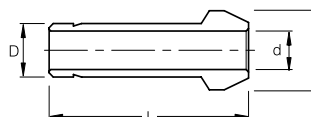
2. With pipe connection tight, the male elbow is pointing in the wrong direction for desired tubing run.



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 D (inch)	d (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 D (inch)	d (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

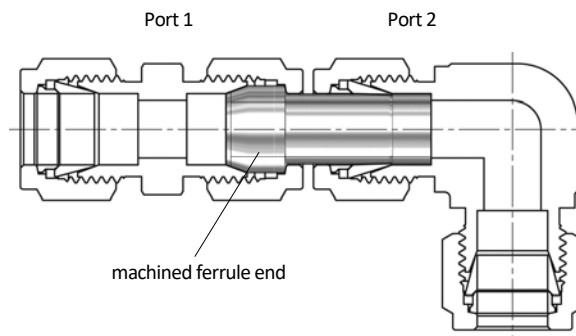


#### Connects Fractional SUPERLOK® Port To Male AN

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

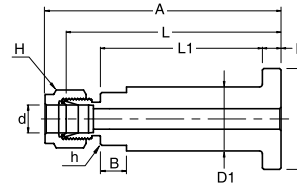


- Remove nut and ferrules from the first of two SUPERLOK ports to be connected.
- Slip nut ( no ferrules) over machined ferrule end of port connector.
- Insert port connector into SUPERLOK port 1 and snug by hand.  
Tighten with wrench 1/4 turn only. For 1/8 and 3/16 in., 2, 3, and 4mm tube fittings, 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

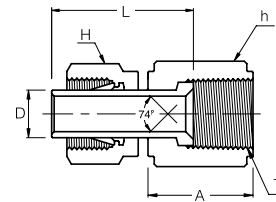


**Serrated**  
Identifier : SR  
Ra 6.3 ~ 12.5  
micrometer

\*Note : GROOVE identifies serrated surface finish

# SAF

## An Flare



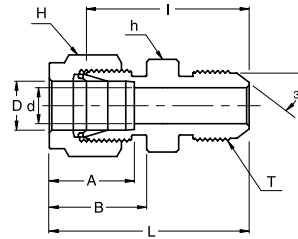
### Connects Fractional SUPERLOK® Port To Male AN

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

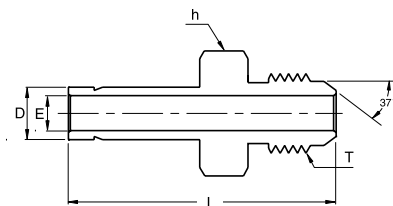
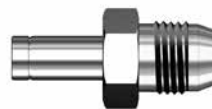


## Connects Fractional Tube To An Flared Tubes

Part No.	Tube OD D (inch)	AN Tube Flare Size (inch)	Straight Thread T (U)	d 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

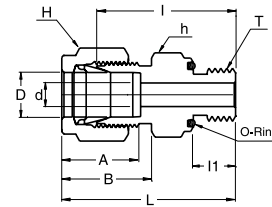
An Adapter



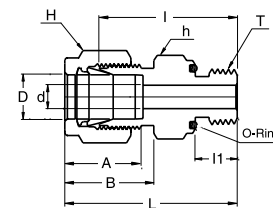
## Connects Fractional SUPERLOK® Port To AN Flared Tubes

Part No.	Tube OD D (inch)	AN Tube Flare Size (inch)	Straight Thread T (U)	Width Across Flat h (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 D (inch)	Straight Thread T (U)	d Min	Width Across Flat		A	B	I	I1	L	O-Ring Uniform 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

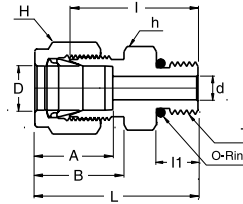
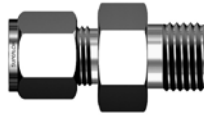
**SOPC****O-Seal Pipe Thread Connector****Connects Fractional Tube To Female NPT Thread**

Part No.	Tube OD D (inch)	T* (NPT)	d Min	Width Across Flat		A	B	I	I1	L	O-Ring Uniform 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**

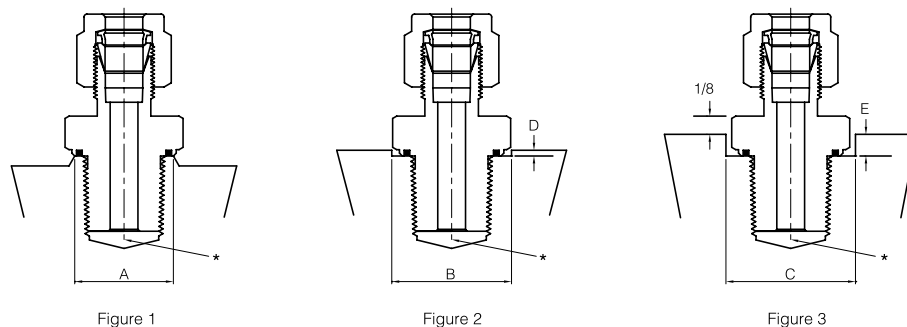
## SAE/MS Male Connector

**Connects Fractional Tube To SAE/MS Straight Thread Boss**

Part No.	Tube OD D (inch)	Straight Thread T (U)	d Min	Width Across Flat		A	B	I	I1	L	O-Ring Uniform 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



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

## 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.

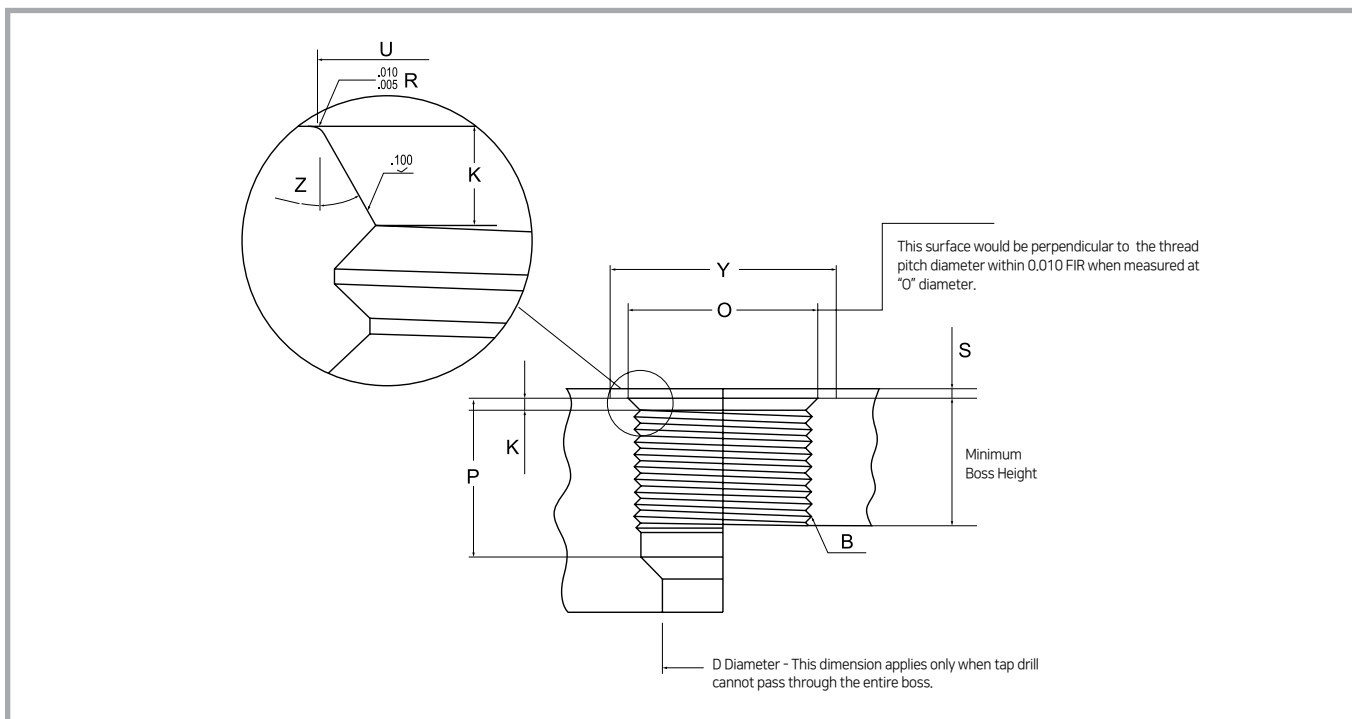
## O-Ring for SAE/MS Fittings Bosses

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

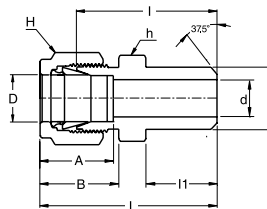
Nom. Tube O.D	Thread Size	B / Straight Thread				D Dia	Full Thread Depth	K	O Dia	P <sup>④</sup>	S <sup>②③</sup>	U <sup>②</sup> Dia	Y <sup>①</sup> Dia	Z
		Pitch Dia		Minor Dia										
		Min	Max	Min	Max									Min
1/8	5/16 - 24	0.2854	0.2902	0.267	0.277	0.062	0.390	0.074	0.438	0.468	0.062	0.358	0.672	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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### SPWC

#### Male Pipe Weld Connector



#### Connects Fractional Tube To Pipe

Part No.	Tube O.D. D (inch)	Male Pipe Size p		d Min	Width Across Flat		A	B	I	I1	L
		Nom.	O.D.		h (inch)	H (inch)					
SPWC - 2 - 2P	1/8	1/8	10.30	2.28	7/16	7/16	12.70	15.24	23.87	9.65	30.48
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 Tube To Pipe

Part No.	Tube O.D. D	Male Pipe Size p		d Min	Width Across Flat		A	B	I	I1	L
		Nom.	O.D.		h	H					
SPWC - 3M - 2P	3	1/8	10.3	2.4	12	12	12.9	15.3	23.9	9.7	30.5
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

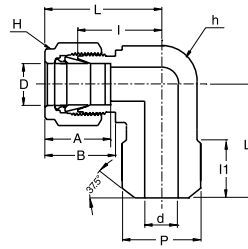
#### Weld end SUPERLOK® Usage Informations :

- 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

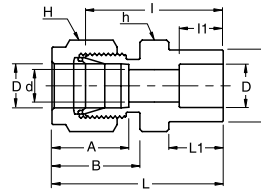


#### Connects Fractional Tube To Pipe

Part No.	Tube OD D (inch)	Pipe Size (P)		d 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

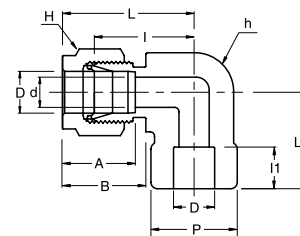


#### Connects Fractional Tube To Pipe

Part No.	Tube OD D (inch)	d 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

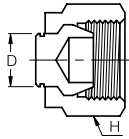


#### Connects Fractional Tube To Pipe

Part No.	Tube OD D (inch)	d 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

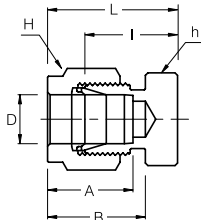
Plugs Unused port of Metric SUPERLOK fittings

**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

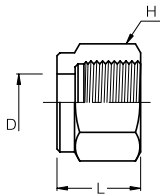
**Connects Metric Tubes**

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

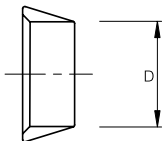
Part No.	Tube OD D (inch)	Width Across Flat H (inch)	L	Part No.	Tube OD D (inch)	Width Across Flat H (inch)	L
SN - 1	1/16	5/16	7.90	SN - 8	1/2	7/8	17.30
SN - 2	1/8	7/16	11.93	SN - 10	5/8	1	17.52
SN - 3	3/16	1/2	11.93	SN - 12	3/4	1-1/8	17.52
SN - 4	1/4	9/16	12.70	SN - 14	7/8	1-1/4	17.52
SN - 5	5/16	5/8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

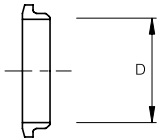
### Metric

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

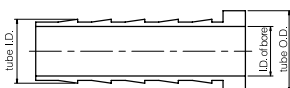
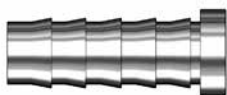
Part No.	Tube OD D (inch)	Part No.	Tube OD D (inch)	Part No.	Tube OD D (inch)
SFS - 1	1/16	SFS - 5	5/16	SFS - 12	3/4
SFS - 2	1/8	SFS - 6	3/8	SFS - 14	7/8
SFS - 3	3/16	SFS - 8	1/2	SFS - 16	1
SFS - 4	1/4	SFS - 10	5/8		

#### 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



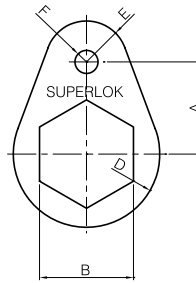
#### Fractional

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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## SBHR

### Bulkhead Retainer

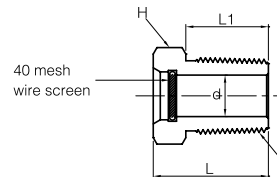
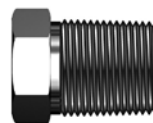


Part No.	A (inch)	B (inch)	C (inch)	D Dia (inch)	E Dia (inch)	F Dia (inch)
SBHR - 1	3/8	5/16	1/8	5/16	5/32	5/32
SBHR - 2	1/2	1/2	1/8	13/32	7/32	5/32
SBHR - 3	9/16	9/16	1/8	15/32	1/4	5/32
SBHR - 4 ①	5/8	5/8	1/8	1/2	9/32	5/32
SBHR - 5	1/16	11/16	1/8	9/16	5/16	5/32
SBHR - 6	3/4	3/4	1/8	5/8	11/32	5/32
SBHR - 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
SVP - 16N	1	33.30	23.90	22.40	1-3/8

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

# Single-Ferrule Tube Fittings

Available in sizes from 1/16 to 1 in

## Features

- Single ferrule swaging action
- Total component interchangeability
- More tolerant of vibrations
- 316 stainless steel construction
- Heat code traceable



## Introduction

SUPERLOK Tube Fitting offers both double-ferrule and single-ferrule tube fittings.

While the double-ferrule design is more popular, there are situations where single-ferrule tube fittings are preferred. SUPERLOK single-ferrule tube fitting is designed to provide leak-proof, secure connections that can withstand high pressure, vibration and vacuum applications.

This fitting includes single ferrule with body and nut of a standard SUPERLOK tube fitting (double-ferrule design).

## Pressure and Temperature Ratings

SUPERLOK single-ferrule tube fittings are identical to standard SUPERLOK tube fittings in pressure and temperature ratings, and with the same dimensions as the standard SUPERLOK tube fittings.

## Ordering Information

The single-ferrule tube fittings part numbering system is the same as SUPERLOK Tube Fitting (double ferrule design) except that you add an “S” as a suffix to Tube OD designator.

Example :	<b>SMC</b>	-	<b>8S</b>	-	<b>8N</b>	-	<b>M40</b>
	<b>1</b>		<b>2-1</b>		<b>2-2</b>		<b>3</b>

### 1. Type of Fitting

Please refer to SUPERLOK tube fitting index on page 2.

#### Examples :

- SMC = male connector
- SME = male elbow
- SU = union
- SUT = union tee

### 3. Material

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

### 2. Size of Fitting

#### 2-1) Tube OD Designator

Tube OD(inch)	1/4	3/8	1/2	3/4	1
Designator	4S	6S	8S	12S	16S

#### 2-2) Pipe Thread Designator

Size(inch)	1/8	1/4	3/8	1/2	3/4	1
ISO Tapered	2R	4R	6R	8R	12R	16R
Screwed NPT	2N	4N	6N	8N	12N	16N
ISO Parallel	2G	4G	6G	8G	12G	16G
Unified Screw	2U	4U	6U	8U	12U	16U

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





# Tube Benders

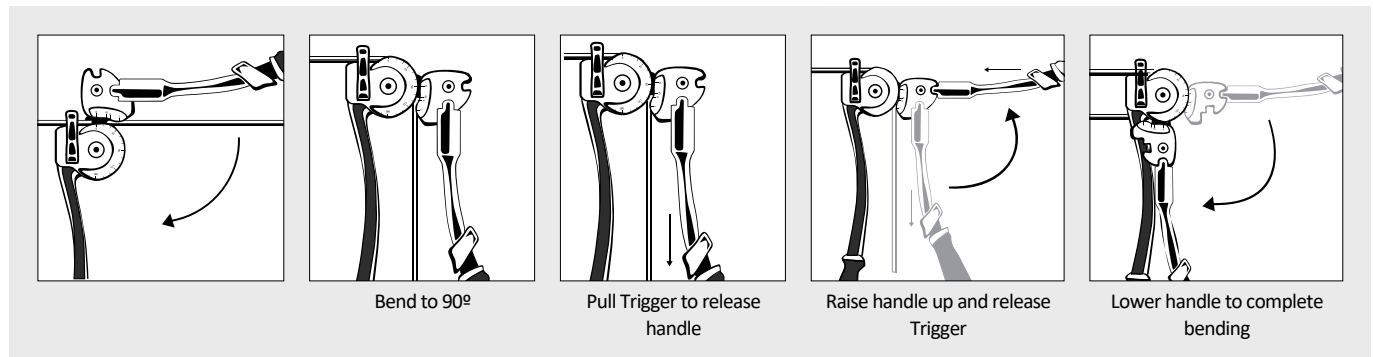
## Features

- For bending soft copper, aluminum, brass, steel, stainless steel and other tubing.
- New design for accurate and tight bends up to 180° in stainless steel and other tough metals.
- Patented, quick action trigger release repositions two-stage handle midway through a bend when both handle begin to meet. This feature allows easy fabrication of optimized bends up to 180° with reduced effort, better control and no crossing of handles.
- Rollers in bending handle reduce friction and bending effort, eliminate scoring of tubing.
- Comfortable and durable ergonomically molded cushion grips.
- Vise lug for mounting in vise.
- Clamshell packaging available for 1/4" and 3/8" O.D models.



## Operating Procedures

1. Available the setting to adjust the pressure value according to the condition.
2. Activate the buzzer sound when complete to install in normal.
3. Assemble it to check the set pressure value by naked eye.
4. Available to use without electric power supply.



## Technical Data

Part No.	Tube OD	Raidius(to center of tube)	Weight (kg)
SDTB-4	1/4	9/16	0.54
SDTB-6	3/8	15/16	1.68
SDTB-8	1/2	1-1/2	3.45

# SUPERLOK Inspection Gauges

Part No.	Fitting Size
SIG-468	1/4", 3/8", 1/2"
SIG-1216	3/4", 1"
SIG-2024	1-1/4", 1-1/2"
SIG-6M10M12M	6mm, 10mm, 12mm



Please refer to page 4~5 for installation instruction and gaugeability.

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

# Memo



**KENMORE  
CONTROLS**  
FLUID CONTROL PRODUCTS

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