



Klemmringverschraubungen
Twin Ferrule Compression Fittings

Local solutions for
individual customers
worldwide

UNION

SU Union

SRU
Reducing Union

SBHRU
Bulkhead Reducing Union

SBHU
Bulkhead Union

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CONNECTORS

SMC
Male Connector

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Male Connector For
Metal Gasket Seal
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Female Connector
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Gauge Connector
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SBFC
Bulkhead Female
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ELBOWS

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Union Elbow

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Male Elbow

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SPHME
45° Positionable
Male Elbow
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Reducing Union
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Positionable
Male Run Tee
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Female Branch Tee

SFRT
Female Run Tee

SUC
Union Cross

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STUB TUBE CONNECTOR

SR
Reducer

SBR
Bulkhead Reducer

SMA
Male Adapter

SFA
Female Adapter

SPC
Port Connector

SRPC
Reducing Port
Connector

SFTC
Flange Lapped
Tubes Connector
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AN TUBE

SAF
An Flare

SAU
An Union

SAA
An Adapter

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SSWC
Socket Weld
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Socket Weld
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Back Ferrule
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SBR
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SVP
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LOK - SU - 1 - 1 - A

Prefix	Fitting Type	Fitting Size (Tube O.D.)	Pipe Thread Size or Tube Fitting (Tube Size)	Material
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SUPERLOK Fitting Type

SU : Union **SMC** : Male Connector **SUE** : Union Elbow

SUT : Union Tee

SWC : Weld connector

SR : Reducer

SSMC : SAE/MS O-Ring Male Connector

SAU : An union

SP : Plug

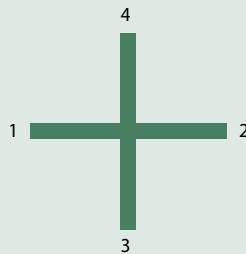
Fitting Size - Tube OD															
Imperial Sizes	O.D. inch	1/16	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1-1/4	1-1/2	2
	Identity No	1	2	3	4	5	6	8	10	12	14	16	20	24	32
Metric Sizes	Metric mm	2	3	4	6	8	10	12	16	20	22	25	28	32	38
	Identity No.	2M	3M	4M	6M	8M	10M	12M	16M	20M	22M	25M	28M	32M	38M

Pipe Thread Size - or Tube Size								
SIZE (INCH)	1/8	1/4	3/8	1/2	3/4	1	Applied Size	
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	

MATERIAL					
Aluminum	Brass and Copper	Carbon Steel ** <small>(** : Refer to Alloy No.)</small>	Stainless Steel*** <small>(*** : Refer to Alloy No.)</small>	Monel Alloy 400	Inconel Alloy 600
A	B	C**	SS***	M	INC

EXAMPLE : SMC8-6N SS316L

SUPERLOK MALE CONNECTOR , Tube O.D: 1/2", Thread :3/8"NPT, Stainless Steel 316L

TEES and CROSSES


TEES are described by the size of 1 & 2 and then the branch (3).

CROSSES are described by the size of 1 & 2 and then the branch (3 & 4).

Ex. 1) SMBT6 - 6N - SS316

MALE BRANCH TEE 3/8" X 3/8" X 3/8" NPT Stainless steel 316

Ex. 2) SUC - 8 - M

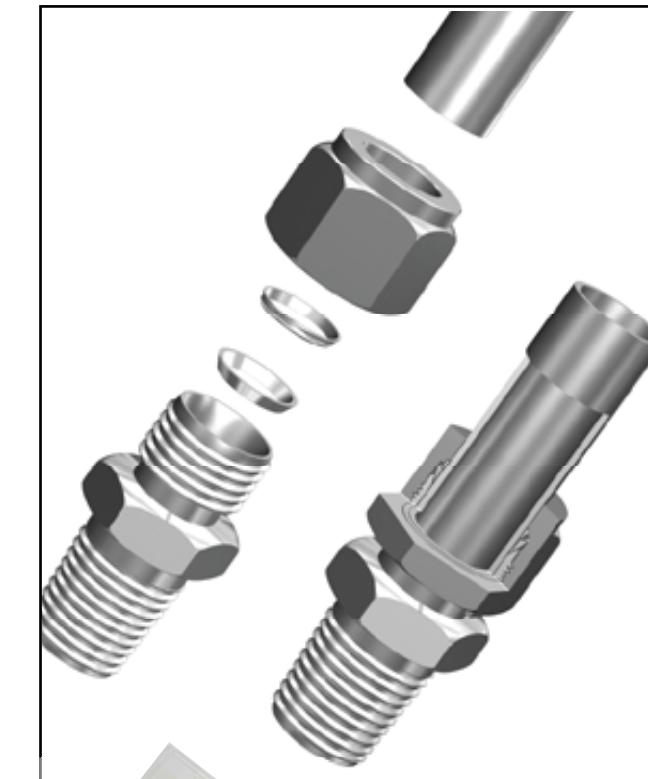
UNION CROSS 1/2" X 1/2" X 1/2" X 1/2" Monel 400



Design and Manufacture

Superlok tube fittings have been designed and manufactured in accordance with strict material management, high precision design and the latest manufacturing technology and processes to meet the specifications required for a wide range of applications in Oil and Gas, Chemical, Power generation, Shipbuilding, Pulp Paper, Micro Electronics, Oil Refineries etc.

Each Superlok fitting consists of four precision parts: body, front ferrule, Back ferrule, and nut. This two-ferrule design ensures constant and outstanding leak-tight connections. Superlok tube fitting users also benefit from a product which offers enhanced flow characteristics due to the exceptional internal surface finish of the fitting.



SUPERLOK Installation Instruction

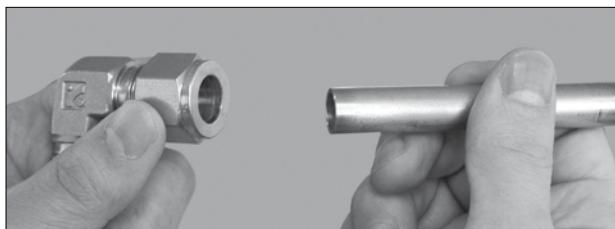
1. Installation under 1 inch or 25MM

SUPERLOK Tube Fittings are delivered to the customer in the assembled state, ready for immediate use with only finger-tightening. Disassembling the product prior to use can be a cause of leakage or allow contamination to enter the tube fitting. Do not use with poor quality tubing, which can cause of leakage or functional deterioration.

SUPERLOK Tube Fittings are installed in three easy steps:

Step 1

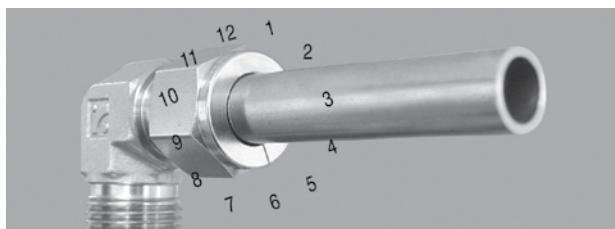
1. Insert tubing into the SUPERLOK tube fitting.
Ensure that the tubing abuts firmly on the shoulder of the fitting body and that the nut is finger-tight..



Step1

Step 2

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



Step2

Step 3

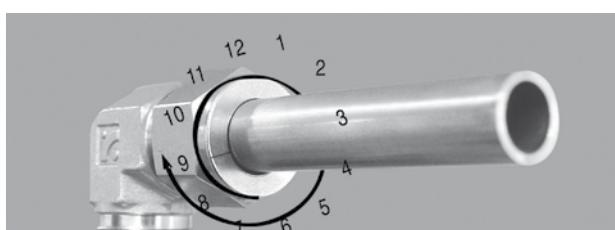
While holding fitting body steady with a back up wrench, tighten the nut 1 1/4 turns to the 9 o'clock position.

Note: For 1/16, 1/8, and 3/16 in.;

2, 3, and 4 mm tube fittings, tighten the nut 3/4 turn to the 3 o'clock position.

Installation in High-PressureSUPERLOK Tube Fitting is installed accurately.

After 1-1/4 revolution of the SUPERLOK nut by finger-tightening, make sure whether it is sufficiently tightened using by the Gap Inspection Gage.



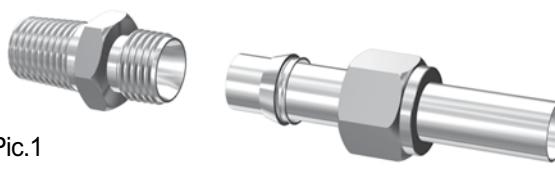
Step3

2. Installation in High Pressure Applications or where High Safety Margins are required

Follow steps 1 and 2 of the SUPERLOK Tube Fitting Instructions.

Tighten the nut until the tubing cannot rotate freely by hand.

Follow steps 3 and 4 of the SUPERLOK Tube Fitting Instructions.



Pic.1



Pic.2



Pic.3

Assembly Safety Gauge

On initial installation, the SUPERLOK gap testing gauge shows that a fitting has been sufficiently tightened.

Position the SUPERLOK gap inspection gauge next to the gap between the nut and body.

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

3. Reassembly Instructions

1. Shows the disconnected position of fittings.
2. Insert tubing with pre-swaged ferrules into the fitting body until the front ferrule seats..
3. Finger-tighten the nut, then rotate to the original position with a wrench. At this point, a significant increase in resistance will be encountered. Tighten slightly with a wrench.

Note: Do not use the gap inspection gauge with reassembled fittings.

Tube Preparation

- ◆ Check tubing O.D. and wall thickness
- ◆ Check ovality and hardness grade
- ◆ Check tolerances for above are within spec for the application
- ◆ Ensure surface is free from scratches and dirt
- ◆ Make a square cut, always use proper tube cutter with a sharp blade
- ◆ Blunt tube cutters can cause excessive tube deformation
- ◆ Remove burrs from inner and outer edges of tubing.



Tube Standard Information

Tube Selection

Correct tubing is essential to the performance of SUPERLOK tubing systems.

When selecting tubing material, size and wall thickness, customer must consider pressure, flow, temperature, environment and general system compatibility

Consideration in 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 Quality Requirements for different materials

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 B65, B75 or equivalent.

Copper tubing of high quality, annealed and seamless.

Stainless steel tubing

ASTM A213, A269 or A632 or equivalent.

Stainless steel tubing for an oil pressure usage 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.

Coefficient of Tubing to calculate Temperature/ Pressure Change.

Multiply the allowable working pressure in by the coefficient in the Table above in order to calculate allowable pressure at high temperature.

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	---

Example

SUS316

(3/8"»O.D of tube) X (0.049"» wall thickness)

$$1200\mu:4800 \text{ psi} \times 0.37 = 1776 \text{ psi}$$

The applicable operation pressure of SUS 316 tubing for wall thickness, 3/8"» O.D X 0.049"», is 1776 psi at 1200μ

Tube Bending

When bending tube adjacent to SUPERLOK fittings, there should be sufficient linear distance from the bending point to the fitting to avoid the potential for leakage. See table below for guidance.

Tube O.D. (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

Stainless Steel Tube | Imperial Sizes
Working Pressures PSI

Tube O.D. (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

Stainless Steel Tube | Metric Sizes
Working Pressures PSI

Tube O.D. (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

UNION**SU**
Union

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SRU
Reducing Union

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SBHRU
Bulkhead Reducing
Union

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SBHU
Bulkhead Union

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CONNECTOR**SMC**
Male Connector

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SGMC
Male Connector For
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Male Connector For
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SFC
Female Connector

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SGC
Gauge Connector

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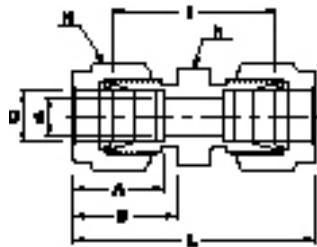
SBMC
Bulkhead Male
Connector

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SBFC
Bulkhead Female
Connector

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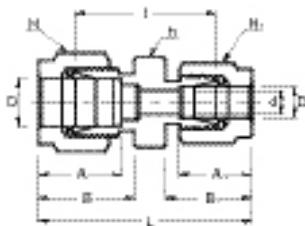
SU

IMPERIAL SIZE TUBES | Union

		Width Across Flat						
Part No.	Tube O.D. D (inch)	h (inch)	H (inch)	A	B	I	L	
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

METRIC SIZE TUBES | Union

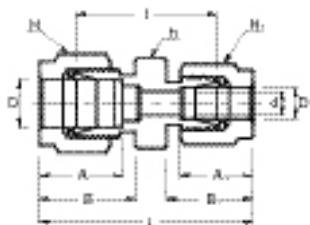
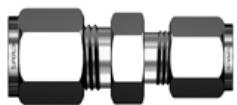
		Width Across Flat						
Part No.	Tube O.D. D (inch)	h (inch)	H (inch)	A	B	I	L	
SU - 2M	2	1.7	12	12	12.9	15.3	22.4	35.6
SU - 3M	3	2.4	12	12	12.9	15.3	22.1	35.3
SU - 4M	4	2.4	12	12	13.7	16.1	24.1	37.3
SU - 6M	6	4.8	14	14	15.3	17.7	26.2	41.0
SU - 8M	8	6.4	15	16	16.2	18.6	28.2	43.2
SU - 10M	10	7.9	18	19	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


IMPERIAL SIZE TUBES | Reducing Union

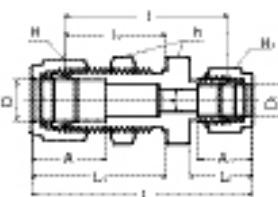
	Tube OD			Width Across Flat								
Part No.	D (inch)	D1 (inch)	d min	h (inch)	H (inch)	H1 (inch)	A	A1	B	B1	I	L
SRU 2 - 1	1/8	1/16	1.27	7/16	7/16	5/16	12.7	8.63	15.24	10.92	20.60	31.00
SRU 3 - 2	3/16	1/8	2.28	7/16	1/2	7/16	13.71	12.70	16.00	15.24	23.36	36.57
SRU 4 - 2	1/4	1/8	2.28	1/2	9/16	7/16	15.24	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

METRIC SIZE TUBES | Reducing Union

	Tube OD			Width Across Flat								
Part No.	D (inch)	D1 (inch)	d min	h (inch)	H (inch)	H1 (inch)	A	A1	B	B1	I	L
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

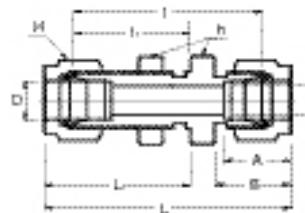

CONNECT METRIC SIZE TUBES TO IMPERIAL SIZE TUBES | Reducing Union

	Tube OD			Width Across Flat								
Part No.	D (inch)	D1 (inch)	d min	h (inch)	H (inch)	H1 (inch)	A	A1	B	B1	I	L
SRU 3M - 2	3	1/8	2.4	12	11.1	12.9	12.8	15.3	15.2	10.92	22.1	35.2
SRU 4M - 2	4	1/8	2.4	12	11.1	13.7	12.8	16.1	15.2	15.24	23.4	36.5
SRU 4M - 4	4	1/4	2.4	14	14.3	13.7	15.3	16.1	17.7	15.24	25.4	39.4
SRU 6M - 2	6	1/8	2.4	14	11.1	15.3	12.8	17.7	15.2	16.00	24.6	38.5
SRU 6M - 4	6	1/4	4.8	14	14.3	15.3	15.3	17.7	17.7	15.24	26.2	41.0
SRU 6M - 5	6	5/16	4.8	14	15.9	15.3	16.2	17.7	18.6	17.78	27.4	42.3
SRU 8M - 4	8	1/4	4.8	15	14.3	16.2	15.3	18.6	17.7	15.24	27.4	42.3
SRU 10M - 2	10	1/8	2.4	18	11.1	17.2	12.8	19.5	15.2	17.78	27.7	41.8
SRU 10M - 4	10	1/4	4.8	18	14.3	17.2	15.3	19.5	17.7	18.54	29.5	44.5
SRU 10M - 5	10	5/16	6.4	18	15.9	17.2	16.2	19.5	18.6	15.24	30.0	45.1
SRU 10M - 6	10	3/8	7.1	18	17.5	17.2	16.9	19.5	19.2	17.78	31.0	45.9
SRU 12M - 5	12	5/16	6.4	22	15.9	22.8	16.2	22.0	18.6	19.30	30.2	47.8
SRU 12M - 6	12	3/8	7.1	22	17.5	22.8	16.9	22.0	19.2	19.30	31.0	48.4
SRU 12M - 8	12	1/2	9.5	22	22.2	22.8	22.8	22.0	22.0	21.84	31.0	51.2
SRU 15M - 8	15	1/2	10.3	24	22.2	24.4	22.8	22.0	22.0	17.78	31.8	52.0
SRU 16M - 10	16	5/8	12.7	24	25.4	24.4	24.4	22.0	22.0	19.30	31.8	52.0
SRU 18M - 12	18	3/4	15.1	27	28.6	24.4	24.4	22.0	22.0	21.84	33.3	53.5
SRU 20M - 12	20	3/4	15.9	30	28.6	26.0	24.4	22.0	22.0	21.84	34.8	54.9
SRU 20M - 16	20	1	15.9	35	38.1	26.0	31.2	22.0	26.4	21.84	40.4	62.8
SRU 25M - 16	25	1	21.8	35	38.1	31.3	31.3	26.5	26.5	21.84	40.4	65.0


CONNECT IMPERIAL SIZE TUBES | Bulkhead Reducing Union

	Tube OD			Width Across Flat									Panel Hole Drill Size	Panel Max Thickness	
Part No.	D (inch)	D1 (inch)	d min	h (inch)	H (inch)	H1 (inch)	A	A1	i	h	L	L1	L2		
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	1.50	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

SBHU

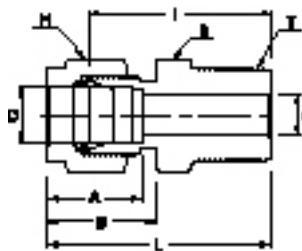

CONNECT IMPERIAL SIZE TUBES | Bulkhead Union

Part No.	Tube OD	Width Across Flat										Panel Hole Drill Size	Panel Max Thickness
		d min	h (inch)	H (inch)	A	B	I	h	L	L ₁			
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	

CONNECT METRIC SIZE TUBES | Bulkhead Union

Part No.	Tube OD D	Width Across Flat										Panel Hole Drill Size	Panel Max Thickness
		d min	h	h1*	H (inch)	A	B	I	h	L	L ₁		
BHU - 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

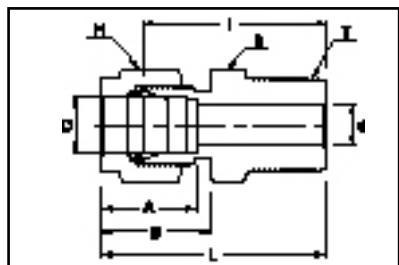
h1* : Metric Tubes Bulkhead Hexagon application only



SMC

IMPERIAL TUBE | NPT Male

Part No.	Tube O.D. 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


IMPERIAL TUBE | BSP Taper Male

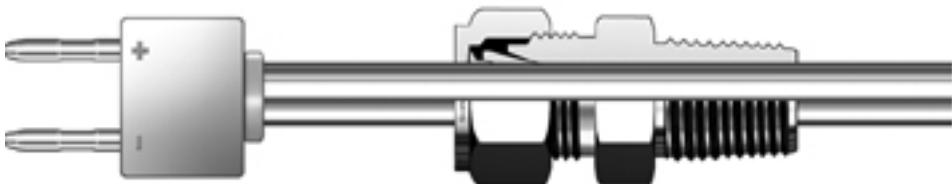
Part No.	Tube O.D. D (inch)	T R (PT)	d Min	Width Across Flat		A	B	I	L
				h (inch)	H (inch)				
SMC 2 - 2R	1/8	1/8	2.28	7/16	7/16	12.70	15.24	23.87	30.48
SMC 2 - 4R	1/8	1/4	2.28	9/16	7/16	12.70	15.24	28.95	35.56
SMC 4 - 2R	1/4	1/8	4.82	1/2	9/16	15.24	17.78	25.40	32.76
SMC 4 - 4R	1/4	1/4	4.82	9/16	9/16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

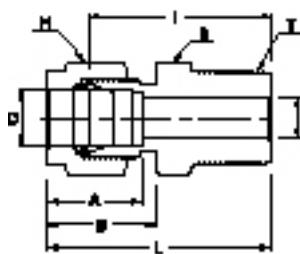
Bored Through Fittings for Thermocouples

SUPERLOK Bored through MALE CONNECTORS accommodate thermocouples or dip tubes

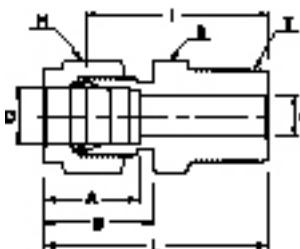
To order, use TM as a suffix to the desired Male Connector ordering number.

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

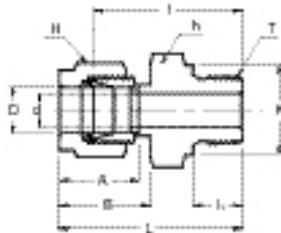



SMC
METRIC TUBE | NPT Male

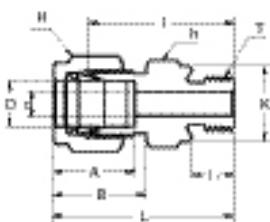
Part No.	Tube O.D. D	T (NPT)	d Min	Width Across Flat		A	B	I	L
				h	H				
SMC 2M - 2N	2	1/8	1.7	12	12	12.9	15.3	20.00	23.9
SMC 3M - 2N	3	1/8	2.4	12	12	12.9	15.3	22.35	23.9
SMC 3M - 4N	3	1/4	2.4	14	12	12.9	15.3	23.87	29.0
SMC 4M - 2N	4	1/8	2.4	12	12	13.7	16.1	28.95	24.6
SMC 4M - 4N	4	1/4	2.4	14	12	13.7	16.1	29.21	29.7
SMC 6M - 2N	6	1/8	4.8	14	14	15.3	17.7	35.56	25.4
SMC 6M - 4N	6	1/4	4.8	14	14	15.3	17.7	24.63	30.5
SMC 6M - 6N	6	3/8	4.8	18	14	15.3	17.7	29.71	31.0
SMC 6M - 8N	6	1/2	4.8	22	14	15.3	17.7	25.40	37.3
SMC 8M - 2N	8	1/8	4.8	15	16	16.2	18.6	30.48	26.7
SMC 8M - 4N	8	1/4	6.4	15	16	16.2	18.6	30.98	31.2
SMC 8M - 6N	8	3/8	6.4	18	16	16.2	18.6	37.33	31.8
SMC 8M - 8N	8	1/2	6.4	22	16	16.2	18.6	38.86	38.1
SMC 10M - 2N	10	1/8	4.8	18	19	17.2	19.5	26.67	28.7
SMC 10M - 4N	10	1/4	7.9	18	19	17.2	19.5	31.24	33.3
SMC 10M - 6N	10	3/8	7.9	18	19	17.2	19.5	31.75	33.3
SMC 10M - 8N	10	1/2	7.9	22	19	17.2	19.5	27.94	38.9
SMC 12M - 2N	12	1/8	4.8	22	22	22.8	22.0	32.51	28.7
SMC 12M - 4N	12	1/4	7.1	22	22	22.8	22.0	32.51	33.3
SMC 12M - 6N	12	3/8	9.5	22	22	22.8	22.0	38.86	33.3
SMC 12M - 8N	12	1/2	9.5	22	22	22.8	22.0	40.38	38.9
SMC 12M - 12N	12	3/4	9.5	27	22	22.8	22.0	28.70	40.4
SMC 14M - 4N	14	1/4	7.1	24	25	24.4	22.0	33.27	34.0
SMC 14M - 6N	14	3/8	9.5	24	25	24.4	22.0	33.27	34.0
SMC 14M - 8N	14	1/2	11.1	24	25	24.4	22.0	38.86	38.9
SMC 16M - 6N	16	3/8	9.5	24	25	24.4	22.0	40.38	34.0
SMC 16M - 8N	16	1/2	11.9	24	25	24.4	22.0	46.99	38.9
SMC 16M - 12N	16	3/4	12.7	27	25	24.4	22.0	34.03	40.4
SMC 18M - 8N	18	1/2	11.9	27	30	24.4	22.0	38.86	40.4
SMC 18M - 12N	18	3/4	15.1	27	30	24.4	22.0	40.38	40.4
SMC 20M - 8N	20	1/2	11.9	30	32	26.0	22.0	40.38	42.2
SMC 20M - 12N	20	3/4	15.9	30	32	26.0	22.0	40.38	42.2
SMC 22M - 12N	22	3/4	15.9	30	32	26.0	22.0	46.99	42.2
SMC 22M - 16N	22	1	18.3	35	32	26.0	22.0	40.38	47.0
SMC 25M - 12N	25	3/4	15.9	35	38	31.3	26.5	46.99	45.2
SMC 25M - 16N	25	1	21.8	35	38	31.3	26.5	45.21	50.0
SMC 28M - 16N	28	1	21.8	41	46	36.6	36.6	45.21	51.6
SMC 28M - 20N	28	1-1/4	21.8	46	46	36.6	36.6	50.03	52.3
SMC 30M - 20N	30	1-1/4	26.2	46	50	39.6	39.2	55.12	55.6
SMC 32M - 20N	32	1-1/4	28.6	46	50	42.0	41.6	55.12	56.6
SMC 38M - 24N	38	1-1/2	33.7	55	60	49.4	47.9	61.72	64.0
SMC 32 - 32N	2	2	45.97	2-3/4	3	67.56	62.74	76.20	113.54


METRIC TUBE | BSP Taper Male

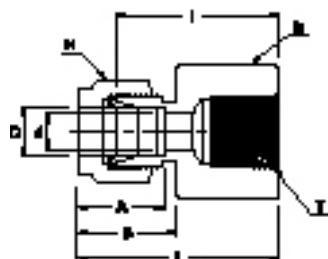
Part No.	Tube O.D. D	T R (PT)	d Min	Width Across Flat		A	B	I	L
				h	H				
SMC 2M - 2R	2	1/8	1.7	12	12	12.9	15.3	23.9	30.5
SMC 3M - 2R	3	1/8	2.4	12	12	12.9	15.3	23.9	30.5
SMC 3M - 4R	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
SMC 4M - 2R	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
SMC 4M - 4R	4	1/4	2.4	14	12	13.7	16.1	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	46	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

SGMC

METRIC TUBE | BSP Parallel Male | Bonded Washer Seal

Part No.	Tube O.D. D	T R (PT)	d Min	Width Across Flat		A	B	I	h	L	K
				h	H						
SGMC 3M - 2G	1/8	1/8	2.4	14	12	12.9	15.3	23.4	7.1	30.0	13.8
SGMC 3M - 4G	1/4	1/4	2.4	19	12	12.9	15.3	28.7	11.2	35.3	18.0
SGMC 4M - 2G	1/8	1/8	2.4	14	12	13.7	16.1	24.1	7.1	30.7	13.8
SGMC 6M - 2G	1/8	1/8	4.0	14	14	15.3	17.7	24.9	7.1	32.3	13.8
SGMC 6M - 4G	1/4	1/4	4.8	19	14	15.3	17.7	30.2	11.2	37.6	18.0
SGMC 6M - 6G	3/8	3/8	4.8	22	14	15.3	17.7	31.5	11.2	38.9	21.8
SGMC 6M - 8G	1/2	1/2	4.8	27	14	15.3	17.7	37.3	14.2	44.7	26.0
SGMC 8M - 2G	1/8	1/8	4.0	15	16	16.2	18.6	25.7	7.1	33.2	13.8
SGMC 8M - 4G	1/4	1/4	6.4	19	16	16.2	18.6	31.0	11.2	38.5	18.0
SGMC 8M - 6G	3/8	3/8	6.4	22	16	16.2	18.6	32.3	11.2	39.8	21.8
SGMC 8M - 8G	1/2	1/2	6.4	27	16	16.2	18.6	38.1	14.2	45.6	26.0
SGMC 10M - 4G	1/4	1/4	5.9	19	19	17.2	19.5	31.8	11.2	39.4	18.0
SGMC 10M - 6G	3/8	3/8	7.9	22	19	17.2	19.5	33.0	11.2	40.6	21.8
SGMC 10M - 8G	1/2	1/2	7.9	27	19	17.2	19.5	38.9	14.2	46.5	26.0
SGMC 12M - 4G	1/4	1/4	5.9	22	22	22.8	22.0	32.5	11.2	42.6	18.0
SGMC 12M - 6G	3/8	3/8	7.9	22	22	22.8	22.0	33.0	11.2	43.1	21.8
SGMC 12M - 8G	1/2	1/2	9.5	27	22	22.8	22.0	38.9	14.2	49.0	26.0
SGMC 12M - 12G	3/4	3/4	9.5	35	22	22.8	22.0	42.7	15.7	52.8	32.0
SGMC 16M - 6G	3/8	3/8	7.9	24	25	24.4	22.0	33.8	11.2	43.9	21.8
SGMC 16M - 8G	1/2	1/2	11.9	27	25	24.4	22.0	38.9	14.2	49.0	26.0
SGMC 18M - 8G	1/2	1/2	11.9	27	30	24.4	22.0	38.9	14.2	49.0	26.0
SGMC 18M - 12G	3/4	3/4	15.1	35	30	24.4	22.0	42.7	15.7	52.8	32.0
SGMC 20M - 8G	1/2	1/2	11.9	30	32	26.0	22.0	40.4	14.2	50.5	26.0
SGMC 20M - 12G	3/4	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
SGMC 22M - 12G	3/4	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
SGMC 22M - 16G	1	1	18.3	41	32	26.0	22.0	45.2	18.3	55.3	39.0
SGMC 25M - 12G	3/4	3/4	15.9	35	38	31.3	26.5	45.2	15.7	57.5	32.0
SGMC 25M - 16G	1	1	19.8	41	38	31.3	26.5	47.8	18.3	60.1	39.0

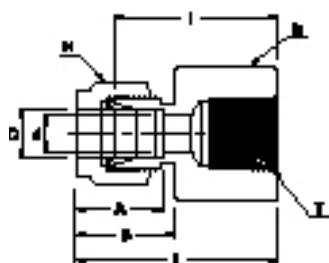

SOMC
METRIC TUBE | BSP Parallel Male | Metal Gasket Seal

Part No.	Tube O.D. D	T G (PF)	d Min	Width Across Flat		A	B	I	h	L	K
				h	H						
SOMC 3M - 2G	3	1/8	2.4	14	12	12.9	15.3	23.4	7.1	30.0	13.8
SOMC 3M - 4G	3	1/4	2.4	19	12	12.9	15.3	28.7	11.2	35.3	18.0
SOMC 4M - 2G	4	1/8	2.4	14	12	13.7	16.1	24.1	7.1	30.7	13.8
SOMC 6M - 2G	6	1/8	4.0	14	14	15.3	17.7	24.9	7.1	32.3	13.8
SOMC 6M - 4G	6	1/4	4.8	19	14	15.3	17.7	30.2	11.2	37.6	18.0
SOMC 6M - 6G	6	3/8	4.8	22	14	15.3	17.7	31.5	11.2	38.9	21.8
SOMC 6M - 8G	6	1/2	4.8	27	14	15.3	17.7	37.3	14.2	44.7	26.0
SOMC 8M - 2G	8	1/8	4.0	15	16	16.2	18.6	25.7	7.1	33.2	13.8
SOMC 8M - 4G	8	1/4	6.4	19	16	16.2	18.6	31.0	11.2	38.5	18.0
SOMC 8M - 6G	8	3/8	6.4	22	16	16.2	18.6	32.3	11.2	39.8	21.8
SOMC 8M - 8G	8	1/2	6.4	27	16	16.2	18.6	38.1	14.2	45.6	26.0
SOMC 10M - 4G	10	1/4	5.9	19	19	17.2	19.5	31.8	11.2	39.4	18.0
SOMC 10M - 6G	10	3/8	7.9	22	19	17.2	19.5	33.0	11.2	40.6	21.8
SOMC 10M - 8G	10	1/2	7.9	27	19	17.2	19.5	38.9	14.2	46.5	26.0
SOMC 12M - 4G	12	1/4	5.9	22	22	22.8	22.0	32.5	11.2	42.6	18.0
SOMC 12M - 6G	12	3/8	7.9	22	22	22.8	22.0	33.0	11.2	43.1	21.8
SOMC 12M - 8G	12	1/2	9.5	27	22	22.8	22.0	38.9	14.2	49.0	26.0
SOMC 12M - 12G	12	3/4	9.5	35	22	22.8	22.0	42.7	15.7	52.8	32.0
SOMC 15M - 8G	15	1/2	11.9	27	25	24.4	22.0	38.9	14.2	49.0	26.0
SOMC 16M - 6G	16	3/8	7.9	24	25	24.4	22.0	33.8	11.2	43.9	21.8
SOMC 16M - 8G	16	1/2	11.9	27	25	24.4	22.0	38.9	14.2	49.0	26.0
SOMC 18M - 8G	18	1/2	11.9	27	30	24.4	22.0	38.9	14.2	49.0	26.0
SOMC 18M - 12G	18	3/4	15.1	35	30	24.4	22.0	42.7	15.7	52.8	32.0
SOMC 20M - 8G	20	1/2	11.9	30	32	26.0	22.0	40.4	14.2	50.5	26.0
SOMC 20M - 12G	20	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
SOMC 22M - 12G	22	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
SOMC 22M - 16G	22	1	18.3	41	32	26.0	22.0	45.2	18.3	55.3	39.0
SOMC 25M - 12G	25	3/4	15.9	35	38	31.3	26.5	45.2	15.7	57.5	32.0
SOMC 25M - 16G	25	1	19.8	41	38	31.3	26.5	47.8	18.3	60.1	39.0


IMPERIAL TUBE | NPT Female

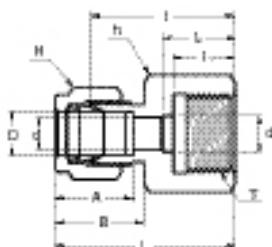
Part No.	Tube O.D. D	T * (NPT)	d Min	Width Across Flat		A	B	I	L
				H (inch)	H (inch)				
SFC 2 - 2N	1/8	1/8	2.28	9/16	7/16	12.70	15.24	22.09	28.70
SFC 2 - 4N	1/8	1/4	2.28	3/4	7/16	12.70	15.24	26.92	33.52
SFC 3 - 2N	3/16	1/8	3.04	9/16	1/2	13.71	16.00	23.11	29.71
SFC 4 - 2N	1/4	1/8	4.82	9/16	9/16	15.24	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

* ISO Tapered Threads are available upon request


SFC
IMPERIAL TUBE | BSP Taper Female

Part No.	Tube O.D. 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

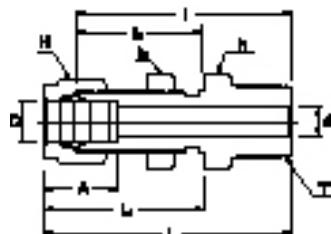
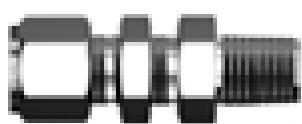
* NPT Threads are available upon request


IMPERIAL TUBE | BSP Parallel Thread Gauge Connector

Part No.	Tube O.D. D	T G (PF)	d Min	d1	Width Across Flat		A	B	I	l1	l2	L
					h(inch)	H(inch)						
SGC 4 - 4G	3	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	3	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	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	6	1/4	5.58	-	3/4	5/8	16.25	18.54	30.98	13.00	-	38.35
SGC 5 - 8G	6	1/2	7.11	-	1-1/16	5/8	16.25	18.54	33.53	18.80	-	40.89
SGC 6 - 4G	6	1/4	5.58	-	3/4	11/16	16.76	19.30	31.75	13.00	-	39.12
SGC 6 - 6G	6	3/8	6.60	-	15/16	11/16	16.76	19.30	31.24	14.20	-	38.61
SGC 6 - 8G	8	1/2	7.11	-	1-1/16	11/16	16.76	19.30	34.54	18.80	-	41.91
SGC 8 - 4G	8	1/4	5.58	-	7/8	7/8	22.86	21.84	31.80	13.00	-	41.95
SGC 8 - 6G	8	3/8	6.60	-	15/16	7/8	22.86	21.84	34.29	14.20	-	44.45
SGC 8 - 8G	8	1/2	7.11	7.11	1-1/16	7/8	22.86	21.84	38.10	18.80	-	48.26

METRIC TUBE | BSP Parallel Thread Gauge Connector

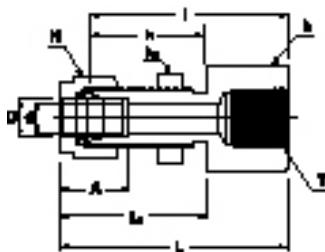
Part No.	Tube O.D. D	T G (PF)	d Min	d1	Width Across Flat		A	B	I	l1	l2	L
					h	H						
SGC 3M - 4G	3	1/4	2.4	5.5	19	12	12.9	15.3	28.7	13	17	35.3
SGC 6M - 4G	6	1/4	4.8	5.5	19	14	15.3	17.7	30.2	13	17	37.6
SGC 6M - 6G	6	3/8	4.8	6.5	24	14	15.3	17.7	30.2	14	20	37.6
SGC 6M - 8G	6	1/2	4.8	7.0	27	14	15.3	17.7	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

SBMC

IMPERIAL TUBE | NPT Bulkhead Male

Part No.	Tube O.D. D(inch)	T * (NPT)	Width Across Flat									Panel Hole Drill Size	Panel Max Thickness
			d min	h (inch)	h1 (inch)	H (inch)	A	l	h	L			
SBMC 2 - 2N	1/8	1/8	2.28	1/2	1/2	7/16	12.70	39.87	24.63	46.48	31.24	5.16	12.70
SBMC 4 - 2N	1/4	1/8	4.82	5/8	5/8	9/16	15.24	42.16	26.16	49.53	33.52	8.33	10.16
SBMC 4 - 4N	1/4	1/4	4.82	5/8	5/8	9/16	15.24	46.73	26.16	54.10	33.52	9.92	10.16
SBMC 6 - 4N	3/8	1/4	7.11	3/4	3/4	11/16	16.76	50.03	29.46	57.40	36.83	11.50	11.17
SBMC 6 - 6N	3/8	3/8	7.11	3/4	3/4	11/16	16.76	50.03	29.46	57.40	36.83	13.09	11.17
SBMC 6 - 8N	3/8	1/2	7.11	7/8	7/8	11/16	16.76	56.38	29.46	63.75	36.83	14.68	11.17
SBMC 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
SBMC 8 - 8N	1/2	1/2	10.41	15/16	15/16	7/8	22.86	58.67	31.75	68.83	41.91	22.62	12.70
SBMC 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
SBMC 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	28.97	19.05

* ISO Tapered Threads are available upon request

SBFC


IMPERIAL TUBE | NPT Bulkhead Female

Part No.	Tube O.D.	T * (NPT)	Width Across Flat									Panel Hole Drill Size	Panel Max Thickness
			d min	h (inch)	h1 (inch)	H (inch)	A	I	h	L	L1		
SBFC 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
SBFC 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
SBFC 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
SBFC 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
SBFC 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
SBFC 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
SBFC 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

METRIC TUBE | NPT Bulkhead Female

Part No.	Tube O.D.	T * (NPT)	Width Across Flat									Panel Hole Drill Size	Panel Max Thickness
			d min	h (inch)	h1 (inch)	H (inch)	A	I	h	L	L1		
SBFC 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
SBFC 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
SBFC 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
SBFC 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

* ISO Tapered Threads are available upon request

ELBOWS**SUE**
Union Elbow

page

**SME**
Male Elbow

page

**SHME**
45 Male Elbow

page

**SPHME**
45 Positionable Male
Elbow

page

**SPME**
Positionable Male Elbow

page

**SFE**
Female Elbow

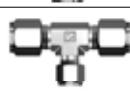
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**TEES****SUT**
Union Tee

page

**SRUT**
Reducing Union Tee

page

**SMBT**
Male Branch Tee

page

**SPMBT**
Positionable Male
Branch Tee

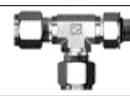
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**SMRT**
Male Run Tee

page

**SPMRT**
Positionable Male Run Tee

page

**SFBT**
Female Branch Tee

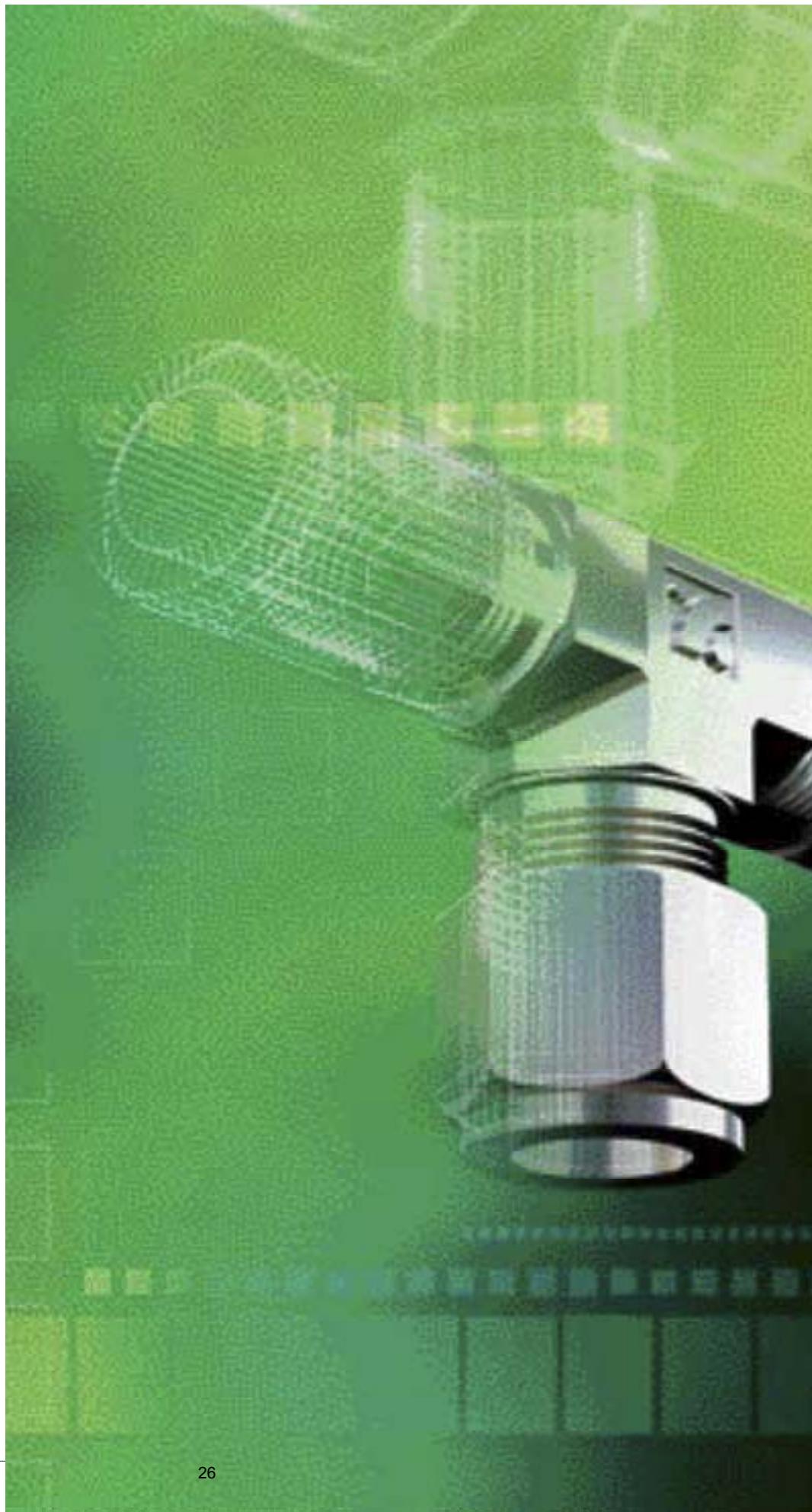
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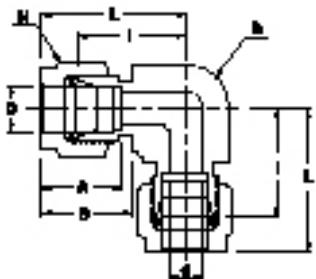
**SFRT**
Female Run Tee

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**SUC**
Union Cross

page

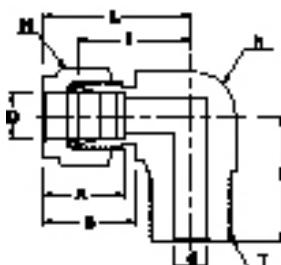



SUE
IMPERIAL TUBE | Elbow Connector

Part No.	Tube O.D. D	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

METRIC TUBE | Elbow Connector

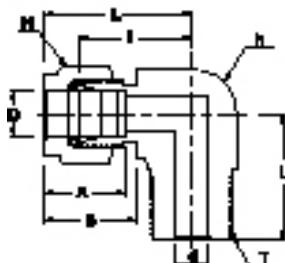
Part No.	Tube O.D. D	d Min	Width Across Flat		A	B	I	L
			h(inch)	H(inch)				
SUE - 2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
SUE - 3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
SUE - 4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
SUE - 6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
SUE - 8M	8	6.4	15.9	16	16.2	18.6	22.4	29.9
SUE - 10M	10	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	46	50	39.6	39.2	48.3	69.9
SUE - 32M	32	28.6	46	50	42.0	41.6	49.3	72.3
SUE - 38M	38	33.7	55	60	49.4	47.9	56.4	84.0



SME

METRIC TUBE | NPT Male Elbow

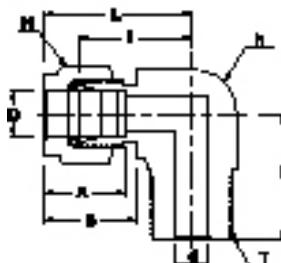
Part No.	Tube O.D. D (inch)	T (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h	H					
SME 3M - 2N	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
SME 3M - 4N	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
SME 4M - 2N	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
SME 4M - 4N	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	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	46	50	39.6	39.2	48.3	69.9	53.1
SME 32M - 20N	32	1-1/4	27.8	46	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



SME

METRIC TUBE | BSP Male Elbow

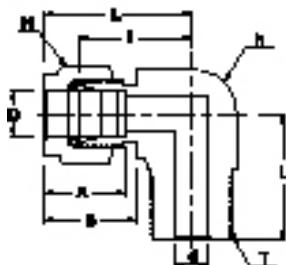
Part No.	Tube O.D. D (inch)	T R (PT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h	H					
SME 3M - 2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
SME 3M - 4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
SME 4M - 2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
SME 4M - 4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4	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



SME

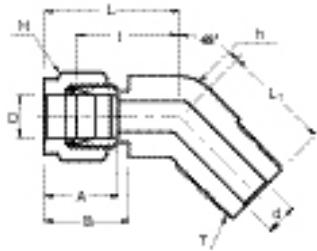
IMPERIAL TUBE | NPT Male Elbow

Part No.	Tube O.D. D (inch)	T (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h	H					
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 - 12N	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

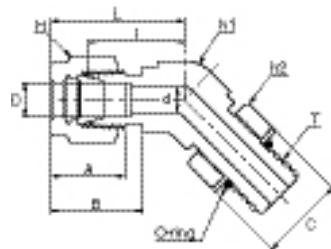
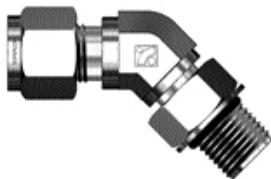

 SME
SHME

IMPERIAL TUBE | BSP Male Elbow

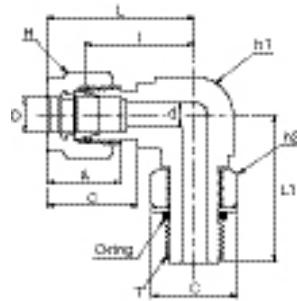
Part No.	Tube O.D. D (inch)	T (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h	H					
SME 2 - 2N	1/4	1/8	4.82	1/2	9/16	15.24	17.78	19.55	26.92	18.79
SME 2 - 4N	1/4	1/4	4.82	1/2	9/16	15.24	17.78	19.55	26.92	23.36
SME 3 - 2N	1/4	3/8	4.82	5/8	9/16	15.24	17.78	22.35	29.71	26.16
SME 3 - 4N	1/4	1/2	4.82	13/16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


IMPERIAL TUBE | 45° NPT Male Elbow

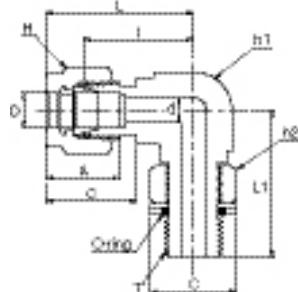
Part No.	Tube O.D. D (inch)	T (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h	H					
SHME 4 - 2N	1/4	1/8	4.82	1/2	9/16	15.24	17.78	17.27	24.63	16.51
SHME 4 - 4N	1/4	1/4	4.82	1/2	9/16	15.24	17.78	17.27	24.63	21.08
SHME 6 - 2N	3/8	1/8	4.82	5/8	11/16	16.76	19.30	20.57	27.94	18.28
SHME 6 - 4N	3/8	1/4	7.11	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

SHME
SPME

IMPERIAL TUBE | 45° Adjustable Male Elbow SAE/MS

Part No.	Tube O.D. D	T (U)	d Min	Width Across Flat			A	B	I	L	L1	C
				h2	h2	H						
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-	22.35	1-3/8	1-1/2	1-1/2	31.24	26.42	35.31	47.50	50.55	43.94


IMPERIAL TUBE | Adjustable Male Elbow SAE/MS

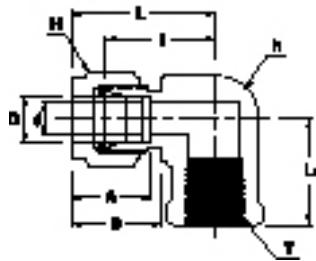
Part No.	Tube O.D. D	T (U)	d Min	Width Across Flat			A	B	I	L	L1	C
				h2	h2	H						
SPME 4 - 4U	1/4	7/16-20	4.83	1/2	9/16	9/16	15.24	17.78	21.08	28.45	28.45	16.51
SPME 4 - 6U	1/4	9/16-18	4.83	5/8	11/16	9/16	15.24	17.78	23.11	30.48	32.26	20.07
SPME 5 - 5U	5/16	1/2-20	5.84	9/16	5/8	5/8	16.26	18.54	22.86	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	29.46	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	31.24	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	38.35	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	2-1/2	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

SPME

IMPERIAL TUBE | Adjustable Male Elbow BSP

Part No.	Tube O.D. D	T (U)	d Min	Width Across Flat			A	B	I	L	L1	C
				h2	h2	H						
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	22.86	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	29.46	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	31.24	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	38.35	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	2-1/2	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

METRIC TUBE | Adjustable Male Elbow BSP

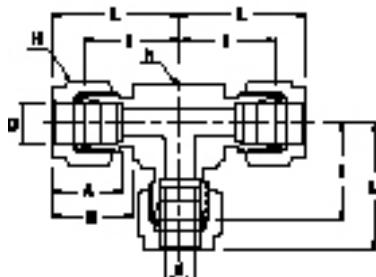
Part No.	Tube O.D. D	T (U)	d Min	Width Across Flat			A	B	I	L	L1	C
				h2	h2	H						
SPME 6M - 2G	6	1/8	4.0	1/2	9/16	14	15.3	17.7	19.6	27.0	26.4	17.3
SPME 6M - 4G	6	1/4	4.8	5/8	3/4	14	15.3	17.7	21.6	29.0	32.3	22.9
SPME 8M - 2G	8	1/8	4.0	9/16	9/16	16	16.2	18.6	21.3	28.8	27.4	17.3
SPME 8M - 4G	8	1/4	5.9	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

SFE

IMPERIAL TUBE | Female Elbow NPT

Part No.	Tube O.D. D	T (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				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	19.05
SFE 2 - 4N	1/8	1/4	2.28	11/16	7/16	12.70	15.24	20.82	27.43	22.35
SFE 3 - 2N	3/16	1/8	3.04	1/2	1/2	13.71	16.00	18.79	25.40	19.05
SFE 4 - 2N	1/4	1/8	4.82	1/2	9/16	15.24	17.78	19.55	26.92	19.05
SFE 4 - 4N	1/4	1/4	4.82	11/16	9/16	15.24	17.78	22.35	29.71	22.35
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	28.44
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	22.35
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	22.35
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	28.44
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

METRIC TUBE | Female Elbow NPT

Part No.	Tube O.D. D	T (U)	d Min	Width Across Flat		A	B	I	L	L ₁
				h(inch)	H(inch)					
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	28.40
SFE 8M - 4N	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
SFE 8M - 8N	8	1/2	6.4	20.63	16	16.2	18.6	28.0	35.2	28.40
SFE 10M - 4N	10	1/4	7.9	17.46	19	17.2	19.5	25.9	33.5	22.40
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	28.40
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	28.40

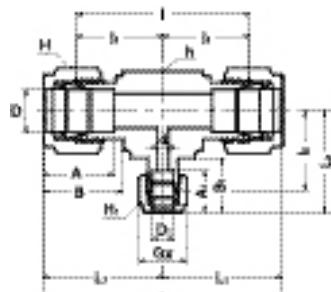

IMPERIAL TUBE | Equal Tee Connector

Part No.	Tube O.D. D	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

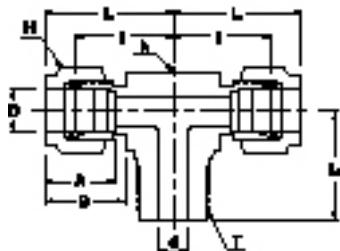
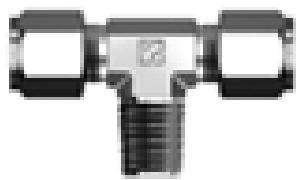
METRIC TUBE | Equal Tee Connector

Part No.	Tube O.D. 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	46	50	39.6	39.2	48.3	69.9
SUT - 32M	32	28.6	46	50	42.0	41.6	49.3	72.3
SUT - 38M	38	33.7	55	60	49.4	47.9	56.4	84.0

SRUT


IMPERIAL TUBE | Reducing Tee Connector

Part No.	Tube O.D.		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 - 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 - 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 - 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 -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 -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 -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 -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 -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 -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

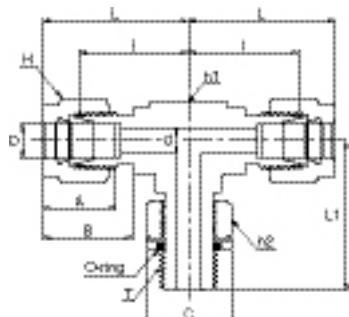
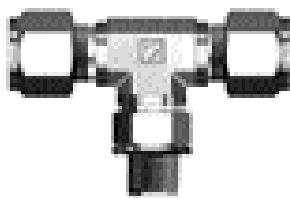
SMBT

IMPERIAL TUBE | Male Branch Tee NPT

Part No.	Tube O.D. D	T * (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				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

* NPT Threads are available upon request
METRIC TUBE | Male Branch Tee BSP Taper Thread

Part No.	Tube O.D. D	T * (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h(inch)	H(inch)					
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	14.2	14	15.3	17.7	19.6	27.0	23.4
SMBT 8M - 2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
SMBT 8M - 4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
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

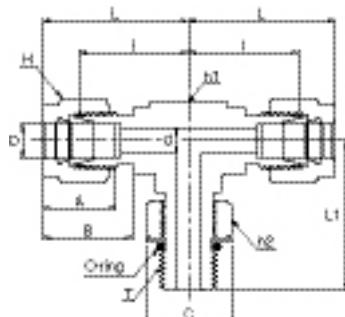
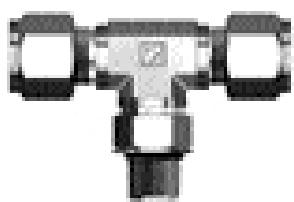
* NPT Threads are available upon request

SPMBT

IMPERIAL TUBE | Adjustable Male Tee BSP

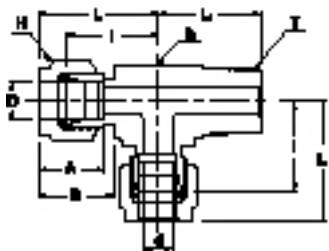
Part No.	Tube O.D. D (inch)	T (PF)	d Min	Width Across Flat			A	B	I	L	L1	C
				h2	h2	H						
SPMBT 4 - 2G	1/4	1/8	4.06	1/2	9/16	9/16	15.24	17.78	19.56	26.92	26.42	17.27
SPMBT 4 - 4G	1/4	1/4	4.83	5/8	3/4	9/16	15.24	17.78	21.59	28.96	32.26	22.86
SPMBT 6 - 4G	3/8	1/4	5.08	5/8	3/4	11/16	15.24	19.30	23.11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

METRIC TUBE | Adjustable Male Tee BSP

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

SPMBT

METRIC TUBE | Adjustable Tee SAE O Ring Boss Male

Part No.	Tube O.D. D (inch)	T (U)	d Min	Width Across Flat			A	B	I	L	L1	C
				h2	h2	H						
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

SMRT

IMPERIAL TUBE | Male Run Tee NPT

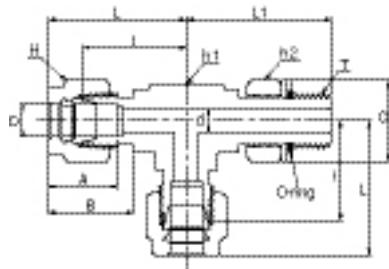
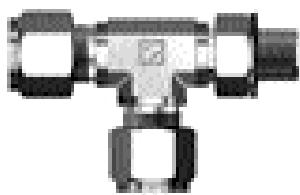
Part No.	Tube O.D. D	T * (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h(inch)	H(inch)					
SMRT 2 - 2N	1/8	1/8	2.28	1/2	7/16	12.70	15.24	18.30	24.91	18.90
SMRT 2 - 4N	1/8	1/4	2.28	1/2	7/16	12.70	15.24	18.03	24.63	23.36
SMRT 3 - 2N	3/16	1/8	3.04	1/2	1/2	13.71	16.00	17.78	25.40	18.79
SMRT 4 - 2N	1/4	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

METRIC TUBE | Male Run Tee BSP Taper

Part No.	Tube O.D. D	T * (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h(inch)	H(inch)					
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	14.2	14	15.3	17.7	19.6	27.0	23.4
SMRT 8M - 2R	8	1/8	4.8	14.3	16	16.2	18.6	21.3	28.8	19.8
SMRT 8M - 4R	8	1/4	6.4	14.3	16	16.2	18.6	21.3	28.8	24.4
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

* NPT Threads are available upon request

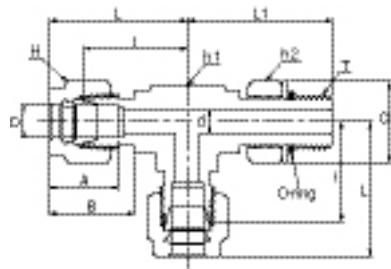
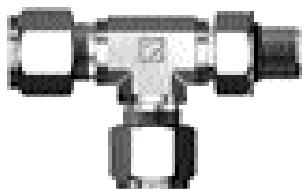
SPMRT


IMPERIAL TUBE | Male Run Tee BSP Parallel

Part No.	Tube O.D. D (inch)	T (PF)	d Min	Width Across Flat			A	B	I	L	L ₁	C
				h1	h2	H						
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	21.11	30.48	32.26	22.86
SPMRT 8 - 6G	1/4	3/8	7.87	13/16	7/8	7/8	22.86	21.84	25.91	36.07	37.08	26.42
SPMRT 8 - 8G	3/8	1/2	10.41	15/16	1-1/16	7/8	22.86	21.84	27.94	38.10	43.43	32.00
SPMRT 10 - 8G	1/2	1/2	11.94	15/16	1-1/16	1	24.38	21.84	27.94	38.10	43.43	32.00
SPMRT 12 - 8G	3/4	1/2	11.94	1-1/16	1-1/16	1-1/8	24.38	21.84	29.72	39.88	45.21	32.00
SPMRT 12 - 12G	3/4	3/4	15.75	1-1/16	1-3/8	1-1/8	24.38	21.84	29.72	39.88	48.77	41.15
SPMRT 16 - 16G	1	1	19.81	1-3/8	1-5/8	1-1/2	31.24	26.42	36.83	49.02	53.59	48.51

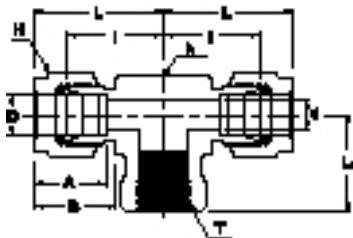
METRIC TUBE | Male Run Tee BSP Parallel

Part No.	Tube O.D.	T (PF)	d Min	Width Across Flat			A	B	I	L	L ₁	C
				h1	h2	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

SPMRT

METRIC TUBE | Male Run Tee SAE O Ring Boss Male

Part No.	Tube O.D.	T (PF)	d Min	Width Across Flat			A	B	I	L	L1	C
				h1	h2	H						
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

SFBT

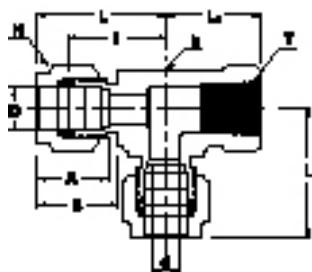

IMPERIAL TUBE | Female Branch Tee NPT

Part No.	Tube O.D. D (inch)	T * (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				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

METRIC TUBE | Female Branch Tee NPT

Part No.	Tube O.D. D (inch)	T * (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h(inch)	H(inch)					
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

* ISO Tapered Threads are available upon request

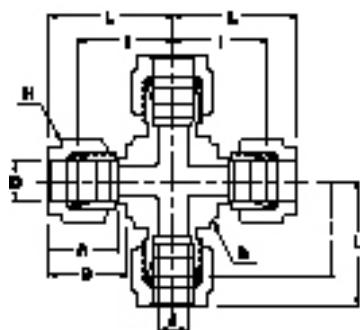
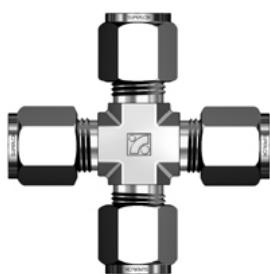
SFRT

IMPERIAL TUBE | Female Run Tee NPT

Part No.	Tube O.D. D (inch)	T * (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				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

METRIC TUBE | Female Run Tee NPT

Part No.	Tube O.D.	T * (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h(inch)	H(inch)					
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	26.98	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

* ISO Tapered Threads are available upon request



SUC

IMPERIAL TUBE | Equal Cross Connector

Part No.	Tube O.D. 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	1-1/16	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

METRIC TUBE | Equal Cross Connector

Part No.	Tube O.D. 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	27.0	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

STUB TUBE CONNECTORS**SR**
Reducer

page

SBR
Bulkhead
Reducer

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SMA
Male Adapter

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SFA
Female Adapter

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SPC
Port Connector

page

SRPC
Reducing Port
Connector

page

SFTC
Flange Lapped
Tubes Connector

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AN TUBE**SAF**
An Flare

page

SAU
An Union

page

SAA
An Adapter

page

O RING SEAL**SOSC**
O-Seal Straight
Thread Connector

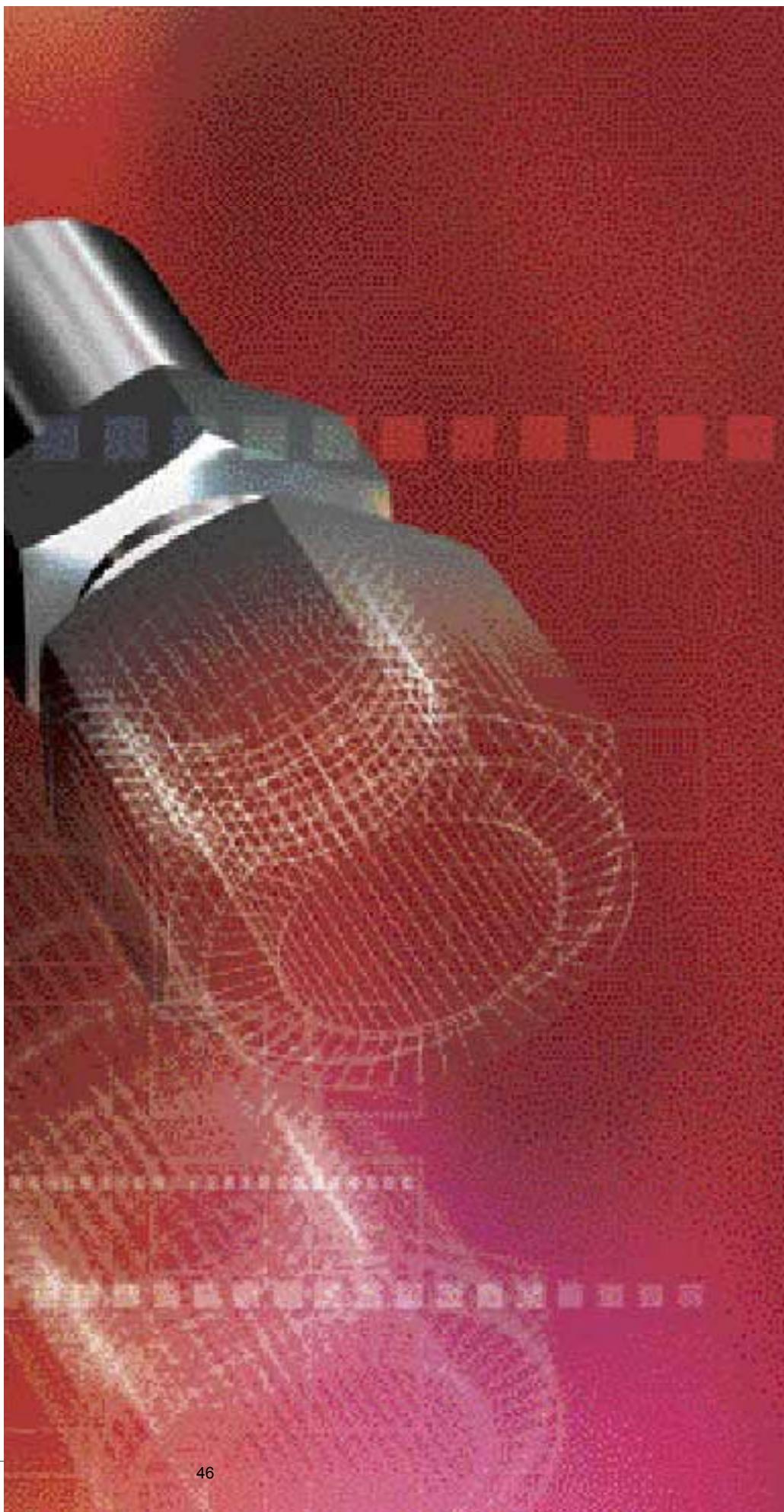
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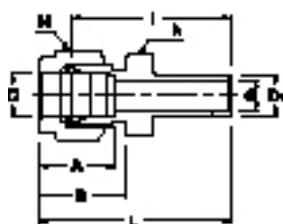
SOPC
O-Seal Pipe
Thread Connector

page

SSMC
SAE/MS
Male Connector

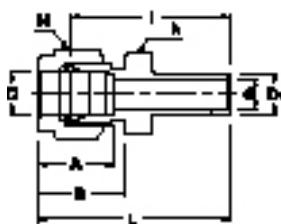
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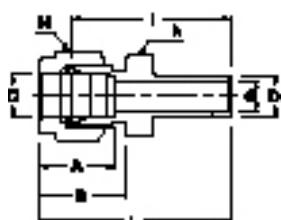

IMPERIAL TUBE | Superlok Port Connector

Part No.	Tube OD		d min	Width Across Flat					
	D (inch)	D1 (inch)		h (inch)	H (inch)	A	B	I	L
SR 2 - 1	1/8	1/16	0.76	7/16	7/16	12.70	15.24	22.35	28.95
SR 2 - 2	1/8	1/8	2.03	7/16	7/16	12.70	15.24	26.92	33.52
SR 2 - 3	1/8	3/16	2.28	7/16	7/16	12.70	15.24	27.68	34.29
SR 2 - 4	1/8	1/4	2.28	7/16	7/16	12.70	15.24	29.46	36.06
SR 2 - 6	1/8	3/8	2.28	7/16	7/16	12.70	15.24	30.98	37.59
SR 2 - 8	1/8	1/2	2.28	9/16	7/16	12.70	15.24	37.59	44.19
SR 3 - 2	3/16	1/8	2.03	7/16	1/2	13.71	16.00	28.19	34.79
SR 3 - 4	3/16	1/4	3.04	7/16	1/2	13.71	16.00	30.48	37.08
SR 4 - 2	1/4	1/8	2.03	1/2	9/16	15.24	17.78	29.46	36.83
SR 4 - 3	1/4	3/16	3.04	1/2	9/16	15.24	17.78	30.22	37.59
SR 4 - 4	1/4	1/4	4.82	1/2	9/16	15.24	17.78	31.75	39.11
SR 4 - 5	1/4	5/16	4.82	1/2	9/16	15.24	17.78	32.51	39.87
SR 4 - 6	1/4	3/8	4.82	1/2	9/16	15.24	17.78	33.27	40.64
SR 4 - 8	1/4	1/2	4.82	9/16	9/16	15.24	17.78	38.86	46.22
SR 4 - 10	1/4	5/8	4.82	11/16	9/16	15.24	17.78	40.64	48.00
SR 4 - 12	1/4	3/4	4.82	13/16	9/16	15.24	17.78	41.40	47.75
SR 5 - 6	5/16	3/8	6.35	9/16	5/8	16.25	18.54	34.54	41.91
SR 5 - 8	5/16	1/2	6.35	9/16	5/8	16.25	18.54	40.13	47.49
SR 6 - 4	3/8	1/4	4.82	5/8	11/16	16.76	19.30	34.03	41.40
SR 6 - 6	3/8	3/8	7.11	5/8	11/16	16.76	19.30	35.81	43.18
SR 6 - 8	3/8	1/2	7.11	5/8	11/16	16.76	19.30	41.14	48.51
SR 6 - 10	3/8	5/8	7.11	11/16	11/16	16.76	19.30	42.92	50.29
SR 6 - 12	3/8	3/4	7.11	13/16	11/16	16.76	19.30	42.92	50.29
SR 8 - 4	1/2	1/4	4.82	13/16	7/8	22.86	21.84	34.79	44.95
SR 8 - 6	1/2	3/8	7.11	13/16	7/8	22.86	21.84	36.57	46.73
SR 8 - 8	1/2	1/2	9.90	13/16	7/8	22.86	21.84	42.16	52.32
SR 8 - 10	1/2	5/8	10.41	13/16	7/8	22.86	21.84	43.68	53.84
SR 8 - 12	1/2	3/4	10.41	13/16	7/8	22.86	21.84	43.68	53.84
SR 8 - 16	1/2	1	10.41	1-1/16	7/8	22.86	21.84	50.03	60.19
SR 10 - 12	5/8	3/4	12.70	15/16	1	24.38	21.84	44.45	54.61
SR 10 - 14	5/8	7/8	12.70	15/16	1	24.38	21.84	45.97	56.13
SR 10 - 16	5/8	1	12.70	1-1/16	1	24.38	21.84	50.80	60.96
SR 12 - 8	3/4	1/2	9.90	1-1/16	1-1/8	24.38	21.84	44.45	54.61
SR 12 - 16	3/4	1	15.74	1-1/16	1-1/8	24.38	21.84	52.32	62.48

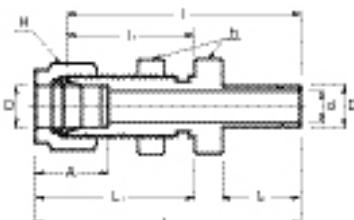
* Fractional Tube to Metric SUPERLOK port are available upon request


METRIC TUBE | Superlok Port Connector

Part No.	Tube OD		d min	Width Across Flat					
	D (inch)	D1 (inch)		h (inch)	H (inch)	A	B	I	L
SR 3M - 4M	3	4	2.4	12	12	12.9	15.3	28.4	35.0
SR 3M - 6M	3	6	2.4	12	12	12.9	15.3	29.5	36.1
SR 3M - 10M	3	10	2.4	14	12	12.9	15.3	31.8	38.4
SR 4M - 6M	4	6	2.4	12	12	13.7	16.1	30.5	37.1
SR 6M - 3M	6	3	1.8	14	14	15.3	17.7	29.5	36.9
SR 6M - 8M	6	8	4.8	14	14	15.3	17.7	32.5	39.9
SR 6M - 10M	6	10	4.8	14	14	15.3	17.7	33.3	40.7
SR 6M - 12M	6	12	4.8	14	14	15.3	17.7	38.9	46.3
SR 8M - 6M	8	6	4.6	15	16	16.2	18.6	32.8	40.3
SR 8M - 10M	8	10	6.4	15	16	16.2	18.6	34.5	42.0
SR 8M - 12M	8	12	6.4	15	16	16.2	18.6	40.1	47.6
SR 10M - 6M	10	6	4.6	18	19	17.2	19.5	34.8	42.4
SR 10M - 8M	10	8	6.4	18	19	17.2	19.5	35.8	43.4
SR 10M - 12M	10	12	7.9	18	19	17.2	19.5	42.2	49.8
SR 10M - 15M	10	15	7.9	18	19	17.2	19.5	43.7	51.3
SR 10M - 18M	10	18	7.9	22	19	17.2	19.5	43.7	51.3
SR 12M - 6M	12	6	4.6	22	22	22.8	22.0	34.8	44.9
SR 12M - 8M	12	8	6.4	22	22	22.8	22.0	35.8	45.9
SR 12M - 10M	12	10	7.7	22	22	22.8	22.0	36.6	46.7
SR 12M - 16M	12	16	9.5	22	22	22.8	22.0	43.7	53.8
SR 12M - 18M	12	18	9.5	22	22	22.8	22.0	43.7	53.8
SR 12M - 20M	12	20	9.5	22	22	22.8	22.0	46.0	56.1
SR 12M - 22M	12	22	9.5	24	22	22.8	22.0	46.0	56.1
SR 12M - 25M	12	25	9.5	27	22	22.8	22.0	52.3	62.4
SR 16M - 12M	16	12	9.1	24	25	24.4	22.0	42.9	53.0
SR 18M - 12M	18	12	9.1	27	30	24.4	22.0	44.5	54.6
SR 18M - 16M	18	16	12.7	27	30	24.4	22.0	46.0	56.1
SR 18M - 20M	18	20	15.1	27	30	24.4	22.0	47.5	57.6
SR 18M - 22M	18	22	15.1	27	30	24.4	22.0	47.5	57.6
SR 18M - 25M	18	25	15.1	27	30	24.4	22.0	52.3	62.4
SR 20M - 16M	20	16	12.7	30	32	26.0	22.0	47.8	57.9
SR 20M - 18M	20	18	13.9	30	32	26.0	22.0	47.8	57.9
SR 20M - 22M	20	22	15.8	30	32	26.0	22.0	49.3	59.4
SR 20M - 25M	20	25	15.8	30	32	26.0	22.0	54.1	64.2
SR 22M - 18M	22	18	13.9	30	32	26.0	22.0	47.8	57.9
SR 22M - 20M	22	20	15.1	30	32	26.0	22.0	49.3	59.4
SR 22M - 25M	22	25	18.3	30	32	26.0	22.0	54.1	64.2
SR 25M - 18M	25	18	13.9	35	38	31.3	26.5	50.8	63.1
SR 25M - 20M	25	20	15.1	35	38	31.3	26.5	52.3	64.6

SR
SBR

METRIC TUBE to Imperial Superlok Port Connector

Part No.	Tube OD		d min	Width Across Flat					
	D (inch)	D1 (inch)		h (inch)	H (inch)	A	B	I	L
SR 3M - 2	3	1/8	2.0	12	12.9	12.9	5.3	26.9	33.5
SR 3M - 4	3	1/4	2.4	12	12.9	12.9	15.3	29.5	36.1
SR 6M - 4	6	1/4	4.8	14	15.3	12.9	17.7	31.8	39.2
SR 6M - 5	6	5/16	4.8	14	15.3	13.7	17.7	32.5	39.9
SR 6M - 6	6	3/8	4.8	14	15.3	15.3	17.7	33.3	40.7
SR 6M - 8	6	1/2	4.8	14	15.3	15.3	17.7	38.9	46.3
SR 8M - 6	8	3/8	6.4	15	16.2	15.3	18.6	34.5	42.0
SR 8M - 8	8	1/2	6.4	15	16.2	15.3	18.6	40.1	47.6
SR 10M - 6	10	3/8	7.1	18	17.2	16.2	19.5	36.6	44.2
SR 10M - 8	10	1/2	7.9	18	17.2	16.2	19.5	42.2	49.8
SR 12M - 8	12	1/2	9.5	22	22.8	16.2	22.0	42.2	52.3
SR 12M - 12	12	3/4	9.5	22	22.8	17.2	22.0	43.7	53.8
SR 18M - 12	18	3/4	15.1	27	24.4	17.2	22.0	46.0	56.1
SR 18M - 16	18	1	15.1	27	24.4	17.2	22.0	52.3	62.4


IMPERIAL TUBE to Imperial Superlok Port Bulkhead Connector

Part No.	Tube O.D. D(inch)	Width Across Flat						Panel Hole Drill Size	Panel Max Thickness	
		d min	h (inch)	H (inch)	A	I	I ₁	I ₂	L	L ₂
SBR 2 - 2	1/8	1/2	7/16	12.70	12.70	42.92	24.63	13.46	49.53	31.24
SBR 4 - 4	1/4	5/8	9/16	15.24	15.24	48.51	26.16	15.74	55.88	33.52
SBR 6 - 6	3/8	3/4	11/16	16.76	15.24	53.84	29.46	17.52	61.21	36.83
SBR 8 - 8	1/2	15/16	7/8	22.86	16.76	62.73	31.75	23.11	72.89	41.91
SBR 10 - 10	5/8	1-1/16	1	24.38	16.76	65.02	32.51	24.70	75.18	42.67
SBR 16 - 16	1	1-5/8	1-1/2	31.24	16.76	88.13	45.21	31.70	100.33	57.40
									33.73	19.05

SMA

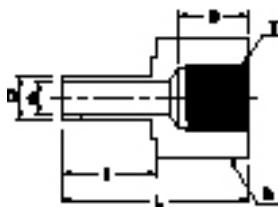
IMPERIAL TUBE | Superlok Port Connector NPT Male

Part No.	Tube O.D. D (inch)	T * (NPT)	d Min	d ₁	Width Across Flat		I	L
					h			
SMA 2 - 2N	1/8	1/8	4.82	2.28	7/16		13.45	29.50
SMA 2 - 4N	1/8	1/4	7.11	2.28	9/16		13.45	34.80
SMA 3 - 2N	3/16	1/8	4.82	3.04	7/16		14.20	30.22
SMA 3 - 4N	3/16	1/4	7.11	3.04	9/16		14.20	35.56
SMA 4 - 2N	1/4	1/8	4.82	4.82	7/16		15.75	31.80
SMA 4 - 4N	1/4	1/4	4.82	4.82	9/16		15.75	37.08
SMA 4 - 6N	1/4	3/8	4.82	4.82	11/16		15.75	37.84
SMA 4 - 8N	1/4	1/2	4.82	4.82	7/8		15.75	43.43
SMA 5 - 2N	5/16	1/8	4.82	6.35	7/16		16.80	32.76
SMA 5 - 4N	5/16	1/4	6.35	6.35	9/16		16.80	38.10
SMA 6 - 2N	3/8	1/8	4.82	7.11	7/16		17.50	33.50
SMA 6 - 4N	3/8	1/4	7.11	7.11	9/16		17.50	38.90
SMA 6 - 6N	3/8	3/8	7.11	7.11	11/16		17.50	39.60
SMA 6 - 8N	3/8	1/2	7.11	7.11	7/8		17.50	45.20
SMA 8 - 4N	1/2	1/4	7.11	9.90	9/16		23.20	44.50
SMA 8 - 6N	1/2	3/8	9.90	9.90	11/16		23.20	45.20
SMA 8 - 8N	1/2	1/2	9.90	9.90	7/8		23.20	50.80
SMA 10 - 6N	5/8	3/8	9.90	12.70	11/16		24.70	47.40
SMA 10 - 8N	5/8	1/2	11.94	12.70	7/8		24.70	52.30
SMA 10 - 12N	5/8	3/4	14.98	12.70	1-1/16		24.70	52.30
SMA 12 - 8N	3/4	1/2	11.94	14.98	7/8		24.70	52.30
SMA 12 - 12N	3/4	3/4	14.98	14.98	1-1/16		24.70	52.30
SMA 12 - 16N	3/4	1	20.32	14.98	1-3/8		24.70	57.91
SMA 14 - 12N	7/8	3/4	14.98	17.27	1-1/16		26.70	54.30
SMA 16 - 12N	1	3/4	15.74	20.32	1-1/16		31.70	58.70
SMA 16 - 16N	1	1	20.32	20.32	1-3/8		31.70	66.00

METRIC TUBE | Superlok Port Connector NPT Male

Part No.	Tube O.D. D	T * (NPT)	d Min	d ₁	Width Across Flat		I	L
					h			
SMA 6M - 2N	6	1/8	4.6	4.6	12		15.75	32.8
SMA 6M - 4N	6	1/4	4.6	4.6	14		15.75	38.1
SMA 8M - 4N	8	1/4	6.3	6.3	14		16.50	39.1
SMA 10M - 4N	10	1/4	7.7	7.7	14		17.50	39.9
SMA 10M - 6N	10	3/8	7.7	7.7	18		17.50	40.6
SMA 10M - 8N	10	1/2	11.9	7.7	22		17.50	46.2
SMA 12M - 4N	12	1/4	7.1	9.1	16		23.50	46.5
SMA 12M - 8N	12	1/2	11.9	9.1	22		23.50	52.0
SMA 18M - 12N	18	3/4	15.9	13.9	27		24.90	54.8

* ISO Tapered Threads are available upon request


IMPERIAL TUBE | Superlok Port Connector NPT Female

Part No.	Tube O.D. D	T * (NPT)	d Min	Width Across Flat h	I	L
SFA 2 - 2N	1/8	1/8	2.28	9/16	13.45	31.50
SFA 2 - 4N	1/8	1/4	2.28	3/4	13.45	35.30
SFA 3 - 2N	3/16	1/8	3.04	9/16	14.20	32.00
SFA 3 - 4N	3/16	1/4	3.04	3/4	14.20	35.81
SFA 4 - 2N	1/4	1/8	4.82	9/16	15.75	33.02
SFA 4 - 4N	1/4	1/4	4.82	3/4	15.75	37.10
SFA 4 - 6N	1/4	3/8	4.82	7/8	15.75	39.37
SFA 4 - 8N	1/4	1/2	4.82	1-1/16	15.75	45.50
SFA 5 - 2N	5/16	1/8	6.35	9/16	16.80	34.29
SFA 5 - 4N	5/16	1/4	6.35	3/4	16.80	37.59
SFA 6 - 2N	3/8	1/8	7.11	9/16	17.50	34.29
SFA 6 - 4N	3/8	1/4	7.11	3/4	17.50	38.10
SFA 6 - 6N	3/8	3/8	7.11	7/8	17.50	40.38
SFA 6 - 8N	3/8	1/2	7.11	1-1/16	17.50	46.73
SFA 8 - 4N	1/2	1/4	9.90	3/4	23.20	43.43
SFA 8 - 6N	1/2	3/8	9.90	7/8	23.20	45.46
SFA 8 - 8N	1/2	1/2	9.90	1-1/16	23.20	51.80
SFA 10 - 6N	5/8	3/8	12.70	7/8	24.70	48.26
SFA 10 - 8N	5/8	1/2	12.70	1-1/16	24.70	53.08
SFA 12 - 8N	3/4	1/2	14.98	1-1/16	24.70	52.83
SFA 12 - 12N	3/4	3/4	14.98	1-5/16	24.70	54.86
SFA 12 - 16N	3/4	1	14.98	1-5/8	24.70	58.42
SFA 14 - 12N	7/8	3/4	17.27	1-5/16	26.70	57.15
SFA 16 - 12N	1	3/4	20.32	1-5/16	31.70	60.70
SFA 16 - 16N	1	1	20.32	1-5/8	31.70	64.26

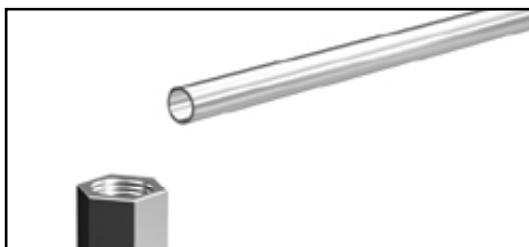
METRIC TUBE | Superlok Port Connector NPT Female

Part No.	Tube O.D. D	T * (NPT)	d Min	Width Across Flat h	I	L
SFA 3M - 2N	3	1/8	1.8	14	13.15	31.2
SFA 6M - 2N	6	1/8	4.6	14	15.75	32.5
SFA 6M - 4N	6	1/4	4.6	19	15.75	37.1
SFA 8M - 4N	8	1/4	6.3	19	16.50	37.6
SFA 10M - 4N	10	1/4	7.7	19	17.50	38.1
SFA 10M - 6N	10	3/8	7.7	22	17.50	40.1
SFA 10M - 8N	10	1/2	7.7	27	17.50	46.5
SFA 12M - 4N	12	1/4	9.1	19	23.50	43.7
SFA 12M - 6N	12	3/8	9.1	22	23.50	46.0
SFA 12M - 8N	12	1/2	9.1	27	23.50	52.3
SFA 18M - 12N	3/8	3/4	13.9	32	24.90	54.8

* ISO Tapered Threads are available upon request

SUPERLOK Adapter |Solves Alignment Problems

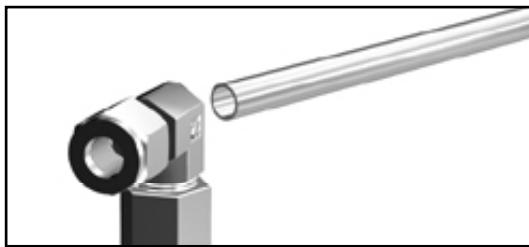
SFA



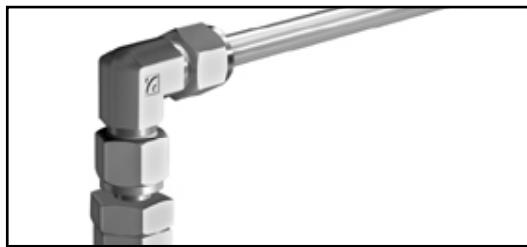
1. Required installation is to connect tubing in direction shown, to a female port.



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

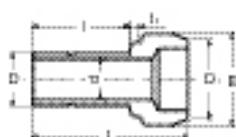
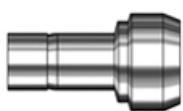

IMPERIAL TUBE | Superlok Port Connector

Part No.	Tube O.D. (D) (Inch)	d Min	E	I	L
SFA 3M - 2N	3	1.8	14	13.15	31.2
SFA 6M - 2N	6	4.6	14	15.75	32.5
SFA 6M - 4N	6	4.6	19	15.75	37.1
SFA 8M - 4N	8	6.3	19	16.50	37.6
SFA 10M - 4N	10	7.7	19	17.50	38.1
SFA 10M - 6N	10	7.7	22	17.50	40.1
SFA 10M - 8N	10	7.7	27	17.50	46.5
SFA 12M - 4N	12	9.1	19	23.50	43.7
SFA 12M - 6N	12	9.1	22	23.50	46.0
SFA 12M - 8N	12	9.1	27	23.50	52.3
SFA 18M - 12N	3/8	13.9	32	24.90	54.8

METRIC TUBE | Superlok Port Connector

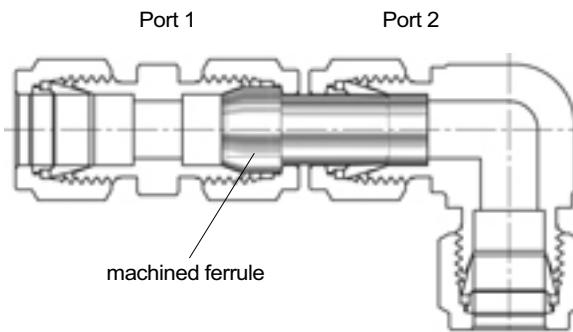
Part No.	Tube O.D. (D)	d Min	E	I	L
SPC - 3M	3	2.1	6.0	15.7	22.2
SPC - 6M	6	4.4	9.0	18.7	24.6
SPC - 8M	8	6.3	11.0	20.0	25.9
SPC - 10M	10	8.2	13.1	20.2	26.1
SPC - 12M	12	9.1	15.0	26.0	35.8
SPC - 16M	16	12.7	19.0	27.6	37.4

¹All dimensions in millimeters unless specified as "inch"


IMPERIAL TUBE | Superlok Port Connector AN Female

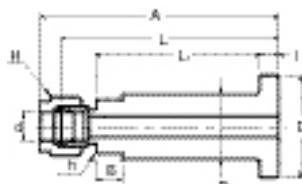
Part No.	Tube O.D. D ₁ (inch)	Reduced Tube OD D (inch)	d	E	I	I ₁	L
SRPC 2 - 1	1/8	1/16	0.76	6.09	8.63	2.03	17.27
SRPC 4 - 1	1/4	1/16	0.76	9.39	8.63	3.55	18.03
SRPC 4 - 2	1/4	1/8	2.28	9.39	13.46	3.30	22.60
SRPC 6 - 2	3/8	1/8	2.28	12.70	13.46	3.81	23.11
SRPC 6 - 4	3/8	1/4	4.82	12.70	15.74	3.30	24.89
SRPC 8 - 4	1/2	1/4	4.82	15.74	15.74	3.81	29.21
SRPC 8 - 6	1/2	3/8	7.11	15.74	17.52	3.30	30.48
SRPC 12 - 8	3/4	1/2	9.90	22.09	24.38	3.81	37.84
SRPC 16 - 8	1	1/2	9.90	28.44	24.38	4.82	42.67
SRPC 16 - 12	1	3/4	14.98	28.44	25.90	4.06	43.43

* ISO Tapered Threads are available upon request

**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, 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, 3/16 in., 2, 3, and 4mm tube fittings, only 3/4 turn from finger-tight is necessary.

All dimensions in millimeters unless specified as "inch"

**SFTC
SAF**

IMPERIAL TUBE | Lapped Flange Tube Connector

Part No.	Tube Size (inch)	Flange Seat	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

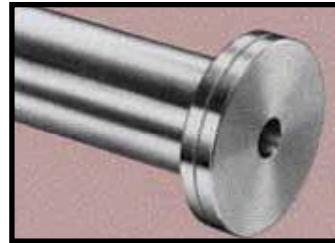
Flange lapped tube connector provides easy joint between process lines and instruments designed for use with lap joint flanges to ANSI B 16.5 or BS 1560

Flange Seal Finish

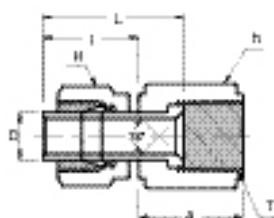
The Gasket contact surface of the stub end is of "Smooth" or "Serrated" seal face



Smooth
Identified as : SM

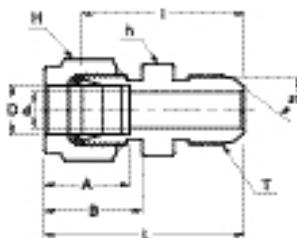


Serrated
Identified as : SR

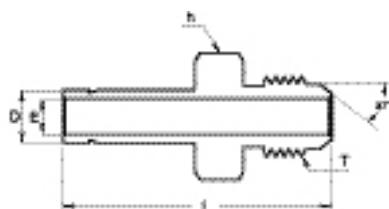
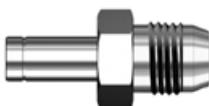

IMPERIAL TUBE | SUPERLOK Port Connector Female AN

Part No.	Tube O.D. D (inch)	AN Tube Flare Size	Straight Thread T (U)	Width Across Flats		A	I	L
				h (inch)	H (inch)			
SAF2 - 2U	1/8	1/8	5/16-24	3/8	7/16	13.71	13.46	18.54
SAF2 - 4U	1/8	1/4	7/16-20	9/16	7/16	15.74	13.46	19.05
SAF4 - 4U	1/4	1/4	7/16-20	9/16	9/16	15.74	15.74	21.33
SAF6 - 6U	3/8	3/8	9/16-18	11/16	11/16	18.28	17.52	24.89
SAF8 - 8U	1/2	1/2	3/4-16	7/8	7/8	21.59	23.11	31.75

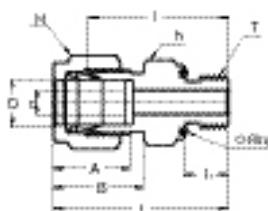
¹All dimensions in millimeters unless specified as "inch"

SAU
SAA

IMPERIAL TUBE | AN Flared Tube to Tube Connector

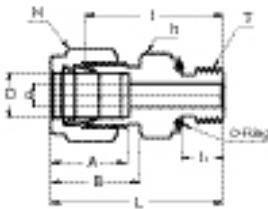
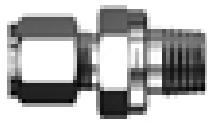
Part No.	Tube O.D. D (inch)	AN Tube Flare Size (inch)	Straight Thread T (U)	d Min	Width Across Flat		A	B	I	L
					h(inch)	H(inch)				
SAU 2 - 2U	1/8	1/8	5/16-24	1.52	7/16	7/16	12.70	15.24	25.65	32.25
SAU 2 - 4U	1/4	1/4	7/16-20	2.28	1/2	7/16	12.70	15.24	28.44	35.05
SAU 4 - 4U	1/4	1/4	7/16-20	4.31	1/2	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	1/4	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


IMPERIAL TUBE | SUPERLOK Port AN Flared Tube Connector

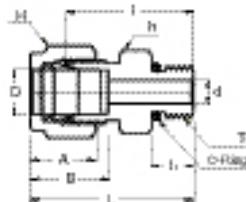
Part No.	Tube O.D. D (inch)	AN Tube Flare Size (inch)	Straight Thread T (U)	Width Across Flat h(inch)	E	L
SAA 4 - 4U	1/4	1/4	7/16-20	1/2	4.82	37.08
SAA 6 - 4U	3/8	1/4	7/16-20	1/2	7.11	38.86
SAA 6 - 6U	3/8	3/8	9/16-18	5/8	7.11	39.62
SAA 8 - 8U	1/2	1/2	3/4-16	13/16	9.90	48.51
SAA 12 - 12U	3/4	3/4	1-1/16-12	1-1/8	14.98	56.13
SAA 16 - 16U	1	1	1-5/16-12	1-3/8	20.32	65.53

**SOSC
SOPC**

IMPERIAL TUBE | O Ring Seal Male Connector

Part No.	Tube O.D. D (inch)	Straight Thread T (U)	d Min	Width Across Flat		A	B	I	h	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	7/16	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	11/16	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	7/8	24.38	21.84	42.16	14.22	52.32	-215
SOSC 16 - 16U	1	1-5/16-12	22.35	1-3/4	1-1/8	31.24	26.41	45.97	14.22	58.16	-219
SAU 16 - 16U	1	1-5/16-12	21.33	1-3/8	1-1/2	31.24	26.41	49.27	61.46		


IMPERIAL TUBE | O Ring Seal NPT Male Connector

Part No.	Tube O.D. D (inch)	Straight Thread T (U)	d Min	Width Across Flat		A	B	I	h	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	3.05	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	6.35	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	10.41	1-5/16	11/16	16.76	19.30	39.62	13.46	46.99	-212
SOPC 8 - 8N	1/2	1/2	15.75	1-5/16	7/8	22.86	21.84	39.62	13.46	49.78	-212

SSMC

IMPERIAL TUBE | SAE O Ring Boss Male Connector

Part No.	Tube O.D. D (inch)	Straight Thread T (U)	d Min	Width Across Flat		A	B	l	h	L	O-Ring Uniform Size Number
				h(inch)	H(inch)						
SSMC 2 - 2U	1/8	5/16-24	4.82	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	6.35	1	9/16	15.24	17.78	33.27	12.70	40.64	3-910
SSMC 5 - 5U	5/16	1/2-20	5.08	5/8	5/8	16.25	18.54	27.43	9.14	34.79	3-905
SSMC 6 - 4U	3/8	7/16-20	7.11	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	10.41	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	10.66	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	12.70	15/16	1	24.38	21.84	31.75	11.17	41.91	3-908
SSMC 10 - 10U	5/8	7/8-14	10.66	1	1	24.38	21.84	35.05	12.70	45.21	3-910
SSMC 12 - 8U	3/4	3/4-16	15.74	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	18.28	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	16.76	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	22.35	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		1-1/2	1-1/2	31.24	26.41	42.16	14.98	54.35	3-916

Mounting Dimensions for O-Seal Connectors

SOSC

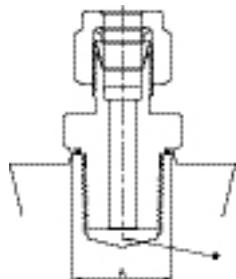


Figure 1

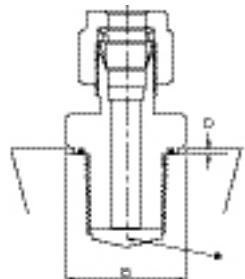


Figure 2

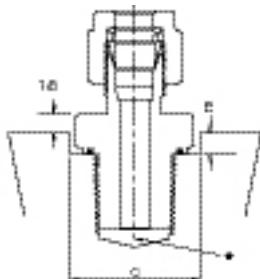


Figure 3

*ALLOW CLEARANCE FOR FULL THREAD

Installation Instructions

In order to prevent 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 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.

IMPERIAL TUBE | SUPERLOK Port AN Flared Tube Connector

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

SAE/MS Straight Thread Adjustable Elbows and Tees

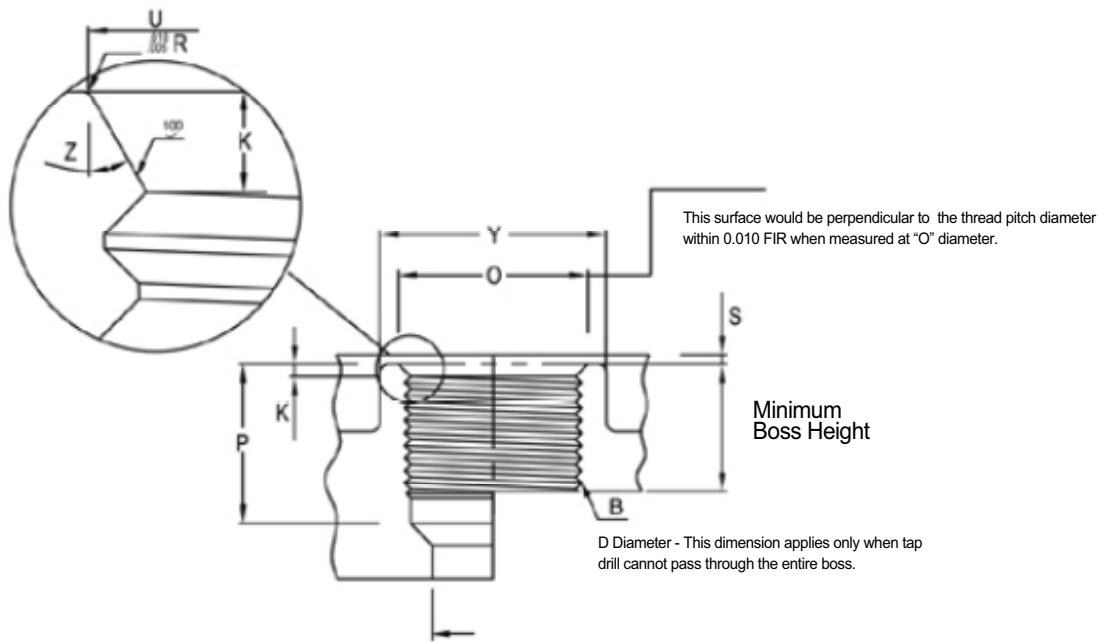
Installation instructions

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 ADJUSTABLE TEE and ELBOWS shall be compatible with SAE J1926, MS16142, or O-Ring female straight thread for JIS boss.

SAE/MS Internal Straight Thread Boss



O : This surface would be perpendicular to the thread pitch diameter within 0.010 FIR when measured at "O" diameter.

D : This dimension applies only when tap drill cannot pass through the entire 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 ₄	S _{2.3}	U ₁ Dia	Y ₁ Dia	Z	
		Pitch Dia		Minor Dia											
		Min	Max	Min	Max	Min	Max	+0.015 -0.000	Min	Max	Min	Max	Min	Max	±1 Deg
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 100 micro 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

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	33/4-16	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

WELD END

SPWC
Male Pipe
Weld Connector
page



SMPWE
Male Pipe
Weld Elbow
page



SSWC
Socket
Weld Connector
page



SSWE
Socket
Weld Elbow
page

**PLUGS AND CAPS**

SP
Plug
page



SC
Cap
page

**SPARE PARTS**

SN
Nut
page



SFF
Front Ferrule
page



SBF
Back Ferrule
page



SFS
Ferrule Set
page



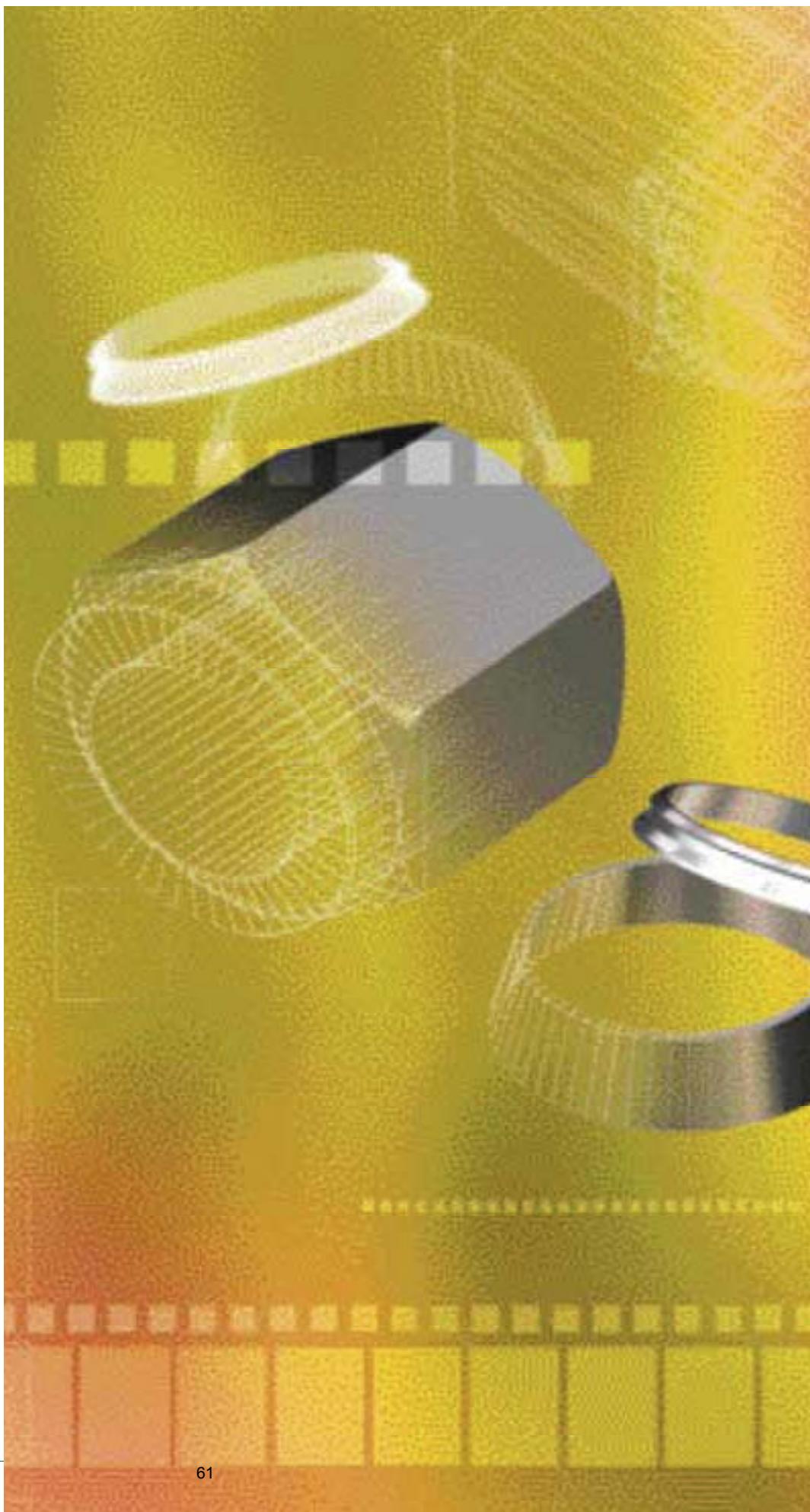
SI
Insert
page



SBR
Bulkhead Retainer
page



SVP
Vent Protector
page




IMPERIAL TUBE | Tube to Weld Tube Connector

Part No.	Tube O.D. D (inch)	Male Pipe Size p		d Min	Width Across Flat		A	B	I	I ₁	L
		Nom	OD		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

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

METRIC TUBE | Tube to Weld Tube Connector

Part No.	Tube O.D. D (inch)	Male Pipe Size p		d Min	Width Across Flat		A	B	I	I ₁	L
		Nom	OD		h(inch)	H(inch)					
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

SUPERLOK Weld end application Information :

- 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.

**SMPWE
SSWC
SSWE**

METRIC TUBE | Tube to Elbow Weld Tube Connector

Part No.	Tube O.D. D (inch)	Male Pipe Size p		d Min	Width Across Flat		A	B	I	I ₁	L	L ₁
		Nom	OD		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


METRIC TUBE | Tube to Socket Weld Tube Connector

Part No.	Tube O.D. D (inch)	d Min	P	Width Across Flat		A	B	I	I ₁	L	L ₁
				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


METRIC TUBE | Tube to Socket Weld Elbow Tube Connector

Part No.	Tube O.D. D (inch)	d Min	P	Width Across Flat		A	B	I	I ₁	L	L ₁
				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

SP
SC

IMPERIAL TUBE | Plug

Part No.	Tube O.D. D (inch)	Width Across Flat H (inch)	Part No.	Tube O.D. 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


METRIC TUBE | Plug

Part No.	Tube O.D. D	Width Across Flat H	Part No.	Tube O.D. D	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			

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

IMPERIAL TUBE | Cap

Part No.	Tube O.D. D (inch)	Width Across Flat		A	B	I	L
		h(inch)	H(inch)				
SC - 1	1/16	5/16	5/16	10.92	10.92	11.20	14.98
SC - 2	1/8	7/16	7/16	15.24	15.24	13.46	20.06
SC - 3	3/16	7/16	1/2	16.00	16.00	14.73	21.33
SC - 4	1/4	1/2	9/16	17.78	17.78	16.00	23.36
SC - 5	5/16	9/16	5/8	18.54	18.54	17.01	24.38
SC - 6	3/8	5/8	11/16	19.30	19.30	18.28	25.65
SC - 8	1/2	13/16	7/8	21.84	21.84	19.05	29.21
SC - 10	5/8	15/16	1	21.84	21.84	19.81	29.97
SC - 12	3/4	1-1/16	1-1/8	21.84	21.84	21.33	31.49
SC - 14	7/8	1-3/16	1-1/4	21.84	21.84	23.87	34.03
SC - 16	1	1-3/8	1-1/2	26.41	26.41	26.16	38.35



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. Insert tube end into cap

METRIC TUBE | Cap

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								

SN
SFF

IMPERIAL TUBE | Nut

Part No.	Tube O.D. D (inch)	Width Across Flat H (inch)	L	Part No.	Tube O.D. D (inch)	Width Across Flat H (inch)	L
SN - 1	1/16	5/16	7.90	SN - 8	1/2	7/8	17.52
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	13.46	SN - 16	1	1-1/2	20.6
SN - 6	3/8	11/16	14.22	SP - 25M	25	38	


METRIC TUBE | Nut

Part No.	Tube O.D. D	Width Across Flat H	L	Part No.	Tube O.D. D	Width Across Flat H	L
SN - 2M	2	12	11.9	SN - 14M	14	25	17.4
SN - 3M	3	12	11.9	SN - 15M	15	25	17.4
SN - 4M	4	12	11.9	SN - 16M	16	25	17.4
SN - 6M	6	14	12.7	SN - 18M	18	30	17.4
SN - 8M	8	16	13.5	SN - 20M	20	32	17.4
SN - 10M	10	19	15.1	SN - 22M	22	32	17.4
SN - 12M	12	22	17.4	SN - 25M	25	38	20.6

IMPERIAL TUBE | Front Ferrule

Part No.	Tube O.D. D (inch)	Part No.	Tube O.D. 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 TUBE | Front Ferrule

Part No.	Tube O.D. D (inch)	Part No.	Tube O.D. D (inch)
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

IMPERIAL TUBE | Back Ferrule

Part No.	Tube O.D. D (inch)	Part No.	Tube O.D. D (inch)	Part No.	Tube O.D. 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 TUBE | Back Ferrule

Part No.	Tube O.D. D (inch)	Part No.	Tube O.D. D (inch)	Part No.	Tube O.D. 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		

IMPERIAL TUBE | Ferrule Set

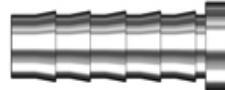
Part No.	Tube O.D. D (inch)	Part No.	Tube O.D. D (inch)	Part No.	Tube O.D. D (inch)
SFS - 1	1/16	SFS - 5	5/16	SBF - 12	3/4
SFS - 2	1/8	SFS - 6	3/8	SBF - 14	7/8
SFS - 3	3/16	SFS - 8	1/2	SBF - 16	1
SFS - 4	1/4	SFS - 10	5/8		


METRIC TUBE | Ferrule Set

Part No.	Tube O.D. D (inch)	Part No.	Tube O.D. D (inch)	Part No.	Tube O.D. 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		

IMPERIAL TUBE | Inserts

Part No.	Tube O.D. (inch)	Tube I.D. (inch)	I.D. of Bore (mm)	Part No.	Tube O.D. (inch)	Tube I.D. (inch)	I.D. of Bore (mm)
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				




Bulkhead Retainer

Part No.	A	B	C	D	E	Drill Hole Diameter
SBHU 1-RE	3/8	5/16	1/8	5/16	5/32	3.05
SBHU 2-RE	1/2	1/2	1/8	13/32	5/32	3.05
SBHU 3-RE *1	9/16	9/16	1/8	15/32	5/32	3.05
SBHU 4-RE *2	5/8	5/8	1/8	1/2	5/32	3.05
SBHU 5-RE	1/16	11/16	1/8	9/16	5/32	3.05
SBHU 6-RE	3/4	3/4	1/8	5/8	5/32	3.05
SBHU 8-RE *3	15/16	15/16	1/8	3/4	7/32	3.66
SBHU 10-RE *4	1	1-1/16	1/8	13/16	7/32	3.66
SBHU 12-RE *5	1-1/16	1-3/16	1/8	29/32	7/32	3.66
SBHU 14-RE	1-1/8	1-5/16	1/8	1-1/32	7/32	3.66
SBHU 16-RE	1-9/32	1-5/8	1/8	1-5/32	7/32	3.66
SBHU 8-RE	11/16	18 mm	1/8	9/16	5/32	3.05
SBHU 10-RE	15/16	22 mm	1/8	3/4	7/32	3.66

*1 Can be used with 3mm and 4mm bulkheads

*2 Can be used with 6mm bulkheads

*3 Can be used with 12mm bulkheads

*4 Can be used with 15mm and 16mm bulkheads

*5 Can be used with 18mm bulkheads

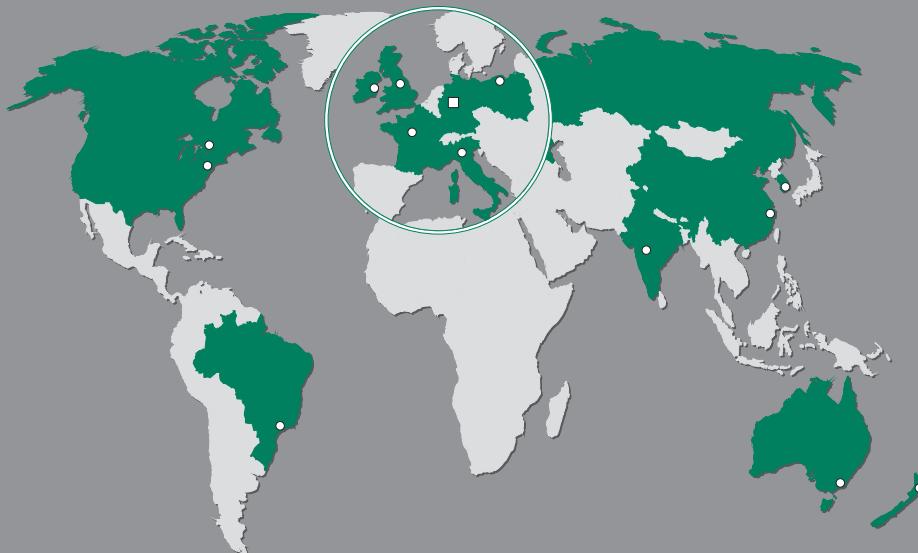

Vent protector

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



®

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