



 **SUPERLOK® Twin Ferrule
Compression Fittings**

**Local solutions for
individual customers
worldwide**

STAUFF

A New Partnership

Originating and located in Werdohl in the German Sauerland region, Walter Stauffenberg GmbH & Co. KG and its affiliated companies have become international leading developers, manufacturers and suppliers of pipe-work components, measuring equipment, filtration technology and additional hydraulic accessories under the brand name STAUFF.

More than 5 decades of experience, highly-motivated and qualified staff, state-of-the-art manufacturing technologies and a foresighted management give them the reputation of being a competitive partner.



Werdohl

The in-house laboratories carry out constant tests in line with international standards on all products. Certified in accordance with EN ISO 9001:2000, DIN EN ISO 14001:2005 and OHSAS 18001:1999, the STAUFF Management System continually strives for perfection. Most of the company's products have been successfully tested and approved by several international organisations and institutes.



Neuenrade

Well-stocked warehouses and flexible production lines ensure prompt reaction and short delivery times.

Represented by a close network of distributors and wholly owned manufacturing facilities, distribution bases and warehouses in 15 countries worldwide, the STAUFF group is near to you. Our subsidiaries also supply additional retail products related to the hydraulics industry, offering a near complete range of industry specific key products.

The Korean company BMT, are a major high precision mechanical components manufacturer, established in 1988 and specialising in the Automotive, Aerospace, Semiconductor, Shipbuilding and Petrochemical industries. They are a successful manufacturer and supplier of Tube Fittings & Valves to many large companies. BMT's key capabilities are Technology based and Know-how achieved utilising modern automated systems and consistent high quality by strict quality control systems.

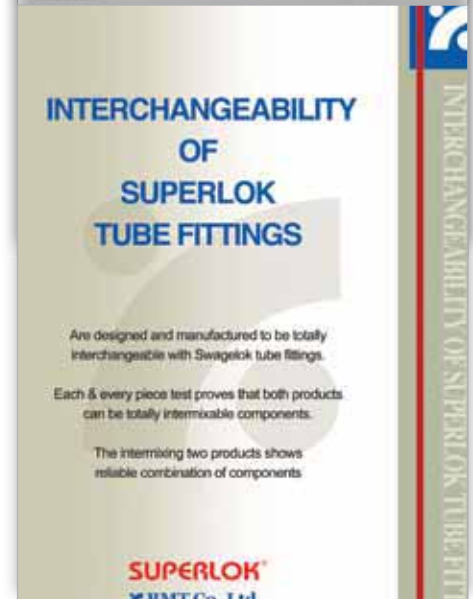
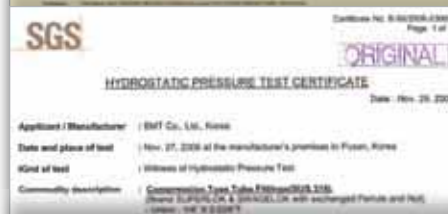
STAUFF has recognised BMT as a significant manufacturer of these products in the global market place. Accordingly they have committed to an international supply and support partnership including a sole agency dealership agreement for several countries across Central Europe and worldwide.



Plettenberg

A well established product in major industries and applications

The Stauff SUPERLOK range already has many approvals and product certification, copies of which are available upon request, below is a representative sample.



UNION



SU Union

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SRU
Reducing Union

Page 12



SBHRU
Bulkhead Reducing Union

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SBHU
Bulkhead Union

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CONNECTORS



SMC
Male Connector

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SGMC
Male Connector For
Bonded Washer Seal

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SOMC
Male Connector For
Metal Gasket Seal

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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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ELBOWS



SUE
Union Elbow

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SME
Male Elbow

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SHME
45° Male Elbow

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SPHME
45° Positionable
Male Elbow

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SPME
Positionable Male
Elbow

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SFE
Female Elbow

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TEES



SUT
Union Tee

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SRUT
Reducing Union
Tee

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SMBT
Male Branch Tee

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SPMBT
Positionable
Male Branch Tee

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SMRT
Male Run Tee

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SPMRT
Positionable
Male Run Tee

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SFBT
Female Branch Tee

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SFRT
Female Run Tee

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SUC
Union Cross

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STUB TUBE CONNECTOR



SR
Reducer

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SBR
Bulkhead Reducer

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SMA
Male Adapter

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SFA
Female Adapter

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SPC
Port Connector

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SRPC
Reducing Port
Connector

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SFTC
Flange Lapped
Tubes Connector

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AN TUBE



SAF
An Flare

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SAU
An Union

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SAA
An Adapter

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O RING SEAL



SOSC
O-Seal Straight
Thread Connector
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SOPC
O-Seal Pipe Thread
Connector
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SSMC
SAE/MS Male
Connector
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WELD END



SPWC
Male Pipe Weld
Connector
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SMPWE
Male Pipe Weld
Elbow
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SSWC
Socket Weld
Connector
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SSWE
Socket Weld
Elbow
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PLUG & CAP



SP
Plug

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SC
Cap

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SPARE PARTS



SN
Nut

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SFF
Front Ferrule

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SBF
Back Ferrule

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SFS
Ferrule Set

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SI
Insert

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SBHU-RE
Bulkhead Retainer

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SVP
Vent Protector

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SFH
Flexible Metallic Hoses

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ORDERING INFORMATION

LOK - SU - 1 - 1 - SS

Prefix

Fitting Type

Fitting Size
(Tube O.D.)

Pipe Thread Size or
Tube Fitting (Tube Size)

Material

SUPERLOK Fitting Type Note : The table shown below is only for example and is not a full list of parts - see index for a complete listing

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

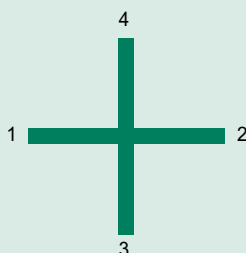
MATERIAL					
Aluminum	Brass and Copper	Carbon Steel ** (** : Refer to Alloy No.)	Stainless Steel*** (*** : Refer to Alloy No.)	Monel Alloy 400	Inconel Alloy 600
A	B	C**	SS***	M	INC

Also available in Histelloy and 6MO Please call for details

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

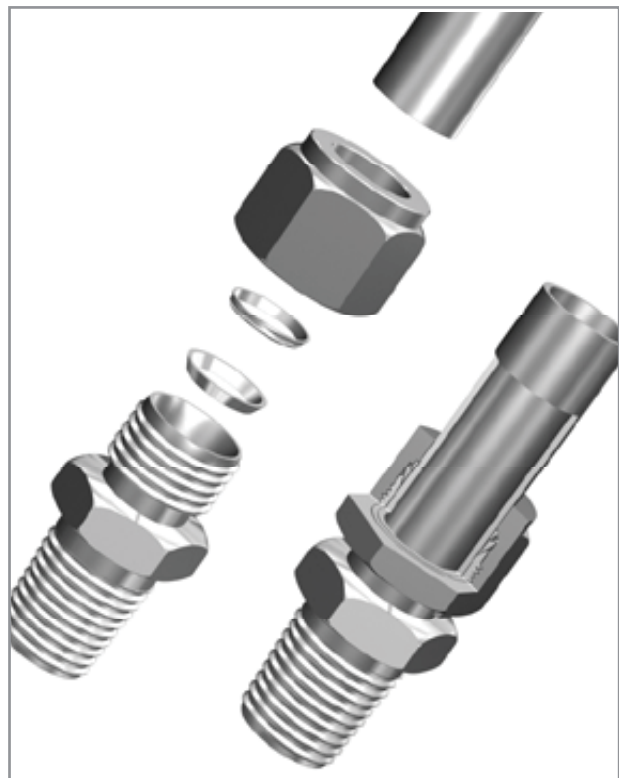
UNION CROSS 1/2" X 1/2" X 1/2" X 1/2" Monel 400



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.



Stauff 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 Instructions

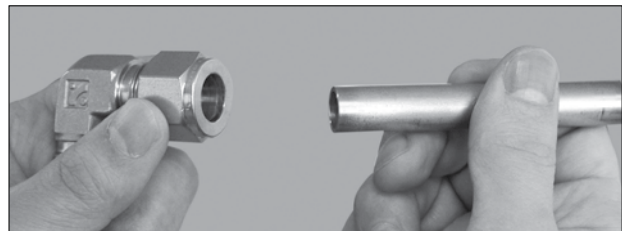
1. Installation 1 inch or 25MM and under

SUPERLOK Tube Fittings are delivered to the customer ready assembled, finger tight and ready for immediate use. 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 leakage or functional deterioration.

SUPERLOK Tube Fittings are installed in three easy steps:

Step 1

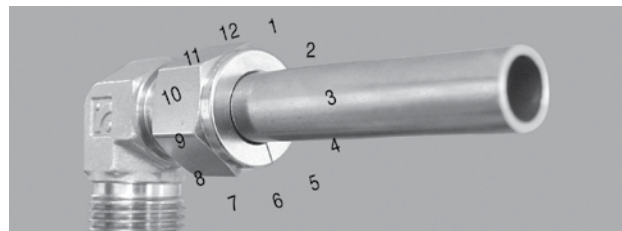
Insert tubing into the SUPERLOK tube fitting. Ensure that the tubing abuts firmly on the shoulder of the fitting body and that the nut is finger tight..



Step1

Step 2

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

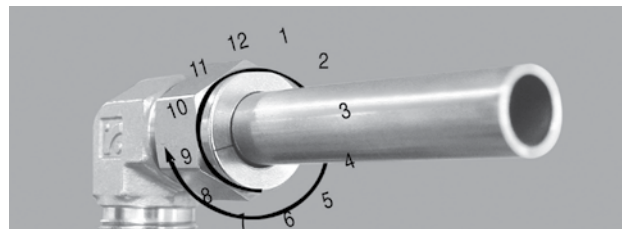


Step2

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.

The SUPERLOK Tube Fitting is now correctly installed and ready for immediate use.



Step3

To check that the fitting is assembled correctly, use the Superlok gap inspection gauge.

Assembly Safety Gauge

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

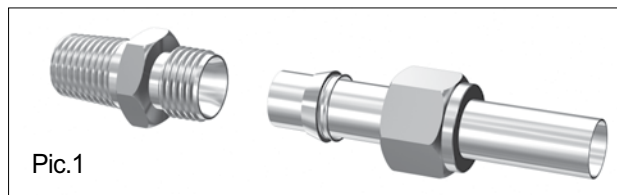
Position the SUPERLOK gap inspection gauge next to the gap between the nut and body.

- ◆ If the gauge will not enter the gap, the fitting is sufficiently tightened.
- ◆ If the gauge enters the gap, additional tightening is required. **Please call for ordering details.**

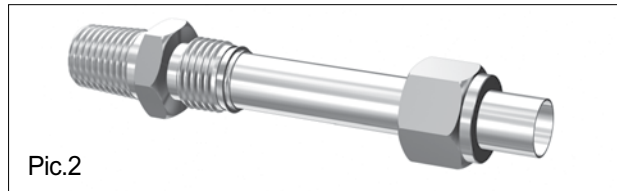


2. Installation in High Pressure Applications or where High Safety Margins are required

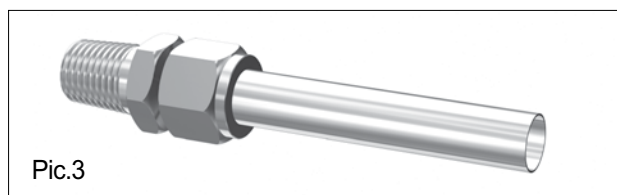
- ◆ Follow steps 1 and 2 of the SUPERLOK Tube Fitting Instructions.
- ◆ Then tighten the nut until the tubing cannot rotate freely by hand
- ◆ Follow step 3 of the SUPERLOK Tube Fitting Instructions opposite



Pic.1



Pic.2



Pic.3

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 the nut 1/4 turn back to it's original position. Then tighten slightly.

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 are within specification
- ◆ Ensure surface is free from scratches and dirt
- ◆ Make a square cut, always use suitable tube cutter with a sharp blade
- ◆ Remove burrs from inner and outer edges of tubing.

Blunt tube cutters can cause excessive tube deformation



Tube Standard Information

Tube Selection

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

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

Consideration in selection of tube

1. Quality of the tube materials & manufacturing method.
2. Wall 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 work.

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 work.

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 work.

Coefficient of Tubing to calculate Temperature/ Pressure Change.

Multiply the allowable working pressure by the coefficient in the Table below 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 tube X 0.049" wall thickness

1200°F:4800 psi X 0.37 = 1776 psi

The maximum working pressure of SUS 316 tubing for wall thickness, 3/8" O.D X 0.049", is 1776 psi at 1200°F

Tube Bending

When bending tube adjacent to SUPERLOK fittings, there should be sufficient linear distance from the bending point to the fitting.

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	
Tube O.D. (mm)	2	3	4	6	8	10	12	16	20	22	25
L (mm)	12.70	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 end 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


page 15

SGMC
Male Connector For
Bonded Washer Seal
page 19

SOMC
Male Connector For
Metal Gasket Seal
page 20

SFC
Female Connector

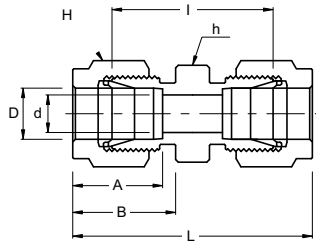

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SGC
Gauge Connector


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SBMC
Bulkhead Male
Connector
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SBFC
Bulkhead Female
Connector
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SU
Union


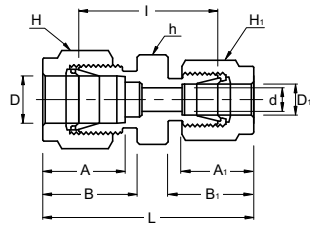
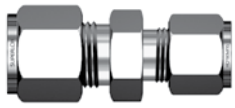
Connects Imperial Tubes

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

Connects Metric Tubes

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

SRU Reducing Union



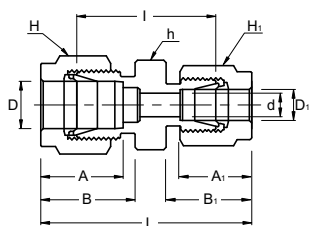
Connects Imperial Tubes

Part No.	Tube OD		d min	Width Across Flat								
	D (inch)	D1 (inch)		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

Connects Metric Tubes

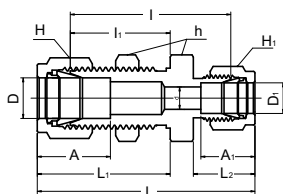
Part No.	Tube OD		d min	Width Across Flat								
	D	D1		h	H	H1	A	A1	B	B1	I	L
SRU 6M- 3M	6	3	2.4	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
SRU 6M- 4M	6	4	2.4	14	14	12	15.3	13.7	17.7	16.1	25.4	39.4
SRU 8M- 6M	8	6	4.8	15	16	14	16.2	15.3	18.6	17.7	27.4	42.3
SRU 10M- 6M	10	6	4.8	18	19	14	17.2	15.3	19.5	17.7	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

SRU Reducing Union SBHRU Bulkhead reducing union



Connects Metric Tubes To Imperial Tubes

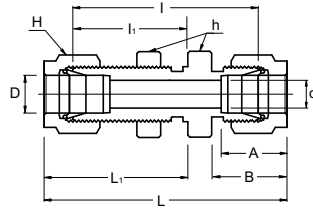
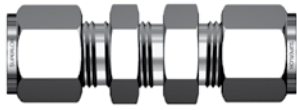
Part No.	Tube OD		d min	Width Across Flat								
	D	D1 (inch)		h	H	H1	A	A1	B	B1	I	L
SRU 3M - 2	3	1/8	2.4	12	12	11.1	12.9	12.8	15.3	15.2	22.1	35.2
SRU 4M - 2	4	1/8	2.4	12	12	11.1	13.7	12.8	16.1	15.2	23.4	36.5
SRU 4M - 4	4	1/4	2.4	14	14	14.3	13.7	15.3	16.1	17.7	25.4	39.4
SRU 6M - 2	6	1/8	2.4	14	14	11.1	15.3	12.8	17.7	15.2	24.6	38.5
SRU 6M - 4	6	1/4	4.8	14	14	14.3	15.3	15.3	17.7	17.7	26.2	41.0
SRU 6M - 5	6	5/16	4.8	14	14	15.9	15.3	16.2	17.7	18.6	27.4	42.3
SRU 8M - 4	8	1/4	4.8	15	15	14.3	16.2	15.3	18.6	17.7	27.4	42.3
SRU 10M - 2	10	1/8	2.4	18	18	11.1	17.2	12.8	19.5	15.2	27.7	41.8
SRU 10M - 4	10	1/4	4.8	18	18	14.3	17.2	15.3	19.5	17.7	29.5	44.5
SRU 10M - 5	10	5/16	6.4	18	18	15.9	17.2	16.2	19.5	18.6	30.0	45.1
SRU 10M - 6	10	3/8	7.1	18	18	17.5	17.2	16.9	19.5	19.2	31.0	45.9
SRU 12M - 5	12	5/16	6.4	22	22	15.9	22.8	16.2	22.0	18.6	30.2	47.8
SRU 12M - 6	12	3/8	7.1	22	22	17.5	22.8	16.9	22.0	19.2	31.0	48.4
SRU 12M - 8	12	1/2	9.5	22	22	22.2	22.8	22.8	22.0	22.0	31.0	51.2
SRU 15M - 8	15	1/2	10.3	24	25	22.2	24.4	22.8	22.0	22.0	31.8	52.0
SRU 16M - 10	16	5/8	12.7	24	25	25.4	24.4	24.4	22.0	22.0	31.8	52.0
SRU 18M - 12	18	3/4	15.1	27	30	28.6	24.4	24.4	22.0	22.0	33.3	53.5
SRU 20M - 12	20	3/4	15.9	30	32	28.6	26.0	24.4	22.0	22.0	34.8	54.9
SRU 20M - 16	20	1	15.9	35	32	38.1	26.0	31.2	22.0	26.4	40.4	62.8
SRU 25M - 16	25	1	21.8	35	38	38.1	31.3	31.3	26.5	26.5	40.4	65.0



Connects Imperial Tubes

Part No.	Tube OD		d min	Width Across Flat										Panel Hole Drill Size	Panel Max Thickness
	D (inch)	D1 (inch)		h (inch)	H (inch)	H1 (inch)	A	A1	i	I1	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 Bulkhead Union



Connects Imperial Tubes

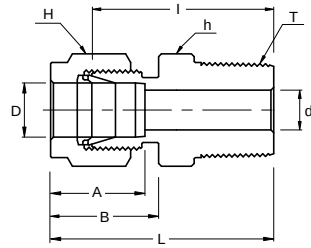
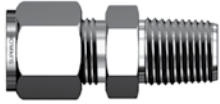
Part No.	Tube OD D (inch)	d min	Width Across Flat								Panel Hole Drill Size	Panel Max Thick- ness
			h (inch)	H (inch)	A	B	I	I ₁	L	L ₁		
SBHU - 1	1/16	1.27	5/16	5/16	8.63	10.92	23.87	13.46	31.50	17.27	5.16	3.05
SBHU - 2	1/8	2.28	1/2	7/16	12.70	15.24	38.10	24.63	51.30	31.24	8.33	12.70
SBHU - 3	3/16	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

Connects Metric Tubes

Part No.	Tube OD D	d min	Width Across Flat									Panel Hole Drill Size	Panel Max Thick- ness
			h	h ₁ *	H	A	B	I	I ₁	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

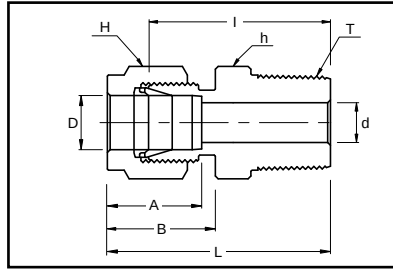
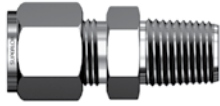
SMC Male Connector



Connects Imperial Tubes To Female NPT Thread

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

SMC Male Connector



Connects Imperial Tube To Female ISO Tapered Thread

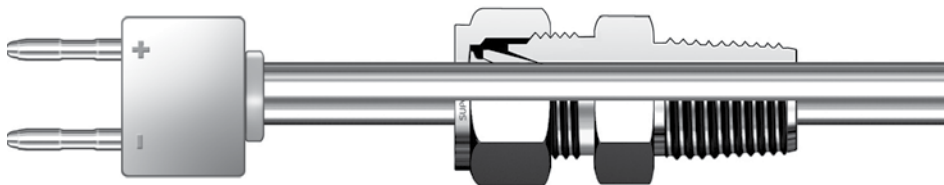
Part No.	Tube O.D. D (inch)	T (RPT)	d Min	Width Across Flat		A	B	I	L
				h (inch)	H (inch)				
SMC 2 - 2R	1/8	1/8	2.28	7/16	7/16	12.70	15.24	23.87	30.48
SMC 2 - 4R	1/8	1/4	2.28	9/16	7/16	12.70	15.24	28.95	35.56
SMC 4 - 2R	1/4	1/8	4.82	1/2	9/16	15.24	17.78	25.40	32.76
SMC 4 - 4R	1/4	1/4	4.82	9/16	9/16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

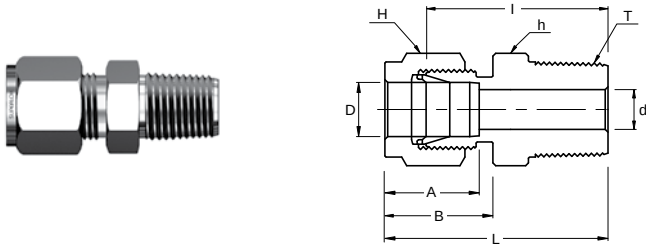
SUPERLOK Bored through MALE CONNECTORS accommodate thermocouples or dip tubes

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.



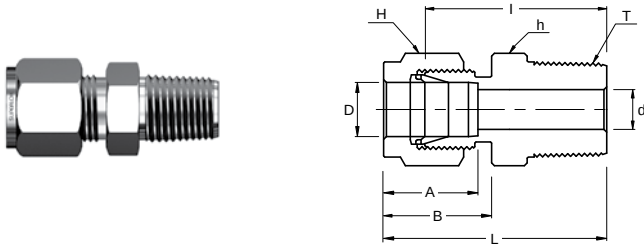
SMC Male Connector



Connects Metric Tube To Female NPT Thread

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	23.9	30.5
SMC 3M - 2N	3	1/8	2.4	12	12	12.9	15.3	23.9	30.5
SMC 3M - 4N	3	1/4	2.4	14	12	12.9	15.3	29.0	35.6
SMC 4M - 2N	4	1/8	2.4	12	12	13.7	16.1	24.6	31.2
SMC 4M - 4N	4	1/4	2.4	14	12	13.7	16.1	29.7	36.3
SMC 6M - 2N	6	1/8	4.8	14	14	15.3	17.7	25.4	32.8
SMC 6M - 4N	6	1/4	4.8	14	14	15.3	17.7	30.5	37.9
SMC 6M - 6N	6	3/8	4.8	18	14	15.3	17.7	31.0	38.4
SMC 6M - 8N	6	1/2	4.8	22	14	15.3	17.7	37.3	44.7
SMC 8M - 2N	8	1/8	4.8	15	16	16.2	18.6	26.7	34.2
SMC 8M - 4N	8	1/4	6.4	15	16	16.2	18.6	31.2	38.7
SMC 8M - 6N	8	3/8	6.4	18	16	16.2	18.6	31.8	39.3
SMC 8M - 8N	8	1/2	6.4	22	16	16.2	18.6	38.1	45.6
SMC 10M - 2N	10	1/8	4.8	18	19	17.2	19.5	28.7	36.3
SMC 10M - 4N	10	1/4	7.9	18	19	17.2	19.5	33.3	40.9
SMC 10M - 6N	10	3/8	7.9	18	19	17.2	19.5	33.3	40.9
SMC 10M - 8N	10	1/2	7.9	22	19	17.2	19.5	38.9	46.5
SMC 12M - 2N	12	1/8	4.8	22	22	22.8	22.0	28.7	38.8
SMC 12M - 4N	12	1/4	7.1	22	22	22.8	22.0	33.3	43.4
SMC 12M - 6N	12	3/8	9.5	22	22	22.8	22.0	33.3	43.4
SMC 12M - 8N	12	1/2	9.5	22	22	22.8	22.0	38.9	49.0
SMC 12M - 12N	12	3/4	9.5	27	22	22.8	22.0	40.4	50.5
SMC 14M - 4N	14	1/4	7.1	24	25	24.4	22.0	34.0	44.1
SMC 14M - 6N	14	3/8	9.5	24	25	24.4	22.0	34.0	44.1
SMC 14M - 8N	14	1/2	11.1	24	25	24.4	22.0	38.9	49.0
SMC 16M - 6N	16	3/8	9.5	24	25	24.4	22.0	34.0	44.1
SMC 16M - 8N	16	1/2	11.9	24	25	24.4	22.0	38.9	49.0
SMC 16M - 12N	16	3/4	12.7	27	25	24.4	22.0	40.4	50.5
SMC 18M - 8N	18	1/2	11.9	27	30	24.4	22.0	40.4	50.5
SMC 18M - 12N	18	3/4	15.1	27	30	24.4	22.0	40.4	50.5
SMC 20M - 8N	20	1/2	11.9	30	32	26.0	22.0	42.2	52.3
SMC 20M - 12N	20	3/4	15.9	30	32	26.0	22.0	42.2	52.3
SMC 22M - 12N	22	3/4	15.9	30	32	26.0	22.0	42.2	52.3
SMC 22M - 16N	22	1	18.3	35	32	26.0	22.0	47.0	57.1
SMC 25M - 12N	25	3/4	15.9	35	38	31.3	26.5	45.2	57.5
SMC 25M - 16N	25	1	21.8	35	38	31.3	26.5	50.0	62.3
SMC 28M - 16N	28	1	21.8	41	46	36.6	36.6	51.6	72.4
SMC 28M - 20N	28	1-1/4	21.8	46	46	36.6	36.6	52.3	73.1
SMC 30M - 20N	30	1-1/4	26.2	46	50	39.6	39.2	55.6	77.2
SMC 32M - 20N	32	1-1/4	28.6	46	50	42.0	41.6	56.6	79.6
SMC 38M - 24N	38	1-1/2	33.7	55	60	49.4	47.9	64.0	91.6

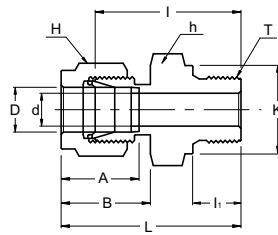
SMC Male Connector



Connects Metric Tube To Female ISO Tapered Thread

Part No.	Tube O.D. D	T (RPT)	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

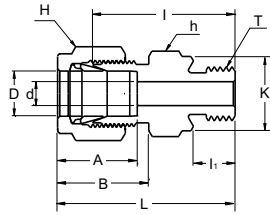
SGMC Male Connector For Bonded Washer Seal



Connects Metric Tubes To Female ISO Parallel Thread

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

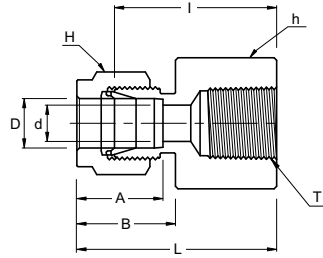
SOMC Male Connector For Metal Gasket Seal



Connects Metric Tube To Female ISO Parallel Thread

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

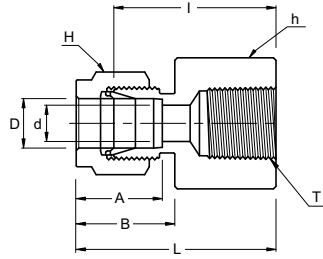
SFC Female Connector



Connects Imperial Tubes To Male NPT Thread

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

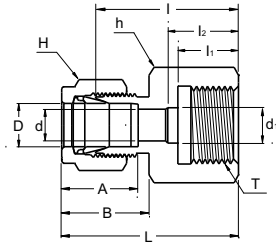
SFC Female Connector



Connects Metric Tubes To Male ISO Tapered Thread

Part No.	Tube O.D. D	T * (RPT)	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

SGC Gauge Connector



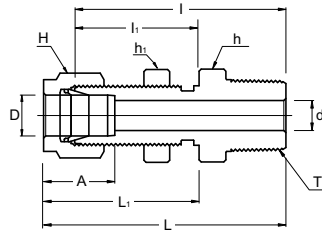
Connects Imperial Tubes To ISO Parallel Thread

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

Connects Metric Tubes To ISO Parallel Thread

Part No.	Tube O.D. D	T (GPF)	d Min	d ₁	Width Across Flat		A	B	l	l ₁	l ₂	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 Bulkhead Male Connector

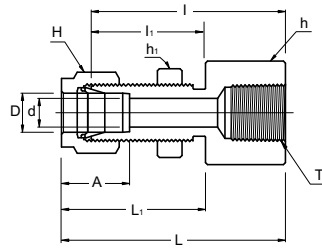


Connects Imperial Tubes To Female NPT Thread

Connects Imperial Tubes To Female NPT Thread													Panel Hole Drill Size	Panel Max Thick- ness
Part No.	Tube O.D. D(inch)	T * (NPT)		Width Across Flat										
			d min	h (inch)	h1 (inch)	H (inch)	A	I	I1	L	L1			
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	8.33	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	11.50	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	11.50	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	14.68	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	14.68	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	19.44	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	33.73	19.05	

SBFC

Bulkhead Female Connector



Connects Imperial Tubes To Male NPT Thread

Part No.	Tube O.D. D(inch)	T * (NPT)	d min	Width Across Flat								Panel Hole Drill Size	Panel Max Thick-ness
				h (inch)	h1 (inch)	H (inch)	A	I	I1	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

Connects Metric Tubes To Male NPT Thread

Part No.	Tube O.D. D	T * (NPT)	d min	Width Across Flat								Panel Hole Drill Size	Panel Max Thick-ness
				h	h1	H	A	I	I1	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

ELBOWS

SUE
Union Elbow

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SME
Male Elbow

page 28



SHME
45 Male Elbow

page 31



SPHME
45 Positionable Male
Elbow

page 32



SPME
Positionable Male Elbow

page 32



SFE
Female Elbow

page 34



TEES

SUT
Union Tee

page 35



SRUT
Reducing Union Tee

page 36



SMBT
Male Branch Tee

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SPMBT
Positionable Male
Branch Tee

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SMRT
Male Run Tee

page 40



SPMRT
Positionable Male Run Tee

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SFBT
Female Branch Tee

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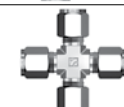
SFRT
Female Run Tee

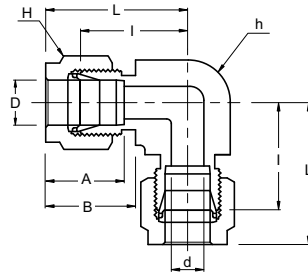
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SUC
Union Cross

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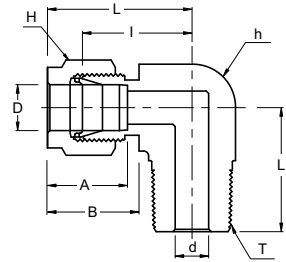
SUE
Union Elbow

Connects Imperial Tubes

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

Connects Metric Tubes

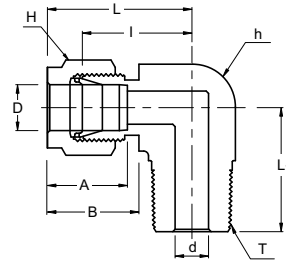
Part No.	Tube O.D. D	d Min	Width Across Flat		A	B	I	L
			h	H				
SUE - 2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
SUE - 3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
SUE - 4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
SUE - 6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
SUE - 8M	8	6.4	15.9	16	16.2	18.6	22.4	29.9
SUE - 10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
SUE - 12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
SUE - 15M	15	11.9	23.8	25	24.4	22.0	27.9	38.8
SUE - 16M	16	12.7	23.8	25	24.4	22.0	27.9	38.0
SUE - 18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
SUE - 20M	20	15.9	34.9	32	26.0	22.0	34.5	44.6
SUE - 22M	22	18.3	34.9	32	26.0	22.0	34.5	44.6
SUE - 25M	25	21.8	34.9	38	31.3	26.5	36.8	49.1
SUE - 28M	28	21.8	41	46	36.6	36.6	43.2	64.0
SUE - 30M	30	26.2	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
Male Elbow

Connects Metric Tubes To Female NPT Thread

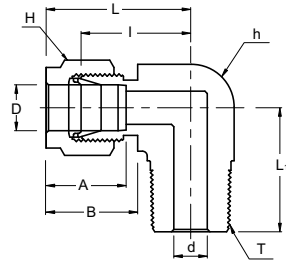
Part No.	Tube O.D. D (inch)	T (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h	H					
SME 3M - 2N	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
SME 3M - 4N	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
SME 4M - 2N	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
SME 4M - 4N	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4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

Connects Metric Tubes To Female ISO Tapered Thread

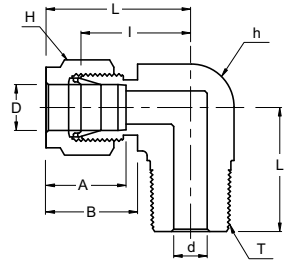
Part No.	Tube O.D. D (inch)	T (RPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h	H					
SME 3M - 2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
SME 3M - 4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
SME 4M - 2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
SME 4M - 4R	4	1/4	2.4	12.7	12	13.7	16.1	18.8	25.4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

Connects Fractional Tube To Female NPT Thread

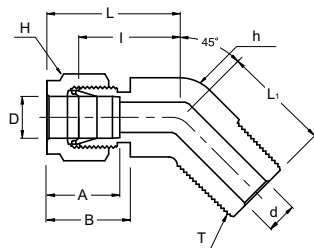
Part No.	Tube O.D. D (inch)	T (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h (inch)	H (inch)					
SME 2 - 2N	1/8	1/8	2.28	1/2	7/16	12.70	15.24	18.00	24.30	18.80
SME 2 - 4N	1/8	1/4	2.28	1/2	7/16	12.70	15.24	18.00	24.30	23.36
SME 3 - 2N	3/16	1/8	3.04	1/2	1/2	13.71	16.00	18.79	25.40	18.79
SME 3 - 4N	3/16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



SME
Male Elbow
SHME
45° Male Elbow

Connects Imperial Tubes To Female ISO Tapered Thread

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



Connects Fractional Tubes To Female NPT Thread

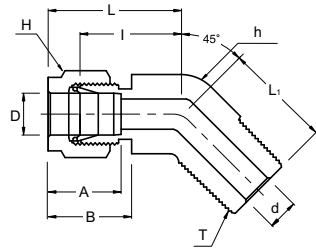
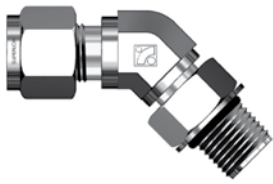
Part No.	Tube O.D. D (inch)	T (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h (inch)	H (inch)					
SHME 4 - 2N	1/4	1/8	4.82	1/2	9/16	15.24	17.78	17.27	24.63	16.51
SHME 4 - 4N	1/4	1/4	4.82	1/2	9/16	15.24	17.78	17.27	24.63	21.08
SHME 6 - 2N	3/8	1/8	4.82	5/8	11/16	16.76	19.30	20.57	27.94	18.28
SHME 6 -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

SPHME

45° Positionable Male Elbow

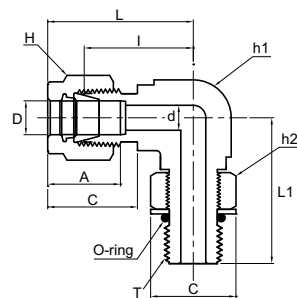
SPME

Positonable Male Elbow



Connects Imperial Tubes To SAE/MS Straight Thread

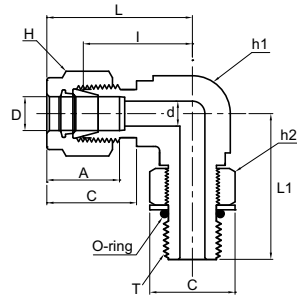
Part No.	Tube O.D. D (inch)	T (U)	d Min	Width Across Flat			A	B	I	L	L1	C
				h1 (inch)	h2 (inch)	H (inch)						
SPHME 4 - 4U	1/4	7/16-20	4.83	1/2	9/16	9/16	15.24	17.78	18.29	25.64	25.65	16.51
SPHME 6 - 6U	3/8	9/16-18	7.11	5/8	11/16	11/16	16.76	19.30	20.57	27.94	28.19	20.07
SPHME 8 - 8U	1/2	3/4-16	10.41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



Connects Imperial Tubes To SAE/MS Straight Thread

Part No.	Tube O.D. D (inch)	T (U)	d Min	Width Across Flat			A	B	I	L	L1	C
				h1 (inch)	h2 (inch)	H (inch)						
SPME 4 - 4U	1/4	7/16-20	4.83	1/2	9/16	9/16	15.24	17.78	21.08	28.45	28.45	16.51
SPME 4 - 6U	1/4	9/16-18	4.83	5/8	11/16	9/16	15.24	17.78	23.11	30.48	32.26	20.07
SPME 5 - 5U	5/16	1/2-20	5.84	9/16	5/8	5/8	16.26	18.54	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 Positionable Male Elbow



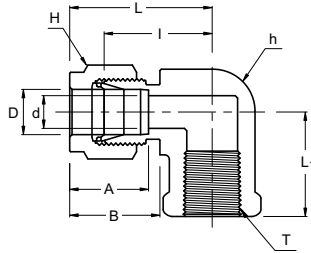
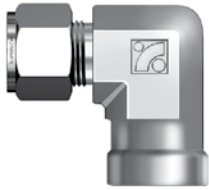
Connects Imperial Tubes To Female ISO Parallel Thread

Part No.	Tube O.D. D (inch)	T (U)	d Min	Width Across Flat			A	B	I	L	L ₁	C
				h1 (inch)	h2 (inch)	H (inch)						
SPME 4 - 4U	1/4	7/16-20	4.83	1/2	9/16	9/16	15.24	17.78	21.08	28.45	28.45	16.51
SPME 4 - 6U	1/4	9/16-18	4.83	5/8	11/16	9/16	15.24	17.78	23.11	30.48	32.26	20.07
SPME 5 - 5U	5/16	1/2-20	5.84	9/16	5/8	5/8	16.26	18.54	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

Connects Metric Tubes To Female ISO Parallel Thread

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



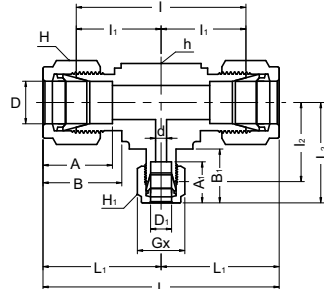
Connects Imperial Tubes To Male NPT Thread

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

Connects Metric Tubes To Male NPT Thread

Part No.	Tube O.D. D	T NPT	d Min	Width Across Flat		A	B	I	L	L ₁
				h	H					
SFE 6M - 4N	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
SFE 6M - 6N	6	3/8	4.8	20.63	14	15.3	17.7	24.4	31.7	22.40
SFE 6M - 8N	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.6	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

SUT Union Tee

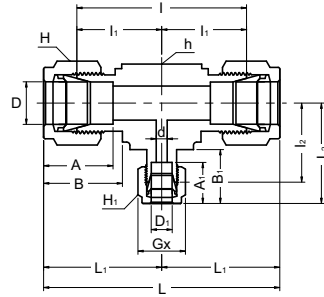
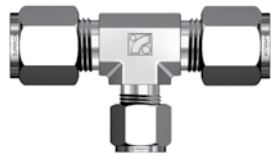


Connects Imperial Tubes

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

Connects Metric Tubes

Part No.	Tube 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

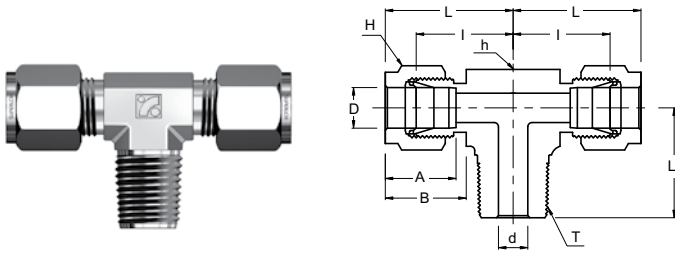


SRUT Reducing Union Tee

Connects Imperial Tubes

Part No.	Tube O.D.		d Min	Width Across Flat			A	A ₁	B	B ₁	I	I ₁	I ₂	L	L ₁	L ₂
	D (inch)	D ₁ (inch)		h (inch)	H (inch)	H ₁ (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 Male Branch Tee

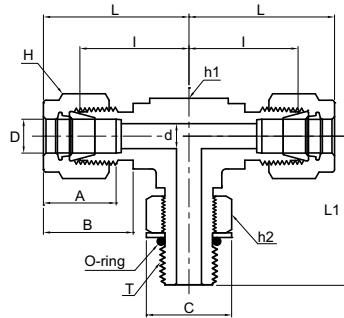


Connects Imperial Tubes To Female NPT Thread

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

Connects Metric Tubes To Female ISO Tapered Thread

Part No.	Tube O.D. D	T * (RPT)	d Min	Width Across Flat		A	B	I	L	L1
				h	H					
SMBT 3M - 2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
SMBT 3M - 4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
SMBT 4M - 2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
SMBT 6M - 2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
SMBT 6M - 4R	6	1/4	4.8	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



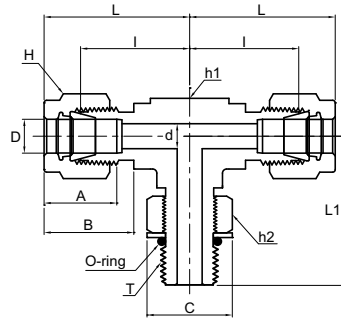
SPMBT Positionable Male Branch Tee

Connects Imperial Tubes To Female ISO Parallel Thread

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

Connects Metric Tubes To Female ISO Parallel Thread

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

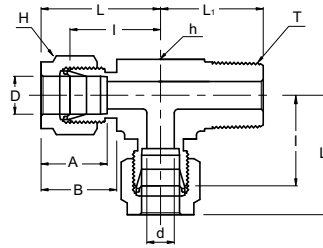


SPMBT Positionable Male Branch Tee

Connects Fractional Tubes To SAE/MS Straight Thread Boss

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

SMRT Male Run Tee



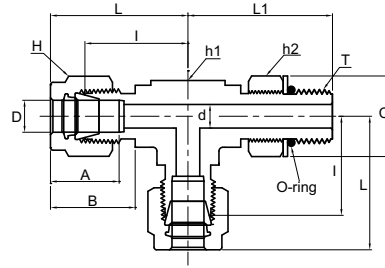
Connects Imperial Tubes To Female NPT Thread

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

Connects Metric Tubes To Female ISO Tapered Thread

Part No.	Tube O.D. D	T * (RPT)	d Min	Width Across Flat		A	B	I	L	L1
				h	H					
SMRT 3M - 2R	3	1/8	2.4	12.7	12	12.9	15.3	17.0	23.6	17.8
SMRT 3M - 4R	3	1/4	2.4	12.7	12	12.9	15.3	18.0	24.6	23.4
SMRT 4M - 2R	4	1/8	2.4	12.7	12	13.7	16.1	18.8	25.4	18.8
SMRT 6M - 2R	6	1/8	4.8	12.7	14	15.3	17.7	19.6	27.0	18.8
SMRT 6M - 4R	6	1/4	4.8	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

SPMRT Positionable Male Run Tee



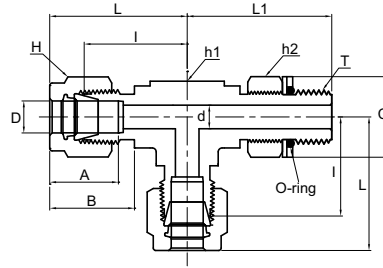
Connects Imperial Tubes To Female ISO Parallel Thread

Part No.	Tube O.D. D (inch)	T (PF)	d Min	Width Across Flat			A	B	I	L	L ₁	C
				h1 (inch)	h2 (inch)	H (inch)						
SPMRT 4 - 2G	1/4	1/8	4.06	1/2	9/16	9/16	15.24	17.78	19.56	26.92	26.42	17.27
SPMRT 4 - 4G	1/4	1/4	4.83	5/8	3/4	9/16	15.24	17.78	21.59	28.96	32.26	22.86
SPMRT 6 - 4G	3/8	1/4	5.84	5/8	3/4	11/16	16.76	19.30	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

Connects Metric Tubes To Female ISO Parallel Thread

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 Positionable Male Run Tee

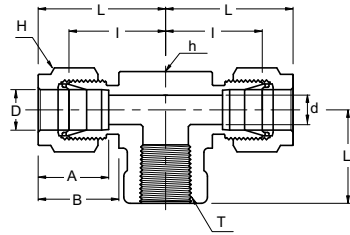


Connects Imperial Tubes To SAE/MS Straight Thread

Part No.	Tube O.D.	T (U)	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

Female Branch Tee



Connects Imperial Tubes To Male NPT Thread

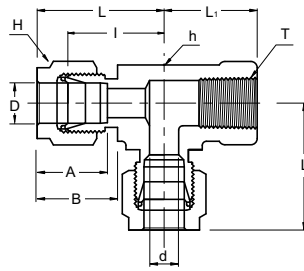
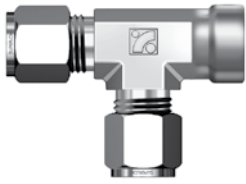
Part No.	Tube O.D. D (inch)	T * (NPT)	d Min	Width Across Flat		A	B	I	L	L ₁
				h(inch)	H(inch)					
SFBT 2 - 2N	1/8	1/8	2.28	1/2	7/16	12.70	15.24	18.03	24.63	19.05
SFBT 4 - 2N	1/4	1/8	4.82	1/2	9/16	15.24	17.78	19.55	26.92	19.05
SFBT 4 - 4N	1/4	1/4	4.82	11/16	9/16	15.24	17.78	22.35	29.71	22.35
SFBT 6 - 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

Connects Metric Tubes To Male NPT Thread

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

SFRT

Female Run Tee

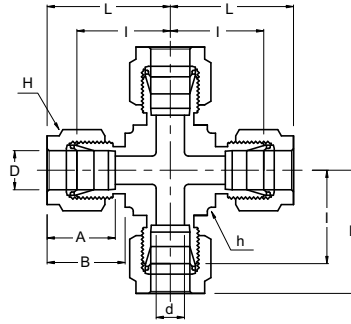


Connects Imperial Tubes To Male NPT Thread

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

Connects Metric Tubes To Male NPT Thread

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



SUC Union Cross

Connects Imperial Tubes

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

Connects Metric Tubes

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



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SBR Bulkhead Reducer page 49



SMA Male Adapter



page 50

SFA Female Adapter



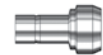
page 51

SPC Port Connector



page 52

SRPC Reducing Port Connector page 53



SFTC Flange Lapped Tubes Connector page 54



AN TUBE

SAF An Flare



page 54

SAU An Union



page 55

SAA An Adapter



page 55

O RING SEAL

SOSC O-Seal Straight Thread Connector page 56



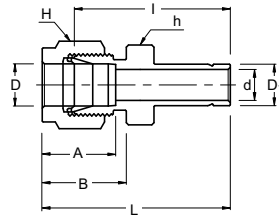
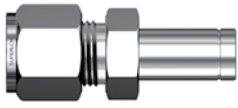
SOPC O-Seal Pipe Thread Connector page 56



SSMC SAE/MS Male Connector page 57



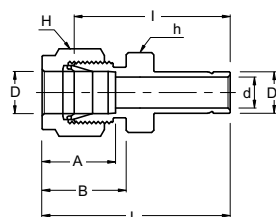
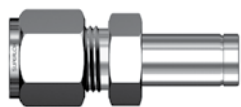
SR Reducer



Connects Imperial Tubes To Imperial SUPERLOK Port

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

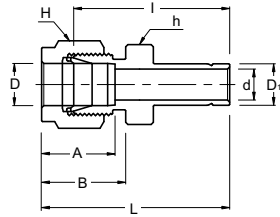
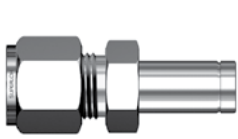
* Fractional Tube to Metric SUPERLOK port are available upon request

SR
Reducer


Connects Metric Tubes To Metric SUPERLOK Port

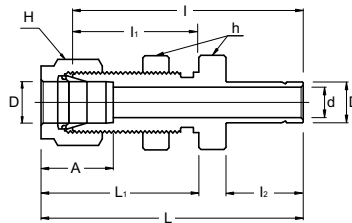
Part No.	Tube OD		d min	Width Across Flat		A	B	I	L
	D	D1		h	H				
SR 3M - 4M	3	4	2.4	12	12	12.9	15.3	28.4	35.0
SR 3M - 6M	3	6	2.4	12	12	12.9	15.3	29.5	36.1
SR 3M - 10M	3	10	2.4	14	12	12.9	15.3	31.8	38.4
SR 4M - 6M	4	6	2.4	12	12	13.7	16.1	30.5	37.1
SR 6M - 3M	6	3	1.8	14	14	15.3	17.7	29.5	36.9
SR 6M - 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 Reducer SBR Bulkhead Reducer



Connects Metric Tubes To Fractional SUPERLOK Port

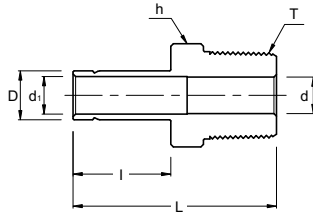
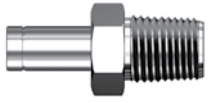
Part No.	Tube OD		Width Across Flat						
	D	D1 (inch)	d min	h	H	A	B	I	L
SR 3M - 2	3	1/8	2.0	12	12	12.9	15.3	26.9	33.5
SR 3M - 4	3	1/4	2.4	12	12	12.9	15.3	29.5	36.1
SR 6M - 4	6	1/4	4.8	14	14	15.3	17.7	31.8	39.2
SR 6M - 5	6	5/16	4.8	14	14	15.3	17.7	32.5	39.9
SR 6M - 6	6	3/8	4.8	14	14	15.3	17.7	33.3	40.7
SR 6M - 8	6	1/2	4.8	14	14	15.3	17.7	38.9	46.3
SR 8M - 6	8	3/8	6.4	15	16	16.2	18.6	34.5	42.0
SR 8M - 8	8	1/2	6.4	15	16	16.2	18.6	40.1	47.6
SR 10M - 6	10	3/8	7.1	18	19	17.2	19.5	36.6	44.2
SR 10M - 8	10	1/2	7.9	18	19	17.2	19.5	42.2	49.8
SR 12M - 8	12	1/2	9.5	22	22	22.8	22.0	42.2	52.3
SR 12M - 12	12	3/4	9.5	22	22	22.8	22.0	43.7	53.8
SR 18M - 12	18	3/4	15.1	27	30	24.4	22.0	46.0	56.1
SR 18M - 16	18	1	15.1	27	30	24.4	22.0	52.3	62.4



Connects Imperial Tubes To Imperial SUPERLOK Port

Part No.	Tube O.D. D(inch)	d min	Width Across Flat								Panel Hole Drill Size	Panel Max Thickness
			h (inch)	H (inch)	A	I	I1	I2	L	L1		
SBR 2 - 2	1/8	2.03	1/2	7/16	12.70	42.92	24.63	13.46	49.53	31.24	8.33	12.70
SBR 4 - 4	1/4	4.82	5/8	9/16	15.24	48.51	26.16	15.74	55.88	33.52	11.50	10.16
SBR 6 - 6	3/8	7.11	3/4	11/16	16.76	53.84	29.46	17.52	61.21	36.83	14.68	11.17
SBR 8 - 8	1/2	10.41	15/16	7/8	22.86	62.73	31.75	23.11	72.89	41.91	19.44	12.70
SBR 10 - 10	5/8	12.70	1-1/16	1	24.38	65.02	32.51	24.70	75.18	42.67	22.62	12.70
SBR 16 - 16	1	20.32	1-5/8	1-1/2	31.24	88.13	45.21	31.70	100.33	57.40	33.73	19.05

SMA Male Adapter



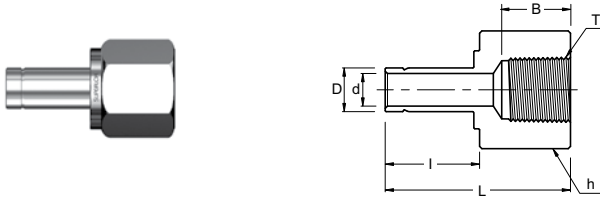
Connects Imperial SUPERLOK Port To Female NPT Thread

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

Connects Metric SUPERLOK Port To Female NPT Thread

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

SFA Female Adapter



Connects Imperial SUPERLOK Port To Male NPT Thread

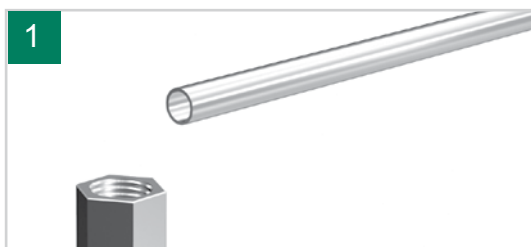
Part No.	Tube O.D. D	T * (NPT)	d Min	Width Across Flat h	I	L
SFA 2 - 2N	1/8	1/8	2.28	9/16	13.45	31.50
SFA 2 - 4N	1/8	1/4	2.28	3/4	13.45	35.30
SFA 3 - 2N	3/16	1/8	3.04	9/16	14.20	32.00
SFA 3 - 4N	3/16	1/4	3.04	3/4	14.20	35.81
SFA 4 - 2N	1/4	1/8	4.82	9/16	15.75	33.02
SFA 4 - 4N	1/4	1/4	4.82	3/4	15.75	37.10
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

Connects Metric SUPERLOK Port To Male NPT Thread

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	18	3/4	13.9	32	24.90	54.8

SUPERLOK Adapter |Solves Alignment Problems

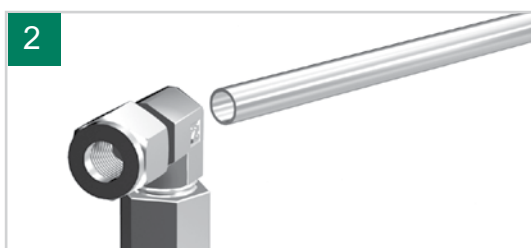
SPC Port Connector



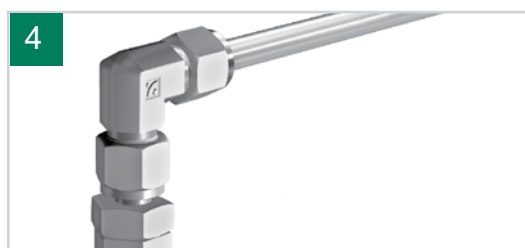
Required installation is to connect tubing in direction shown, to a female port.



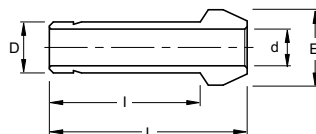
To connect this situation, merely tighten pipe thread of male adapter into female port.



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



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



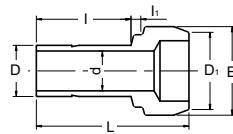
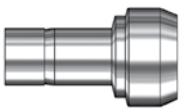
Connects Imperial SUPERLOK Ports

Part No.	Tube O.D. (D) (Inch)	d Min	E	I	L
SPC - 2	1/8	2.28	6.09	15.75	22.35
SPC - 4	1/4	4.82	9.39	18.79	24.63
SPC - 5	5/16	6.35	10.92	20.06	25.90
SPC - 6	3/8	7.11	12.70	20.32	26.16
SPC - 8	1/2	9.90	15.74	25.90	35.81
SPC - 12	3/4	14.98	22.09	27.68	37.33
SPC - 16	1	20.32	28.44	34.54	48.00

Connects Metric SUPERLOK Ports

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

SRPC Reducing Port Connector

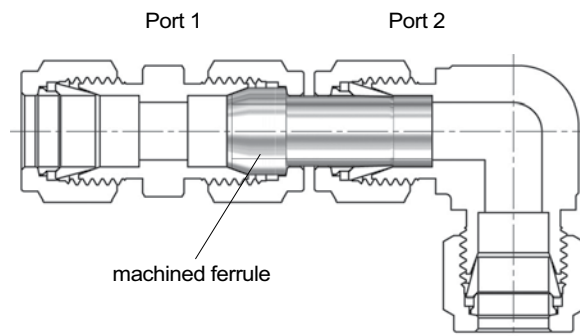


Connects Imperial SUPERLOK Port To Male AN

Part No.	Tube O.D. D ₁ (inch)	Reduced Tube OD D (inch)	d	E	I	I1	L
SRPC 2 - 1	1/8	1/16	0.76	6.09	8.63	2.03	17.27
SRPC 4 - 1	1/4	1/16	0.76	9.39	8.63	3.55	18.03
SRPC 4 - 2	1/4	1/8	2.28	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

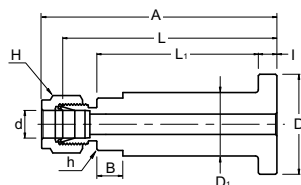
Installation Instructions Port Connector



- 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 finger tighten the nut
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 finger tightening the nut by hand.
- Insert the 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 Flange Lapped Tubes Connector SAF An Flare



Connects Imperial Tubes

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

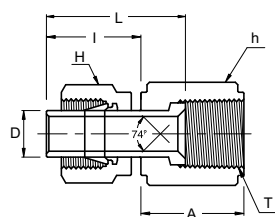
The Gasket contact surface of the stub end is of "Smooth" or "Serrated" seal face



Smooth
Identified as : SM



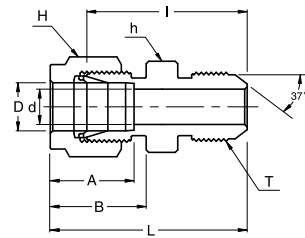
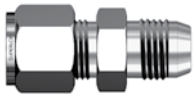
Serrated
Identified as : SR



Connects Imperial SUPERLOK Port To Male AN

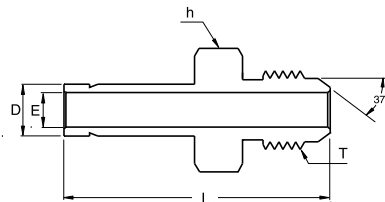
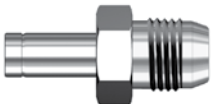
Part No.	Tube O.D. D (inch)	AN Tube Flare Size	Straight Thread T (U)	Width Across Flats		A	I	L
				h (inch)	H (inch)			
SAF2 - 2U	1/8	1/8	5/16-24	3/8	7/16	13.71	13.46	18.54
SAF2 - 4U	1/8	1/4	7/16-20	9/16	7/16	15.74	13.46	19.05
SAF4 - 4U	1/4	1/4	7/16-20	9/16	9/16	15.74	15.74	21.33
SAF6 - 6U	3/8	3/8	9/16-18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

SAU
An Union
SAA
An Adapter



Connects Imperial Tubes To An Flared Tubes

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



Connects Imperial SUPERLOK Port To AN Flared Tubes

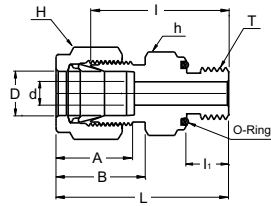
Part No.	Tube O.D. D (inch)	AN Tube Flare Size (inch)	Straight Thread T (U)	Width Across Flat h(inch)	E	L
SAA 4 - 4U	1/4	1/4	7/16-20	1/2	4.82	37.08
SAA 6 - 4U	3/8	1/4	7/16-20	1/2	7.11	38.86
SAA 6 - 6U	3/8	3/8	9/16-18	5/8	7.11	39.62
SAA 8 - 8U	1/2	1/2	3/4-16	13/16	9.90	48.51
SAA 12 - 12U	3/4	3/4	1-1/16-12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

SOSC

O-Seal Straight Thread Connector

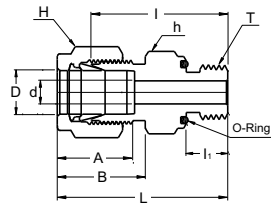
SOPC

O-Seal Pipe Thread Connector



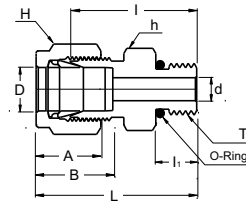
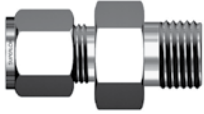
Connects Imperial Tube To Female Straight Thread

Part No.	Tube O.D. D (inch)	Straight Thread T (U)	d Min	Width Across Flat		A	B	I	I ₁	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



Connects Imperial Tube To Female NPT Thread

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

SSMC
SAE/MS Male Connector


Connects Imperial Tubes To SAE/MS Straight Thread Boss

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

Mounting Dimensions for O-Seal Connectors

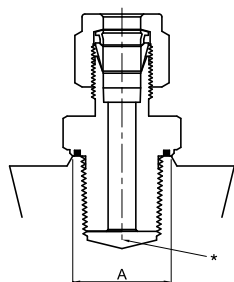


Figure 1

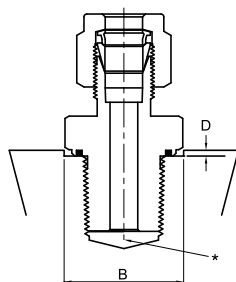


Figure 2

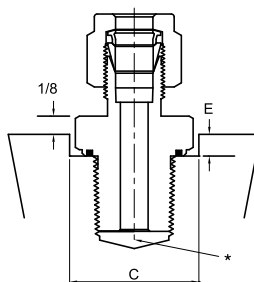


Figure 3

*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, tighten slightly 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.

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

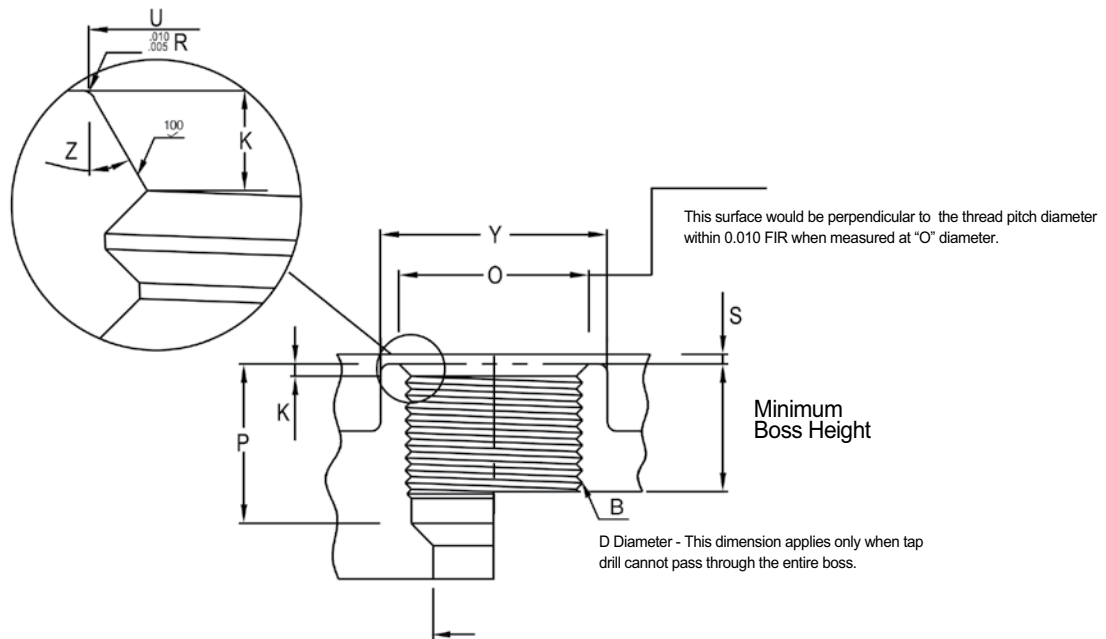
Installation instructions

1. Lubricate O-Ring with the lubricant which is applicable for the system fluid, environment and O-Ring material.
Standard O-Ring material 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 the O-Ring mates with the groove.
3. Position the fitting by turning counter clockwise until the SUPERLOK end is facing in the proper direction, (no more than 1 turn)
4. Tighten the fittings with wrench and back-up wrench .
until the washer contacts the face of the bosses.



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

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

¹ Diameter U shall be concentric with thread pitch diameter within 0.005 full indicator reading (FIR) and shall be free from longitudinal and spiral tool marks. Annular tool marks shall be less than 100micro inches.

² This is the maximum recommended spotface depth to permit sufficient wrench grip for proper tightening of the fitting or locknut

³ If the boss surface is machined, dimensions Y and S do 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	3/4-16	16.36	2.21	3-908
3/8-24	7.65	1.63	3-903	7/8-14	19.18	2.46	3-910
7/16-20	8.92	1.83	3-904	1-1/16-12	23.47	2.95	3-912
1/2-20	10.52	1.83	3-905	1-3/16-12	26.59	2.95	3-914
9/16-18	11.89	1.98	3-906	1-5/16-12	29.74	2.95	3-916

WELD END

SPWC
Male Pipe
Weld Connector
page 62



SMPWE
Male Pipe
Weld Elbow
page 63



SSWC
Socket
Weld Connector
page 63



SSWE
Socket
Weld Elbow
page 63



PLUGS AND CAPS

SP
Plug
page 64



SC
Cap
page 64



SPARE PARTS

SN
Nut
page 65



SFF
Front Ferrule
page 65



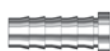
SBF
Back Ferrule
page 66



SFS
Ferrule Set
page 66



SI
Insert
page 66



SBHU-RE
Bulkhead Retainer
page 67



SVP
Vent Protector
page 67

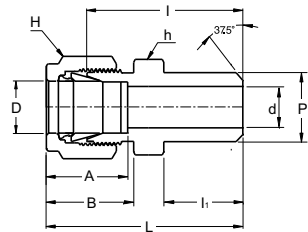
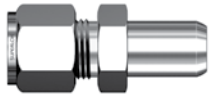


SFH
Flexible Metallic Hoses



SPWC

Male Pipe Weld Connector



Connects Imperial Tubes To Pipe

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

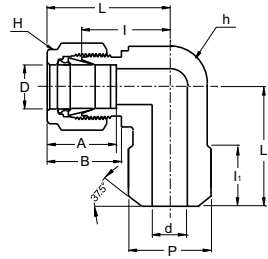
Connects Metric Tubes To Pipe

Part No.	Tube O.D. D	Male Pipe Size p		d Min	Width Across Flat		A	B	I	I ₁	L
		Nom	OD		h	H					
SPWC 3M - 2P	3	1/8	10.3	2.4	12	12	12.9	15.3	23.9	9.7	30.5
SPWC 4M - 2P	4	1/8	10.3	2.4	12	12	13.7	16.1	24.6	9.7	31.2
SPWC 6M - 2P	6	1/8	10.3	4.8	14	14	15.3	17.7	25.4	9.7	32.8
SPWC 6M - 4P	6	1/4	13.7	4.8	14	14	15.3	17.7	30.5	14.2	37.9
SPWC 8M - 2P	8	1/8	10.3	5.1	15	16	16.2	18.6	26.7	9.7	34.2
SPWC 8M - 4P	8	1/4	13.7	6.4	15	16	16.2	18.6	31.2	14.2	38.7
SPWC 8M - 8P	8	1/2	21.3	6.4	22	16	16.2	18.6	38.1	19.0	45.6
SPWC 10M - 4P	10	1/4	13.7	7.1	18	19	17.2	19.5	33.3	14.2	40.9
SPWC 10M - 6P	10	3/8	17.1	7.9	18	19	17.2	19.5	33.3	14.2	40.9
SPWC 10M - 8P	10	1/2	21.3	7.9	22	19	17.2	19.5	38.9	19.0	46.5
SPWC 12M - 4P	12	1/4	13.7	7.1	22	22	22.8	22.0	33.3	14.2	43.4
SPWC 12M - 6P	12	3/8	17.1	9.5	22	22	22.8	22.0	33.3	14.2	43.4
SPWC 12M - 8P	12	1/2	21.3	9.5	22	22	22.8	22.0	38.9	19.0	49.0
SPWC 15M - 8P	15	1/2	21.3	11.9	24	25	24.4	22.0	38.9	19.0	49.0
SPWC 16M - 8P	16	1/2	21.3	12.7	24	25	24.4	22.0	38.9	19.0	49.0
SPWC 18M - 8P	18	1/2	21.3	13.5	27	30	24.4	22.0	40.4	19.0	50.5

SUPERLOK Weld end application Information :

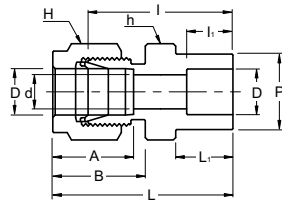
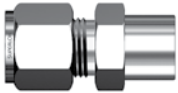
- Do weld after removing nut and ferrules from body to protect them from weld heat.
- Do protect thread end or pot and seat area of SUPERLOK body with another nut and plug.(for easy disassembly just finger tighten it)
- Correct weld procedure is required during welding and after weld completion suitable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

SMPWE
Male Pipe Weld Elbow
SSWC
Socket Weld Connector
SSWE
Socket Weld Elbow



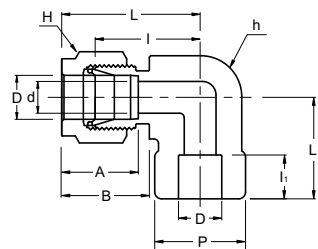
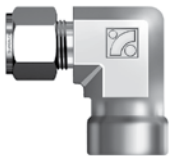
Connects Imperial Tubes To Pipe

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



Connects Imperial Tubes To Pipe

Part No.	Tube O.D. D	d Min	P	Width Across Flat		A	B	I	I ₁	L	L ₁
				h	H						
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



Connects Imperial Tubes To Pipe

Part No.	Tube O.D. D	d Min	P	Width Across Flat		A	B	I	I ₁	L	L ₁
				h	H						
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 Plug SC Cap

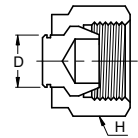
Imperial Plug

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 Plug

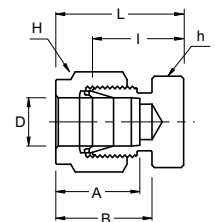
Part No.	Tube O.D. D	Width Across Flat H	Part No.	Tube O.D. D	Width Across Flat H
SP - 2M	2	12	SP - 15M	15	25
SP - 3M	3	12	SP - 16M	16	25
SP - 4M	4	12	SP - 18M	18	30
SP - 6M	6	14	SP - 20M	20	32
SP - 8M	8	16	SP - 22M	22	32
SP - 10M	10	19	SP - 25M	25	38
SP - 12M	12	22			



- 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 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	8.63	10.92	11.20	14.98
SC - 2	1/8	7/16	7/16	12.70	15.24	13.46	20.06
SC - 3	3/16	7/16	1/2	13.71	16.00	14.73	21.33
SC - 4	1/4	1/2	9/16	15.24	17.78	16.00	23.36
SC - 5	5/16	9/16	5/8	16.25	18.54	17.01	24.38
SC - 6	3/8	5/8	11/16	16.76	19.30	18.28	25.65
SC - 8	1/2	13/16	7/8	22.86	21.84	19.05	29.21
SC - 10	5/8	15/16	1	24.38	21.84	19.81	29.97
SC - 12	3/4	1-1/16	1-1/8	24.38	21.84	21.33	31.49
SC - 14	7/8	1-3/16	1-1/4	25.90	21.84	23.87	34.03
SC - 16	1	1-3/8	1-1/2	31.24	26.41	26.16	38.35



- 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 Cap

Part No.	Tube O.D. D	Width Across Flat		A	B	I	L
		h	H				
SC - 2M	2	12	12	12.9	15.3	13.5	20.1
SC - 3M	3	12	12	12.9	15.3	13.5	20.1
SC - 4M	4	12	12	13.7	16.1	14.7	21.3
SC - 6M	6	14	14	15.3	17.7	15.7	23.1
SC - 8M	8	15	16	16.2	18.6	17.0	24.5
SC - 10M	10	18	19	17.2	19.5	19.0	26.6
SC - 12M	12	22	22	22.8	22.0	19.0	29.1

Metric Cap

Part No.	Tube O.D. D	Width Across Flat		A	B	I	L
		h	H				
SC - 15M	15	24	25	24.4	22.0	19.8	29.9
SC - 16M	16	24	25	24.4	22.0	19.8	29.9
SC - 18M	18	27	30	24.4	22.0	21.3	31.4
SC - 20M	20	30	32	26.0	22.0	23.9	34.0
SC - 22M	22	30	32	26.0	22.0	23.9	34.0
SC - 25M	25	35	38	31.3	26.5	26.2	38.5

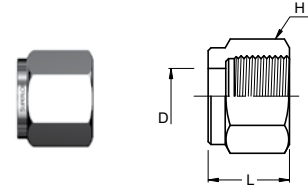
SN Nut SFF Front Ferrule

Imperial 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				

Metric 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

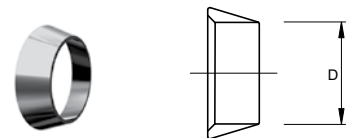


Imperial Front Ferrule

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 Front Ferrule

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



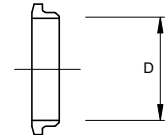
SBF Back Ferrule SFS Ferrule Set SI Insert

Imperial 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		

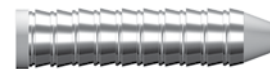
Metric Back Ferrule

Part No.	Tube O.D. D	Part No.	Tube O.D. D	Part No.	Tube O.D. D
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 Ferrule Set (10)

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		

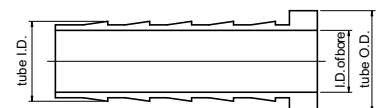
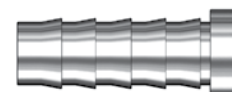


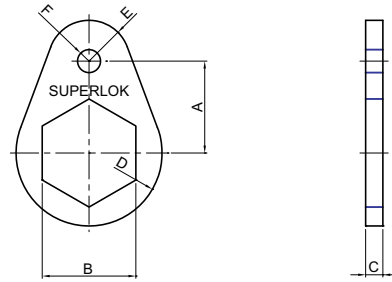
Metric Ferrule Set (10)

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





SBHU-RE Bulkhead Retainer SVP Vent Protector

Bulkhead Retainer

Part No.	A	B	C	D	E	F	Drill Hole Diameter
SBHU 1-RE	3/8	5/16	1/8	5/16	5/32	5/32	3.05
SBHU 2-RE	1/2	1/2	1/8	13/32	7/32	5/32	3.05
SBHU 3-RE *1	9/16	9/16	1/8	15/32	1/4	5/32	3.05
SBHU 4-RE *2	5/8	5/8	1/8	1/2	9/32	5/32	3.05
SBHU 5-RE	1/16	11/16	1/8	9/16	5/16	5/32	3.05
SBHU 6-RE	3/4	3/4	1/8	5/8	11/32	5/32	3.05
SBHU 8-RE *3	15/16	15/16	1/8	3/4	13/32	7/32	3.66
SBHU 10-RE *4	1	1-1/16	1/8	13/16	13/32	7/32	3.66
SBHU 12-RE *5	1-1/16	1-3/16	1/8	29/32	15/32	7/32	3.66
SBHU 14-RE	1-1/8	1-5/16	1/8	1-1/32	17/32	7/32	3.66
SBHU 16-RE	1-9/32	1-5/8	1/8	1-5/32	9/16	7/32	3.66
SBHU 8-RE	11/16	18 mm	1/8	9/16	5/16	5/32	3.05
SBHU 10-RE	15/16	22 mm	1/8	3/4	13/32	7/32	3.66

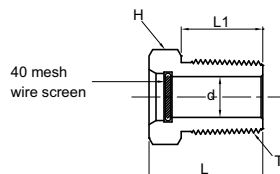
*1 Can be used with 3mm and 4mm bulkheads

*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

Flexible Metallic Hoses

- ◆ Stainless steel construction
- ◆ Working pressure up to 1600psi (110bar)
- ◆ Wide variety of imperial and metric end connections from 1/4" to 2" and 6mm to 38mm
- ◆ Custom options and assemblies available

Technical Data

Nominal Hose Size in.	HOSE Series	Minimum Bend Radius in. (cm)		Temperature Range °F °C	Working Pressure @ -325 to +300 °F -200 to +148 °C psi (bar)	Minimum Burst @70°F(20°C) psi (bar)
		Static	Dynamic			
1/4	SFH4	0.75 (1.90)	4.33 (11.0)	-325 to 800 °F -200 to 426 °C	1600 (110)	6400 (440)
3/8	SFH6	0.87 (2.21)	5.91 (15.0)		1470 (101)	5880 (405)
1/2	SFH8	1.04 (2.64)	6.50 (16.5)		1110 (76.4)	4440 (305)
3/4	SFH12	1.61 (4.09)	8.86 (22.5)		860 (59.2)	3440 (237)
1	SFH16	1.89 (4.80)	10.2(26.0)		680 (46.8)	2720 (187)
1 1/4	SFH20	2.16 (5.49)	11.8 (30.0)		680 (46.8)	2720 (187)
1 1/2	SFH24	2.33 (5.92)	13.4 (34.0)		520 (35.8)	2080 (143)
2	SFH32	3.10 (7.87)	15.4 (39.1)		450 (31.0)	1800 (124)

- ◆ Do not subject Flexible Metal Hose to system pressure surges, shock or pulsations greater than 50% of the working pressure rating.

Ordering Information

LOK - SFH 4 - S4 - M4N - 1.5

Prefix 1 2 3 4

1 : Hose series and size

2 : 1st End connection

3 : 2nd End connection

4 : Overall length in meters

*Always use the **LOK** prefix when ordering these hoses*

Flexible Metallic Hoses

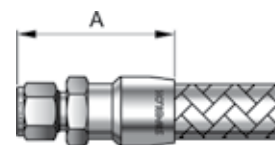
Dimensional details

SFH Series

SUPERLOK Tube Fitting

Order Number		Tube OD(in)	Dimension A (mm)
Hose Series	End Connection		
SFH 4	S4	1/4	47.5
SFH 6	S6	3/8	50.8
SFH 8	S8	1/2	61.7
SFH 12	S12	3/4	66.5
SFH 16	S16	1	81.3
SFH 20	S20	1 1/4	96.3
SFH 24	S24	1 1/2	108.0
SFH 32	S32	2	133.0

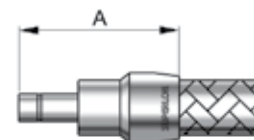
♦Metric connections are available upon request.



Tube Adapter

Order Number		Tube OD(in)	Dimension A (mm)
Hose Series	End Connection		
SFH 4	4T	1/4	38.6
SFH 6	6T	3/8	46.0
SFH 8	8T	1/2	54.9
SFH 12	12T	3/4	63.5
SFH 16	16T	1	75.9

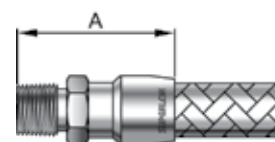
♦Metric connections are available upon request.



Male Pipe Threads, NPT

Order Number		Tube OD(in)	Dimension A (mm)
Hose Series	End Connection		
SFH 4	M4N	1/4	43.2
SFH 6	M6N	3/8	48.5
SFH 8	M8N	1/2	58.9
SFH 12	M12N	3/4	62.3
SFH 16	M16N	1	77.5
SFH 20	M20N	1 1/4	79.8
SFH 24	M24N	1 1/2	85.9
SFH 32	M32N	2	92.2

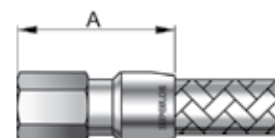
♦BSP tapered thread available if required order R in stead of N. (ex : SFH4-M4R)

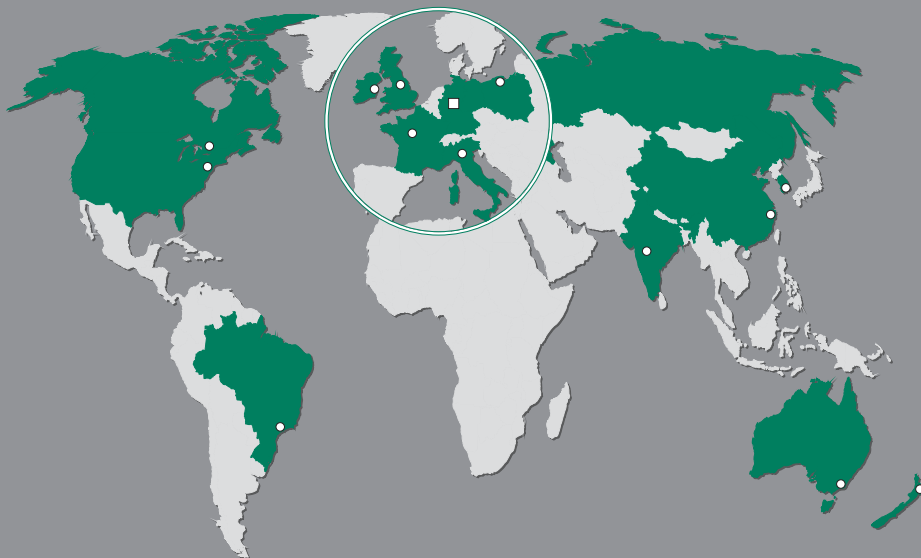


Female Pipe Threads, NPT

Order Number		Tube OD(in)	Dimension A (mm)
Hose Series	End Connection		
SFH 4	F4N	1/4	46.0
SFH 6	F6N	3/8	46.7
SFH 8	F8N	1/2	62.2
SFH 12	F12N	3/4	61.2
SFH 16	F16N	1	74.2
SFH 24	F24N	1 1/2	83.3

♦BSP tapered thread available if required order R in stead of N. (ex : SFH4-F4R)





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