



Tube Fittings

High Technology Valve & Fitting Series



Greetings

We, BMT Co., Ltd. are high precision mechanical components manufacturer specialized in the field of Automotive, Aerospace, Semiconductor, shipbuilding and petrochemical industries since its foundation in 1988.

We have been successfully nominated as an official supplier and manufacturer of Tube Fittings & Valves by the big companies (SAMSUNG Electronics, LG Electronics, Hyundai etc) and it was landmark for BMT to be evaluated for its high technology at the related industries.

BMT's key capability are Technology and Know-how accumulated from long experience in the field, High Productivity with modernization & automation and consistent High Quality by strict quality control system.

Our mission is to supply our products, **SUPERLOK**, with high quality and high reliability to our customers through continuous R&D investment and strong quality control system.

Our ultimate goal is to be a Technically Leading Company in Tube Fittings & Valves and make our brand, **SUPERLOK**, to be World's Best.

저희 BMT는 1988년 설립이후, 자동차, 항공우주, 반도체, 조선, 석유화학플랜트 산업등에 사용되는 정밀기계 부품을 생산하는 부품소재 전문기업으로 성장해 왔으며, 국내 우수기업들(삼성, LG, 현대 등)로부터 Tube Fitting & Valve의 공식 납품업체로 지정됨으로서, 그 기술력을 대외적으로 인정받게 되었습니다.

저희 BMT의 핵심역량은 오랜 경험으로부터의 축적된 기술력과 노하우에 있으며, 또한 현대화된 공장 자동화 시스템과 생산 관리 시스템을 통한 높은 생산성, 체계적이고 정형화된 품질 관리 시스템을 통한 고품질의 제품 생산에 있다고 할 수 있습니다.

저희 BMT는 지속적인 R&D투자를 통한 기술선도와 엄격한 품질관리를 통한 고 신뢰성 제품의 생산으로 고객 만족을 위하여 최선을 다할 것이며, 고객과 함께 성장하는 기업이 되도록 노력 할 것입니다 또한, 21세기 국가 산업 발전의 일익을 담당하며, 세계속의 한국 기업이 되기 위하여, 자사 브랜드인 **SUPERLOK**을 세계적인 제품으로 성장시키며, 이 분야의 기술을 선도하는 세계 기업으로 성장하여, 고객 여러분의 기대에 부응하는 기업이 되고자 항상 노력할 것을 약속드립니다.





History Of BMT Co., Ltd

- 1988 Feb.** Established GyeongPoong Machinery Co
- 1996 Dec.** Move to Songhyeon-Ri, Jinrye-Myeon, Gimhae-City, Gyeongnam
- 2000 Mar.** Move to Songjeong-Dong, Gangseo-Gu, Busan
- 2000 Jun.** Changed the company name to "BMT Co.Ltd"
- 2001 Sep.** Qualified and certified ISO 9001 for Fittings, Valves, and Machinery parts and equipments by HSB-RS(Cert No : 379)
- 2002 Oct.** Designated as "Clean Company" by Ministry of Labor.
Introduced ERP(Enterprise Resource Planning) SYSTEM
- 2003 May.** Registered a trademark (no. 0547128)
- 2003 Jul.** Designated as Fitting & Valve supplier by SAMSUNG ELECTRONICS
- 2003 Oct.** Designated as "Venture Business" by Small and Medium Business Administration
- 2003 Dec.** Designated as "Superior Technology Company" by Korea Technology Credit Guarantee Fund(KOTEC)
- 2004 Jan.** Registered utility model "Female Type Ball Valve"(no.0338699)
Registered utility model "Angle Type Ball Valve"(no.0341375)
Registered utility model "Check Valve"(no.0341420)
- 2004 Feb.** Participated in "SEMICON KOREA 2004"
- 2004 Mar.** Registered Patent "Ball Valve"(no.0423556)
Accredited as a "PROMISING COMPANY" by the Industrial Band of Korea
- 2004 Apr.** Received "MK Best Venture Awards" by small and Medium Business Administration
Registered utility model "NEEDLE VALVE"(no.0348821)
Registered utility model "REGULATOR"(no.0348820)
Designated as "The Specialized Manufacturer of Components & Materials" by the Ministry of Commerce, Industry and Energy
Received "The Prime Minister Award" by KFSB
- 2004 July.** Designated as "Superior Exporting Firm" by Small and Medium Business Administration
- 2004 Sep.** Participated in "SEDEX KOREA 2004"
- 2004 Oct.** Participated in "CHINA HI-TECH FAIR 2004"
- 2004 Nov.** Built and moved to new main factory & office in 1617-7, Songjeong-Dong Gangseo-Gu Busan
- 2005 May.** Established BMT R&D Institute
- 2005 May.** Registered a Patent and a Design of MCPD(Molded Case Power Distributor)
Entered into Electric Field Enterprise
- 2005 Jul.** Designated the MCPD as a "Subject of Technological Innovation Business"
- 2005 Sep.** Awarded "The Superior Entrepreneur of Busan Venture"
- 2005 Dec.** Awarded "The Grand Prix of Busan Enterprise in Technology Field"
- 2005 Dec.** Participated in "Semicon Japan 2005"

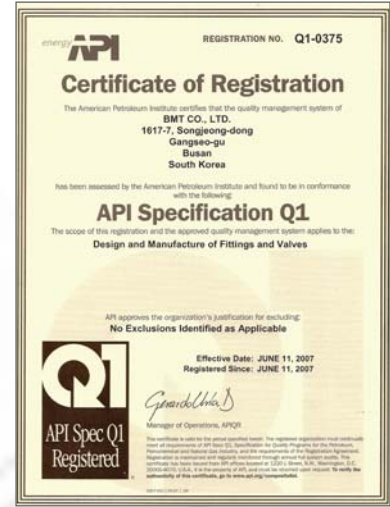
Certificates



■ ISO 14001



■ ABS 06-BK150238-PDA



■ API-SPECQ1



■ DNV-P-12285



■ GL CERT-SUPERLOK
























































■ ISO 9001

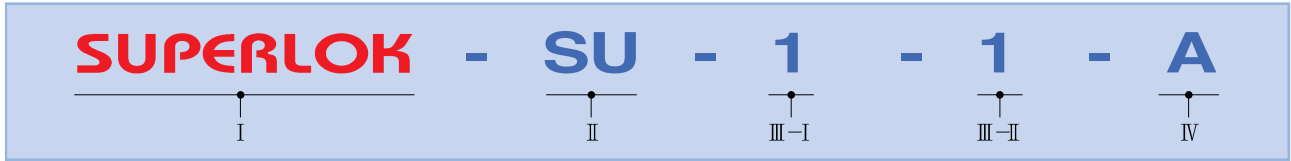


■ LR 06.10006



| UNION | TEE | AN TUBE | |
|--|--|---|--|
| SU Union page 15  | SUT Union Tee page 39  | SAF An Flare page 56  | |
| SRU Reducing Union page 16  | SRUT Reducing Union Tee page 40  | SAU An Union page 57  | |
| SBHRU Bulkhead Reducing Union page 17  | SMBT Male Branch Tee page 41  | SAA An Adapter page 57  | |
| SBHU Bulkhead Union page 18  | SPMBT Positionable Male Branch Tee page 42  | O-RING SEAL | |
| CONNECTOR | | SOSC O-Seal Straight Thread Connector page 58  | |
| SMC Male Connector page 19  | SMRT Male Run Tee page 43  | SOPC O-Seal Pipe Thread Connector page 58  | |
| SGMC Male Connector For Bonded Washer Seal page 23  | SPMRT Positionable Male Run Tee page 44  | SSMC SAE/MS Male Connector page 59  | |
| SOMC Male Connector For Metal Gasket Seal page 24  | SFBT Female Branch Tee page 45  | WELD END | |
| SFC Female Connector page 25  | SFRT Female Run Tee page 46  | SPWC Male Pipe Weld Connector page 66  | |
| SGC Gauge Connector page 27  | SUC Union Cross page 47  | SMPWE Male Pipe Weld Elbow page 67  | |
| SBMC Bulkhead Male Connector page 28  | STUB TUBE CONNECTOR | | |
| SBFC Bulkhead Female Connector page 29  | SR Reducer page 48  | SSWC Socket Weld Connector page 67  | |
| ELBOWS | | SSWE Socket Weld Elbow page 67  | |
| SUE Union Elbow page 31  | SBR Bulkhead Reducer page 51  | PLUG & CAP | |
| SME Male Elbow page 32  | SMA Male Adapter page 52  | SP Plug page 68  | |
| SHME 45° Male Elbow page 35  | SFA Female Adapter page 53  | SC Cap page 68  | |
| SPHME 45° Positionable Male Elbow page 36  | SFC Female Adapter page 53  | SPARE PART | |
| SPME Positionable Male Elbow page 37  | SPC Port Connector page 54  | SN Nut page 69  | |
| SFE Female Elbow page 38  | SRPC Reducing Port Connector page 55  | SFF Front Ferrule page 69  | |
| | SFTC Flange Lapped Tubes Connector page 56  | SBF Back Ferrule page 70  | |
| | | SFS Ferrule Set page 70  | |
| | | SI Insert page 70  | |
| | | SBR Bulkhead Retainer page 71  | |
| | | SVP Vent Protector page 71  | |

Ordering Information



I : **SUPERLOK** Tube Fitting II : Fitting Type III : Fitting Size (III - I : Tube O.D. III - II : Pipe Thread Size or Tube Size) IV : Material

I : **SUPERLOK** Tube Fitting

II : Type of Fitting

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

※ Referred to catalogue Index

III : Size of Fitting

III - I : Tube O.D

| Fractional Tube | 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 |
|-----------------|------------|------|-----|------|-----|------|-----|-----|-----|-----|-----|-----|-------|-------|-----|
| Identify | | 1 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 14 | 16 | 20 | 24 | 32 |
| Metric Tube | O.D (mm) | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 22 | 25 | 28 | 32 | 38 |
| Identify | | 2M | 3M | 4M | 6M | 8M | 10M | 12M | 16M | 20M | 22M | 25M | 28M | 32M | 38M |

III - II : 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 |

IV : Material

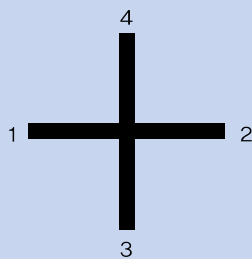
| MATERIAL | Aluminum (Use dash "-") | Brass and Copper (Use dash "-") | Carbon Steel ** (** : Refer to Alloy No.) | Stainless Steel*** (*** : Refer to Alloy No.) | Monel Alloy 400 | Inconel Alloy 600 |
|----------|----------------------------|------------------------------------|--|--|-----------------|-------------------|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

Example

* SMC8-6N SS316L
 SUPERLOK MALE CONNECTOR, Tube O.D: 1/2", Thread :3/8"NPT,
 Stainless Steel 316L

* In case of Stainless Steel,
 it is possible to express SS316 or 316 itself.

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" × 3/8" × 3/8" NPT Stainless steel 316

Ex. 2) SUC - 8 - M

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

* Products are for reference only and are subject to change on client's request.



Features of SUPERLOK Tube Fittings



SUPERLOK Tube Fitting is produced by a strict material management, a high precision design and the best processing technology.

SUPERLOK Tube Fitting is tightened softly in linking and is leakage free entirely under shock, impact and high tension. Therefore, it can contribute for productivity improvement and cost reduction to SUPERLOK Tube Fitting users because It's the best product whose flow of fluid is very smooth caused by Fitting's excellent inner surface condition.

SUPERLOK can be assembled easily without any other special tool but the use of low quality tubing may deteriorate Fitting's function.

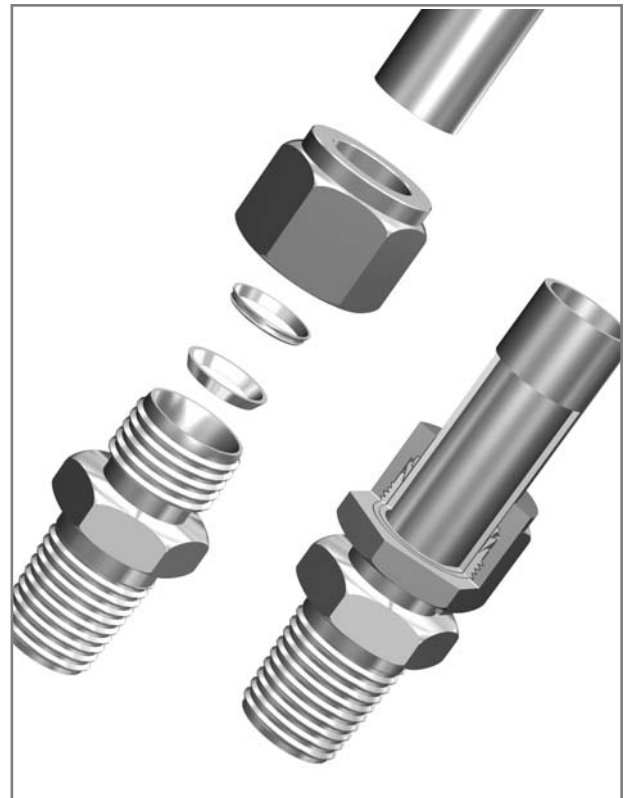
Structure of SUPERLOK

The whole system design should be considered so that there is no problem to secure reliable safety.

SUPERLOK is consists of 4 precision parts and all parts are being manufactured through a very strict tolerance superintendence under systematic and constant quality control.

All parts that are being made by this process can cope with the inferior enviromental conditions and various customer's needs.

SUPERLOK Tube Fitting secures the leakage prevention and sufficient tightness with less forces in all the tubing connections and reduces the cost and potential leakage risk in a course of tubing assembly and process.



■ Quality and Process Control

BMT's SUPERLOK Tube Fitting & Valve are produced as the product of best quality through a statistical process control and a strict quality control (various test and the self-examination included) and the written systematic quality control assurance.

■ Warranty of Quality and Exchange

BMT warrants that SUPERLOK Tube Fitting is being manufactured without defect in raw materials and manufacturing process, with the guarantee of its construction and workmanship of enough quality control and process control according to the specifications.

However, the defect owing to user's recklessness, an unreasonable assembling method and operation and the operation disregarding manufacturer's indications can not be compensated.

In case that leakage happens by the defect on SUPERLOK Tube Fitting in spite of normal operation, all the defected fittings shall be exchanged immediately.

SUPERLOK acknowledges this leaflet is regarded as warranty and does not publish separate warranty as long as special requirement issues are not required.

SUPERLOK Installation Instruction

1. Installation under 1 inch or 25MM

SUPERLOK Tube Fitting shall be delivered to customer with completely assembled state, so be ready to immediate use only with finger-tightening. Disassembling the product prior to use can be a cause of leakage or a cause of inflow something into the fitting's inside. Do not use for the poor quality tubes, which can be a cause of leakage or functional deterioration.

SUPERLOK Tube Fittings are installed in three easy steps:

Step 1

Insert the tubing into SUPERLOK Tube Fitting's inside. At this moment, make sure that the tubing is completely contact with the shoulder of fittings and then finger-tighten the nut.

Step 2

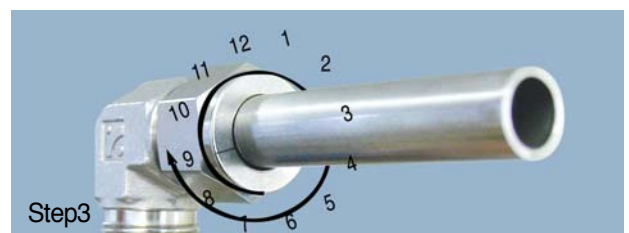
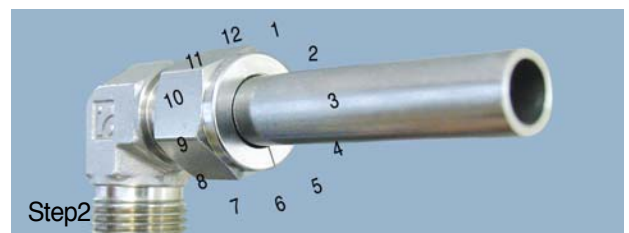
Before tightening the SUPERLOK nut, mark the starting point of turning at the 6 o'clock position.

Step 3

Hold the fitting body safely with a backup wrench and tighten the nut 1-1/4 turns. (pay attention to the mark of starting point of turning, make one revolution and place at 9 o'clock position. Marking the starting point of turning at the 6 o'clock position will let you notice where the starting point is).

After 1-1/4 revolution, when the starting point is placed at 9 o'clock position, you can easily confirm and see that SUPERLOK Tube Fitting is installed accurately.

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





2. Installation at the high pressure or the high safety systems

Since there are various variations of tubing, unifying the starting point of the fitting is desirable. The starting point is determined by that when tighten the nut by using a wrench until the tubing shall not be turn freely in the fitting. At this point, make the 1-1/4 revolution and tighten the nut.

(If tube rotation is not possible, tighten the nut approximately 1/8 turn from the finger-tight position)

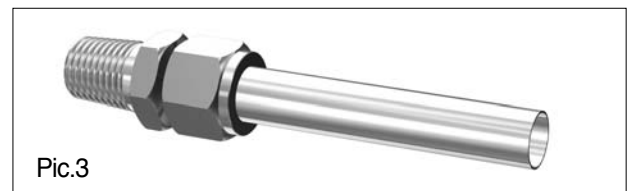
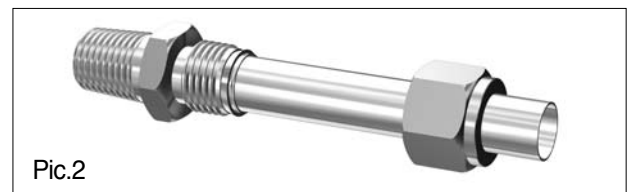
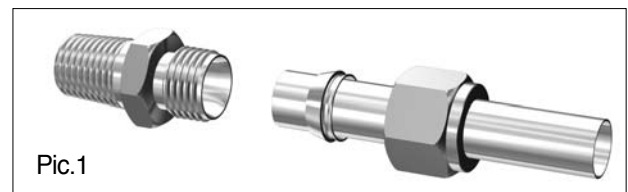
Safety Considerations on Installations for High Pressure System

(Apply to the installation of general system)

1. Make sure whether the thickness and material of tubing is proper to applicable usage. The material of tubing is compatible with the material of fitting and the hardness of tubing shall be less than that of fitting.
2. Do not assemble or disassemble the fitting when the pressure is hold at the system.
3. Since straightly assembled tubing to a pair of fixed fitting cannot be completely contacted with the both sides of fittings' shoulder, there shall be a leakage risk caused by deformation from high temperature and high pressure.
4. Do not turn the fitting body.

3. Re-tightening Instruction

1. Shown the disconnected position of fittings.
2. When inserting the tubing with preswaged ferrule into the fitting body, the front ferrule shall be seated in the fitting body.
3. Finger-tighten the nut and revolve the nut to the original position with a wrench. At the original position, the resistance increases. At the point, the job will be done by tightening slightly more.



Technological Information

■ Hardness Limitation

Generally, heat treated tubing shall be used in Metal tubing so that can be used properly with SUPERLOK tube fitting.

Hardness of stainless steel tubing is being limited below HRb90 but large majority of users are using the hardness of tube limited below HRb80. On the other hand, it is actually economical to use tubing by lowering the hardness of tubing because the assembly is easy and tubing can be bent easily. Therefore, SUPERLOK encourage customers to use tubing with the hardness

below HRb 80. This is for customer's convenience and perfect leakage prevention in operation.

■ Compatibility

SUPERLOK is manufactured in order to be compatible with other firm's tube fitting from the beginning of design so that can warrant 100% confidence in case of being made under the mutual control of tolerance and hardness with other firm. But it is safe to operate with only SUPERLOK products if possible.

Application Gas System

SUPERLOK is appropriate as the standard for making use of gas system, but potential leakage can be prevented by the implementation of the below standards.

Tube standard in gas system (Apply to the installation of general system)

1. The hardness of tubing shall be less than those of fitting.
2. Surface of tubing must be free from scar, defect, pollution and etc. Shall be flexible and expansion of tubing should be easy.
3. Refer to Table 2, 3, 4, 5 for tubing choice of suitable gas system.
4. End part shape of tubing should not be deformed especially. (For example, the ending part of tubing should not be an oval.)
5. End of tubing must be perpendicular to the center line of tubing and be deburred. For these reason, tube cutting machine must have a sharp blade and deburring tools should be used.
6. Firm connection shall be performed. Insufficient connection is the main cause of leakage and failure of system.
7. Do not bend tubing after inserting tubing into the fitting.
8. Observe the procedure of operation which is suggested by our firm.
9. Use minimum wall thickness of below table in order to secure maximum safety in gas system.

Application to Cryogenic and High Temperature System

SUPERLOK Tube Fitting is suitable for vacuum system as well as the situation of high pressure and from cryogenic condition to high temperature. SUPERLOK Tube Fitting has been tested repeatedly under various conditions.

Maximum Temperature by Materials

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

Please refer to ASME B31.3-1993 concerning the detailed information about the maximum & minimum temperature of various materials.

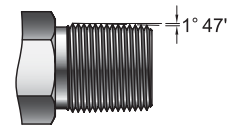
THREADS

1. NPT (National Pipe Thread)

- Thread angle 60°
- Tapered angle 1°47'
- Manufactured by the standard of ANSI B2.1

2. ISO 7/1 Tapered Thread

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



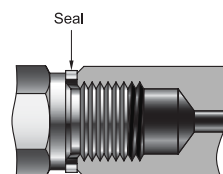
ISO Tapered
(thread sealant required)

3. ISO 228/1 Parallel Thread

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

① Bonded Washer Seal

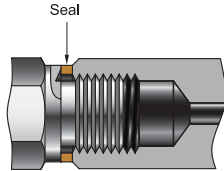
Be sealed by contacting the inclined surface of the hex body of male thread to the surface of the female thread. In case of sealing, a washer which composed of metal and elastic material is located at the center of tapered surface.



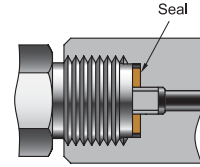


② Metal Gasket Seal

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



by male thread surface.



③ Metal Gasket Seal

This is a method to insert a gasket into the flat surface of thread's inside.

The sealing shall be completed with pushing the gasket

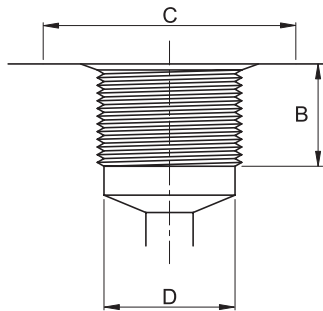
4. UNF Thread

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

ISO Internal parallel pipe Thread

| SUPERLOK Designator | ISO Female Parallel Pipe Size (inch) | Minimum Full Thread Depth B (inch) | Thread Minor Diameter D (inch) | Minimum Flat Diameter for ① & ② C (inch) | Minimum Flat Diameter for Positionable Thread C (inch) |
|---------------------|--------------------------------------|------------------------------------|--------------------------------|--|--|
| 2G | 1/8 | 0.31 | 0.337/0.348 | 0.59 | 0.68 |
| 4G | 1/4 | 0.47 | 0.450/0.468 | 0.75 | 0.90 |
| 6G | 3/8 | 0.47 | 0.586/0.606 | 0.91 | 1.04 |
| 8G | 1/2 | 0.55 | 0.733/0.755 | 1.06 | 1.26 |
| 12G | 3/4 | 0.63 | 0.949/0.971 | 1.30 | 1.62 |
| 16G | 1 | 0.71 | 1.193/1.218 | 1.57 | 1.91 |

• Note : ISO positionable elbows and tees are compatible with female ports having BS 2779 threads.



Tube Standard Information

Tube Selection

Suitable tubing selection is essential in performance of tubing system.

When selecting tubing material, size and wall thickness, customer must consider pressure, flux (flow), temperature, environment and compatibility of system.

Consideration facts at the selection of tube

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

■ Tube Bending

In case of bending tubing near at SUPERLOK fittings, there should be enough lineal distance from bending point to the fittings as this can be a reason of leakage. (see the below Table).

This is essential to protect customer's system from the leakage. The required straight line length of tube should be bigger than tube diameter. For more detailed specifications and technology data, we suggest you to contact SUPERLOK engineers.

• The recommended straight line length of tube in Tube bending

| 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) 직선 튜빙길이 | 12.70 | 18.25 | 19.05 | 20.63 | 22.20 | 23.81 | 30.16 | 31.75 | 33.30 | 38.10 |

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

■ The requirements for tube quality of the material

Carbon steel tubing

- ASTM A179 or equivalent.
- Carbon steel tubing for an oil pressure usage of high quality, annealed and seamless.
- Maximum hardness : HRb72.
- Tubing must be free from scars and shall be suitable for bending and expansion works.

Copper tubing

- ASTM B65, B75 or equivalent.
- Copper tubing of high quality, annealed and seamless.

Stainless steel tubing

- ASTM A213, A269 or A632 or equivalent.
- Stainless steel tubing for an oil pressure usage of high quality, annealed and seamless. (316, 304, 321, etc.)
- Hardness : below HRb 80.
- Tubing must be free from scars and shall be suitable for bending and expansion works.

Monel tubing

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

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

Table 1

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

Multiply the allowable working pressure in Table 2, 3, 4, 5 by the coefficient in Table1 in order to decide allowable pressure at high temperature.

(See page 12, 13)

Example

SUS316
 $(3/8" \text{ O.D of tube}) \times (0.049" \text{ wall thickness})$
 $1200^{\circ}\text{F} : 4800 \text{ psi} \times 0.37 = 1776 \text{ psi}$

The applicable operation pressure of SUS 316 tubing for wall thickness, 3/8" O.D \times 0.049", is 1776 psi at 1200°F



Technological Data

Table 2 Stainless Steel Tubing

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

STAINLESS STEEL FRACTIONAL TUBE

| 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 |

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

STAINLESS STEEL METRIC TUBE












| 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 |

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

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

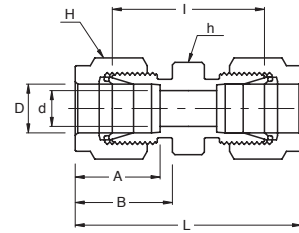
- The above data are based on the minimum wall thickness and the maximum O. D. allowed by and under the standard of ASTM A269.
- The dimensions are not considered to erosion or corrosion.

Union & Connector

| UNION | |
|---|---|
| SU Union page 15 |  |
| SRU Reducing Union page 16 |  |
| SBHRU Bulkhead Reducing Union page 17 |  |
| SBHU Bulkhead Union page 18 |  |
| CONNECTOR | |
| SMC Male Connector page 19 |  |
| SGMC Male Connector For Bonded Washer Seal page 23 |  |
| SOMC Male Connector For Metal Gasket Seal page 24 |  |
| SFC Female Connector page 25 |  |
| SGC Gauge Connector page 27 |  |
| SBMC Bulkhead Male Connector page 28 |  |
| SBFC Bulkhead Female Connector page 29 |  |



**SU
Union**



Connects Fractional Tubes

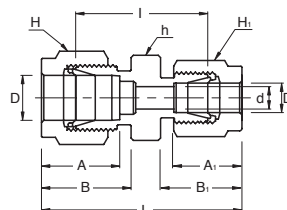
| Part No. | Tube O.D. D (inch) | d Min | Width Across Flat | | A | B | I | L |
|----------|-----------------------|----------|-------------------|----------|-------|-------|-------|--------|
| | | | h (inch) | H (inch) | | | | |
| SU - 1 | 1/16 | 1.27 | 5/16 | 5/16 | 8.63 | 10.92 | 17.52 | 25.15 |
| 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 |

• All dimensions in millimeters unless specified as "inch"

SRU Reducing Union



Connects Fractional Tubes

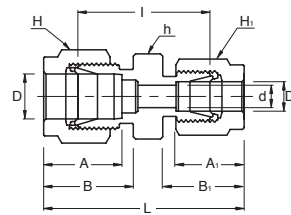
| Part No. | Tube O.D. | | d Min | Width Across Flat | | | A | A ₁ | B | B ₁ | I | L |
|-------------|-----------|-----------------------|----------|-------------------|----------|-----------------------|-------|----------------|-------|----------------|-------|-------|
| | D (inch) | D ₁ (inch) | |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

Connects Metric Tubes

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

• All dimensions in millimeters unless specified as "inch"

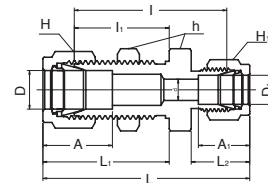
SRU Reducing Union



Connects Metric Tubes To Fractional Tubes

| Part No. | Tube O.D. | | d Min | Width Across Flat | | | A | A ₁ | B | B ₁ | I | L |
|--------------|-----------|-----------------------|----------|-------------------|----|----------------|------|----------------|------|----------------|------|------|
| | D | D ₁ (inch) | | h | H | H ₁ | | | | | | |
| 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 | 12 | 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 | 16 | 14.3 | 16.2 | 15.3 | 18.6 | 17.7 | 27.4 | 42.3 |
| SRU 10M - 2 | 10 | 1/8 | 2.4 | 18 | 19 | 11.1 | 17.2 | 12.8 | 19.5 | 15.2 | 27.7 | 41.8 |
| SRU 10M - 4 | 10 | 1/4 | 4.8 | 18 | 19 | 14.3 | 17.2 | 15.3 | 19.5 | 17.7 | 29.5 | 44.5 |
| SRU 10M - 5 | 10 | 5/16 | 6.4 | 18 | 19 | 15.9 | 17.2 | 16.2 | 19.5 | 18.6 | 30.0 | 45.1 |
| SRU 10M - 6 | 10 | 3/8 | 7.1 | 18 | 19 | 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 |

SBHRU Bulkhead Reducing Union

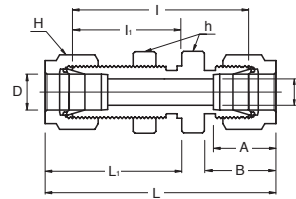


Connects Fractional Tubes

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

• All dimensions in millimeters unless specified as "inch"

SBHU Bulkhead Union



Connects Fractional Tubes

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

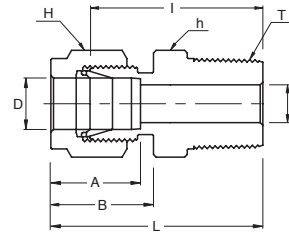
Connects Metric Tubes

| Part No. | Tube O.D. D | d Min | Width Across Flat | | | A | B | I | I ₁ | L | L ₁ | Panel Hole Drill Size | Panel Max. Thickness |
|------------|----------------|----------|-------------------|------------------|----|------|------|------|----------------|------|----------------|-----------------------------|----------------------------|
| | | | h | h ₁ * | H | | | | | | | | |
| SBHU - 3M | 3 | 2.4 | 14 | 12.7 | 12 | 12.9 | 15.3 | 38.1 | 24.6 | 51.3 | 31.2 | 8.3 | 12.7 |
| SBHU - 4M | 4 | 2.4 | 14 | 14.3 | 12 | 13.7 | 16.1 | 40.4 | 25.4 | 53.6 | 32.0 | 9.9 | 12.7 |
| SBHU - 6M | 6 | 4.8 | 16 | 15.9 | 14 | 15.3 | 17.7 | 42.9 | 26.2 | 57.7 | 33.6 | 11.5 | 10.2 |
| SBHU - 8M | 8 | 6.4 | 18 | 17.5 | 16 | 16.2 | 18.6 | 46.0 | 28.6 | 61.0 | 36.1 | 13.1 | 11.2 |
| SBHU - 10M | 10 | 7.9 | 22 | 22.0 | 19 | 17.2 | 19.5 | 48.5 | 29.4 | 63.7 | 37.0 | 16.2 | 11.2 |
| SBHU - 12M | 12 | 9.5 | 24 | 23.8 | 22 | 22.8 | 22.0 | 50.8 | 31.8 | 71.0 | 41.9 | 19.5 | 12.7 |
| SBHU - 15M | 15 | 11.9 | 27 | 27.0 | 25 | 24.4 | 22.0 | 52.3 | 32.5 | 72.5 | 42.6 | 22.8 | 12.7 |
| SBHU - 16M | 16 | 12.7 | 27 | 27.0 | 25 | 24.4 | 22.0 | 52.3 | 32.5 | 72.5 | 42.6 | 22.8 | 12.7 |
| SBHU - 18M | 18 | 15.1 | 30 | 30.0 | 30 | 24.4 | 22.0 | 58.7 | 37.3 | 78.9 | 47.4 | 26.0 | 16.8 |
| SBHU - 20M | 20 | 15.9 | 35 | 35.0 | 32 | 26.0 | 22.0 | 64.3 | 42.9 | 84.5 | 53.0 | 29.0 | 17.0 |
| SBHU - 22M | 22 | 18.3 | 35 | 35.0 | 32 | 26.0 | 22.0 | 64.3 | 42.9 | 84.5 | 53.0 | 29.0 | 19.1 |
| SBHU - 25M | 25 | 21.8 | 41.3 | 41.3 | 38 | 31.3 | 26.5 | 71.4 | 45.2 | 95.9 | 57.5 | 33.7 | 19.1 |

h1* : Metric Tubes Bulkhead Hexagon application only

* All dimensions in millimeters unless specified as "inch"

SMC
Male Connector

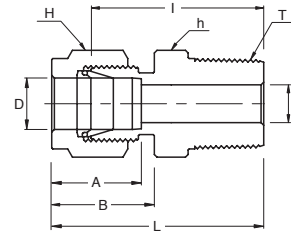
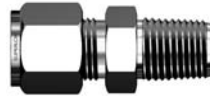


Connects Fractional Tubes To Female NPT Thread

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

• All dimensions in millimeters unless specified as "inch"

SMC
Male Connector



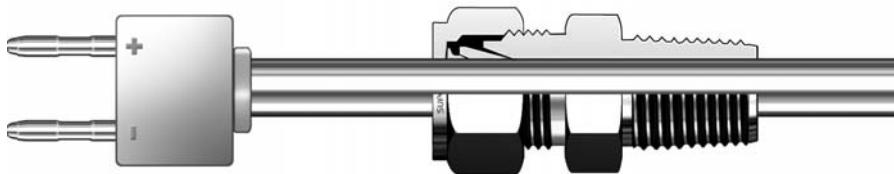
Connects Fractional Tube To Female ISO Tapered Thread

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

Bored - Through Fittings for Thermocouples

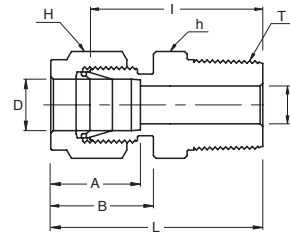
SUPERLOK Bored-Through MALE CONNECTORS accommodate thermocouples or dip tubes
To order, use TM as a suffix to the desired Male Connector ordering number.

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



• All dimensions in millimeters unless specified as "inch"

SMC
Male Connector

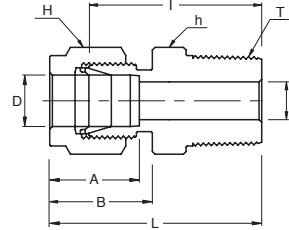
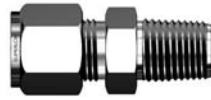


Connects Metric Tube To Female NPT Thread

| 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 |

• All dimensions in millimeters unless specified as "inch"

SMC
Male Connector

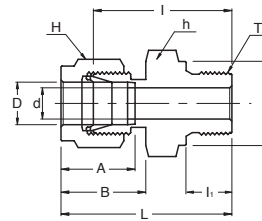


Connects Metric Tube To Female ISO Tapered Thread

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

• All dimensions in millimeters unless specified as "inch"

SGMC
Male Connector For
Bonded Washer Seal

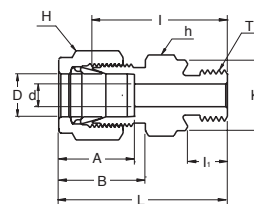


Connects Metric Tubes To Female ISO Parallel Thread

| Part No. | Tube O.D. D | T G (PF) | 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 |

* See page 10 for Explanation of ISO Pipe Thread.

SOMC Male Connector For Metal Gasket Seal

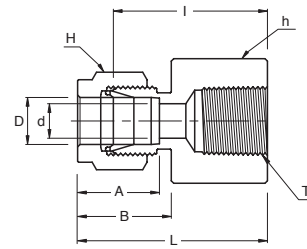


Connects Metric Tube To Female ISO Parallel Thread

| Part No. | Tube O.D. D | T G (PF) | d Min | Width Across Flat | | A | B | I | I _i | 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 |

* See page 10 for Explanation of ISO Pipe Thread.

SFC
Female Connector

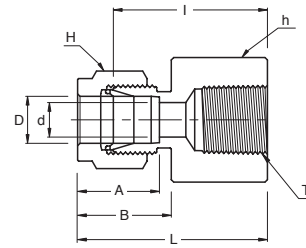


Connects Fractional Tubes To Male NPT Thread

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

* ISO Tapered Threads are available upon request

SFC
Female Connector



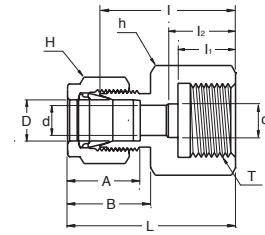
Connects Metric Tubes To Male ISO Tapered Thread

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

* NPT Threads are available upon request

• All dimensions in millimeters unless specified as "inch"

SGC
Gauge Connector



Connects Fractional Tubes To ISO Parallel Thread

| Part No. | Tube O.D. D (inch) | T G (PF) | d Min | d ₁ | Width Across Flat | | A | B | I | I ₁ | I 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 |

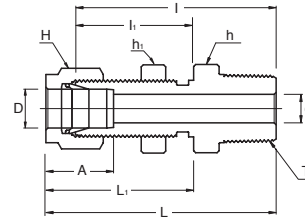
Connects Metric Tubes To ISO Parallel Thread

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

* See page 11 for Explanation of ISO Pipe Thread.

• All dimensions in millimeters unless specified as "inch"

SBMC
Bulkhead Male
Connector

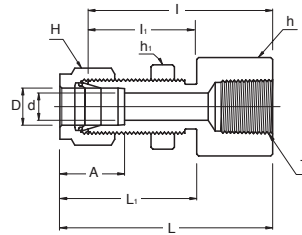


Connects Fractional Tubes To Female NPT Thread

| Part No. | Tube O.D. D (inch) | T* (NPT) | d Min | Width Across Flat | | | A | l | li | L | Li | Panel Hole Drill Size | Panel Max. Thickness |
|---------------|--------------------|----------|-------|-------------------|-----------|----------|-------|-------|-------|-------|-------|-----------------------|----------------------|
| | | | | h (inch) | h1 (inch) | H (inch) | | | | | | | |
| 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 | 3/4 | 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 |

* ISO Tapered Threads are available upon request

SBFC
Bulkhead Female
Connector



Connects Fractional Tubes To Male NPT Thread

| Part No. | Tube O.D. D (inch) | T* (NPT) | d Min | Width Across Flat | | | A | I | I ₁ | L | L ₁ | Panel Hole Drill Size | Panel Max. Thickness |
|---------------|--------------------|----------|-------|-------------------|-----------------------|----------|-------|-------|----------------|-------|----------------|-----------------------|----------------------|
| | | | | h (inch) | h ₁ (inch) | H (inch) | | | | | | | |
| 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 |
















* ISO Tapered Threads are available upon request

Connects Metric Tubes To Male NPT Thread

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

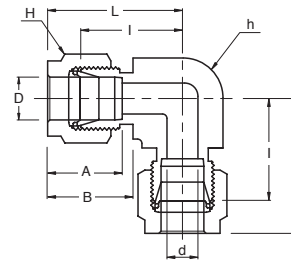
* ISO Tapered Threads are available upon request

Elbow & Tee

| ELBOWS | |
|---|---|
| SUE Union Elbow page 31 |  |
| SME Male Elbow page 32 |  |
| SHME 45° Male Elbow page 35 |  |
| SPHME 45° Positionable Male Elbow page 36 |  |
| SPME Positionable Male Elbow page 36 |  |
| SFE Female Elbow page 38 |  |
| TEE | |
| SUT Union Tee page 39 |  |
| SRUT Reducing Union Tee page 41 |  |
| SMBT Male Branch Tee page 42 |  |
| SPMBT Positionable Male Branch Tee page 43 |  |
| SMRT Male Run Tee page 44 |  |
| SPMRT Positionable Male Run Tee page 45 |  |
| SFBT Female Branch Tee page 47 |  |
| SFRT Female Run Tee page 48 |  |
| SUC Union Cross page 49 |  |



SUE
Union Elbow



Connects Fractional Tubes

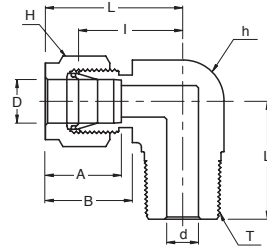
| Part No. | Tube O.D. D (inch) | d Min | Width Across Flat | | A | B | I | L |
|----------|-----------------------|----------|-------------------|----------|-------|-------|-------|--------|
| | | | h (inch) | H (inch) | | | | |
| SUE - 1 | 1/16 | 1.27 | 3/8 | 5/16 | 8.63 | 10.92 | 14.00 | 18.03 |
|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

Connects Metric Tubes

| Part No. | Tube 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 |

• All dimensions in millimeters unless specified as "inch"

SME
Male Elbow

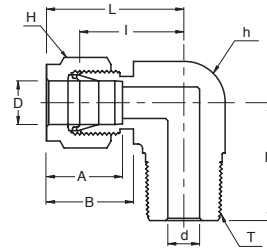


Connects Metric Tubes To Female NPT Thread

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

• All dimensions in millimeters unless specified as "inch"

SME
Male Elbow

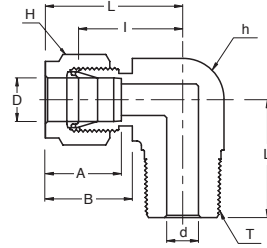


Connects Metric Tubes To Female ISO Tapered Thread

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

• All dimensions in millimeters unless specified as "inch"

SME
Male Elbow

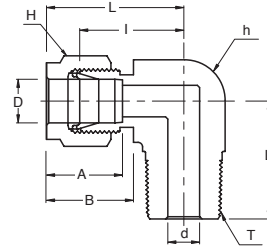


Connects Fractional Tube To Female NPT Thread

| 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 |

• All dimensions in millimeters unless specified as "inch"

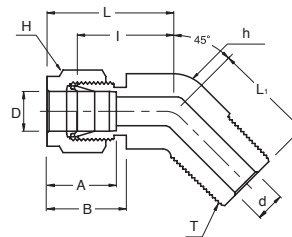
SME
Male Elbow



Connects Fractional Tubes To Female ISO Tapered Thread

| Part No. | Tube O.D. D (inch) | T R (PT) | 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 |

SHME
45° Male Elbow



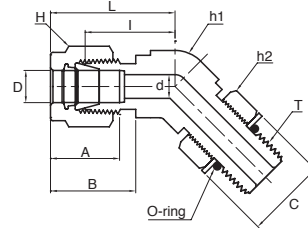
Connects Fractional Tubes To Female NPT Thread

| 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 |

* ISO Tapered Threads are available upon request

• All dimensions in millimeters unless specified as "inch"

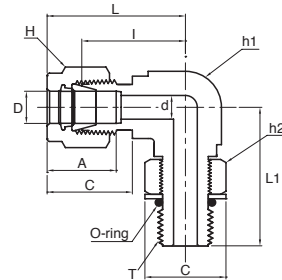
SPHME
45° Positionable
Male Elbow



Connects Fractional 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 | h2 | H | | | | | | |
| SPHME 4 - 4U | 1/4 | 7/16-20 | 4.83 | 1/2 | 9/16 | 9/16 | 15.24 | 17.78 | 18.29 | 25.64 | 25.65 | 16.51 |
| SPHME 6 - 6U | 3/8 | 9/16-18 | 7.11 | 5/8 | 11/16 | 11/16 | 16.76 | 19.30 | 20.57 | 27.94 | 28.19 | 20.07 |
| SPHME 8 - 8U | 1/2 | 3/4-16 | 10.41 | 13/16 | 7/8 | 7/8 | 22.86 | 21.84 | 21.84 | 32.00 | 32.26 | 25.65 |
| SPHME 12 - 12U | 3/4 | 1-1/16-12 | 15.75 | 1-1/8 | 1-1/4 | 1-1/8 | 24.38 | 24.84 | 29.72 | 39.88 | 47.24 | 36.58 |
| SPHME 16 - 16U | 1 | 1-5/16-12 | 22.35 | 1-3/8 | 1-1/2 | 1-1/2 | 31.24 | 26.42 | 35.31 | 47.50 | 50.55 | 43.94 |

SPME
Positionable
Male Elbow

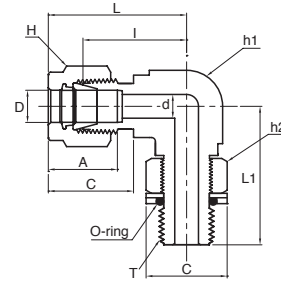


Connects Fractional Tubes To SAE/MS Straight Thread

| Part No. | Tube O.D. D (inch) | T (U) | d Min | Width Across Flat | | | A | B | I | L | L1 | C |
|---------------|-----------------------|-----------|----------|-------------------|-------|-------|-------|-------|-------|--------|-------|-------|
| | | | | h1 | h2 | H | | | | | | |
| SPME 4 - 4U | 1/4 | 7/16-20 | 4.83 | 1/2 | 9/16 | 9/16 | 15.24 | 17.78 | 21.08 | 28.45 | 28.45 | 16.51 |
| SPME 4 - 6U | 1/4 | 9/16-18 | 4.83 | 5/8 | 11/16 | 9/16 | 15.24 | 17.78 | 23.11 | 30.48 | 32.26 | 20.07 |
| SPME 5 - 5U | 5/16 | 1/2-20 | 5.84 | 9/16 | 5/8 | 5/8 | 16.26 | 18.54 | 22.86 | 30.23 | 29.46 | 18.29 |
| SPME 6 - 6U | 3/8 | 9/16-18 | 7.11 | 5/8 | 11/16 | 11/16 | 16.76 | 19.30 | 24.64 | 32.00 | 32.26 | 20.07 |
| SPME 6 - 8U | 3/8 | 3/4-16 | 7.11 | 13/16 | 7/8 | 11/16 | 16.76 | 19.30 | 27.43 | 34.80 | 37.85 | 25.65 |
| SPME 8 - 8U | 1/2 | 3/4-16 | 10.41 | 13/16 | 7/8 | 7/8 | 22.86 | 21.84 | 27.43 | 37.59 | 37.85 | 25.65 |
| SPME 10 - 10U | 5/8 | 7/8-14 | 12.70 | 15/16 | 1 | 1 | 24.38 | 21.84 | 29.46 | 39.62 | 43.43 | 29.46 |
| SPME 12 - 12U | 3/4 | 1-1/16-12 | 15.75 | 1-1/16 | 1-1/4 | 1-1/8 | 24.38 | 21.84 | 31.24 | 41.40 | 48.77 | 36.58 |
| SPME 14 - 14U | 7/8 | 3/16-12 | 18.29 | 1-3/16 | 1-3/8 | 1-1/4 | 25.91 | 21.84 | 33.02 | 43.18 | 50.55 | 40.39 |
| SPME 16 - 16U | 1 | 1-5/16-12 | 22.35 | 1-3/8 | 1-1/2 | 1-1/2 | 31.24 | 26.42 | 38.35 | 50.55 | 53.59 | 43.94 |
| SPME 20 - 20U | 1-1/4 | 1-5/8-12 | 27.69 | 1-11/16 | 1-7/8 | 1-7/8 | 41.15 | 38.86 | 45.72 | 67.82 | 58.17 | 54.86 |
| SPME 24 - 24U | 1-1/2 | 1-7/8-12 | 34.04 | 2 | 2-1/8 | 2-1/4 | 50.04 | 45.21 | 50.80 | 77.98 | 60.45 | 62.23 |
| SPME 32 - 32U | 2-1/2 | 2-1/2-12 | 45.97 | 2-3/4 | 2-3/4 | 3 | 67.56 | 62.74 | 69.85 | 107.19 | 71.63 | 80.26 |

• All dimensions in millimeters unless specified as "inch"

SPME
Positionable
Male Elbow



Connects Fractional Tubes To Female ISO Parallel Thread

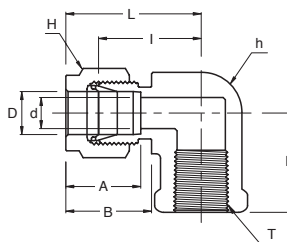
| Part No. | Tube O.D. D (inch) | T (PF) | d Min | Width Across Flat | | | A | B | I | L | L1 | C |
|---------------|-----------------------|-----------|----------|-------------------|--------|-------|-------|-------|-------|-------|-------|-------|
| | | | | h1 | h2 | H | | | | | | |
| SPME 4 - 2G | 1/4 | 1/8 | 4.06 | 1/2 | 9/16 | 9/16 | 15.24 | 17.78 | 19.56 | 26.92 | 26.42 | 17.27 |
| SPME 4 - 4G | 1/4 | 1/4 | 4.83 | 5/8 | 3/4 | 9/16 | 15.24 | 17.78 | 21.59 | 28.96 | 32.26 | 22.86 |
| SPME 6 - 4G | 3/8 | 1/4 | 5.84 | 5/8 | 3/4 | 11/16 | 16.76 | 19.30 | 23.11 | 30.48 | 32.26 | 22.86 |
| SPME 6 - 6G | 3/8 | 3/8 | 7.11 | 13/16 | 7/8 | 11/16 | 16.76 | 19.30 | 25.91 | 33.27 | 37.08 | 26.42 |
| SPME 8 - 4G | 1/2 | 1/4 | 5.84 | 13/16 | 3/4 | 7/8 | 22.86 | 21.84 | 25.91 | 36.07 | 35.05 | 26.42 |
| SPME 8 - 6G | 1/2 | 3/8 | 7.87 | 13/16 | 7/8 | 7/8 | 22.86 | 21.84 | 25.91 | 36.07 | 37.08 | 22.86 |
| SPME 8 - 8G | 1/2 | 1/2 | 10.41 | 15/16 | 1-1/16 | 7/8 | 22.86 | 21.84 | 27.94 | 38.10 | 43.43 | 26.42 |
| SPME 10 - 8G | 5/8 | 1/2 | 11.94 | 15/16 | 1-1/16 | 1 | 24.38 | 21.84 | 27.94 | 38.10 | 43.43 | 32.00 |
| SPME 12 - 8G | 3/4 | 1/2 | 11.94 | 1-1/16 | 1-1/16 | 1-1/8 | 24.38 | 21.84 | 29.72 | 39.88 | 45.21 | 32.00 |
| SPME 12 - 12G | 3/4 | 3/4 | 15.75 | 1-1/16 | 1-3/8 | 1-1/8 | 24.38 | 21.84 | 29.72 | 39.88 | 48.77 | 41.15 |
| SPME 16 - 12G | 1 | 3/4 | 15.75 | 1-3/8 | 1-3/8 | 1-1/2 | 31.24 | 26.42 | 36.83 | 49.02 | 53.34 | 41.15 |
| SPME 16 - 16G | 1 | 1 | 19.81 | 1-3/8 | 1-3/8 | 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 (inch) | T (PF) | d Min | Width Across Flat | | | A | B | I | L | L1 | 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 |

• All dimensions in millimeters unless specified as "inch"

SFE
Female Elbow



Connects Fractional 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 |

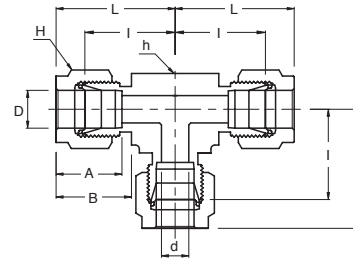
Connects Metric Tubes To Male NPT Thread

| 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 |

* ISO Tapered Threads are available upon request

• All dimensions in millimeters unless specified as "inch"

SUT
Union Tee



Connects Fractional Tubes

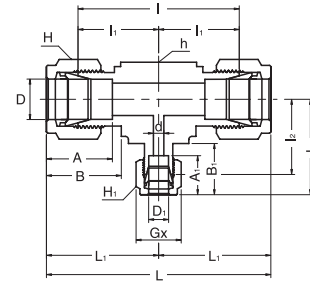
| Part No. | Tube O.D. D (inch) | d Min | Width Across Flat | | A | B | I | L |
|----------|-----------------------|----------|-------------------|----------|-------|-------|-------|--------|
| | | | h (inch) | H (inch) | | | | |
| SUT - 1 | 1/16 | 1.27 | 3/8 | 5/16 | 8.63 | 10.92 | 14.00 | 18.03 |
| 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 |

• All dimensions in millimeters unless specified as "inch"

SRUT Reducing Union Tee

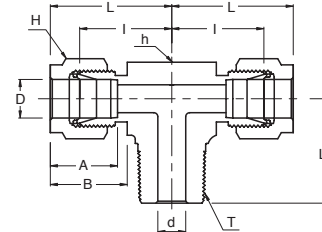


Connects Fractional Tubes

| 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 |

• All dimensions in millimeters unless specified as "inch"

SMBT
Male Branch Tee



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) | | | | | |
| 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 |

* ISO Tapered Threads are available upon request

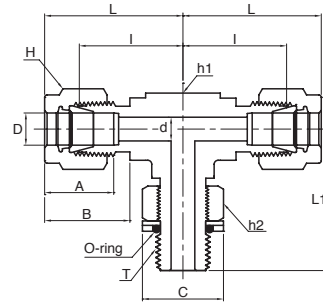
Connects Metric Tubes To Female ISO Tapered Thread

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

* NPT Threads are available upon request

• All dimensions in millimeters unless specified as "inch"

SPMBT
Positionable
Male Branch Tee



Connects Fractional Tubes To Female ISO Parallel Thread

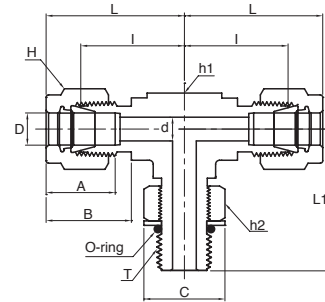
| Part No. | Tube O.D. D (inch) | T (PF) | d Min | Width Across Flat | | | A | B | I | L | L1 | C |
|----------------|-----------------------|-----------|----------|-------------------|--------|-------|-------|-------|-------|-------|-------|-------|
| | | | | h1 | h2 | H | | | | | | |
| SPMBT 4 - 2G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

Connects Metric 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 | 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 |

• All dimensions in millimeters unless specified as "inch"

SPMBT
Positionable
Male Branch Tee

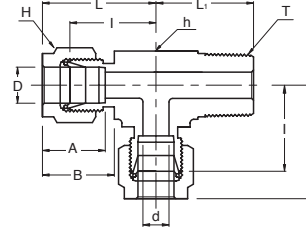


Connects Fractional Tubes To SAE/MS Straight Thread Boss

| Part No. | Tube O.D. D (inch) | T (U) | d Min | Width Across Flat | | | A | B | I | L | L1 | C |
|----------------|-----------------------|-----------|----------|-------------------|-------|-------|-------|-------|-------|--------|-------|-------|
| | | | | h1 | h2 | H | | | | | | |
| SPMBT 4 - 4U | 1/4 | 7/16-20 | 4.83 | 1/2 | 9/16 | 9/16 | 15.24 | 17.78 | 21.08 | 28.45 | 28.45 | 16.51 |
| SPMBT 6 - 6U | 3/8 | 9/16-18 | 7.11 | 5/8 | 11/16 | 11/16 | 16.76 | 19.30 | 24.64 | 32.00 | 32.26 | 20.07 |
| SPMBT 8 - 8U | 1/2 | 3/4-16 | 10.41 | 13/16 | 7/8 | 7/8 | 22.86 | 21.84 | 27.43 | 37.59 | 37.85 | 25.65 |
| SPMBT 12 - 12U | 3/4 | 1-1/16-12 | 15.75 | 1-1/16 | 1-1/4 | 1-1/8 | 24.38 | 21.84 | 31.24 | 41.40 | 48.77 | 36.58 |
| SPMBT 16 - 16U | 1 | 1-5/8-12 | 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 |

• All dimensions in millimeters unless specified as "inch"

SMRT
Male Run Tee



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) | | | | | |
| 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 |

* ISO Tapered Threads are available upon request

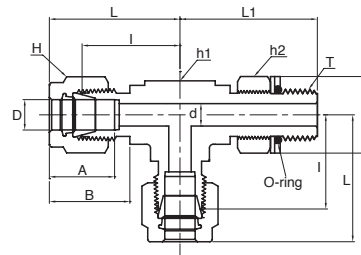
Connects Metric Tubes To Female ISO Tapered Thread

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

* NPT Threads are available upon request

• All dimensions in millimeters unless specified as "inch"

SPMRT
Positionable
Male Run Tee



Connects Fractional Tubes To Female ISO Parallel Thread

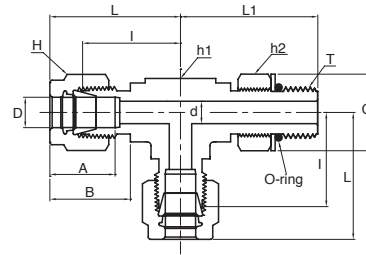
| Part No. | Tube O.D. D (inch) | T (PF) | d Min | Width Across Flat | | | A | B | I | L | L1 | C |
|----------------|-----------------------|-----------|----------|-------------------|--------|-------|-------|-------|-------|-------|-------|-------|
| | | | | h1 | h2 | H | | | | | | |
| SPMRT 4 - 2G | 1/4 | 1/8 | 4.06 | 1/2 | 9/16 | 9/16 | 15.24 | 17.78 | 19.56 | 26.92 | 26.42 | 17.27 |
| SPMRT 4 - 4G | 1/4 | 1/4 | 4.83 | 5/8 | 3/4 | 9/16 | 15.24 | 17.78 | 21.59 | 28.96 | 32.26 | 22.86 |
| SPMRT 6 - 4G | 3/8 | 1/4 | 5.84 | 5/8 | 3/4 | 11/16 | 16.76 | 19.30 | 21.11 | 30.48 | 32.26 | 22.86 |
| SPMRT 8 - 6G | 1/4 | 3/8 | 7.87 | 13/16 | 7/8 | 7/8 | 22.86 | 21.84 | 25.91 | 36.07 | 37.08 | 26.42 |
| SPMRT 8 - 8G | 3/8 | 1/2 | 10.41 | 15/16 | 1-1/16 | 7/8 | 22.86 | 21.84 | 27.94 | 38.10 | 43.43 | 32.00 |
| SPMRT 10 - 8G | 1/2 | 1/2 | 11.94 | 15/16 | 1-1/16 | 1 | 24.38 | 21.84 | 27.94 | 38.10 | 43.43 | 32.00 |
| SPMRT 12 - 8G | 3/4 | 1/2 | 11.94 | 1-1/16 | 1-1/16 | 1-1/8 | 24.38 | 21.84 | 29.72 | 39.88 | 45.21 | 32.00 |
| SPMRT 12 - 12G | 3/4 | 3/4 | 15.75 | 1-1/16 | 1-3/8 | 1-1/8 | 24.38 | 21.84 | 29.72 | 39.88 | 48.77 | 41.15 |
| SPMRT 16 - 16G | 1 | 1 | 19.81 | 1-3/8 | 1-5/8 | 1-1/2 | 31.24 | 26.42 | 36.83 | 49.02 | 53.59 | 48.51 |

Connects Metric 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 | 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 |

• All dimensions in millimeters unless specified as "inch"

SPMRT
Positionable
Male Run Tee

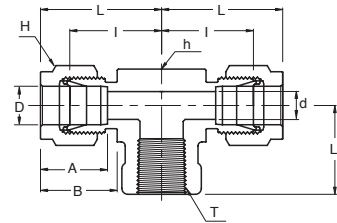


Connects Fractional Tubes To SAE/MS Straight Thread

| Part No. | Tube O.D. D (inch) | T (U) | d Min | Width Across Flat | | | A | B | I | L | L1 | C |
|----------------|-----------------------|-----------|----------|-------------------|-------|-------|-------|-------|-------|--------|-------|-------|
| | | | | h1 | 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 | 1-5/8-12 | 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 |

• All dimensions in millimeters unless specified as "inch"

SFBT
Female Branch Tee



Connects Fractional 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 |

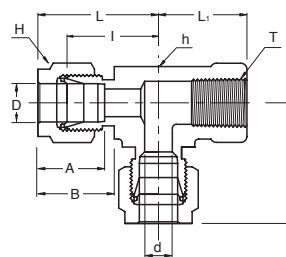
Connects Metric Tubes To Male NPT Thread

| 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 |

* ISO Tapered Threads are available upon request

• All dimensions in millimeters unless specified as "inch"

SFRT Female Run Tee



Connects Fractional 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 |

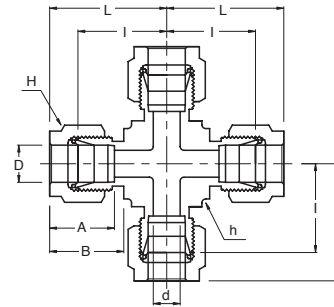
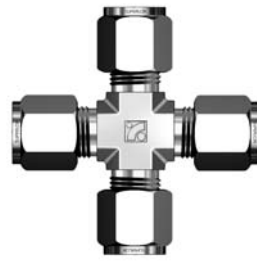
Connects Metric Tubes To Male NPT Thread

| Part No. | Tube O.D. 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 |

* ISO Tapered Threads are available upon request

• All dimensions in millimeters unless specified as "inch"

SUC
Union Cross



Connects Fractional 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 |

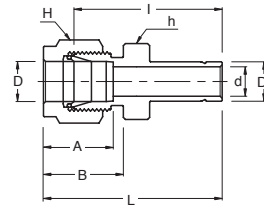
• All dimensions in millimeters unless specified as "inch"

Stub Tube Connector, An Tube & O-Ring Seal



| STUB TUBE CONNECTOR | |
|---|---|
| SR Reducer page 51 |  |
| SBR Bulkhead Reducer page 53 |  |
| SMA Male Adapter page 54 |  |
| SFA Female Adapter page 55 |  |
| SPC Port Connector page 56 |  |
| SRPC Reducing Port Connector page 57 |  |
| SFTC Flange Lapped Tubes Connector page 58 |  |
| AN TUBE | |
| SAF An Flare page 58 |  |
| SAU An Union page 59 |  |
| SAA An Adapter page 59 |  |
| O-RING SEAL | |
| SOSC O-Seal Straight Thread Connector page 60 |  |
| SOPC O-Seal Pipe Thread Connector page 60 |  |
| SSMC SAE/MS Male Connector page 61 |  |

SR
Reducer



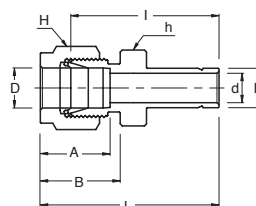
Connects Fractional Tubes To Fractional SUPERLOK Port

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

• All dimensions in millimeters unless specified as "inch"

SR
Reducer

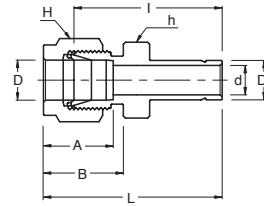


Connects Metric Tubes To Metric SUPERLOK Port

| Part No. | Tube O.D. | | d Min | Width Across Flat | | A | B | I | L |
|--------------|-----------|----------------|----------|-------------------|----|------|------|------|------|
| | D | D ₁ | | 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 |

• All dimensions in millimeters unless specified as "inch"

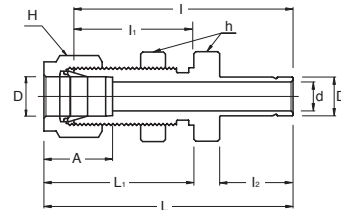
SR
Reducer



Connects Metric Tubes To Fractional SUPERLOK Port

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

SBR
Bulkhead Reducer

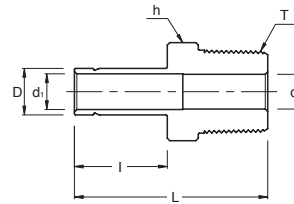


Connects Fractional Tubes To Fractional SUPERLOK Port

| Part No. | Tube O.D. D (inch) | d Min | Width Across Flat | | A | I | I ₁ | I ₂ | L | L ₁ | Panel Hole Drill Size | Panel Max. Thickness |
|-------------|--------------------|-------|-------------------|----------|-------|-------|----------------|----------------|--------|----------------|-----------------------|----------------------|
| | | | h (inch) | H (inch) | | | | | | | | |
| 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 |

• All dimensions in millimeters unless specified as "inch"

SMA
Male Adapter



Connects Fractional SUPERLOK Port To Female NPT Thread

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

* ISO Tapered Threads are available upon request

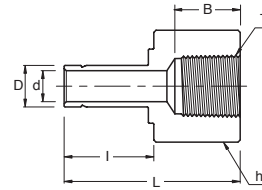
Connects Metric SUPERLOK Port To Female NPT Thread

| 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 |

* ISO Tapered Threads are available upon request

• All dimensions in millimeters unless specified as "inch"

SFA
Female Adapter



Connects Fractional SUPERLOK Port To Male NPT Thread

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

* ISO Tapered Threads are available upon request

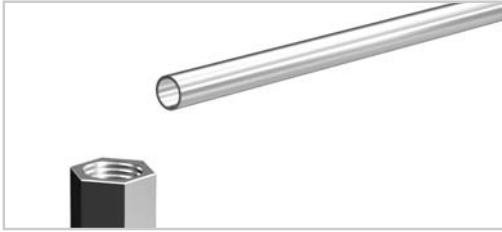
Connects Metric SUPERLOK Port To Male NPT Thread

| 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 |

* ISO Tapered Threads are available upon request

• All dimensions in millimeters unless specified as "inch"

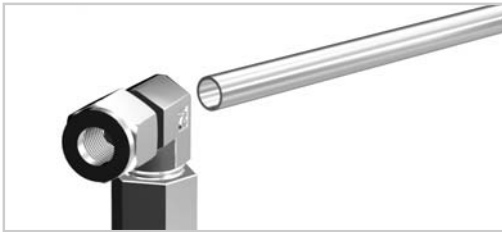
SUPERLOK Adapter Solve Alignment Problems



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



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

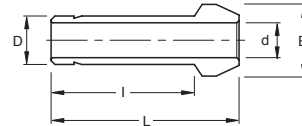


2. With pipe connection tight, the male elbow is pointing in the wrong direction for desired tubing run.



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

SPC Port Connector



Connects Fractional SUPERLOK Ports

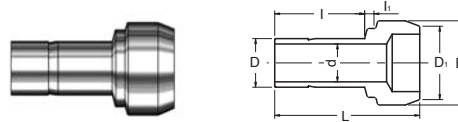
| Part No. | Tube O.D.(D) (inch) | d (Min) | E | I | L |
|----------|---------------------|---------|-------|-------|-------|
| SPC - 2 | 1/8 | 2.28 | 6.09 | 15.75 | 22.35 |
| SPC - 4 | 1/4 | 4.82 | 9.39 | 18.79 | 24.63 |
| SPC - 5 | 5/16 | 6.35 | 10.92 | 20.06 | 25.90 |
| SPC - 6 | 3/8 | 7.11 | 12.70 | 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 |

• All dimensions in millimeters unless specified as "inch"

SRPC Reducing Port Connector

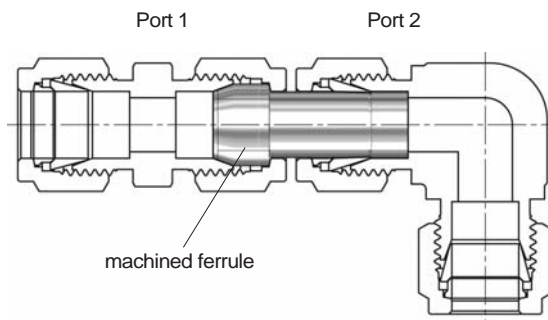


Connects Fractional SUPERLOK Port To Male AN

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

* ISO Tapered Threads are available upon request

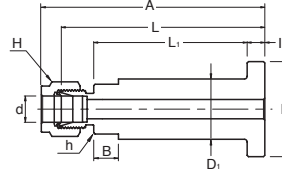
Installation Instructions Port Connector



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

• All dimensions in millimeters unless specified as "inch"

SFTC
Flange Lapped
 Tubes Connector



Connects Fractional Tubes

| Part No. | Tube Size (inch) | Flange Seat | Dimensions | | | | | | | | | |
|-------------|------------------|-------------|------------|-----|----------------|------|-----|----------|----------|------|----------------|---------|
| | | | A | B | L ₁ | L | I | h (inch) | H (inch) | D | D ₁ | 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 |

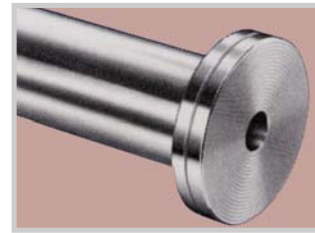
Flange lapped tube connector provides easy joint between process lines and instruments designed for use with lap joint flanges to ANSI B 16.5 or BS 1560

Flange Seal Finish

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

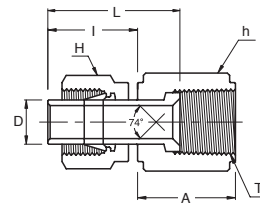


Smooth Identifier : SM



Serrated Identifier : SR

SAF
An Flare

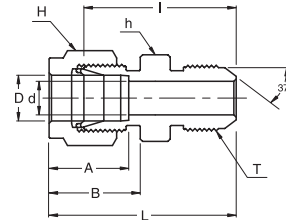


Connects Fractional SUPERLOK Port To Male AN

| Part No. | Tube O.D. D (inch) | AN Tube Flare Size | Straight Thread T (U) | Width Across Flat | | 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 |

• All dimensions in millimeters unless specified as "inch"

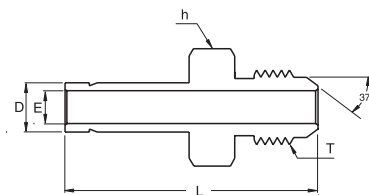
SAU
An Union



Connects Fractional 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 | 1/8 | 1/4 | 7/16-20 | 2.28 | 1/2 | 7/16 | 12.70 | 15.24 | 28.44 | 35.05 |
| SAU 4 - 4U | 1/4 | 1/4 | 7/16-20 | 4.31 | 1/2 | 9/16 | 15.24 | 17.78 | 30.22 | 37.59 |
| SAU 5 - 5U | 5/16 | 5/16 | 1/2-20 | 5.84 | 9/16 | 5/8 | 16.25 | 18.54 | 30.98 | 38.35 |
| SAU 6 - 4U | 3/8 | 1/4 | 7/16-20 | 4.31 | 5/8 | 11/16 | 16.76 | 19.30 | 32.25 | 39.62 |
| SAU 6 - 6U | 3/8 | 3/8 | 9/16-18 | 7.11 | 5/8 | 11/16 | 16.76 | 19.30 | 32.25 | 39.62 |
| SAU 8 - 8U | 1/2 | 1/2 | 3/4-16 | 9.90 | 13/16 | 7/8 | 22.86 | 21.84 | 35.81 | 45.97 |
| SAU 12 - 12U | 3/4 | 3/4 | 1-1/16-12 | 15.49 | 1-1/8 | 1-1/8 | 24.38 | 21.84 | 43.18 | 53.34 |
| SAU 16 - 16U | 1 | 1 | 1-5/16-12 | 21.33 | 1-3/8 | 1-1/2 | 31.24 | 26.41 | 49.27 | 61.46 |

SAA
An Adapter

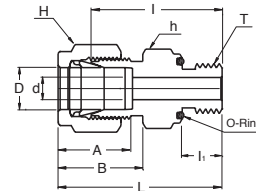


Connects Fractional SUPERLOK Port To AN Flared Tubes

| Part No. | Tube 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 |

• All dimensions in millimeters unless specified as "inch"

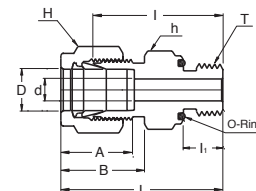
SOSC
O-Seal Straight
Thread Connector



Connects Fractional 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 | 1/2 | 13.71 | 16.00 | 27.68 | 9.65 | 34.29 | -012 |
| SOSC 4 - 4U | 1/4 | 7/16-20 | 4.82 | 3/4 | 9/16 | 15.24 | 17.78 | 30.98 | 10.41 | 38.35 | -111 |
| SOSC 5 - 5U | 5/16 | 1/2-20 | 6.35 | 7/8 | 5/8 | 16.25 | 18.54 | 33.27 | 11.17 | 40.64 | -112 |
| SOSC 6 - 6U | 3/8 | 9/16-18 | 7.11 | 15/16 | 11/16 | 16.76 | 19.30 | 35.05 | 11.93 | 42.41 | -114 |
| SOSC 8 - 8U | 1/2 | 3/4-16 | 10.41 | 1-1/8 | 7/8 | 22.86 | 21.84 | 35.81 | 11.93 | 45.97 | -116 |
| SOSC 12 - 12U | 3/4 | 1-1/16-12 | 15.75 | 1-1/2 | 1-1/8 | 24.38 | 21.84 | 42.16 | 14.22 | 52.32 | -215 |
| SOSC 16 - 16U | 1 | 1-5/16-12 | 22.35 | 1-3/4 | 1-1/2 | 31.24 | 26.41 | 45.97 | 14.22 | 58.16 | -219 |

SOPC
O-Seal Pipe
Thread Connector

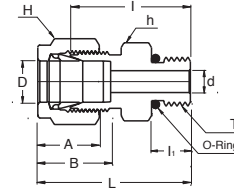
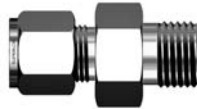


Connects Fractional Tube To Female NPT Thread

| Part No. | Tube O.D. D (inch) | T* (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 |

*All dimensions in millimeters unless specified as "inch"

SSMC
SAE/MS Male Connector

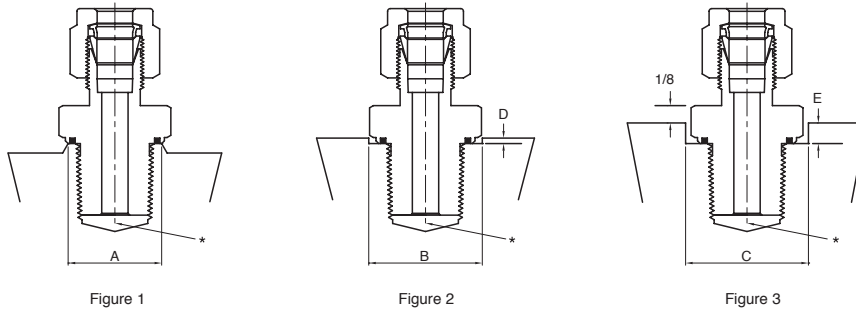


Connects Fractional Tubes To SAE/MS Straight Thread Boss

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

• All dimensions in millimeters unless specified as "inch"

Mounting Dimensions for O-Seal Connectors



*ALLOW CLEARANCE FOR FULL THREAD

■ Installation Instruction

In order to prevent the leakage with SUPERLOK O-Seal Fittings, the surface perpendicular to the axis of the thread should be flat. When installing an O-Seal fitting, turn it until finger-tight. (The squeeze on O-Ring can be felt during the last 1/4 turn). After finger-tight installation, snug lightly with a wrench.

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

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

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

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

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

Dimensions are for reference only and are subject to change.

• All dimensions in millimeters unless specified as “inch”

SAE/MS Straight Thread Positionable Elbows and Tees

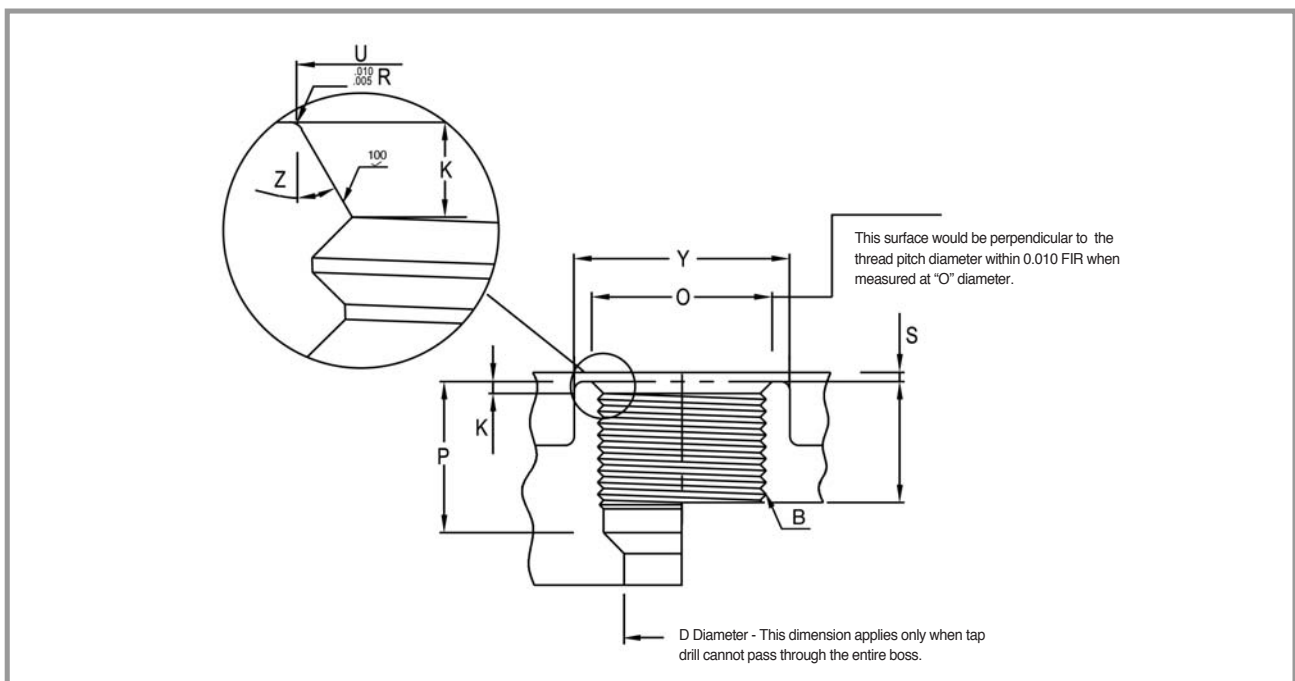
Installation instructions

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



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

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.

• All dimensions in millimeters unless specified as "inch"

Data for SAE/MS Straight Thread Boss

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













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

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 |

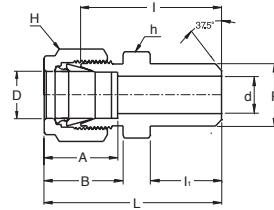
• All dimensions in millimeters unless specified as "inch"

Weld End, Plug & Cap, Spare Part

| WELD END | |
|---|---|
| SPWC Male Pipe Weld Connector page 66 |  |
| SMPWE Male Pipe Weld Elbow page 67 |  |
| SSWC Socket Weld Connector page 67 |  |
| SSWE Socket Weld Elbow page 67 |  |
| PLUG & CAP | |
| SP Plug page 68 |  |
| SC Cap page 68 |  |
| SPARE PART | |
| SN Nut page 69 |  |
| SFF Front Ferrule page 69 |  |
| SBF Back Ferrule page 70 |  |
| SFS Ferrule Set page 70 |  |
| SI Insert page 70 |  |
| SBR Bulkhead Retainer page 71 |  |
| SVP Vent Protector page 71 |  |



SPWC Male Pipe Weld Connector



Connects Fractional Tubes To Pipe

| Part No. | Tube O.D. D (inch) | Male Pipe Size p | | d Min | Width Across Flat | | A | B | I | li | L |
|---------------|--------------------|------------------|-------|-------|-------------------|----------|-------|-------|-------|-------|-------|
| | | Nom. | O.D. | | h (inch) | H (inch) | | | | | |
| SPWC 2 - 2P | 1/8 | 1/8 | 10.30 | 2.28 | 7/16 | 7/16 | 12.70 | 15.24 | 23.87 | 9.65 | 30.48 |
| SPWC 3 - 2P | 3/16 | 1/8 | 10.30 | 3.04 | 7/16 | 1/2 | 13.71 | 16.00 | 24.63 | 9.65 | 31.24 |
| SPWC 4 - 2P | 1/4 | 1/8 | 10.30 | 4.82 | 1/2 | 9/16 | 15.24 | 17.78 | 25.40 | 9.65 | 32.76 |
| SPWC 4 - 4P | 1/4 | 1/4 | 13.70 | 4.82 | 9/16 | 9/16 | 15.24 | 17.78 | 30.48 | 14.22 | 37.84 |
| SPWC 5 - 2P | 5/16 | 1/8 | 10.30 | 5.08 | 9/16 | 5/8 | 16.25 | 18.54 | 26.67 | 9.65 | 34.03 |
| SPWC 5 - 4P | 5/16 | 1/4 | 13.70 | 6.35 | 9/16 | 5/8 | 16.25 | 18.54 | 31.24 | 14.22 | 38.60 |
| SPWC 6 - 4P | 3/8 | 1/4 | 13.70 | 7.11 | 5/8 | 11/16 | 16.76 | 19.30 | 32.51 | 14.22 | 39.87 |
| SPWC 6 - 6P | 3/8 | 3/8 | 17.10 | 7.11 | 11/16 | 11/16 | 16.76 | 19.30 | 32.51 | 14.22 | 39.87 |
| SPWC 6 - 8P | 3/8 | 1/2 | 21.30 | 7.11 | 7/8 | 11/16 | 16.76 | 19.30 | 38.86 | 19.05 | 46.22 |
| SPWC 8 - 6P | 1/2 | 3/8 | 17.10 | 10.41 | 13/16 | 7/8 | 22.86 | 21.84 | 33.27 | 14.22 | 43.43 |
| SPWC 8 - 8P | 1/2 | 1/2 | 21.30 | 10.41 | 7/8 | 7/8 | 22.86 | 21.84 | 38.86 | 19.05 | 49.02 |
| SPWC 8 - 12P | 1/2 | 3/4 | 26.67 | 10.41 | 1-1/16 | 7/8 | 22.86 | 21.84 | 40.38 | 19.05 | 50.54 |
| SPWC 10 - 8P | 5/8 | 1/2 | 21.30 | 12.70 | 15/16 | 1 | 24.38 | 21.84 | 38.86 | 19.05 | 49.02 |
| SPWC 12 - 12P | 3/4 | 3/4 | 26.67 | 15.74 | 1-1/16 | 1-1/8 | 24.38 | 21.84 | 40.38 | 19.05 | 50.54 |
| SPWC 16 - 16P | 1 | 1 | 33.40 | 22.35 | 1-3/8 | 1-1/2 | 31.24 | 26.41 | 50.03 | 23.87 | 62.23 |

Connects Metric Tubes To Pipe

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

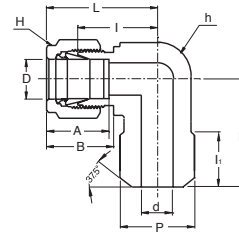
Note : **SUPERLOK** weld ends are constructed per schedule 80 wall thickness or greater. Weld End : ANSI B31.1 and B31.3

Weld end **SUPERLOK** Usage Informations :

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

• All dimensions in millimeters unless specified as "inch"

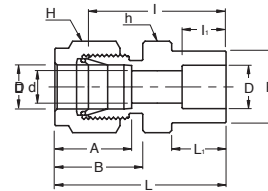
SMPWE Male Pipe Weld Elbow



Connects Fractional Tubes To Pipe

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

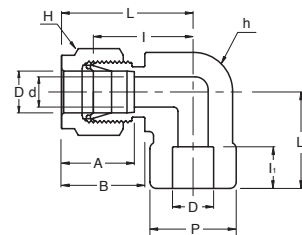
SSWC Socket Weld Connector



Connects Fractional Tubes To Pipe

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

SSWE Socket Weld Elbow

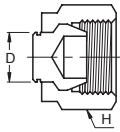


Connects Fractional Tubes To Pipe

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

• All dimensions in millimeters unless specified as "inch"

SP Plug



Plug provides plugging fitting port

Installation instruction

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

Fractional

| Part No. | Tube 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 |

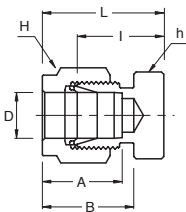
Plugs Unused port of Metric **SUPERLOK** fittings

Metric

| 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 | | | |

Plugs Unused port of Fractional **SUPERLOK** fittings

SC Cap



Installation instruction

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

Connects Caps End of Fractional Tubes

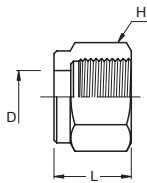
| Part No. | Tube O.D. D (inch) | Width Across Flat | | A | B | I | L |
|----------|--------------------|-------------------|----------|-------|-------|-------|-------|
| | | h (inch) | H (inch) | | | | |
| SC - 1 | 1/16 | 5/16 | 5/16 | 8.63 | 10.92 | 11.20 | 14.98 |
| SC - 2 | 1/8 | 7/16 | 7/16 | 12.70 | 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 |

Connects Metric Tubes

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

• All dimensions in millimeters unless specified as "inch"

**SN
Nut**



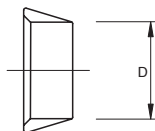
Fractional

| 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

| 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 |

**SFF
Front Ferrule**



Fractional

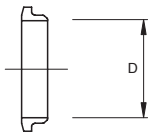
| Part No. | Tube O.D. D (inch) | Part No. | Tube O.D. D (inch) |
|----------|--------------------|----------|--------------------|
| SFF - 1 | 1/16 | SFF - 8 | 1/2 |
| SFF - 2 | 1/8 | SFF - 10 | 5/8 |
| SFF - 3 | 3/16 | SFF - 12 | 3/4 |
| SFF - 4 | 1/4 | SFF - 14 | 7/8 |
| SFF - 5 | 5/16 | SFF - 16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

Metric

| 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 |

• All dimensions in millimeters unless specified as "inch"

SBF Back Ferrule



Fractional

| 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

| 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 | | |

SFS Ferrule Set



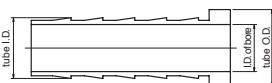
Fractional

| 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 | SFS - 12 | 3/4 |
| SFS - 2 | 1/8 | SFS - 6 | 3/8 | SFS - 14 | 7/8 |
| SFS - 3 | 3/16 | SFS - 8 | 1/2 | SFS - 16 | 1 |
| SFS - 4 | 1/4 | SFS - 10 | 5/8 | | |

Metric

| Part No. | Tube 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 | | |

SI Insert

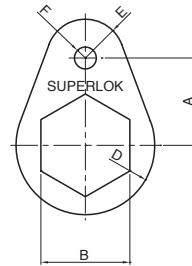


Fractional

| 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 | | | | |

• All dimensions in millimeters unless specified as "inch"

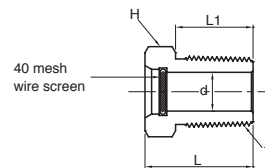
SBR
Bulkhead Retainer



| Part No. | A | B | C | D | E | F | Drill Hole Dia. |
|--------------|--------|--------|-----|--------|-------|------|-----------------|
| 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

SVP
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 |

• All dimensions in millimeters unless specified as "inch"



Valve Series

- Key Operation Ball Valves
- Key Operation Needle Valves
- Ball Valves
- Integral Bonnet Needle Valves
- Union Bonnet Needle Valves
- Check Valves
- High Pressure Check Valves
- High Pressure Needle Valves
- Plug Valves
- Manifold Valves
- Vacuum Clamps
- Water Regulators
- Flexible Hoses
- Double Block & Bleed Valves
- Swing-Out Ball Valves
- Toggle Valves
- Bleed & Purge Valves
- Quick Connectors
- High Pressure Ball Valves
- Hydraulic Ball Valves
- Trunnion Ball Valves
- Rising Plug Valves
- Relief Valves
- Cryogenic Needle Valves
- Cryogenic Ball Valves
- Micron in-Line Filters
- Gauge Root Valves
- Hydraulic Flange and Components

Fitting Series

- Tube Fittings (Compression Type)
- Instrument Thread Fittings
- Forged Fittings
- Bite Type Tube Fittings (DIN2353)
- Bite Type Tube Fittings (JIS B2351)
- 37° Flared Tube Fittings (SAE J514)
- O-Ring Face Seal Fittings
- Hose Connectors & Push-On Hose Fittings

Electric

- MCPD(Molded Case Power Distributor)

BMT Co., Ltd.

21-1, Bukjeong-dong Yangsan-si 경상남도 양산시 북정동 21-1

Gyeongsangnam-do Korea 전화 : 055-783-1000

Tel. 82-55-783-1000 팩스 : 055-783-1111

Fax. 82-55-783-1111 www.superlok.com

www.superlok.com superlok@superlok.com

superlok@superlok.com

