

S-LOK Compression Tube Fittings

The best partner for value creation
We support the innovations of customer



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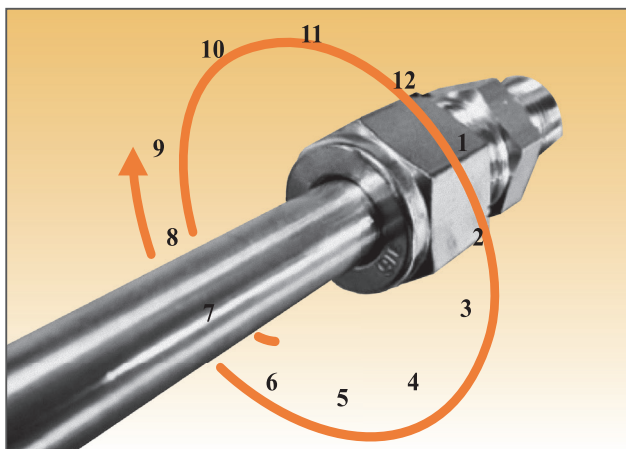
Catalogue No. S-LOK Mar.2024

✚ Installation Instruction

- Fully insert the tube into the fitting and against the shoulder; tight the nut by finger-tightening.
- (**Caution** : The tube may be elliptical or have burrs; foreign material on the surface and/or inside of the tube fitting).

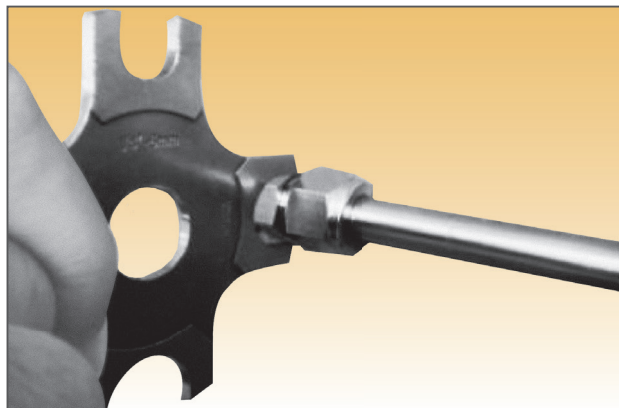


- Mark the nut at the 6 o'clock position before placing the spanner.



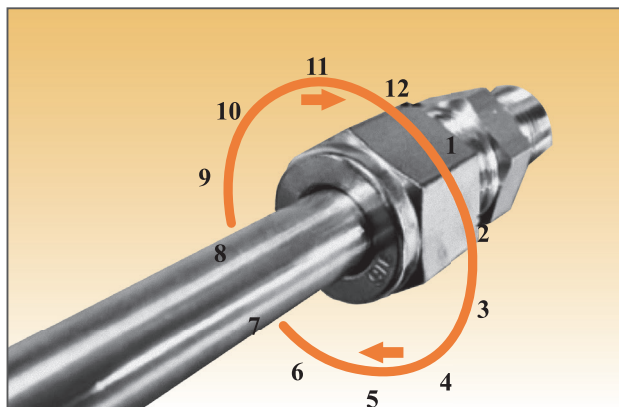
- While holding the fitting body steady, tight the nut with the spanner by turning 1-1/4 clockwise.
- Make sure that the spanner's starting point at 6 o'clock is being positioned at 9 o'clock after tightening 1-1/4 clockwise.
- Tighten the nut only 3/4 turn to the 3 o'clock position for 1/16", 1/8" and 3/16" (2mm, 3mm and 4mm) size tube fittings.
- When it was tightened 1-1/4 turn clockwise, the tube fitting has been designed to be durable even from the bursting pressure of the tube, therefore insufficient tightening against the regulation may cause the leakage and bursting while over-tightening makes the reassembly difficult due to deformity.

✚ Gaugeability



- Gap inspection gauge assures the installer or the inspector that the instrument has been sufficiently tightened during the first installation inspection.
- Place gap inspection gauge at the gap between the nut and body.
- When the gauge does not fit into the gap, it means that the fitting is sufficiently tightened.
- When the gauge fits into the gap, it means that it needs to be tightened more.

✚ Reassembly Instruction



- S-LOK products can be disassembled and reassembled numerous.
- For reassembly, insert the tube with ferrules into the fitting until the front ferrule seats against the fitting body to avoid any damage from foreign objects at the disassembled area.
- After hand-tightening the nut while holding the fitting's body steady, tight the nut with a spanner to the previously pulled-up position.
- At this point, you would feel a significant increase in resistance.
- Then tight the nut slightly.

Introduction

S-LOK tube fittings are manufactured under very strict quality control to assure maximum reliable performance. S-LOK tube fittings require no special tools assembly. Connections can be quickly and easily made by simple insertion and tightening the nuts.

S-LOK tube fittings has been specifically designed for use on instrumentation, process and control systems and equipment employed in chemical, petroleum, power generating and pulp and paper plants.

S-LOK tube fittings could also be used in extensive applications of other fields where very high quality tube fittings are required.

Construction

S-LOK tube fittings are composed of four precision part ; body, nut, front ferrule and back ferrule.

By screwing the nut onto the body, the nut is tightened against the tapered area of the body, and its edge is compressed tightly against the tube by curling inward.

The back ferrule is also located between the body and nut.

As the front ferrule rolls, the back ferrule rolls up and bites into the tube resulting in the connection of tube and the fitting as well as a non-leakage effected.

The double ferrule design achieves the leak proof sealing by assembly motion being transmitted axially through the tubing. This results in no radial movement of the tubing upon assembly. Therefore, the tube is not stressed and the mechanical integrity is maintained. This is the result of close monitoring of tolerance control in machining, and hardness of each and every part of S-LOK tube fittings.

Through this swaging action, S-LOK tube fittings are mechanically integrated with the tube connected.



Materials

S-LOK tube fittings are made of stainless steel, brass and alloy steels.

Fitting Material	Bar Stock	Forging
Stainless Steel 316	ASTM A479 / A276 TYPE 316	ASTM A182 F316
Duplex Stainless Steel	ASTM A479 / A276 UNS S31803	A182 F51
Super Duplex Stainless Steel	ASTM A479 / A276 UNS S32750	A182 F53
Alloy 400	ASTM B164 UNS N04400	ASTM B564 UNS N04400
Alloy 625	ASTM B446 UNS N06625	ASTM B564 UNS N06625
Alloy 825	ASTM B425 UNS N08825	ASTM B564 UNS N08825
Alloy C-276	ASTM B574 UNS N10276	ASTM B564 UNS N10276
Carbon Steel	ASTM A108 JIS G4051 S45C	ASTM A105 JIS G4051 S45C
Brass	ASTM B16 C3600 JIS H3250 C3604	ASTM B124 C3770 JIS H3250 C3771

Pressure Ratings

S-LOK tube fittings are rated its maximum working pressure in accordance with the maximum working pressure of recommended tubing within this catalogue.

Tubing

Suitable tube selection is essential in performance of tubing system. For safe, reliable and leak-free seals tubing should be considered as a fitting component. S-LOK tube fittings perform best when good quality tubing is used.

When selecting tubing material including size and wall thickness, customer must consider pressure, flow, temperature Environment and compatibility of system.

- General Rules.

1. For leak-free sealing, the tubing surface is very important. The tubing must have a good surface condition with free of scratches, draw mark, flat spots or dirt.
2. In case of welded tubing, it should not have a visible poor bead on its surface.
3. Tubing and fitting material is essential for the thermal compatibility and corrosion resistance.
4. Tubing must be softer than fitting material. When tubing and fittings are made of the same material, the metal tubing must be fully annealed.
5. Tubing hardness must be selected according to the information in the table 2 to 4.
6. Do not select a too thin or too thick wall. A too thin wall may collapse, and a too thick wall may not properly be deformed by the ferrule action. Selection the wall's thickness should be based on the applicable pressure, temperature, shock and vibration.

- Consider the following in selecting tube.

1. Quality of the tubing material and manufacturing method.
2. Hardness of tube.
3. Surface treatment of tube.
4. O.D and tolerance.
5. Wall thickness and tolerance.
6. Concentricity of tube.
7. Ovality. (shape)

Temperature Ranges

The maximum and minimum operating temperatures for various tubing material.

Tubing Material	Temperature Range	Tubing Material	Temperature Range
Stainless Steel 316	-196°C to 649°C (-321°F to 1200°F)	Alloy 600	-130°C to 649°C (-205°F to 1200°F)
Carbon Steel	-53°C to 426°C (-65°F to 800°F)	Alloy C-276	-195°C to 537°C (-320°F to 1000°F)
Copper	-40°C to 204°C (-40°F to 400°F)	Titanium	-195°C to 315°C (-320°F to 600°F)
Alloy 400	-198°C to 426°C (-324°F to 800°F)	PTFE	-17°C to 65°C (0°F to 150°F)

Temperature De-rating Factors

The allowable working pressure is determined by various temperatures. To determine the working pressure at the specific temperatures, multiply the working pressure at ambient temperature and factor.

Temp °F(°C)	Stainless Steel ASTM A269		Carbon Steel ASTM A179	Copper ASTM B75	Alloy 400
	304	316			
100 (37)	1.00	1.00	1.00	1.00	1.00
200 (93)	1.00	1.00	0.95	0.80	0.88
300 (148)	1.00	1.00	0.90	0.78	0.82
400 (204)	0.93	0.96	0.86	0.50	0.79
500 (260)	0.87	0.90	0.82	-	0.79
600 (315)	0.82	0.85	0.77	-	0.79
700 (370)	0.80	0.82	0.73	-	0.76
800 (426)	0.76	0.79	0.59	-	0.76
900 (480)	0.73	0.78	-	-	-
1000 (537)	0.69	0.76	-	-	-
1200 (649)	0.30	0.37	-	-	-

Example : Tube S316 3/8 O.D. x 0.035" at 700 °F

3,300psi x 0.82=2.706psi

Therefore 2.706psi is the maximum allowable working pressure of S316 3/8" O.D x 0.035" wall tubing.

Stainless Steel Tubing

Fully annealed 304 or 316 high quality seamless steel tube to ASTM A269 or equivalent. Recommended Hardness : HRB 90 or less

Stainless Steel Fractional Tubing

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	0.134	0.156	0.188
1/16	5,600	6,800	8,100	9,400	12,000											
1/8						8,500	10,900					Working pressure (psig)				
3/16						5,400	7,000	10,200								
1/4						4,000	5,100	7,500	10,200							
5/16							4,000	5,800	8,000							
3/8							3,300	4,800	6,500	7500						
1/2							2,600	3,700	5,100	6,700						
5/8		For gas service, applying tube wall thickness should only be selected from the outside of the shaded boundary.						2,900	4,000	5,200	6,000					
3/4								2,400	3,300	4,200	4,900	5,800				
7/8								2,000	2,800	3,600	4,200	4,800				
1									2,400	3,100	3,600	4,200	4,700			
1-1/4										2,400	2,800	3,300	3,600	4,100	4,900	
1-1/2											2,300	2,700	3,000	3,400	4,000	4,900
2												2,000	2,200	2,500	2,900	3,600

Stainless Steel Metric Tubing

Tube O.D. (mm)	Tube Wall Thickness (mm)														
	0.3	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.5	4.0	4.5	5.0
2	210	660													
3		670									Working pressure (bar)				
4		500	660												
6		310	420	540	710										
8			310	390	520										
10			240	300	400	510	580								
12			200	250	330	410	470								
14			160	200	270	340	380	430							
15			150	190	250	310	360	400							
16				170	230	290	330	370	400						
18				150	200	260	290	320	370						
20				140	180	230	260	290	330	380					
22				140	180	200	230	260	300	340					
25						180	200	230	260	290	320				
28							180	200	230	260	280	330			
30		For gas service, applying tube wall thickness should only be selected from the outside of the shaded boundary.					170	180	210	240	260	310			
32							160	170	200	220	240	290	330		
38								140	160	190	200	240	270	310	
50											150	180	210	240	270

- Working pressure are based on allowable stress value of 20,000psi (137,800kPa) as specified in ASME B31.3 within the temperature range of -29°C to 37°C (-20°F to 100°F), considering ultimate tensile strength 75,000psi (516,700kPa).

- Pressure calculation are based on Maximum O.D and minimum wall thickness and no allowance is made for corrosion and erosion.

- Welded tubing Based on ASME B31.3 for weld integrity, a de-rating factor must be applied to welded tubing.

For double butt seam tubing, multiply by 0.85, For single butt seam tubing, multiply by 0.80.

Carbon Steel Tubing

Soft annealed seamless carbon steel tube to ASTM A179 or equivalent. Recommended Hardness : HRB 72 or less

Carbon Steel Fractional Tubing

Tube O.D (inch)	Tube Wall Thickness (inch)													
	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.148	0.165	0.180	0.220
1/16	9,700													
1/8		8,000	10,200								Working pressure (psig)			
3/16		5,100	6,600	9,600										
1/4		3,700	4,800	7,000	9,600									
5/16			3,700	5,500	7,500									
3/8			3,100	4,500	6,200									
1/2			2,300	3,200	4,500	5,900								
5/8			1,800	2,600	3,500	4,600	5,300							
3/4				2,100	2,900	3,700	4,300	5,100						
7/8	For gas service, applying tube wall thickness should only be selected from the outside of the shaded boundary.			1,800	2,400	3,200	3,700	4,300						
1				1,500	2,100	2,700	3,200	3,700	4,100					
1-1/4					1,600	2,100	2,500	2,900	3,200	3,600	4,000	4,600	5,000	
1-1/2						1,800	2,000	2,400	2,600	2,900	3,300	3,700	4,100	5,100
2							1,500	1,700	1,900	2,100	2,400	2,700	3,000	3,700

Carbon Steel Metric Tubing

Tube O.D (mm)	Tube Wall Thickness (mm)												
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.5	4.0	4.5
3	630	790											
6	290	370	460	590						Working pressure (bar)			
8		270	330	430									
10		210	260	330									
12		170	210	270	330	380	420						
14		150	180	230	280	320	350						
15		140	170	210	260	290	330						
16		130	150	200	240	270	300	350					
18			140	170	210	240	270	310					
20			120	160	190	210	240	270	310				
22			110	140	170	190	210	240	280				
25			100	120	150	170	180	210	240	260			
28	For gas service, applying tube wall thickness should only be selected from the outside of the shaded boundary.					150	160	190	210	230	270		
30						140	150	170	200	210	250		
32						130	140	160	180	200	230	270	
38							120	130	150	160	190	230	260

- Working pressure are based on allowable stress value of 15,700psi (108,200kPa) as specified in ASME B31.3 within the temperature range of -29°C to 37°C (-20°F to 100°F), considering ultimate tensile strength 47,000psi (324,000kPa).

- Pressure calculation are based on Maximum O.D and minimum wall thickness and no allowance is made for corrosion and erosion.

Copper Tubing

High quality soft annealed seamless copper tube to ASTM B75 or equivalent. Recommended Hardness : HRB60 or less

Copper Fractional Tubing

Tube O.D (inch)	Tube Wall Thickness (inch)								
	0.028	0.030	0.035	0.049	0.065	0.083	0.095	0.109	0.120
1/8	2,700	3,000	3,600						
3/16	1,800	1,900	2,300	3,400			Working pressure (psig)		
1/4	1,300	1,400	1,600	2,500	3,500				
5/16			1,300	1,900	2,700				
3/8			1,000	1,600	2,200				
1/2			800	1,100	1,600	2,100			
5/8	For gas service, applying tube wall thickness should only be selected from the outside of the shaded boundary.			900	1,200	1,600	1,900		
3/4				700	1,000	1,300	1,500	1,800	
7/8				600	800	1,100	1,300	1,500	
1				500	700	900	1,100	1,300	1,500

Copper Metric Tubing

Tube O.D (mm)	Tube Wall Thickness (mm)									
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0
3	200									
4	140	200						Working pressure (bar)		
6	110	140	170	220						
8		100	120	160						
10		80	100	130						
12		60	80	100	130	140				
14		50	60	90	110	120				
15			60	80	100	110	120			
16				70	90	100	110	120		
18				60	80	90	100	110		
20	For gas service, applying tube wall thickness should only be selected from the outside of the shaded boundary.			60	70	80	90	100	110	
22				50	60	70	80	90	100	
25				40	50	60	70	80	90	100
28					40	50	60	70	80	90

- Working pressure are based on allowable stress value of 6,000psi (41,300kPa) as specified in ASME B31.3 within the temperature range of -29°C to 37°C (-20°F to 100°F), considering ultimate tensile strength 30,000psi (206,700kPa).

- Pressure calculation are based on Maximum O.D and minimum wall thickness and no allowance is made for corrosion and erosion.

⚡ Alloy 400 Tubing

Fully annealed seamless Alloy 400 tube to ASTM B165 or equivalent. Recommended Hardness : HRB 75 or less

Alloy 400 Fractional Tubing

Tube O.D (inch)	Tube Wall Thickness (inch)							
	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
1/8	7,900	10,100						
3/16	5,100	6,500	9,500			Working pressure (psig)		
1/4	3,700	4,800	7,000	9,500				
5/16		3,700	5,400	7,300				
3/8		3,100	4,400	6,100				
1/2		2,300	3,200	4,400				
5/8	For gas service, applying tube wall thickness should only be selected from the outside of the shaded boundary.		2,700	3,700	4,800	5,600		
3/4			2,200	3,000	4,000	4,600		
7/8			1,900	2,600	3,400	3,900	4,500	
1				2,200	2,900	3,400	3,900	4,300

Alloy 400 Metric Tubing

Tube O.D (mm)	Tube Wall Thickness (mm)									
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0
3	630									
4	400						Working pressure (bar)			
6	310	390	490	620						
8		290	350	450						
10		220	280	350						
12		180	230	290						
14		180	190	240	270					
15			190	240	290	330	330			
16			170	220	270	310	320			
18			150	200	240	270	300			
20	For gas service, applying tube wall thickness should only be selected from the outside of the shaded boundary.			180	210	240	270	290		
22				170	200	230	250	290	310	
25					170	190	210	240	270	290
28										

- Working pressure are based on allowable stress value of 20,000psi (137,800kPa) as specified in ASME B31.3 within the temperature range of -29°C to 37°C (-20°F to 100°F), considering ultimate tensile strength 70,000psi (482,300kPa).

- Pressure calculation are based on Maximum O.D and minimum wall thickness and no allowance is made for corrosion and erosion.

⚡ Special Alloy Tubing

When special alloy tubing is selected, we recommend:

Full annealed seamless (or welded and cold-drawn, where permitted) alloy tubing to the ASTM specification as shown below.

Tubing should be free of scratches for bending or flaring.

Tube Material	ASTM code	MAX. Hardness	Tube Material	ASTM code	MAX. Hardness
Alloy C-276	B622	HRB 100	Alloy 625	B444	HRC 25
Alloy 20	B729	HRB 95	Alloy 825	B163	HR15T 90
Alloy 600	B167	HRB 92	Alloy 6Mo	A269	HRB 96

✚ Cryogenic Service

S-LOK tube fittings in 316 stainless steel provide highly reliable performance from cryogenic temperatures to high temperature levels. 316 stainless steel temperature range : -196°C to 649°C (-321°F to 1200°F).

Cryogenic temperature are considered to be temperatures below : -73°C (-100°F)

✚ Proper Tube Handling

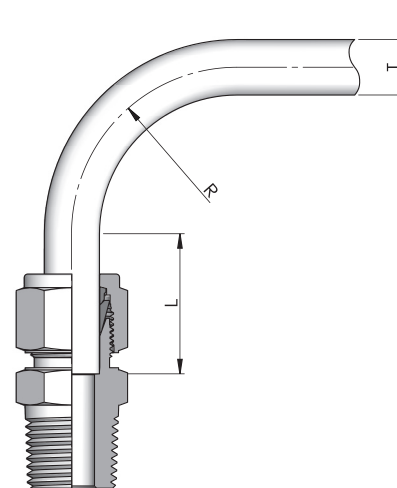
Good handling practices can greatly save the good surface finish of the supplied tube.

- Tubing should never be dragged out of a tubing rack.
- Tubing should never be dragged across cement, asphalt, gravel or any other rough surface.
- Tubing cutter wheel and hacksaw blade should always be sharp.
- Try not to take deep cuts with each turn of the cutter or stroke of the saw.
- Tube end should always be de burred.
- Tubing should be stored to avoid collection of dirt and contamination.
- If possible, tubing ends should be plugged, so any foreign materials will not fall inside.

✚ Tube Bending

For sealing installation in case of bended tubing being near S-LOK fittings, there should be enough lineal distance from bending point to the fittings. When tube bend is too close to the fitting, the deformed section of the bend may enter the fitting, and it may result in leaking. Also the bending radius should not be too short of bending radius may affect the working pressure and may cause insufficient flow. Minimum bending radius is usually recommended by the bending manufacturer.

Tube O.D (T) (inch)	Straight Length (L)	Tube O.D (T) (mm)	Straight Length (L)
1/16	1/2	3	19
1/8	23/32	6	21
3/16	3/4	8	23
1/4	13/16	10	25
5/16	7/8	12	31
3/8	15/16	14	32
1/2	1-3/16	15	32
5/8	1-1/4	16	32
3/4	1-1/4	18	32
7/8	1-5/16	20	34
1	1-1/2	22	40
1-1/4	2	25	46
1-1/2	2-13/32	28	50
2	3-1/4	32	54
		38	63
		50	80



T : Tube O.D

R : Radius

Follow the bented tube vendor's recommendation.

L : Straight tubing length is required from the beginning of the bend to the tubing end.

Pressure Rating

Many S-LOK tube fittings have a male or female pipe end. These ends occasionally have a lower pressure rating than the pressure rating of the tube fitting end so consider both of the rating.

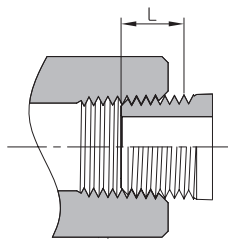
NPT/ISO Pipe Size (inch)	Stainless Steel 316				Brass				Carbon Steel			
	Male		Female		Male		Female		Male		Female	
	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar
1/16	11,000	758	6,700	462	5,500	378	3,300	227	11,000	758	6,700	462
1/8	10,000	689	6,500	448	5,000	345	3,200	221	10,000	689	6,500	448
1/4	8,000	551	6,600	455	4,000	276	3,300	227	8,000	551	6,600	455
3/8	7,800	538	5,300	365	3,900	269	2,600	179	7,800	538	5,300	365
1/2	7,700	531	4,900	338	3,800	262	2,400	165	7,700	531	4,900	338
3/4	7,300	503	4,600	317	3,600	248	2,300	159	7,300	503	4,600	317
1	5,300	365	4,400	303	2,600	179	2,200	152	5,300	365	4,400	303
1-1/4	6,000	414	5,000	345	3,000	207	2,500	172	6,000	414	5,000	345
1-1/2	5,000	345	4,600	317	2,500	172	2,300	159	5,000	345	4,600	317
2	3,900	269	3,900	269	1,900	131	1,900	131	3,900	269	3,900	269

- The ratings shown above are based on ASME B31.3.
- Female pipe ends have lower ratings than male pipe in a given size due to the inner and outer diameters of female threads being larger than those of male pipe ends.
- The ratings shown above are reference only.

Pipe Thread Sealant

Pipe thread sealant is essential to ensure leak-free seal. Since the PTFE tape is commonly used, we provide information of recommended tape width, as well as the numbers of thread to be wrapped. The PTFE tape fills the voids between threads and prevents galling on pipe threads. The sealant usually contains a lubricant.

Nominal Pipe Size	Recommended Tape Width	Effective Thread External Length (L)	Approx. of Thread
1/8	1/8 – 1/4	0.2639	7
1/4	1/4	0.4018	7-1/4
3/8	1/4	0.4075	7-1/3
1/2	1/4 – 1/2	0.5337	7-1/2
3/4	1/4 – 1/2	0.5457	7-2/3
1	1/4 – 1/2	0.6828	8



Elastomer Seal Temperature Rating

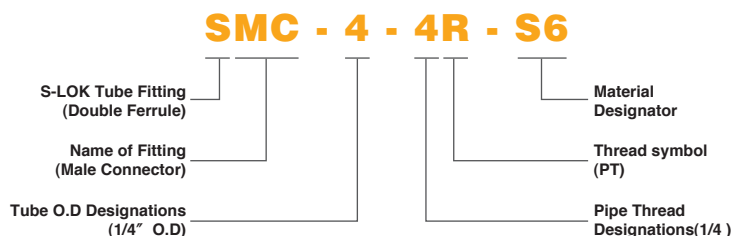
When elastomer seal is used in the fitting, care must be taken for allowable working temperature.

Elastomer Seal Material	Temperature Range
NBR	-20°C ~ 105°C (-4°F ~ 221°F)
FKM	-28°C ~ 204°C (-20°F ~ 400°F)
EPDM	-28°C ~ 148°C (-20°F ~ 300°F)
FFKM	-25°C ~ 275°C (-13°F ~ 527°F)

Ordering Information

The symbols in the part number column on each page represent the shape and size of individual fittings.

Example 1 : Tube to Pipe ends



Example 2 : Tube to Tube ends



Example 3 : Tee & Cross

Tee & Cross are described by first the run (1 and 2) and next the branch (3 and 4)



Example 4 : Single Ferrule type

To order, use "O" as a suffix to the desired type of fitting ordering designation.

SMCO - 4 - 4R - S6

STO - 4 - S6

Tube O.D Designator			
Inch	Identifier	Metric	Identifier
1/16	1	3mm	3M
1/8	2	4mm	4M
3/16	3	6mm	6M
1/4	4	8mm	8M
5/16	5	10mm	10M
3/8	6	12mm	12M
1/2	8	14mm	14M
5/8	10	15mm	15M
3/4	12	16mm	16M
7/8	14	20mm	20M
1	16	22mm	22M
1-1/4	20	25mm	25M
1-1/2	24	28mm	28M
2	32	32mm	32M
		38mm	38M
		50mm	50M

Pipe Thread Size Designator			
Nominal Pipe Size	Identifier	Nominal Pipe Size	Identifier
1/8	2	1	16
1/4	4	1-1/4	20
3/8	6	1-1/2	24
1/2	8	2	32
3/4	12		

Fitting Material Designator	
Body Material	Identifier
Stainless Steel 316	S6
Stainless Steel 316L	S6L
Stainless Steel 304	S4
Carbon Steel	CS
Brass	BS
Alloy 400	A400
Alloy 625	A625

Type	Taper Threads		Parallel Threads	
Symbol	R	N	G	U
Specification	ISO 7/1, BS21 (BSPT) JIS B 0203 (PT) DIN 2999	ASME B 1.20.1 (NPT)	ISO 228/1 BS 2779 (BSPP) JIS B 0202 (PF)	ASME B 1.1

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Male Run Tee

STRM



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Male Branch Tee

STBM



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Female Connector

SCF



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Gauge Connector

SCG



43

Bulkhead Female Connector

SCBF



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Female Elbow

SLF



45

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STRF



46

Female Branch Tee

STBF



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Stub Tube Connector

Reducer

SR



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Elbow Adapter

SLA



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Bulkhead Adapter

SAB



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Male Adapter

SAM



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Female Adapter

SAF



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SCRP



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AN Union

SUA

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AN Adapter

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SAE Male Connector

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Positionable SAE Male Elbow

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Positionable SAE Male Run Tee

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O-Seal Straight Thread Connector

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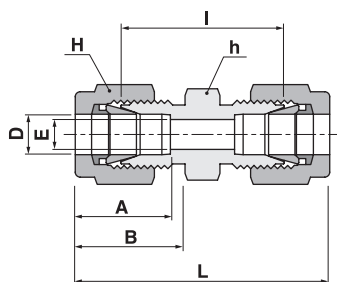
78

Liquid Gas Leak Detectors

S-detec

78

Union
SU



Connects fractional tube

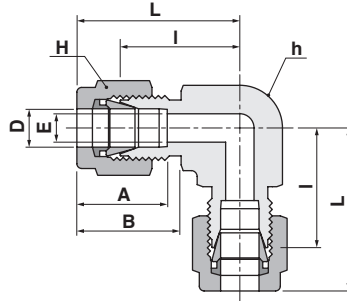
Part No.	Tube O.D		E	Width across flat				A	B	I	L
	D			h		H					
	in	mm	Min	in	mm	in	mm				
SU-1	1/16	1.59	1.27	5/16	7.93	5/16	7.93	8.63	10.92	17.50	25.15
SU-2	1/8	3.17	2.28	7/16	11.11	7/16	11.11	12.70	15.24	22.35	35.56
SU-3	3/16	4.76	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.13	37.33
SU-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	26.16	40.89
SU-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	28.19	42.92
SU-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	30.22	44.95
SU-8	1/2	12.70	10.41	13/16	20.64	7/8	22.22	22.86	21.84	30.98	51.30
SU-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	52.07
SU-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	33.27	53.89
SU-14	7/8	22.22	18.28	1-3/16	30.16	1-1/4	31.75	25.90	21.84	35.05	55.37
SU-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.38	64.77
SU-20	1-1/4	31.75	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	48.00	92.20
SU-24	1-1/2	38.10	34.03	2-1/8	53.97	2-1/4	57.15	50.03	45.21	53.60	107.95
SU-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	74.70	149.35

Connects metric tube

Part No.	Tube O.D	E	Width across flat		A	B	I	L
	D		h	H				
SU-2M	2	1.7	12	12	12.9	15.3	22.1	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
SU-28M	28	21.8	41	46	36.6	36.6	43.4	85.0
SU-32M	32	28.6	46	50	42.0	41.6	51.3	97.3
SU-38M	38	33.7	55	60	49.4	47.9	58.4	113.6

Union Elbow

SL



Connects fractional tube

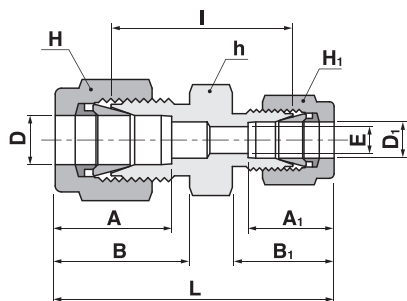
Part No.	Tube O.D		E	Width across flat				A	B	I	L
	D			h		H					
	in	mm	Min	in	mm	in	mm				
SL-1	1/16	1.59	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
SL-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
SL-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.35
SL-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
SL-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
SL-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
SL-8	1/2	12.70	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06
SL-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	28.70	38.80
SL-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87
SL-14	7/8	22.22	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70
SL-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02
SL-20	1-1/4	31.75	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54
SL-24	1-1/2	38.10	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97
SL-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

Connects metric tube

Part No.	Tube O.D	E	Width across flat		A	B	I	L
	D		h	H				
SL-2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
SL-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
SL-4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
SL-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
SL-8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
SL-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
SL-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
SL-15M	15	11.9	23.8	25	24.4	22.0	28.7	38.8
SL-16M	16	12.7	23.8	25	24.4	22.0	28.7	38.8
SL-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
SL-20M	20	15.9	31.8	32	26.0	22.0	34.5	42.6
SL-22M	22	18.3	31.8	32	26.0	22.0	34.5	42.6
SL-25M	25	21.8	34.9	38	31.3	26.5	36.8	49.1
SL-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0
SL-32M	32	28.6	46.0	50	42.0	41.6	49.3	72.3
SL-38M	38	33.7	55.0	60	49.4	47.9	56.4	84.0

Reducing Union

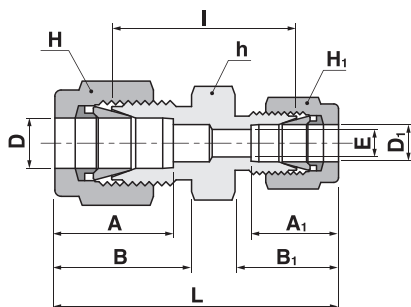
SUR



Connects fractional tube

Part No.	Tube O.D				E	Width across flat						A	A _i	B	B _i	I	L
	D		D _i			h		H		H _i							
	in	mm	in	mm		Min	in	mm	in	mm	in						
SUR-2-1	1/8	3.17	1/16	1.59	1.27	7/16	11.11	7/16	11.11	5/16	7.93	12.70	8.63	15.24	10.92	20.60	30.91
SUR-3-1	3/16	4.76	1/16	1.59	1.27	7/16	11.11	1/2	12.70	5/16	7.93	13.71	8.63	16.00	10.92	21.84	32.25
SUR-3-2	3/16	4.76	1/8	3.17	2.28	7/16	11.11	1/2	12.70	7/16	11.11	13.71	12.70	16.00	15.24	23.36	36.57
SUR-4-1	1/4	6.35	1/16	1.59	1.27	1/2	12.70	9/16	14.28	5/16	7.93	15.24	8.63	17.78	10.92	23.11	34.29
SUR-4-2	1/4	6.35	1/8	3.17	2.28	1/2	12.70	9/16	14.28	7/16	11.11	15.24	12.70	17.78	15.24	24.63	38.60
SUR-4-3	1/4	6.35	3/16	4.76	3.04	1/2	12.70	9/16	14.28	1/2	12.70	15.24	13.71	17.78	16.00	25.40	39.37
SUR-5-2	5/16	7.93	1/8	3.17	2.28	9/16	14.28	5/8	15.87	7/16	11.11	16.25	12.70	18.54	15.24	25.90	39.87
SUR-5-4	5/16	7.93	1/4	6.35	4.82	9/16	14.28	5/8	15.87	9/16	14.28	16.25	15.24	18.54	17.78	27.43	42.16
SUR-6-1	3/8	9.52	1/16	1.59	1.27	5/8	15.87	11/16	17.46	5/16	7.93	16.76	8.63	19.30	10.92	25.40	36.57
SUR-6-2	3/8	9.52	1/8	3.17	2.28	5/8	15.87	11/16	17.46	7/16	11.11	16.76	12.70	19.30	15.24	26.92	40.89
SUR-6-4	3/8	9.52	1/4	6.35	4.82	5/8	15.87	11/16	17.46	9/16	14.28	16.76	15.24	19.30	17.78	28.44	43.18
SUR-6-5	3/8	9.52	5/16	7.93	6.35	5/8	15.87	11/16	17.46	5/8	15.87	16.76	16.25	19.30	18.54	29.46	44.19
SUR-8-2	1/2	12.70	1/8	3.17	2.28	13/16	20.64	7/8	22.22	7/16	11.11	22.86	12.70	21.84	15.24	28.44	45.21
SUR-8-4	1/2	12.70	1/4	6.35	4.82	13/16	20.64	7/8	22.22	9/16	14.28	22.86	15.24	21.84	17.78	29.46	46.99
SUR-8-6	1/2	12.70	3/8	9.52	7.11	13/16	20.64	7/8	22.22	11/16	17.46	22.86	16.76	21.84	19.30	30.98	48.51
SUR-10-6	5/8	15.87	3/8	9.52	7.11	15/16	23.81	1	25.40	11/16	17.46	24.38	16.76	21.84	19.30	31.75	49.27
SUR-10-8	5/8	15.87	1/2	12.70	10.41	15/16	23.81	1	25.40	7/8	22.22	24.38	22.86	21.84	21.84	31.75	52.07
SUR-12-4	3/4	19.05	1/4	6.35	4.82	1-1/16	26.98	1-1/8	28.58	9/16	14.28	24.38	15.24	21.84	17.78	31.75	49.27
SUR-12-6	3/4	19.05	3/8	9.52	7.11	1-1/16	26.98	1-1/8	28.58	11/16	17.46	24.38	16.76	21.84	19.30	33.27	50.80
SUR-12-8	3/4	19.05	1/2	12.70	10.41	1-1/16	26.98	1-1/8	28.58	7/8	22.22	24.38	22.86	21.84	21.84	33.27	53.59
SUR-12-10	3/4	19.05	5/8	15.87	12.70	1-1/16	26.98	1-1/8	28.58	1	25.40	24.38	24.38	21.84	21.84	33.27	53.59
SUR-16-8	1	25.40	1/2	12.70	10.41	1-3/8	34.92	1-1/2	38.10	7/8	22.22	31.24	22.86	26.41	21.84	40.89	63.24
SUR-16-12	1	25.40	3/4	19.05	15.74	1-3/8	34.92	1-1/2	38.10	1-1/8	28.58	31.24	24.38	26.41	21.84	40.38	62.73

Reducing Union

SUR

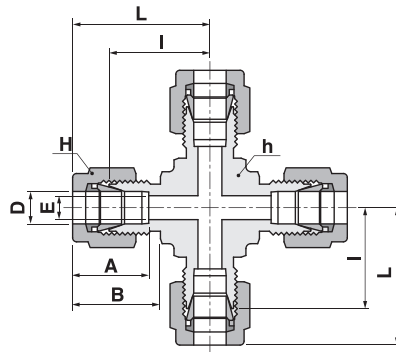
Connects metric tube

Part No.	Tube O.D		E	Width across flat			A	A ₁	B	B ₁	I	L
	D	D ₁		h	H	H ₁						
SUR-3M-2M	3	2	1.7	12	12	12	12.9	12.9	15.3	15.3	22.1	35.3
SUR-6M-2M	6	2	1.7	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
SUR-6M-3M	6	3	2.4	14	14	12	15.3	12.9	17.7	15.3	24.6	38.6
SUR-6M-4M	6	4	2.4	14	14	12	15.3	13.7	17.7	16.1	25.4	39.4
SUR-8M-6M	8	6	4.8	15	16	14	16.2	15.3	18.6	17.7	27.4	42.3
SUR-10M-6M	10	6	4.8	18	19	14	17.2	15.3	19.5	17.7	29.5	44.5
SUR-10M-8M	10	8	6.4	18	19	16	17.2	16.2	19.5	18.6	30.3	45.1
SUR-12M-6M	12	6	4.8	22	22	14	22.8	15.3	22.0	17.7	29.5	47.0
SUR-12M-8M	12	8	6.4	22	22	16	22.8	16.2	22.0	18.6	30.2	47.8
SUR-12M-10M	12	10	7.9	22	22	19	22.8	17.2	22.0	19.5	31.0	48.7
SUR-16M-10M	16	10	7.9	24	25	19	24.4	17.2	22.0	19.5	31.8	49.5
SUR-16M-12M	16	12	9.5	24	25	22	24.4	22.8	22.0	22.0	31.8	52.0
SUR-18M-12M	18	12	9.5	27	30	22	24.4	22.8	22.0	22.0	33.3	53.5
SUR-25M-18M	25	18	15.1	35	38	30	31.3	24.4	26.5	22.0	38.6	61.0
SUR-25M-20M	25	20	15.9	35	38	32	31.3	26.0	26.5	22.0	39.9	62.3

Connects metric tube to fractional tube

Part No.	Tube O.D			E	Width across flat			A	A ₁	B	B ₁	I	L
	D	D ₁			h	H	H ₁						
		in	mm	Min									
SUR-3M-2	3	1/8	3.17	2.4	12	12	11.1	12.9	12.8	15.3	15.2	22.1	35.2
SUR-4M-2	4	1/8	3.17	2.4	12	12	11.1	13.7	12.8	16.1	15.2	23.4	36.5
SUR-4M-4	4	1/4	6.35	2.4	14	12	14.3	13.7	15.3	16.1	17.7	25.4	39.4
SUR-6M-2	6	1/8	3.17	2.4	14	14	11.1	15.3	12.8	17.7	15.2	24.6	38.5
SUR-6M-4	6	1/4	6.35	4.8	14	14	14.3	15.3	15.8	17.7	17.7	26.2	41.0
SUR-6M-5	6	5/16	7.93	4.8	14	14	15.9	15.3	16.2	17.7	18.6	27.4	42.3
SUR-8M-4	8	1/4	6.35	4.8	15	16	14.3	16.2	15.3	18.6	17.7	27.4	42.3
SUR-10M-2	10	1/8	3.17	2.4	18	19	11.1	17.2	12.8	19.5	15.2	27.7	41.8
SUR-10M-4	10	1/4	6.35	4.8	18	19	14.3	17.2	15.3	19.5	17.7	29.5	44.5
SUR-10M-5	10	5/16	7.93	6.4	18	19	15.9	17.2	16.2	19.5	18.6	30.3	45.1
SUR-10M-6	10	3/8	9.52	7.1	18	19	17.5	17.2	16.9	19.5	18.6	31.0	45.9
SUR-12M-5	12	5/16	7.93	6.4	22	22	15.9	22.8	16.2	22.0	18.6	30.2	47.8
SUR-12M-6	12	3/8	9.52	7.1	22	22	17.5	22.8	16.9	22.0	19.2	31.0	48.4
SUR-12M-8	12	1/2	12.70	9.5	22	22	22.2	22.8	22.8	22.0	22.0	31.0	51.2
SUR-15M-8	15	1/2	12.70	10.3	24	25	22.2	24.4	22.8	22.0	22.0	31.8	52.0
SUR-16M-10	16	5/8	19.05	12.7	24	25	25.4	24.4	24.4	22.0	22.0	31.8	52.0
SUR-18M-12	18	3/4	19.05	15.1	27	30	28.6	24.4	24.4	22.0	22.0	33.3	53.5
SUR-20M-12	20	3/4	19.05	15.9	30	32	28.6	26.0	24.4	22.0	22.0	34.8	54.9
SUR-20M-16	20	1	25.40	15.9	34.9	32	38.1	26.0	31.2	22.0	26.4	38.0	60.3
SUR-22M-16	22	1	25.40	18.3	34.9	32	38.1	26.0	31.2	22.0	26.4	38.2	60.3

Union Cross

SX

Connects fractional tube

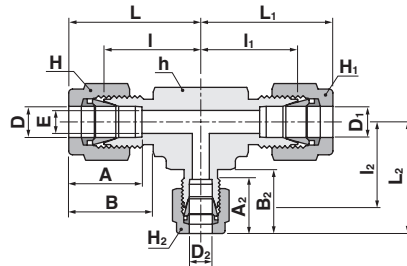
Part No.	Tube O.D		E	Width across flat				A	B	I	L
	D			h		H					
	in	mm		Min.	in	mm	in				
SX-1	1/16	1.59	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88
SX-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35
SX-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.35
SX-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92
SX-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70
SX-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48
SX-8	1/2	12.70	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06
SX-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	28.70	38.80
SX-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87
SX-14	7/8	22.22	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70
SX-16	1	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02
SX-20	1-1/4	31.75	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54
SX-24	1-1/2	38.10	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97
SX-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

Connects metric tube

Part No.	Tube O.D	E	Width across flat		A	B	I	L
	D		h	H				
SX-2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3
SX-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3
SX-4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4
SX-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0
SX-8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8
SX-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5
SX-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0
SX-15M	15	11.9	27.0	25	24.4	22.0	28.7	38.8
SX-16M	16	12.7	27.0	25	24.4	22.0	28.7	38.8
SX-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8
SX-20M	20	15.9	31.8	32	26.0	22.0	34.5	42.6
SX-22M	22	18.3	31.8	32	26.0	22.0	34.5	42.6
SX-25M	25	21.8	34.9	38	31.3	26.5	36.8	49.1
SX-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0
SX-32M	32	28.6	46.0	50	42.0	41.6	49.3	72.3
SX-38M	38	33.7	55.0	60	49.4	47.9	56.4	84.0

Reducing Union Tee

STR

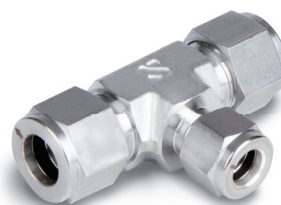
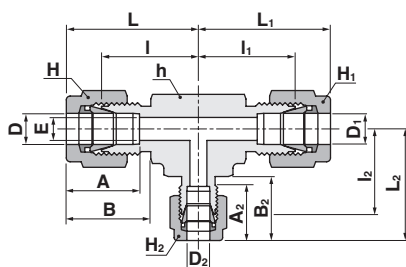


Connects fractional tube

Part No.	Tube O.D							E	A	A ₁	A ₂	B	B ₁	B ₂	Width across flat										I	I ₁	I ₂	L	L ₁	L ₂
	D		D ₁		D ₂		h								H		H ₁		H ₂											
	in	mm	in	mm	in	mm	Min.								in	mm	in	mm	in	mm	in	mm	in	mm						
STR-4-2	1/4	6.35	1/4	6.35	1/8	3.17	2.28	15.24	15.24	12.70	17.78	17.78	15.24	1/2	12.70	9/16	14.28	9/16	14.28	7/16	11.11	19.55	19.55	17.90	26.91	26.91	24.50			
STR-4-6	1/4	6.35	1/4	6.35	3/8	9.52	4.82	15.24	15.24	16.76	17.78	17.78	19.30	5/8	15.87	9/16	14.28	9/16	14.28	11/16	17.46	21.92	21.92	23.10	29.28	29.28	30.46			
STR-4-8-8	1/4	6.35	1/2	12.70	1/2	12.70	4.82	15.24	22.86	22.86	17.78	21.84	21.84	13/16	20.64	9/16	14.28	7/8	22.22	7/8	22.22	24.40	25.90	25.90	31.76	36.06	36.06			
STR-6-4-6	3/8	9.52	1/4	6.35	3/8	9.52	4.82	16.76	15.24	16.76	19.30	17.78	19.30	5/8	15.87	11/16	17.46	9/16	14.28	11/16	17.46	23.10	21.92	23.10	30.46	29.28	30.46			
STR-6-4	3/8	9.52	3/8	9.52	1/4	6.35	4.82	16.76	16.76	15.24	19.30	19.30	17.78	5/8	15.87	11/16	17.46	11/16	17.46	9/16	14.28	23.10	23.10	21.92	30.46	30.46	29.28			
STR-6-8	3/8	9.52	3/8	9.52	1/2	12.70	7.11	16.76	16.76	22.86	19.30	19.30	21.84	13/16	20.64	11/16	17.46	11/16	17.46	7/8	22.22	25.90	25.90	25.90	33.26	33.26	36.06			
STR-8-4-6	1/2	12.70	1/4	6.35	3/8	9.52	4.82	22.86	15.24	16.76	21.84	17.78	19.30	13/16	20.64	7/8	22.22	9/16	14.28	11/16	17.46	25.90	25.90	25.90	36.06	33.26	33.26			
STR-8-4-8	1/2	12.70	1/4	6.35	1/2	12.70	4.82	22.86	15.24	22.86	21.84	17.78	21.84	13/16	20.64	7/8	22.22	9/16	14.28	7/8	22.22	25.90	24.40	25.90	36.06	31.76	36.06			
STR-8-6-6	1/2	12.70	3/8	9.52	3/8	9.52	7.11	22.86	16.76	16.76	21.84	19.30	19.30	13/16	20.64	7/8	22.22	11/16	17.46	11/16	17.46	25.90	25.90	25.90	36.06	33.26	33.26			
STR-8-4	1/2	12.70	1/2	12.70	1/4	6.35	4.82	22.86	22.86	15.24	21.84	21.84	17.78	13/16	20.64	7/8	22.22	7/8	22.22	9/16	14.28	25.90	25.90	24.40	36.06	36.06	31.76			
STR-8-6	1/2	12.70	1/2	12.70	3/8	9.52	7.11	22.86	22.86	16.76	21.84	21.84	19.30	13/16	20.64	7/8	22.22	7/8	22.22	11/16	17.46	25.90	25.90	25.90	36.06	36.06	33.26			
STR-10-6	5/8	15.87	5/8	15.87	3/8	9.52	7.11	24.38	24.38	16.76	21.84	21.84	19.30	15/16	23.81	1	25.40	1	25.40	11/16	17.46	28.70	28.70	28.70	38.86	38.86	36.06			
STR-12-8-12	3/4	19.05	1/2	12.70	3/4	19.05	10.41	24.38	22.86	24.38	21.84	21.84	21.84	1-1/16	26.98	1-1/8	28.58	7/8	22.22	1-1/8	28.58	29.71	29.71	29.71	39.87	39.87	39.87			
STR-12-4	3/4	19.05	3/4	19.05	1/4	6.35	4.82	24.38	24.38	15.24	21.84	21.84	17.78	1-1/16	26.98	1-1/8	28.58	1-1/8	28.58	9/16	14.28	29.71	29.71	28.21	39.87	39.87	35.57			
STR-12-6	3/4	19.05	3/4	19.05	3/8	9.52	7.11	24.38	24.38	16.76	21.84	21.84	19.30	1-1/16	26.98	1-1/8	28.58	1-1/8	28.58	11/16	17.46	29.71	29.71	29.71	39.87	39.87	35.57			
STR-12-8	3/4	19.05	3/4	19.05	1/2	12.70	10.41	24.38	24.38	22.86	21.84	21.84	21.84	1-1/16	26.98	1-1/8	28.58	1-1/8	28.58	7/8	22.22	29.71	29.71	29.71	39.87	39.87	38.37			
STR-12-16	3/4	19.05	3/4	19.05	1	25.40	15.74	24.38	24.38	31.24	21.84	21.84	26.41	1-3/8	34.92	1-1/8	28.58	1-1/8	28.58	1-1/2	38.10	34.43	34.43	36.83	49.02	49.02	45.70			
STR-12-20	3/4	19.05	3/4	19.05	1-1/4	31.75	15.74	24.38	24.38	41.14	21.84	21.84	38.86	1-11/16	42.86	1-1/8	28.58	1-1/8	28.58	1-7/8	47.63	39.41	39.41	44.45	49.57	49.57	66.55			
STR-14-8	7/8	22.22	7/8	22.22	1/2	12.70	10.41	25.90	25.90	22.86	21.84	21.84	21.84	1-1/4	31.75	1-1/4	31.75	1-1/4	31.75	7/8	22.22	34.54	34.54	34.54	44.70	44.70	44.70			
STR-16-12-12	1	25.40	3/4	19.05	3/4	19.05	15.74	31.24	24.38	24.38	26.41	21.84	21.84	1-3/8	34.92	1-1/2	38.10	1-1/8	28.58	1-1/8	28.58	36.83	35.54	35.54	49.02	45.70	45.70			
STR-16-4	1	25.40	1	25.40	1/4	6.35	4.82	31.24	31.24	15.24	26.41	26.41	17.78	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	9/16	14.28	36.83	36.83	33.04	49.02	49.02	40.40			
STR-16-6	1	25.40	1	25.40	3/8	9.52	7.11	31.24	31.24	16.76	26.41	26.41	19.30	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	11/16	17.46	36.83	36.83	34.54	49.02	49.02	41.90			
STR-16-8	1	25.40	1	25.40	1/2	12.70	10.41	31.24	31.24	22.86	26.41	26.41	21.84	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	7/8	22.22	36.83	36.83	34.54	49.02	49.02	44.70			
STR-16-12	1	25.40	1	25.40	3/4	19.05	15.74	31.24	31.24	24.38	26.41	26.41	21.84	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	1-1/8	28.58	36.83	36.83	35.54	49.02	49.02	45.70			
STR-20-12-12	1-1/4	31.75	3/4	19.05	3/4	19.05	15.74	41.14	24.38	24.38	38.86	21.84	21.84	1-11/16	42.86	1-7/8	47.63	1-1/8	28.58	1-1/8	28.58	44.45	39.41	39.41	66.55	49.57	49.57			
STR-20-12	1-1/4	31.75	1-1/4	31.75	3/4	19.05	15.74	41.14	41.14	24.38	38.86	38.86	21.84	1-11/16	42.86	1-7/8	47.63	1-7/8	47.63	1-1/8	28.58	44.45	44.45	39.41	66.55	66.55	49.57			
STR-24-20-20	1-1/2	38.10	1-1/4	31.75	1-1/4	31.75	27.68	50.03	41.14	41.14	45.21	38.86	38.86	2	50.80	2-1/4	57.15	1-7/8	47.63	1-7/8	47.63	50.80	49.62	49.62	77.97	71.72	71.72			
STR-24-8	1-1/2	38.10	1-1/2	38.10	1/2	12.70	10.41	50.03	50.03	22.86	45.21	45.21	21.84	2	50.80	2-1/4	57.15	2-1/4	57.15	7/8	22.22	50.80	50.80	44.58	77.97	77.97	54.74			
STR-24-12	1-1/2	38.10	1-1/2	38.10	3/4	19.05	15.74	50.03	50.03	24.38	45.21	45.21	21.84	2	50.80	2-1/4	57.15	2-1/4	57.15	1-1/8	28.58	50.80	50.80	44.58	77.97	77.97	54.74			
STR-24-16	1-1/2	38.10	1-1/2	38.10	1	25.40	22.35	50.03	50.03	31.24	45.21	45.21	26.41	2	50.80	2-1/4	57.15	2-1/4	57.15	1-1/2	38.10	50.80	50.80	47.75	77.97	77.97	59.94			

Reducing Union Tee

STR

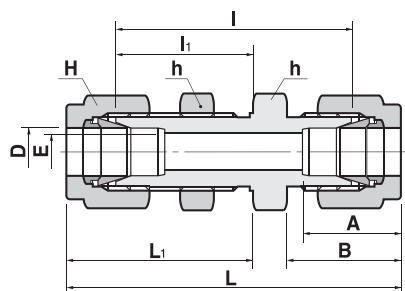


Connects metric tube

Part No.	Tube O.D			E Min.	A	A ₁	A ₂	B	B ₁	B ₂	Width across flat				I	I ₁	I ₂	L	L ₁	L ₂
	D	D ₁	D ₂								h	H	H ₁	H ₂						
STR-3M-6M	3	3	6	2.4	12.9	12.9	15.3	15.3	15.3	17.7	12.7	12	12	14	18.0	18.0	19.6	24.6	24.6	27.0
STR-8M-6M	8	8	6	4.8	16.2	16.2	15.3	18.6	18.6	17.7	15.0	16	16	14	21.3	21.3	20.5	28.8	28.8	28.0
STR-10M-6M	10	10	6	4.8	17.2	17.2	15.3	19.5	19.5	17.7	17.4	19	19	14	23.9	23.9	22.4	31.5	31.5	29.8
STR-10M-12M	10	10	12	7.9	17.2	17.2	22.8	19.5	19.5	22.0	20.6	19	19	22	25.9	25.9	25.9	33.5	33.5	36.0
STR-12M-6M-10M	12	6	10	4.8	22.8	15.3	17.2	22.0	17.7	19.5	20.6	22	14	19	25.9	24.4	25.9	36.0	31.8	33.5
STR-12M-6M-12M	12	6	12	4.8	22.8	15.3	22.8	22.0	17.7	22.0	20.6	22	14	22	25.9	24.4	25.9	36.0	31.8	36.0
STR-12M-10M-10M	12	10	10	7.9	22.8	17.2	17.2	22.0	19.5	19.5	20.6	22	19	19	25.9	25.9	25.9	36.0	33.5	33.5
STR-12M-10M	12	12	10	7.9	22.8	22.8	17.2	22.0	22.0	19.5	20.6	22	22	19	25.9	25.9	25.9	36.0	36.0	33.5
STR-12M-6M	12	12	6	4.8	22.8	22.8	15.3	22.0	22.0	17.7	20.6	22	22	14	25.9	25.9	24.4	36.0	36.0	31.8
STR-15M-12M	15	15	12	9.8	24.4	24.4	22.8	28.7	28.7	22.0	23.8	25	25	22	28.7	28.7	28.7	38.8	38.8	38.8
STR-16M-12M	16	16	12	9.8	24.4	24.4	22.8	28.7	28.7	22.0	23.8	25	25	22	28.7	28.7	28.7	38.8	38.8	38.8
STR-18M-12M	18	18	12	9.8	24.4	24.4	22.8	29.7	29.7	22.0	27.0	30	30	22	29.7	29.7	29.5	39.8	39.8	39.6
STR-20M-12M-20M	20	12	20	9.8	26.0	22.8	26.0	34.5	22.0	34.5	34.9	32	22	32	32.5	32.5	32.5	42.6	42.6	42.6
STR-20M-6M	20	20	6	4.8	26.0	26.0	15.3	34.5	34.5	17.7	34.9	32	32	14	32.5	32.5	31.0	42.6	42.6	38.4
STR-20M-10M	20	20	10	7.9	26.0	26.0	17.2	34.5	34.5	19.5	34.9	32	32	19	32.5	32.5	32.5	42.6	42.6	40.1
STR-20M-12M	20	20	12	9.8	26.0	26.0	22.8	34.5	34.5	22.0	34.9	32	32	22	32.5	32.5	32.5	42.6	42.6	42.6
STR-20M-25M	20	20	25	15.9	26.0	26.0	31.3	34.5	34.5	26.5	34.9	32	32	38	34.3	34.3	36.8	44.4	44.4	49.1
STR-20M-32M	20	20	32	15.9	26.0	26.0	42.0	34.5	34.5	41.6	46.0	32	32	50	42.5	42.5	49.3	52.6	52.6	72.3
STR-22M-12M	22	22	12	9.8	26.0	26.0	22.8	34.5	34.5	22.0	31.8	32	32	22	32.5	32.5	32.5	42.6	42.6	42.6
STR-25M-20M-20M	25	20	20	15.9	31.3	26.0	26.0	26.5	34.5	34.5	34.9	38	32	32	36.8	34.3	34.3	49.1	44.4	44.4
STR-25M-10M	25	25	10	7.9	31.3	31.3	17.2	26.5	26.5	19.5	34.9	38	38	19	36.8	36.8	34.3	49.1	49.1	38.9
STR-25M-12M	25	25	12	9.8	31.3	31.3	22.8	26.5	26.5	22.0	34.9	38	38	22	36.8	36.8	34.3	49.1	49.1	44.4
STR-25M-20M	25	25	20	15.9	31.3	31.3	26.0	26.5	26.5	34.5	34.9	38	38	32	36.8	36.8	34.3	49.1	49.1	44.4
STR-32M-20M	32	32	20	15.9	42.0	42.0	26.0	41.6	41.6	34.5	46.0	38	38	32	49.3	49.3	42.5	72.3	72.3	52.6
STR-38M-32M-32M	38	32	32	28.6	49.4	42.0	42.0	47.9	41.6	41.6	50.8	60	38	38	56.4	54.7	54.7	84.0	77.7	77.7
STR-38M-20M	38	38	20	15.9	49.4	49.4	26.0	47.9	47.9	34.5	50.8	60	60	32	56.4	56.4	47.9	84.0	84.0	58.0
STR-38M-25M	38	38	25	21.8	49.4	49.4	31.3	47.9	47.9	26.5	50.8	60	60	38	56.4	56.4	50.4	84.0	84.0	62.7

Bulkhead Union

SUB



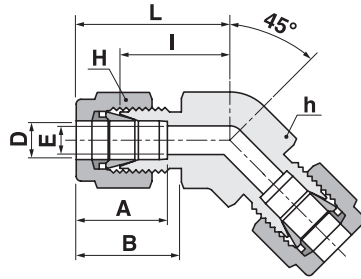
Connects fractional tube

Part No.	Tube O.D		E	Width across flat				A	B	I	I ₁	L	L ₁	Panel Hole Drill Size	Panel Max. Thickness
	D			h		H									
	in	mm		Min.	in	mm	in								
SUB-1	1/16	1.59	1.27	5/16	7.93	5/16	7.93	8.63	10.92	23.87	13.46	31.50	17.27	5.16	3.05
SUB-2	1/8	3.17	2.28	1/2	12.70	7/16	11.11	12.70	15.24	38.10	24.63	51.30	31.24	8.33	12.70
SUB-3	3/16	4.76	3.04	9/16	14.28	1/2	12.70	13.71	16.00	40.38	25.40	53.59	32.00	9.92	12.70
SUB-4	1/4	6.35	4.82	5/8	15.87	9/16	14.28	15.24	17.78	42.92	26.16	57.65	33.52	11.50	10.16
SUB-5	5/16	7.93	6.35	11/16	17.46	5/8	15.87	16.25	18.54	45.97	28.44	60.70	35.81	13.09	11.17
SUB-6	3/8	9.52	7.11	3/4	19.05	11/16	17.46	16.76	19.30	47.49	29.46	62.23	36.83	14.68	11.17
SUB-8	1/2	12.70	10.41	15/16	23.81	7/8	22.22	22.86	21.84	50.80	31.75	71.10	41.91	19.44	12.70
SUB-10	5/8	15.87	12.70	1-1/16	26.98	1	25.40	24.38	21.84	52.32	32.51	72.64	42.67	22.62	12.70
SUB-12	3/4	19.05	15.74	1-3/16	30.16	1-1/8	28.58	24.38	21.84	58.67	37.33	78.99	47.49	25.79	16.76
SUB-14	7/8	22.22	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	64.26	42.92	84.58	53.08	28.97	19.05
SUB-16	1	25.40	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	71.37	45.21	95.75	57.40	33.73	19.05
SUB-20	1-1/4	31.75	27.68	1-7/8	47.63	1-7/8	47.63	41.14	38.86	78.99	47.75	123.19	69.85	41.67	19.05
SUB-24	1-1/2	38.10	34.03	2-1/4	57.15	2-1/4	57.15	50.03	45.21	84.83	49.27	139.19	76.45	49.61	19.05
SUB-32	2	50.80	45.97	2-3/4	69.85	3	76.20	67.56	62.73	105.66	56.38	180.34	93.72	57.94	19.05

Connects metric tube

Part No.	Tube O.D	E	Width across flat		A	B	I	I ₁	L	L ₁	Panel Hole Drill Size	Panel Max. Thickness
	D	Min.	h	H								
SUB-3M	3	2.4	14	12	12.9	15.3	38.1	24.6	51.3	31.2	8.3	12.7
SUB-4M	4	2.4	14	12	13.7	16.1	40.4	25.4	53.6	32.0	9.9	12.7
SUB-6M	6	4.8	16	14	15.3	17.7	42.9	26.2	57.7	33.6	11.5	10.2
SUB-8M	8	6.4	18	16	16.2	18.6	46.0	28.6	61.0	36.1	13.1	11.2
SUB-10M	10	7.9	22	19	17.2	19.5	48.5	29.4	63.7	37.0	16.2	11.2
SUB-12M	12	9.5	24	22	22.8	22.0	50.8	31.8	71.0	41.9	19.5	12.7
SUB-15M	15	11.9	27	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
SUB-16M	16	12.7	27	25	24.4	22.0	52.3	32.5	72.5	42.6	22.8	12.7
SUB-18M	18	15.1	30	30	24.4	22.0	58.7	37.3	78.9	47.4	26.0	16.8
SUB-20M	20	15.9	35	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	17.0
SUB-22M	22	18.3	35	32	26.0	22.0	64.3	42.9	84.5	53.0	29.0	19.1
SUB-25M	25	21.8	41	38	31.3	26.5	71.4	45.2	95.9	57.5	33.7	19.1
SUB-32M	32	28.6	50	50	42.0	41.6	82.3	49.5	128.3	72.5	42.5	19.0
SUB-38M	38	33.7	60	60	49.4	47.9	89.4	51.5	144.6	79.1	50.5	19.0

45° Union Elbow

SLBU

Connects fractional tube

Part No.	Tube O.D		E	Width across flat				A	B	I	L
	D			h		H					
	in	mm		Min.	in	mm	in				
SLBU-4	1/4	6.35	4.82	1/2	12.7	9/16	14.28	15.24	17.78	17.27	24.63
SLBU-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	20.60	27.94
SLBU-8	1/2	12.7	10.41	13/16	20.64	7/8	22.22	22.86	22.00	21.80	32.00
SLBU-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.58	24.20	21.70	21.80	31.70
SLBU-16	1	25.4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	28.20	40.40
*SLBU-20	1-1/4	31.75	27.68	1-11/16	42.86	1-7/8	47.63	41.00	38.88	44.50	66.50
*SLBU-24	1-1/2	38.1	34.03	2	50.8	2-1/4	57.15	50.38	45.40	50.00	77.40
*SLBU-32	2	50.8	45.97	2-3/4	69.85	3	76.20	67.56	62.73	69.80	107.18

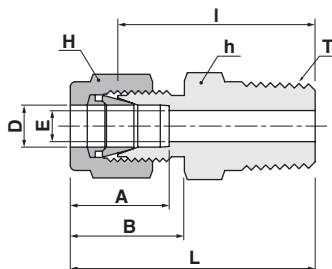
*Approval Drawing Required

Connects metric tube

Part No.	Tube O.D	E	Width across flat		A	B	I	L
	D		h	H				
SLBU-4M	4	2.4	12.7	12	13.7	16.0	18.0	24.5
SLBU-6M	6	4.8	12.7	14	15.3	17.6	19.0	26.3
SLBU-12M	12	9.5	20.6	22	22.9	22.0	20.6	30.8
SLBU-15M	15	11.9	27	25	24.3	22.0	22.8	32.8
SLBU-18M	18	15.1	27	30	24.4	22.0	24.4	34.5
SLBU-20M	20	15.9	34.9	32	26.0	22.0	26.2	36.1
SLBU-25M	25	21.8	34.9	38	31.3	26.5	28.2	40.5
SLBU-38M	38	33.7	55	60	49.4	47.9	50.0	77.6

Male Connector

SMC-N

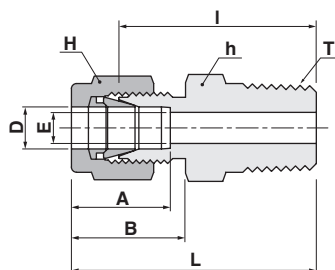


Connects fractional tube to female NPT thread

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D.		T	E	Width across flat				A	B	I	L
	D				h		H					
	in	mm	N(NPT)	Min.	in	mm	in	mm				
SMC-1-1N	1/16	1.59	1/16	1.27	5/16	7.93	5/16	7.93	8.63	10.92	20.00	23.83
SMC-1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	22.35	26.23
SMC-1-4N	1/16	1.59	1/4	1.27	9/16	14.28	5/16	7.93	8.63	10.92	27.17	30.98
SMC-2-1N	1/8	3.17	1/16	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.11	29.71
SMC-2-2N	1/8	3.17	1/8	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.87	30.48
SMC-2-4N	1/8	3.17	1/4	2.28	9/16	14.28	7/16	11.11	12.70	15.24	28.95	35.56
SMC-2-6N	1/8	3.17	3/8	2.28	11/16	17.46	7/16	11.11	12.70	15.24	29.21	35.38
SMC-2-8N	1/8	3.17	1/2	2.28	7/8	22.22	7/16	11.11	12.70	15.24	35.56	42.16
SMC-3-2N	3/16	4.76	1/8	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.63	31.24
SMC-3-4N	3/16	4.76	1/4	3.04	9/16	14.28	1/2	12.70	13.71	16.00	29.71	36.32
SMC-4-1N	1/4	6.35	1/16	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	32.76
SMC-4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	32.76
SMC-4-4N	1/4	6.35	1/4	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	37.84
SMC-4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	30.98	38.35
SMC-4-8N	1/4	6.35	1/2	4.82	7/8	22.22	9/16	14.28	15.24	17.78	37.33	44.70
SMC-4-12N	1/4	6.35	3/4	4.82	1-1/6	26.98	9/16	14.28	15.24	17.78	38.86	46.22
SMC-5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	26.67	34.03
SMC-5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	38.60
SMC-5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	31.75	39.11
SMC-5-8N	5/16	7.93	1/2	6.35	7/8	22.22	5/8	15.87	16.25	18.54	38.11	45.60
SMC-6-2N	3/8	9.52	1/8	7.11	5/8	15.87	11/16	17.46	16.76	19.30	27.94	35.30
SMC-6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.51	39.87
SMC-6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	39.87
SMC-6-8N	3/8	9.52	1/2	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	46.22
SMC-6-12N	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	40.38	47.75
SMC-8-2N	1/2	12.70	1/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	28.70	38.86
SMC-8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
SMC-8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	33.27	43.43
SMC-8-8N	1/2	12.70	1/2	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	49.02
SMC-8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	40.38	50.54
SMC-8-16N	1/2	12.70	1	10.41	1-3/8	34.92	7/8	22.22	22.86	21.84	46.99	57.15
SMC-10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	34.03	44.19
SMC-10-8N	5/8	15.87	1/2	12.70	15/16	23.81	1	25.40	24.38	21.84	38.86	49.02
SMC-10-12N	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	40.38	50.54
SMC-12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	50.54
SMC-12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	50.54
SMC-12-16N	3/4	19.05	1	15.74	1-3/8	34.92	1-1/8	28.58	24.38	21.84	46.99	57.15
SMC-14-12N	7/8	22.22	3/4	18.28	1-3/16	30.16	1-1/4	31.75	25.90	21.84	40.38	50.54
SMC-14-16N	7/8	22.22	1	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	46.99	57.15
SMC-16-8N	1	25.40	1/2	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
SMC-16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	45.21	57.40
SMC-16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	50.03	62.23
SMC-20-16N	1-1/4	31.75	1	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	77.21
SMC-20-20N	1-1/4	31.75	1-1/4	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	77.21
SMC-20-24N	1-1/4	31.75	1-1/2	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	60.54	82.64
SMC-24-20N	1-1/2	38.10	1-1/4	34.03	2-1/8	53.98	2-1/4	57.15	50.03	45.21	59.42	86.60
SMC-24-24N	1-1/2	38.10	1-1/2	34.03	2-1/8	53.98	2-1/4	57.15	50.03	45.21	61.72	88.90
SMC-24-32N	1-1/2	38.10	2	34.03	2-3/4	69.85	2-1/4	57.15	50.03	45.21	62.42	99.75
SMC-32-8N	2	50.80	1/2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	68.40	105.73
SMC-32-20N	2	50.80	1-1/4	45.97	2-3/4	69.85	3	76.20	67.56	62.73	71.40	108.73
SMC-32-24N	2	50.80	1-1/2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	75.50	112.83
SMC-32-32N	2	50.80	2	45.97	2-3/4	69.85	3	76.20	67.56	62.73	76.20	113.53

Male Connector

SMC-R

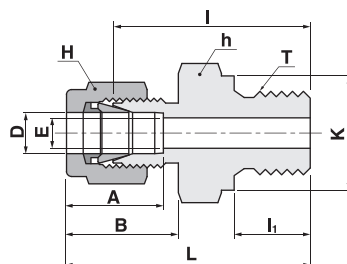
Connects metric tube to female ISO taper thread

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D	T	E	Width across flat		A	B	I	L
	D	R(PT)	Min.	h	H				
SMC-2M-2R	2	1/8	1.7	12	12	12.9	15.3	23.1	29.7
SMC-3M-2R	3	1/8	2.4	12	12	12.9	15.3	23.1	29.7
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	30.2	37.6
SMC-6M-6R	6	3/8	4.8	8	14	15.3	17.7	31.0	38.4
SMC-6M-8R	6	1/2	4.8	22	14	15.3	17.7	36.6	44.0
SMC-8M-2R	8	1/8	6.4	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	39.2
SMC-8M-8R	8	1/2	6.4	22	16	16.2	18.6	37.3	44.8
SMC-10M-2R	10	1/8	4.8	18	19	17.2	19.5	28.7	36.3
SMC-10M-4R	10	1/4	7.1	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	38.1	45.7
SMC-12M-4R	12	1/4	9.5	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	38.1	48.2
SMC-12M-12R	12	3/4	9.5	27	22	22.8	22.0	38.9	49.0
SMC-15M-8R	15	1/2	11.9	24	25	24.4	22.0	38.9	49.0
SMC-16M-4R	16	1/4	12.7	24	25	24.4	22.0	34.0	44.1
SMC-16M-6R	16	3/8	12.7	24	25	24.4	22.0	34.0	44.1
SMC-16M-8R	16	1/2	12.7	24	25	24.4	22.0	38.9	49.0
SMC-16M-12R	16	3/4	12.7	27	25	24.4	22.0	38.9	49.0
SMC-18M-8R	18	1/2	15.1	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	15.9	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	18.3	30	32	26.0	22.0	42.2	52.3
SMC-22M-16R	22	1	18.3	35	32	26.0	22.0	47.8	57.9
SMC-25M-12R	25	3/4	21.8	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-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

**Male Connector
for Bonded Seal**

SMC-G



Connects fractional tube to female ISO parallel thread

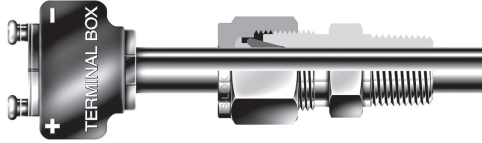
These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		T	E	Width across flat				A	B	I	I ₁	L	K
	D				h									
	in	mm	G(PF)	Min.	in	mm	in	mm						
SMC-2-2G	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	23.37	7.11	29.97	13.72
SMC-2-4G	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	28.70	11.18	35.31	18.03
SMC-2-6G	1/8	3.17	3/8	2.28	7/8	22.22	7/16	11.11	12.70	15.24	29.72	11.18	36.21	21.84
SMC-4-2G	1/4	6.35	1/8	4.82	9/16	14.28	9/16	14.28	15.24	17.78	24.89	7.11	32.26	13.72
SMC-4-4G	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	30.23	11.18	37.59	18.03
SMC-4-6G	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	61.50	11.18	38.86	21.84
SMC-4-8G	1/4	6.35	1/2	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	37.34	14.22	44.70	25.91
SMC-6-4G	3/8	9.52	1/4	7.11	3/4	19.05	11/16	17.46	16.76	19.30	31.75	11.18	39.12	18.03
SMC-6-6G	3/8	9.52	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	33.02	11.18	40.39	21.84
SMC-6-8G	3/8	9.52	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	38.86	14.22	46.23	25.91
SMC-8-4G	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	32.51	11.18	42.67	18.03
SMC-8-6G	1/2	12.70	3/8	10.41	7/8	22.22	7/8	22.22	22.86	21.84	33.02	11.18	43.18	21.84
SMC-8-8G	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	38.86	14.22	49.02	25.91
SMC-12-8G	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	38.86	14.22	49.02	25.91
SMC-12-12G	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	42.67	15.75	52.83	32.00
SMC-16-8G	1	25.40	1/2	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	43.69	14.22	55.88	25.91
SMC-16-16G	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	47.75	18.29	59.94	39.12
SMC-20-20G	1-1/4	31.75	1-1/4	27.68	2	50.80	1-7/8	47.63	41.14	38.86	51.16	20.00	73.26	49.00
SMC-24-24G	1-1/2	38.10	1-1/2	34.03	2-1/4	57.15	2-1/4	57.15	50.03	45.21	57.57	22.00	84.75	55.00

Connects metric tube to female ISO parallel thread

Part No.	Tube O.D	T	E	Width across flat		A	B	I	I ₁	L	K
	D	G(PF)	Min.	h	H						
SMC-2M-2G	2	1/8	1.7	14	12	12.9	15.3	23.4	7.1	30.0	13.8
SMC-3M-2G	3	1/8	2.4	14	12	12.9	15.3	23.4	7.1	30.0	13.8
SMC-3M-4G	3	1/4	2.4	19	12	12.9	15.3	28.7	11.2	35.3	18.0
SMC-4M-2G	4	1/8	2.4	14	12	13.7	16.1	24.1	7.1	30.7	13.8
SMC-4M-4G	4	1/4	2.4	19	12	13.7	16.1	29.4	11.2	36.0	18.0
SMC-6M-2G	6	1/8	4.8	14	14	15.3	17.7	24.9	7.1	32.3	13.8
SMC-6M-4G	6	1/4	4.8	19	14	15.3	17.7	30.2	11.2	37.6	18.0
SMC-6M-6G	6	3/8	4.8	22	14	15.3	17.7	31.5	11.2	38.9	21.8
SMC-6M-8G	6	1/2	4.8	27	14	15.3	17.7	37.3	14.2	44.7	26.0
SMC-8M-2G	8	1/8	6.4	15	16	16.2	18.6	25.7	7.1	33.2	13.8
SMC-8M-4G	8	1/4	6.4	19	16	16.2	18.6	31.0	11.2	38.5	18.0
SMC-8M-6G	8	3/8	6.4	22	16	16.2	18.6	32.3	11.2	39.8	21.8
SMC-8M-8G	8	1/2	6.4	27	16	16.2	18.6	38.1	14.2	45.6	26.0
SMC-10M-4G	10	1/4	7.9	19	19	17.2	19.5	31.8	11.2	39.4	18.0
SMC-10M-6G	10	3/8	7.9	22	19	17.2	19.5	33.0	11.2	40.6	21.8
SMC-10M-8G	10	1/2	7.9	27	19	17.2	19.5	38.9	14.2	46.5	26.0
SMC-12M-4G	12	1/4	9.5	22	22	22.8	22.0	32.5	11.2	42.6	18.0
SMC-12M-6G	12	3/8	9.5	22	22	22.8	22.0	33.0	11.2	43.1	21.8
SMC-12M-8G	12	1/2	9.5	27	22	22.8	22.0	38.9	14.2	49.0	26.0
SMC-12M-12G	12	3/4	9.5	35	22	22.8	22.0	42.7	15.7	52.8	32.0
SMC-16M-6G	16	3/8	12.7	24	25	24.4	22.0	33.8	11.2	43.9	21.8
SMC-16M-8G	16	1/2	12.7	27	25	24.4	22.0	38.9	14.2	49.0	26.0
SMC-18M-8G	18	1/2	15.1	27	30	24.4	22.0	38.9	14.2	49.0	26.0
SMC-18M-12G	18	3/4	15.1	35	30	24.4	22.0	42.7	15.7	52.8	32.0
SMC-20M-8G	20	1/2	15.9	30	32	26.0	22.0	40.4	14.2	50.5	26.0
SMC-20M-12G	20	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
SMC-22M-12G	22	3/4	18.3	35	32	26.0	22.0	42.7	15.7	52.8	32.0
SMC-22M-16G	22	1	18.3	41	32	26.0	22.0	45.2	18.3	55.3	39.0
SMC-25M-12G	25	3/4	21.8	35	38	31.3	26.5	45.2	15.7	57.5	32.0
SMC-25M-16G	25	1	21.8	41	38	31.3	26.5	47.8	18.3	60.1	39.0
SMC-28M-16G	28	1	21.8	41	46	36.6	36.6	49.3	18.3	70.1	39.0
SMC-28M-20G	28	1-1/4	21.8	50	46	36.6	36.6	53.1	19.8	73.9	49.0
SMC-32M-20G	32	1-1/4	28.6	50	50	42.0	41.6	55.9	19.8	78.9	49.0
SMC-38M-24G	38	1-1/2	33.7	55	60	49.4	47.9	63.2	22.1	90.8	54.7

Thermocouple Connector

SMCT

S-LOK thermocouple connector has no shoulder nor sizing angle inside the fitting; the features enable thermocouple to go through the fitting's thread end.

Example : SMCT 8-8N-S6 for ordering Thermocouple connector
O.D 1/2"× 1/2"NPT S316

Assembly Instructions

1. Position the length of the Thermocouple passed through fitting's thread end and hold it to prevent shifting during assembly.
2. Turn the nut 1-1/4 after finger tight with a wrench by holding the body with a back up wrench for size 1/4"(6mm) or above.

ISO Pipe Thread

The International Standards Organization created the ISO 228/1 and 7/1 threads to standardize the nomenclature of several international pipe threads.

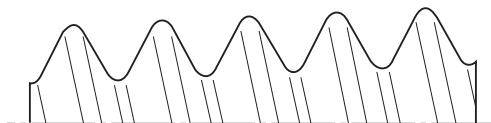
ISO 7/1

The ISO 7/1 is a tapered thread that is sealing threads working by interference fit. This still requires thread sealant for pressure-tight seal by filling the voids between threads, and further, this prevents galling on piping threads. The sealant usually contains a lubricant.

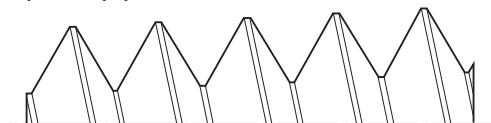
The ISO 7/1 is described in following codes.

1. BS 21(BSPT)
2. JIS B0203(PT)
3. ISO 7/1
4. DIN 2999 (male thread only)

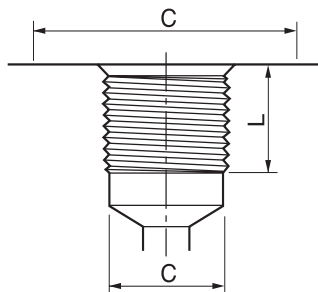
The ISO 7/1 looks similar to the NPT thread. See how different they are as illustrated below.

ISO 7/1 tapered pipe thread

- *55° thread angle
- *Pitch measured in millimeters
- *Truncation of root and crest are round
- *Taper angle 1°47'

NPT tapered pipe threads

- *60° thread angle
- *Pitch measured in Inches
- *Truncation of root and crest are flat
- *Taper angle 1°47'

**ISO Internal Parallel Pipe Thread**

S-LOK Pipe Thread Designator	ISO Female Parallel Pipe Size	Minimum Full Thread Depth L	Thread Minor Diameter D	Minimum Flat Diameter for SGB & SGC C
2	1/8	0.31	0.337 / 0.348	0.59
4	1/4	0.47	0.450 / 0.468	0.75
6	3/8	0.47	0.588 / 0.606	0.91
8	1/2	0.55	0.733 / 0.755	1.06
12	3/4	0.63	0.949 / 0.971	1.30
16	1	0.71	1.193 / 1.218	1.57

ISO 228/1

ISO 228/1 is parallel thread the that is no sealing threads. The pressure tight seal is usually made metal to metal against the female port or with a gasket.

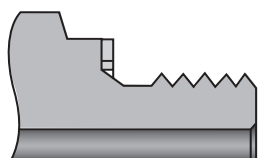
ISO 228/1 is described in following codes.

1.BS 2779(BSPP) 2.DIN-ISO 228/1 3.JIS B0202(PF) 4.ISO 228/1

The ISO 228/1 threads sealing available in S-LOK are listed below.

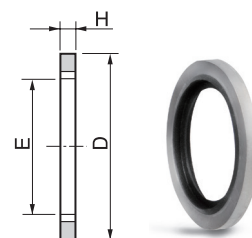
A self-centering taper is constructed at the hex. This taper centers a bonded washer to seal to the surface surrounding the female thread.

SGB Bonded Seal Gasket
(Buna inner ring bonded to carbon steel outer ring)



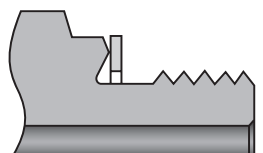
Sealing by compression
against face of body
Reference DIN 3852 Type A

Ordering Number	E		H		D	
	in	mm	in	mm	in	mm
SGB-2-	0.41	10.4	0.08	2.0	0.63	16.0
SGB-4-	0.54	13.7	0.08	2.0	0.81	20.6
SGB-6-	0.68	17.3	0.08	2.0	0.94	23.9
SGB-8-	0.85	21.6	0.10	2.5	1.13	28.7
SGB-12-	1.06	27.2	0.10	2.5	1.38	35.1
SGB-16-	1.33	33.8	0.10	3.2	1.69	42.9
SGB-20-	1.67	42.4	0.10	3.2	2.01	51.1
SGB-24-	1.92	48.8	0.10	3.2	2.33	59.2



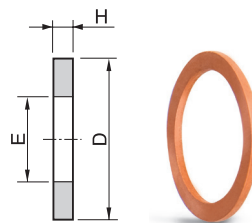
A metal gasket performs the sealing between the reverse bevel of the fitting and the face of the female threaded component.

SGC Copper Gasket



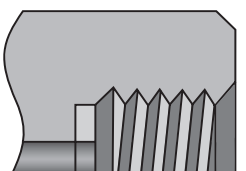
Sealing by gasket (washer)
Reference DIN 3852 Type B

Ordering Number	E		H		D	
	in	mm	in	mm	in	mm
SGC-2-	0.39	9.9	0.04	1.0	0.59	15.0
SGC-4-	0.52	13.2	0.06	1.5	0.75	19.1
SGC-6-	0.66	16.8	0.06	1.5	0.91	23.1
SGC-8-	0.83	21.1	0.06	1.5	1.06	26.9
SGC-12-	1.05	26.7	0.08	2.0	1.30	33.0
SGC-16-	1.31	33.3	0.08	2.0	1.58	40.1
SGC-20-	1.66	42.2	0.08	2.0	1.96	49.8
SGC-24-	1.89	48.0	0.08	2.0	2.30	58.4



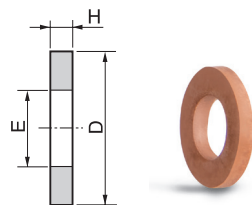
A gasket is dropped into the flat bottom of the female thread. The face of the male thread eerts aload on the gasket to seal.

SGG Copper Gasket



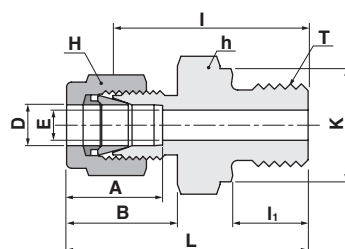
Sealing by gasket.
Reference DIN 3852 Type Y

Ordering Number	E		H		D	
	in	mm	in	mm	in	mm
SGG-4-	0.30	7.6	0.08	2.0	0.42	10.7
SGG-6-	0.34	8.6	0.10	2.5	0.56	14.2
SGG-8-	0.36	9.1	0.10	2.5	0.70	17.8



Male Connector
for Metal Gasket

SOM



Connects fractional tube to female ISO parallel thread

These fittings may have a larger opening at the pipe / straight thread end.

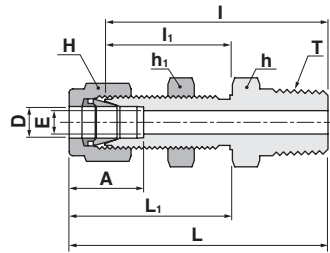
Part No.	Tube O.D		T	E	Width across flat				A	B	I	I ₁	L	K
	D				h		H							
	in	mm			G(PF)	Min.	in	mm						
SOM-2-2G	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	23.37	7.11	29.97	13.72
SOM-2-4G	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	28.70	11.18	35.31	18.03
SOM-2-6G	1/8	3.17	3/8	2.28	7/8	22.22	7/16	11.11	12.70	15.24	29.72	11.18	36.21	21.84
SOM-4-2G	1/4	6.35	1/8	4.82	9/16	14.28	9/16	14.28	15.24	17.78	24.89	7.11	32.26	13.72
SOM-4-4G	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	30.23	11.18	37.59	18.03
SOM-4-6G	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	61.50	11.18	38.86	21.84
SOM-4-8G	1/4	6.35	1/2	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	37.34	14.22	44.70	25.91
SOM-6-4G	3/8	9.52	1/4	7.11	3/4	19.05	11/16	17.46	16.76	19.30	31.75	11.18	39.12	18.03
SOM-6-6G	3/8	9.52	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	33.02	11.18	40.39	21.84
SOM-6-8G	3/8	9.52	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	38.86	14.22	46.23	25.91
SOM-8-4G	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	32.51	11.18	42.67	18.03
SOM-8-6G	1/2	12.70	3/8	10.41	7/8	22.22	7/8	22.22	22.86	21.84	33.02	11.18	43.18	21.84
SOM-8-8G	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	38.86	14.22	49.02	25.91
SOM-12-8G	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	38.86	14.22	49.02	25.91
SOM-12-12G	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	42.67	15.75	52.83	32.00
SOM-16-8G	1	25.40	1/2	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	43.69	14.22	55.88	25.91
SOM-16-16G	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	47.75	18.29	59.94	39.12
SOM-20-20G	1-1/4	31.75	1-1/4	27.68	2	50.80	1-7/8	47.63	41.14	38.86	51.16	20.00	73.26	49.00
SOM-24-24G	1-1/2	38.10	1-1/2	34.03	2-1/4	57.15	2-1/4	57.15	50.03	45.21	57.57	22.00	84.75	55.00

Connects metric tube to female ISO parallel thread

Part No.	Tube O.D	T	E	Width across flat		A	B	I	I ₁	L	K
	D	G(PF)	Min.	h	H						
SOM-3M-2G	3	1/8	2.4	14	12	12.9	15.3	23.4	7.1	30.0	13.8
SOM-3M-4G	3	1/4	2.4	19	12	12.9	15.3	28.7	11.2	35.3	18.0
SOM-4M-2G	4	1/8	2.4	14	12	13.7	16.1	24.1	7.1	30.7	13.8
SOM-6M-2G	6	1/8	4.8	14	14	15.3	17.7	24.9	7.1	32.3	13.8
SOM-6M-4G	6	1/4	4.8	19	14	15.3	17.7	30.2	11.2	37.6	18.0
SOM-6M-6G	6	3/8	4.8	22	14	15.3	17.7	31.5	11.2	38.9	21.8
SOM-6M-8G	6	1/2	4.8	27	14	15.3	17.7	37.3	14.2	44.7	26.0
SOM-8M-2G	8	1/8	6.4	15	16	16.2	18.6	25.7	7.1	33.2	13.8
SOM-8M-4G	8	1/4	6.4	19	16	16.2	18.6	31.0	11.2	38.5	18.0
SOM-8M-6G	8	3/8	6.4	22	16	16.2	18.6	32.3	11.2	39.8	21.8
SOM-8M-8G	8	1/2	6.4	27	16	16.2	18.6	38.1	14.2	45.6	26.0
SOM-10M-4G	10	1/4	7.9	19	19	17.2	19.5	31.8	11.2	39.4	18.0
SOM-10M-6G	10	3/8	7.9	22	19	17.2	19.5	33.0	11.2	40.6	21.8
SOM-10M-8G	10	1/2	7.9	27	19	17.2	19.5	38.9	14.2	46.5	26.0
SOM-12M-4G	12	1/4	9.5	22	22	22.8	22.0	32.5	11.2	42.6	18.0
SOM-12M-6G	12	3/8	9.5	22	22	22.8	22.0	33.0	11.2	43.1	21.8
SOM-12M-8G	12	1/2	9.5	27	22	22.8	22.0	38.9	14.2	49.0	26.0
SOM-12M-12G	12	3/4	9.5	35	22	22.8	22.0	42.7	15.7	52.8	32.0
SOM-16M-6G	16	3/8	12.7	24	25	24.4	22.0	33.8	11.2	43.9	21.8
SOM-16M-8G	16	1/2	12.7	27	25	24.4	22.0	38.9	14.2	49.0	26.0
SOM-18M-8G	18	1/2	15.1	27	30	24.4	22.0	38.9	14.2	49.0	26.0
SOM-18M-12G	18	3/4	15.1	35	30	24.4	22.0	42.7	15.7	52.8	32.0
SOM-20M-8G	20	1/2	15.9	30	32	26.0	22.0	40.4	14.2	50.5	26.0
SOM-20M-12G	20	3/4	15.9	35	32	26.0	22.0	42.7	15.7	52.8	32.0
SOM-22M-12G	22	3/4	18.3	35	32	26.0	22.0	42.7	15.7	52.8	32.0
SOM-22M-16G	22	1	18.3	41	32	26.0	22.0	45.2	18.3	55.3	39.0
SOM-25M-12G	25	3/4	21.8	35	38	31.3	26.5	45.2	15.7	57.5	32.0
SOM-25M-16G	25	1	21.8	41	38	31.3	26.5	47.8	18.3	60.1	39.0
SOM-28M-16G	28	1	21.8	41	46	36.6	36.6	49.3	18.3	70.1	39.0
SOM-28M-20G	28	1-1/4	21.8	50	46	36.6	36.6	53.1	19.8	73.9	49.0
SOM-32M-20G	32	1-1/4	28.6	50	50	42.0	41.6	55.9	19.8	78.9	49.0
SOM-38M-24G	38	1-1/2	33.7	55	60	49.4	47.9	61.7	20.6	89.3	54.7

**Bulkhead
Male Connector**

SMCB



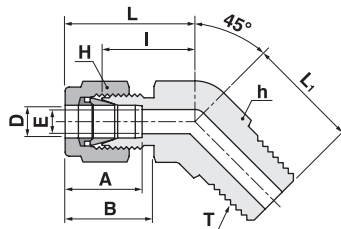
Connects fractional tube to female NPT thread

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		T	E	Width across flat						A	I	I ₁	L	L ₁	Panel Hole Drill Size	Panel Max. Thickness
	D				h		h ₁		H								
	in	mm			N(NPT)	Min.	in	mm	in	mm							
SMCB-2-2N	1/8	3.17	1/8	2.28	1/2	12.70	1/2	12.70	7/16	11.11	12.70	39.87	24.63	46.48	31.24	8.33	12.70
SMCB-4-2N	1/4	6.35	1/8	4.82	5/8	15.87	5/8	15.87	9/16	14.28	15.24	42.16	26.16	49.53	33.52	11.50	10.16
SMCB-4-4N	1/4	6.35	1/4	4.82	5/8	15.87	5/8	15.87	9/16	14.28	15.24	45.97	26.16	53.34	33.52	11.50	10.16
SMCB-6-4N	3/8	9.52	1/4	7.11	3/4	19.05	3/4	19.05	11/16	17.46	16.76	50.03	29.46	57.40	36.83	14.68	11.17
SMCB-6-6N	3/8	9.52	3/8	7.11	3/4	19.05	3/4	19.05	11/16	17.46	16.76	50.03	29.46	57.40	36.83	14.68	11.17
SMCB-6-8N	3/8	9.52	1/2	7.11	7/8	22.22	7/8	22.22	11/16	17.46	16.76	56.38	29.46	63.75	36.83	14.68	11.17
SMCB-8-6N	1/2	12.70	3/8	10.41	15/16	23.81	15/16	23.81	7/8	22.22	22.86	53.08	31.75	63.24	41.91	19.44	12.70
SMCB-8-8N	1/2	12.70	1/2	10.41	15/16	23.81	15/16	23.81	7/8	22.22	22.86	58.67	31.75	68.83	41.91	19.44	12.70
SMCB-12-12N	3/4	19.05	3/4	15.74	1-3/16	30.16	1-3/16	30.16	1-1/8	28.58	24.38	66.04	37.33	76.20	47.49	25.76	16.76
SMCB-16-16N	1	25.40	1	22.35	1-5/8	41.28	1-5/8	41.28	1-1/2	38.10	31.24	81.02	45.21	93.21	57.40	33.73	19.05
SMCB-20-20N	1-1/4	31.75	1-1/4	27.68	1-7/8	47.63	1-7/8	47.63	1-7/8	47.63	41.14	85.97	47.75	108.07	69.85	41.67	19.05
SMCB-24-24N	1-1/2	38.10	1-1/2	34.03	2-1/4	57.15	2-1/4	57.15	2-1/4	57.15	50.03	93.03	49.27	120.21	76.45	49.61	19.05
SMCB-32-32N	2	50.80	2	45.97	2-3/4	69.85	2-3/4	69.85	3	76.20	67.56	107.29	56.38	144.62	93.71	57.94	19.05

45° Male Elbow

SLBM



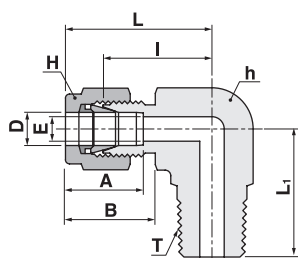
Connects fractional tube to female NPT thread

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		T	E	Width across flat				A	B	I	L	L ₁
	D				h		H						
	in	mm			N(NPT)	Min.	in	mm					
SLBM-4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	17.27	24.63	16.51
SLBM-4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	17.27	24.63	21.08
SLBM-6-2N	3/8	9.52	1/8	4.82	5/8	15.87	11/16	17.46	16.76	19.30	20.57	27.94	18.28
SLBM-6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	20.57	27.94	22.86
SLBM-6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	21.84	29.21	24.13
SLBM-8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	21.84	32.00	24.13
SLBM-8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	21.84	32.00	28.95
SLBM-12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	23.87	34.03	30.98
SLBM-16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	28.19	40.38	37.84

Male Elbow

SLM



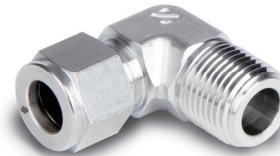
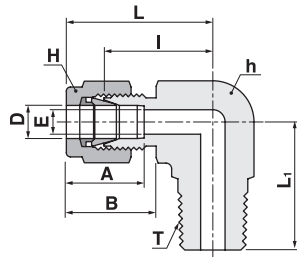
Connects fractional tube to female NPT thread

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		T	E	Width across flat				A	B	I	L	L ₁
	D				h		H						
	in	mm	N(NPT)	Min.	in	mm	in	mm					
SLM-1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
SLM-1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
SLM-2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	18.90
SLM-2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.36
SLM-3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	18.79
SLM-3-4N	3/16	4.76	1/4	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	23.36
SLM-4-1N	1/4	6.35	1/16	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.90	18.79
SLM-4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.10	26.47	19.10
SLM-4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.81	27.18	23.87
SLM-4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	26.20
SLM-4-8N	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	33.02
SLM-5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.81
SLM-5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	29.77	24.50
SLM-5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	26.20
SLM-6-2N	3/8	9.52	1/8	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	20.60
SLM-6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
SLM-6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	26.20
SLM-6-8N	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	31.42	33.02
SLM-6-12N	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	29.71	37.08	36.83
SLM-8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
SLM-8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
SLM-8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
SLM-8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	29.71	39.87	36.83
SLM-10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	30.22
SLM-10-8N	5/8	15.87	1/2	12.70	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	35.10
SLM-10-12N	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	29.71	39.87	36.83
SLM-12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	37.00
SLM-12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	36.83
SLM-14-12N	7/8	22.22	3/4	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
SLM-16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
SLM-16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	49.70
SLM-20-20N	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	49.75
SLM-24-24N	1-1/2	38.10	1-1/2	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97	60.45
SLM-32-32N	2	50.80	2	45.97	2-3/4	69.82	3	76.20	67.56	62.54	69.80	107.18	70.61

Male Elbow

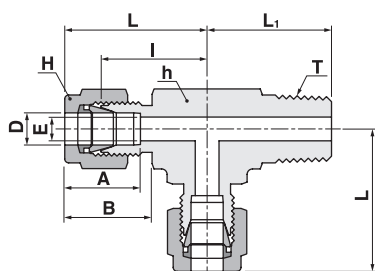
SLM



Connects metric tube to female ISO taper thread

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

STRM

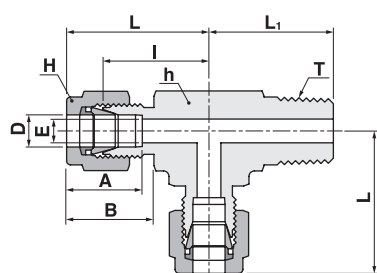


These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		T	E	Width across flat				A	B	I	L	L ₁
	D				h		H						
	in	mm			N(NPT)	Min.	in	mm					
STRM-1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
STRM-1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
STRM-2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	18.90
STRM-2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.36
STRM-3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	18.79
STRM-3-4N	3/16	4.76	1/4	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	23.36
STRM-4-1N	1/4	6.35	1/16	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.90	18.79
STRM-4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.10	26.47	19.10
STRM-4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.81	27.18	23.87
STRM-4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	26.20
STRM-4-8N	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	33.02
STRM-5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.81
STRM-5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	29.77	24.50
STRM-5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	26.20
STRM-6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
STRM-6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	26.20
STRM-6-8N	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	31.42	33.02
STRM-6-12N	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	29.71	37.08	36.83
STRM-8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
STRM-8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
STRM-8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
STRM-8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	29.71	39.87	36.83
STRM-10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	30.22
STRM-10-8N	5/8	15.87	1/2	12.70	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	35.10
STRM-10-12N	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	29.71	39.87	36.83
STRM-12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	37.00
STRM-12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	36.83
STRM-14-12N	7/8	22.22	3/4	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
STRM-16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
STRM-16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	49.70
STRM-20-20N	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	49.75
STRM-24-24N	1-1/2	38.10	1-1/2	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97	60.45
STRM-32-32N	2	50.80	2	45.97	2-3/4	69.82	3	76.20	67.56	62.54	69.80	107.18	70.61

Male Run Tee

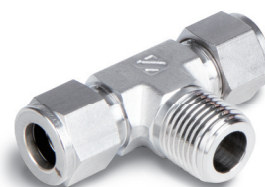
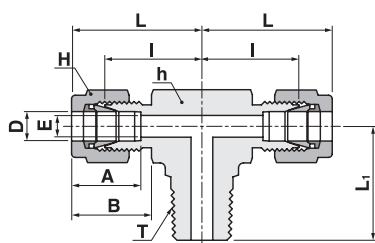
STRM



Connects metric tube to female ISO taper thread

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

Male Branch Tee

STBM

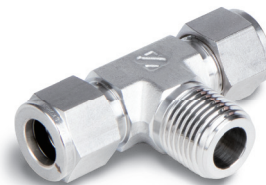
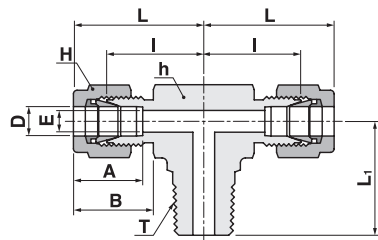
Connects fractional tube to female NPT thread

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		T	E	Width across flat				A	B	I	L	L ₁
	D				h		H						
	in	mm	N(NPT)	Min.	in	mm	in	mm					
STBM-1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
STBM-1-2N	1/16	1.59	1/8	1.27	7/16	11.11	5/16	7.93	8.63	10.92	15.24	19.05	17.78
STBM-2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	18.90
STBM-2-4N	1/8	3.17	1/4	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.30	24.91	23.36
STBM-3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	18.79
STBM-3-4N	3/16	4.76	1/4	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	23.36
STBM-4-1N	1/4	6.35	1/16	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.90	18.79
STBM-4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.10	26.47	19.10
STBM-4-4N	1/4	6.35	1/4	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.81	27.18	23.87
STBM-4-6N	1/4	6.35	3/8	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	26.20
STBM-4-8N	1/4	6.35	1/2	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.60	31.97	33.02
STBM-5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.81
STBM-5-4N	5/16	7.93	1/4	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	29.77	24.50
STBM-5-6N	5/16	7.93	3/8	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	26.20
STBM-6-4N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	25.40
STBM-6-6N	3/8	9.52	3/8	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	26.20
STBM-6-8N	3/8	9.52	1/2	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	31.42	33.02
STBM-6-12N	3/8	9.52	3/4	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	29.71	37.08	36.83
STBM-8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
STBM-8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	28.30
STBM-8-8N	1/2	12.70	1/2	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	33.02
STBM-8-12N	1/2	12.70	3/4	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	29.71	39.87	36.83
STBM-10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	30.22
STBM-10-8N	5/8	15.87	1/2	12.70	15/16	23.81	1	25.40	24.38	21.84	28.00	37.06	35.10
STBM-10-12N	5/8	15.87	3/4	12.70	1-1/16	26.98	1	25.40	24.38	21.84	29.71	39.87	36.83
STBM-12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	37.00
STBM-12-12N	3/4	19.05	3/4	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	36.83
STBM-14-12N	7/8	22.22	3/4	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70	41.65
STBM-16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	42.20
STBM-16-16N	1	25.40	1	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	49.70
STBM-20-20N	1-1/4	31.75	1-1/4	27.68	1-11/16	42.86	1-7/8	47.63	41.14	38.86	44.50	66.54	49.75
STBM-24-24N	1-1/2	38.10	1-1/2	34.03	2	50.80	2-1/4	57.15	50.03	45.21	50.80	77.97	60.45
STBM-32-32N	2	50.80	2	45.97	2-3/4	69.82	3	76.20	67.56	62.54	69.80	107.18	70.61

Male Branch Tee

STBM

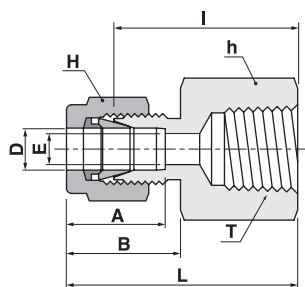


Connects metric tube to female ISO taper thread

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

Female Connector

SCF

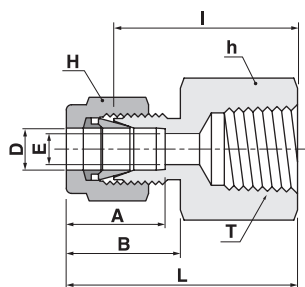


Connects fractional tube to male NPT thread

Part No.	Tube O.D		T	E	Width across flat				A	B	I	L
	D				h		H					
	in	mm	N(NPT)	Min.	in	mm	in	mm				
SCF-1-1N	1/16	1.59	1/16	1.27	7/16	11.11	5/16	7.93	8.63	10.92	19.21	23.62
SCF-1-2N	1/16	1.59	1/8	1.27	9/16	14.28	5/16	7.93	8.63	10.92	20.57	24.38
SCF-2-2N	1/8	3.17	1/8	2.28	9/16	14.28	7/16	11.11	12.70	15.24	22.09	28.70
SCF-2-4N	1/8	3.17	1/4	2.28	3/4	19.05	7/16	11.11	12.70	15.24	26.92	33.52
SCF-3-2N	3/16	4.76	1/8	3.04	9/16	14.28	1/2	12.70	13.71	16.00	23.11	29.71
SCF-4-2N	1/4	6.35	1/8	4.82	9/16	14.28	9/16	14.28	15.24	17.78	23.87	31.24
SCF-4-4N	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	28.44	35.81
SCF-4-6N	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	30.22	37.59
SCF-4-8N	1/4	6.35	1/2	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	35.05	42.41
SCF-5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	24.63	32.00
SCF-5-4N	5/16	7.93	1/4	6.35	3/4	19.05	5/8	15.87	16.25	18.54	29.46	36.83
SCF-6-2N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	25.40	32.76
SCF-6-4N	3/8	9.52	1/4	7.11	3/4	19.05	11/16	17.46	16.76	19.30	30.22	37.59
SCF-6-6N	3/8	9.52	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	31.75	39.11
SCF-6-8N	3/8	9.52	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	36.57	43.94
SCF-6-12N	3/8	9.52	3/4	7.11	1-5/16	33.33	11/16	17.46	16.76	19.30	40.38	47.75
SCF-8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	30.22	40.38
SCF-8-6N	1/2	12.70	3/8	10.41	7/8	22.22	7/8	22.22	22.86	21.84	31.75	41.91
SCF-8-8N	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	36.57	46.73
SCF-8-12N	1/2	12.70	3/4	10.41	1-5/16	33.33	7/8	22.22	22.86	21.84	38.10	48.26
SCF-10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	31.75	41.91
SCF-10-8N	5/8	15.87	1/2	12.70	1-1/16	26.98	1	25.40	24.38	21.84	36.57	46.73
SCF-10-12N	5/8	15.87	3/4	12.70	1-5/16	33.33	1	25.40	24.38	21.84	38.10	48.26
SCF-12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	36.57	46.73
SCF-12-12N	3/4	19.05	3/4	15.74	1-5/16	33.33	1-1/8	28.58	24.38	21.84	38.10	48.26
SCF-14-12N	7/8	22.22	3/4	18.28	1-5/16	33.33	1-1/4	31.75	25.90	21.84	39.62	49.78
SCF-16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	41.14	53.34
SCF-16-16N	1	25.40	1	22.35	1-5/8	41.27	1-1/2	38.10	31.24	26.41	50.03	62.23
SCF-20-20N	1-1/4	31.75	1-1/4	27.68	2-1/8	53.98	1-7/8	47.63	41.14	38.86	52.57	74.67
SCF-24-24N	1-1/2	38.10	1-1/2	34.03	2-3/8	60.33	2-1/4	57.15	50.03	45.21	56.13	83.31
SCF-32-32N	2	50.80	2	45.97	2-7/8	73.03	3	76.20	67.56	62.54	64.26	101.60

Female Connector

SCF



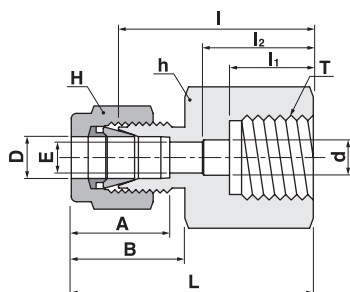
Connects metric tube to male ISO taper thread

Part No.	Tube O.D	T	E	Width across flat		A	B	I	L
	D	R(PT)	Min.	h	H				
SCF-3M-2R	3	1/8	2.4	14	12	12.9	15.3	22.1	28.7
SCF-3M-4R	3	1/4	2.4	19	12	12.9	15.3	26.9	33.5
SCF-4M-2R	4	1/8	2.4	14	12	13.7	16.1	23.1	29.7
SCF-6M-2R	6	1/8	4.8	14	14	15.3	17.7	23.9	31.3
SCF-6M-4R	6	1/4	4.8	19	14	15.3	17.7	28.4	35.8
SCF-6M-6R	6	3/8	4.8	22	14	15.3	17.7	29.5	36.9
SCF-6M-8R	6	1/2	4.8	27	14	15.3	17.7	35.1	42.5
SCF-8M-2R	8	1/8	6.4	15	16	16.2	18.6	24.6	32.1
SCF-8M-4R	8	1/4	6.4	19	16	16.2	18.6	29.5	37.0
SCF-8M-6R	8	3/8	6.4	22	16	16.2	18.6	30.2	37.7
SCF-8M-8R	8	1/2	6.4	27	16	16.2	18.6	35.8	43.3
SCF-10M-2R	10	1/8	7.9	18	19	17.2	19.5	25.4	33.0
SCF-10M-4R	10	1/4	7.9	19	19	17.2	19.5	30.2	37.8
SCF-10M-6R	10	3/8	7.9	22	19	17.2	19.5	31.0	38.6
SCF-10M-8R	10	1/2	7.9	27	19	17.2	19.5	36.6	44.2
SCF-12M-2R	12	1/4	9.5	22	22	22.8	22.0	28.4	38.5
SCF-12M-4R	12	1/4	9.5	22	22	22.8	22.0	30.2	40.3
SCF-12M-6R	12	3/8	9.5	22	22	22.8	22.0	31.0	41.1
SCF-12M-8R	12	1/2	9.5	27	22	22.8	22.0	36.6	46.7
SCF-12M-12R	12	3/4	9.5	35	22	22.8	22.0	38.9	49.0
SCF-15M-8R	15	1/2	11.9	27	27	24.4	22.0	36.6	46.7
SCF-16M-8R	16	1/2	12.7	27	25	24.4	22.0	36.8	46.9
SCF-20M-8R	20	1/2	15.9	30	32	26.0	22.0	37.8	47.9
SCF-20M-12R	20	3/4	15.9	35	32	26.0	22.0	39.6	49.7
SCF-22M-12R	22	3/4	18.3	35	32	26.0	22.0	39.6	49.7
SCF-22M-16R	22	1	18.3	41	32	26.0	22.0	47.8	57.9
SCF-25M-12R	25	3/4	21.8	35	38	31.3	26.5	41.1	53.4
SCF-25M-16R	25	1	21.8	41	38	31.3	26.5	50.0	62.3

Gauge Connector

SCG

See page 32
for SGG gasket



Connects fractional tube to male ISO parallel thread (gauge)

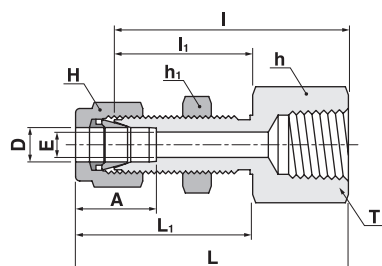
Part No.	Tube O.D		T	E	Width across flat				A	B	I	I ₁	I ₂	d	L
	D				h		H								
	in	mm			G(PF)	Min.	in	mm							
SCG-4-2G	1/4	6.35	1/8	4.82	9/16	14.28	9/16	14.28	15.24	17.78	26.30	12.00	17.00	5.60	33.55
SCG-4-4G	1/4	6.35	1/4	4.82	3/4	19.05	9/16	14.28	15.24	17.78	30.22	12.95	17.00	5.60	37.59
SCG-4-6G	1/4	6.35	3/8	4.82	7/8	22.22	9/16	14.28	15.24	17.78	30.22	14.22	18.00	6.60	37.59
SCG-4-8G	1/4	6.35	1/2	4.82	1-1/16	26.98	9/16	14.28	15.24	17.78	36.07	18.80	22.00	7.10	43.43
SCG-5-4G	5/16	7.93	1/4	6.35	3/4	19.05	5/8	15.87	16.25	18.54	30.98	12.95	-	-	38.60
SCG-5-8G	5/16	7.93	1/2	6.35	1-1/16	26.98	5/8	15.87	16.25	18.54	33.53	18.80	-	-	40.89
SCG-6-4G	3/8	9.52	1/4	7.11	3/4	19.05	11/16	17.46	16.76	19.30	31.75	12.95	-	-	39.12
SCG-6-6G	3/8	9.52	3/8	7.11	7/8	22.22	11/16	17.46	16.76	19.30	31.24	14.22	-	-	38.61
SCG-6-8G	3/8	9.52	1/2	7.11	1-1/16	26.98	11/16	17.46	16.76	19.30	34.54	18.80	-	-	41.91
SCG-8-4G	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	31.80	12.95	-	-	41.95
SCG-8-6G	1/2	12.70	3/8	10.41	7/8	22.22	7/8	22.22	22.86	21.84	34.29	14.22	-	-	44.45
SCG-8-8G	1/2	12.70	1/2	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	38.10	18.80	-	-	48.26

Connects metric tube to male ISO parallel thread (gauge)

Part No.	Tube O.D	T	E	Width across flat		A	B	I	I ₁	I ₂	d	L
	D	G(PF)	Min.	h	H							
SCG-3M-4G	3	1/4	2.4	19	12	12.9	15.3	28.7	13	17.0	5.5	35.3
SCG-6M-4G	6	1/4	4.8	19	14	15.3	17.7	30.2	13	17.0	5.5	37.6
SCG-6M-6G	6	3/8	4.8	24	14	15.3	17.7	30.2	14	18.0	6.5	37.6
SCG-6M-8G	6	1/2	4.8	27	14	15.3	17.7	36.1	19	22.0	7.0	43.5
SCG-8M-4G	8	1/4	6.4	19	16	16.2	18.6	31.0	13	-	5.5	38.5
SCG-8M-6G	8	3/8	6.4	24	16	16.2	18.6	28.7	14	-	6.5	36.2
SCG-8M-8G	8	1/2	6.4	27	16	16.2	18.6	33.5	19	-	7.0	41.0
SCG-10M-4G	10	1/4	7.9	19	19	17.2	19.5	31.8	13	-	5.5	39.4
SCG-10M-6G	10	3/8	7.9	24	19	17.2	19.5	31.2	14	-	6.5	38.8
SCG-10M-8G	10	1/2	7.9	27	19	17.2	19.5	34.5	19	-	7.0	42.1
SCG-12M-4G	12	1/4	9.5	22	22	22.8	22.0	31.8	13	-	5.5	41.9
SCG-12M-6G	12	3/8	9.5	24	22	22.8	22.0	34.3	14	-	6.5	44.4
SCG-12M-8G	12	1/2	9.5	27	22	22.8	22.0	38.1	19	-	7.0	48.2
SCG-20M-8G	20	1/2	15.9	30	32	26.0	22.0	44.2	19	-	7.0	54.3
SCG-22M-8G	22	1/2	9.5	30	32	22.8	22.0	44.2	19	-	7.0	54.3

Bulkhead Female Connector

SCBF



Connects fractional tube to male NPT thread

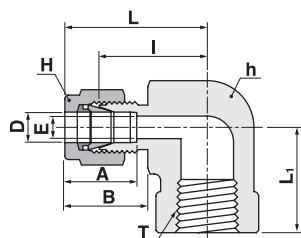
Part No.	Tube O.D		T	E	Width across flat						A	I	I ₁	L	L ₁	Panel Hole Drill Size	Panel Max. Thickness
	D				h		h ₁		H								
	in	mm			N(NPT)	Min.	in	mm	in	mm							
SCBF-2-2N	1/8	3.17	1/8	2.28	9/16	14.28	1/2	12.70	7/16	11.11	12.70	38.10	24.63	44.70	31.24	8.33	12.70
SCBF-4-2N	1/4	6.35	1/8	4.82	5/8	15.87	5/8	15.87	9/16	14.28	15.24	39.62	26.16	46.99	33.52	11.50	10.16
SCBF-4-4N	1/4	6.35	1/4	4.82	3/4	19.05	5/8	15.87	9/16	14.28	15.24	44.45	26.16	51.81	33.52	11.50	10.16
SCBF-6-4N	3/8	9.52	1/4	7.11	3/4	19.05	3/4	19.05	11/16	17.46	16.76	47.75	29.46	55.11	36.83	14.68	11.17
SCBF-6-6N	3/8	9.52	3/8	7.11	7/8	22.22	3/4	19.05	11/16	17.46	16.76	49.41	29.46	56.77	36.83	14.68	11.17
SCBF-8-6N	1/2	12.70	3/8	10.41	15/16	23.81	15/16	23.81	7/8	22.22	22.86	51.56	31.75	61.72	41.91	19.44	12.70
SCBF-8-8N	1/2	12.70	1/2	10.41	1-1/16	26.98	15/16	23.81	7/8	22.22	22.86	56.38	31.75	66.54	41.91	19.44	12.70
SCBF-12-12N	3/4	19.05	3/4	15.74	1-5/16	33.33	1-3/16	30.16	1-1/8	28.58	24.38	63.60	37.33	73.51	47.21	25.79	16.76
SCBF-16-16N	1	25.40	1	22.35	1-5/8	41.27	1-5/8	41.27	1-1/2	38.10	31.24	81.04	45.21	93.23	57.40	33.73	19.05
SCBF-20-20N	1-1/4	31.75	1-1/4	27.68	2-1/8	53.98	1-7/8	47.63	1-7/8	47.63	41.14	83.49	47.75	105.59	69.85	41.67	19.05
SCBF-24-24N	1-1/2	38.10	1-1/2	34.03	2-3/8	60.33	2-1/4	57.15	2-1/4	57.15	50.03	87.39	49.27	114.57	76.45	49.61	19.05
SCBF-32-32N	2	50.80	2	45.97	2-1/8	73.03	2-3/4	69.85	3	76.20	67.56	95.30	56.38	132.63	93.71	57.94	19.05

Connects metric tube to male NPT thread

Part No.	Tube O.D	T	E	Width across flat			A	I	I ₁	L	L ₁	Panel	Panel
	D	N(NPT)	Min.	h	h ₁	H						Hole	Max.
												Drill Size	Thickness
SCBF-6M-2N	6	1/8	4.8	15.8	15.8	14	15.3	39.6	26.2	469	35.0	11.5	10.2
SCBF-6M-4N	6	1/4	4.8	19.0	16.0	14	15.3	44.4	26.2	51.8	33.6	11.5	10.2
SCBF-8M-4N	8	1/4	6.4	19.0	17.4	16	16.2	46.7	28.6	53.9	35.6	13.1	11.2
SCBF-12M-8N	12	1/2	9.5	27.0	24.0	22	22.8	56.4	31.8	66.5	41.9	19.5	12.7

Female Elbow

SLF



Connects fractional tube to male NPT thread

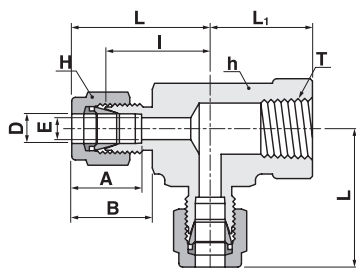
Part No.	Tube O.D		T	E	Width across flat				A	B	I	L	L ₁
	D				h		H						
	in	mm			N(NPT)	Min.	in	mm					
SLF-2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.63	19.05
SLF-2-4N	1/8	3.17	1/4	2.28	11/16	17.46	7/16	11.11	12.70	15.24	20.82	27.43	22.35
SLF-3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	19.05
SLF-4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	19.05
SLF-4-4N	1/4	6.35	1/4	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	22.35
SLF-4-6N	1/4	6.35	3/8	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.38	31.75	22.35
SLF-4-8N	1/4	6.35	1/2	4.82	1	25.40	9/16	14.28	15.24	17.78	27.17	34.54	28.44
SLF-5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.05
SLF-5-4N	5/16	7.93	1/4	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	22.35
SLF-6-2N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	19.05
SLF-6-4N	3/8	9.52	1/4	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	22.35
SLF-6-6N	3/8	9.52	3/8	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	22.35
SLF-6-8N	3/8	9.52	1/2	7.11	1	25.40	11/16	17.46	16.76	19.30	28.70	36.06	28.44
SLF-8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
SLF-8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
SLF-8-8N	1/2	12.70	1/2	10.41	1	25.40	7/8	22.22	22.86	21.84	28.70	38.86	28.44
SLF-10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	27.94	38.10	22.35
SLF-10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	29.71	39.87	28.44
SLF-12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	28.44
SLF-12-12N	3/4	19.05	3/4	15.74	1-1/4	31.75	1-1/8	28.58	24.38	21.84	34.54	44.70	31.75
SLF-14-12N	7/8	22.22	3/4	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70	31.75
SLF-16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	31.75
SLF-16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	41.40	50.29	38.10

Connects metric tube to male NPT thread

Part No.	Tube O.D		T	E	Width across flat		A	B	I	L	L ₁
	D				h	H					
			N(NPT)	Min.							
SLF-6M-2N	6		1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
SLF-6M-4N	6		1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
SLF-6M-6N	6		3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
SLF-6M-8N	6		1/2	4.8	25.40	14	15.3	17.7	27.2	34.6	28.40
SLF-8M-2N	8		1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
SLF-8M-4N	8		1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
SLF-8M-8N	8		1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
SLF-10M-2N	10		1/8	7.9	17.46	19	17.2	19.5	23.9	31.5	19.00
SLF-10M-4N	10		1/4	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
SLF-10M-6N	10		3/8	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
SLF-10M-8N	10		1/2	7.9	25.40	19	17.2	19.5	28.7	36.1	28.40
SLF-12M-4N	12		1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
SLF-12M-6N	12		3/8	9.5	20.64	22	22.8	22.0	25.9	36.2	22.35
SLF-12M-8N	12		1/2	9.5	25.40	22	22.8	22.0	28.7	38.8	28.40
SLF-16M-8N	16		1/2	12.7	26.98	25	24.4	22.0	29.7	39.5	28.40

Female Run Tee

STRF



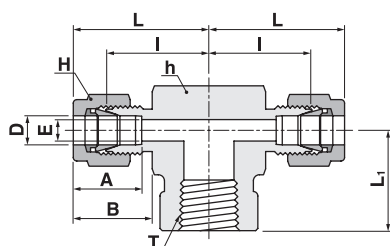
Connects fractional tube to male NPT thread

Part No.	Tube O.D		T	E	Width across flat				A	B	I	L	L ₁
	in	mm			h	mm	in	H					
STRF-2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.63	19.05
STRF-2-4N	1/8	3.17	1/4	2.28	11/16	17.46	7/16	11.11	12.70	15.24	20.82	27.43	22.35
STRF-3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	19.05
STRF-4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	19.05
STRF-4-4N	1/4	6.35	1/4	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	22.35
STRF-4-6N	1/4	6.35	3/8	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.38	31.75	22.35
STRF-4-8N	1/4	6.35	1/2	4.82	1	25.40	9/16	14.28	15.24	17.78	27.17	34.54	28.44
STRF-5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.05
STRF-5-4N	5/16	7.93	1/4	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	22.35
STRF-6-2N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	19.05
STRF-6-4N	3/8	9.52	1/4	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	22.35
STRF-6-6N	3/8	9.52	3/8	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	22.35
STRF-6-8N	3/8	9.52	1/2	7.11	1	25.40	11/16	17.46	16.76	19.30	28.70	36.06	28.44
STRF-8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
STRF-8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
STRF-8-8N	1/2	12.70	1/2	10.41	1	25.40	7/8	22.22	22.86	21.84	28.70	38.86	28.44
STRF-10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	27.94	38.10	22.35
STRF-10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	29.71	39.87	28.44
STRF-12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	28.44
STRF-12-12N	3/4	19.05	3/4	15.74	1-1/4	31.75	1-1/8	28.58	24.38	21.84	34.54	44.70	31.75
STRF-14-12N	7/8	22.22	3/4	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70	31.75
STRF-16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	31.75
STRF-16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	41.40	50.29	38.10

Connects metric tube to male NPT thread

Part No.	Tube O.D		T	E	Width across flat		A	B	I	L	L ₁
	D	mm			h	H					
STRF-6M-2N	6		1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
STRF-6M-4N	6		1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
STRF-6M-6N	6		3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
STRF-6M-8N	6		1/2	4.8	25.40	14	15.3	17.7	27.2	34.6	28.40
STRF-8M-2N	8		1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
STRF-8M-4N	8		1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
STRF-8M-6N	8		1/4	6.4	20.64	16	16.2	18.6	25.2	32.4	22.40
STRF-8M-8N	8		1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
STRF-10M-2N	10		1/8	7.9	17.46	19	17.2	19.5	23.9	31.5	19.00
STRF-10M-4N	10		1/4	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
STRF-10M-6N	10		3/8	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
STRF-10M-8N	10		1/2	7.9	25.40	19	17.2	19.5	28.7	36.1	28.40
STRF-12M-4N	12		1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
STRF-12M-6N	12		3/8	9.5	20.64	22	22.8	22.0	25.9	36.2	22.35
STRF-12M-8N	12		1/2	9.5	25.40	22	22.8	22.0	28.7	38.8	28.40
STRF-16M-8N	16		1/2	12.7	26.98	25	24.4	22.0	29.7	39.5	28.40

Female Branch Tee

STBF

Connects fractional tube to male NPT thread

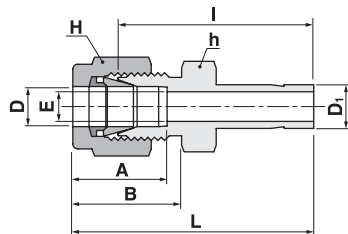
Part No.	Tube O.D		T	E	Width across flat				A	B	I	L	L ₁
	D				h		H						
	in	mm	N(NPT)	Min.	in	mm	in	mm					
STBF-2-2N	1/8	3.17	1/8	2.28	1/2	12.70	7/16	11.11	12.70	15.24	18.03	24.63	19.05
STBF-2-4N	1/8	3.17	1/4	2.28	11/16	17.46	7/16	11.11	12.70	15.24	20.82	27.43	22.35
STBF-3-2N	3/16	4.76	1/8	3.04	1/2	12.70	1/2	12.70	13.71	16.00	18.79	25.40	19.05
STBF-4-2N	1/4	6.35	1/8	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	19.05
STBF-4-4N	1/4	6.35	1/4	4.82	11/16	17.46	9/16	14.28	15.24	17.78	22.35	29.71	22.35
STBF-4-6N	1/4	6.35	3/8	4.82	13/16	20.64	9/16	14.28	15.24	17.78	24.38	31.75	22.35
STBF-4-8N	1/4	6.35	1/2	4.82	1	25.40	9/16	14.28	15.24	17.78	27.17	34.54	28.44
STBF-5-2N	5/16	7.93	1/8	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	19.05
STBF-5-4N	5/16	7.93	1/4	6.35	11/16	17.46	5/8	15.87	16.25	18.54	23.11	30.48	22.35
STBF-6-2N	3/8	9.52	1/4	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	19.05
STBF-6-4N	3/8	9.52	1/4	7.11	11/16	17.46	11/16	17.46	16.76	19.30	23.87	31.24	22.35
STBF-6-6N	3/8	9.52	3/8	7.11	13/16	20.64	11/16	17.46	16.76	19.30	25.90	33.27	22.35
STBF-6-8N	3/8	9.52	1/2	7.11	1	25.40	11/16	17.46	16.76	19.30	28.70	36.06	28.44
STBF-8-4N	1/2	12.70	1/4	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
STBF-8-6N	1/2	12.70	3/8	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	22.35
STBF-8-8N	1/2	12.70	1/2	10.41	1	25.40	7/8	22.22	22.86	21.84	28.70	38.86	28.44
STBF-10-6N	5/8	15.87	3/8	12.70	15/16	23.81	1	25.40	24.38	21.84	27.94	38.10	22.35
STBF-10-8N	5/8	15.87	1/2	12.70	1	25.40	1	25.40	24.38	21.84	29.71	39.87	28.44
STBF-12-8N	3/4	19.05	1/2	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	28.44
STBF-12-12N	3/4	19.05	3/4	15.74	1-1/4	31.75	1-1/8	28.58	24.38	21.84	34.54	44.70	31.75
STBF-14-12N	7/8	22.22	3/4	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70	31.75
STBF-16-12N	1	25.40	3/4	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	31.75
STBF-16-16N	1	25.40	1	22.35	1-11/16	42.86	1-1/2	38.10	31.24	26.41	41.40	50.29	38.10

Connects metric tube to male NPT thread

Part No.	Tube O.D	T	E	Width across flat		A	B	I	L	L ₁
	D	N(NPT)	Min.	h	H					
STBF-6M-2N	6	1/8	4.8	12.70	14	15.3	17.7	19.6	27.0	19.00
STBF-6M-4N	6	1/4	4.8	17.46	14	15.3	17.7	22.4	29.8	22.40
STBF-6M-6N	6	3/8	4.8	20.64	14	15.3	17.7	24.4	31.7	22.40
STBF-6M-8N	6	1/2	4.8	25.40	14	15.3	17.7	27.2	34.6	28.40
STBF-8M-2N	8	1/8	6.4	15.87	16	16.2	18.6	23.1	29.9	19.00
STBF-8M-4N	8	1/4	6.4	17.46	16	16.2	18.6	23.1	30.6	22.40
STBF-8M-6N	8	1/4	6.4	20.64	16	16.2	18.6	25.2	32.4	22.40
STBF-8M-8N	8	1/2	6.4	25.40	16	16.2	18.6	28.0	35.2	28.40
STBF-10M-2N	10	1/8	7.9	17.46	19	17.2	19.5	23.9	31.5	19.00
STBF-10M-4N	10	1/4	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
STBF-10M-6N	10	3/8	7.9	20.64	19	17.2	19.5	25.9	33.5	22.40
STBF-10M-8N	10	1/2	7.9	25.40	19	17.2	19.5	28.7	36.1	28.40
STBF-12M-4N	12	1/4	9.5	20.64	22	22.8	22.0	25.9	36.0	22.40
STBF-12M-6N	12	3/8	9.5	20.64	22	22.8	22.0	25.9	36.2	22.35
STBF-12M-8N	12	1/2	9.5	25.40	22	22.8	22.0	28.7	38.8	28.40
STBF-16M-8N	16	1/2	12.7	26.98	25	24.4	22.0	29.7	39.5	28.40

Reducer

SR

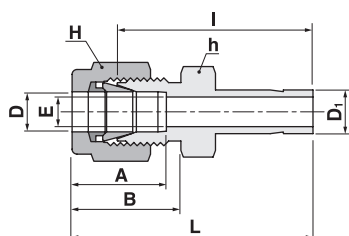


Connects fractional tube to fractional S-LOK port

Part No.	Tube O.D				E	Width across flat				A	B	I	L
	D		D _i			h		H					
	in	mm	in	mm		in	mm	in	mm				
SR-1-2	1/16	1.59	1/8	3.17	1.27	5/16	7.93	5/16	7.93	8.63	10.92	25.40	29.21
SR-1-4	1/16	1.59	1/4	6.35	1.27	5/16	7.93	5/16	7.93	8.63	10.92	57.68	31.49
SR-2-1	1/8	3.17	1/16	1.59	2.28	7/16	11.11	7/16	11.11	12.70	15.24	22.35	28.95
SR-2-2	1/8	3.17	1/8	3.17	2.03	7/16	11.11	7/16	11.11	12.70	15.24	26.92	33.52
SR-2-3	1/8	3.17	3/16	4.76	2.28	7/16	11.11	7/16	11.11	12.70	15.24	27.68	34.29
SR-2-4	1/8	3.17	1/4	6.35	2.28	7/16	11.11	7/16	11.11	12.70	15.24	29.46	36.06
SR-2-6	1/8	3.17	3/8	9.52	2.28	7/16	11.11	7/16	11.11	12.70	15.24	30.98	37.59
SR-2-8	1/8	3.17	1/2	12.70	2.28	9/16	14.28	7/16	11.11	12.70	15.24	37.59	44.19
SR-3-2	3/16	4.76	3/16	4.76	2.03	7/16	11.11	1/2	12.70	13.71	16.00	28.19	34.79
SR-3-4	3/16	4.76	1/4	6.35	3.04	7/16	11.11	1/2	12.70	13.71	16.00	30.48	37.08
SR-4-2	1/4	6.35	1/8	3.17	2.03	1/2	12.70	9/16	14.28	15.24	17.78	29.46	36.83
SR-4-3	1/4	6.35	3/16	4.76	3.04	1/2	12.70	9/16	14.28	15.24	17.78	30.22	37.59
SR-4-4	1/4	6.35	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	31.75	39.11
SR-4-5	1/4	6.35	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	32.51	39.87
SR-4-6	1/4	6.35	3/8	9.52	4.82	1/2	12.70	9/16	14.28	15.24	17.78	33.27	40.64
SR-4-8	1/4	6.35	1/2	12.70	4.82	9/16	14.28	9/16	14.28	15.24	17.78	38.86	46.22
SR-4-10	1/4	6.35	5/8	15.87	4.82	11/16	17.46	9/16	14.28	15.24	17.78	40.64	48.00
SR-4-12	1/4	6.35	3/4	19.05	4.82	13/16	20.64	9/16	14.28	15.24	17.78	40.38	47.75
SR-5-6	5/16	7.93	3/8	9.52	6.35	9/16	14.28	5/8	15.87	16.25	18.54	34.54	41.91
SR-5-8	5/16	7.93	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	40.13	47.49
SR-6-4	3/8	9.52	1/4	6.35	4.82	5/8	15.87	11/16	17.46	16.76	19.30	34.03	41.40
SR-6-6	3/8	9.52	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	35.81	43.18
SR-6-8	3/8	9.52	1/2	12.70	7.11	5/8	15.87	11/16	17.46	16.76	19.30	41.14	48.51
SR-6-10	3/8	9.52	5/8	15.87	7.11	11/16	17.46	11/16	17.46	16.76	19.30	42.92	50.29
SR-6-12	3/8	9.52	3/4	19.05	7.11	13/16	20.64	11/16	17.46	16.76	19.30	42.92	50.29
SR-8-4	1/2	12.70	1/4	6.35	4.82	13/16	20.64	7/8	22.22	22.86	21.84	34.79	44.95
SR-8-6	1/2	12.70	1/2	12.70	7.11	13/16	20.64	7/8	22.22	22.86	21.84	36.57	46.73
SR-8-8	1/2	12.70	1/2	12.70	9.90	13/16	20.64	7/8	22.22	22.86	21.84	42.16	52.32
SR-8-10	1/2	12.70	5/8	15.87	10.41	13/16	20.64	7/8	22.22	22.86	21.84	43.68	53.84
SR-8-12	1/2	12.70	3/4	19.05	10.41	13/16	20.64	7/8	22.22	22.86	21.84	43.68	53.84
SR-8-16	1/2	12.70	1	25.40	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	50.03	60.19
SR-10-12	5/8	15.87	3/4	19.05	12.70	1-1/16	26.98	1	25.40	24.38	21.84	44.45	54.61
SR-10-14	5/8	15.87	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	45.97	56.13
SR-10-16	5/8	15.87	1	25.40	12.70	15/16	23.81	1	25.40	24.38	21.84	50.80	60.96
SR-12-8	3/4	19.05	1/2	12.70	9.90	1-1/16	26.98	1-1/8	28.58	24.38	21.84	44.45	54.61
SR-12-16	3/4	19.05	1	25.40	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	52.32	62.48
SR-16-20	1	25.40	1-1/4	31.75	22.35	1-3/8	34.93	1-1/2	38.10	31.24	26.41	68.32	80.51
SR-16-24	1	25.40	1-1/2	38.10	22.35	1-5/8	41.28	1-1/2	38.10	31.24	26.41	76.96	89.15
SR-16-32	1	25.40	2	50.80	22.35	2-1/8	53.98	1-1/2	38.10	31.24	26.41	100.33	112.52
SR-20-24	1-1/4	31.75	1-1/2	38.10	27.68	1-7/8	47.63	2-1/4	57.15	41.14	38.86	82.04	104.14
SR-20-32	1-1/4	31.75	2	50.80	27.68	2-1/8	53.98	2-1/4	57.15	41.14	38.86	103.12	125.22
SR-24-32	1-1/2	38.10	2	50.80	34.03	2-1/4	57.15	3	76.20	50.03	45.21	101.14	131.31

Reducer

SR



Connects metric tube to fractional S-LOK port

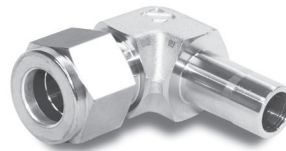
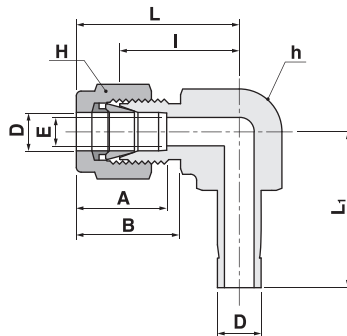
Part No.	Tube O.D			E	Width across flat		A	B	I	L
	D	D ₁			h	H				
		in	mm							
SR-2M-2	2	1/8	3.17	1.7	12	12	12.9	15.3	26.9	33.5
SR-3M-2	3	1/8	3.17	2.0	12	12	12.9	15.3	26.9	33.5
SR-3M-4	3	1/4	6.35	2.4	12	12	12.9	15.3	39.5	36.1
SR-4M-4	4	1/4	6.35	2.4	12	12	13.7	16.1	30.5	37.1
SR-6M-2	6	1/8	3.17	2.0	14	14	15.3	17.7	29.5	36.9
SR-6M-4	6	1/4	6.35	4.8	14	14	15.3	17.7	31.8	39.2
SR-6M-5	6	1/4	6.35	4.8	14	14	15.3	17.7	32.5	39.9
SR-6M-6	6	3/8	9.52	4.8	14	14	15.3	17.7	33.3	40.7
SR-6M-8	6	1/2	12.70	4.8	14	14	15.3	17.7	38.9	46.3
SR-8M-6	8	3/8	9.52	6.4	15	16	16.2	18.6	34.5	42.0
SR-8M-8	8	5/16	7.93	6.4	15	16	16.2	18.6	40.1	47.6
SR-10M-6	10	3/8	9.52	7.1	18	19	17.2	19.5	36.6	44.2
SR-10M-8	10	1/2	12.70	7.9	18	19	17.2	19.5	42.2	49.8
SR-12M-8	12	1/2	12.70	9.5	22	22	22.8	22.0	42.2	52.3
SR-12M-12	12	3/4	19.05	9.5	22	22	22.8	22.0	43.7	53.8
SR-18M-12	18	3/4	19.05	15.1	27	30	24.4	22.0	46.0	56.1
SR-18M-16	18	1	25.40	15.1	27	30	24.4	22.0	52.3	62.4
SR-25M-16	25	1	25.40	20.2	35	38	31.3	26.5	57.2	69.5

Connects metric tube to metric S-LOK port

Part No.	Tube O.D		E	Width across flat		A	B	I	L
	D	D ₁		Min.	h				
SR-2M-3M	2	3	1.7	12	12	12.9	15.3	26.9	35.3
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	12	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-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	19	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-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

Elbow Adapter

SLA



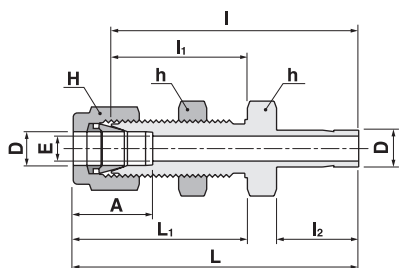
Connects fractional tube to fractional S-LOK port

Part No.	Tube O.D		E	Width across flat				A	B	I	L	L ₁
	D			h		H						
	in	mm	Min	in	mm	in	mm					
SLA-1	1/16	1.59	1.27	3/8	9.52	5/16	7.93	8.63	10.92	14.00	17.88	16.00
SLA-2	1/8	3.17	2.28	3/8	9.52	7/16	11.11	12.70	15.24	15.74	22.35	21.00
SLA-3	3/16	4.76	3.04	1/2	12.70	1/2	12.70	13.71	16.00	17.78	24.35	22.50
SLA-4	1/4	6.35	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	26.92	25.00
SLA-5	5/16	7.93	6.35	9/16	14.28	5/8	15.87	16.25	18.54	21.33	28.70	27.10
SLA-6	3/8	9.52	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	30.48	28.80
SLA-8	1/2	12.70	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	36.06	37.30
SLA-10	5/8	15.87	12.70	15/16	23.81	1	25.40	24.38	21.84	28.70	38.80	41.80
SLA-12	3/4	19.05	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	39.87	42.60
SLA-14	7/8	22.22	18.28	1-1/4	31.75	1-1/4	31.75	25.90	21.84	34.54	44.70	49.40
SLA-16	12	25.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	49.02	54.00

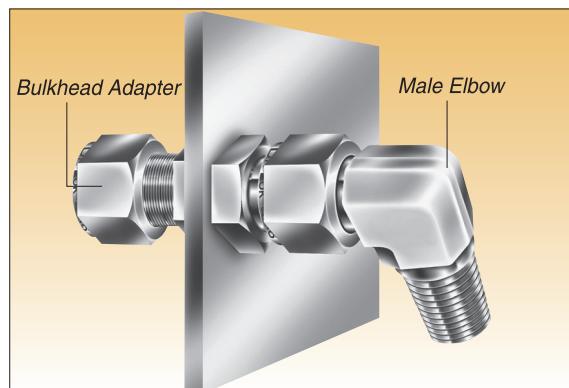
Connects metric tube to metric S-LOK port

Part No.	Tube O.D	E	Width across flat		A	B	I	L	L ₁
	D	Min	h	H					
SLA-2M	2	1.7	9.5	12	12.9	15.3	15.7	22.3	20.5
SLA-3M	3	2.4	9.5	12	12.9	15.3	15.7	22.3	20.5
SLA-4M	4	2.4	12.7	12	13.7	16.1	18.8	25.4	23.0
SLA-6M	6	4.8	12.7	14	15.3	17.7	19.6	27.0	25.1
SLA-8M	8	6.4	14.3	16	16.2	18.6	21.3	28.8	26.8
SLA-10M	10	7.9	17.5	19	17.2	19.5	23.9	31.5	29.5
SLA-12M	12	9.5	20.6	22	22.8	22.0	25.9	36.0	37.6
SLA-15M	15	11.9	23.8	25	24.4	22.0	28.7	38.8	42.6
SLA-16M	16	12.7	23.8	25	24.4	22.0	28.7	38.8	42.6
SLA-18M	18	15.1	27.0	30	24.4	22.0	29.7	39.8	42.6
SLA-20M	20	15.9	31.8	32	26.0	22.0	34.5	42.6	47.2
SLA-22M	22	18.3	31.8	32	26.0	22.0	34.5	42.6	47.2
SLA-25M	25	21.8	34.9	38	31.3	26.5	36.8	49.1	54.3
SLA-28M	28	21.8	41.0	46	36.6	36.6	43.2	64.0	65.0

Bulkhead Adapter

SAB

The bulkhead adapter is useful for panel construction when you need to set a direction.



Set a direction

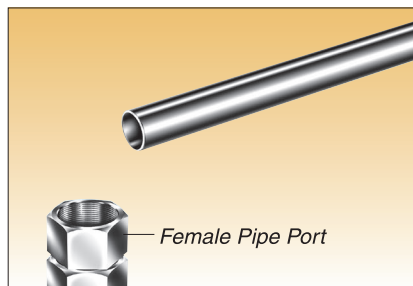
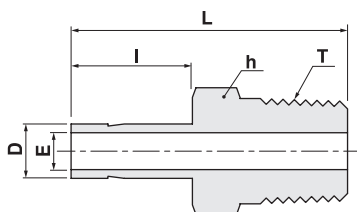
Connects fractional tube to fractional S-LOK port

Part No.	Tube O.D				E	Width across flat				A	I	I ₁	I ₂	L	L ₁	Panel Hole Drill Size	Panel Max. Thickness
	D		D ₁			h		H									
	in	mm	in	mm	Min.	in	mm	in	mm								
SAB-2-2	1/8	3.17	1/8	3.17	2.03	1/2	12.70	7/16	11.11	12.70	42.92	24.63	13.45	49.53	31.24	8.33	12.70
SAB-4-4	1/4	6.35	1/4	6.35	4.82	5/8	15.87	9/16	14.28	15.24	48.51	26.16	15.74	55.88	33.52	11.50	10.16
SAB-6-6	3/8	9.52	3/8	9.52	7.11	3/4	19.05	11/16	17.46	16.76	53.84	29.46	17.50	61.21	36.83	14.68	11.17
SAB-8-8	1/2	12.70	1/2	12.70	10.41	15/16	23.81	7/8	22.22	22.86	62.73	31.75	23.11	72.89	41.91	19.44	12.70
SAB-10-10	5/8	15.87	5/8	15.87	12.70	1-1/16	26.98	1	25.40	24.38	65.02	32.51	24.70	75.18	42.67	22.62	12.70
SAB-16-16	1	25.40	1	25.40	20.32	1-5/8	41.28	1-1/2	38.10	31.24	88.13	45.21	31.70	100.33	57.40	33.73	19.05
SAB-20-20	1-1/4	31.75	1-1/4	31.75	27.68	1-7/8	47.63	1-7/8	47.63	41.14	102.07	47.75	42.00	124.17	69.85	41.67	19.05
SAB-24-24	1-1/2	38.10	1-1/2	38.10	34.03	2-1/4	57.15	2-1/4	57.15	50.03	118.33	49.27	51.50	145.51	76.45	49.61	19.05
SAB-32-32	2	50.80	2	50.80	45.97	2-3/4	69.85	3	76.20	57.56	148.79	56.38	68.40	185.82	93.71	57.94	19.05

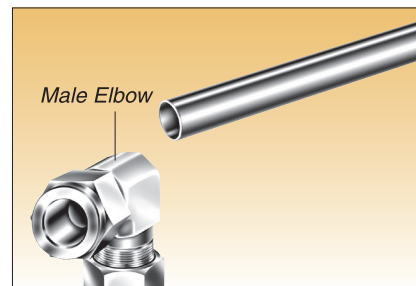
Male Adapter

SAM

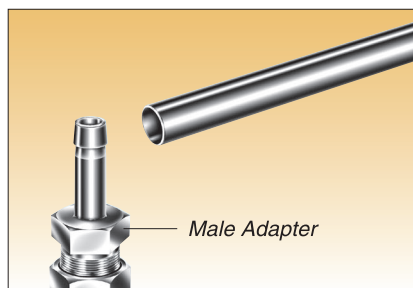
S-LOK Adapter eliminates alignment problems



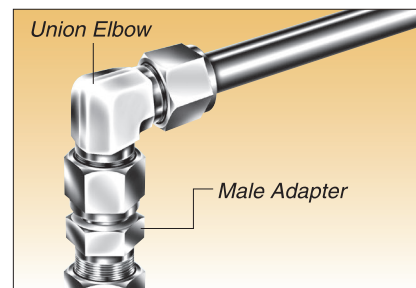
In the direction shown the female port is required to connect with tubing.



The male elbow is positioning in the wrong direction.



To eliminate the problem, use a male adapter into the female port.



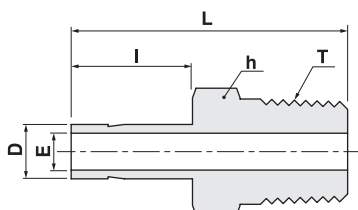
Connect a union elbow to the adapter by tightening the S-LOK port with a wrench while holding the elbow wrench pad in the desired direction

Connects metric tube to female ISO taper thread

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D	T	E	Width across flat	I	L
	D	R(PT)	Min.	h		
SAM-3M-2R	3	1/8	1.9	12	13.15	29.4
SAM-6M-2R	6	1/8	4.1	12	15.75	32.8
SAM-6M-4R	6	1/4	4.1	14	15.75	38.1
SAM-8M-4R	8	1/4	5.6	14	16.50	39.1
SAM-10M-4R	10	1/4	7.1	14	17.50	39.9
SAM-10M-6R	10	3/8	7.1	17	17.50	40.6
SAM-10M-8R	10	1/2	7.1	22	17.50	46.2
SAM-12M-4R	12	1/4	8.8	14	23.50	46.5
SAM-12M-6R	12	3/8	8.8	17	23.50	46.5
SAM-12M-8R	12	1/2	8.8	22	23.50	51.8
SAM-18M-8R	18	1/2	13.9	22	24.90	53.2
SAM-18M-12R	18	3/4	13.9	27	24.90	53.2
SAM-28M-16R	28	1	22.5	35	31.70	74.7
SAM-28M-20R	28	1-1/4	22.5	46	31.70	76.2
SAM-32M-20R	32	1-1/4	26.5	46	40.00	81.0
SAM-32M-24R	32	1-1/2	31.6	55	51.50	92.2

Male Adapter

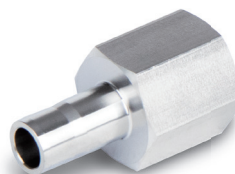
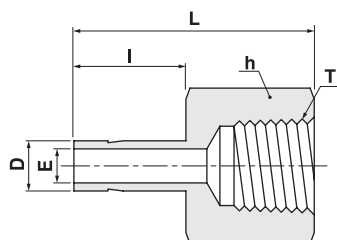
SAM

Connects fractional tube to female NPT thread

Part No.	Tube O.D		T	E	Width across flat		I	L
	D				h			
	in	mm			N(NPT)	Min.		
SAM-2-2N	1/8	3.17	1/8	2.03	7/16	11.11	13.45	29.50
SAM-2-4N	1/8	3.17	1/4	2.03	9/16	14.28	13.45	34.80
SAM-3-2N	3/16	4.76	1/8	3.04	7/16	11.11	14.20	30.22
SAM-3-4N	3/16	4.76	1/4	3.04	9/16	14.28	14.20	35.56
SAM-4-2N	1/4	6.35	1/8	4.31	7/16	11.11	15.75	31.60
SAM-4-4N	1/4	6.35	1/4	4.31	9/16	14.28	15.75	37.08
SAM-4-6N	1/4	6.35	3/8	4.31	11/16	17.46	15.75	37.84
SAM-4-8N	1/4	6.35	1/2	4.31	7/8	22.22	15.75	43.43
SAM-5-2N	5/16	7.93	1/8	5.58	7/16	11.11	16.80	32.76
SAM-5-4N	5/16	7.93	1/4	5.58	9/16	14.28	16.80	38.10
SAM-6-2N	3/8	9.52	1/4	6.86	7/16	11.11	17.50	33.50
SAM-6-4N	3/8	9.52	1/4	6.86	9/16	14.28	17.50	38.90
SAM-6-6N	3/8	9.52	3/8	6.86	11/16	17.46	17.50	39.60
SAM-6-8N	3/8	9.52	1/2	6.86	7/8	22.22	17.50	45.20
SAM-8-4N	1/2	12.70	1/4	9.40	9/16	14.28	23.20	44.50
SAM-8-6N	1/2	12.70	3/8	9.40	11/16	17.46	23.20	45.20
SAM-8-8N	1/2	12.70	1/2	9.40	7/8	22.22	23.20	50.50
SAM-10-6N	5/8	15.87	3/8	11.90	11/16	17.46	24.70	47.40
SAM-10-8N	5/8	15.87	1/2	11.90	7/8	22.22	24.70	52.30
SAM-10-12N	5/8	15.87	3/4	11.90	1-1/16	26.98	24.70	52.30
SAM-12-8N	3/4	19.05	1/2	14.73	7/8	22.22	24.70	52.30
SAM-12-12N	3/4	19.05	3/4	14.73	1-1/16	26.98	24.70	52.30
SAM-12-16N	3/4	19.05	1	14.73	1-3/8	34.92	24.70	57.91
SAM-14-12N	7/8	22.22	3/4	17.27	1-1/16	26.98	26.70	54.30
SAM-16-12N	1	25.40	3/4	20.32	1-1/16	26.98	31.70	58.70
SAM-16-16N	1	25.40	1	20.32	1-3/8	34.92	31.70	66.00
SAM-20-20N	1-1/4	31.75	1-1/4	25.90	1-3/4	44.45	42.00	80.26
SAM-24-24N	1-1/2	38.10	1-1/2	31.75	2-1/8	53.98	51.50	94.48
SAM-32-32N	2	50.80	2	43.68	2-3/4	69.85	68.40	119.38

Female Adapter

SAF



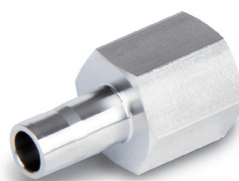
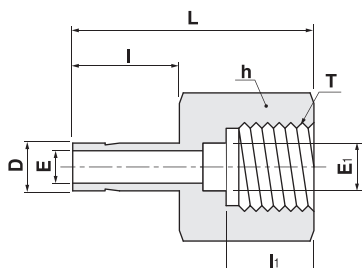
Connects fractional tube to male NPT thread

Part No.	Tube O.D.		T	E	Width across flat		I	L
	D				h			
	in	mm	N(NPT)	Min.	in	mm		
SAF-2-2N	1/8	3.17	1/8	2.03	9/16	14.28	13.45	31.50
SAF-2-4N	1/8	3.17	1/4	2.03	3/4	19.05	13.45	35.30
SAF-3-2N	3/16	4.76	1/8	3.04	9/16	14.28	14.20	32.00
SAF-3-4N	3/16	4.76	1/4	3.04	3/4	19.05	14.20	35.81
SAF-4-2N	1/4	6.35	1/8	4.31	9/16	14.28	15.75	33.02
SAF-4-4N	1/4	6.35	1/4	4.31	3/4	19.05	15.75	37.10
SAF-4-6N	1/4	6.35	3/8	4.31	7/8	22.22	15.75	39.37
SAF-4-8N	1/4	6.35	1/2	4.31	1-1/16	26.98	15.75	45.50
SAF-5-2N	5/16	7.93	1/8	5.58	9/16	14.28	16.80	34.29
SAF-5-4N	5/16	7.93	1/4	5.58	3/4	19.05	16.80	37.59
SAF-6-2N	3/8	9.52	1/4	6.86	9/16	14.28	17.50	34.29
SAF-6-4N	3/8	9.52	1/4	6.86	3/4	19.05	17.50	38.10
SAF-6-6N	3/8	9.52	3/8	6.86	7/8	22.22	17.50	40.38
SAF-6-8N	3/8	9.52	1/2	6.86	1-1/16	26.98	17.50	46.73
SAF-8-4N	1/2	12.70	1/4	9.40	3/4	19.05	23.20	43.43
SAF-8-6N	1/2	12.70	3/8	9.40	7/8	22.22	23.20	45.46
SAF-8-8N	1/2	12.70	1/2	9.40	1-1/16	26.98	23.20	51.80
SAF-10-6N	5/8	15.87	3/8	11.90	7/8	22.22	24.70	48.26
SAF-10-8N	5/8	15.87	1/2	11.90	1-1/16	26.98	24.70	53.84
SAF-10-12N	5/8	15.87	3/4	11.90	1-5/16	33.33	24.70	55.37
SAF-12-8N	3/4	19.05	1/2	14.73	1-1/16	26.98	24.70	52.83
SAF-12-12N	3/4	19.05	3/4	14.73	1-5/16	33.33	24.70	54.86
SAF-12-16N	3/4	19.05	1	14.73	1-5/8	41.27	24.70	58.42
SAF-14-12N	7/8	22.22	3/4	17.27	1-5/16	33.33	26.70	57.15
SAF-16-12N	1	25.40	3/4	20.32	1-5/16	33.33	31.70	60.70
SAF-16-16N	1	25.40	1	20.32	1-5/8	41.27	31.70	64.26
SAF-20-20N	1-1/4	31.75	1-1/4	25.90	2-1/8	53.98	42.00	77.72
SAF-24-24N	1-1/2	38.10	1-1/2	31.75	2-3/8	60.33	51.50	88.90
SAF-32-32N	2	50.80	2	43.68	2-7/8	73.03	68.40	107.44

Connects metric tube to male ISO taper thread

Part No.	Tube O.D.		T	E	Width across flat		I	L
	D				h			
			R(PT)	Min.				
SAF-3M-2R	3		1/8	1.9	14		13.15	31.15
SAF-6M-2R	6		1/8	4.1	14		15.75	32.50
SAF-6M-4R	6		1/4	4.1	19		15.75	37.10
SAF-8M-4R	8		1/4	5.6	19		16.50	37.60
SAF-10M-4R	10		1/4	7.1	19		17.50	38.10
SAF-10M-6R	10		3/8	7.1	22		17.50	40.10
SAF-10M-8R	10		1/2	7.1	27		17.50	46.50
SAF-12M-4R	12		1/4	8.8	19		23.50	43.70
SAF-12M-6R	12		3/8	8.8	22		23.50	46.00
SAF-12M-8R	12		1/2	8.8	27		23.50	52.30
SAF-18M-12R	18		3/4	13.9	35		24.90	54.80

Gauge Adapter

SAG

Connects fractional tube to male ISO parallel thread

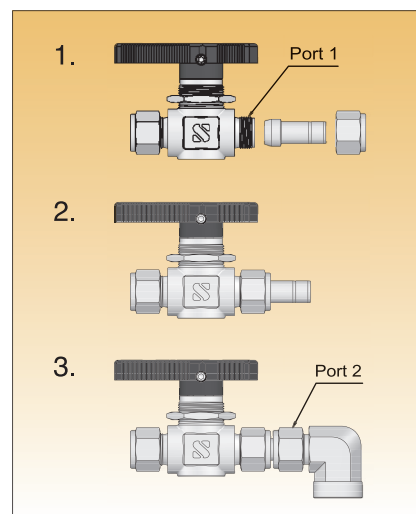
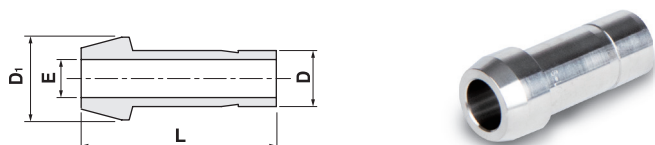
Part No.	Tube O.D		T	E	E ₁	Width across flat		I	I ₁	L
	D					h				
	in	mm		G(PF)			Min.			
SAF-4-2G	1/4	6.35	1/8	4.31	4.57	9/16	14.28	15.75	12.0	32.00
SAF-4-4G	1/4	6.35	1/4	4.31	5.50	3/4	19.05	15.75	12.9	35.30
SAF-6-6G	3/8	9.52	3/8	6.50	6.50	7/8	22.22	17.50	16.0	39.37
SAF-8-8G	1/2	12.70	1/2	9.40	7.00	1-1/16	26.98	23.20	18.9	45.72

Connects metric tube to male ISO parallel thread

Part No.	Tube O.D	T	E	E ₁	Width across flat	I	I ₁	L
	D	G(PF)	Min.		h			
SAG-6M-2G	6	1/8	4.1	4.0	14	15.75	12.0	32.0
SAG-6M-4G	6	1/4	4.1	5.5	19	15.75	13.0	35.3
SAG-6M-6G	6	3/8	4.1	6.5	24	15.75	14.2	38.4
SAG-6M-8G	6	1/2	4.1	7.0	27	15.75	18.9	42.9
SAG-8M-4G	8	1/4	5.6	5.5	19	16.5	13.0	33.0
SAG-8M-6G	8	3/8	5.6	6.5	24	16.5	14.2	38.9
SAG-8M-8G	8	1/2	5.6	7.0	27	16.5	18.9	43.7
SAG-10M-4G	10	1/4	7.1	5.5	19	17.5	13.0	34.5
SAG-10M-6G	10	3/8	7.1	6.5	24	17.5	14.2	36.1
SAG-10M-8G	10	1/2	7.1	7.0	27	17.5	18.9	40.1
SAG-12M-4G	12	1/4	8.8	5.5	19	23.5	13.0	40.1
SAG-12M-6G	12	3/8	8.8	6.5	24	23.5	14.2	44.7
SAG-12M-8G	12	1/2	8.8	7.0	27	23.5	18.9	48.8
SAG-15M-8G	15	1/2	12.7	7.0	27	24.65	18.9	49.0
SAG-16M-8G	16	1/2	12.7	7.0	27	24.6	18.9	49.0
SAG-18M-8G	18	1/2	13.9	7.0	27	24.9	18.9	49.3
SAG-22M-8G	22	1/2	18.3	7.0	27	26.6	18.9	52.0
SAG-25M-8G	25	1/2	19.8	7.0	30	31.7	18.9	56.1

Port Connector

SCP



S-LOK port connector facilitates close connection to another port.

Installation Instructions

1. Remove the nut and ferrules from port 1 and set nut only(no ferrules) over the port connector
2. With a wrench, 1/4" turn from the finger-tight position. (1/8 turn for 1/8", 3/16" and 2mm, 3mm and 4mm)
3. Insert the other end of port connector into port 2 and tighten nut 1-1/4 turns with wrench. for 1/8", 3mm only 3/4 turn from finger tight.

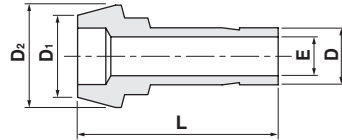
Connects two fractional S-LOK ports

Part No.	Tube O.D		E	D ₁	L
	in	mm			
SCP-1	1/16	1.59	1.00	3.30	13.72
SCP-2	1/8	3.17	2.03	6.09	22.35
SCP-4	1/4	6.35	4.31	9.39	24.64
SCP-5	5/16	7.93	5.58	10.92	25.90
SCP-6	3/8	9.52	6.86	12.70	26.16
SCP-8	1/2	12.70	9.40	15.74	35.81
SCP-12	3/4	19.05	14.73	22.09	37.33
SCP-16	1	25.40	20.32	28.44	48.00

Connects two metric S-LOK ports

Part No.	Tube O.D	E	D ₁	L
	D	Min		
SCP-3M	3	1.9	6.0	22.2
SCP-4M	4	2.2	7.0	25.8
SCP-6M	6	4.1	9.0	24.6
SCP-8M	8	5.6	11.0	27.2
SCP-10M	10	7.1	13.1	26.1
SCP-12M	12	8.8	15.0	35.8
SCP-15M	15	11.2	19.0	37.4
SCP-16M	16	12.0	19.0	37.4
SCP-18M	18	13.9	21.0	37.4
SCP-20M	20	15.5	23.0	38.9
SCP-22M	22	17.9	25.0	39.2
SCP-25M	25	19.9	28.0	48.0
SCP-28M	28	22.5	34.3	63.5
SCP-32M	32	26.5	39.5	69.7
SCP-38M	38	31.6	47.1	81.9

Reducing
Port Connector
SCRP



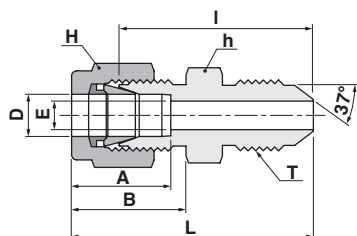
Connects two fractional S-LOK ports

Part No.	Tube O.D				E	D ₂	L
	D ₁		D				
	in	mm	in	mm			
SCRP-2-1	1/8	3.17	1/16	1.59	1.00	6.10	17.27
SCRP-4-2	1/4	6.35	1/8	3.17	2.00	9.39	22.60
SCRP-6-2	3/8	9.52	1/8	3.17	2.00	12.70	23.11
SCRP-6-4	3/8	9.52	1/4	6.35	4.31	12.70	24.89
SCRP-8-4	1/2	12.70	1/4	6.35	4.31	15.74	29.21
SCRP-8-6	1/2	12.70	3/8	9.52	6.86	15.74	30.48
SCRP-12-8	3/4	19.05	1/2	12.70	9.40	22.09	37.85
SCRP-16-8	1	25.40	1/2	12.70	9.40	28.40	42.67
SCRP-16-12	1	25.40	3/4	19.05	14.73	28.40	43.43

Connects two metric S-LOK ports

Part No.	Tube O.D		E	D ₂	L
	D ₁	D			
SCRP-6M-3M	6	3	1.9	9.0	22.6
SCRP-8M-6M	8	6	4.1	11.0	24.7
SCRP-10M-6M	10	6	4.1	13.1	25.0
SCRP-10M-8M	10	8	5.6	13.1	26.0
SCRP-12M-6M	12	6	4.1	15.0	29.1
SCRP-12M-8M	12	8	5.6	15.0	29.8
SCRP-12M-10M	12	10	7.1	15.0	30.4
SCRP-16M-6M	16	6	4.1	19.0	30.4
SCRP-16M-12M	16	12	8.8	19.0	36.2
SCRP-28M-25M	28	25	19.8	34.3	56.5
SCRP-32M-25M	32	25	19.8	39.5	60.3
SCRP-38M-25M	38	25	19.8	47.1	65.8

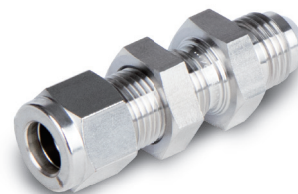
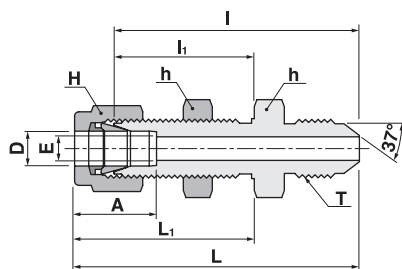
AN Union
SUA



Connects fractional tube to AN flared tube

Part No.	Tube O.D		AN Tube Flare Size		Straight Thread	E	Width across flat				A	B	I	L
	D						h		H					
	in	mm	in	mm	T	Min.	in	mm	in	mm				
SUA-1-2	1/16	1.59	1/8	3.17	5/16-24	1.27	7/16	11.11	5/16	7.93	8.63	10.92	23.36	27.17
SUA-2-2	1/8	3.17	1/8	3.17	5/16-24	1.52	7/16	11.11	7/16	11.11	12.70	15.24	24.89	31.49
SUA-2-4	1/8	3.17	1/4	6.35	7/16-20	2.28	1/2	12.70	7/16	11.11	12.70	15.24	28.44	35.05
SUA-4-4	1/4	6.35	1/4	6.35	7/16-20	4.31	1/2	12.70	9/16	14.28	15.24	17.78	30.22	37.59
SUA-5-5	5/16	7.93	5/16	7.93	1/2-20	5.84	9/16	14.28	5/8	15.87	16.25	18.54	30.98	38.35
SUA-6-4	3/8	9.52	1/4	6.35	7/16-20	4.31	5/8	15.87	11/16	17.46	16.76	19.30	32.25	39.62
SUA-6-6	3/8	9.52	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.25	39.62
SUA-8-8	1/2	12.70	1/2	12.70	3/4-16	9.90	13/16	20.64	7/8	22.22	22.86	21.84	35.81	45.97
SUA-12-12	3/4	19.05	3/4	19.05	1-1/16-12	15.49	1-1/8	28.58	1-1/8	28.58	24.38	21.84	43.18	53.34
SUA-16-16	1	25.40	1	25.40	1-5/16-12	21.33	1-3/8	34.92	1-1/2	38.10	31.24	26.41	49.27	61.46
SUA-20-20	1-1/4	31.75	1-1/4	31.75	1-5/8-12	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.46	77.56
SUA-24-24	1-1/2	38.10	1-1/2	38.10	1-7/8-12	34.03	2-1/8	53.98	2-1/4	57.15	50.03	45.21	63.07	90.25
SUA-32-32	2	50.80	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	67.56	62.73	83.24	120.57

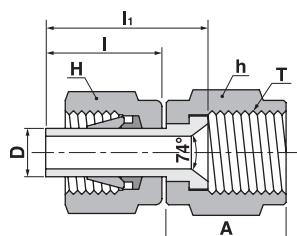
AN Bulkhead Union

SUBA

Connects fractional tube to AN flared tube

Part No.	Tube O.D		AN Tube Flare Size		Straight Thread	E	Width across flat				A	I	I ₁	L	L ₁	Panel Hole Drill Size	Panel Max. Thickness
	D						h		H								
	in	mm	in	mm	T	Min.	in	mm	in	mm							
SUBA-2-2	1/8	3.17	1/8	3.17	5/16-24	1.52	1/2	12.70	7/16	11.11	12.70	40.85	24.63	47.45	31.23	8.33	12.70
SUBA-4-4	1/4	6.35	1/4	6.35	7/16-20	4.31	5/8	15.87	9/16	14.28	15.24	46.48	26.16	53.84	33.52	11.50	10.16
SUBA-6-6	3/8	9.52	3/8	9.52	9/16-18	7.11	3/4	19.05	11/16	17.46	16.76	49.78	29.46	57.15	36.83	14.68	11.17
SUBA-8-8	1/2	12.70	1/2	12.70	3/4-16	9.90	5/16	23.81	7/8	22.22	22.86	55.62	31.75	65.78	41.91	19.44	12.70
SUBA-12-12	3/4	19.05	3/4	19.05	1-1/16-12	15.49	1-3/16	30.16	1-1/8	28.58	24.38	68.83	37.33	78.99	47.49	25.79	16.76
SUBA-16-16	1	25.40	1	25.40	1-5/16-12	21.33	1-5/8	41.27	1-1/2	38.10	31.24	80.26	45.21	92.45	57.40	33.73	19.05
SUBA-20-20	1-1/4	31.75	1-1/4	31.75	1-5/8-12	27.68	1-7/8	47.36	1-7/8	47.63	41.14	86.37	47.75	108.47	69.85	41.67	19.05
SUBA-24-24	1-1/2	38.10	1-1/2	38.10	1-7/8-12	34.03	2-1/4	57.15	2-1/4	57.15	50.03	94.33	49.27	121.51	76.45	49.61	19.05
SUBA-32-32	2	50.80	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	67.56	114.29	56.38	151.62	93.71	16.27	19.05

AN Adapter

SAA

Connects fractional S-LOK port to male AN

Part No.	Tube O.D		AN Tube Flare Size		Straight Thread	Width across flat				A	I	I ₁
	D					h		H				
	in	mm	in	mm	T	in	mm	in	mm			
SAA-2-2	1/8	3.17	1/8	3.17	5/16-24	3/8	9.52	7/16	11.11	13.71	13.46	18.54
SAA-2-4	1/8	3.17	1/4	6.35	7/16-20	9/16	14.28	7/16	11.11	15.74	13.46	19.05
SAA-4-4	1/4	6.35	1/4	6.35	7/16-20	9/16	14.28	9/16	14.28	15.74	15.74	21.33
SAA-6-6	3/8	9.52	3/8	9.52	9/16-18	11/16	17.46	11/16	17.46	18.28	17.52	24.89
SAA-8-8	1/2	12.70	1/2	12.70	3/4-16	7/8	22.22	7/8	22.22	21.59	23.11	31.75

SAE Fittings

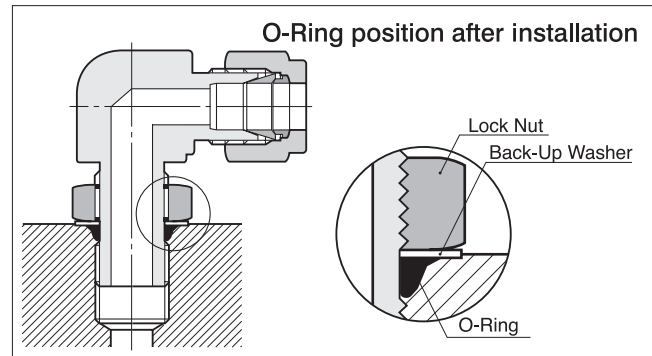
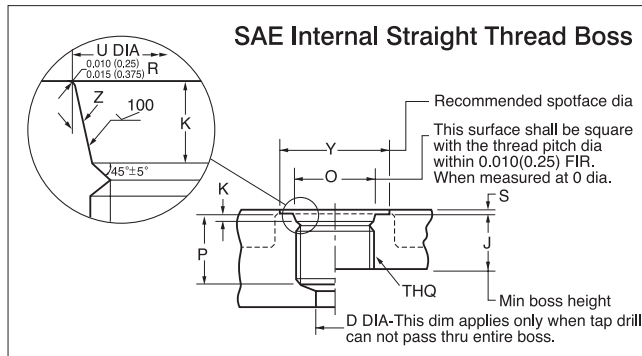
S-LOK SAE straight O-Ring seal fittings are of positionable feature and provide connection tube to straight thread boss. Further this has an advantage of eliminating welding and brazing process when used as bulkhead fitting on thin wall tanks or vessels.

These fittings are designed and manufactured to SAE standards as below:

Male or external fitting end dimensions to SAE J514

Straight thread to SAE J475(equivalent to ANSI B1.1 or ISO R725)

Female or internal straight thread boss to SAE J1926. See diagram below.



Details of SAE Internal Straight Thread Boss

Nominal Tube O.D	Thread Size	D Min.	J Min.	K (±0.2)	O Min.	P ^d Min.	U ^a ()	Y ^c	S ^{bc} Max	Z (±1°)
1/8	5/16-24	1.6	10.0	1.9	11.0	12.0	9.1	17.0	1.6	12°
3/16	3/8-24	3.2	10.0	1.9	13.0	12.0	10.7	19.0	1.6	12°
1/4	7/16-20	4.4	11.5	2.4	15.0	14.0	12.4	21.0	1.6	12°
5/16	1/2-20	6.0	11.5	2.4	16.0	14.0	14.0	23.0	1.6	12°
3/8	9/16-18	7.5	12.7	2.5	18.0	15.5	15.6	25.0	1.6	12°
1/2	3/4-16	10.0	14.3	2.5	22.0	17.5	20.6	30.0	2.4	15°
5/8	7/8-14	12.5	16.7	2.5	26.0	20.0	23.9	34.0	2.4	15°
3/4	1-1/16-12	16.0	19.0	3.2	32.0	23.0	29.2	41.0	2.4	15°
7/8	1-3/16-12	18.0	19.0	3.2	35.0	23.0	32.3	45.0	2.4	15°
1	1-5/16-12	21.0	19.0	3.2	38.0	23.0	35.5	49.0	3.2	15°
1-1/4	1-5/8-12	27.0	19.0	3.2	48.0	23.0	43.5	58.0	3.2	15°
1-1/2	1-7/8-12	33.0	19.0	3.2	54.0	23.0	49.8	65.0	3.2	15°
2	2-1/2-12	70.0	19.0	3.2	70.0	23.0	65.7	88.0	3.2	15°

- Diameter U shall be concentric with the thread pitch diameter within 0.13 full indicator reading(FIR) and shall be free from longitudinal and spiral tool marks. Annular tool marks up to 2.5 micro meters max. shall be permissible.
- This is the maximum recommended spotface depth to permit sufficient wrench grip for the proper tightening of the fitting or locknut.
- If the face of the boss is on a machined surface, dimensions Y and S need not apply as long as R 0.25/ 0.375 is maintained to avoid damage to the O-Ring during installation.
- Tap drill depths given require the use of bottoming taps to produce the specified full thread lengths. Where standard taps are used, the tap drill depths must be increased accordingly.

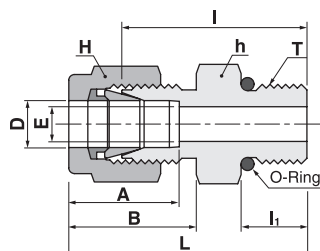
O-ring and straight thread size for SAE fitting bosses

Nominal Tube O.D	Port Size	Thread Size	O-ring		
			Size No.	I.D in	Cross Section in
1/8	2	5/16-24	902	0.239	0.064
3/16	3	3/8-24	903	0.301	0.064
1/4	4	7/16-20	904	0.351	0.072
5/16	5	1/2-20	905	0.414	0.072
3/8	6	9/16-18	906	0.468	0.078
1/2	8	3/4-16	908	0.644	0.087
5/8	10	7/8-14	910	0.755	0.097
3/4	12	1-1/16-12	912	0.924	0.116
7/8	14	1-3/16-12	914	1.048	0.116
1	16	1-5/16-12	916	1.171	0.116
1-1/4	20	1-5/8-12	920	1.475	0.118
1-1/2	24	1-7/8-12	924	1.720	0.118
2	32	2-1/2-12	932	2.337	0.118

Installation Instruction

- Step 1. Ensure the locknut is fully raised.
- Step 2. Lubricate the O-Ring with a light oil or petroleum and turn the fitting into the straight thread boss until the metal washer is in contact with the boss.
- Step 3. Position the fitting by backing it out(not more than 1turn counter-clockwise)until the S-LOK fitting is oriented in the desired direction.
- Step 4. With a back up wrench, hold the wrench pad and tighten the locknut until the washer is set against the face of the boss.

SAE Male Connector

SMCS

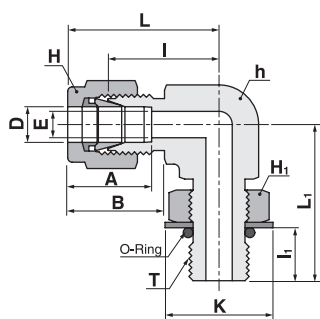
Connects fractional tube to SAE straight thread boss

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		Straight Thread	E	Width across flat				A	B	I	I ₁	L	O-Ring Uniform Size No.
	D				h									
	in	mm			T	Min.	in	mm						
SMCS-2-2U	1/8	3.17	5/16-24	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.26	7.62	29.97	-902
SMCS-4-4U	1/4	6.35	7/16-20	4.82	9/16	14.28	9/16	14.28	15.24	17.78	26.67	9.14	34.03	-904
SMCS-4-6U	1/4	6.35	9/16-18	4.82	11/16	17.46	9/16	14.28	15.24	17.78	28.19	9.90	35.56	-906
SMCS-4-8U	1/4	6.35	3/4-16	4.82	7/8	22.22	9/16	14.28	15.24	17.78	30.22	11.17	37.59	-908
SMCS-4-10U	1/4	6.35	7/8-14	4.82	1	25.40	9/16	14.28	15.24	17.78	33.27	12.70	40.64	-910
SMCS-5-5U	5/16	7.93	1/2-20	5.84	5/8	15.87	5/8	15.87	16.25	18.54	27.43	9.14	34.79	-905
SMCS-6-4U	3/8	9.52	7/16-20	5.08	5/8	15.87	11/16	17.46	16.76	19.30	28.19	9.14	35.56	-904
SMCS-6-6U	3/8	9.52	9/16-18	7.11	11/16	17.46	11/16	17.46	16.76	19.30	29.71	9.90	37.08	-906
SMCS-6-8U	3/8	9.52	3/4-16	7.11	7/8	22.22	11/16	17.46	16.76	19.30	31.75	11.17	39.11	-908
SMCS-6-10U	3/8	9.52	7/8-14	7.11	1	25.40	11/16	17.46	16.76	19.30	34.79	12.70	42.16	-910
SMCS-8-6U	1/2	12.70	9/16-18	7.11	13/16	20.64	7/8	22.22	22.86	21.84	28.95	9.90	39.11	-906
SMCS-8-8U	1/2	12.70	3/4-16	10.41	7/8	22.22	7/8	22.22	22.86	21.84	31.75	11.17	41.91	-908
SMCS-8-10U	1/2	12.70	7/8-14	10.41	1	25.40	7/8	22.22	22.86	21.84	34.79	12.70	44.95	-910
SMCS-8-12U	1/2	12.70	1-1/16-12	10.41	1-1/4	31.75	7/8	22.22	22.86	21.84	38.86	14.98	49.02	-912
SMCS-10-8U	5/8	15.87	3/4-16	10.66	15/16	23.81	1	25.40	24.38	21.84	31.75	11.17	41.91	-908
SMCS-10-10U	5/8	15.87	7/8-14	12.70	1	25.40	1	25.40	24.38	21.84	35.05	12.70	45.21	-910
SMCS-12-8U	3/4	19.05	3/4-16	10.66	1-1/16	26.98	1-1/8	28.58	24.38	21.84	35.81	11.17	45.97	-908
SMCS-12-12U	3/4	19.05	1-1/16-12	15.74	1-1/4	31.75	1-1/8	28.58	24.38	21.84	38.86	14.98	49.02	-912
SMCS-14-14U	7/8	22.22	1-3/16-12	18.28	1-3/8	34.92	1-1/4	31.75	25.90	21.84	38.86	14.98	49.02	-914
SMCS-16-12U	1	25.40	1-1/16-12	16.76	1-3/8	34.92	1-1/2	38.10	31.24	26.41	41.14	14.98	53.34	-912
SMCS-16-16U	1	25.40	1-5/16-12	22.35	1-1/2	38.10	1-1/2	38.10	31.24	26.41	42.16	14.98	54.35	-916
SMCS-20-20U	1-1/4	31.75	1-5/8-12	27.68	1-7/8	47.63	1-7/8	47.63	41.14	38.86	46.22	14.98	68.32	-920
SMCS-24-24U	1-1/2	38.10	1-7/8-12	34.03	2-1/8	53.98	2-1/4	57.15	50.03	45.21	50.54	14.98	77.72	-924
SMCS-32-32U	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	67.56	62.73	64.26	14.98	101.60	-932

**Positiopnable
SAE Male Elbow**

SLS



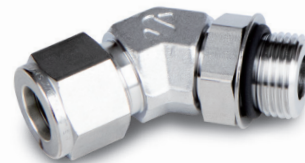
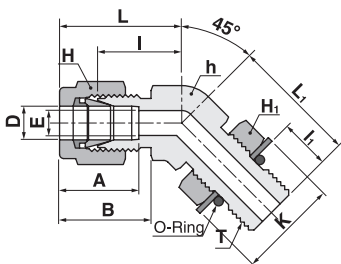
Connects fractional tube to SAE straight thread boss

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		Straight Thread	E	Width across flat						A	B	I	I ₁	L	L ₁	K	O-Ring Uniform Size No.
	D				h		H		H ₁									
	in	mm	T	Min.	in	mm	in	mm	in	mm								
SLS-4-4U	1/4	6.35	7/16-20	4.82	1/2	12.00	9/16	14.28	9/16	14.28	15.24	17.78	21.08	9.90	28.44	28.44	16.51	-904
SLS-5-5U	5/16	7.93	1/2-20	5.84	9/16	14.28	5/8	15.87	5/8	15.87	16.25	18.54	22.86	9.90	30.22	29.46	18.28	-905
SLS-6-6U	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	24.63	11.17	32.00	32.25	20.06	-906
SLS-6-8U	3/8	9.52	3/4-16	7.11	13/16	20.64	11/16	17.46	7/8	22.22	16.76	19.30	27.43	12.70	34.79	37.84	25.65	-908
SLS-8-8U	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	27.43	12.70	37.59	37.84	25.65	-908
SLS-10-10U	5/8	15.87	7/8-14	12.70	1	25.40	1	25.40	1	25.40	24.38	21.84	29.46	14.22	39.62	43.43	29.46	-910
SLS-12-12U	3/4	19.05	1-1/16-12	15.74	1-1/16	26.98	1-1/8	28.58	1-1/4	31.75	24.38	21.84	31.24	16.76	41.40	48.76	36.57	-912
SLS-14-14U	7/8	22.22	1-3/16-12	18.28	1-1/4	31.75	1-1/4	31.75	1-3/8	34.92	25.90	21.84	33.02	16.76	43.18	50.54	40.38	-914
SLS-16-16U	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	38.35	16.76	50.54	53.59	43.94	-916
SLS-20-20U	1-1/4	31.75	1-5/8-12	27.68	1-11/16	42.76	1-7/8	47.63	1-7/8	47.63	41.14	38.86	45.72	16.76	67.81	58.16	54.86	-920
SLS-24-24U	1-1/2	38.10	1-7/8-12	34.03	2	50.80	2-1/4	57.15	2-1/8	53.98	50.03	45.21	50.80	16.76	77.97	60.45	62.23	-924
SLS-32-32U	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	2-3/4	69.85	67.56	62.73	69.85	16.76	107.18	71.62	80.26	-932

**Positiopnable
45° SAE Male Elbow**

SLBS



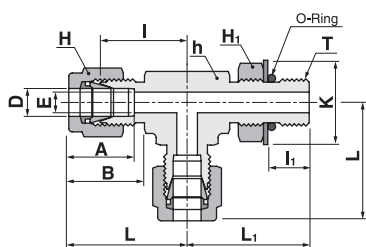
Connects fractional tube to SAE straight thread boss

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		Straight Thread	E	Width across flat						A	B	I	I _i	L	L _i	K	O-Ring Uniform Size No.
	D				h		H		H _i									
	in	mm	T	Min.	in	mm	in	mm	in	mm								
SLBS-4-4U	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	21.08	9.90	28.44	28.44	16.51	-904
SLBS-6-6U	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	24.63	11.17	32.00	32.25	20.06	-906
SLBS-8-8U	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	27.43	12.70	37.59	37.84	25.65	-908
SLBS-12-12U	3/4	19.05	1-1/16-12	15.74	1-1/16	26.98	1-1/8	28.58	1-1/4	31.75	24.38	21.84	31.24	16.76	41.40	48.76	36.57	-912
SLBS-16-16U	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	38.35	16.76	50.54	53.59	43.94	-916

Positionable
SAE Male Run Tee

STRS



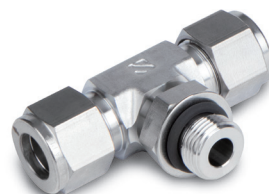
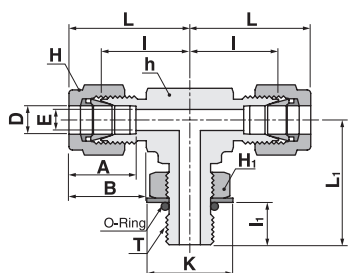
Connects fractional tube to SAE straight thread boss

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		Straight Thread	E	Width across flat						A	B	I	I ₁	L	L ₁	K	O-Ring Uniform Size No.
	in	mm	T	Min.	in	mm	in	mm	in	mm								
STRS-4-4U	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	21.08	9.90	28.44	28.44	16.51	-904
STRS-6-6U	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	24.63	11.17	32.00	32.25	20.06	-906
STRS-8-8U	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	27.43	12.70	37.59	37.84	25.65	-908
STRS-12-12U	3/4	19.05	1-1/16-12	15.74	1-1/16	26.98	1-1/8	28.58	1-1/4	31.75	24.38	21.84	31.24	16.76	41.40	48.76	36.57	-912
STRS-16-16U	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	38.35	16.76	50.54	53.59	43.94	-916
STRS-20-20U	1-1/4	31.75	1-5/8-12	27.68	1-11/16	42.76	1-7/8	47.63	1-7/8	47.63	41.14	38.86	45.72	16.76	67.81	58.16	54.86	-920
STRS-24-24U	1-1/2	38.10	1-7/8-12	34.03	2	50.80	2-1/4	57.15	2-1/8	53.98	50.03	45.21	50.80	16.76	77.97	60.45	62.23	-924
STRS-32-32U	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	2-3/4	69.85	67.56	62.73	69.85	16.76	107.18	71.62	80.26	-932

Positionable
SAE Male Branch Tee

STBS



Connects fractional tube to SAE straight thread boss

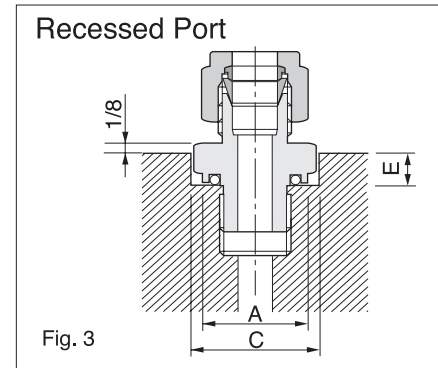
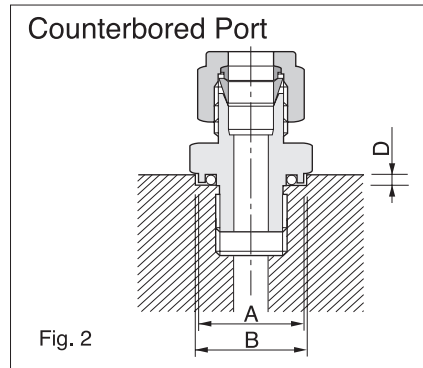
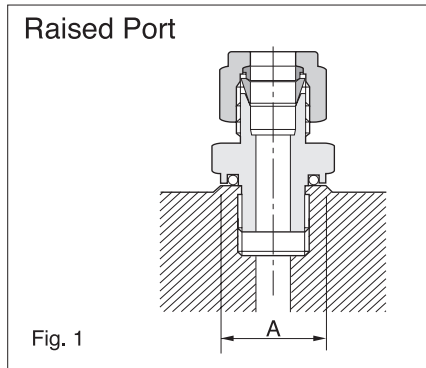
These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		Straight Thread	E	Width across flat						A	B	I	I ₁	L	L ₁	K	O-Ring Uniform Size No.
	in	mm	T	Min.	in	mm	in	mm	in	mm								
STBS-4-4U	1/4	6.35	7/16-20	4.82	1/2	12.70	9/16	14.28	9/16	14.28	15.24	17.78	21.08	9.90	28.44	28.44	16.51	-904
STBS-6-6U	3/8	9.52	9/16-18	7.11	5/8	15.87	11/16	17.46	11/16	17.46	16.76	19.30	24.63	11.17	32.00	32.25	20.06	-906
STBS-8-8U	1/2	12.70	3/4-16	10.41	13/16	20.64	7/8	22.22	7/8	22.22	22.86	21.84	27.43	12.70	37.59	37.84	25.65	-908
STBS-12-12U	3/4	19.05	1-1/16-12	15.74	1-1/16	26.98	1-1/8	28.58	1-1/4	31.75	24.38	21.84	31.24	16.76	41.40	48.76	36.57	-912
STBS-16-16U	1	25.40	1-5/16-12	22.35	1-3/8	34.92	1-1/2	38.10	1-1/2	38.10	31.24	26.41	38.35	16.76	50.54	53.59	43.94	-916
STBS-20-20U	1-1/4	31.75	1-5/8-12	27.68	1-11/16	42.76	1-7/8	47.63	1-7/8	47.63	41.14	38.86	45.72	16.76	67.81	58.16	54.86	-920
STBS-24-24U	1-1/2	38.10	1-7/8-12	34.03	2	50.80	2-1/4	57.15	2-1/8	53.98	50.03	45.21	50.80	16.76	77.97	60.45	62.23	-924
STBS-32-32U	2	50.80	2-1/2-12	45.97	2-3/4	69.85	3	76.20	2-3/4	69.85	67.56	62.73	69.85	16.76	107.18	71.62	80.26	-932

O-Seal Connector

S-LOK O-Ring seal fittings provide leak-tight sealing on both vacuum and high pressure with a smooth & flat surface perpendicular to the threaded port to ensure metal to metal contact.

The standard Buna N O-Ring is contained in a precision groove to prevent O-Ring extrusion at high pressure and for a controlled squeeze in a vacuum service.



Mounting Dimensions for O-seal connectors

S-LOK Part No.	Straight Thread	Pipe Thread	Diameter						Depth			
			A		B		C		D		E	
			Min.	Min.	Min.	Min.	Min.	Min.	Max.	Max.	Max.	Max.
			in	mm	in	mm	in	mm	in	mm	in	mm
SCOS-2-2U	5/16-24	-	0.50	12.7	0.59	15.0	0.66	16.8	0.09	2.3	0.16	5.6
SCOS-3-3U	3/8-24	-	0.56	14.2	0.66	16.8	0.75	19.1	0.09	2.3	0.22	5.6
SCOS-4-4U	7/16-20	-	0.69	17.5	0.78	19.8	0.88	22.4	0.16	4.1	0.28	7.1
SCOS-5-5U	1/2-20	-	0.75	19.1	0.91	23.1	1.03	26.2	0.16	4.1	0.31	7.9
SCOS-6-6U	9/16-18	-	0.81	20.6	0.97	24.6	1.09	27.7	0.16	4.1	0.31	7.9
SCOS-8-8U	3/4-16	-	1.00	25.4	1.16	29.5	1.31	33.3	0.16	4.1	0.34	8.6
SCOS-12-12U	1-1/16-12	-	1.41	35.8	1.53	38.9	1.75	44.5	0.22	5.6	0.50	12.7
SCOS-16-16U	1-5/16-12	-	1.69	42.9	1.78	45.2	2.03	51.6	0.22	5.6	0.56	14.2
SCOP-2-2N	-	1/8	0.69	17.5	0.78	19.8	0.88	22.4	0.16	4.1	0.28	7.1
SCOP-4-2N	-	1/8	0.69	17.5	0.78	19.8	0.88	22.4	0.16	4.1	0.28	7.1
SCOP-4-4N	-	1/4	0.87	22.1	0.97	24.6	1.09	27.7	0.16	4.1	0.31	7.9
SCOP-6-6N	-	3/8	1.00	25.4	1.16	29.5	1.31	33.3	0.16	4.1	0.34	8.6
SCOP-6-8N	-	1/2	1.22	31.0	1.34	34.0	1.53	38.9	0.22	5.6	0.44	11.2
SCOP-8-8N	-	1/2	1.22	31.0	1.34	34.0	1.53	38.9	0.22	5.6	0.44	11.2

When installing an O-Ring seal fitting:

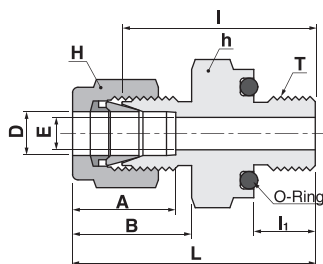
1. Hand-tighten it until the squeeze on the O-Ring can be felt during the last 1/4 turn
2. Snug the fitting lightly with a wrench

When connecting & disconnecting the tubing to the O-Ring fitting:

1. Use a back-up wrench on the fitting hex so it does not turn while the nut is being tightened at the tubing connection.
2. When disconnecting the tubing also use a back-up wrench so the fitting does not turn
3. For a recessed port, use a thin back-up wrench (1/8") to hold the fitting hex (Fig. 3).

O-Seal Straight
Thread Connector

SCOS



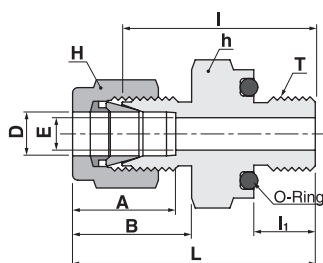
Connects fractional tube to straight thread

These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		Straight Thread	E	Width across flat				A	B	I	I ₁	L	O-Ring Uniform Size No.
	D				h		H							
	in	mm			T	Min.	in	mm						
SCOS-2-2U	1/8	3.17	5/16-24	2.28	9/16	14.28	7/16	11.11	12.70	15.24	26.16	8.63	32.76	-011
SCOS-3-3U	3/16	4.76	3/8-24	3.04	5/8	15.87	1/2	12.70	13.71	16.00	27.68	9.65	34.29	-012
SCOS-4-4U	1/4	6.35	7/16-20	4.82	3/4	19.05	9/16	14.28	15.24	17.78	30.98	10.41	38.35	-111
SCOS-5-5U	5/16	7.93	1/2-20	6.35	7/8	22.22	5/8	15.87	16.25	18.54	33.27	11.17	40.64	-112
SCOS-6-6U	3/8	9.52	9/16-18	7.11	15/16	23.81	11/16	17.46	16.76	19.30	35.05	11.93	42.41	-113
SCOS-8-8U	1/2	12.70	3/4-16	10.41	1-1/8	28.57	7/8	22.22	22.86	21.84	35.81	11.93	45.97	-116
SCOS-12-12U	3/4	19.05	1-1/16-12	15.74	1-1/2	38.10	1-1/8	28.58	24.38	21.84	42.16	14.22	52.32	-215
SCOS-16-16U	1	25.40	1-5/16-12	22.35	1-3/4	44.45	1-1/2	38.10	31.24	26.41	45.97	14.22	58.16	-219

O-Seal Pipe
Thread Connector

SCOP



Connects fractional tube to NPT thread

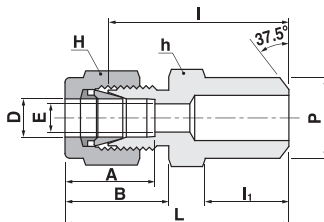
These fittings may have a larger opening at the pipe / straight thread end.

Part No.	Tube O.D		T	E	Width across flat				A	B	I	I ₁	L	O-Ring Uniform Size No.
	D				h		H							
	in	mm			*(NPT)	Min.	in	mm						
SCOP-2-2N	1/8	3.17	1/8	2.28	3/4	19.05	7/16	11.11	12.70	15.24	26.16	7.11	32.76	-111
SCOP-4-2N	1/4	6.35	1/8	4.82	3/4	19.05	9/16	14.28	15.24	17.78	27.68	7.11	35.05	-111
SCOP-4-4N	1/4	6.35	1/4	4.82	15/16	23.81	9/16	14.28	15.24	17.78	30.98	9.65	38.35	-113
SCOP-6-4N	3/8	9.52	1/4	7.11	15/16	23.81	11/16	17.46	16.76	19.30	32.51	9.65	39.87	-113
SCOP-6-6N	3/8	9.52	3/8	7.11	1-1/8	28.58	11/16	17.46	16.76	19.30	34.03	10.41	41.40	-116
SCOP-6-8N	3/8	9.52	1/2	7.11	1-5/16	33.33	11/16	17.46	16.76	19.30	39.62	13.46	46.99	-212
SCOP-8-8N	1/2	12.70	1/2	10.41	1-5/16	33.33	7/8	22.22	22.86	21.84	39.62	13.46	49.78	-212

* ISO paralalled threads are available upon request.

**Male Pipe
Weld Connector**

SCW

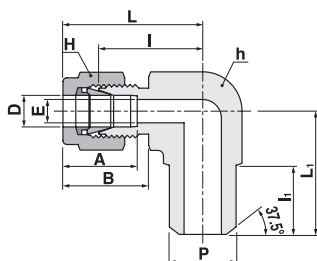


Connects fractional tube to pipe

Part No.	Tube O.D		Male Pipe Size		E	Width across flat				A	B	I	I ₁	L
	D		P			h		H						
	in	mm	NPS	O.D		in	mm	in	mm					
SCW-2-2P	1/8	3.17	1/8	10.29	2.28	7/16	11.11	7/16	11.11	12.70	15.24	23.20	9.65	31.24
SCW-3-2P	3/16	4.76	1/8	10.29	3.04	7/16	11.11	1/2	12.70	13.71	16.00	24.63	9.65	31.24
SCW-4-2P	1/4	6.35	1/8	10.29	4.82	1/2	12.70	9/16	14.28	15.24	17.78	25.40	9.65	32.76
SCW-4-4P	1/4	6.35	1/4	13.72	4.82	9/16	14.28	9/16	14.28	15.24	17.78	30.48	14.22	37.84
SCW-5-2P	5/16	7.93	1/8	10.29	5.08	9/16	14.28	5/8	15.87	16.25	18.54	26.67	9.65	34.03
SCW-5-4P	5/16	7.93	1/4	13.72	6.35	9/16	14.28	5/8	15.87	16.25	18.54	31.24	14.22	38.60
SCW-6-4P	3/8	9.52	1/4	13.72	7.11	5/8	15.87	11/16	17.46	16.76	19.30	32.51	14.22	39.87
SCW-6-6P	3/8	9.52	3/8	17.15	7.11	11/16	17.46	11/16	17.46	16.76	19.30	32.51	14.22	39.87
SCW-6-8P	3/8	9.52	1/2	21.34	7.11	7/8	22.22	11/16	17.46	16.76	19.30	38.86	19.05	46.26
SCW-8-6P	1/2	12.70	3/8	17.15	10.41	13/16	20.64	7/8	22.22	22.86	21.84	33.27	14.22	43.43
SCW-8-8P	1/2	12.70	1/2	21.34	10.41	7/8	22.22	7/8	22.22	22.86	21.84	38.86	19.05	49.02
SCW-8-12P	1/2	12.70	3/4	26.67	10.41	1-1/16	26.98	7/8	22.22	22.86	21.84	40.38	19.05	50.54
SCW-10-8P	5/8	15.87	1/2	21.34	12.70	15/16	23.81	1	25.40	24.38	21.84	38.86	19.05	49.02
SCW-12-12P	3/4	19.05	3/4	26.67	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	40.38	19.05	50.54
SCW-16-16P	1	25.40	1	33.40	22.35	1-3/8	34.92	1-1/2	38.10	31.24	26.41	50.03	23.87	62.23
SCW-20-20P	1-1/4	31.75	1-1/4	42.16	27.68	1-3/4	44.45	1-7/8	47.63	41.14	38.86	55.11	23.87	77.21
SCW-24-24P	1-1/2	38.10	1-1/2	48.26	34.03	2-1/8	53.98	2-1/4	57.15	50.03	45.21	61.72	26.16	88.90
SCW-32-32P	2	50.80	2	60.33	45.97	2-3/4	69.85	3	76.20	67.56	62.73	76.20	26.92	113.53

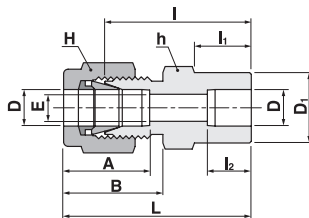
Connects metric tube to pipe

Part No.	Tube O.D	Male Pipe Size		E	Width across flat		A	B	I	I	L
	D	P			h	H					
		NPS	O.D								
SCW-3M-2P	3	1/8	10.29	2.4	12	12	12.9	15.3	23.1	9.7	29.7
SCW-4M-2P	4	1/8	10.29	2.4	12	12	13.7	16.1	24.1	9.7	30.7
SCW-6M-2P	6	1/8	10.29	4.8	14	14	15.3	17.7	25.4	9.7	32.8
SCW-6M-4P	6	1/4	13.72	4.8	14	14	15.3	17.7	30.2	14.2	37.6
SCW-8M-2P	8	1/8	10.29	5.1	15	16	16.2	18.6	26.7	9.7	34.2
SCW-8M-4P	8	1/4	13.72	6.4	15	16	16.2	18.6	31.2	14.2	38.7
SCW-8M-8P	8	1/2	21.34	6.4	22	16	16.2	18.6	37.3	19.0	44.8
SCW-10M-4P	10	1/4	13.72	7.1	18	19	17.2	19.5	33.3	14.2	40.9
SCW-10M-6P	10	3/8	17.15	7.9	18	19	17.2	19.5	32.5	14.2	40.1
SCW-10M-8P	10	1/2	21.34	7.9	22	19	17.2	19.5	38.1	19.0	45.7
SCW-12M-4P	12	1/4	13.72	7.1	22	22	22.8	22.0	33.3	14.2	43.4
SCW-12M-6P	12	3/8	17.15	9.5	22	22	22.8	22.0	33.3	14.2	43.4
SCW-12M-8P	12	1/2	21.34	9.5	22	22	22.8	22.0	38.1	19.0	48.2
SCW-14M-6P	14	3/8	17.15	10.3	24	25	24.4	22.0	34.0	14.2	44.1
SCW-15M-8P	15	1/2	21.34	11.9	24	25	24.4	22.0	38.9	19.0	49.0
SCW-18M-8P	18	1/2	21.34	12.7	24	25	24.4	22.0	38.9	19.0	49.0
SCW-18M-8P	18	1/2	21.34	13.5	27	30	24.4	22.0	40.4	19.0	50.5
SCW-32M-20P	32	1-1/4	42.16	28.6	46	50	42.0	41.6	56.6	23.9	49.6
SCW-38M-24P	38	1-1/2	48.26	33.7	55	60	49.4	47.9	64.0	26.2	91.6

Male Pipe
Weld Elbow**SLW**

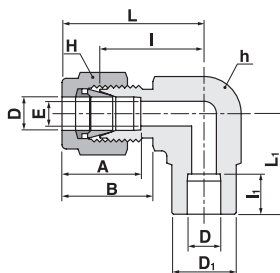
Connects fractional tube to pipe

Part No.	Tube O.D		Male Pipe Size		E	Width across flat				A	B	I	I ₁	L	L ₁
	D		P			h		H							
	in	mm	NPS	O.D		in	mm	in	mm						
SLW-2-2P	1/8	3.17	1/8	10.29	2.28	1/2	12.70	7/16	11.11	12.70	15.24	19.55	9.65	26.92	18.79
SLW-4-4P	1/4	6.35	1/4	13.72	4.82	1/2	12.70	9/16	14.28	15.24	17.78	19.55	14.22	26.92	23.36
SLW-6-4P	3/8	9.52	1/4	13.72	7.11	5/8	15.87	11/16	17.46	16.76	19.30	23.11	14.22	30.48	25.40
SLW-8-8P	1/2	12.70	1/2	21.34	10.41	13/16	20.64	7/8	22.22	22.86	21.84	25.90	19.05	36.06	33.02
SLW-12-12P	3/4	19.05	3/4	26.67	15.74	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	19.05	39.87	36.83

Tube Socket
Weld Connector**SCSW**

Connects fractional tubes

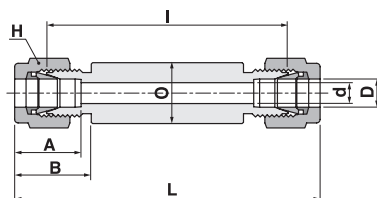
Part No.	Tube O.D		E	D ₁	Width across flat				A	B	I	I ₁	I ₂	L
	D				h		H							
	in	mm			in	mm	in	mm						
SCSW-2-2	1/8	3.17	2.28	7.87	7/16	11.11	7/16	11.11	12.70	15.24	22.35	8.63	6.35	28.95
SCSW-4-4	1/4	6.35	4.82	11.17	1/2	12.70	9/16	14.28	15.24	17.78	26.16	10.41	7.87	33.52
SCSW-6-6	3/8	9.52	7.11	15.74	5/8	15.87	11/16	17.46	16.76	19.30	30.22	11.93	9.65	37.59
SCSW-8-8	1/2	12.70	10.41	19.05	13/16	20.64	7/8	22.22	22.86	21.84	30.98	11.93	12.70	41.14
SCSW-12-12	3/4	19.05	15.74	26.67	1-1/16	26.98	1-1/8	28.58	24.38	21.84	33.27	11.93	14.22	43.43
SCSW-16-16	1	25.40	22.35	33.27	1-3/8	34.92	1-1/2	38.10	31.24	26.41	40.38	14.22	19.05	52.57

Tube Socket
Weld Elbow**SLSW**

Connects fractional tubes

Part No.	Tube O.D		E	D _i	Width across flat				A	B	I	I _i	L	L _i
	D				h		H							
	in	mm			in	mm	in	mm						
SLSW-4-4	1/4	6.35	4.82	11.17	1/2	12.70	9/16	14.28	15.24	17.78	19.55	7.87	26.92	19.55
SLSW-6-6	3/8	9.52	7.11	15.74	5/8	15.87	11/16	17.46	16.76	19.30	23.11	9.65	30.48	23.11
SLSW-8-8	1/2	12.70	10.41	19.05	13/16	20.64	7/8	22.22	22.86	21.84	25.90	12.70	36.06	25.90
SLSW-12-12	3/4	19.05	15.74	26.67	1-1/16	26.98	1-1/8	28.58	24.38	21.84	29.71	14.22	39.87	29.71
SLSW-16-16	1	25.40	22.35	33.27	1-3/8	34.92	1-1/2	38.10	31.24	26.41	36.83	19.05	49.02	36.83

**Welding
Bulkhead Union
SBUW**



Connects fractional Tubes

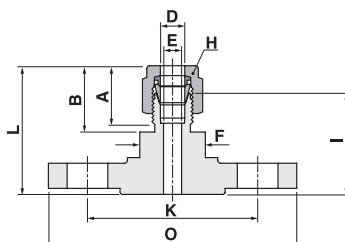
Part No.	Tube O.D. D		d	H		A	B	I	L	O
	in	mm	mm	in	mm					
SBUW-1	1/16	1.59	1.27	5/16	7.93	8.63	10.92	64.2	71.85	10
SBUW-2	1/8	3.17	2.28	7/16	11.11	12.7	15.24	67.2	80.41	12
SBUW-3	3/16	4.76	3.04	1/2	12.70	13.71	16	69	82.2	12
SBUW-4	1/4	6.35	4.82	9/16	14.28	15.24	17.78	70.4	85.13	14
SBUW-5	5/16	7.93	6.35	5/8	15.87	16.25	18.54	73.7	88.43	16
SBUW-6	3/8	9.52	7.11	11/16	17.46	16.76	19.3	73.7	88.43	19
SBUW-8	1/2	12.7	10.41	7/8	22.22	22.86	21.84	73.7	94.02	22
SBUW-10	5/8	15.87	12.7	1	25.40	24.38	21.84	73.7	94.02	28
SBUW-12	3/4	19.05	15.74	1-1/8	28.58	24.38	21.84	73.7	94.02	32
SBUW-14	7/8	22.22	18.28	1-1/4	31.75	25.9	21.84	73.7	94.02	32
SBUW-16	1	25.4	22.35	1-1/2	38.10	31.24	26.41	78.5	102.89	35
SBUW-20	1-1/4	31.75	27.68	1-7/8	47.63	41.14	38.86	83.9	128.1	50
SBUW-24	1-1/2	38.1	34.03	2-1/4	57.15	50.03	45.21	86.1	140.45	55
SBUW-32	2	50.8	45.97	3	76.20	67.56	62.73	100.9	175.55	80

Connects Metric Tubes

Part No.	Tube O.D. D	d	H	A	B	I	L	O
		mm						
SBUW-2M	2	1.7	12	12.9	15.3	67.3	80.5	12
SBUW-3M	3	2.4	12	12.9	15.3	67.3	80.5	12
SBUW-4M	4	2.4	12	13.7	16.1	69	82.2	12
SBUW-6M	6	4.8	14	15.3	17.7	70.4	85.2	14
SBUW-8M	8	6.4	16	16.2	18.6	74	89	16
SBUW-10M	10	7.9	19	17.2	19.5	74	89.2	19
SBUW-12M	12	9.5	22	22.8	22	74	94.2	22
SBUW-15M	15	11.9	25	24.4	22	74	94.2	25
SBUW-16M	16	12.7	25	24.4	22	74	94.2	28
SBUW-18M	18	15.1	30	24.4	22	74	94.2	28
SBUW-20M	20	15.9	32	26	22	74	94.2	32
SBUW-22M	22	18.3	32	26	22	74	94.2	32
SBUW-25M	25	21.8	38	31.3	26.5	78.6	103.2	38
SBUW-28M	28	21.8	46	36.6	36.6	81.7	116.3	45
SBUW-30M	30	26.2	50	39.6	39.2	74	117.2	50
SBUW-32M	32	28.6	50	42	41.6	87.1	133.1	50
SBUW-38M	38	33.7	60	49.4	47.9	90.9	146.1	60
SBUW-42M	42	36.5	65	49.4	47.9	90.9	146.1	60

Flange Adapter

SF



Connects fractional Tube to ANSI Flanges

Part No,	Tube O.D.		ANSI Flange		E	H		A	B	F	L	I	K	O
	D													
	in	mm	NPS	Class	min	in	mm							
SF-8R-4T-150	1/4	6.35	1/2	150	4.82	9/16	14.28	15.24	17.78	20.64	40.89	33.53	60.3	90
SF-8R-6T-300	3/8	9.52	1/2	300	7.11	11/16	17.46	16.76	19.3	20.64	45.47	38.1	66.7	95
SF-8R-8T-150	1/2	12.7	1/2	150	10.41	7/8	22.22	22.86	21.84	20.64	45.21	35.05	60.3	90
SF-16R-8T-150	1/2	12.7	1	150	10.41	7/8	22.22	22.86	21.84	20.64	48.26	38.1	79.4	110
SF-32R-8T-150	1/2	12.7	2	150	10.41	7/8	22.22	22.86	21.84	20.64	53.09	42.93	120.7	150
SF-16R-12T-150	3/4	19.05	1	150	15.74	1-1/8	28.58	24.38	21.84	31.75	50.29	40.13	79.4	110
SF-16R-16T-150	1	25.4	1	150	22.35	1-1/2	38.1	31.24	26.41	34.93	60.45	48.26	79.4	110
SF-32R-24T-150	1-1/2	38.1	2	150	34.03	1-7/8	47.63	50.03	45.21	53.98	86.36	59.18	120.7	150
SF-32R-32T-150	2	50.8	2	150	45.97	3	76.2	67.56	62.73	69.85	101.39	67.06	120.7	150

Connects Metric Tube to DIN PN40 Flanges

Part No,	Tube O.D.		DIN Flange		E	H	A	B	F	L	I	K	O
	D	DN	min										
			min										
SF-25R-6M-PN40	6	25	4.8	14	15.3	17.7	20	47.5	40.1	85	115		
SF-15R-12M-PN40	12	15	9.5	22	22.8	22	20	48.5	38.4	65	95		
SF-25R-12M-PN40	12	25	9.5	22	22.8	22	20	50.5	40.4	85	115		
SF-50R-12M-PN40	12	50	9.5	22	22.8	22	20	55.3	45.2	125	165		
SF-15R-18M-PN40	18	15	15.1	30	24.4	22	32	51.8	41.7	65	95		
SF-25R-18M-PN40	18	25	15.1	30	24.4	22	32	53.8	43.7	85	115		
SF-25R-25M-PN40	25	25	21.8	38	31.3	26.5	35	64	51.8	85	115		
SF-50R-38M-PN40	38	50	33.7	60	49.4	47.9	55	90.4	62.7	125	165		

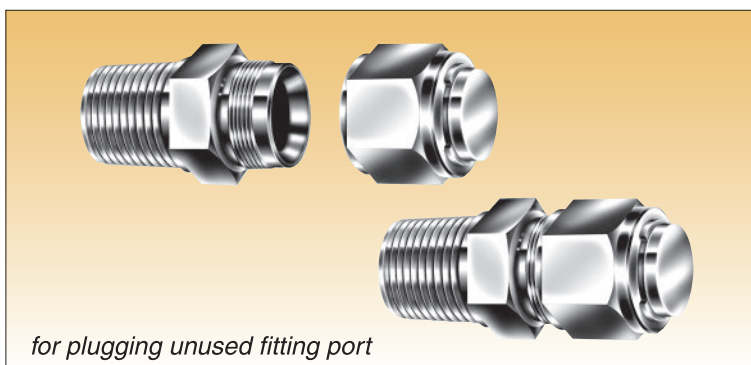
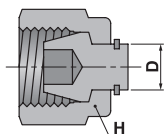
Connects fractional Tube to JIS10K Flanges

Part No,	Tube O.D.		JIS Flange	E	H		A	B	F	L	I	K	O
	D												
	in	mm	DN	min	in	mm							
SF-15R-4T-10K	1/4	6.35	15	4.82	9/16	14.28	15.24	17.78	20.64	42.16	34.8	70	95
SF-15R-6T-10K	3/8	9.52	15	7.11	11/16	17.46	16.76	19.3	20.64	43.69	36.32	70	95
SF-15R-8T-10K	1/2	12.7	15	10.41	7/8	22.22	22.86	21.84	20.64	46.49	36.32	70	95
SF-15R-12T-10K	3/4	19.05	15	15.74	1-1/8	28.58	24.38	21.84	31.75	48.51	38.35	70	95
SF-25R-16T-10K	1	25.4	25	22.35	1-1/2	38.1	31.24	26.41	34.93	60.96	48.77	90	125
SF-50R-32T-10K	2	50.8	50	45.97	3	76.2	67.56	62.73	69.85	101.85	64.52	120	155

Connects Metric Tube to JIS10K Flanges

Part No,	Tube O.D.		JIS Flange		E	H	A	B	F	L	I	K	O
	D	DN	min										
			min										
SF-15R-12M-10K	12	15	9.5	22	22.8	22	20	46.5	36.3	70	95		
SF-15R-18M-10K	18	15	15.1	30	24.4	22	32	48.5	38.4	70	95		
SF-25R-25M-10K	25	25	21.8	38	31.3	26.5	35	61.0	48.8	90	125		

Plug
SP



Installation Instructions

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

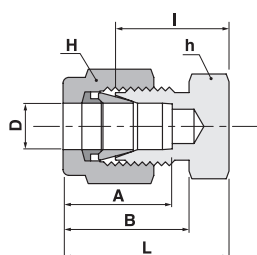
fractional

Part No.	Tube O.D. D		Width across flat H	
	in	mm	in	mm
SP-1	1/16	1.59	5/16	7.93
SP-2	1/8	3.17	7/16	11.11
SP-3	3/16	4.76	1/2	12.70
SP-4	1/4	6.35	9/16	14.28
SP-5	5/16	7.93	5/8	15.87
SP-6	3/8	9.52	11/16	17.46
SP-8	1/2	12.70	7/8	22.22
SP-10	5/8	15.87	1	25.40
SP-12	3/4	19.05	1-1/8	28.58
SP-14	7/8	22.22	1-1/4	31.75
SP-16	1	25.40	1-1/2	38.10
SP-20	1-1/4	31.75	1-7/8	47.63
SP-24	1-1/2	38.10	2-1/4	57.15
SP-32	2	50.80	3	76.20

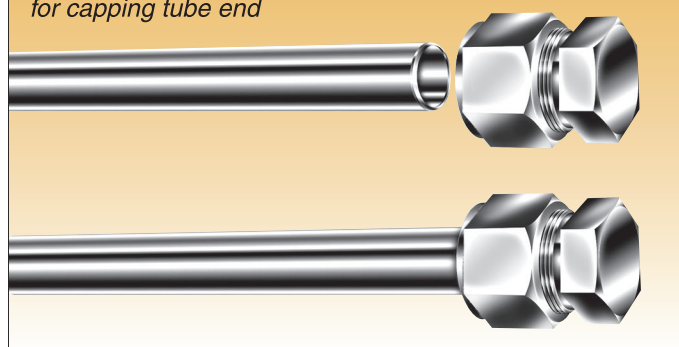
metric

Part No.	Tube O.D. D		Width across flat H	
SP-2M	2		12	
SP-3M	3		12	
SP-4M	4		12	
SP-6M	6		14	
SP-8M	8		16	
SP-10M	10		19	
SP-12M	12		22	
SP-15M	15		25	
SP-16M	16		25	
SP-18M	18		30	
SP-20M	20		32	
SP-22M	22		32	
SP-25M	25		38	
SP-28M	28		46	
SP-32M	32		50	
SP-38M	38		60	

Cap SC



for capping tube end



Installation Instructions

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

Cap end of fractional tube

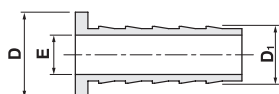
Part No.	Tube O.D.		Width across flat				A	B	I	L
	D		h		H					
	in	mm	in	mm	in	mm				
SC-1	1/16	1.59	5/16	7.93	5/16	7.93	8.63	10.92	11.20	14.18
SC-2	1/8	3.17	7/16	11.11	7/16	11.11	12.70	15.24	13.46	20.06
SC-3	3/16	4.76	7/16	11.11	1/2	12.70	13.71	16.00	14.73	21.33
SC-4	1/4	6.35	1/2	12.70	9/16	14.28	15.24	17.78	16.00	23.26
SC-5	5/16	7.93	9/16	14.28	5/8	15.87	16.25	18.54	17.01	24.38
SC-6	3/8	9.52	5/8	15.87	11/16	17.46	16.76	19.30	18.28	25.65
SC-8	1/2	12.70	13/16	20.63	7/8	22.22	22.86	21.84	19.05	29.21
SC-10	5/8	15.87	15/16	23.81	1	25.40	24.38	21.84	19.81	29.97
SC-12	3/4	19.05	1-1/16	26.98	1-1/8	28.57	24.38	21.84	21.33	31.49
SC-14	7/8	22.22	1-3/16	30.16	1-1/4	31.75	25.90	21.84	23.87	34.03
SC-16	1	25.40	1-3/8	34.92	1-1/2	38.10	31.24	26.41	26.16	38.35
SC-20	1-1/4	31.75	1-3/4	44.45	1-7/8	47.63	41.14	38.86	31.24	53.34
SC-24	1-1/2	38.10	2-1/8	53.98	2-1/4	57.15	50.15	45.21	37.33	64.51
SC-32	2	50.80	2-3/4	69.85	3	76.20	67.56	62.73	49.27	86.61

Cap end of metric tube

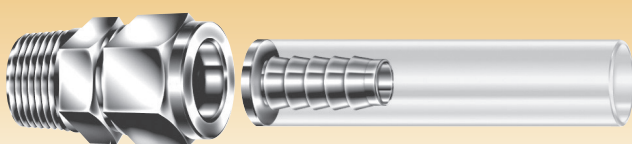
Part No.	Tube O.D. D	Width across flat		A	B	I	L
		h	H				
SC-2M	2	12	12	12.9	15.3	13.5	20.1
SC-3M	3	12	12	12.9	15.3	13.5	20.1
SC-4M	4	12	12	13.7	16.1	14.7	21.3
SC-6M	6	14	14	15.3	17.7	15.7	23.1
SC-8M	8	15	16	16.2	18.6	17.0	24.5
SC-10M	10	18	19	17.2	19.5	19.0	26.6
SC-12M	12	22	22	22.8	22.0	19.0	29.1
SC-15M	15	24	25	24.4	22.0	19.8	29.9
SC-16M	16	24	25	24.4	22.0	19.8	29.9
SC-18M	18	27	30	24.4	22.0	21.3	31.4
SC-20M	20	30	32	26.0	22.0	23.9	34.0
SC-22M	22	30	32	26.0	22.0	23.9	34.0
SC-25M	25	35	38	31.3	26.5	26.2	38.5
SC-28M	28	41	46	36.6	36.6	27.7	48.5
SC-32M	32	46	50	42.0	41.6	32.8	55.8
SC-38M	38	55	60	49.4	47.9	37.8	65.4

Tube Insert

SI



for Nylon or Soft Plastic Tubing



Installation Instructions

The S-LOK Tube Insert supports the soft plastic tubing, thus the tubing does not collapse when the ferrules deform it.

When you select a size of Tube Insert, check if the tubing O.D and I.D conform to those of the tube insert.

fractional

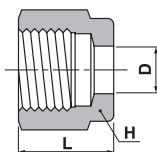
Part No.	Tube O.D.		Tube I.D.		E
	D		D ₁		
	in	mm	in	mm	
SI-3-2	3/16	4.76	1/8	3.17	2.28
SI-4-2	1/4	6.35	1/8	3.17	2.28
SI-4-3	1/4	6.35	3/16	4.76	3.55
SI-5-2	5/16	7.93	1/8	3.17	2.28
SI-5-3	5/16	7.93	3/16	4.76	3.04
SI-5-4	5/16	7.93	1/4	6.35	4.82
SI-6-3	3/8	9.52	3/16	4.76	3.04
SI-6-4	3/8	9.52	1/4	6.35	4.82
SI-8-4	1/2	12.70	1/4	6.35	4.82
SI-8-6	1/2	12.70	3/8	9.52	7.87
SI-10-6	5/8	15.87	3/8	9.52	7.87
SI-10-8	5/8	15.87	1/2	12.70	11.17
SI-12-8	3/4	19.05	1/2	12.70	11.17
SI-12-10	3/4	19.05	5/8	15.87	14.22
SI-16-12	1	25.40	3/4	19.05	17.52

metric

Part No.	Tube O.D.		Tube I.D.		E
	D		D ₁		
SI-6M-4M	6		4		2.8
SI-8M-6M	8		6		4.4
SI-10M-8M	10		8		6.4
SI-12M-8M	12		8		6.4
SI-12M-10M	12		10		8.3

Nut

SN



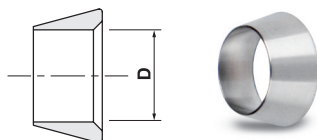
fractional

Part No.	Tube O.D.		Width across flat		L
	D		H		
	in	mm	in	mm	
SN-1	1/16	1.59	5/16	7.93	7.90
SN-2	1/8	3.17	7/16	11.11	11.93
SN-3	3/16	4.76	1/2	12.70	11.93
SN-4	1/4	6.35	9/16	14.28	12.70
SN-5	5/16	7.93	5/8	15.87	13.46
SN-6	3/8	9.52	11/16	17.46	14.22
SN-8	1/2	12.70	7/8	22.22	17.52
SN-10	5/8	15.87	1	25.40	17.52
SN-12	3/4	19.05	1-1/8	28.58	17.52
SN-14	7/8	22.22	1-1/4	31.75	17.52
SN-16	1	25.40	1-1/2	38.10	20.57
SN-20	1-1/4	31.75	1-7/8	47.63	31.75
SN-24	1-1/2	38.10	2-1/4	57.15	38.10
SN-32	2	50.80	3	76.20	52.32

metric

Part No.	Tube O.D.		Width across flat		L
	D		H		
SN-2M	2		12		11.8
SN-3M	3		12		11.8
SN-4M	4		12		12.0
SN-6M	6		14		12.7
SN-8M	8		16		13.5
SN-10M	10		19		13.1
SN-12M	12		22		17.5
SN-15M	15		25		17.5
SN-16M	16		25		17.4
SN-18M	18		30		17.5
SN-20M	20		32		17.5
SN-22M	22		32		17.5
SN-25M	25		38		20.6
SN-28M	28		46		30.6
SN-32M	32		50		34.4
SN-38M	38		60		40.6

Front Ferrule

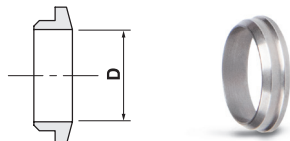
SFF*fractional*

Part No.	Tube O.D. D	
	in	mm
SFF-1	1/16	1.59
SFF-2	1/8	3.17
SFF-3	3/16	4.76
SFF-4	1/4	6.35
SFF-5	5/16	7.93
SFF-6	3/8	9.52
SFF-8	1/2	12.70
SFF-10	5/8	15.87
SFF-12	3/4	19.05
SFF-14	7/8	22.22
SFF-16	1	25.40
SFF-20	1-1/4	31.75
SFF-24	1-1/2	38.10
SFF-32	2	50.80

metric

Part No.	Tube O.D. D
SFF-2M	2
SFF-3M	3
SFF-4M	4
SFF-6M	6
SFF-8M	8
SFF-10M	10
SFF-12M	12
SFF-15M	15
SFF-16M	16
SFF-18M	18
SFF-20M	20
SFF-22M	22
SFF-25M	25
SFF-28M	28
SFF-32M	32
SFF-38M	38

Back Ferrule

SFB*fractional*

Part No.	Tube O.D. D	
	in	mm
SFB-1	1/16	1.59
SFB-2	1/8	3.17
SFB-3	3/16	4.76
SFB-4	1/4	6.35
SFB-5	5/16	7.93
SFB-6	3/8	9.52
SFB-8	1/2	12.70
SFB-10	5/8	15.87
SFB-12	3/4	19.05
SFB-14	7/8	22.22
SFB-16	1	25.40
SFB-20	1-1/4	31.75
SFB-24	1-1/2	38.10
SFB-32	2	50.80

metric

Part No.	Tube O.D. D
SFB-2M	2
SFB-3M	3
SFB-4M	4
SFB-6M	6
SFB-8M	8
SFB-10M	10
SFB-12M	12
SFB-15M	15
SFB-16M	16
SFB-18M	18
SFB-20M	20
SFB-22M	22
SFB-25M	25
SFB-28M	28
SFB-32M	32
SFB-38M	38

Ferrule Set

SFS10*fractional*

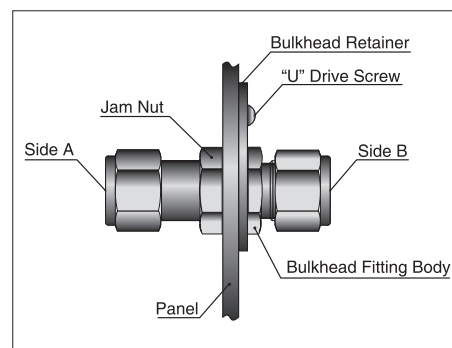
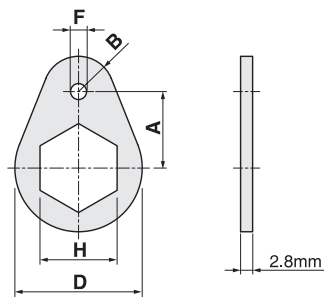
Part No.	Tube O.D.	
	in	mm
SFS10-1	1/16	1.59
SFS10-2	1/8	3.17
SFS10-3	3/16	4.76
SFS10-4	1/4	6.35
SFS10-5	5/16	7.93
SFS10-6	3/8	9.52
SFS10-8	1/2	12.70
SFS10-10	5/8	15.87
SFS10-12	3/4	19.05
SFS10-14	7/8	22.22
SFS10-16	1	25.40

metric

Part No.	Tube O.D.
SFS10-2M	2
SFS10-3M	3
SFS10-4M	4
SFS10-6M	6
SFS10-8M	8
SFS10-10M	10
SFS10-12M	12
SFS10-15M	15
SFS10-16M	16
SFS10-18M	18
SFS10-20M	20
SFS10-22M	22
SFS10-25M	25

Bulkhead Retainer

SBR

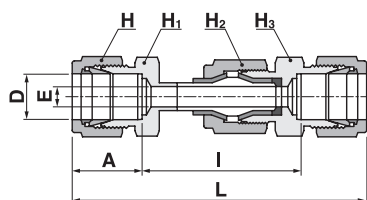


Connects fractional Tube

Part No.	S-LOK Fitting Size		A	B	D	H	F	Drill Hole Dia.	"U" Drive Screw	Drill No.
	in	mm								
SBR-1	1/16	-	9.52	3.97	15.9	7.93	3.97	3.05	6-3/8	31
SBR-2	1/8	-	12.7	5.56	20.6	12.7	3.97	3.05	6-3/8	31
SBR-3	3/16	3, 4	14.28	6.35	23.8	14.28	3.97	3.05	6-3/8	31
SBR-4	1/4	6	15.87	7.14	25.4	15.87	3.97	3.05	6-3/8	31
SBR-5	5/16	-	17.46	7.93	28.6	17.46	3.97	3.05	6-3/8	31
SBR-8M	-	8	17.46	7.93	28.6	18.0	3.97	3.05	6-3/8	31
SBR-6	3/8	-	19.05	8.73	31.8	19.05	3.97	3.05	6-3/8	31
SBR-10M	-	10	23.81	10.32	38.1	22.0	5.56	3.66	10-1/2	27
SBR-8	1/2	12	23.81	10.32	38.1	23.81	5.56	3.66	10-1/2	27
SBR-10	5/8	15, 16	25.4	10.32	41.2	26.98	5.56	3.66	10-1/2	27
SBR-12	3/4	18	26.98	11.91	46.0	30.16	5.56	3.66	10-1/2	27
SBR-14	7/8	-	30.2	13.49	52.4	34.93	5.56	3.66	10-1/2	27
SBR-16	1	-	32.54	13.49	58.7	41.27	5.56	3.66	10-1/2	27

Dielectric Fitting

SEU



Connects fractional Tube or Pipe

Part No.	Tube O.D. D		Pipe Thread NPT	E min	A	L	ℓ	H		H ₁		H ₂		H ₃	
	in	mm						in	mm	in	mm	in	mm	in	mm
SEU-4	1/4	6.35	-	4.8	15.24	95.8	65.3	9/16	14.28	1/2	12.7	7/8	22.22	13/16	30.16
SEU-6	3/8	9.52	-	7.1	16.76	99.7	65.9	11/16	17.46	5/8	15.87	7/8	22.22	13/16	30.16
SEU-6-4N	3/8	9.52	1/4	7.1	16.76	94.5	-	11/16	17.46	5/8	15.87	7/8	22.22	13/16	30.16
SEU-8	1/2	12.7	-	7.1	22.86	106	60.3	7/8	22.22	13/16	20.64	7/8	22.22	13/16	30.16
SEU-10M	-	10	-	7.1	17.2	101.5	67.3	-	19	-	18	-	22	-	22
SEU-12M	-	12	-	7.1	22.8	106.3	60.4	-	22	-	22	-	22	-	22

Technical Data & Dimensions

- Electrical resistance of insulators at 70°F (20°C): 10 x 10⁶ at 10V (dc)
- Pressure Rating : 5,000psig (344 barg)
- Temperature Rating : -40 to 200°F (-40 to 93°C)

Hydraulic Swaging Unit SWG-MNL

S-LOK Hydraulic Swaging Units preswage the ferrules to the tubing before assembly.

Features

- Reduce assembly and installation time.
- Does not cause deformation on the sealing surface of the fitting body and the fitting body thread.
- Supplied in a portable rugged plastic bag.

Part No.	Case Dimensions (L x W x D)	
	in.	cm
SWG-SMNL	19.78 x 15.77 x 7.41	50.2 x 40.1 x 18.8
SWG-LMNL	24.84 x 19.68 x 11.89	63.1 x 50 x 30.2

- Available Size - Fractional Tubing : 1/2 ~ 2 in.
- Metric Tubing: 12 ~ 38 mm
- Can be preswage all available sizes by replacing the jig and die.

Unit Assembly and Set up

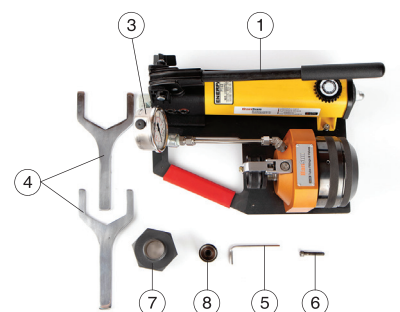
1. Open the vent valve of the hand pump by turning it counterclockwise.
2. Connect the hose to the hand pump and swaging head.
3. Turn the jig and die you want to use on the swaging head clockwise to fasten.
4. Tighten the die to the swaging head with Y wrench.
5. Tighten the bolt tightly with L wrench to fix the jig and complete the assembly.

Swaging Unit Operating

1. Align the front ferrule, back ferrule, nut and tubing of the size you want to swage, and fasten them to the jig and die.
2. Turn the vent valve of the hand pump clockwise to close it.
3. Pump the handle of the hand pump up and down.
4. Pump the hook on the back of the swaging head until it facing downward.
5. Open the vent valve of the hand pump by turning it counterclockwise while keeping the hook downward.
6. Disassemble preswaged ferrule, nut, tubing from jig and die.

Assembly with Fitting Body

1. Insert the pre-swaged ferrule, nut and tubing into the fitting body.
2. Tighten the nut clockwise by hand.
3. Fix the fitting body with a vise or spanner.
4. Tighten the nut 1/4 turn clockwise with spanner.



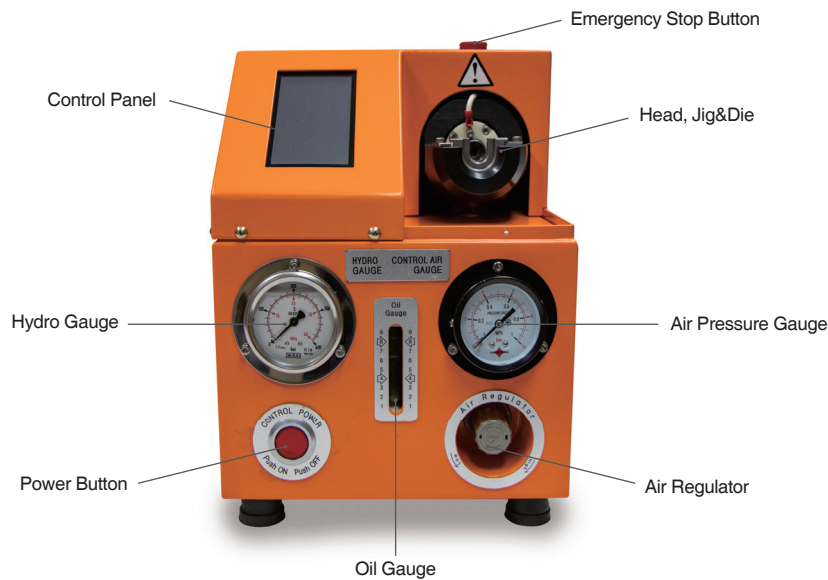
Swaging Unit - SWG-MNL Component

No.	Part Name
1	Hand Pump
2	Swaging Head
3	Pressure Gauge
4	Y Wrench
5	L Wrench
6	Bolt
7	Jig
8	Die

Recommended Minimum Wall Thickness of Tubing

Size	Tubing Wall Thickness	
	Stainless Steel	SWG-JD Part No.
1/2"	0.065	SWG-JD8-S630
5/8"	0.065	SWG-JD10-S630
3/4"	0.065	SWG-JD12-S630
7/8"	0.065	SWG-JD14-S630
1"	0.083	SWG-JD16-S630
1-1/4"	0.095	SWG-JD20-S630
1-1/2"	0.095	SWG-JD24-S630
2"	0.109	SWG-JD32-S630
12mm	1.5	SWG-JD12M-S630
15mm	1.5	SWG-JD15M-S630
16mm	1.8	SWG-JD16M-S630
18mm	1.8	SWG-JD18M-S630
20mm	2.0	SWG-JD20M-S630
22mm	2.0	SWG-JD22M-S630
25mm	2.0	SWG-JD25M-S630
28mm	2.2	SWG-JD28M-S630
32mm	2.2	SWG-JD32M-S630
38mm	2.5	SWG-JD38M-S630

Air-Actuated Hydraulic Swaging Unit – SWG-PAT

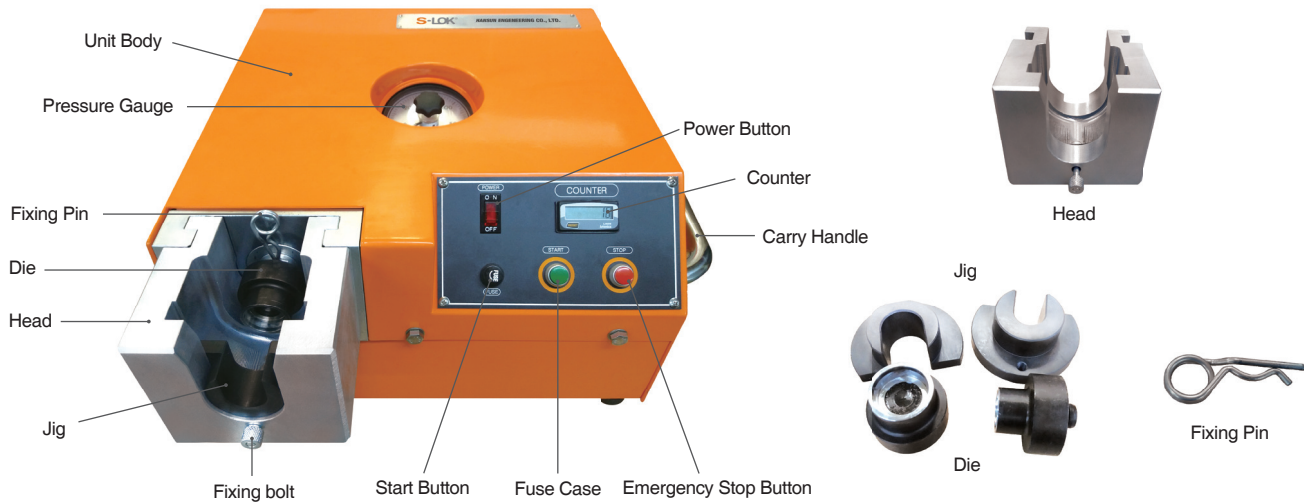


Features

- Easily preswage S-LOK nut, ferrule to stainless steel tubing
- Pneumatic drive & improve process control
- An electronically controlled semi-automatic device starts and stops the preswaging process.
- Automatically starts when tubing is inserted and bottomed
- Available size – Metric Tubing : 6, 8, 10, 12mm
 - Fractional Tubing : 1/4, 3/8, 1/2 inch
- Easily replace jigs and dies for available tubing sizes

Electric Swaging Unit – SWG-AT

S-LOK Electric Swaging Units pre-assemble the sleeve of bite type fitting to the tubing before installation.



Features

- Reduce assembly and installation time.
- Does not cause deformation on the sealing surface of the fitting body and the fitting body thread.
- Easy replacement of jig and die.
- Can be assembly all available sizes by replacing the jig and die.
- Available size – Metric Tubing : 12 ~ 42 mm
– Fractional Tubing : 1/2 ~ 2 in.
- 220V version is standard and 110V version is available upon request.

Hydraulic pump	0.35 kW • 2.0 L/min
Operating pressure	0 ~ 600 bar
Connection	220V • 1Ø • 50 / 60Hz • 2.5A
Dimension	400 x 410 x 230 mm
Weight	44 kg

Tubing preparation

- Make sure that the outer diameter, wall thickness, circularity and tolerance of the tubing are appropriate for your application.
- Make sure the surface is free of scratches.
- Tubing should be cut to length with a square cut.
- Deburr the inside and outside edge of the tubing.

Unit Set Up

- Install the head on the swaging unit.
- Insert the die of the size you want to use into the swaging unit and fix it with the fixing pin.
- Install the jig of the size you want to use on the head and fix it with the fixing bolt.

Unit Set Up

- Turn on the unit.
- Set up the swaging pressure.
- Align the sleeve, nut on tubing of size you want to pre-assemble, and insert the tubing to the die.
(The sleeve and nut are positioned between the die and the jig, Aligned with the tubing.)
- Press the start button and the die will slide toward the jig to complete pre-assemble.
In case of emergency, press the red stop button. the unit stops immediately.
- Remove pre-assembled tubing from the unit.

Assembly on Fitting Body

- Insert the pre-assembled sleeve, nut and tubing into the fitting body.
- Tighten the nut clockwise by hand.
- Fix the fitting body with a vise or spanner.
- Tighten the nut 1/4 ~ 1/3 turn clockwise with spanner.

Gap Gauge for Pull-up Inspection

SIG

S-LOK maintains unbelievably tight tolerance on its each and every part. S-LOK tube fittings are monitored and gauged throughout process. This assures S-LOK consistency and makes S-LOK fittings gaugable. This no-go gauge is the useful tool to inspect if the fittings are pulled up 1-1/4 turns from the finger-tight position. When the gauge doesn't fit the gap between the nut and body hex, the fitting is tightened 1-1/4 turns from the finger-tight position. If the gauge fits the gap, the fittings is not fully tightened.

Multiple Size Gap Gauge

Part No.	Applicable S-LOK Tube O.D.
SIG-468	1/4", 3/8", 1/2", 6mm, 10mm, 12mm



Liquid Gas Leak Detectors

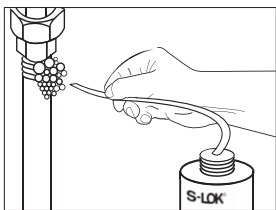
S-detec

- **S-detec** liquid gas leak detectors detect gas leaks in hard-to-reach areas.
- Flexible tube extends for hard-to-reach areas.
- Detects even on very small leaks and vertical surfaces.
- Easy to use, non-toxic, non-corrosive, non-flammable and free of chlorine.
- **S-detec** liquid evaporates cleanly after testing.
- Composition : Distilled water, glycerine and others
- Temperature range : -2°C to 93°C (28°F to 200°F)

⚠ Use S-detec liquid gas leak detectors only on external surfaces.



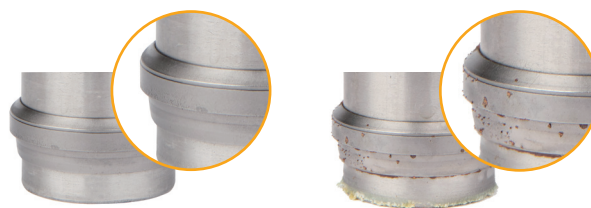
Instructions



M-SLD-02

Hold S-detec tube end at a pressurized connection. Squeeze upright bottle to apply a stream of S-detec liquid leak detector. Seek for bubbles which indicates leakage.

Product Comparison



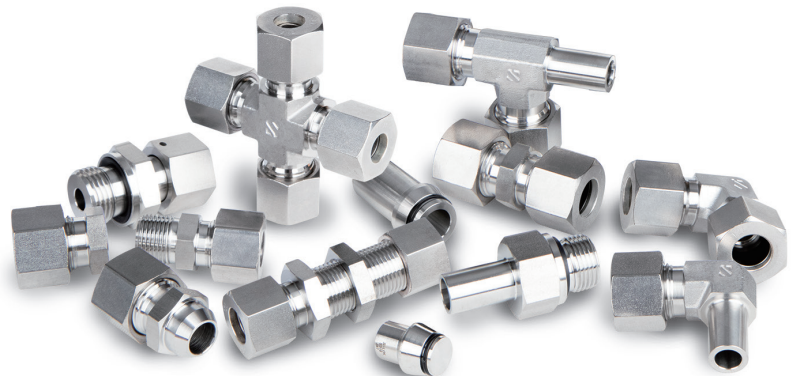
Ordering Information

Ordering Number	Container Size	Flexible Tube Length
M-SLD-01	3.8 L (1 gal)	-
M-SLD-02	240 mL (8 oz)	30 cm (12 inch)

S-detec	Detergent
Non-corrosive	Corrosion
Dry clean without stains.	Stains and clots are formed.

Bite Type Tube Fittings (DIN 2353)

The best partner for value creation
We support the innovations of customer



02



Catalogue No. S-LOK Jan.2023

Bite Type Tube Fittings - DIN2353

Features

- HANSUN bite type fitting are designed in accordance with DIN 2353.
- The HANSUN bite type fitting is consists of a body, a progressive ring(sleeve) and a nut.
- The HANSUN bite type tube fittings are designed and manufacture to produced a strong, reliable, leak-free joint upon proper assembly.

Standard Material Specifications

- Steel Fittings : Materials see DIN3859.
- Stainless Steel Fitting : X5CrNiMo 17122 in accordance with DIN17440, material No. 1.4401. or ASTM A276 / A479 type 316
- Brass Fitting : CuZn35Ni2 in accordance with DIN17660/ 17672, material No. 2.0540.
- Elastomer Seal : NBR(BUNA-N), DIN 17660FPM(VITON).

Technical Information

Pressure and temperature load Capability

- Pressure Ranges

Series		Max. Pressure		
		Steel	Stainless Steel	Brass
LL	4 ~ 12	100 bar	100 bar	63 bar
L	6 ~ 10	500 bar	315 bar	200 bar
	12 ~ 18	400 bar		
	22 ~ 42	250 bar	160 bar	100 bar
S	6 ~ 10	800 bar	630 bar	400 bar
	12 ~ 14(16*)	630 bar		
	16 ~ 30	420 bar	400 bar	250 bar
	38		315 bar	200 bar

*16S Steel Only.

Pressure reduction with temperature

The following reduction of pressure compared with the catalogue specification for higher temperatures.

Materials of fittings	Temperature range	Reduction of pressure
Steel	-40°C up to 120°C	-
Brass	-60°C up to 175°C	35%
	-60°C up to 20°C	-
316 Stainless Steel (1.4401)	50°C	4%
	100°C	11%
	200°C	20%
	300°C	29%
	400°C	33%

For different material of tubes and fittings, the tubes must be tested separately concerning the allowed temperature range and the necessary reduction of pressure.

Allowable working temperatures

A) For fittings materials

Material	Temperature
Steel	-40°C up to 120°C (DIN 3859)
Brass	-60°C up to 175°C
316 Stainless Steel	-60°C up to 400°C (DIN 17440)

Please refer to the information given in the section "Reduction of Pressure"

A) For seal materials

Material	Temperature
NBR (e.g. PERBUNAN®)	-35°C up to 100°C
FPM (e.g. VITON®)	-28°C up to 204°C
PTFE (e.g. TEFLON®)	-60°C up to 240°C

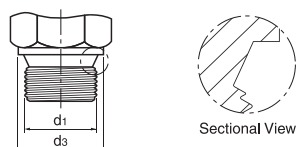
Caution! If different fitting and sealing material are used, the lowest temperature as indicated for each material is applicable!

Stud Ends & Tapped Hole Forms for tube Fittings

This standard specifies dimensions for stud ends and tapped holes with metric fine pitch thread and pipe thread for use with compression fittings, valves and screw plugs, general outlay of types.

Forms of Stud Ends

Form A (DIN 3852 Part 1+2) with sealing by washer



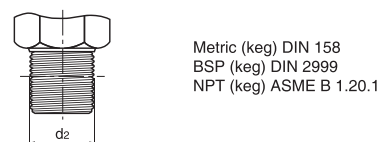
Form B (DIN 3852 Part 1+2)

with sealing by compression against face of body



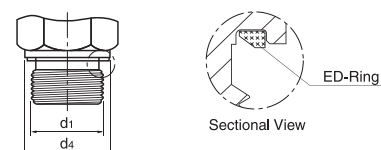
Form C (DIN 3852 Part 1+2)

with sealing in tapered thread



Form E (DIN 3852 Part 1)

with sealing by DIN 3869 ring seals (*ED-Ring)



Form F (DIN 3852 Part 3)

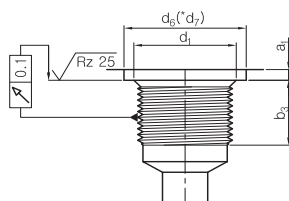
with sealing by (*O-Ring)



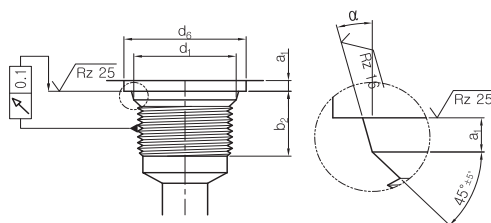
Thread size for		d ₃	d ₄ ⁰ _{-0.2}	d ₅
From A, B and E, F stud ends	From C stud ends			
d ₁	d ₂			
M8X1.0	M8X1.0keg.	-	-	10.9
M10X1.0	M10X1.0keg.	14	13.9	12.9
M12X1.5	M12X1.5keg.	17	16.9	16.9
M14X1.5	M14X1.5keg.	19	18.9	18.9
M16X1.5	M16X1.5keg.	21	21.9	20.9
M18X1.5	M18X1.5keg.	23	23.9	22.9
M20X1.5	M20X1.5keg.	25	25.9	24.9
M22X1.5	M22X1.5keg.	27	26.9	26.9
M26X1.5	-	31	31.9	30.9
M27X2.0	-	32	31.9	31.9
M33X2.0	-	39	39.9	37.9
M42X2.0	-	49	49.9	49.8
M48X2.0	-	55	54.9	54.9
G1/8	1/8 NPT	14	13.9	-
G1/4	1/4 NPT	18	18.9	-
G3/8	3/8 NPT	22	21.9	-
G1/2	1/2 NPT	26	26.9	-
G3/4	3/4 NPT	32	31.9	-
G1	1 NPT	39	39.9	-
G1-1/4	1-1/4 NPT	49	49.9	-
G1-1/2	1-1/2 NPT	55	54.9	-
7/16-20UNF	R1/8 keg.	-	-	14.4
9/16-18UNF	R1/4 keg.	-	-	17.6
3/4-16UNF	R3/8 keg.	-	-	22.3
7/8-14UNF	R1/2 keg.	-	-	25.5
1-1/16-12UN	R3/4 keg.	-	-	31.9
1-5/16-12UN	R1 keg.	-	-	38.2
1-5/8-12UN	R1-1/4 keg.	-	-	47.7
-	R1-1/2 keg.	-	-	-

Forms of Tapped Holes

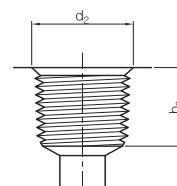
Form X (DIN 3852 Part 1+2)
for parallel Stud Ends. (Form A,B)
* d_7 is for Stud Ends Form E



Form Y (DIN 3852 Part 3)
for Stud Ends with O-Ring. (Form F)



Form Z (DIN 3852 Part 1+2)
for tapered thread Stud Ends.



Thread size for		d_6 Min.	d_7	a_1 Max	$a_2^{+0.4}_0$	b_1 Min.	b_2 Min	b_3 Min	$\alpha^{\circ} \pm 1.0^{\circ}$
From X, Y Tapped Holes	From Z Tapped Holes								
d_1	d_2								
M8X1.0	M8X1.0keg.	13	-	1.0	1.6	-	10.0	5.5	12
M10X1.0	M10X1.0keg.	15	15	1.0	1.6	8	10.0	5.5	12
M12X1.5	M12X1.5keg.	18	18	1.5	2.4	12	11.5	8.5	12
M14X1.5	M14X1.5keg.	20	20	1.5	2.4	12	11.5	8.5	15
M16X1.5	M16X1.5keg.	22	23	1.5	2.4	12	13.0	8.5	15
M18X1.5	M18X1.5keg.	24	25	2.0	2.4	12	14.5	8.5	15
M20X1.5	M20X1.5keg.	26	27	2.0	2.4	14	14.0	10.5	15
M22X1.5	M22X1.5keg.	28	28	2.5	2.4	14	15.5	10.5	15
M26X1.5	-	32	33	2.5	3.1	16	16.0	-	15
M27X2.0	-	33	33	2.5	3.1	16	19.0	-	15
M33X2.0	-	40	41	2.5	3.1	18	19.0	-	15
M42X2.0	-	50	58	2.5	3.1	20	19.5	-	15
M48X2.0	-	56	56	2.5	3.1	22	22.0	-	15
G1/8	1/8 NPT	15	15	1.0	-	8	-	6.9	-
G1/4	1/4 NPT	19	20	1.5	-	12	-	10.0	-
G3/8	3/8 NPT	23	23	2.0	-	12	-	10.3	-
G1/2	1/2 NPT	27	28	2.5	-	14	-	13.6	-
G3/4	3/4 NPT	33	33	2.5	-	16	-	14.1	-
G1	1 NPT	40	41	2.5	-	18	-	16.8	-
G1-1/4	1-1/4 NPT	50	51	2.5	-	20	-	17.3	-
G1-1/2	1-1/2 NPT	56	56	2.5	-	22	-	17.3	-
7/16-20UNF	R1/8 keg.	21	-	1.6	2.4	-	11.5	5.5	12
9/16-18UNF	R1/4 keg.	25	-	1.6	2.5	-	12.7	8.5	12
3/4-16UNF	R3/8 keg.	30	-	2.4	2.5	-	14.3	8.5	15
7/8-14UNF	R1/2 keg.	34	-	2.4	2.5	-	16.7	10.5	15
1-1/16-12UN	R3/4 keg.	41	-	2.4	3.3	-	19.0	13.0	15
1-5/16-12UN	R1 keg.	49	-	3.2	3.3	-	19.0	16.0	15
1-5/8-12UN	R1-1/4 keg.	58	-	3.2	3.3	-	19.0	17.0	15
-	R1-1/2 keg.	-	-	-	-	-	-	17.0	-

↗ Seamless precision stainless steel 1.4401

Stainless steel tubes (e.g. 1.4401), code X5CrNiMo 17122, must be cold-drawn and seamless, heat-treated without formation of scales, type m to DIN 17458, provide tolerances to DIN 2391, Part1.
The following tube wall thicknesses are suitable for use:

Tube O.D (D)	Tol.	* Wall Thickness (t)	Weight	Design Pressure DIN 2413	
				I	III
mm	mm	mm	kg/m	bar	bar
4	±0.1	0.75	0.061	391	376
		1.0	0.075	500	480
6	±0.1	1.0	0.125	372	357
		1.5	0.168	526	505
		2.0	0.200	662	637
		2.25	0.211	725	696
8	±0.1	1.0	0.175	347	277
		1.5	0.244	412	396
		2.0	0.300	526	505
		2.5	0.344	630	604
10	±0.1	1.0	0.225	294	238
		1.5	0.319	357	343
		2.0	0.401	458	439
		2.5	0.469	551	529
		3.0	0.525	638	612
12	±0.08	• 1.0	0.275	245	201
		1.5	0.394	368	291
		2.0	0.501	391	376
		2.5	0.594	474	455
		3.0	0.615	551	529
15	±0.08	3.5	0.744	624	599
		1.5	0.507	294	238
		2.0	0.651	321	309
		2.5	0.782	391	376
		3.0	0.901	458	439
16	±0.08	2.0	0.701	368	291
		2.5	0.845	370	355
		3.0	0.977	433	416
18	±0.08	• 1.5	0.620	245	201
		2.0	0.801	327	262
		2.5	0.967	333	320
		3.0	1.126	391	376

Tube O.D (D)	Tol.	* Wall Thickness (t)	Weight	Design Pressure DIN 2413	
				I	III
mm	mm	mm	kg/m	bar	bar
20	±0.08	2.5	1.095	368	291
		3.0	1.277	357	343
		3.5	1.433	408	392
		4.0	1.600	458	439
22	±0.08	• 2.0	1.002	267	218
		2.5	1.220	334	267
		3.0	1.426	328	315
25	±0.08	• 2.0	1.152	235	193
		2.5	1.408	294	238
		3.0	1.635	353	281
		4.0	2.092	378	363
		4.5	2.307	418	402
		5.0	2.501	458	439
28	±0.08	2.0	1.302	210	174
		2.5	1.594	263	214
		3.0	1.874	315	253
		4.0	2.402	342	328
		5.0	2.876	415	399
30	±0.08	3.0	2.028	294	238
		4.0	2.605	321	309
		5.0	3.400	391	376
35	±0.15	2.0	1.644	168	141
		2.5	2.018	210	174
		3.0	2.392	252	206
		4.0	3.086	336	269
		5.0	3.742	342	328
38	±0.15	6.0	4.351	401	385
		4.0	3.405	309	249
		5.0	4.131	318	305
		6.0	4.807	373	358
		7.0	5.426	427	410
42	±0.2	3.0	2.930	210	174
		4.0	3.798	280	227

• Reinforce tube inserts are recommended where thin-walled tubes are subject to severe strains.

* Permissible variation in wall thickness (DIN 2391)

■ Calculation Pressures:

- Calculated pressures to DIN 2413 part I for primarily static load conditions
- Yield point (K) : 245N/mm²(to DIN 17458)
- Safety factor (S) : 1.5
- Allowance factor (C)

$$P = 20 \times K \times t \times c / (S \times D) \quad (\text{bar})$$

- Calculated pressures to DIN 2413 part III for dynamic load conditions
- Yield point (K) : 216N/mm² (assumed value)
- Safety factor (S) : 1.5

$$P = 20 \times K \times t \times c / (S \times (D + t \times c)) \quad (\text{bar})$$

■ Consideration factors of wall thickness divergence for static and dynamic stress.

Tube Range	4mm / 5mm	6mm / 8mm	Larger
Factor (C)	0.8	0.85	0.9

■ Note

For a diameter ratio of O.D/I.D>1.35, calculation made to DIN 2413 part III and based on a pulsating fatigue limit of 225 N/mm²

■ Temperature range : -60°C to + 400°C Reduction in pressure for higher temperatures

Ordering Information

Selection the applicable options from designators listed.

DDMC

Fitting Name
Designator
See Page 7 ~ 9

12S

Tube O.D & Series
Designator

02N

Thread
Designator

S6

Body Material
Designator

Tube O.D Designators

Tube Size	4mm	6mm		35mm	38mm	42mm
Identifier	04	06		35	38	42

Series Designators

Series	Very Light	Light	Heavy
Identifier	LL	L	S

Pipe Thread Designators

Thread Type	Symbol	Standard	Thread Size								
			1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
NPT	N	ASME B 1.20.1	01N	02N	03N	04N	06N	08N	10N	12N	16N
PT	R	ISO 7-1, BS-21, JIS B0203	01R	02R	03R	04R	06R	08R	10R	12R	16R
PF	G	ISO 228-1, BS 2779, JIS B 0202	01G	02G	03G	04G	06G	08G	10G	12G	16G

Metric Thread Designators

Thread Type	Symbol	Standard	Thread Size								
			M8x1.0	M10x1.0	M12x1.5	M14x1.5		M27x2.0	M33.0x2.0	M42x2.0	M48x2.0
Metric	M	DIN 13 Parallel	M8	M10	M12	M14		M27	M33	M42	M48
	M-K	DIN 158 Taper (keg)	M8K	M10K	M12K	M14K		M27K	M33K	M42K	M48K

Unified Thread Designators

Thread Type	Symbol	Standard	Thread Size												
			5/16	3/8	7/16	1/2	9/16	3/4	7/8	1-1/16	1-3/16	1-5/16	1-5/8	1-7/8	2-1/2
UN/UNF	U	ASME B 1.1	02U	03U	04U	05U	06U	08U	10U	12U	14U	16U	20U	24U	32U

Body Material Designators

Series	Carbon Steel (DIN3859)	Stainless Steel (DIN 17440 / 1.4401 or ASTM A276 / A479 type 316)	Brass
Identifier	CS	S6	BS

Tube to Tube

Straight Union
DDU



88

Union Elbow
DDL



89

Union Tee
DDT



90

Union Cross
DDC



91

Reducing Union
DDUR



92

Reducing Tee
DDTR



93

Bulkhead Union
DDBU



95

Welding Bulkhead Union
DDBUW



95

Bulkhead Union Elbow
DDBL



96

Tube to Pipe

Male Connector
(Metric/UNF) with O-Ring
DDOM-M/U



96
97

Male Connector
(NPT Thread)
DDMC-N



98

Male Connector
(BSP Tapered)
DDMC-R



98

Male Connector
(BSP Paralled)
DDMC-G



99

Male Connector
(Metric Tapered / Paralled)
DDMC-M



100

Male Connector
(BSP Paralled) with ED-Ring
DDMC-GED



101

Male Connector
with ED-Ring
DDMC-MED



102

Male Elbow
(BSP/ Metric Tapered)
DDL-M-R/MK



103

Female Connector
(BSP / Metric Paralled)
DDFC-G/M



104

Tube to Tube (Adjustable Fittings)

Adjustable Elbow
with Standpipe

DDLA



105

Adjustable Branch Tee
with Standpipe

DDBTA



105

Adjustable Run Tee
with Standpipe

DDRTA



106

Swivel Adjustable Elbow
with Cone

DDEW



106

Swivel Adjustable Branch Tee
with Cone

DDET



107

Swivel Adjustable Run Tee
with Cone

DDEL



107

Standpipe Reducer

DDKOR



108

Reducer

DDR



110

Swivel Reducing Adapter
with Cone

DDRED



112

Swivel Union
with Cone

DDUE



114

Tube to Pipe (Adjustable Fittings)

Adaptor (BSP / Metric Paralled)
with ED-Ring

DDA-GED/MED



115

Swivel Adaptor
(BSP / Metric Paralled)
with ED-Ring

DDEGE-G/M



116

Banjo Fittings

Banjo Fittings
(BSP / Metric Paralled)
with DKA Ring

DDSWVE-G/M



117

High Pressure Banjo Fittings
(BSP / Metric Paralled)
with DKA Ring

DDWH-G/M



118

High Pressure Banjo Fittings
(BSP / Metric Paralled)

DDTH-G/M



119

Gauge Connector & Test Couplings

Pressure Gauge Connector
(BSP Paralled)
with DKI-Ring

DDGC-G



120

Swivel Gauge Adaptor
(BSP Paralled)
with Cone and DKI-Ring

DDGE-G



120

Gauge Connector
(BSP Paralled)
with Standpipe and DKI-Ring

DDGA-G



120

Tee Test Coupling
with Threaded Connection
DDEMA3-02G

DDGMA



121

Test Coupling
with Threaded Connection M16

DDEMA3



121

Weld Fittings

Welding Connector

DDAS



122

Welding Connector
with DAK

DDASK



123

Welding Nipple
with O-Ring

DDAK



124

Reducing Welding Nipple
with O-Ring

DDAKR



124

ETC (Adaptor, Plug, Cap, Sprare Part)

Male Female Adaptor
(BSP Paralled)

DMFAD



126

Male Female Adaptor
(BSP Paralled)

DMFAE



126

Male Female Adaptor
(BSP Paralled)with ED-Ring

DMFAD-ED



127

Male Female Adaptor
(BSP Paralled)with ED-Ring

DMFAE-ED



127

Blanking Plugs for Port
with ED-Ring

DDVSTI-GED/MED



128

Blanking Plugs with O-Ring
(accord.to ISO6149-3/DIN3582)

DDVSTI



128

Blanking Plug
with O-Ring

DDVKA



129

Tube Cap

DDCA



129

Nut

DDN



130

Cutting Ring

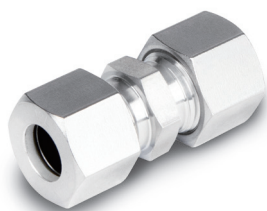
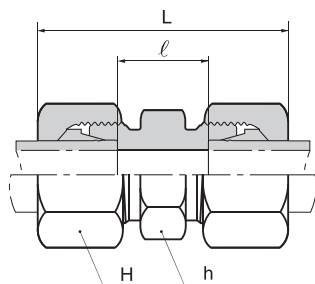
DDS



131

Straight Union

DDU

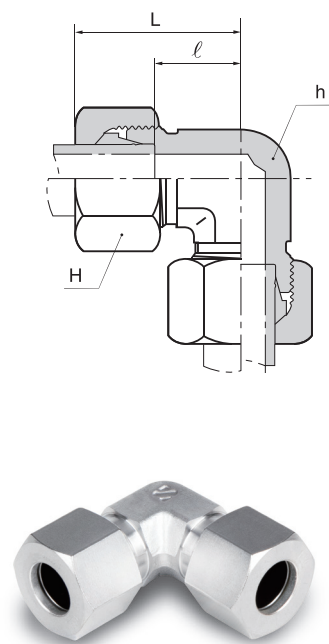


Series	Part No.	Tube O.D	H	h	L	ℓ
LL PN-100	DDU-04LL	4	10	9	31	12
	DDU-06LL	6	12	11	32	9
	DDU-08LL	8	14	12	35	12
	DDU-10LL	10	17	14	35	12
	DDU-12LL	12	19	17	35	11
L PN-315	DDU-06L	6	14	12	39	10
	DDU-08L	8	17	14	40	11
	DDU-10L	10	19	17	42	13
	DDU-12L	12	22	19	43	14
	DDU-15L	15	27	24	46	16
	DDU-18L	18	32	27	48	16
PN-160	DDU-22L	22	36	32	52	20
	DDU-28L	28	41	41	54	21
	DDU-35L	35	50	46	63	20
	DDU-42L	42	60	55	66	21
S PN-630	DDU-06S	6	17	14	45	16
	DDU-08S	8	19	17	47	18
	DDU-10S	10	22	19	49	17
	DDU-12S	12	24	22	51	19
	DDU-14S	14	27	24	57	22
PN-400	DDU-16S	16	30	27	57	21
	DDU-20S	20	36	32	66	23
	DDU-25S	25	46	41	74	26
	DDU-30S	30	50	46	80	27
PN-315	DDU-38S	38	60	55	90	29

Dimensions given approx. length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Union Elbow

DDL

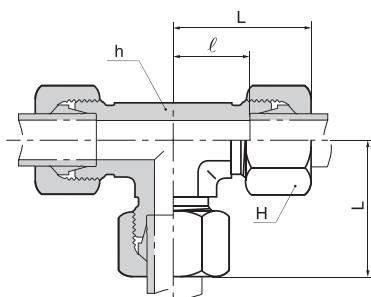


Series	Part No.	Tube O.D	H	h	L	l
LL PN-100	DDL-04LL	4	10	9	21	11
	DDL-06LL	6	12	9	21	9.5
	DDL-08LL	8	14	12	23	11.5
	DDL-10LL	10	17	14	24	12.5
	DDL-12LL	12	19	17	25	13
L PN-315	DDL-06L	6	14	12	27	12
	DDL-08L	8	17	12	29	14
	DDL-10L	10	19	14	30	15
	DDL-12L	12	22	17	32	17
	DDL-15L	15	27	19	36	21.5
	DDL-18L	18	32	24	40	23.5
PN-160	DDL-22L	22	36	27	44	27.5
	DDL-28L	28	41	36	47	30.5
	DDL-35L	35	50	41	56	34.5
	DDL-42L	42	60	50	63	40
S PN-630	DDL-06S	6	17	12	31	16
	DDL-08S	8	19	14	32	17
	DDL-10S	10	22	17	34	17.5
	DDL-12S	12	24	17	38	21.5
	DDL-14S	14	27	19	40	22
PN-400	DDL-16S	16	30	24	43	24.5
	DDL-20S	20	36	27	48	26.5
	DDL-25S	25	46	36	54	30
	DDL-30S	30	50	41	62	35.5
PN-315	DDL-38S	38	60	50	72	41

Dimensions given approx. length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Union Tee

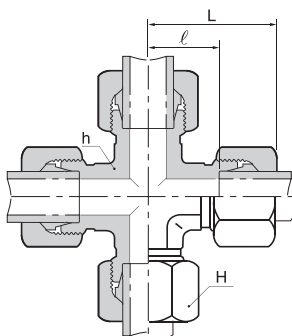
DDT



Series	Part No.	Tube O.D	H	h	L	ℓ
LL PN-100	DDT-04LL	4	10	9	21	11
	DDT-06LL	6	12	9	21	9.5
	DDT-08LL	8	14	12	23	11.5
	DDT-10LL	10	17	14	24	12.5
	DDT-12LL	12	19	14	27	15
L PN-315	DDT-06L	6	14	12	27	12
	DDT-08L	8	17	12	29	14
	DDT-10L	10	19	14	30	15
	DDT-12L	12	22	17	32	17
	DDT-15L	15	27	19	36	21
	DDT-18L	18	32	24	40	23.5
PN-160	DDT-22L	22	36	27	44	27.5
	DDT-28L	28	41	36	47	30.5
	DDT-35L	35	50	41	56	34.5
	DDT-42L	42	60	50	63	40
S PN-630	DDT-06S	6	17	12	31	16
	DDT-08S	8	19	14	32	17
	DDT-10S	10	22	17	34	17.5
	DDT-12S	12	24	17	38	21.5
	DDT-14S	14	27	19	40	22
PN-400	DDT-16S	16	30	24	43	24.5
	DDT-20S	20	36	27	48	26.5
	DDT-25S	25	46	36	54	30
	DDT-30S	30	50	41	62	35.5
PN-315	DDT-38S	38	60	50	72	41

Dimensions given approx. length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Union Cross

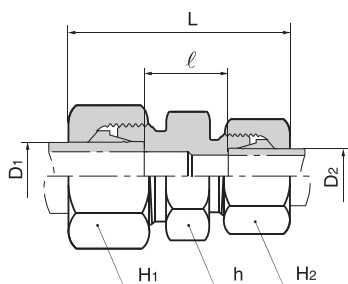
DDC

Series	Part No.	Tube O.D	H	h	L	l
LL PN-100	DDC-04LL	4	10	9	21	11
	DDC-06LL	6	12	9	21	9.5
	DDC-08LL	8	14	12	23	11.5
	DDC-10LL	10	17	14	24	12.5
	DDC-12LL	12	19	14	27	15
L PN-315	DDC-06L	6	14	12	27	12
	DDC-08L	8	17	12	29	14
	DDC-10L	10	19	14	30	15
	DDC-12L	12	22	17	32	17
	DDC-15L	15	27	19	36	21
	DDC-18L	18	32	24	40	23.5
PN-160	DDC-22L	22	36	27	44	27.5
	DDC-28L	28	41	36	47	30.5
	DDC-35L	35	50	41	56	34.5
	DDC-42L	42	60	50	63	40
S PN-630	DDC-06S	6	17	12	31	16
	DDC-08S	8	19	14	32	17
	DDC-10S	10	22	17	34	17.5
	DDC-12S	12	24	17	38	21.5
	DDC-14S	14	27	19	40	22
PN-400	DDC-16S	16	30	24	43	24.5
	DDC-20S	20	36	27	48	26.5
	DDC-25S	25	46	36	54	30
	DDC-30S	30	50	41	62	35.5
PN-315	DDC-38S	38	60	50	72	41

Dimensions given approx. length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Reducing Union

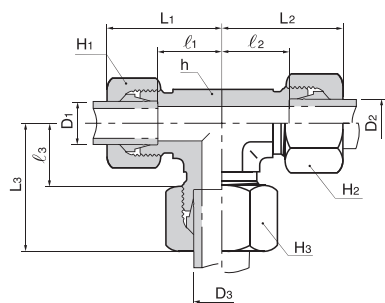
DDUR



Series	Part No.	Tube O.D		H	H ₁	h	L	ℓ
		D ₁	D ₂					
L PN-315	DDUR-08L-06L	8	6	17	14	14	40	11
	DDUR-10L-06L	10	6	19	14	17	41	12
	DDUR-10L-08L	10	8	19	17	17	41	12
	DDUR-12L-06L	12	6	22	14	19	42	13
	DDUR-12L-08L	12	8	22	17	19	42	13
	DDUR-12L-10L	12	10	22	19	19	43	14
	DDUR-15L-10L	15	10	27	19	24	45	15
	DDUR-15L-12L	15	12	27	22	24	45	15
	DDUR-18L-10L	18	10	32	19	27	46	15.5
	DDUR-18L-12L	18	12	32	22	27	46	15.5
	DDUR-18L-15L	18	15	32	27	27	48	16.5
PN-160	DDUR-22L-12L	22	12	36	22	32	48	17.5
	DDUR-22L-15L	22	15	36	27	32	50	18.5
	DDUR-22L-18L	22	18	36	32	32	50	18
	DDUR-28L-18L	28	18	41	32	41	52	19
	DDUR-28L-22L	28	22	41	36	41	54	21
	DDUR-35L-22L	35	22	50	36	46	59	21
	DDUR-35L-28L	35	28	50	41	46	59	21
S PN-630	DDUR-08S-06S	8	6	19	17	17	47	18
	DDUR-10S-06S	10	6	22	17	19	48	17.5
	DDUR-10S-08S	10	8	22	19	19	48	17.5
	DDUR-12S-06S	12	6	24	17	22	50	19.5
	DDUR-12S-08S	12	8	24	19	22	50	19.5
	DDUR-12S-10S	12	10	24	22	22	51	19
	DDUR-14S-10S	14	10	27	22	24	54	20.5
	DDUR-14S-12S	14	12	27	24	24	54	20.5
PN-400	DDUR-16S-12S	16	12	30	24	27	54	20
	DDUR-16S-14S	16	14	30	27	27	57	21.5
	DDUR-20S-10S	20	10	36	22	32	60	22
	DDUR-20S-12S	20	12	36	24	32	60	22
	DDUR-20S-16S	20	16	36	30	32	63	23
	DDUR-25S-16S	25	16	46	30	41	68	25
	DDUR-25S-20S	25	20	46	36	41	71	25.5
	DDUR-30S-20S	30	20	50	36	46	74	26
	DDUR-30S-25S	30	25	50	46	46	77	26.5
PN-315	DDUR-38S-30S	38	30	60	50	55	87	29.5

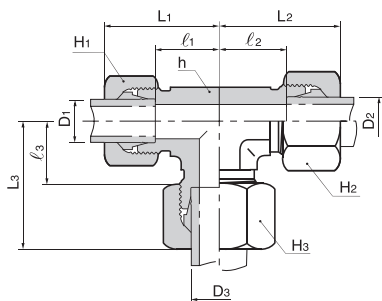
Dimensions given approx. length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Reducing Union Tee

DDTRL
PN-315

Series	Part No.	Tube O.D			H ₁	H ₂	H ₃	h	L ₁	L ₂	L ₃	l ₁	l ₂	l ₃
		D ₁	D ₂	D ₃										
L PN-315	DDTR-06L-06L-08L	6	6	8	14	14	17	14	29	29	29	14	14	14
	DDTR-08L-08L-06L	8	8	6	17	17	14	14	29	29	29	14	14	14
	DDTR-06L-06L-10L	6	6	10	14	14	19	14	30	30	30	15	15	15
	DDTR-08L-08L-10L	8	8	10	17	17	19	14	30	30	30	15	15	15
	DDTR-10L-10L-06L	10	10	6	19	19	14	14	30	30	30	15	15	15
	DDTR-10L-10L-08L	10	10	8	19	19	17	14	30	30	30	15	15	15
	DDTR-10L-06L-10L	10	6	10	19	14	19	14	30	30	30	15	15	15
	DDTR-08L-08L-12L	8	8	12	17	17	22	17	32	32	32	15	15	15
	DDTR-12L-12L-06L	12	12	6	22	22	14	17	32	32	32	17	17	17
	DDTR-12L-08L-08L	12	8	8	22	17	17	17	32	32	32	17	17	17
	DDTR-12L-12L-08L	12	12	8	22	22	17	17	32	32	32	17	17	17
	DDTR-12L-10L-10L	12	10	10	22	19	19	17	32	32	32	17	17	17
	DDTR-12L-12L-10L	12	12	10	22	22	19	17	32	32	32	17	17	17
	DDTR-12L-10L-12L	12	10	12	22	19	22	17	32	32	32	17	17	17
	DDTR-10L-10L-15L	10	10	15	19	19	27	19	36	36	36	21	21	21
	DDTR-12L-12L-15L	12	12	15	22	22	27	19	36	36	36	21	21	21
	DDTR-15L-15L-06L	15	15	6	27	27	14	19	36	36	36	21	21	21
	DDTR-15L-15L-10L	15	15	10	27	27	19	19	36	36	36	21	21	21
	DDTR-15L-12L-12L	15	12	12	27	22	22	19	36	36	36	21	21	21
	DDTR-15L-15L-12L	15	15	12	27	27	22	19	36	36	36	21	21	21
	DDTR-15L-12L-15L	15	12	15	27	22	27	19	36	36	36	21	21	21
	DDTR-12L-12L-18L	12	12	18	22	22	32	24	39	39	40	24	24	23.5
	DDTR-18L-10L-10L	18	10	10	32	19	19	24	40	39	39	23.5	24	24
	DDTR-18L-18L-10L	18	18	10	32	32	19	24	40	40	39	23.5	23.5	24
	DDTR-18L-18L-12L	18	18	12	32	32	22	24	40	40	39	23.5	23.5	24
	DDTR-18L-18L-15L	18	18	15	32	32	27	24	40	40	39	23.5	23.5	24
	DDTR-18L-10L-18L	18	10	18	32	19	32	24	40	39	40	23.5	24	23.5

Reducing Union Tee

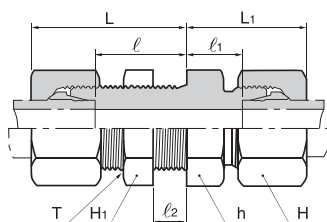
DDTR

Series	Part No.	Tube O.D			H ₁	H ₂	H ₃	h	L ₁	L ₂	L ₃	l ₁	l ₂	l ₃
		D ₁	D ₂	D ₃										
PN-160	DDTR-22L-22L-10L	22	22	10	36	36	19	27	44	44	43	27.5	27.5	28
	DDTR-22L-22L-12L	22	22	12	36	36	22	27	44	44	43	27.5	27.5	28
	DDTR-22L-15L-15L	22	15	15	36	27	27	27	44	43	43	27.5	28	28
	DDTR-22L-22L-15L	22	22	15	36	36	27	27	44	44	43	27.5	27.5	28
	DDTR-22L-18L-18L	22	18	18	36	32	32	27	44	44	44	27.5	27.5	27.5
	DDTR-22L-22L-18L	22	22	18	36	36	32	27	44	44	44	27.5	27.5	27.5
	DDTR-22L-18L-22L	22	18	22	36	32	36	27	44	44	44	27.5	27.5	27.5
	DDTR-28L-28L-10L	28	28	10	41	41	19	36	47	44	46	30.5	30.5	31
	DDTR-28L-28L-12L	28	28	12	41	41	22	36	47	47	46	30.5	30.5	31
	DDTR-28L-28L-15L	28	28	15	41	41	27	36	47	47	46	30.5	30.5	31
	DDTR-28L-28L-18L	28	28	18	41	41	32	36	47	47	47	30.5	30.5	30.5
	DDTR-28L-22L-22L	28	22	22	41	36	36	36	47	47	47	30.5	30.5	30.5
	DDTR-28L-28L-22L	28	28	22	41	41	36	36	47	47	47	30.5	30.5	30.5
S PN-630	DDTR-10S-10S-06S	10	10	6	22	22	17	17	34	34	33	17.5	17.5	18
	DDTR-12S-08S-08S	12	8	8	24	19	19	17	38	37	37	21.5	22	22
	DDTR-12S-12S-08S	12	12	8	24	24	19	17	38	38	37	21.5	21.5	22
	DDTR-12S-12S-10S	12	12	10	24	24	22	17	38	38	38	21.5	21.5	21.5
PN-400	DDTR-12S-12S-16S	12	12	16	24	24	30	24	42	42	43	25.5	25.5	24.5
	DDTR-16S-16S-06S	16	16	6	30	30	17	24	43	43	41	24.5	24.5	26
	DDTR-16S-16S-08S	16	16	8	30	30	19	24	43	43	41	24.5	24.5	26
	DDTR-16S-16S-10S	16	16	10	30	30	22	24	43	43	42	24.5	24.5	25.5
	DDTR-16S-16S-12S	16	16	12	30	30	24	24	43	43	42	24.5	24.5	25.5
	DDTR-16S-16S-20S	16	16	20	30	30	36	27	47	47	48	28.5	28.5	26.5
	DDTR-20S-20S-10S	20	20	10	36	36	22	27	48	48	46	26.5	26.5	29.5
	DDTR-20S-20S-12S	20	20	12	36	36	24	27	48	48	46	26.5	26.5	29.5
	DDTR-20S-20S-16S	20	20	16	36	36	30	27	48	48	47	26.5	26.5	28.5
	DDTR-20S-20S-25S	20	20	25	36	36	46	36	53	53	54	31.5	31.5	30
	DDTR-25S-25S-16S	25	25	16	46	46	30	36	54	54	52	30	30	33.5
	DDTR-25S-25S-20S	25	25	20	46	46	36	36	54	54	53	30	30	31.5
	DDTR-25S-25S-30S	25	25	30	46	46	50	41	61	61	62	37	37	35.5

Dimensions given approx. length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Bulkhead Union

DDBU



$l_2 = 16\text{mm Max.}$

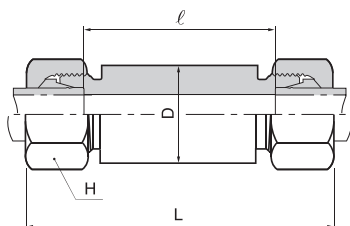


Series	Part No.	Tube O.D	H	H ₁	h	L	L ₁	l	l ₁	T
L PN-315	DDBU-06L	6	14	17	17	42	22	27	7	M12 x 1.5
	DDBU-08L	8	17	19	19	42	23	27	8	M14 x 1.5
	DDBU-10L	10	19	22	22	43	25	28	10	M16 x 1.5
	DDBU-12L	12	22	24	24	44	25	29	10	M18 x 1.5
	DDBU-15L	15	27	30	27	46	27	31	12	M22 x 1.5
	DDBU-18L	18	32	36	32	49	30	32.5	13.5	M26 x 1.5
PN-160	DDBU-22L	22	36	41	36	51	33	34.5	16.5	M30 x 2
	DDBU-28L	28	41	46	41	52	35	35.5	18.5	M36 x 2
	DDBU-35L	35	50	55	50	58	40	36.5	18.5	M45 x 2
	DDBU-42L	42	60	65	60	59	42	36	19	M52 x 2
S PN-630	DDBU-06S	6	17	19	19	44	27	29	12	M14 x 1.5
	DDBU-08S	8	19	22	22	44	28	29	13	M16 x 1.5
	DDBU-10S	10	22	24	24	46	31	29.5	14.5	M18 x 1.5
	DDBU-12S	12	24	27	27	47	31	30.5	14.5	M20 x 1.5
	DDBU-14S	14	27	30	30	50	35	32	17	M22 x 1.5
PN-400	DDBU-16S	16	30	32	32	50	35	31.5	16.5	M24 x 1.5
	DDBU-20S	20	36	41	41	55	39	33.5	17.5	M30 x 2
	DDBU-25S	25	46	46	46	59	44	35	20	M36 x 2
	DDBU-30S	30	50	50	50	64	48	37.5	21.5	M42 x 2
PN-315	DDBU-38S	38	60	65	65	68	53	37	22	M52 x 2

Dimensions given approx. length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Welding Bulkhead Union

DDBUW

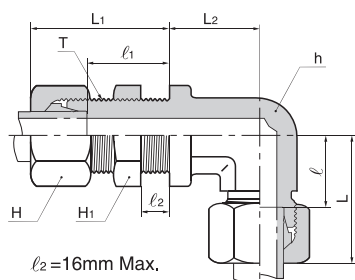


Series	Part No.	Tube O.D	D	H	L	l
L PN-315	DDBUW-06L	6	18	14	85	56
	DDBUW-08L	8	20	17	85	56
	DDBUW-10L	10	22	19	87	58
	DDBUW-12L	12	25	22	87	58
	DDBUW-15L	15	28	27	100	70
	DDBUW-18L	18	32	32	101	69
PN-160	DDBUW-22L	22	36	36	105	73
	DDBUW-28L	28	40	41	106	73
	DDBUW-35L	35	50	50	114	71
	DDBUW-42L	42	60	60	115	70
S PN-630	DDBUW-06S	6	20	17	89	60
	DDBUW-08S	8	22	19	89	60
	DDBUW-10S	10	25	22	91	59
	DDBUW-12S	12	28	24	91	59
	DDBUW-14S	14	30	27	107	72
PN-400	DDBUW-16S	16	35	30	107	71
	DDBUW-20S	20	38	36	114	71
	DDBUW-25S	25	45	46	120	72
	DDBUW-30S	30	50	50	126	73
PN-315	DDBUW-38S	38	60	60	133	72

Dimensions given approx. length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Bulkhead Union Elbow

DDBL

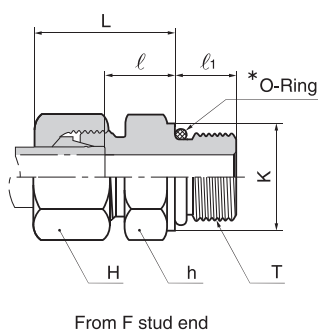


Series	Part No.	Tube O.D	H	H ₁	h	L	L ₁	L ₂	l	l ₁	T
L PN-315	DDBL-06L	6	14	17	12	27	42	14	12	27	M12 x 1.5
	DDBL-08L	8	17	19	12	29	42	17	14	27	M14 x 1.5
	DDBL-10L	10	19	22	14	30	43	18	15	28	M16 x 1.5
	DDBL-12L	12	22	24	17	32	44	20	17	29	M18 x 1.5
	DDBL-15L	15	27	30	19	36	46	23	21	31	M22 x 1.5
	DDBL-18L	18	32	36	24	40	49	24	23.5	32.5	M26 x 1.5
PN-160	DDBL-22L	22	36	41	27	44	51	30	27.5	34.5	M30 x 2
	DDBL-28L	28	41	46	36	47	52	34	30.5	35.5	M36 x 2
	DDBL-35L	35	50	55	41	56	58	39	34.5	36.5	M45 x 2
	DDBL-42L	42	60	65	50	63	59	43	40	36	M52 x 2
S PN-630	DDBL-06S	6	17	19	12	31	44	17	16	29	M14 x 1.5
	DDBL-08S	8	19	22	14	32	44	18	17	29	M16 x 1.5
	DDBL-10S	10	22	24	17	34	46	20	17.5	29.5	M18 x 1.5
	DDBL-12S	12	24	27	17	38	47	21	21.5	30.5	M20 x 1.5
	DDBL-14S	14	27	30	19	40	50	23	22	32	M22 x 1.5
PN-400	DDBL-16S	16	30	32	24	43	50	24	24.5	31.5	M24 x 1.5
	DDBL-20S	20	36	41	27	48	55	30	26.5	33.5	M30 x 2
	DDBL-25S	25	46	46	36	54	59	34	30	35	M36 x 2
	DDBL-30S	30	50	50	41	62	64	39	35.5	37.5	M42 x 2
PN-315	DDBL-38S	38	60	65	50	72	68	43	41	37	M52 x 2

Dimensions given approx. length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Connector (Metric Parallel) with *O-Ring

DDOM-M



From F stud end



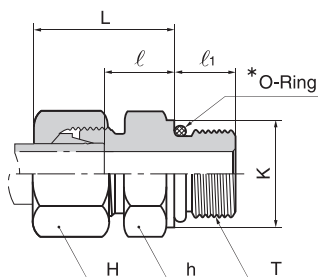
Series	Part No.	Tube O.D	H	h	K	L	l	l ₁	T
L PN-315	DDOM-06L-M10	6	14	14	14	23	8.5	9.5	M10 x 1
	DDOM-08L-M12	8	17	17	17	25	10	11	M12 x 1.5
	DDOM-10L-M14	10	19	19	19	26	11	11	M14 x 1.5
	DDOM-12L-M16	12	22	22	22	27	12.5	12.5	M16 x 1.5
	DDOM-15L-M18	15	27	24	24	29	13.5	14	M18 x 1.5
	DDOM-18L-M22	18	32	27	27	30	14.5	15	M22 x 1.5
PN-160	DDOM-22L-M27	22	36	32	32	33	16.5	18.5	M27 x 2
	DDOM-28L-M33	28	41	41	41	34	17.5	18.5	M33 x 2
	DDOM-35L-M42	35	50	50	50	39	17.5	19	M42 x 2
S PN-630	DDOM-06S-M12	6	17	17	17	28	13	11	M12 x 1.5
	DDOM-08S-M14	8	19	19	19	30	15	11	M14 x 1.5
	DDOM-10S-M16	10	22	22	22	31	15	12.5	M16 x 1.5
	DDOM-12S-M18	12	24	24	24	33	17	14	M18 x 1.5
PN-400	DDOM-16S-M22	16	30	27	27	37	18.5	15	M22 x 1.5
	DDOM-20S-M27	20	36	32	32	42	20.5	18.5	M27 x 2
	DDOM-25S-M33	25	46	41	41	47	23	18.5	M33 x 2
	DDOM-30S-M42	30	50	50	50	50	23.5	19	M42 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Male Connector
(Unified Parallel) with *O-Ring

DDOM-U



From F stud end



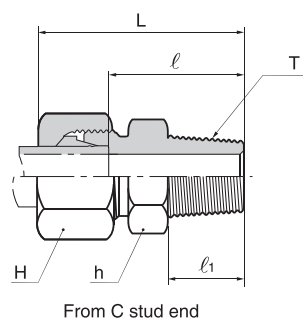
Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ ₁	T
L PN-315	DDOM-08L-04U	8	17	17	14.4	25	10	9	7/16-20 UNF
	DDOM-10L-04U	10	19	17	14.4	26	11	10	7/16-20 UNF
	DDOM-12L-06U	12	22	19	17.6	26	11	10	9/16-18 UNF
	DDOM-12L-08U	12	22	24	22.3	28	13	11	3/4-16 UNF
	DDOM-12L-10U	12	22	27	25.5	29	14.3	12.7	7/8-14 UNF
	DDOM-15L-08U	15	27	24	22.3	29	14	11	3/4-16 UNF
	DDOM-15L-10U	15	27	27	25.5	30	15.3	12.7	7/8-14 UNF
	DDOM-18L-08U	18	32	27	22.3	31	14.5	11	3/4-16 UNF
	DDOM-18L-10U	18	32	27	25.5	31	14.8	12.7	7/8-14 UNF
PN-160	DDOM-22L-10U	22	36	32	25.5	33	16.8	12.7	7/8-14 UNF
	DDOM-22L-12U	22	36	32	31.9	33	16.5	15	1-1/16-12 UN
	DDOM-22L-16U	22	36	41	38.2	34	17.5	15	1-5/16-12 UN
	DDOM-28L-12U	28	41	41	31.9	34	17.5	15	1-1/16-12 UN
	DDOM-28L-16U	28	41	41	38.2	34	17.5	15	1-5/16-20 UN
	DDOM-35L-16U	35	50	46	38.2	39	17.5	15	1-5/16-20 UN
	DDOM-35L-20U	35	50	50	47.7	39	17.5	15	1-5/8-12 UN
	DDOM-42L-20U	42	60	55	47.7	42	19	15	1-5/8-12 UN
S PN-630	DDOM-08S-04U	8	19	17	16	30	15	9	7/16-20 UNF
	DDOM-10S-06U	10	22	19	17.6	31	14.5	10	9/16-18 UNF
	DDOM-12S-06U	12	24	22	17.6	31	14.5	10	9/16-18 UNF
	DDOM-12S-08U	12	24	24	22.3	34	17.5	11	3/4-16 UNF
PN-400	DDOM-16S-08U	16	30	24	22.3	34	15.5	11	3/4-16 UNF
	DDOM-16S-10U	16	30	27	25.5	37	18.8	12.7	7/8-14 UNF
	DDOM-20S-08U	20	36	32	22.3	42	20.5	11	3/4-16 UNF
	DDOM-20S-10U	20	36	32	25.5	42	20.8	12.7	7/8-14 UNF
	DDOM-20S-12U	20	36	32	31.9	42	20.5	15	1-1/16-12 UN
	DDOM-25S-12U	25	46	36	31.9	47	23	15	1-1/16-12 UN
	DDOM-25S-16U	25	46	41	38.2	47	23	15	1-5/16-12 UN
	DDOM-30S-16U	30	50	46	38.2	50	23.5	15	1-5/16-12 UN
	DDOM-30S-20U	30	50	50	47.7	50	23.5	15	1-5/8-12 UN
PN-315	DDOM-38S-20U	38	60	55	47.7	57	26	15	1-5/8-12 UN

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Male Connector (NPT Thread)

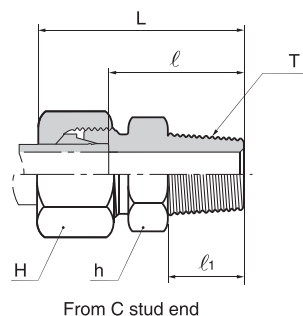
DDMC-N



Series	Part No.	Tube O.D	H	h	L	ℓ	ℓ ₁	T
LL PN-100	DDMC-04LL-01N	4	10	11	28	18.5	9.9	NPT 1/8
	DDMC-06LL-01N	6	12	11	28	16.5	9.9	NPT 1/8
	DDMC-08LL-01N	8	14	12	30	18.5	9.9	NPT 1/8
L PN-315	DDMC-06L-01N	6	14	12	32	17	9.9	NPT 1/8
	DDMC-06L-02N	6	14	17	38	23	14.2	NPT 1/4
	DDMC-08L-02N	8	17	17	38	23	14.2	NPT 1/4
	DDMC-10L-02N	10	19	17	39	24	14.2	NPT 1/4
	DDMC-10L-03N	10	19	19	40	25	14.2	NPT 3/8
	DDMC-12L-02N	12	22	19	40	25	14.2	NPT 1/4
	DDMC-12L-03N	12	22	19	40	25	14.2	NPT 3/8
	DDMC-12L-04N	12	22	24	45	30	19.1	NPT 1/2
	DDMC-15L-04N	15	27	24	46	31	19.1	NPT 1/2
	DDMC-18L-04N	18	32	27	48	31.5	19.1	NPT 1/2
PN-160	DDMC-22L-06N	22	36	32	50	33.5	19.1	NPT 3/4
	DDMC-28L-08N	28	41	41	56	39.5	23.9	NPT 1
	DDMC-35L-10N	35	50	46	62	40.5	23.9	NPT 1-1/4
	DDMC-42L-12N	42	60	55	65	42	25.4	NPT 1-1/2
S PN-630	DDMC-06S-02N	6	17	17	43	28	14.2	NPT 1/4
	DDMC-08S-02N	8	19	17	43	28	14.2	NPT 1/4
	DDMC-10S-02N	10	22	19	44	27.5	14.2	NPT 1/4
	DDMC-10S-03N	10	22	19	44	27.5	14.2	NPT 3/8
	DDMC-12S-02N	12	24	22	46	29.5	14.2	NPT 1/4
	DDMC-12S-03N	12	24	22	46	29.5	14.2	NPT 3/8
	DDMC-12S-04N	12	24	22	51	34.5	19.1	NPT 1/2
	DDMC-14S-04N	14	27	24	54	36	19.1	NPT 1/2
PN-400	DDMC-16S-04N	16	30	27	54	35.5	19.1	NPT 1/2
	DDMC-20S-06N	20	36	32	59	37.5	19.1	NPT 3/4
	DDMC-25S-08N	25	46	41	69	45	23.9	NPT 1
	DDMC-30S-10N	30	50	46	73	46.5	23.9	NPT 1-1/4
PN-315	DDMC-38S-12N	38	60	55	80	49	25.4	NPT 1-1/2

Male Connector (BSP Tapered)

DDMC-R

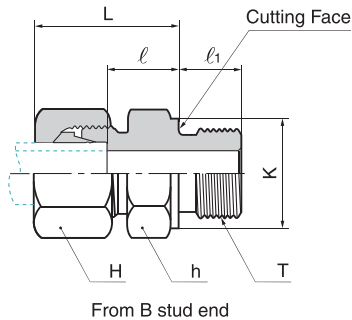


Series	Part No.	Tube O.D	H	h	L	ℓ	ℓ ₁	T
LL PN-100	DDMC-04LL-01R	4	10	11	26	16	8	PT 1/8
	DDMC-06LL-01R	6	12	11	26	14.5	8	PT 1/8
	DDMC-08LL-01R	8	14	12	28	16.5	8	PT 1/8
	DDMC-08LL-02R	8	14	14	32	20.5	12	PT 1/4
	DDMC-10LL-02R	10	17	14	32	20.5	12	PT 1/4
	DDMC-12LL-02R	12	19	17	32	20	12	PT 1/4
	DDMC-12LL-03R	12	19	17	32	20	12	PT 3/8
L PN-315	DDMC-06L-01R	6	14	12	30	15	8	PT 1/8
	DDMC-08L-02R	8	17	17	35	20	12	PT 1/4
	DDMC-10L-02R	10	19	17	36	21	12	PT 1/4
	DDMC-12L-02R	12	22	19	37	22	12	PT 1/4
	DDMC-12L-03R	12	22	19	37	22	12	PT 3/8
	DDMC-12L-04R	12	22	24	39	24	14	PT 1/2
	DDMC-15L-03R	15	27	24	38	23	12	PT 3/8
	DDMC-15L-04R	15	27	24	40	25	14	PT 1/2
	DDMC-18L-04R	18	32	27	41	25.5	14	PT 1/2
	DDMC-22L-06R	22	36	32	46	29.5	16	PT 3/4

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Connector
(BSP Parallel)

DDMC-G

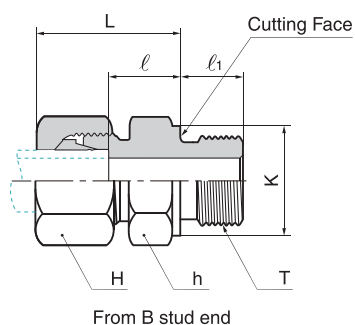


Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ ₁	T
L PN-315	DDMC-06L-01G	6	14	14	14	23	8.5	8	PF 1/8
	DDMC-06L-02G	6	14	19	18	25	10	12	PF 1/4
	DDMC-06L-03G	6	14	22	22	26	11.5	12	PF 3/8
	DDMC-06L-04G	6	14	27	26	27	12	14	PF 1/2
	DDMC-08L-01G	8	17	14	14	23	8.5	8	PF 1/8
	DDMC-08L-02G	8	17	19	18	25	10	12	PF 1/4
	DDMC-08L-03G	8	17	22	22	26	11.5	12	PF 3/8
	DDMC-08L-04G	8	17	27	26	27	12	14	PF 1/2
	DDMC-10L-02G	10	19	19	18	26	11	12	PF 1/4
	DDMC-10L-03G	10	19	22	22	27	12.5	12	PF 3/8
	DDMC-10L-04G	10	19	27	26	28	13	14	PF 1/2
	DDMC-12L-02G	12	22	19	18	27	12	12	PF 1/4
	DDMC-12L-03G	12	22	22	22	27	12.5	12	PF 3/8
	DDMC-12L-04G	12	22	27	26	28	13	14	PF 1/2
	DDMC-12L-06G	12	22	32	32	29	14	16	PF 3/4
	DDMC-15L-03G	15	27	24	22	29	13.5	12	PF 3/8
	DDMC-15L-04G	15	27	27	26	29	14	14	PF 1/2
	DDMC-15L-06G	15	27	32	32	30	15	16	PF 3/4
	DDMC-18L-03G	18	32	27	22	29.5	14	12	PF 3/8
	DDMC-18L-04G	18	32	27	26	31	14.5	14	PF 1/2
	DDMC-18L-06G	18	32	32	32	30	14.5	16	PF 3/4
PN-160	DDMC-22L-04G	22	36	32	26	33	16.5	14	PF 1/2
	DDMC-22L-06G	22	36	32	32	33	16.5	16	PF 3/4
	DDMC-28L-06G	28	41	41	32	34	17.5	16	PF 3/4
	DDMC-28L-08G	28	41	41	39	34	17.5	18	PF 1
	DDMC-35L-08G	35	50	46	39	39	17.5	18	PF 1
	DDMC-35L-10G	35	50	50	49	39	17.5	20	PF 1-1/4
	DDMC-42L-12G	42	60	55	55	42	19	22	PF 1-1/2
S PN-630	DDMC-06S-02G	6	17	19	18	28	13	12	PF 1/4
	DDMC-06S-04G	6	17	27	26	33	18	14	PF 1/2
	DDMC-08S-02G	8	19	19	18	30	15	12	PF 1/4
	DDMC-08S-03G	8	19	22	22	30	15.5	12	PF 3/8
	DDMC-10S-02G	10	22	19	18	31	14.5	12	PF 1/4
	DDMC-10S-03G	10	22	22	22	31	15	12	PF 3/8
	DDMC-10S-04G	10	22	27	26	34	17.5	14	PF 1/2
	DDMC-12S-02G	12	24	22	18	33	16.5	12	PF 1/4
	DDMC-12S-03G	12	24	22	22	33	17	12	PF 3/8
	DDMC-12S-04G	12	24	27	26	34	17.5	14	PF 1/2
	DDMC-14S-03G	14	27	24	22	36	18.5	12	PF 3/8
	DDMC-14S-04G	14	27	27	26	37	19	14	PF 1/2
PN-400	DDMC-16S-03G	16	30	27	22	36	18	12	PF 3/8
	DDMC-16S-04G	16	30	27	26	37	18.5	14	PF 1/2
	DDMC-16S-06G	16	30	32	32	39	20.5	16	PF 3/4
	DDMC-20S-04G	20	36	32	26	42	20.5	14	PF 1/2
	DDMC-20S-06G	20	36	32	32	42	20.5	16	PF 3/4
	DDMC-25S-06G	25	46	41	32	47	23	16	PF 3/4
	DDMC-25S-08G	25	46	41	39	47	23	18	PF 1
PN-250	DDMC-30S-08G	30	50	46	39	50	23.5	18	PF 1
	DDMC-30S-10G	30	50	50	49	50	23.5	20	PF 1-1/4
	DDMC-38S-12G	38	60	55	55	57	26	22	PF 1-1/2
	DDMC-38S-10G	38	60	55	49	57	26	20	PF 1-1/4

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Connector
(Metric Parallel)
From B stud end

DDMC-M

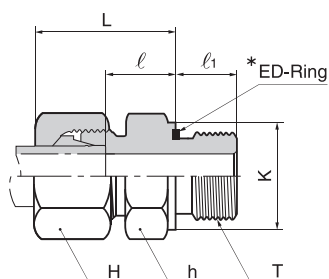


Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ ₁	T
L PN-315	DDMC-06L-M10	6	14	14	14	23	8.5	8	M10 x 1
	DDMC-08L-M12	8	17	17	17	25	10	12	M12 x 1.5
	DDMC-08L-M18	8	17	24	23	26	11.5	12	M18 x 1.5
	DDMC-10L-M14	10	19	19	19	26	11	12	M14 x 1.5
	DDMC-10L-M16	10	19	22	21	27	12	12	M16 x 1.5
	DDMC-10L-M18	10	19	24	23	27	12.5	12	M18 x 1.5
	DDMC-10L-M22	10	19	27	27	29	14	14	M22 x 1.5
	DDMC-12L-M14	12	22	19	19	26	11	12	M14 x 1.5
	DDMC-12L-M16	12	22	22	21	27	12.5	12	M16 x 1.5
	DDMC-12L-M18	12	22	24	23	27	12.5	12	M18 x 1.5
	DDMC-12L-M22	12	22	27	27	29	14	14	M22 x 1.5
	DDMC-15L-M16	15	27	24	21	28	13	12	M16 x 1.5
	DDMC-15L-M18	15	27	24	23	29	13.5	12	M18 x 1.5
	DDMC-15L-M22	15	27	27	27	30	15	14	M22 x 1.5
	DDMC-18L-M18	18	32	27	23	30	14	12	M18 x 1.5
	DDMC-18L-M22	18	32	27	27	31	14.5	14	M22 x 1.5
PN-160	DDMC-22L-M22	22	36	32	27	33	16.5	14	M22 x 1.5
	DDMC-22L-M26	22	36	32	31	33	16.5	16	M26 x 1.5
	DDMC-28L-M33	28	41	41	39	34	17.5	18	M33 x 2
	DDMC-35L-M42	35	50	50	49	39	17.5	20	M42 x 2
	DDMC-42L-M48	42	60	55	55	42	19	22	M48 x 2
S PN-630	DDMC-06S-M12	6	17	17	17	28	13	12	M12 x 1.5
	DDMC-08S-M14	8	19	19	19	30	15	12	M14 x 1.5
	DDMC-10S-M16	10	22	22	21	31	15	12	M16 x 1.5
	DDMC-12S-M18	12	24	24	23	33	17	12	M18 x 1.5
	DDMC-12S-M22	12	24	27	27	34	17.5	14	M22 x 1.5
	DDMC-14S-M20	14	27	27	25	37	19	14	M20 x 1.5
PN-400	DDMC-16S-M18	16	30	27	23	36	18	12	M18 x 1.5
	DDMC-16S-M22	16	30	27	27	37	18.5	14	M22 x 1.5
	DDMC-20S-M27	20	36	32	32	42	20.5	16	M27 x 2
	DDMC-25S-M33	25	46	41	39	47	23	18	M33 x 2
PN-250	DDMC-30S-M42	30	50	50	49	50	23.5	20	M42 x 2
	DDMC-38S-M48	38	60	55	55	57	26	22	M48 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Connector
(BSP Parallel) with *ED-Ring
From E stud end

DDMC-GED



From E stud end



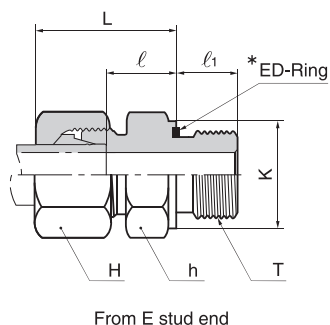
Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ ₁	T
L PN-315	DDMC-06L-01GED	6	14	14	13.9	23	8.5	8	PF 1/8
	DDMC-06L-02GED	6	14	19	18.9	25	10	12	PF 1/4
	DDMC-08L-01GED	8	17	14	13.9	24	8.5	8	PF 1/8
	DDMC-08L-02GED	8	17	19	18.9	25	10	12	PF 1/4
	DDMC-08L-03GED	8	17	22	21.9	26	11.5	12	PF 3/8
	DDMC-10L-02GED	10	19	19	18.9	26	11	12	PF 1/4
	DDMC-10L-03GED	10	19	22	21.9	27	12.5	12	PF 3/8
	DDMC-10L-04GED	10	19	27	26.9	28	13	14	PF 1/2
	DDMC-12L-02GED	12	22	19	18.9	27	12	12	PF 1/4
	DDMC-12L-03GED	12	22	22	21.9	27	12.5	12	PF 3/8
	DDMC-12L-04GED	12	22	27	26.9	28	13	14	PF 1/2
	DDMC-15L-03GED	15	27	24	21.9	29	13.5	12	PF 3/8
	DDMC-15L-04GED	15	27	27	26.9	29	14	14	PF 1/2
	DDMC-18L-04GED	18	32	27	26.9	31	14.5	14	PF 1/2
	DDMC-18L-06GED	18	32	32	31.9	31	14.5	16	PF 3/4
PN-160	DDMC-22L-06GED	22	36	32	31.9	33	16.5	16	PF 3/4
	DDMC-28L-08GED	28	41	41	39.9	34	17.5	18	PF 1
	DDMC-35L-10GED	35	50	50	49.9	39	17.5	20	PF 1-1/4
	DDMC-42L-12GED	42	60	55	54.9	42	19	22	PF 1-1/2
S PN-630	DDMC-06S-02GED	6	17	19	18.9	28	13	12	PF 1/4
	DDMC-08S-02GED	8	19	19	18.9	30	15	12	PF 1/4
	DDMC-08S-03GED	8	19	22	21.9	30	15.5	12	PF 3/8
	DDMC-10S-02GED	10	22	19	18.9	31	14.5	12	PF 1/4
	DDMC-10S-03GED	10	22	22	21.9	31	15	12	PF 3/8
	DDMC-10S-04GED	10	22	27	26.9	34	17.5	14	PF 1/2
	DDMC-12S-02GED	12	24	22	21.9	33	16.5	12	PF 1/4
	DDMC-12S-03GED	12	24	22	21.9	33	17	12	PF 3/8
	DDMC-12S-04GED	12	24	27	26.9	34	17.5	14	PF 1/2
	DDMC-14S-04GED	14	27	27	26.9	37	19	14	PF 1/2
PN-400	DDMC-16S-03GED	16	30	27	21.9	36	18	12	PF 3/8
	DDMC-16S-04GED	16	30	27	26.9	37	18.5	14	PF 1/2
	DDMC-16S-06GED	16	30	32	31.9	39	20.5	16	PF 3/4
	DDMC-20S-06GED	20	36	32	31.9	42	20.5	16	PF 3/4
	DDMC-25S-04GED	25	46	41	26.9	47	23	14	PF 1/2
	DDMC-25S-06GED	25	46	41	31.9	47	23	16	PF 3/4
	DDMC-25S-08GED	25	46	41	39.9	47	23	18	PF 1
	DDMC-30S-10GED	30	50	50	49.9	50	23.5	20	PF 1-1/4
PN-315	DDMC-38S-12GED	38	60	55	54.9	57	26	22	PF 1-1/2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*ED-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Male Connector
(Metric Parallel) with *ED-Ring
From E stud end

DDMC-MED



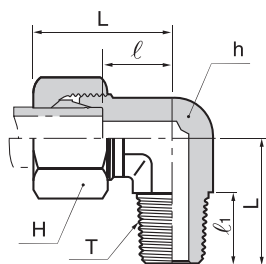
Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ ₁	T
L PN-315	DDMC-06L-M10ED	6	14	14	13.9	23	8.5	8	M10 x 1
	DDMC-08L-M12ED	8	17	17	16.9	25	10	12	M12 x 1.5
	DDMC-10L-M14ED	10	19	19	18.9	26	11	12	M14 x 1.5
	DDMC-12L-M16ED	12	22	22	21.9	27	12.5	12	M16 x 1.5
	DDMC-12L-M18ED	12	22	24	23.9	27	12.5	12	M18 x 1.5
	DDMC-12L-M22ED	12	22	27	26.9	29	14	14	M22 x 1.5
	DDMC-15L-M18ED	15	27	24	23.9	29	13.5	12	M18 x 1.5
	DDMC-15L-M22ED	15	27	27	26.9	30	15	14	M22 x 1.5
	DDMC-18L-M22ED	18	32	27	26.9	31	14.5	14	M22 x 1.5
PN-160	DDMC-22L-M26ED	22	36	32	31.9	33	16.5	16	M26 x 1.5
	DDMC-28L-M23ED	28	41	41	39.9	34	17.5	18	M33 x 2
	DDMC-35L-M42ED	35	50	50	49.9	39	17.5	20	M42 x 2
	DDMC-42L-M48ED	42	60	55	54.9	42	19	22	M48 x 2
S PN-630	DDMC-06S-M12ED	6	17	17	16.9	28	13	12	M12 x 1.5
	DDMC-08S-M14ED	8	19	19	18.9	30	15	12	M14 x 1.5
	DDMC-10S-M16ED	10	22	22	21.9	31	15	12	M16 x 1.5
	DDMC-12S-M18ED	12	24	24	23.9	33	17	12	M18 x 1.5
	DDMC-14S-M20ED	14	27	27	25.9	37	19	14	M20 x 1.5
PN-400	DDMC-16S-M22ED	16	30	27	26.9	37	18.5	14	M22 x 1.5
	DDMC-20S-M27ED	20	36	32	31.9	42	20.5	16	M27 x 2
	DDMC-25S-M33ED	25	46	41	39.9	47	23	18	M33 x 2
	DDMC-30S-M42ED	30	50	50	49.9	50	23.5	20	M42 x 2
PN-315	DDMC-38S-M48ED	38	60	55	54.9	57	26	22	M48 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*ED-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Male Elbow
(BSP Tapered)

DDLM-R



From C stud end

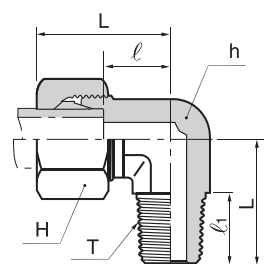


Series	Part No.	Tube O.D	H	h	L	L ₁	ℓ	ℓ ₁	T
LL PN-100	DDLM-04LL-01R	4	10	9	21	17	11	10	PT 1/8
	DDLM-06LL-01R	6	12	9	21	17	9.5	10	PT 1/8
	DDLM-08LL-01R	8	14	12	23	20	11.5	10	PT 1/8
	DDLM-10LL-02R	10	17	14	24	23	12.5	14	PT 1/4
	DDLM-12LL-02R	12	19	17	25	23	13	14	PT 1/4
L PN-315	DDLM-06L-01R	6	14	12	27	20	12	10	PT 1/8
	DDLM-08L-02R	8	17	12	29	26	14	14	PT 1/4
	DDLM-10L-02R	10	19	14	30	27	15	14	PT 1/4
	DDLM-12L-03R	12	22	17	32	28	17	15	PT 3/8
	DDLM-15L-04R	15	27	19	36	34	21	19	PT 1/2
	DDLM-18L-04R	18	32	24	40	36	23.5	19	PT 1/2
S PN-400	DDLM-06S-02R	6	17	12	31	26	16	14	PT 1/4
	DDLM-08S-02R	8	19	14	32	27	17	14	PT 1/4
	DDLM-10S-03R	10	22	17	34	28	17.5	15	PT 3/8
	DDLM-12S-03R	12	24	17	38	28	21.5	15	PT 3/8
	DDLM-14S-04R	14	27	19	40	32	22	19	PT 1/2
	DDLM-16S-04R	16	30	24	43	32	24.5	19	PT 1/2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Elbow
(Metric Tapered)

DDLM-MK



From C stud end

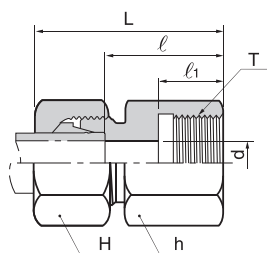


Series	Part No.	Tube O.D	H	h	L	L ₁	ℓ	ℓ ₁	T
LL PN-100	DDLM-04LL-M8K	4	10	9	21	17	11	8	M8 x 1keg
	DDLM-06LL-M10K	6	12	9	21	17	9.5	8	M10 x 1keg
	DDLM-08LL-M10K	8	14	12	23	20	11.5	8	M10 x 1keg
L PN-315	DDLM-06L-M10K	6	14	12	27	20	12	8	M10 x 1keg
	DDLM-08L-M12K	8	17	12	29	26	14	12	M12 x 1.5keg
	DDLM-10L-M14K	10	19	14	30	27	15	12	M14 x 1.5keg
	DDLM-12L-M16K	12	22	17	32	28	17	14	M16 x 1.5keg
	DDLM-15L-M18K	15	27	19	36	34	21	14	M18 x 1.5keg
	DDLM-18L-M22K	18	32	24	40	36	23.5	17	M22 x 1.5keg
S PN-400	DDLM-06S-M12K	6	17	12	31	26	16	12	M12 x 1.5keg
	DDLM-08S-M14K	8	19	14	32	27	17	12	M14 x 1.5keg
	DDLM-10S-M16K	10	22	17	34	28	17.5	12	M16 x 1.5keg
	DDLM-12S-M18K	12	24	17	38	28	21.5	12	M18 x 1.5keg
	DDLM-14S-M20K	14	27	19	40	32	22	14	M20 x 1.5keg
	DDLM-16S-M22K	16	30	24	43	32	24.5	17	M22 x 1.5keg

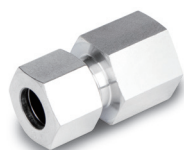
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Female Connector (BSP Parallel)

DDFC-G



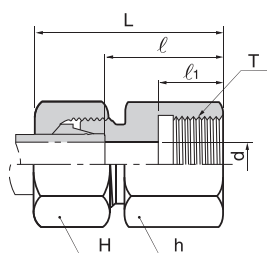
From Y Tapped Hole



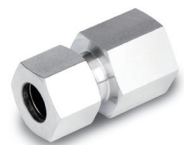
Series	Part No.	Tube O.D	d	H	h	L	ℓ	ℓ ₁	T
L PN-315	DDFC-06L-01G	6	4	14	14	34	19	12	PF 1/8
	DDFC-08L-02G	8	6	17	19	39	24	17	PF 1/4
	DDFC-08L-03G	8	6	17	24	40	25	17	PF 3/8
	DDFC-08L-04G	8	6	17	27	44	29	20	PF 1/2
	DDFC-10L-02G	10	8	19	19	40	25	17	PF 1/4
	DDFC-10L-03G	10	8	19	24	41	26	17	PF 3/8
	DDFC-10L-04G	10	8	19	27	45	30	20	PF 1/2
	DDFC-12L-03G	12	10	22	24	41	26	17	PF 3/8
	DDFC-12L-04G	12	10	22	27	45	30	20	PF 1/2
	DDFC-15L-04G	15	12	27	27	46	31	20	PF 1/2
	DDFC-18L-04G	18	15	32	27	47	30.5	20	PF 1/2
PN-160	DDFC-22L-06G	22	19	36	36	52	35.5	22	PF 3/4
	DDFC-28L-08G	28	24	41	41	55	38	24.5	PF 1
	DDFC-35L-10G	35	30	50	55	63	41	26.5	PF 1-1/4
	DDFC-42L-12G	42	36	60	60	65	42.5	28.5	PF 1-1/2
S PN-630	DDFC-06S-02G	6	4	17	19	41	26	17	PF 1/4
	DDFC-08S-02G	8	5	19	19	41	26	17	PF 1/4
	DDFC-10S-03G	10	7	22	24	43	26.5	17	PF 3/8
	DDFC-12S-03G	12	8	24	24	43	26.5	17	PF 3/8
	DDFC-14S-04G	14	10	27	30	50	32	20	PF 1/2
PN-400	DDFC-16S-04G	16	12	30	30	50	31.5	20	PF 1/2
	DDFC-20S-06G	20	16	36	36	56	34.5	22	PF 3/4
	DDFC-25S-08G	25	20	46	41	62	37.5	24.5	PF 1
	DDFC-30S-10G	30	25	50	55	69	42	26.5	PF 1-1/4
PN-315	DDFC-38S-12G	38	32	60	60	74	43.5	28.5	PF 1-1/2

Female Connector (Metric Parallel)

DDFC-M

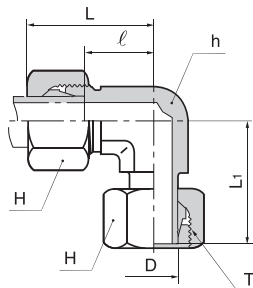
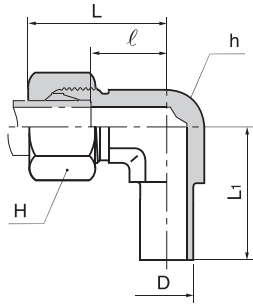


From Y Tapped Hole

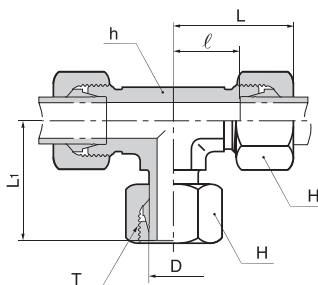
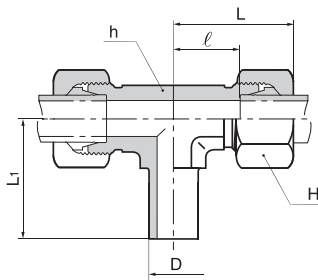


Series	Part No.	Tube O.D	d	H	h	L	ℓ	ℓ ₁	T
L PN-315	DDFC-06L-M10	6	4	14	14	34	19.5	12.5	M10 x 1
	DDFC-08L-M12	8	6	17	17	39	24	17	M12 x 1.5
	DDFC-10L-M14	10	8	19	19	40	25	17	M14 x 1.5
	DDFC-12L-M16	12	10	22	22	41	26	17	M16 x 1.5
	DDFC-15L-M18	15	12	27	24	43	28	17	M18 x 1.5
	DDFC-18L-M22	18	15	32	30	46	29.5	19	M22 x 1.5
PN-160	DDFC-22L-M26	22	19	36	32	51	34.5	21	M26 x 1.5
	DDFC-28L-M33	28	24	41	41	54	37.5	24	M33 x 2
	DDFC-35L-M42	35	30	50	55	62	40.5	26	M42 x 2
	DDFC-42L-M48	42	36	60	60	65	42	28	M48 x 2
S PN-630	DDFC-06S-M12	6	4	17	17	41	26	17	M12 x 1.5
	DDFC-08S-M14	8	5	19	17	41	26	17	M14 x 1.5
	DDFC-10S-M16	10	7	22	22	43	26.5	17	M16 x 1.5
	DDFC-12S-M18	12	8	24	24	44	27.5	17	M18 x 1.5
	DDFC-14S-M20	14	10	27	27	49	31	19	M20 x 1.5
PN-400	DDFC-16S-M22	16	12	30	30	49	30.5	19	M22 x 1.5
	DDFC-20S-M27	20	16	36	36	56	34.5	22	M27 x 2
	DDFC-25S-M33	25	20	46	41	61	37	24	M33 x 2
	DDFC-30S-M42	30	25	50	55	68	41.5	26	M42 x 2
PN-250	DDFC-38S-M48	38	32	60	60	74	43	28	M48 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Adjustable Elbow
with Standpipe**DDLA**

*Option

Adjustable Branch Tee
with Standpipe**DDBTA**

*Option



Series	Part No.	Tube O.D	D	H	h	L	L ₁	ℓ	T
L PN-315	DDLA-06L	6	6	14	12	27	26	12	M12 x 1.5
	DDLA-08L	8	8	17	12	29	27.5	14	M14 x 1.5
	DDLA-10L	10	10	19	14	30	29	15	M16 x 1.5
	DDLA-12L	12	12	22	17	32	29.5	17	M18 x 1.5
	DDLA-15L	15	15	27	19	36	32.5	21	M22 x 1.5
	DDLA-18L	18	18	32	24	40	35.5	23.5	M26 x 1.5
PN-160	DDLA-22L	22	22	36	27	44	38.5	27.5	M30 x 2
	DDLA-28L	28	28	41	36	47	41.5	30.5	M36 x 2
	DDLA-35L	35	35	50	41	56	51	34.5	M45 x 2
	DDLA-42L	42	42	60	50	63	56	40	M52 x 2
S PN-630	DDLA-06S	6	6	17	12	31	27	16	M14 x 1.5
	DDLA-08S	8	8	19	14	32	27.5	17	M16 x 1.5
	DDLA-10S	10	10	22	17	34	30	17.5	M18 x 1.5
	DDLA-12S	12	12	24	17	38	31	21.5	M20 x 1.5
	DDLA-14S	14	14	27	19	40	35	22	M22 x 1.5
PN-400	DDLA-16S	16	16	30	24	43	36.5	24.5	M24 x 1.5
	DDLA-20S	20	20	36	27	48	44.5	26.5	M30 x 2
	DDLA-25S	25	25	46	36	54	50	30	M36 x 2
	DDLA-30S	30	30	50	41	62	55	35.5	M42 x 2
PN-315	DDLA-38S	38	38	60	50	72	63	41	M52 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but with pre-settled nut and cutting ring for connection.

*Option : Preswaging nut and cutting ring - DDLA-06S-PS-S6

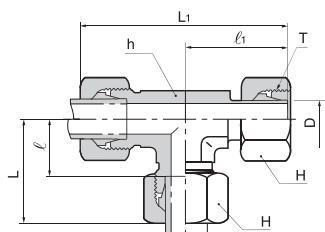
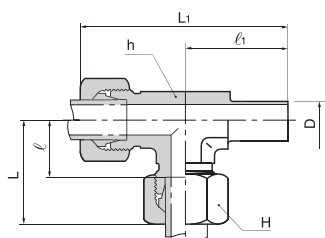
Series	Part No.	Tube O.D	D	H	h	L	L ₁	ℓ	T
L PN-315	DDBTA-06L	6	6	14	12	27	26	12	M12 x 1.5
	DDBTA-08L	8	8	17	12	29	27.5	14	M14 x 1.5
	DDBTA-10L	10	10	19	14	30	29	15	M16 x 1.5
	DDBTA-12L	12	12	22	17	32	29.5	17	M18 x 1.5
	DDBTA-15L	15	15	27	19	36	32.5	21	M22 x 1.5
	DDBTA-18L	18	18	32	24	40	35.5	23.5	M26 x 1.5
PN-160	DDBTA-22L	22	22	36	27	44	38.5	27.5	M30 x 2
	DDBTA-28L	28	28	41	36	47	41.5	30.5	M36 x 2
	DDBTA-35L	35	35	50	41	56	51	34.5	M45 x 2
	DDBTA-42L	42	42	60	50	63	56	40	M52 x 2
S PN-630	DDBTA-06S	6	6	17	12	31	27	16	M14 x 1.5
	DDBTA-08S	8	8	19	14	32	27.5	17	M16 x 1.5
	DDBTA-10S	10	10	22	17	34	30	17.5	M18 x 1.5
	DDBTA-12S	12	12	24	17	38	31	21.5	M20 x 1.5
	DDBTA-14S	14	14	27	19	40	35	22	M22 x 1.5
PN-400	DDBTA-16S	16	16	30	24	43	36.5	24.5	M24 x 1.5
	DDBTA-20S	20	20	36	27	48	44.5	26.5	M30 x 2
	DDBTA-25S	25	25	46	36	54	50	30	M36 x 2
	DDBTA-30S	30	30	50	41	62	55	35.5	M42 x 2
PN-315	DDBTA-38S	38	38	60	50	72	63	41	M52 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but with pre-settled nut and cutting ring for connection.

*Option : Preswaging nut and cutting ring - DDBTA-06S-PS-S6

Adjustable Run Tee with Standpipe

DDRTA



*Option



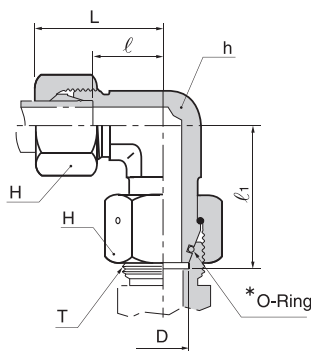
Series	Part No.	Tube O.D	D	H	h	L	L ₁	ℓ	ℓ ₁	T
L PN-315	DDRTA-06L	6	6	14	12	27	53	12	26	M12 x 1.5
	DDRTA-08L	8	8	17	12	29	56	14	27.5	M14 x 1.5
	DDRTA-10L	10	10	19	14	30	59	15	29	M16 x 1.5
	DDRTA-12L	12	12	22	17	32	62	17	29.5	M18 x 1.5
	DDRTA-15L	15	15	27	19	36	69	21	32.5	M22 x 1.5
	DDRTA-18L	18	18	32	24	40	75	23.5	35.5	M26 x 1.5
PN-160	DDRTA-22L	22	22	36	27	44	83	27.5	38.5	M30 x 2
	DDRTA-28L	28	28	41	36	47	91	30.5	41.5	M36 x 2
	DDRTA-35L	35	35	50	41	56	111	34.5	51	M45 x 2
	DDRTA-42L	42	42	60	50	63	123	40	56	M52 x 2
S PN-630	DDRTA-06S	6	6	17	12	31	58	16	27	M14 x 1.5
	DDRTA-08S	8	8	19	14	32	61	17	27.5	M16 x 1.5
	DDRTA-10S	10	10	22	17	34	66	17.5	30	M18 x 1.5
	DDRTA-12S	12	12	24	17	38	71	21.5	31	M20 x 1.5
	DDRTA-14S	14	14	27	19	40	75	22	35	M22 x 1.5
PN-400	DDRTA-16S	16	16	30	24	43	79	24.5	36.5	M24 x 1.5
	DDRTA-20S	20	20	36	27	48	93	26.5	44.5	M30 x 2
	DDRTA-25S	25	25	46	36	54	105	30	50	M36 x 2
	DDRTA-30S	30	30	50	41	62	119	35.5	55	M42 x 2
PN-315	DDRTA-38S	38	38	60	50	72	138	41	63	M52 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but with pre-settled nut and cutting ring for connection.

*Option : Preswaging nut and cutting ring - DDRTA-06S-PS-S6

Swivel Adjustable Elbow with Cone

DDEW

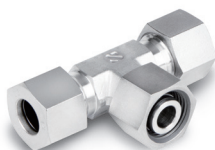
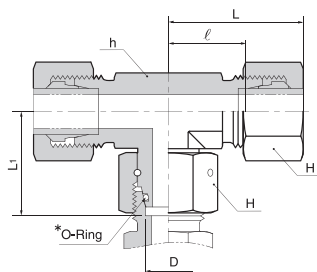


Series	Part No.	Tube O.D	H	h	L	ℓ	ℓ ₁	T
L PN-315	DDEW-06L	6	14	12	27	12	26	M12 x 1.5
	DDEW-08L	8	17	12	29	14	27.5	M14 x 1.5
	DDEW-10L	10	19	14	30	15	29	M16 x 1.5
	DDEW-12L	12	22	17	32	17	29.5	M18 x 1.5
	DDEW-15L	15	27	19	36	21	32.5	M22 x 1.5
	DDEW-18L	18	32	24	40	23.5	35.5	M26 x 1.5
PN-160	DDEW-22L	22	36	27	44	27.5	38.5	M30 x 2
	DDEW-28L	28	41	36	47	30.5	41.5	M36 x 2
	DDEW-35L	35	50	41	56	34.5	51	M45 x 2
	DDEW-42L	42	60	50	63	40	56	M52 x 2
S PN-630	DDEW-06S	6	17	12	31	16	27	M14 x 1.5
	DDEW-08S	8	19	14	32	17	27.5	M16 x 1.5
	DDEW-10S	10	22	17	34	17.5	30	M18 x 1.5
	DDEW-12S	12	24	17	38	21.5	31	M20 x 1.5
	DDEW-14S	14	27	19	40	22	35	M22 x 1.5
PN-400	DDEW-16S	16	30	24	43	24.5	36.5	M24 x 1.5
	DDEW-20S	20	36	27	48	26.5	44.5	M30 x 2
	DDEW-25S	25	46	36	54	30	50	M36 x 2
	DDEW-30S	30	50	41	62	35.5	55	M42 x 2
PN-315	DDEW-38S	38	60	50	72	41	63	M52 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but supplied with fitted O-Ring for connection.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

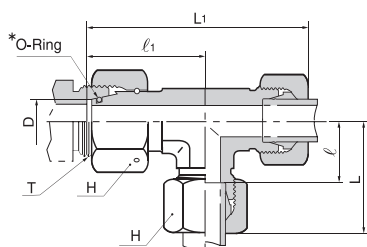
*Option : Preswaging nut and sleeve - DDGA-06S-04G-PS-S6

**Swivel Adjustable Branch Tee
with Cone**
DDET


Series	Part No.	Tube O.D	H	h	L	L ₁	ℓ	T
L PN-315	DDET-06L	6	14	12	27	26	12	M12 x 1.5
	DDET-08L	8	17	12	29	27.5	14	M14 x 1.5
	DDET-10L	10	19	14	30	29	15	M16 x 1.5
	DDET-12L	12	22	17	32	29.5	17	M18 x 1.5
	DDET-15L	15	27	19	36	32.5	21	M22 x 1.5
	DDET-18L	18	32	24	40	35.5	23.5	M26 x 1.5
PN-160	DDET-22L	22	36	27	44	38.5	27.5	M30 x 2
	DDET-28L	28	41	36	47	41.5	30.5	M36 x 2
	DDET-35L	35	50	41	56	51	34.5	M45 x 2
	DDET-42L	42	60	50	63	56	40	M52 x 2
S PN-630	DDET-06S	6	17	12	31	27	16	M14 x 1.5
	DDET-08S	8	19	14	32	27.5	17	M16 x 1.5
	DDET-10S	10	22	17	34	30	17.5	M18 x 1.5
	DDET-12S	12	24	17	38	31	21.5	M20 x 1.5
	DDET-14S	14	27	19	40	35	22	M22 x 1.5
PN-400	DDET-16S	16	30	24	43	36.5	24.5	M24 x 1.5
	DDET-20S	20	36	27	48	44.5	26.5	M30 x 2
	DDET-25S	25	46	36	54	50	30	M36 x 2
	DDET-30S	30	50	41	62	55	35.5	M42 x 2
PN-315	DDET-38S	38	60	50	72	63	41	M52 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but with pre-settled nut and cutting ring for connection.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

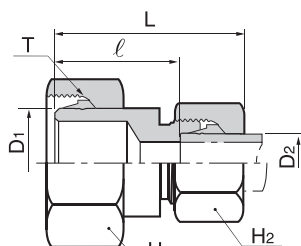
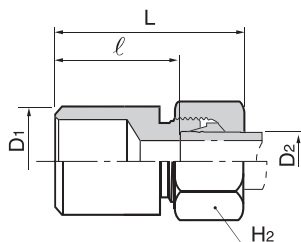
**Swivel Adjustable Run Tee
with Cone**
DDEL


Series	Part No.	Tube O.D	H	h	L	L ₁	ℓ	ℓ ₁	T
L PN-315	DDEL-06L	6	14	12	27	53	12	26	M12 x 1.5
	DDEL-08L	8	17	12	29	56	14	27.5	M14 x 1.5
	DDEL-10L	10	19	14	30	59	15	29	M16 x 1.5
	DDEL-12L	12	22	17	32	61	17	29.5	M18 x 1.5
	DDEL-15L	15	27	19	36	69	21	32.5	M22 x 1.5
	DDEL-18L	18	32	24	40	75	23.5	35.5	M26 x 1.5
PN-160	DDEL-22L	22	36	27	44	82	27.5	38.5	M30 x 2
	DDEL-28L	28	41	36	47	89	30.5	41.5	M36 x 2
	DDEL-35L	35	50	41	56	107	34.5	51	M45 x 2
	DDEL-42L	42	60	50	63	119	40	56	M52 x 2
S PN-630	DDEL-06S	6	17	12	31	58	16	27	M14 x 1.5
	DDEL-08S	8	19	14	32	59	17	27.5	M16 x 1.5
	DDEL-10S	10	22	17	34	64	17.5	30	M18 x 1.5
	DDEL-12S	12	24	17	38	69	21.5	31	M20 x 1.5
	DDEL-14S	14	27	19	40	75	22	35	M22 x 1.5
PN-400	DDEL-16S	16	30	24	43	79	24.5	36.5	M24 x 1.5
	DDEL-20S	20	36	27	48	93	26.5	44.5	M30 x 2
	DDEL-25S	25	46	36	54	104	30	50	M36 x 2
	DDEL-30S	30	50	41	62	117	35.5	55	M42 x 2
PN-315	DDEL-38S	38	60	50	72	135	41	63	M52 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but with pre-settled nut and cutting ring for connection.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Standpipe Reducer

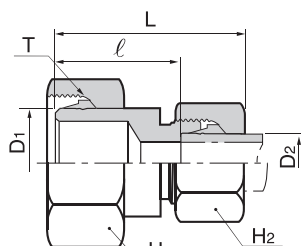
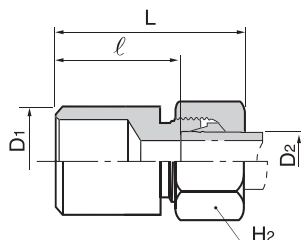
DDKOR


*Option



Series	Part No.	Tube O.D		H ₁	H ₂	L	ℓ	T
		D ₁	D ₂					
L PN-315	DDKOR-08L-06L	8	6	17	14	38	23.5	M14 x 1.5
	DDKOR-10L-06L	10	6	19	14	38	23.5	M16 x 1.5
	DDKOR-10L-08L	10	8	19	17	38	23.5	M16 x 1.5
	DDKOR-12L-06L	12	6	22	14	38	23.5	M18 x 1.5
	DDKOR-12L-08L	12	8	22	17	38	23.5	M18 x 1.5
	DDKOR-12L-10L	12	10	22	19	39	24.5	M18 x 1.5
	DDKOR-15L-06L	15	6	27	14	38	23.5	M22 x 1.5
	DDKOR-15L-08L	15	8	27	17	38	23.5	M22 x 1.5
	DDKOR-15L-10L	15	10	27	19	39	24.5	M22 x 1.5
	DDKOR-15L-12L	15	12	27	22	39	24.5	M22 x 1.5
	DDKOR-18L-06L	18	6	32	14	39	24.5	M26 x 1.5
	DDKOR-18L-08L	18	8	32	17	39	24.5	M26 x 1.5
	DDKOR-18L-10L	18	10	32	19	40	25.5	M26 x 1.5
	DDKOR-18L-12L	18	12	32	22	40	25.5	M26 x 1.5
	DDKOR-18L-15L	18	15	32	27	42	26.5	M26 x 1.5
PN-160	DDKOR-22L-06L	22	6	36	14	40	25.5	M30 x 2
	DDKOR-22L-08L	22	8	36	17	40	25.5	M30 x 2
	DDKOR-22L-10L	22	10	36	19	41	26.5	M30 x 2
	DDKOR-22L-12L	22	12	36	22	41	26.5	M30 x 2
	DDKOR-22L-15L	22	15	36	27	43	27.5	M30 x 2
	DDKOR-22L-18L	22	18	36	32	43	27	M30 x 2
	DDKOR-28L-06L	28	6	41	14	41	26.5	M36 x 2
	DDKOR-28L-08L	28	8	41	17	41	26.5	M36 x 2
	DDKOR-28L-10L	28	10	41	19	42	27.5	M36 x 2
	DDKOR-28L-12L	28	12	41	22	42	27.5	M36 x 2
	DDKOR-28L-15L	28	15	41	27	44	28.5	M36 x 2
	DDKOR-28L-18L	28	18	41	32	44	28	M36 x 2
	DDKOR-28L-22L	28	22	41	36	46	30	M36 x 2
	DDKOR-35L-06L	35	6	50	14	46	31.5	M45 x 2
	DDKOR-35L-08L	35	8	50	17	46	31.5	M45 x 2
	DDKOR-35L-10L	35	10	50	19	47	32.5	M45 x 2
	DDKOR-35L-12L	35	12	50	22	47	32.5	M45 x 2
	DDKOR-35L-15L	35	15	50	27	49	33.5	M45 x 2
	DDKOR-35L-18L	35	18	50	32	49	33	M45 x 2
	DDKOR-35L-22L	35	22	50	36	51	35	M45 x 2
	DDKOR-35L-28L	35	28	50	41	52	35	M45 x 2
	DDKOR-42L-10L	42	10	60	19	48	33.5	M52 x 2
	DDKOR-42L-12L	42	12	60	22	48	33.5	M52 x 2
	DDKOR-42L-15L	42	15	60	27	50	34.5	M52 x 2
	DDKOR-42L-18L	42	18	60	32	50	34	M52 x 2
	DDKOR-42L-22L	42	22	60	36	52	36	M52 x 2
	DDKOR-42L-28L	42	28	60	41	53	36	M52 x 2
	DDKOR-42L-35L	42	35	60	50	57	35	M52 x 2

Standpipe Reducer

DDKOR

*Option

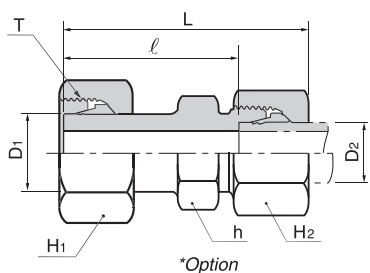
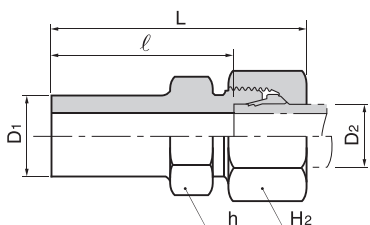


Series	Part No.	Tube O.D		H ₁	H ₂	L	ℓ	T
		D ₁	D ₂					
S PN-630	DDKOR-08S-06S	8	6	19	17	40	25	M16 x 1.5
	DDKOR-10S-06S	10	6	22	17	41	26	M18 x 1.5
	DDKOR-10S-08S	10	8	22	19	41	26	M18 x 1.5
	DDKOR-12S-06S	12	6	24	17	42	27	M20 x 1.5
	DDKOR-12S-08S	12	8	24	19	42	27	M20 x 1.5
	DDKOR-12S-10S	12	10	24	22	43	26.5	M20 x 1.5
	DDKOR-14S-06S	14	6	27	17	44	29	M22 x 1.5
	DDKOR-14S-08S	14	8	27	19	44	29	M22 x 1.5
	DDKOR-14S-10S	14	10	27	22	45	28.5	M22 x 1.5
	DDKOR-14S-12S	14	12	27	24	45	28.5	M22 x 1.5
PN-400	DDKOR-16S-06S	16	6	30	17	44	29	M24 x 1.5
	DDKOR-16S-08S	16	8	30	19	44	29	M24 x 1.5
	DDKOR-16S-10S	16	10	30	22	45	28.5	M24 x 1.5
	DDKOR-16S-12S	16	12	30	24	45	28.5	M24 x 1.5
	DDKOR-16S-14S	16	14	30	27	48	30	M24 x 1.5
	DDKOR-20S-06S	20	6	36	17	49	34	M30 x 2
	DDKOR-20S-08S	20	8	36	19	49	34	M30 x 2
	DDKOR-20S-10S	20	10	36	22	50	33.5	M30 x 2
	DDKOR-20S-12S	20	12	36	24	50	33.5	M30 x 2
	DDKOR-20S-14S	20	14	36	27	53	35	M30 x 2
	DDKOR-20S-16S	20	16	36	30	53	34.5	M30 x 2
	DDKOR-25S-06S	25	6	46	17	52	37	M36 x 2
	DDKOR-25S-08S	25	8	46	19	52	37	M36 x 2
	DDKOR-25S-10S	25	10	46	22	53	36.5	M36 x 2
	DDKOR-25S-12S	25	12	46	24	53	36.5	M36 x 2
	DDKOR-25S-14S	25	14	46	27	55	37	M36 x 2
	DDKOR-25S-16S	25	16	46	30	55	36.5	M36 x 2
	DDKOR-25S-20S	25	20	46	36	59	37.5	M36 x 2
	DDKOR-30S-06S	30	6	50	17	54	39	M42 x 2
	DDKOR-30S-08S	30	8	50	19	54	39	M42 x 2
	DDKOR-30S-10S	30	10	50	22	55	38.5	M42 x 2
	DDKOR-30S-12S	30	12	50	24	55	38.5	M42 x 2
	DDKOR-30S-14S	30	14	50	27	58	40	M42 x 2
	DDKOR-30S-16S	30	16	50	30	58	39.5	M42 x 2
	DDKOR-30S-20S	30	20	50	36	61	39.5	M42 x 2
	DDKOR-30S-25S	30	25	50	46	64	40	M42 x 2
PN-315	DDKOR-38S-06S	38	6	60	17	58	43	M52 x 2
	DDKOR-38S-08S	38	8	60	19	58	43	M52 x 2
	DDKOR-38S-10S	38	10	60	22	59	42.5	M52 x 2
	DDKOR-38S-12S	38	12	60	24	59	42.5	M52 x 2
	DDKOR-38S-14S	38	14	60	27	62	44	M52 x 2
	DDKOR-38S-16S	38	16	60	30	62	43.5	M52 x 2
	DDKOR-38S-20S	38	20	60	36	65	43.5	M52 x 2
	DDKOR-38S-25S	38	25	60	46	68	44	M52 x 2
	DDKOR-38S-30S	38	30	60	50	71	44.5	M52 x 2

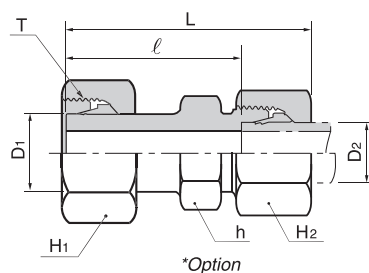
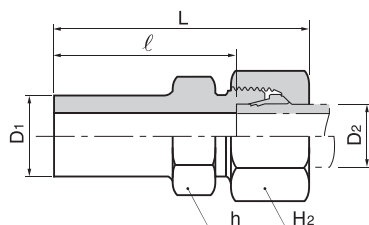
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*Option : Preswaging nut and cutting ring - DDKOR-08S-06S-PS-S6

Reducer
DDR



Series	Part No.	Tube O.D		H ₁	H ₂	h	L	ℓ	T
		D ₁	D ₂						
PN-315	DDR-08L-06L	8	6	17	14	14	40	25.5	M14 x 1.5
	DDR-10L-06L	10	6	19	14	14	42	27.5	M16 x 1.5
	DDR-10L-08L	10	8	19	17	17	43	27.5	M16 x 1.5
	DDR-12L-06L	12	6	22	14	14	42	27.5	M18 x 1.5
	DDR-12L-08L	12	8	22	17	17	43	27.5	M18 x 1.5
	DDR-12L-10L	12	10	22	19	17	44	28.5	M18 x 1.5
	DDR-15L-06L	15	6	27	14	17	44	29	M22 x 1.5
	DDR-15L-08L	15	8	27	17	17	44	29	M22 x 1.5
	DDR-15L-10L	15	10	27	19	17	45	30	M22 x 1.5
	DDR-15L-12L	15	12	27	22	19	45	30	M22 x 1.5
	DDR-18L-06L	18	6	32	14	19	46	31	M26 x 1.5
	DDR-18L-08L	18	8	32	17	19	46	31	M26 x 1.5
	DDR-18L-10L	18	10	32	19	19	47	32	M26 x 1.5
	DDR-18L-12L	18	12	32	22	19	47	32	M26 x 1.5
	DDR-18L-15L	18	15	32	27	24	49	33	M26 x 1.5
PN-160	DDR-22L-06L	22	6	36	14	24	48	33	M30 x 2
	DDR-22L-08L	22	8	36	17	24	48	33	M30 x 2
	DDR-22L-10L	22	10	36	19	24	49	34	M30 x 2
	DDR-22L-12L	22	12	36	22	24	49	34	M30 x 2
	DDR-22L-15L	22	15	36	27	24	51	35	M30 x 2
	DDR-22L-18L	22	18	36	32	27	52	34.5	M30 x 2
	DDR-28L-06L	28	6	41	14	30	48	33	M36 x 2
	DDR-28L-08L	28	8	41	17	30	48	33	M36 x 2
	DDR-28L-10L	28	10	41	19	30	50	34	M36 x 2
	DDR-28L-12L	28	12	41	22	30	50	34	M36 x 2
	DDR-28L-15L	28	15	41	27	30	52	35	M36 x 2
	DDR-28L-18L	28	18	41	32	30	53	36	M36 x 2
	DDR-28L-22L	28	22	41	36	32	57	36.5	M36 x 2
	DDR-35L-06L	35	6	50	14	36	53	38.5	M45 x 2
	DDR-35L-08L	35	8	50	17	36	53	38.5	M45 x 2
	DDR-35L-10L	35	10	50	19	36	55	39.5	M45 x 2
	DDR-35L-12L	35	12	50	22	36	55	39.5	M45 x 2
	DDR-35L-15L	35	15	50	27	36	58	40.5	M45 x 2
	DDR-35L-18L	35	18	50	32	36	58	40	M45 x 2
	DDR-35L-22L	35	22	50	36	36	62	42	M45 x 2
	DDR-35L-28L	35	28	50	41	36	63	42	M45 x 2
	DDR-42L-06L	42	6	60	14	46	56	41	M52 x 2
	DDR-42L-08L	42	8	60	17	46	56	41	M52 x 2
	DDR-42L-10L	42	10	60	19	46	58	42	M52 x 2
	DDR-42L-12L	42	12	60	22	46	58	42	M52 x 2
	DDR-42L-15L	42	15	60	27	46	60	43	M52 x 2
	DDR-42L-18L	42	18	60	32	46	60	42.5	M52 x 2
	DDR-42L-22L	42	22	60	36	46	62	44.5	M52 x 2
	DDR-42L-28L	42	28	60	41	46	64	44.5	M52 x 2
	DDR-42L-35L	42	35	60	50	46	67	43.5	M52 x 2

Reducer
DDR


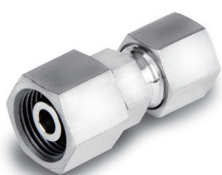
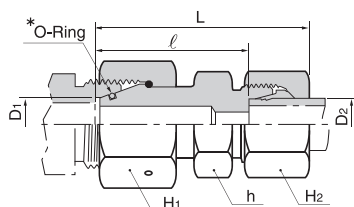
Series	Part No.	Tube O.D		H ₁	H ₂	h	L	ℓ	T
		D ₁	D ₂						
S PN-630	DDR-08S-06S	8	6	19	17	17	43	28	M16 x 1.5
	DDR-10S-06S	10	6	22	17	17	45	30.5	M18 x 1.5
	DDR-10S-08S	10	8	22	19	17	45	30.5	M18 x 1.5
	DDR-12S-06S	12	6	24	17	17	47	32.5	M20 x 1.5
	DDR-12S-08S	12	8	24	19	17	47	32.5	M20 x 1.5
	DDR-12S-10S	12	10	24	22	19	48	32	M20 x 1.5
	DDR-14S-06S	14	6	27	17	17	51	36.5	M22 x 1.5
	DDR-14S-08S	14	8	27	19	17	51	36.5	M22 x 1.5
	DDR-14S-10S	14	10	27	22	19	52	36	M22 x 1.5
	DDR-14S-12S	14	12	27	24	24	52	36	M22 x 1.5
PN-400	DDR-16S-06S	16	6	30	17	17	53	38.5	M24 x 1.5
	DDR-16S-08S	16	8	30	19	17	53	38.5	M24 x 1.5
	DDR-16S-10S	16	10	30	22	19	54	38	M24 x 1.5
	DDR-16S-12S	16	12	30	24	22	55	38.5	M24 x 1.5
	DDR-16S-14S	16	14	30	27	24	57	39.5	M24 x 1.5
	DDR-20S-06S	20	6	36	17	22	58	43	M30 x 2
	DDR-20S-08S	20	8	36	19	22	58	43	M30 x 2
	DDR-20S-10S	20	10	36	22	22	59	42.5	M30 x 2
	DDR-20S-12S	20	12	36	24	22	59	42.5	M30 x 2
	DDR-20S-14S	20	14	36	27	24	62	44	M30 x 2
	DDR-20S-16S	20	16	36	30	27	62	43.5	M30 x 2
	DDR-25S-06S	25	6	46	17	27	62	47.5	M36 x 2
	DDR-25S-08S	25	8	46	19	27	62	47.5	M36 x 2
	DDR-25S-10S	25	10	46	22	27	63	47	M36 x 2
	DDR-25S-12S	25	12	46	24	27	63	47	M36 x 2
	DDR-25S-14S	25	14	46	27	27	66	48.5	M36 x 2
	DDR-25S-16S	25	16	46	30	27	66	48	M36 x 2
	DDR-25S-20S	25	20	46	36	32	70	48	M36 x 2
	DDR-30S-06S	30	6	50	17	32	67	52	M42 x 2
	DDR-30S-08S	30	8	50	19	32	67	52	M42 x 2
	DDR-30S-10S	30	10	50	22	32	68	51.5	M42 x 2
	DDR-30S-12S	30	12	50	24	32	68	51.5	M42 x 2
	DDR-30S-14S	30	14	50	27	32	71	53	M42 x 2
	DDR-30S-16S	30	16	50	30	32	71	52.5	M42 x 2
	DDR-30S-20S	30	20	50	36	32	74	52.5	M42 x 2
	DDR-30S-25S	30	25	50	46	41	77	53	M42 x 2
PN-315	DDR-38S-06S	38	6	60	17	41	72	57	M52 x 2
	DDR-38S-08S	38	8	60	19	41	72	57	M52 x 2
	DDR-38S-10S	38	10	60	22	41	73	56.5	M52 x 2
	DDR-38S-12S	38	12	60	24	41	73	56.5	M52 x 2
	DDR-38S-14S	38	14	60	27	41	76	58	M52 x 2
	DDR-38S-16S	38	16	60	30	41	76	57.5	M52 x 2
	DDR-38S-20S	38	20	60	36	41	79	57.5	M52 x 2
	DDR-38S-25S	38	25	60	46	41	82	58	M52 x 2
	DDR-38S-30S	38	30	60	50	46	89	58.5	M52 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but with pre-settled nut and cutting ring for connection.

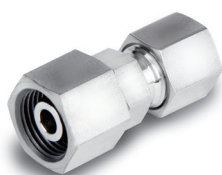
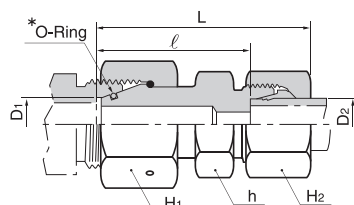
*Option : Preswaging nut and cutting ring - DDR-08S-06S-PS-S6

**Swivel Reducing Adaptor
with Cone**

DDRED



Series	Part No.	Tube O.D		H ₁	H ₂	h	L	ℓ
		D ₁	D ₂					
PN-315	DDRED-08L-06L	8	6	17	14	14	39	24.5
	DDRED-10L-06L	10	6	19	14	17	39.5	24.5
	DDRED-10L-08L	10	8	19	17	17	39.5	24.5
	DDRED-12L-06L	12	6	22	14	17	40	25
	DDRED-12L-08L	12	8	22	17	17	40	25
	DDRED-12L-10L	12	10	22	19	17	41	26
	DDRED-15L-06L	15	6	27	14	22	42	27.5
	DDRED-15L-08L	15	8	27	17	22	42	27.5
	DDRED-15L-10L	15	10	27	19	22	43	28.5
	DDRED-15L-12L	15	12	27	22	22	43	28.5
	DDRED-18L-06L	18	6	32	14	24	43	28
	DDRED-18L-08L	18	8	32	17	24	43	28
	DDRED-18L-10L	18	10	32	19	24	44.5	29.5
	DDRED-18L-12L	18	12	32	22	24	44.5	29.5
	DDRED-18L-15L	18	15	32	27	24	45.5	30.5
PN-160	DDRED-22L-06L	22	6	36	14	28.5	47	32
	DDRED-22L-08L	22	8	36	17	28.5	47	32
	DDRED-22L-10L	22	10	36	19	28.5	48	33
	DDRED-22L-12L	22	12	36	22	28.5	48	33
	DDRED-22L-15L	22	15	36	27	28.5	49	34
	DDRED-22L-18L	22	18	36	32	28.5	50	33.5
	DDRED-28L-06L	28	6	41	14	36	49	34
	DDRED-28L-08L	28	8	41	17	36	49	34
	DDRED-28L-10L	28	10	41	19	36	50	35
	DDRED-28L-12L	28	12	41	22	36	50	35
	DDRED-28L-15L	28	15	41	27	36	51	36
	DDRED-28L-18L	28	18	41	32	36	52	35.5
	DDRED-28L-22L	28	22	41	36	36	54	37.5
	DDRED-35L-06L	35	6	50	14	46	55	40
	DDRED-35L-08L	35	8	50	17	46	55	40
	DDRED-35L-10L	35	10	50	19	46	56	41
	DDRED-35L-12L	35	12	50	22	46	56	41
	DDRED-35L-15L	35	15	50	27	46	57	42
	DDRED-35L-18L	35	18	50	32	46	58	41.5
	DDRED-35L-22L	35	22	50	36	46	60	43.5
	DDRED-35L-28L	35	28	50	41	46	60	43.5
	DDRED-42L-06L	42	6	60	14	50	55	40.5
	DDRED-42L-08L	42	8	60	17	50	55	40.5
	DDRED-42L-10L	42	10	60	19	50	56	41.5
	DDRED-42L-12L	42	12	60	22	50	56	41.5
	DDRED-42L-15L	42	15	60	27	50	58	42.5
	DDRED-42L-18L	42	18	60	32	50	58	42
	DDRED-42L-22L	42	22	60	36	50	60	44
	DDRED-42L-28L	42	28	60	60	50	61	44
	DDRED-42L-35L	42	35	60	60	50	65	43

Swivel Reducing Adaptor
with Cone**DDRED**

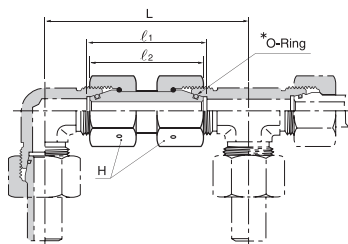
Series	Part No.	Tube O.D		H ₁	H ₂	h	L	ℓ
		D ₁	D ₂					
S PN-630	DDRED-08S-06S	8	6	19	17	17	44	28
	DDRED-10S-06S	10	6	22	17	17	44	29.5
	DDRED-10S-08S	10	8	22	19	17	44	29.5
	DDRED-12S-06S	12	6	24	17	19	45	30
	DDRED-12S-08S	12	8	24	19	19	45	30
	DDRED-12S-10S	12	10	24	22	19	46	29.5
	DDRED-14S-06S	14	6	27	17	22	47.5	33
	DDRED-14S-08S	14	8	27	19	22	47.5	33
	DDRED-14S-10S	14	10	27	22	22	48.5	32.5
	DDRED-14S-12S	14	12	27	24	22	48.5	32.5
PN-400	DDRED-16S-06S	16	6	30	17	24	50	35
	DDRED-16S-08S	16	8	30	19	24	50	35
	DDRED-16S-10S	16	10	30	22	24	51	34.5
	DDRED-16S-12S	16	12	30	24	24	51	34.5
	DDRED-16S-14S	16	14	30	27	24	54	36
	DDRED-20S-06S	20	6	36	17	28.5	54	39
	DDRED-20S-08S	20	8	36	19	28.5	54	39
	DDRED-20S-10S	20	10	36	22	28.5	55	38.5
	DDRED-20S-12S	20	12	36	24	28.5	55	38.5
	DDRED-20S-14S	20	14	36	27	28.5	58	40
	DDRED-20S-16S	20	16	36	30	28.5	58	39.5
	DDRED-25S-06S	25	6	46	17	36	58	43.5
	DDRED-25S-08S	25	8	46	19	36	58	43.5
	DDRED-25S-10S	25	10	46	22	36	59	43
	DDRED-25S-12S	25	12	46	24	36	59	43
	DDRED-25S-14S	25	14	46	27	36	62	44.5
	DDRED-25S-16S	25	16	46	30	36	62	44
	DDRED-25S-20S	25	20	46	36	36	66	44
	DDRED-30S-06S	30	6	50	17	41	66	51
	DDRED-30S-08S	30	8	50	19	41	66	51
	DDRED-30S-10S	30	10	50	22	41	67	50.5
	DDRED-30S-12S	30	12	50	24	41	67	50.5
	DDRED-30S-14S	30	14	50	27	41	70	52
	DDRED-30S-16S	30	16	50	30	41	70	51.5
	DDRED-30S-20S	30	20	50	36	41	73	51.5
	DDRED-30S-25S	30	25	50	46	41	76	52
PN-315	DDRED-38S-06S	38	6	60	17	50	70.5	56
	DDRED-38S-08S	38	8	60	19	50	70.5	56
	DDRED-38S-10S	38	10	60	22	50	71.5	55.5
	DDRED-38S-12S	38	12	60	24	50	71.5	55.5
	DDRED-38S-14S	38	14	60	27	50	74.5	57
	DDRED-38S-16S	38	16	60	30	50	74.5	56.5
	DDRED-38S-20S	38	20	60	36	50	78.5	56.5
	DDRED-38S-25S	38	25	60	46	50	81.5	57
	DDRED-38S-30S	38	30	60	50	50	85.5	58.5

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but supplied with fitted O-Ring for connection.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Swivel Union with Cone

DDUE



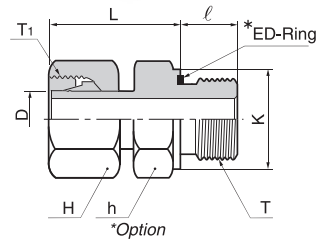
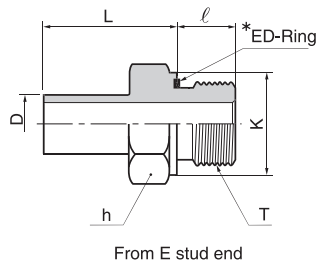
Series	Part No.	Tube O.D	H	L	ℓ ₁	ℓ ₂
L PN-500	DDUE-06L	6	17	64	36	34
	DDUE-08L	8	17	64	36	34
	DDUE-10L	10	19	67	37	36
PN-400	DDUE-12L	12	22	71	37	36
	DDUE-15L	15	27	82	40	39
	DDUE-18L	18	32	89.5	42.5	40.5
PN-250	DDUE-22L	22	36	102	47	45
	DDUE-28L	28	46	110	49	47
	DDUE-35L	35	50	127	58	53
	DDUE-42L	42	60	139	59	53
S PN-800	DDUE-06S	6	17	71	39	37
	DDUE-08S	8	19	73	39	37
	DDUE-10S	10	22	78	43	41
PN-630	DDUE-12S	12	24	87	44	43
	DDUE-14S	14	27	92	48	45
	DDUE-16S	16	30	99	50	46
PN-400	DDUE-20S	20	36	113	60	55
	DDUE-25S	25	46	126	66	58
	DDUE-30S	30	50	144	73	62
	DDUE-38S	38	60	165	83	67

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

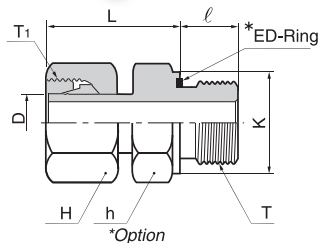
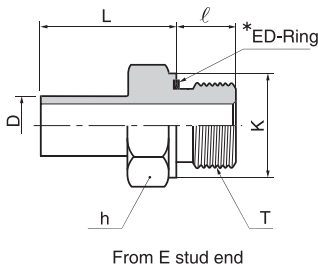
Adaptor
(BSP Parallel) with *ED-Ring

DDA-GED



Adaptor
(Metric Parallel) with *ED-Ring

DDA-MED



Series	Part No.	Tube O.D	H	h	K	L	ℓ	T	T ₁
L PN-315	DDA-06L-01GED	6	14	14	13.9	24.5	8	PF 1/8	M12 x 1.5
	DDA-08L-02GED	8	17	19	18.9	29.5	12	PF 1/4	M14 x 1.5
	DDA-10L-02GED	10	19	19	18.9	27.5	12	PF 1/4	M16 x 1.5
	DDA-12L-03GED	12	22	22	21.9	34	12	PF 3/8	M18 x 1.5
	DDA-15L-04GED	15	27	27	26.9	32	14	PF 1/2	M22 x 1.5
	DDA-18L-04GED	18	32	27	26.9	31.5	14	PF 1/2	M26 x 1.5
PN-160	DDA-22L-06GED	22	36	32	31.9	32.5	16	PF 3/4	M30 x 2
	DDA-28L-08GED	28	41	41	39.9	35	18	PF 1	M36 x 2
	DDA-35L-10GED	35	50	50	49.9	42.5	20	PF 1-1/4	M45 x 2
	DDA-42L-12GED	42	60	55	54.9	46.5	22	PF 1-1/2	M52 x 2
S PN-630	DDA-06S-02GED	6	17	19	18.9	27	12	PF 1/4	M14 x 1.5
	DDA-08S-02GED	8	19	19	18.9	29.5	12	PF 1/4	M16 x 1.5
	DDA-10S-03GED	10	22	22	21.9	32	12	PF 3/8	M18 x 1.5
	DDA-12S-03GED	12	24	22	21.9	34	12	PF 3/8	M20 x 1.5
	DDA-12S-04GED	12	24	27	26.9	34.5	14	PF 1/2	M20 x 1.5
	DDA-14S-04GED	14	27	27	26.9	36.5	14	PF 1/2	M22 x 1.5
PN-400	DDA-16S-04GED	16	30	27	26.9	37	14	PF 1/2	M24 x 1.5
	DDA-16S-06GED	16	30	32	31.9	39	16	PF 3/4	M24 x 1.5
	DDA-20S-06GED	20	36	32	31.9	43	16	PF 3/4	M30 x 2
	DDA-25S-08GED	25	46	41	39.9	48	18	PF 1	M36 x 2
	DDA-30S-10GED	30	50	50	49.9	51	20	PF 1-1/4	M42 x 2
PN-315	DDA-38S-12GED	38	60	55	54.9	60	22	PF 1-1/2	M52 x 2

Series	Part No.	Tube O.D	H	h	K	L	ℓ	T	T ₁
L PN-315	DDA-06L-M10ED	6	14	14	13.9	24.5	8	M10 x 1	M12 x 1.5
	DDA-08L-M12ED	8	17	17	16.9	26.5	12	M12 x 1.5	M14 x 1.5
	DDA-10L-M14ED	10	19	19	18.9	27.5	12	M14 x 1.5	M16 x 1.5
	DDA-12L-M16ED	12	22	22	21.9	30.5	12	M16 x 1.5	M18 x 1.5
	DDA-15L-M18ED	15	27	24	23.9	31.5	12	M18 x 1.5	M22 x 1.5
	DDA-18L-M22ED	18	32	27	26.9	31.5	14	M22 x 1.5	M26 x 1.5
PN-160	DDA-22L-M26ED	22	36	32	31.9	32.5	16	M26 x 1.5	M30 x 2
	DDA-28L-M23ED	28	41	41	39.9	35	18	M33 x 2	M36 x 2
	DDA-35L-M42ED	35	50	50	49.9	42.5	20	M42 x 2	M45 x 2
	DDA-42L-M48ED	42	60	55	54.9	46.5	22	M48 x 2	M52 x 2
S PN-630	DDA-06S-M12ED	6	17	17	16.9	27	12	M12 x 1.5	M14 x 1.5
	DDA-08S-M14ED	8	19	19	18.9	29.5	12	M14 x 1.5	M16 x 1.5
	DDA-10S-M16ED	10	22	22	21.9	32	12	M16 x 1.5	M18 x 1.5
	DDA-12S-M18ED	12	24	24	23.9	34	12	M18 x 1.5	M20 x 1.5
	DDA-14S-M20ED	14	27	27	25.9	36.5	14	M20 x 1.5	M22 x 1.5
PN-400	DDA-16S-M22ED	16	30	27	26.9	37	14	M22 x 1.5	M24 x 1.5
	DDA-20S-M27ED	20	36	32	31.9	43	16	M27 x 2	M30 x 2
	DDA-25S-M33ED	25	46	41	39.9	48	18	M33 x 2	M36 x 2
	DDA-30S-M42ED	30	50	50	49.9	51	20	M42 x 2	M42 x 2
PN-315	DDA-38S-M48ED	38	60	55	54.9	60	22	M48 x 2	M52 x 2

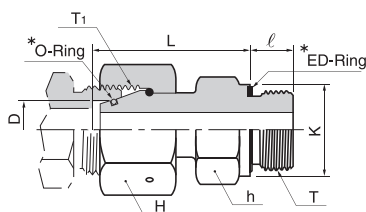
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but with pre-set nut and cutting ring for connection.

*ED-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

*Option : Preswaging nut and cutting ring - DDA-06S-02GED-PS-S6

Swivel Adaptor (BSP Parallel) with *ED-Ring

DDEGE-G



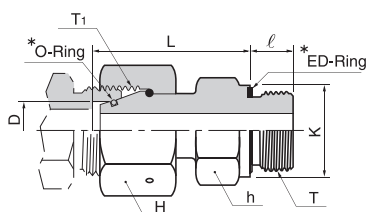
From E stud end



Series	Part No.	Tube O.D	H	h	K	L	ℓ	T	T ₁
L PN-315	DDEGE-06L-01G	6	14	14	13.9	24.5	8	PF 1/8	M12 x 1.5
	DDEGE-08L-02G	8	17	19	18.9	29.5	12	PF 1/4	M14 x 1.5
	DDEGE-10L-02G	10	19	19	18.9	27.5	12	PF 1/4	M16 x 1.5
	DDEGE-12L-03G	12	22	22	21.9	34	12	PF 3/8	M18 x 1.5
	DDEGE-15L-04G	15	27	27	26.9	32	14	PF 1/2	M22 x 1.5
	DDEGE-18L-04G	18	32	27	26.9	31.5	14	PF 1/2	M26 x 1.5
PN-160	DDEGE-22L-06G	22	36	32	31.9	32.5	16	PF 3/4	M30 x 2
	DDEGE-28L-08G	28	41	41	39.9	35	18	PF 1	M36 x 2
	DDEGE-35L-10G	35	50	50	49.9	42.5	20	PF 1-1/4	M45 x 2
	DDEGE-42L-12G	42	60	55	54.9	46.5	22	PF 1-1/2	M52 x 2
S PN-630	DDEGE-06S-02G	6	17	19	18.9	27	12	PF 1/4	M14 x 1.5
	DDEGE-08S-02G	8	19	19	18.9	29.5	12	PF 1/4	M16 x 1.5
	DDEGE-10S-03G	10	22	22	21.9	32	12	PF 3/8	M18 x 1.5
	DDEGE-12S-03G	12	24	22	21.9	34	12	PF 3/8	M20 x 1.5
	DDEGE-14S-04G	14	27	27	26.9	36.5	14	PF 1/2	M22 x 1.5
PN-400	DDEGE-16S-04G	16	30	27	26.9	37	14	PF 1/2	M24 x 1.5
	DDEGE-20S-06G	20	36	32	31.9	43	16	PF 3/4	M30 x 2
	DDEGE-25S-08G	25	46	41	39.9	48	18	PF 1	M36 x 2
	DDEGE-30S-10G	30	50	50	49.9	51	20	PF 1-1/4	M42 x 2
PN-315	DDEGE-38S-12G	38	60	55	54.9	60	22	PF 1-1/2	M52 x 2

Swivel Adaptor (Metric Parallel) with *ED-Ring

DDEGE-M



From E stud end

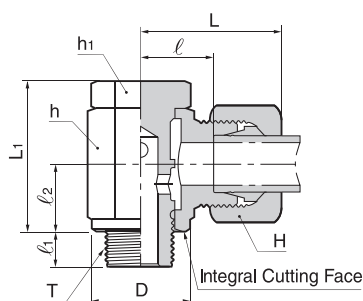


Series	Part No.	Tube O.D	H	h	K	L	ℓ	T	T ₁
L PN-315	DDEGE-06L-M10	6	14	14	13.9	24.5	8	M10 x 1	M12 x 1.5
	DDEGE-08L-M12	8	17	17	16.9	26.5	12	M12 x 1.5	M14 x 1.5
	DDEGE-10L-M14	10	19	19	18.9	27.5	12	M14 x 1.5	M16 x 1.5
	DDEGE-12L-M16	12	22	22	21.9	30.5	12	M16 x 1.5	M18 x 1.5
	DDEGE-15L-M18	15	27	24	23.9	31.5	12	M18 x 1.5	M22 x 1.5
	DDEGE-18L-M22	18	32	27	26.9	31.5	14	M22 x 1.5	M26 x 1.5
PN-160	DDEGE-22L-M26	22	36	32	31.9	32.5	16	M26 x 1.5	M30 x 2
	DDEGE-28L-M23	28	41	41	39.9	35	18	M33 x 2	M36 x 2
	DDEGE-35L-M42	35	50	50	49.9	42.5	20	M42 x 2	M45 x 2
	DDEGE-42L-M48	42	60	55	54.9	46.5	22	M48 x 2	M52 x 2
S PN-630	DDEGE-06S-M12	6	17	17	16.9	27	12	M12 x 1.5	M14 x 1.5
	DDEGE-08S-M14	8	19	19	18.9	29.5	12	M14 x 1.5	M16 x 1.5
	DDEGE-10S-M16	10	22	22	21.9	32	12	M16 x 1.5	M18 x 1.5
	DDEGE-12S-M18	12	24	24	23.9	34	12	M18 x 1.5	M20 x 1.5
	DDEGE-14S-M20	14	27	27	25.9	36.5	14	M20 x 1.5	M22 x 1.5
PN-400	DDEGE-16S-M22	16	30	27	26.9	37	14	M22 x 1.5	M24 x 1.5
	DDEGE-20S-M27	20	36	32	31.9	43	16	M27 x 2	M30 x 2
	DDEGE-25S-M33	25	46	41	39.9	48	18	M33 x 2	M36 x 2
	DDEGE-30S-M42	30	50	50	49.9	51	20	M42 x 2	M42 x 2
PN-315	DDEGE-38S-M48	38	60	55	54.9	60	22	M48 x 2	M52 x 2

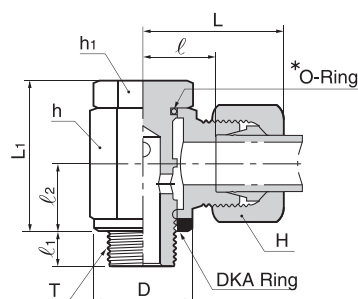
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but supplied with fitted O-Ring for connection.
*O-ring and ED-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Banjo Fittings
(BSP/Metric Parallel) with DKA Ring

DDSWVE-G/M



For Tube O.D up to 15mm



For Tube O.D up to 16mm and larger



Series	Part No.	Tube O.D	D	H	h	h ₁	L	L ₁	ℓ	ℓ ₁	ℓ ₂	T
L PN-160	DDSWVE-06L-01G	6	14	14	14	14	25	21	10.5	6	10	PF 1/8
	DDSWVE-08L-02G	8	18.5	17	19	19	28	27	13	9	13	PF 1/4
	DDSWVE-10L-02G	10	18.5	19	19	19	29	27	14	9	13	PF 1/4
PN-100	DDSWVE-12L-03G	12	22.5	22	22	22	30	32	15.5	9	15	PF 3/8
	DDSWVE-15L-04G	15	26.5	27	27	27	34	37.5	19	11	18	PF 1/2
	DDSWVE-18L-04G	18	26	32	30	27	37	44	20.5	11	21.5	PF 1/2
	DDSWVE-22L-06G	22	32	36	36	32	42	49	25.5	13	24	PF 3/4
S PN-160	DDSWVE-06S-02G	6	18.5	17	19	19	30	27	15	9	13	PF 1/4
	DDSWVE-08S-02G	8	18.5	19	19	19	30	27	15	9	13	PF 1/4
PN-100	DDSWVE-10S-03G	10	22.5	22	22	22	32	32	16	9	15	PF 3/8
	DDSWVE-12S-03G	12	22.5	24	24	24	33	37	17	9	18	PF 3/8
	DDSWVE-14S-04G	14	26.5	27	27	27	38	37	20	11	18	PF 1/2
	DDSWVE-16S-04G	16	26	30	30	27	40	44	21.5	11	21.5	PF 1/2
	DDSWVE-20S-06G	20	32	36	36	32	46	49	24.5	13	24	PF 3/4

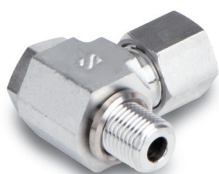
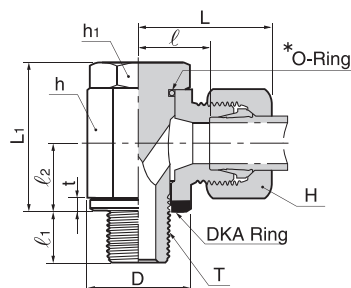
Series	Part No.	Tube O.D	D	H	h	h ₁	L	L ₁	ℓ	ℓ ₁	ℓ ₂	T
L PN-160	DDSWVE-06L-M10	6	14.5	14	14	25	25	10.5	10.5	6	10	M10 x 1
	DDSWVE-08L-M12	8	17.5	17	17	27	27	12	12	9	12	M12 x 1.5
	DDSWVE-10L-M14	10	19.5	19	19	29	29	14	14	9	13	M14 x 1.5
PN-100	DDSWVE-12L-M16	12	21.5	22	22	30	30	15.5	15.5	9	15	M16 x 1.5
	DDSWVE-15L-M18	15	23.5	27	24	33	33	17.5	17.5	9	18	M18 x 1.5
	DDSWVE-18L-M22	18	27	32	30	37	37	20.5	20.5	11	21.5	M22 x 1.5
	DDSWVE-22L-M26	22	31	36	36	42	42	25.5	25.5	13	24	M26 x 1.5
S PN-100	DDSWVE-06S-M12	6	17.5	17	17	29	29	14	14	9	12	M12 x 1.5
	DDSWVE-08S-M14	8	19.5	19	19	30	30	15	15	9	13	M14 x 1.5
	DDSWVE-10S-M16	10	21.5	22	22	32	32	16	16	9	15	M16 x 1.5
	DDSWVE-12S-M18	12	23.5	24	24	33	33	17	17	9	18	M18 x 1.5
	DDSWVE-14S-M20	14	25.5	27	27	38	38	20	20	11	18	M20 x 1.5
	DDSWVE-16S-M22	16	27	30	30	40	40	21.5	21.5	11	21.5	M22 x 1.5
	DDSWVE-20S-M27	20	32	36	36	46	46	24.5	24.5	13	24	M27 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

High Pressure Banjo Elbow
(BSP/Metric Parallel) with DKA Ring

DDWH-G/M



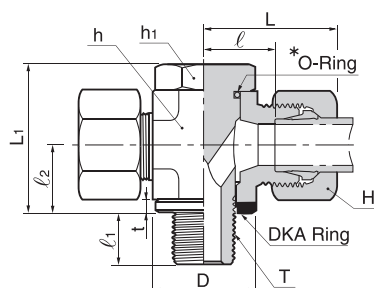
Series	Part No.	Tube O.D	D	H	h	h ₁	L	L ₁	ℓ	ℓ ₁	ℓ ₂	t	T
L PN-250	DDWH-06L-01G	6	14	14	17	17	27	24	12	8	10.5	2.5	PF 1/8
	DDWH-08L-02G	8	18	17	22	19	29	30	14.5	12	14	3	PF 1/4
	DDWH-10L-02G	10	18	19	22	19	30	30	15.5	12	14	3	PF 1/4
	DDWH-12L-03G	12	22	22	27	24	33	36	18	12	16.5	3	PF 3/8
	DDWH-15L-04G	15	26	27	32	30	37	45	21.5	14	21.5	4.5	PF 1/2
	DDWH-18L-04G	18	26	32	32	30	37	45	21	14	21.5	4.5	PF 1/2
PN-160	DDWH-22L-06G	22	32	36	41	36	44	53	27.5	16	24	3.5	PF 3/4
	DDWH-28L-08G	28	39	41	50	46	49	66	32	18	30.5	3.5	PF 1
	DDWH-35L-10G	35	49	50	60	55	58	76	36	20	35.5	3.5	PF 1-1/4
	DDWH-42L-12G	42	55	60	70	60	63	87	40.5	22	40.5	3.5	PF 1-1/2
S PN-315	DDWH-06S-02G	6	18	17	22	19	31	30	16.5	12	14	3	PF 1/4
	DDWH-08S-02G	8	18	19	22	19	31	30	16.5	12	14	3	PF 1/4
	DDWH-10S-03G	10	22	22	27	24	35	36	18.5	12	16.5	3	PF 3/8
	DDWH-12S-03G	12	22	24	27	24	35	36	18.5	12	16.5	3	PF 3/8
	DDWH-16S-04G	16	26	30	32	30	40	45	22	14	21.5	4.5	PF 1/2
PN-160	DDWH-20S-06G	20	32	36	41	36	48	53	26.5	16	24	3.5	PF 3/4
	DDWH-25S-08G	25	39	46	50	46	56	66	31.5	18	30.5	3.5	PF 1
	DDWH-30S-10G	30	49	50	60	55	64	76	37	20	34.5	3.5	PF 1-1/4
	DDWH-38S-12G	38	55	60	70	60	72	87	41.5	22	40.5	3.5	PF 1-1/2

Series	Part No.	Tube O.D	D	H	h	h ₁	L	L ₁	ℓ	ℓ ₁	ℓ ₂	t	T
L PN-250	DDWH-06L-M10	6	14	14	17	17	27	24	12	8	10.5	2.5	M10 x 1
	DDWH-08L-M12	8	17	17	22	19	29	30	14.5	12	14	3	M12 x 1.5
	DDWH-10L-M14	10	19	19	22	19	30	30	15.5	12	14	3	M14 x 1.5
	DDWH-12L-M16	12	21	22	27	24	33	36	18	12	16.5	3	M16 x 1.5
	DDWH-15L-M18	15	23	27	30	27	36	39.5	20.5	12	18.5	3	M18 x 1.5
	DDWH-18L-M22	18	27	32	32	30	37	45	21	14	21.5	4.5	M22 x 1.5
PN-160	DDWH-22L-M26	22	31	36	41	36	44	53	27.5	16	24	3.5	M26 x 1.5
	DDWH-28L-M23	28	39	41	50	46	49	66	32	18	30.5	3.5	M33 x 2
	DDWH-35L-M42	35	49	50	60	55	58	76	36	20	35.5	3.5	M42 x 2
	DDWH-42L-M48	42	55	60	70	60	63	87	40.5	22	40.5	3.5	M48 x 2
S PN-315	DDWH-06S-M12	6	17	17	22	19	31	30	16.5	12	14	3	M12 x 1.5
	DDWH-08S-M14	8	19	19	22	19	31	30	16.5	12	14	3	M14 x 1.5
	DDWH-10S-M16	10	21	22	27	24	35	36	18.5	12	16.5	3	M16 x 1.5
	DDWH-12S-M18	12	23	24	30	27	36	39.5	20	12	18.5	3	M18 x 1.5
	DDWH-16S-M22	16	27	30	32	30	40	45	22	14	21.5	4.5	M22 x 1.5
PN-160	DDWH-20S-M27	20	32	36	41	36	48	53	26.5	16	24	3.5	M27 x 2
	DDWH-25S-M33	25	39	46	50	46	56	66	31.5	18	30.5	3.5	M33 x 2
	DDWH-30S-M42	30	49	50	60	55	64	76	37	20	35.5	3.5	M42 x 2
	DDWH-38S-M48	38	55	60	70	60	72	87	41.5	22	40.5	3.5	M48 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

High Pressure Banjo Tee
(BSP/Metric Parallel) with DKA Ring
DDTH-G/M



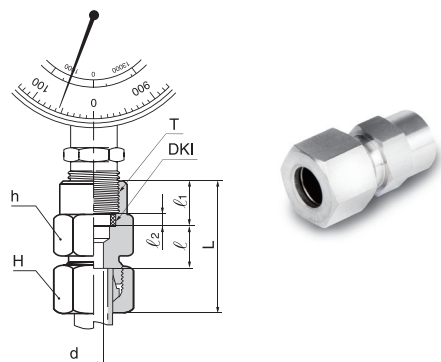
Series	Part No.	Tube O.D	D	H	h	h ₁	L	L ₁	ℓ	ℓ ₁	ℓ ₂	t	T
L PN-250	DDTH-06L-01G	6	14	14	17	17	27	24	12	8	10.5	2.5	PF 1/8
	DDTH-08L-02G	8	18	17	22	19	29	30	14.5	12	14	3	PF 1/4
	DDTH-10L-02G	10	18	19	22	19	30	30	15.5	12	14	3	PF 1/4
	DDTH-12L-03G	12	22	22	27	24	33	36	18	12	16.5	3	PF 3/8
	DDTH-15L-04G	15	26	27	32	30	37	45	21.5	14	21.5	4.5	PF 1/2
	DDTH-18L-04G	18	26	32	32	30	37	45	21	14	21.5	4.5	PF 1/2
PN-160	DDTH-22L-06G	22	32	36	41	36	44	53	27.5	16	24	3.5	PF 3/4
	DDTH-28L-08G	28	39	41	50	46	49	66	32	18	30.5	3.5	PF 1
	DDTH-35L-10G	35	49	50	60	55	58	76	36	20	35.5	3.5	PF 1-1/4
	DDTH-42L-12G	42	55	60	70	60	63	87	40.5	22	40.5	3.5	PF 1-1/2
S PN-315	DDTH-06S-02G	6	18	17	22	19	31	30	16.5	12	14	3	PF 1/4
	DDTH-08S-02G	8	18	19	22	19	31	30	16.5	12	14	3	PF 1/4
	DDTH-10S-03G	10	22	22	27	24	35	36	18.5	12	16.5	3	PF 3/8
	DDTH-12S-03G	12	22	24	27	24	35	36	18.5	12	16.5	3	PF 3/8
	DDTH-16S-04G	16	26	30	32	30	40	45	22	14	21.5	4.5	PF 1/2
PN-160	DDTH-20S-06G	20	32	36	41	36	48	53	26.5	16	24	3.5	PF 3/4
	DDTH-25S-08G	25	39	46	50	46	56	66	31.5	18	30.5	3.5	PF 1
	DDTH-30S-10G	30	49	50	60	55	64	76	37	20	34.5	3.5	PF 1-1/4
	DDTH-38S-12G	38	55	60	70	60	72	87	41.5	22	40.5	3.5	PF 1-1/2

Series	Part No.	Tube O.D	D	H	h	h ₁	L	L ₁	ℓ	ℓ ₁	ℓ ₂	t	T
L PN-250	DDTH-06L-M10	6	14	14	17	17	27	24	12	8	10.5	2.5	M10 x 1
	DDTH-08L-M12	8	17	17	22	19	29	30	14.5	12	14	3	M12 x 1.5
	DDTH-10L-M14	10	19	19	22	19	30	30	15.5	12	14	3	M14 x 1.5
	DDTH-12L-M16	12	21	22	27	24	33	36	18	12	16.5	3	M16 x 1.5
	DDTH-15L-M18	15	23	27	30	27	36	39.5	20.5	12	18.5	3	M18 x 1.5
	DDTH-18L-M22	18	27	32	32	30	37	45	21	14	21.5	4.5	M22 x 1.5
PN-160	DDTH-22L-M26	22	31	36	41	36	44	53	27.5	16	24	3.5	M26 x 1.5
	DDTH-28L-M23	28	39	41	50	46	49	66	32	18	30.5	3.5	M33 x 2
	DDTH-35L-M42	35	49	50	60	55	58	76	36	20	35.5	3.5	M42 x 2
	DDTH-42L-M48	42	55	60	70	60	63	87	40.5	22	40.5	3.5	M48 x 2
S PN-315	DDTH-06S-M12	6	17	17	22	19	31	30	16.5	12	14	3	M12 x 1.5
	DDTH-08S-M14	8	19	19	22	19	31	30	16.5	12	14	3	M14 x 1.5
	DDTH-10S-M16	10	21	22	27	24	35	36	18.5	12	16.5	3	M16 x 1.5
	DDTH-12S-M18	12	23	24	30	27	36	39.5	20	12	18.5	3	M18 x 1.5
	DDTH-16S-M22	16	27	30	32	30	40	45	22	14	21.5	4.5	M22 x 1.5
PN-160	DDTH-20S-M27	20	32	36	41	36	48	53	26.5	16	24	3.5	M27 x 2
	DDTH-25S-M33	25	39	46	50	46	56	66	31.5	18	30.5	3.5	M33 x 2
	DDTH-30S-M42	30	49	50	60	55	64	76	37	20	35.5	3.5	M42 x 2
	DDTH-38S-M48	38	55	60	70	60	72	87	41.5	22	40.5	3.5	M48 x 2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

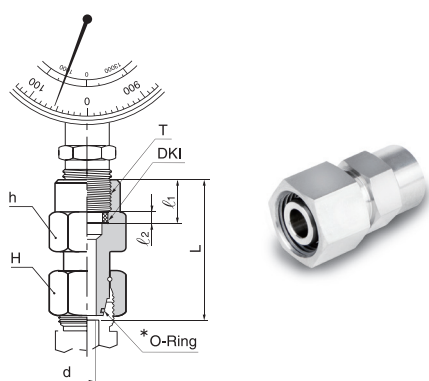
Pressure Gauge Connector
(BSP Parallel)
with DKI-Ring
DDGC-G



Series	Part No.	Tube O.D	d	H	h	L	l ₁	l ₂	T
L PN-315	DDGC-06L-02G	6	2.5	14	19	37	7.5	14.5	4.5 PF 1/4
	DDGC-08L-02G	8	5.5	17	19	37	7.5	14.5	4.5 PF 1/4
	DDGC-10L-02G	10	5.5	19	19	38	8.5	14.5	4.5 PF 1/4
	DDGC-12L-02G	12	5.5	22	19	38	8.5	14.5	4.5 PF 1/4
S PN-630	DDGC-06S-04G	6	3.5	17	27	46	11	20	5 PF 1/2
	DDGC-08S-04G	8	3.5	19	27	46	11	20	5 PF 1/2
	DDGC-10S-04G	10	7	22	27	47	10.5	20	5 PF 1/2
	DDGC-12S-04G	12	7	24	27	47	10.5	20	5 PF 1/2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Swivel Gauge Adaptor
(BSP Parallel) with Cone
and DKI-Ring
DDGE-G

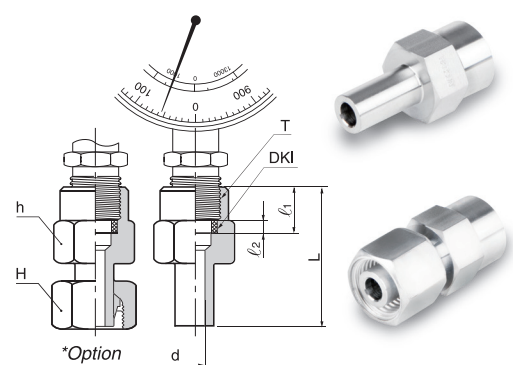


Series	Part No.	Tube O.D	d	H	h	L	l ₁	l ₂	T
L PN-315	DDGE-06L-02G	6	2.5	14	19	35.5	14.5	4.5	PF 1/4
	DDGE-08L-02G	8	4	17	19	35.5	14.5	4.5	PF 1/4
	DDGE-10L-02G	10	5.5	19	19	36	14.5	4.5	PF 1/4
	DDGE-12L-02G	12	5.5	22	19	36	14.5	4.5	PF 1/4
S PN-630	DDGE-06S-04G	6	2.5	17	27	42.5	20	5	PF 1/2
	DDGE-08S-04G	8	4	19	27	43	20	5	PF 1/2
	DDGE-10S-04G	10	6	22	27	43.5	20	5	PF 1/2
	DDGE-12S-04G	12	7	24	27	45	20	5	PF 1/2
	DDGE-06S-02G	6	2.5	17	19	35.5	14.5	4.5	PF 1/4
	DDGE-08S-02G	8	4	19	19	35.5	14.5	4.5	PF 1/4
	DDGE-10S-02G	10	6	22	19	36	14.5	4.5	PF 1/4
	DDGE-12S-02G	12	7	24	19	39	14.5	4.5	PF 1/4

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Pressure Gauge Connector
(BSP Parallel) with Standpipe
and DKI-Ring
DDGA-G



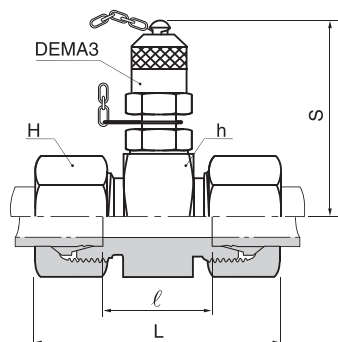
Series	Part No.	Tube O.D	d	H	h	L	l ₁	l ₂	T
L PN-315	DDGA-06L-02G	6	3.5	14	19	38	14.5	4.5	PF 1/4
	DDGA-08L-02G	8	5.5	17	19	38	14.5	4.5	PF 1/4
	DDGA-10L-02G	10	7.5	19	19	39.5	14.5	4.5	PF 1/4
	DDGA-12L-02G	12	9	22	19	40.5	14.5	4.5	PF 1/4
S PN-630	DDGA-06S-04G	6	3.5	17	27	45	20	5	PF 1/2
	DDGA-08S-04G	8	4.5	19	27	45	20	5	PF 1/2
	DDGA-10S-04G	10	6.5	22	27	47	20	5	PF 1/2
	DDGA12S-04G	12	7.5	24	27	47.5	20	5	PF 1/2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*Option : Preswaging nut and cutting ring - DDGA-06S-04G-PS-S6

**Tee Test Couplinge
with threaded Connection
DDEMA3**

DDGMA

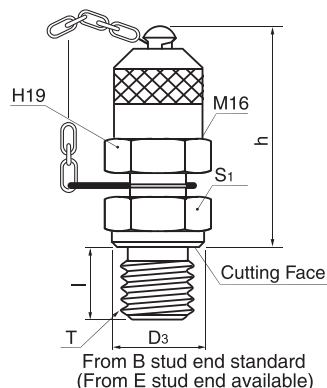


Series	Part No.	Tube O.D	H	h	L	ℓ_1	S
L PN-315	DDGMA3-06L	6	14	24	50	20.5	50
	DDGMA3-08L	8	17	24	50	20.5	50
	DDGMA3-10L	10	19	24	52	22.5	50
	DDGMA3-12L	12	22	24	52	22.5	50
	DDGMA3-15L	15	27	30	55	24.5	53
	DDGMA3-18L	18	32	32	56	23.5	54
PN-160	DDGMA3-22L	22	36	36	60	27.5	56
	DDGMA3-28L	28	41	41	61	27.5	58
	DDGMA3-35L	35	50	46	69	25.5	61
	DDGMA3-42L	42	60	55	70	24.5	65
S PN-630	DDGMA3-06S	6	17	24	54	24.5	50
	DDGMA3-08S	8	19	24	54	24.5	50
	DDGMA3-10S	10	22	24	56	23.5	50
	DDGMA3-12S	12	24	24	56	23.5	50
	DDGMA3-14S	14	27	27	62	26.5	51
PN-400	DDGMA3-16S	16	30	30	62	25.5	53
	DDGMA3-20S	20	36	36	69	25.5	56
	DDGMA3-25S	25	46	41	75	26.5	58
	DDGMA3-30S	30	50	46	81	27.5	61
PN-315	DDGMA3-38S	38	60	55	90	29	65

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

**Test Coupling
with threaded Connection
DDEMA3**

DDEMA3

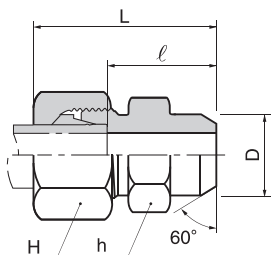


Series	Part No.	D_3	h	I	S_1	T
PN-630	DDEMA3-01G	14	41	8	17	PF 1/8
	DDEMA3-02G	18	41	10	19	PF 1/4
	DDEMA3-03G	22	41	12	22	PF 3/8
	DDEMA3-04G	26	41	14	27	PF 1/2
	DDEMA3-M10	14	41	8	17	M10 x 1
	DDEMA3-M12	17	41	12	17	M12 x 1.5
	DDEMA3-M14	19	41	12	19	M14 x 1.5
	DDEMA3-M16	21	41	12	22	M16 x 1.5

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Welding Connector

DDAS

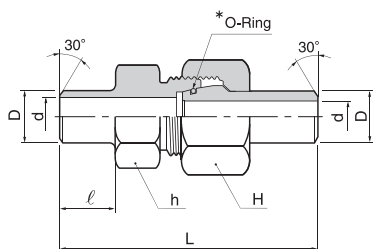


Series	Part No.	Tube O.D	D	H	h	L	ℓ
L PN-315	DDAS-06L	6	10	14	12	29	14
	DDAS-08L	8	12	17	14	31	16
	DDAS-10L	10	14	19	17	33	18
	DDAS-12L	12	16	22	19	33	18
	DDAS-15L	15	19	27	22	37	22
	DDAS-18L	18	22	32	27	40	23.5
PN-160	DDAS-22L	22	27	36	32	45	28.5
	DDAS-28L	28	32	41	41	47	30.5
	DDAS-35L	35	40	50	46	54	32.5
	DDAS-42L	42	46	60	55	58	35
S PN-630	DDAS-06S	6	11	17	14	34	19
	DDAS-08S	8	13	19	17	36	21
	DDAS-10S	10	15	22	19	39	22.5
	DDAS-12S	12	17	24	22	41	24.5
	DDAS-14S	14	19	27	24	45	27
PN-400	DDAS-16S	16	21	30	27	45	26.5
	DDAS-20S	20	26	36	32	51	29.5
	DDAS-25S	25	31	46	41	56	32
	DDAS-30S	30	36	50	46	62	35.5
PN-315	DDAS-38S	38	44	60	55	69	38

Dimensions given approx. length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Welding Connector
with DAK

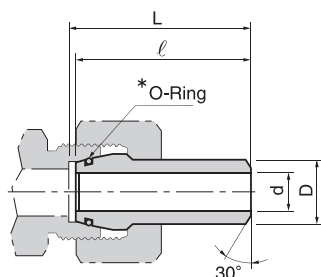
DDASK



Pressure Rating	Part No.	Tube O.D	d	H	h	L	ℓ
PN-248	DDASK-10-1.0	10	8	22	19	58	10
PN-357	DDASK-10-1.5	10	7	22	19	58	10
PN-458	DDASK-10-2.0	10	6	22	19	58	10
PN-303	DDASK-12-1.5	12	9	24	22	65	15
PN-391	DDASK-12-2.0	12	8	24	22	65	15
PN-474	DDASK-12-2.5	12	7	24	22	65	15
PN-234	DDASK-16-1.5	16	13	30	27	74.5	16.5
PN-303	DDASK-16-2.0	16	12	30	27	74.5	16.5
PN-370	DDASK-16-2.5	16	11	30	27	74.5	16.5
PN-433	DDASK-16-3.0	16	10	30	27	74.5	16.5
PN-249	DDASK-20-2.0	20	16	36	32	84	19
PN-305	DDASK-20-2.5	20	15	36	32	84	19
PN-357	DDASK-20-3.0	20	14	36	32	84	19
PN-458	DDASK-20-4.0	20	12	36	32	84	19
PN-292	DDASK-25-3.0	25	19	46	41	94.5	19.5
PN-378	DDASK-25-4.0	25	17	46	41	94.5	19.5
PN-458	DDASK-25-5.0	25	15	46	41	94.5	19.5
PN-248	DDASK-30-3.0	30	24	50	46	102	23
PN-321	DDASK-30-4.0	30	22	50	46	102	23
PN-391	DDASK-30-5.0	30	20	50	46	102	23
PN-460	DDASK-30-6.0	30	18	50	46	102	23
PN-260	DDASK-38-4.0	38	30	60	55	111	23
PN-318	DDASK-38-5.0	38	28	60	55	111	23
PN-373	DDASK-38-6.0	38	26	60	55	111	23
PN-427	DDASK-38-7.0	38	24	60	55	111	23

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

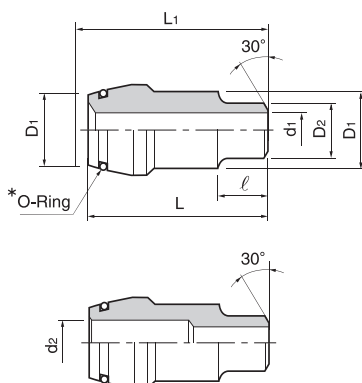
*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Welding Nipple
with *O-Ring**DDAK**

Pressure Rating	Part No.	Tube O.D	d	L	ℓ
PN-248	DDAK-10-1.0T	10	8	35.5	33
PN-357	DDAK-10-1.5T	10	7	35.5	33
PN-458	DDAK-10-2.0T	10	6	35.5	33
PN-303	DDAK-12-1.5T	12	9	35.5	33
PN-391	DDAK-12-2.0T	12	8	35.5	33
PN-474	DDAK-12-2.5T	12	7	35.5	33
PN-234	DDAK-16-1.5T	16	13	42.5	39
PN-303	DDAK-16-2.0T	16	12	42.5	39
PN-370	DDAK-16-2.5T	16	11	42.5	39
PN-433	DDAK-16-3.0T	16	10	42.5	39
PN-249	DDAK-20-2.0T	20	16	47.5	43.5
PN-305	DDAK-20-2.5T	20	15	47.5	43.5
PN-357	DDAK-20-3.0T	20	14	47.5	43.5
PN-458	DDAK-20-4.0T	20	12	47.5	43.5
PN-292	DDAK-25-3.0T	25	19	55	49.5
PN-378	DDAK-25-4.0T	25	17	55	49.5
PN-458	DDAK-25-5.0T	25	15	55	49.5
PN-248	DDAK-30-3.0T	30	24	58.5	51.5
PN-321	DDAK-30-4.0T	30	22	58.5	51.5
PN-391	DDAK-30-5.0T	30	20	58.5	51.5
PN-460	DDAK-30-6.0T	30	18	58.5	51.5
PN-260	DDAK-38-4.0T	38	30	66	56.5
PN-318	DDAK-38-5.0T	38	28	66	56.5
PN-373	DDAK-38-6.0T	38	26	66	56.5
PN-427	DDAK-38-7.0T	38	24	66	56.5

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

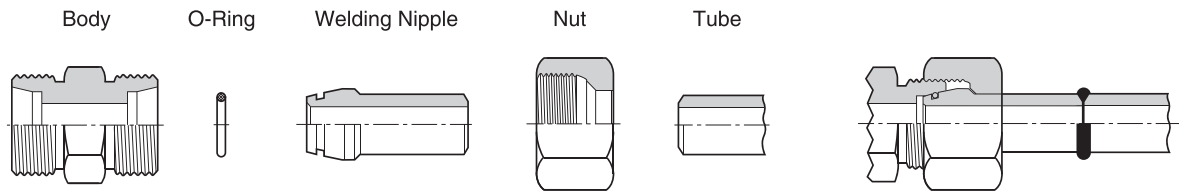
Reducing Welding Nipple
with *O-Ring**DDAKR**

Pressure Rating	Part No.	Tube O.D		d1	d2	L	L ₁	ℓ
		D ₁	D ₂					
PN-526	DDAKR-10-06-1.5T	10	6	3	5	35	37.5	12
PN-526	DDAKR-10-08-2.0T	10	8	4	-	35	37.5	12
PN-526	DDAKR-12-08-2.0T	12	8	4	6	35	37.5	14
PN-357	DDAKR-12-10-1.5T	12	10	7	-	35	37.5	14
PN-474	DDAKR-16-12-2.5T	16	12	7	-	43	46.5	15
PN-474	DDAKR-20-12-2.5T	20	12	7	-	47.5	51.5	15
PN-433	DDAKR-20-16-3.0T	20	16	10	-	49.5	53.5	17
PN-433	DDAKR-25-16-3.0T	25	16	10	-	51	56.5	17
PN-458	DDAKR-25-20-4.0T	25	20	12	-	54	59.5	20
PN-303	DDAKR-30-16-2.0T	30	16	12	-	60	67	17
PN-303	DDAKR-30-20-2.5T	30	20	15	-	63	70	20
PN-292	DDAKR-30-25-3.0T	30	25	19	-	63	70	20
PN-303	DDAKR-38-16-2.0T	38	16	12	-	69.5	79	17
PN-303	DDAKR-38-20-2.5T	38	20	15	-	72.5	82	20
PN-292	DDAKR-38-25-3.0T	38	25	19	-	72.5	82	20
PN-321	DDAKR-38-30-4.0T	38	30	22	-	72.5	82	20

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Installation Instruction for Welding Nipple Fittings



- Step1. Pipe to be cut at right angle by sawing and freed from burrs both inside and outside.
 Step2. Slide nut onto the weld nipple.
 Step3. Welding nipple and tube to be welded together and weld to be cleaned between runs.
 The tube and welding nipple must be aligned.
 Step4. Fit the O-Ring: Attention, do not twist O-Ring: taper, nut and cone must be clean.
 Step5. Thread on body and nut to be oiled.
 Step6. Screw on nut by hand. Fully tighten using a spanner with a 1/3 turn.

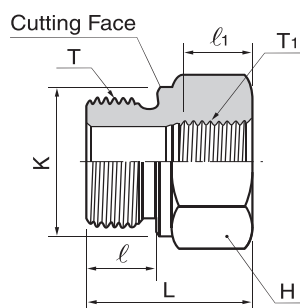
Ordering information for Welding Nipple Fittings

Order No.	Figures
	DDU (Without Cutting Ring)+DDAK
DDGV	
	DDL (Without Cutting Ring)+DDAK
DDWV	
	DDT (Without Cutting Ring)+DDAK
DDTV	
	DDSWVE (Without Cutting Ring)+DDAK
DDWSEV	

Order No.	Figures
	DDMC (Without Cutting Ring)+DDAK
DDGEV	
	DDMC-ED (Without Cutting Ring)+DDAK
DDGUV	
	DDMC (Without Cutting Ring)+DDAK
DDGEV-R	
	DDFC (Without Cutting Ring)+DDAK
DDGAI	
	DDL (Without Cutting Ring)+DDAK
DDWEV	

**Male Female Adaptor
(BSP Parallel)**

DMFAD



From B stud end

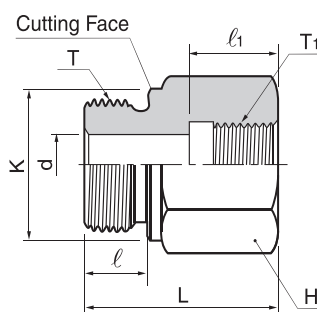


Pressure Rating	Part No.	H	K	L	ℓ	ℓ ₁	Male stud (T)	Female stud (T ₁)
PN-630	DMFAD-03-01G	22	22	22.5	12	8	PF 3/8	PF 1/8
	DMFAD-04-01G	27	26	24	14	8	PF 1/2	PF 1/8
PN-400	DMFAD-04-02G	27	26	24	14	12	PF 1/2	PF 1/4
	DMFAD-06-02G	32	32	26	16	12	PF 3/4	PF 1/4
	DMFAD-06-03G	32	32	26	16	12	PF 3/4	PF 3/8
	DMFAD-08-02G	41	39	29	18	12	PF 1	PF 1/4
	DMFAD-08-03G	41	39	29	18	12	PF 1	PF 3/8
	DMFAD-08-04G	41	39	29	18	14	PF 1	PF 1/2
PN-250	DMFAD-10-04G	50	49	32	20	14	PF 1-1/4	PF 1/2
	DMFAD-10-06G	50	49	32	20	16	PF 1-1/4	PF 3/4
	DMFAD-12-04G	55	55	36	22	14	PF 1-1/2	PF 1/2
	DMFAD-12-06G	55	55	36	22	16	PF 1-1/2	PF 3/4
	DMFAD-12-08G	55	55	36	22	18	PF 1-1/2	PF 1

Male/ Female thread adaptors with metric and NPT thread on request. All dimensions are in millimeters, for reference only subject to change.

**Male Female Adaptor
(BSP Parallel)**

DMFAE



From B stud end

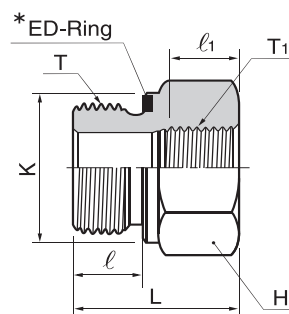


Pressure Rating	Part No.	d	H	K	L	ℓ	ℓ ₁	Male stud (T)	Female stud (T ₁)
PN-630	DMFAE-01-02G	4	19	14	31	8	17	PF 1/8	PF 1/4
	DMFAE-01-03G	4	24	14	32	8	17	PF 1/8	PF 3/8
	DMFAE-02-01G	5	19	18	28	12	12	PF 1/4	PF 1/8
	DMFAE-02-03G	5	24	18	36	12	17	PF 1/4	PF 3/8
	DMFAE-02-04G	5	30	18	40	12	20	PF 1/4	PF 1/2
	DMFAE-03-02G	8	22	22	36	12	17	PF 3/8	PF 1/4
PN-400	DMFAE-03-04G	8	30	22	41	12	20	PF 3/8	PF 1/2
	DMFAE-02-06G	5	36	18	43	12	22	PF 1/4	PF 3/4
	DMFAE-04-03G	12	27	26	36	14	17	PF 1/2	PF 3/8
	DMFAE-04-06G	12	36	26	46	14	22	PF 1/2	PF 3/4
	DMFAE-04-08G	12	41	26	49	14	24.5	PF 1/2	PF 1
	DMFAE-06-04G	16	32	32	41	16	20	PF 3/4	PF 1/2
	DMFAE-06-08G	16	41	32	51	16	24.5	PF 3/4	PF 1
	DMFAE-06-10G	16	55	32	55	1	26.5	PF 3/4	PF 1-1/4
PN-250	DMFAE-08-06G	20	41	39	47	18	22	PF 1	PF 3/4
	DMFAE-03-06G	8	36	22	44	12	22	PF 3/8	PF 3/4
	DMFAE-04-10G	10	55	26	53	14	26.5	PF 1/2	PF 1-1/4
	DMFAE-06-12G	16	60	32	57	16	28.5	PF 3/4	PF 1-1/2
	DMFAE-08-10G	20	55	39	57	18	26.5	PF 1	PF 1-1/4
	DMFAE-08-12G	20	60	39	59	18	28.5	PF 1	PF 1-1/2
	DMFAE-10-08G	25	50	49	52	20	24.5	PF 1-1/4	PF 1
	DMFAE-10-12G	25	60	49	60	20	28.5	PF 1-1/4	PF 1-1/2
	DMFAE-12-10G	32	55	55	58	22	26.5	PF 1-1/2	PF 1-1/4
	DMFAE-16-12G	40	70	68	62	24	28.5	PF 2	PF 1-1/2

Male/ Female thread adaptors with metric and NPT thread on request. All dimensions are in millimeters, for reference only subject to change.

Male Female Adaptor
(BSP Parallel) with *ED-Ring

DMFAD-ED



From B stud end



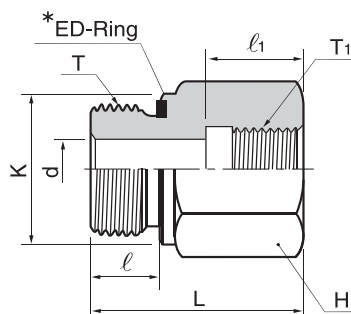
Pressure Rating	Part No.	H	K	L	ℓ	ℓ ₁	Male stud (T)	Female stud (T ₁)
PN-630	DMFAD-03ED-01G	22	22	22.5	12	8	PF 3/8	PF 1/8
	DMFAD-04ED-01G	27	26	24	14	8	PF 1/2	PF 1/8
PN-400	DMFAD-04ED-02G	27	26	24	14	12	PF 1/2	PF 1/4
	DMFAD-06ED-02G	32	32	26	16	12	PF 3/4	PF 1/4
	DMFAD-06ED-03G	32	32	26	16	12	PF 3/4	PF 3/8
	DMFAD-08ED-02G	41	39	29	18	12	PF 1	PF 1/4
	DMFAD-08ED-03G	41	39	29	18	12	PF 1	PF 3/8
	DMFAD-08ED-04G	41	39	29	18	14	PF 1	PF 1/2
PN-250	DMFAD-10ED-04G	50	49.9	32	20	14	PF 1-1/4	PF 1/2
	DMFAD-10ED-06G	50	49.9	32	20	16	PF 1-1/4	PF 3/4
	DMFAD-12ED-04G	55	55	36	22	14	PF 1-1/2	PF 1/2
	DMFAD-12ED-06G	55	55	36	22	16	PF 1-1/2	PF 3/4
	DMFAD-12ED-08G	55	55	36	22	18	PF 1-1/2	PF 1

All dimensions are in millimeters, for reference only subject to change.

*ED-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Male Female Adaptor
(BSP Parallel) with *ED-Ring

DMFAE-ED



From B stud end



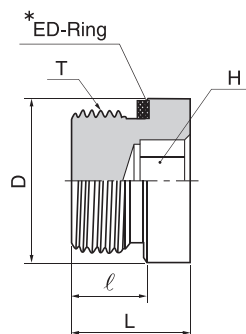
Pressure Rating	Part No.	d	H	K	L	ℓ	ℓ ₁	Male stud (T)	Female stud (T ₁)
PN-630	DMFAE-01ED-02G	4	19	14	31	8	17	PF 1/8	PF 1/4
	DMFAE-01ED-03G	4	24	14	32	8	17	PF 1/8	PF 3/8
	DMFAE-02ED-01G	5	19	18	28	12	12	PF 1/4	PF 1/8
	DMFAE-02ED-03G	5	24	18	36	12	17	PF 1/4	PF 3/8
	DMFAE-02ED-04G	5	30	18	40	12	20	PF 1/4	PF 1/2
	DMFAE-03ED-02G	8	22	22	36	12	17	PF 3/8	PF 1/4
PN-400	DMFAE-03ED-04G	8	30	22	41	12	20	PF 3/8	PF 1/2
	DMFAE-02ED-06G	5	36	18	43	12	22	PF 1/4	PF 3/4
	DMFAE-04ED-03G	12	27	26	36	14	17	PF 1/2	PF 3/8
	DMFAE-04ED-06G	12	36	26	46	14	22	PF 1/2	PF 3/4
	DMFAE-04ED-08G	12	41	26	49	14	24.5	PF 1/2	PF 1
	DMFAE-06ED-04G	16	32	32	41	16	20	PF 3/4	PF 1/2
	DMFAE-06ED-08G	16	41	32	51	16	24.5	PF 3/4	PF 1
	DMFAE-06ED-10G	16	55	32	55	1	26.5	PF 3/4	PF 1-1/4
PN-250	DMFAE-08ED-06G	20	41	39	47	18	22	PF 1	PF 3/4
	DMFAE-03ED-06G	8	36	22	44	12	22	PF 3/8	PF 3/4
	DMFAE-04ED-10G	10	55	26	53	14	26.5	PF 1/2	PF 1-1/4
	DMFAE-06ED-12G	16	60	32	57	16	28.5	PF 3/4	PF 1-1/2
	DMFAE-08ED-10G	20	55	39	57	18	26.5	PF 1	PF 1-1/4
	DMFAE-08ED-12G	20	60	39	59	18	28.5	PF 1	PF 1-1/2
	DMFAE-10ED-08G	25	50	49.9	52	20	24.5	PF 1-1/4	PF 1
	DMFAE-10ED-12G	25	60	49.9	60	20	28.5	PF 1-1/4	PF 1-1/2
	DMFAE-12ED-10G	32	55	55	58	22	26.5	PF 1-1/2	PF 1-1/4
	DMFAE-16ED-12G	40	70	68	62	24	28.5	PF 2	PF 1-1/2

All dimensions are in millimeters, for reference only subject to change.

*ED-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

**Blanking Plugs for Port
with *ED-Ring**

DDVSTI-GED

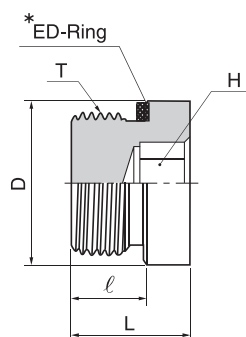


Pressure Rating	Part No.	T	D	H	L	ℓ
PN-400	DDVSTI-01GED	PF 1/8	13.9	5	12	8
	DDVSTI-02GED	PF 1/4	18.9	6	17	12
	DDVSTI-03GED	PF 3/8	21.9	8	17	12
	DDVSTI-04GED	PF 1/2	26.9	10	19	14
	DDVSTI-06GED	PF 3/4	31.9	12	21	16
	DDVSTI-08GED	PF 1	39.9	17	22.5	16
PN-250	DDVSTI-10GED	PF 1-1/4	49.9	22	22.5	16
	DDVSTI-12GED	PF 1-1/2	54.9	24	22.5	16

All dimensions are in millimeters, for reference only subject to change.
*ED-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

**Blanking Plugs for Port
with *ED-Ring**

DDVSTI-MED

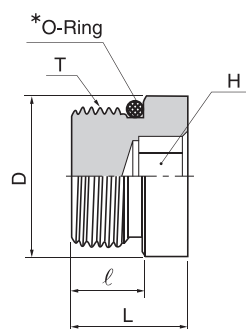


Pressure Rating	Part No.	T	D	H	L	ℓ
PN-400	DDVSTI-M10ED	M10 x 1	13.9	5	12	8
	DDVSTI-M12ED	M12 x 1.5	16.9	6	17	12
	DDVSTI-M14ED	M14 x 1.5	18.9	6	17	12
	DDVSTI-M16ED	M16 x 1.5	21.9	8	17	12
	DDVSTI-M18ED	M18 x 1.5	23.9	8	17	12
	DDVSTI-M20ED	M20 x 1.5	25.9	10	19	14
	DDVSTI-M22ED	M22 x 1.5	26.9	10	19	14
	DDVSTI-M26ED	M26 x 1.5	31.9	12	21	16
	DDVSTI-M27ED	M27 x 2	31.9	12	21	16
	DDVSTI-M33ED	M33 x 2	39.9	17	22.5	16
PN-250	DDVSTI-M42ED	M42 x 2	49.9	22	22.5	16
	DDVSTI-M48ED	M48 x 2	54.9	24	22.5	16

All dimensions are in millimeters, for reference only subject to change.
*ED-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

**Blanking Plugs with *O-Ring
(Accord.to ISO 6149-3/DIN 3582)**

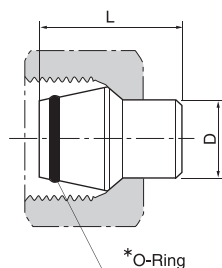
DDVSTI



Pressure Rating	Part No.	T	D	H	L	ℓ
PN-630	DDVSTI-M10	M10 x 1	13	5	14	10
	DDVSTI-M12	M12 x 1.5	17	6	16.5	11.5
	DDVSTI-M14	M14 x 1.5	19	6	16.5	11.5
	DDVSTI-M16	M16 x 1.5	21	6	18	13
	DDVSTI-M18	M18 x 1.5	23	8	19.5	14.5
PN-400	DDVSTI-M22	M22 x 1.5	27	10	20.5	15.5
	DDVSTI-M26	M26 x 1.5	31	12	21	16
	DDVSTI-M27	M27 x 2	32	12	24	19
	DDVSTI-M33	M33 x 2	38	17	25.5	19
	DDVSTI-M42	M42 x 2	48	22	26	19.5

All dimensions are in millimeters, for reference only subject to change.
*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Blanking Plug with *O-Ring

DDVKA

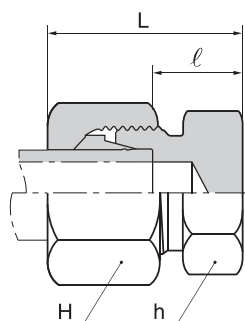
Series	Part No.	Tube O.D	L
L PN-315 / PN-630	DDVKA-06	6	18.5
	DDVKA-08	8	18.5
	DDVKA-10	10	20
	DDVKA-12	12	20.5
	DDVKA-15L	15	20.5
	DDVKA-18L	18	22.5
PN-160	DDVKA-22L	22	25
	DDVKA-28L	28	25.5
	DDVKA-35L	35	30
	DDVKA-42L	42	30
S PN-630	DDVKA-14S	14	22.5
PN-400	DDVKA-16S	16	23.5
	DDVKA-20S	20	28.5
	DDVKA-25S	25	29
	DDVKA-30S	30	30.5
PN-315	DDVKA-38S	38	33

From 6mm to 12mm OD plug, both L Series and S Series are used same plug of the tube OD.

All dimensions are in millimeters, for reference only subject to change.

*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

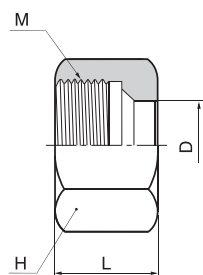
Tube Cap

DDCA

Series	Part No.	Tube O.D	H	h	L	ℓ
L PN-315	DDCA-06L	6	14	12	22	7
	DDCA-08L	8	17	14	23	8
	DDCA-10L	10	19	17	24	9
	DDCA-12L	12	22	19	25	10
	DDCA-15L	15	27	24	26	11
	DDCA-18L	18	32	27	28	11.5
PN-160	DDCA-22L	22	36	32	30	13.5
	DDCA-28L	28	41	41	31	14.5
	DDCA-35L	35	50	46	36	14.5
	DDCA-42L	42	60	55	39	16
S PN-630	DDCA-06S	6	17	14	26	11
	DDCA-08S	8	19	17	28	13
	DDCA-10S	10	22	19	29	12.5
	DDCA-12S	12	24	22	31	14.5
	DDCA-14S	14	27	24	34	16
PN-400	DDCA-16S	16	30	27	34	15.5
	DDCA-20S	20	36	32	39	17.5
	DDCA-25S	25	46	41	44	20
	DDCA-30S	30	50	46	47	20.5
PN-315	DDCA-38S	38	60	55	54	23

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Nut
DDN

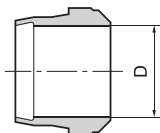


Series	Part No.	Tube O.D (D)	H	L	M
LL Very Light	DDN-04LL	4	10	11.5	M8 x 1.0
	DDN-06LL	6	12	12	M10 x 1.0
	DDN-08LL	8	14	12.5	M12 x 1.0
	DDN-10LL	10	17	12.5	M14 x 1.0
	DDN-12LL	12	19	13	M16 x 1.0
L Light	DDN-06L	6	14	15	M12 x 1.5
	DDN-08L	8	17	15	M14 x 1.5
	DDN-10L	10	19	16	M16 x 1.5
	DDN-12L	12	22	16	M18 x 1.5
	DDN-15L	15	27	17.5	M22 x 1.5
	DDN-18L	18	32	18	M26 x 1.5
	DDN-22L	22	36	20.5	M30 x 2
	DDN-28L	28	41	21	M36 x 2
	DDN-35L	35	50	24	M45 x 2
S Heavy	DDN-42L	42	60	24	M52 x 2
	DDN-06S	6	17	16.5	M14 x 1.5
	DDN-08S	8	19	16.5	M16 x 1.5
	DDN-10S	10	22	17.5	M18 x 1.5
	DDN-12S	12	24	18	M20 x 1.5
	DDN-14S	14	27	20.5	M22 x 1.5
	DDN-16S	16	30	21	M24 x 1.5
	DDN-20S	20	36	24	M30 x 2
	DDN-25S	25	46	27	M36 x 2
	DDN-30S	30	50	29.5	M42 x 2
	DDN-38S	38	60	32.5	M52 x 2

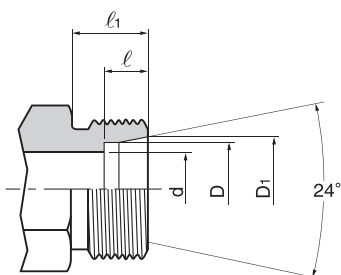
All dimensions are in millimeters, for reference only subject to change.

Cutting Ring

DDS



Compression end Detail



Series	Part No.	Tube O.D (D)	D_1	d	ℓ	ℓ_1
LL Very Light	DDS-04LL	4	5	3	4	8
	DDS-06LL	6	7.5	4.5	5.5	8
	DDS-08LL	8	9.5	6	5.5	9
	DDS-10LL	10	11.5	8	6	9
	DDS-12LL	12	13.5	10	6	9
L Light	DDS-06L	6	8.1	4	7	10
	DDS-08L	8	10.1	6	7	10
	DDS-10L	10	12.3	8	7	11
	DDS-12L	12	14.3	10	7	11
	DDS-15L	15	17.3	12	7	12
	DDS-18L	18	20.3	15	7.5	12
	DDS-22L	22	24.3	19	7.5	14
	DDS-28L	28	30.3	24	7.5	14
	DDS-35L	35	38	30	10.5	16
S Heavy	DDS-42L	42	45	36	11	16
	DDS-06S	6	8.1	4	7	12
	DDS-08S	8	10.1	5	7	12
	DDS-10S	10	12.3	7	7.5	12
	DDS-12S	12	14.3	8	7.5	12
	DDS-14S	14	16.3	10	8	14
	DDS-16S	16	18.3	12	8.5	14
	DDS-20S	20	22.9	16	10.5	16
	DDS-25S	25	27.9	20	12	18
	DDS-30S	30	33	25	13.5	20
	DDS-38S	38	41	32	16	22

All dimensions are in millimeters, for reference only subject to change.

S-LOK®

Bite Type Tube Fittings (JIS B2351)

The best partner for value creation
We support the innovations of customer



03



Catalogue No. S-LOK Mar.2024

General Information For Our Bite Type Tube Fittings.

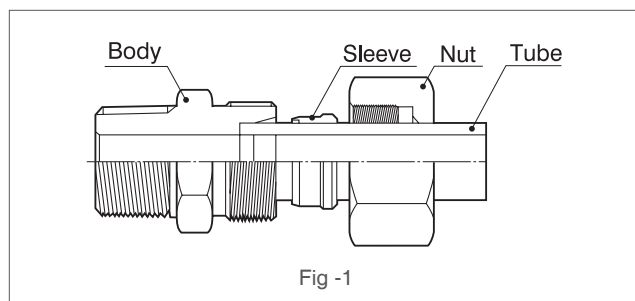
HANSUN bite type tube fittings are precision-machined, under strict quality control. HANSUN bite type tube fittings are the flareless tube fitting with the visible bite. This added safety feature makes them the preferred fitting for non-flared tube connections.

How Do They Work?

The bite type flareless hydraulic tube fitting is designed to work on medium to heavy wall tubing that is hard to flare.

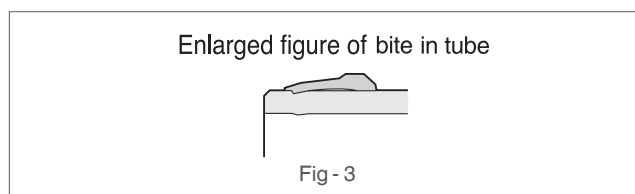
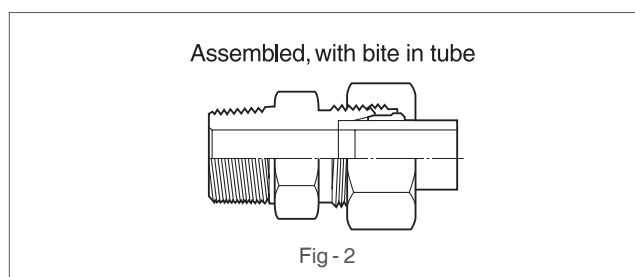
It consists of three parts :

1. body, 2. sleeve, 3. nut. (As shown in Fig-1)



The sleeve is driven forward on the tube by the nut.

As the sleeve moves forward it meets the seal seat angle of the body which causes the sleeve to cam inward into the tube. The sleeve then bites into the tube causing a small ridge of tube material to be pushed up in front of the biting edge of the sleeve. (As shown in Fig-2&3)



The make-up of the fitting is critical in that the tube must be bottomed against the tube stop in the body or presetting tool during make up. If it is not bottomed the tube will move forward with the sleeve and a bite will not be achieved make sure the tube is bottomed.

A check is possible to see if the tube is bottomed during make up, To make this check inspect the end of the tube and see if a circular appearing ring has been impressed into the tube end face. This impression may be caused by the tube stop which has a slight reverse angle rather than a flat face.

Material Specifications

Parts	Steel	Stainless Steel	Brass
Forged body	S20C-S48C	SUS316 or A182 F316	C3771
Bar Stock Body	S20C-S48C	SUS316 or A276/A479 S316	C3604
Cold Formed Nut	S10C-S20C or JIS G3507		
Bar Stock Nut	S20C-S48C	SUS316-SUS304 or A276/A479 S316/S304	C3604
Sleeve	S10C	SUS316-SUS304 or A276/A479 S316/S304	C3604

Gasket and O-ring Temperature Ratings

Component	Material	Temperature Ratings
O-ring	NBR(Buna N)	-31°F to 230°F of (-35°C to 110°C)
	FKM(Viton®)	-20°F to 400°F (-28°C to 204°C)
SGC	Copper	-325°F to 400°F (-198°C to 204°C)
SGB	NBR(Buna N)	-13°F to 230°F of (-25°C to 110°C)
	FKM(Viton®)	5°F to 400°F (-15°C to 204°C)
Thread sealant teflon tape		-320°F to 450°F (-196°C to 232°C)

Applicable Pressure Rating

Our standard specifications of the fittings are as follows

Fitting Size (applicable Tube O.D)	4 ~ 15	16 ~ 22	25 ~ 28	30 ~ 38	40 ~ 45
Rated pressure (kgf/cm ²)	500	400	350	250	210
Max.working temperature (°C)	300				

The Rated Pressure for the fittings are determined based on the results of the design specification confirmed by severe repetitive tests; the rated pressures are determined for each size of fittings while the safety factor of as much as 4 is taken into account in the design.

↗ Suitable Tubing Materials

Common material of tubing includes :

Steel - Seamless, fully annealed, also welded and redrawn type suitable for bending. Maximum hardness, Rockwell B72.

Stainless Steel - Seamless, fully annealed, also welded redrawn, fully annealed suitable for bending. Maximum hardness, Rockwell B90.

Copper - Seamless coils, soft or light annealed, Maximum hardness Rockwell F55. Straight lengths. light drawn and general purpose. Maximum hardness of 60 on Rockwell 30T scale.

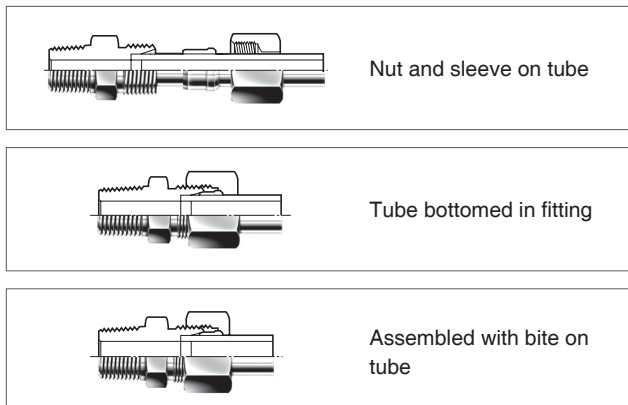
↗ Assembly Instructions

Cutting The Tube

Cut tube squarely and de-burr lightly the end both internally and externally.

Sleeve Placement

Slip nut and sleeve onto tubing. Be sure the long straight end of the sleeve points toward tube end.



Lubrication

Lightly lubricate threads on tool or body as well as the tail and lead end of the sleeve with extreme friction lubricant.

Pre-Setting

Insert tube end into tool or fitting until it sits on the shoulder(to hold tube motionless during pre-setting) and screw the nut down with finger tight.

Final Setting

Wrench nut down 1-1/2 turns to pre-set the sleeve(Reliable make-up of all flareless tube fittings is dependent upon the sleeve traveling a prescribed distance into tapered fitting throat in order to bite into the tube and effect a positive grip and seal.

↗ Reassemble For Final Installation

Insert the tube into the fitting body and wrench the nut down until a sudden increase in torque occurs. From this point turn the nut an additional 1/4 to 1/3 turn(1-1/2 to 2 wrench flats) to again spring the sleeve into place to seal against the tubing and the fitting body.

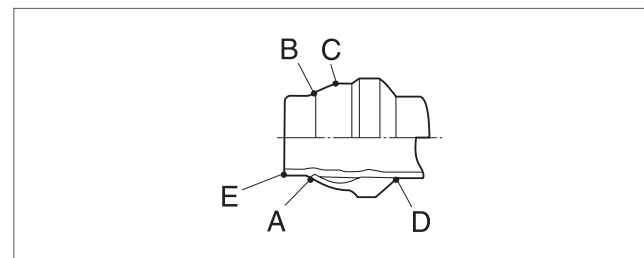
↗ Inspection Of Bite

All HANSUN bite type tube fittings must be disassembled and inspected for proper make-up before final assembly.

Detailed inspection procedures are outlined below and must be followed regardless of the method used to pre-set the sleeve to the tube.

↗ You Should Make Certain That

1. A ridge of metal has been raised above the tube surfaces, to a height of at least 50% of the thickness of the sleeve leading edge, completely around the tube(A)
2. While the leading edge of the sleeve may be coined flat(B) there is a slight bow to the balance of the pilot section(C)
3. The tail or back end of the sleeve is snugged against the tube(D)
4. There is a slight indentation all around the end of the tube(E) that indicates the tube was bottomed in the tool or fitting during pre-setting (unless evidence of this complete contact is visible the sleeve cannot be considered properly pre-set).
5. Avoid rotating the sleeve. Steel sleeve should not be capable of moving back and forth along tube, beyond the bite area(stainless steel sleeve will move more than steel because of its spring back characteristics).



↗ Trouble Shooting

Problems with bite type hydraulic fittings are most often traced to faulty make-up procedures. Look for the following :

1. Tube not bottomed

Check for the indentation on the tube end or compare length from end of tube to the front end of the sleeve with that of a known good assembly.

2. Lack of bite

inspect for turned up ridge of material. A failure to achieve this ridge can be traced either to the fact that the nut was not tightened enough or that the tube was not bottomed against the stop which allowed the tube to travel forward with the sleeve.

3. Sleeve cocked on tube

The sleeve is cocked on the tube when the tube assembly is off axis with that of the body. Generally this condition is caused by faulty tube bending. All bent tube assemblies should drop into the fitting body prior to make up.

4. No bite

If all of the above checks have been made and the sleeve still shows no sign of biting the tube, it may be that the tube is too hard.

Straight Union
BU



138

Union Elbow
BL



138

Union Tee
BT



139

Straight Bulkhead Union
BBU



139

Bulkhead Elbow
BBL



140

Long Male Connector
BLMC



140

Male Connector
BMC-R



141

Male Connector (For Bonded Seal)
BMC-G



142

Male Connector (For O-Ring)
BOM



143

Male Elbow
BLM



144

Long Male Elbow
BLLM



145

O-Seal Male Elbow
BOLM



145

Banjo Elbow
BSLM



146

Male Branch Tee
BBTM



146

Male Run Tee
BRTM



147

Bulkhead Female Connector
BBFC



147

Female Connector
BFC



148

Gauge Connector
BGC



148

Female Elbow
BLF



149

Female Branch Tee
BBTF



149

Female Run Tee
BRTF



150

Presetting Tools
BPST



150

Cap
BC



151

Plug
BP



151

Nut
BN



152

Sleeve
BS



152

Hose Male Union
BHUM



153

Hose Female Union
BHUF



153

Hose Bulkhead Male Union
BHBM



154

Hose Bulkhead Female Union
BHBF



154

Hose Male Elbow
BHLM



155

Hose Female Elbow
BHLF



155

Hose Bulkhead Male Elbow
BHBLM



156

Hose Bulkhead Female Elbow
BHBLF



156

Welding Connector
BCW



157

Welding Bulkhead Union
BBUW



157

Adapter
BA-R



158

Adapter (For Copper Gasket)
BA-G



158

Reducer
BR



159

Positionable Elbow
BLA



159

Positionable Branch Tee
BBTA



160

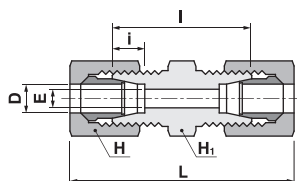
Positionable Run Tee
BRTA



160

Straight Union

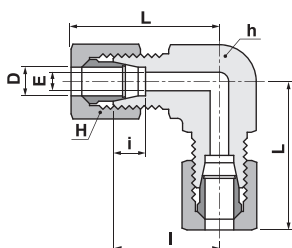
BU



Part No.	Tube O.D	E	Width across flat		i	I	Approx
	D		H ₁	H			L
BU-06	6	4	14	14	7	30	51
BU-08	8	6	17	17	7	31	52
BU-10	10	8	17	19	7	31	54
BU-12	12	10	19	22	7	31	54
BU-15	15	12	24	27	7.5	36	61
BU-16	16	13	27	30	7.5	36	61
BU-18	18	14	27	32	8	36	61
BU-20	20	17	30	36	8	38	63
BU-22	22	18	32	36	9	38	63
BU-25	25	20	36	41	10	38	66
BU-28	28	22	41	46	10	43	71
BU-30	30	25	41	46	10	43	72
BU-32	32	26	46	50	11	44	73
BU-35	35	28	46	55	11	44	79
BU-38	38	32	50	60	12	46	85
BU-40	40	32	55	60	12	55	94
BU-42	42	34	55	60	12	55	94
BU-06A	10.5	8	17	19	7	31	54
BU-08A	13.8	11	22	24	7.5	38	60
BU-10A	17.3	14	27	32	8	38	61
BU-15A	21.7	18	32	36	9	38	63
BU-20A	27.2	22	41	46	10	43	71
BU-25A	34.0	28	46	55	11	44	79
BU-32A	42.7	34	60	65	12	57	98
BU-40A	48.6	40	65	75	12	60	103

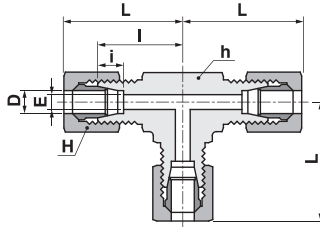
Union Elbow

BL



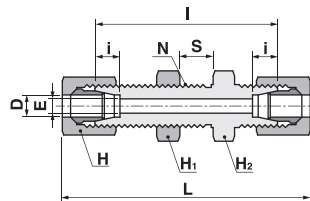
Part No.	Tube O.D	E	Width across flat		i	I	Approx
	D		H ₁	H			L
BL-06	6	4	14	14	7	20	30.5
BL-08	8	6	17	17	7	23	33.5
BL-10	10	8	17	19	7	23	34.5
BL-12	12	10	19	22	7	24	35.5
BL-15	15	12	24	27	7.5	29	41.5
BL-16	16	13	27	30	7.5	32	44.5
BL-18	18	14	27	32	8	32	44.5
BL-20	20	17	30	36	8	33	45.5
BL-22	22	18	32	36	9	34	46.5
BL-25	25	20	36	41	10	36	49.5
BL-28	28	22	41	46	10	41	55
BL-30	30	25	41	46	10	41	55.5
BL-32	32	26	46	50	11	45	59.5
BL-35	35	28	46	55	11	48	63.5
BL-38	38	32	50	60	12	50	69.5
BL-40	40	32	55	60	12	55	74.5
BL-42	42	34	55	60	12	55	74.5
BL-06A	10.5	8	17	19	7	23	34.5
BL-08A	13.8	11	22	24	7.5	28	40
BL-10A	17.3	14	27	32	8	32	44.5
BL-15A	21.7	18	32	36	9	34	46.5
BL-20A	27.2	22	41	46	10	41	55
BL-25A	34.0	28	46	55	11	46	63.5
BL-32A	42.7	34	60	65	12	57	77.5
BL-40A	48.6	40	65	75	12	62	83.5

Union Tee

BT

Part No.	Tube O.D	E	Width across flat		i	I	Approx L
	D		H ₁	H			
BT-06	6	4	14	14	7	20	30.5
BT-08	8	6	17	17	7	23	33.5
BT-10	10	8	17	19	7	23	34.5
BT-12	12	10	19	22	7	24	35.5
BT-15	15	12	24	27	7.5	29	41.5
BT-16	16	13	27	30	7.5	32	44.5
BT-18	18	14	27	32	8	32	44.5
BT-20	20	17	30	36	8	33	45.5
BT-22	22	18	32	36	9	34	46.5
BT-25	25	20	36	41	10	36	49.5
BT-28	28	22	41	46	10	41	55
BT-30	30	25	41	46	10	41	55.5
BT-32	32	26	46	50	11	45	59.5
BT-35	35	28	46	55	11	48	63.5
BT-38	38	32	50	60	12	50	69.5
BT-40	40	32	55	60	12	55	74.5
BT-42	42	34	55	60	12	55	74.5
BT-06A	10.5	8	17	19	7	23	34.5
BT-08A	13.8	11	22	24	7.5	28	40
BT-10A	17.3	14	27	32	8	32	44.5
BT-15A	21.7	18	32	36	9	34	46.5
BT-20A	27.2	22	41	46	10	41	55
BT-25A	34.0	28	46	55	11	46	63.5
BT-32A	42.7	34	60	65	12	57	77.5
BT-40A	48.6	40	65	75	12	62	83.5

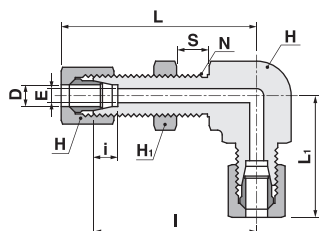
Straight Bulkhead Union

BBU

Part No.	Tube O.D	E	Width across flat		i	I	Approx	Panel Hole	Max.Panel
	D		H ₁	H			L	Drill Size	Thickness
								N	S
BBU-06	6	4	17	14	7	51	51	12.5	13
BBU-08	8	6	19	17	7	51	52	14.5	13
BBU-10	10	8	22	19	7	52	54	16.5	13
BBU-12	12	10	24	22	7	52	54	18.5	13
BBU-15	15	12	27	27	7.5	59	61	22.5	15
BBU-16	16	13	30	30	7.5	61	61	24.5	15
BBU-18	18	14	32	32	8	63	61	26.5	15
BBU-20	20	17	32	36	8	63	63	28.5	15
BBU-22	22	18	36	36	9	64	63	30.5	15
BBU-25	25	20	41	41	10	64	66	35.5	15
BBU-28	28	22	46	46	10	69	71	38.5	15
BBU-30	30	25	46	46	10	69	72	40.5	15
BBU-32	32	26	50	50	11	73	73	42.5	15
BBU-35	35	28	50	55	11	73	79	45.5	15
BBU-38	38	32	55	60	12	76	85	48.5	15
BBU-40	40	32	60	60	12	87	94	52.5	15
BBU-06A	10.5	8	22	19	7	52	54	16.5	13
BBU-08A	13.8	11	27	24	7.5	59	60	20.5	15
BBU-10A	17.3	14	32	32	8	63	61	26.5	15
BBU-15A	21.7	18	36	36	9	64	63	30.5	15
BBU-20A	27.2	22	46	46	10	69	71	38.5	15
BBU-25A	34.0	28	50	55	11	73	79	45.5	15
BBU-32A	42.7	34	65	65	12	90	98	56.5	15
BBU-40A	48.6	40	70	75	12	93	103	64.5	15

Bulkhead Elbow

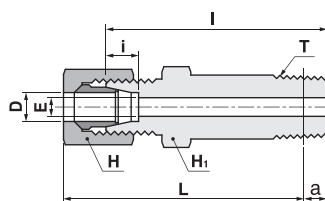
BBL



Part No.	Tube O.D	E	Width across flat			i	I	Approx		Panel Hole Drill Size N	Max. Panel Thickness S
	D		h	H ₁	H			L ₁	L		
BBL-06	6	4	17	17	14	7	45	33.5	55.5	12.5	13
BBL-08	8	6	19	19	17	7	46	34.5	56.5	14.5	13
BBL-10	10	8	22	22	19	7	48	37.5	59.5	16.5	13
BBL-12	12	10	24	24	22	7	49	38.5	60.5	18.5	13
BBL-15	15	12	27	27	27	7.5	57	43.5	69.5	22.5	15
BBL-16	16	13	30	30	30	7.5	59	45.5	71.5	24.5	15
BBL-18	18	14	32	32	32	8	63	45.5	75.5	26.5	15
BBL-20	20	17	32	32	36	8	65	45.5	77.5	28.5	15
BBL-22	22	18	36	36	36	9	65	48.5	77.5	30.5	15
BBL-25	25	20	41	41	41	10	68	52.5	81.5	35.5	15
BBL-28	28	22	41	46	46	10	70	55	84	38.5	15
BBL-30	30	25	46	46	46	10	74	60.5	88.5	40.5	15

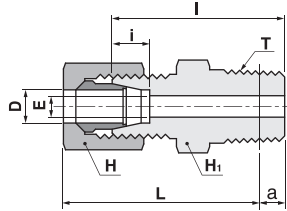
Long Male Connector

BLMC



Part No.	Tube O.D	PT T	E	Basic Gauge length a	Width across flat		i	I	Approx
	D				H ₁	H			L
BLMC-06-01R	6	1/8	4	3.97	14	14	7	63	69.5
BLMC-08-02R	8	1/4	6	6.01	17	17	7	70	74.5
BLMC-10-02R	10	1/4	7	6.01	17	19	7	71	76.5
BLMC-10-03R	10	3/8	8	6.35	19	19	7	72	77
BLMC-12-02R	12	1/4	7	6.01	19	22	7	71	76.5
BLMC-12-03R	12	3/8	9	6.35	19	22	7	72	77
BLMC-15-03R	15	3/8	9	6.35	24	27	7.5	81	87
BLMC-15-04R	15	1/2	12	8.16	24	27	7.5	86	90.5
BLMC-16-04R	16	1/2	12	8.16	27	30	7.5	86	90.5
BLMC-18-04R	18	1/2	12	8.16	27	32	8	86	90.5
BLMC-20-06R	20	3/4	16	9.53	30	36	8	92	95
BLMC-22-06R	22	3/4	16	9.53	32	36	9	93	96
BLMC-25-08R	25	1	20	10.39	36	41	10	99	102
BLMC-28-08R	28	1	22	10.39	41	46	10	104	107.5
BLMC-30-10R	30	1-1/4	25	12.7	46	46	10	109	111
BLMC-32-10R	32	1-1/4	26	12.7	46	50	11	110	112
BLMC-06A-02R	10.5	1/4	7	6.01	17	19	7	71	76.5
BLMC-08A-03R	13.8	3/8	9	6.35	22	24	7.5	81	86.5
BLMC-10A-03R	17.3	3/8	9	6.35	27	32	8	81	87
BLMC-15A-06R	21.7	3/4	16	9.53	32	36	9	93	96
BLMC-20A-08R	27.2	1	22	10.39	41	46	10	104	107.5

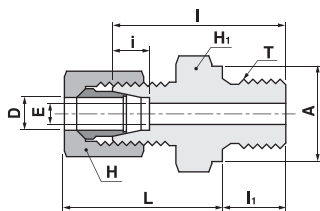
Male Connector

BMC-R

Part No.	Tube O.D	PT T	E	Basic Gauge length a	Width across flat		i	I	Approx
	D				H ₁	H			L
BMC-06-01R	6	1/8	4	3.97	14	14	7	28	34.5
BMC-06-02R	6	1/4	4	6.01	17	14	7	33	37.5
BMC-06-03R	6	3/8	4	6.35	17	14	7	34	38.5
BMC-08-01R	8	1/8	4	3.97	17	17	7	29	35.5
BMC-08-02R	8	1/4	6	6.01	17	17	7	33	37.5
BMC-10-02R	10	1/4	7	6.01	17	19	7	33	38.5
BMC-10-03R	10	3/8	8	6.35	19	19	7	34	39
BMC-10-04R	10	1/2	8	8.16	22	19	7	39	42.5
BMC-12-02R	12	1/4	7	6.01	19	22	7	33	38.5
BMC-12-03R	12	3/8	9	6.35	19	22	7	34	39
BMC-12-04R	12	1/2	10	8.16	22	22	7	39	42.5
BMC-15-03R	15	3/8	9	6.35	24	27	7.5	37	43
BMC-15-04R	15	1/2	12	8.16	24	27	7.5	41	45.5
BMC-16-03R	16	3/8	9	6.35	27	30	7.5	37	43
BMC-16-04R	16	1/2	12	8.16	27	30	7.5	41	45.5
BMC-18-04R	18	1/2	12	8.16	27	32	8	41	45.5
BMC-20-04R	20	1/2	12	8.16	30	36	8	43	47.5
BMC-20-06R	20	3/4	16	9.53	30	36	8	45	48
BMC-22-04R	22	1/2	12	8.16	32	36	9	43	47.5
BMC-22-06R	22	3/4	16	9.53	32	36	9	45	48
BMC-25-08R	25	1	20	10.39	36	41	10	49	52
BMC-28-08R	28	1	22	10.39	41	46	10	51	54.5
BMC-30-08R	30	1	22	10.39	41	46	10	51	55
BMC-30-10R	30	1-1/4	25	12.7	46	46	10	55	57
BMC-32-10R	32	1-1/4	26	12.7	46	50	11	55	57
BMC-35-10R	35	1-1/4	28	12.7	46	55	11	55	60
BMC-38-12R	38	1-1/2	32	12.7	50	60	12	57	64
BMC-40-12R	40	1-1/2	32	12.7	55	60	12	62	69
BMC-42-12R	42	1-1/2	34	12.7	55	60	12	62	69
BMC-06A-01R	10.5	1/8	4	3.97	17	19	7	29	36.5
BMC-06A-02R	10.5	1/4	7	6.01	17	19	7	33	38.5
BMC-08A-02R	13.8	1/4	7	6.01	22	24	7.5	36	42
BMC-08A-03R	13.8	3/8	9	6.35	22	24	7.5	37	42.5
BMC-10A-03R	17.3	3/8	9	6.35	27	32	8	37	43
BMC-10A-04R	17.3	1/2	12	8.16	27	32	8	41	45.5
BMC-15A-04R	21.7	1/2	12	8.16	32	36	9	43	47.5
BMC-15A-06R	21.7	3/4	16	9.53	32	36	9	45	48
BMC-20A-06R	27.2	3/4	16	9.53	41	46	10	48	52.5
BMC-20A-08R	27.2	1	22	10.39	41	46	10	51	54.5
BMC-25A-08R	34.0	1	22	10.39	46	55	11	52	59
BMC-25A-10R	34.0	1-1/4	28	12.7	46	55	11	55	60
BMC-32A-10R	42.7	1-1/4	31	12.7	60	65	12	64	72
BMC-32A-12R	42.7	1-1/2	34	12.7	60	65	12	64	72
BMC-40A-12R	48.6	1-1/2	36	12.7	65	75	12	67	76
BMC-40A-16R	48.6	2	40	15.88	65	75	12	71	76.5

Male Connector
(For Bonded Seal)

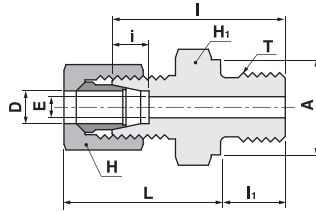
BMC-G



Part No.	Tube O.D	PF T	E	Width across flat		i	I	A	I ₁	Approx
	D			H ₁	H					L
BMC-06-01G	6	1/8	4	14	14	7	28	14	8	30.5
BMC-06-02G	6	1/4	4	19	14	7	33	18	12	31.5
BMC-08-01G	8	1/8	4	17	17	7	28	14	8	30.5
BMC-08-02G	8	1/4	6	19	17	7	33	18	12	31.5
BMC-10-02G	10	1/4	7	19	19	7	33	18	12	32.5
BMC-10-03G	10	3/8	8	22	19	7	34	21.5	12	33.5
BMC-12-02G	12	1/4	7	19	22	7	33	18	12	32.5
BMC-12-03G	12	3/8	9	22	22	7	34	21.5	12	33.5
BMC-12-04G	12	1/2	10	27	22	7	39	25.5	14	36.5
BMC-15-03G	15	3/8	9	24	27	7.5	37	21.5	12	37.5
BMC-15-04G	15	1/2	12	27	27	7.5	41	25.5	14	39.5
BMC-16-04G	16	1/2	12	27	30	7.5	41	25.5	14	39.5
BMC-18-04G	18	1/2	12	27	32	8	41	25.5	14	39.5
BMC-20-06G	20	3/4	16	32	36	8	46	31.5	16	42.5
BMC-22-04G	22	1/2	12	32	36	9	43	25.5	14	41.5
BMC-22-06G	22	3/4	16	32	36	9	46	31.5	16	42.5
BMC-25-06G	25	3/4	16	36	41	10	46	31.5	16	43.5
BMC-25-08G	25	1	20	41	41	10	50	38	18	45.5
BMC-28-08G	28	1	22	41	46	10	52	38	18	48
BMC-30-08G	30	1	22	41	46	10	52	38	18	48.5
BMC-30-10G	30	1-1/4	25	50	46	10	57	48.5	20	51.5
BMC-32-10G	32	1-1/4	26	50	50	11	57	48.5	20	51.5
BMC-35-10G	35	1-1/4	28	50	55	11	57	48.5	20	54.5
BMC-38-12G	38	1-1/2	32	55	60	12	58	53.5	21	56.5
BMC-40-12G	40	1-1/2	32	55	60	12	62	53.5	21	60.5
BMC-42-12G	42	1-1/2	34	55	60	12	62	53.5	21	60.5
BMC-06A-01G	10.5	1/8	4	17	19	7	29	14	8	32.5
BMC-06A-02G	10.5	1/4	7	19	19	7	33	18	12	32.5
BMC-08A-02G	13.8	1/4	7	22	24	7.5	36	18	12	36
BMC-08A-03G	13.8	3/8	9	22	24	7.5	36	21.5	12	36
BMC-10A-03G	17.3	3/8	9	27	32	8	38	21.5	12	38.5
BMC-10A-04G	17.3	1/2	12	27	32	8	41	25.5	14	39.5
BMC-15A-04G	21.7	1/2	12	32	36	9	43	25.5	14	41.5
BMC-15A-06G	21.7	3/4	16	32	36	9	46	31.5	16	42.5
BMC-20A-06G	27.2	3/4	16	41	46	10	50	31.5	16	48
BMC-20A-08G	27.2	1	22	41	46	10	52	38	18	48
BMC-25A-08G	34.0	1	22	46	55	11	54	38	18	53.5
BMC-25A-10G	34.0	1-1/4	28	50	55	11	57	48.5	20	54.5
BMC-32A-10G	42.7	1-1/4	31	60	65	12	60	48.5	20	63.5
BMC-32A-12G	42.7	1-1/2	34	60	65	12	64	53.5	21	63.5
BMC-40A-12G	48.6	1-1/2	36	65	75	12	65	53.5	21	65.5
BMC-40A-16G	48.6	2	40	70	75	12	73	66	25	69.5

Male Connector
(For O-Ring)

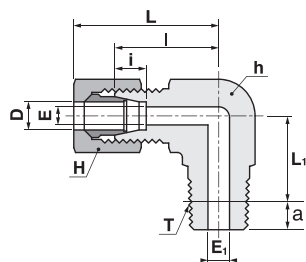
BOM



Part No.	Tube O.D	PF T	E	Width across flat		i	I	A	I ₁	Approx
	D			H ₁	H					L
BOM-06-01G	6	1/8	4	14	14	7	28	14	8	30.5
BOM-06-02G	6	1/4	4	19	14	7	33	19	12	31.5
BOM-08-01G	8	1/8	4	17	17	7	28	14	8	30.5
BOM-08-02G	8	1/4	6	19	17	7	33	19	12	31.5
BOM-10-02G	10	1/4	7	19	19	7	33	19	12	32.5
BOM-10-03G	10	3/8	8	22	19	7	34	22	12	33.5
BOM-12-02G	12	1/4	7	19	22	7	33	19	12	32.5
BOM-12-03G	12	3/8	9	22	22	7	34	22	12	33.5
BOM-12-04G	12	1/2	10	27	22	7	39	27	14	36.5
BOM-15-03G	15	3/8	9	24	27	7.5	37	22	12	37.5
BOM-15-04G	15	1/2	12	27	27	7.5	41	27	14	39.5
BOM-16-04G	16	1/2	12	27	30	7.5	41	27	14	39.5
BOM-18-04G	18	1/2	12	27	32	8	41	27	14	39.5
BOM-20-06G	20	3/4	16	36	36	8	46	36	16	42.5
BOM-22-06G	22	3/4	16	36	36	9	46	36	16	42.5
BOM-25-06G	25	3/4	16	36	41	10	46	36	16	43.5
BOM-25-08G	25	1	20	41	41	10	50	41	18	45.5
BOM-28-08G	28	1	22	41	46	10	52	41	18	48
BOM-30-08G	30	1	22	41	46	10	52	41	18	48.5
BOM-30-10G	30	1-1/4	25	50	46	10	57	50	20	51.5
BOM-32-10G	32	1-1/4	26	50	50	11	57	50	20	51.5
BOM-35-10G	35	1-1/4	28	50	55	11	57	50	20	54.5
BOM-38-12G	38	1-1/2	32	55	60	12	58	55	21	56.5
BOM-40-12G	40	1-1/2	32	55	60	12	62	55	21	60.5
BOM-42-12G	42	1-1/2	34	55	60	12	62	55	21	60.5
BOM-06A-01G	10.5	1/8	4	17	19	7	29	14	8	32.5
BOM-06A-02G	10.5	1/4	7	19	19	7	33	19	12	32.5
BOM-08A-02G	13.8	1/4	7	22	24	7.5	36	19	12	36
BOM-08A-03G	13.8	3/8	9	22	24	7.5	36	22	12	36
BOM-10A-03G	17.3	3/8	9	27	32	8	38	22	12	38.5
BOM-10A-04G	17.3	1/2	12	27	32	8	41	27	14	39.5
BOM-15A-04G	21.7	1/2	12	32	36	9	43	27	14	41.5
BOM-15A-06G	21.7	3/4	16	36	36	9	46	36	16	42.5
BOM-20A-06G	27.2	3/4	16	41	46	10	50	36	16	48
BOM-20A-08G	27.2	1	22	41	46	10	52	41	18	48
BOM-25A-08G	34.0	1	22	46	55	11	54	41	18	53.5
BOM-25A-10G	34.0	1-1/4	28	50	55	11	57	50	20	54.5
BOM-32A-10G	42.7	1-1/4	31	60	65	12	63	50	20	63.5
BOM-32A-12G	42.7	1-1/2	34	60	65	12	64	55	21	63.5
BOM-40A-12G	48.6	1-1/2	36	65	75	12	65	55	21	65.5
BOM-40A-16G	48.6	2	40	75	75	12	73	75	25	69.5

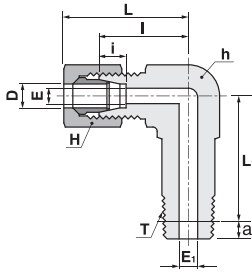
Male Elbow

BLM



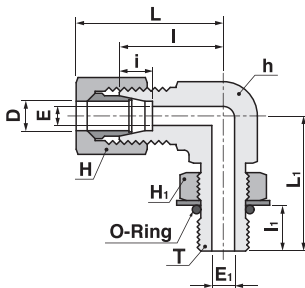
Part No.	Tube O.D	PT T	E	E ₁	Basic Gauge length a	Width across flat		i	l	Approx	
	D					h	H			L	L ₁
BLM-06-01R	6	1/8	4	4	3.97	14	14	7	20	30.5	14
BLM-06-02R	6	1/4	4	7	6.01	17	14	7	23	33.5	17
BLM-08-01R	8	1/8	6	4	3.97	17	17	7	23	33.5	16
BLM-08-02R	8	1/4	6	7	6.01	17	17	7	23	33.5	18
BLM-10-02R	10	1/4	8	7	6.01	17	19	7	23	34.5	19
BLM-10-03R	10	3/8	8	9	6.35	19	19	7	24	35.5	19.5
BLM-10-04R	10	1/2	8	12	8.16	22	19	7	29	40.5	26
BLM-12-02R	12	1/4	10	7	6.01	19	22	7	24	35.5	20
BLM-12-03R	12	3/8	10	9	6.35	19	22	7	24	35.5	20.5
BLM-12-04R	12	1/2	10	12	8.16	22	22	7	29	40.5	26
BLM-15-03R	15	3/8	12	9	6.35	24	27	7.5	29	41.5	23.5
BLM-15-04R	15	1/2	12	12	8.16	24	27	7.5	29	41.5	26
BLM-16-03R	16	3/8	13	9	6.35	27	30	7.5	32	44.5	25.5
BLM-16-04R	16	1/2	13	12	8.16	27	30	7.5	32	44.5	27
BLM-18-03R	18	3/8	4	9	6.35	27	32	8	32	44.5	27.5
BLM-18-04R	18	1/2	14	12	8.16	27	32	8	32	44.5	30
BLM-20-04R	20	1/2	17	12	8.16	30	36	8	33	45.5	32
BLM-20-06R	20	3/4	17	16	9.53	30	36	8	33	45.5	30.5
BLM-22-04R	22	1/2	18	12	8.16	32	36	9	34	46.5	32
BLM-22-06R	22	3/4	18	16	9.53	32	36	9	34	46.5	32.5
BLM-25-06R	25	3/4	20	16	9.53	36	41	10	36	49.5	33.5
BLM-25-08R	25	1	20	22	10.39	36	41	10	36	49.5	35.5
BLM-28-06R	28	3/4	22	16	9.53	41	46	10	41	55	37.5
BLM-28-08R	28	1	22	22	10.39	41	46	10	41	55	39.5
BLM-30-08R	30	1	25	22	10.39	41	46	10	41	55.5	39.5
BLM-30-10R	30	1-1/4	25	31	12.7	46	46	10	46	60.5	42.5
BLM-32-10R	32	1-1/4	26	31	12.7	46	50	11	46	60.5	43.5
BLM-35-10R	35	1-1/4	28	31	12.7	46	55	11	46	63.5	45.5
BLM-38-12R	38	1-1/2	32	36	12.7	50	60	12	50	69.5	48.5
BLM-40-12R	40	1-1/2	32	36	12.7	55	60	12	55	74.5	49.5
BLM-42-12R	42	1-1/2	34	36	12.7	55	60	12	55	74.5	49.5
BLM-06A-01R	10.5	1/8	8	4	3.97	17	19	7	23	34.5	17
BLM-06A-02R	10.5	1/4	8	7	6.01	17	19	7	23	34.5	19
BLM-08A-02R	13.8	1/4	11	7	6.01	22	24	7.5	28	40	22
BLM-08A-03R	13.8	3/8	11	9	6.35	22	24	7.5	28	40	22.5
BLM-10A-03R	17.3	3/8	14	9	6.35	27	32	8	32	44.5	27.5
BLM-10A-04R	17.3	1/2	14	12	8.16	27	32	8	32	44.5	30
BLM-15A-04R	21.7	1/2	18	12	8.16	32	36	9	34	46.5	32
BLM-15A-06R	21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5
BLM-20A-06R	27.2	3/4	22	16	9.53	41	46	10	41	55	37.5
BLM-20A-08R	27.2	1	22	22	10.39	41	46	10	41	55	39.5
BLM-25A-08R	34.0	1	28	22	10.39	46	55	11	46	63.5	44.5
BLM-25A-10R	34.0	1-1/4	28	31	12.7	46	55	11	46	63.5	45.5
BLM-32A-10R	42.7	1-1/4	34	31	12.7	60	65	12	57	77.5	51.5
BLM-32A-12R	42.7	1-1/2	34	36	12.7	60	65	12	57	77.5	51.5
BLM-40A-12R	48.6	1-1/2	40	36	12.7	65	75	12	62	83.5	57.5
BLM-40A-16R	48.6	2	40	46	15.88	65	75	12	62	83.5	58

Long Male Elbow

BLLM

Part No.	Tube O.D	PT	E	E ₁	Basic Gauge length a	Width across flat		i	I	Approx	
	D					h	H			L	L ₁
BLLM-06-01R	6	1/8	4	4	3.97	14	14	7	20	30.5	36
BLLM-08-02R	8	1/4	6	7	6.01	17	17	7	23	33.5	43
BLLM-10-02R	10	1/4	8	7	6.01	17	19	7	23	34.5	46
BLLM-12-02R	12	1/4	10	7	6.01	19	22	7	24	35.5	52
BLLM-12-03R	12	3/8	10	9	6.35	19	22	7	24	35.5	53
BLLM-15-03R	15	3/8	12	9	6.35	24	27	7.5	29	41.5	61.5
BLLM-15-04R	15	1/2	12	12	8.16	24	27	7.5	29	41.5	67
BLLM-16-04R	16	1/2	13	12	8.16	27	30	7.5	32	44.5	70
BLLM-18-04R	18	1/2	14	12	8.16	27	32	8	32	44.5	77
BLLM-20-06R	20	3/4	17	16	9.53	30	36	8	33	45.5	82.5
BLLM-22-06R	22	3/4	18	16	9.53	32	36	9	34	46.5	83.5
BLLM-25-06R	25	3/4	20	16	9.53	36	41	10	36	49.5	90.5
BLLM-25-08R	25	1	20	22	10.39	36	41	10	36	49.5	91.5
BLLM-28-08R	28	1	22	22	10.39	41	46	10	41	55	104.5
BLLM-30-10R	30	1-1/4	25	31	12.7	46	46	10	46	60.5	104.5
BLLM-32-10R	32	1-1/4	26	31	12.7	46	50	11	46	60.5	104.5
BLLM-35-10R	35	1-1/4	28	31	12.7	46	55	11	46	63.5	121.5

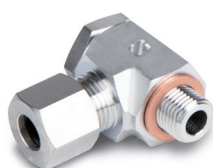
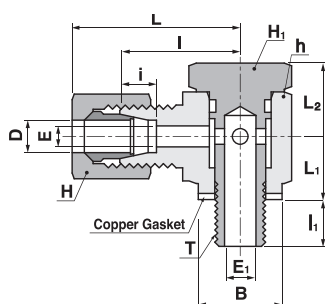
O-Seal Male Elbow

BOLM

Part No.	Tube O.D	PF	E	E ₁	Width across flat			i	I	I ₁	Approx	
	D				h	H ₁	H				L	L ₁
BOLM-06-01G	6	1/8	4	4	14	14	14	7	20	10	30.5	30
BOLM-08-02G	8	1/4	6	6	17	19	17	7	23	12	33.5	34
BOLM-10-02G	10	1/4	8	6	17	19	19	7	23	12	34.5	35
BOLM-12-02G	12	1/4	10	6	19	19	22	7	24	12	35.5	36
BOLM-12-03G	12	3/8	10	9	19	22	22	7	24	12	35.5	36
BOLM-12-04G	12	1/2	10	12	24	27	22	7	24	16	40.5	46
BOLM-15-03G	15	3/8	12	9	24	22	27	7.5	29	12	41.5	40
BOLM-15-04G	15	1/2	12	12	24	27	27	7.5	29	16	41.5	46
BOLM-16-04G	16	1/2	13	12	24	27	30	7.5	32	16	44.5	46
BOLM-18-04G	18	1/2	14	12	30	27	32	8	32	16	44.5	52
BOLM-20-06G	20	3/4	17	16	30	36	36	8	33	17	45.5	52
BOLM-22-06G	22	3/4	18	16	32	36	36	9	34	17	46.5	52
BOLM-25-06G	25	3/4	20	16	36	36	41	10	36	17	49.5	60
BOLM-25-08G	25	1	20	22	36	41	41	10	36	21	49.5	62
BOLM-28-08G	28	1	22	22	41	41	46	10	41	21	55	62
BOLM-30-08G	30	1	25	22	41	41	46	10	41	21	55.5	66
BOLM-30-10G	30	1-1/4	25	31	46	50	46	10	44	21	60.5	66
BOLM-32-10G	32	1-1/4	26	31	46	50	50	11	46	21	60.5	66
BOLM-35-10G	35	1-1/4	28	31	46	50	55	11	46	21	63.5	66
BOLM-38-12G	38	1-1/2	32	36	50	55	60	12	50	21	69.5	73

Banjo Elbow

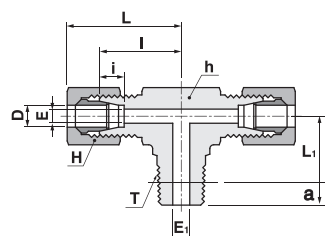
BSLM



Part No.	Tube O.D	PF T	E	E ₁	Width across flat			i	I	I ₁	Approx			B
	D				h	H ₁	H				L	L ₁	L ₂	
BSLM-06-01G	6	1/8	4	4	17	17	14	7	23	8	33.5	13	14	14
BSLM-08-02G	8	1/4	6	7	22	22	17	7	25	12	35.5	16	17	19.1
BSLM-10-02G	10	1/4	8	7	22	22	19	7	25	12	36.5	16	17	19.1
BSLM-12-03G	12	3/8	10	9	27	27	22	7	29	12	40.5	19	22	21.5
BSLM-15-04G	15	1/2	12	12	36	30	27	7.5	36	14	48.5	24	28	25.5
BSLM-16-04G	16	1/2	13	12	36	30	30	7.5	36	14	48.5	24	28	25.5
BSLM-18-04G	18	1/2	14	12	36	30	32	8	36	14	48.5	24	28	25.5
BSLM-20-06G	20	3/4	17	16	41	41	36	8	38	16	50.5	28	32	31.5
BSLM-22-06G	22	3/4	18	16	42	41	36	9	38	16	50.5	28	32	31.5
BSLM-25-08G	25	1	20	22	50	50	41	10	42	18	55.5	37	38	38
BSLM-28-08G	28	1	22	22	50	50	46	10	42	18	56	37	38	38
BSLM-06A-02G	10.5	1/4	8	7	22	22	19	7	25	12	36.5	16	17	18
BSLM-08A-03G	13.8	3/8	11	9	27	27	24	7.5	29	12	41	19	22	21.5
BSLM-10A-04G	17.3	1/2	14	12	36	30	32	8	36	14	48.5	24	28	25.5
BSLM-15A-06G	21.7	3/4	18	16	41	41	36	9	38	16	50.5	28	32	31.5
BSLM-20A-08G	27.2	1	22	22	50	50	46	10	42	18	56	37	38	38

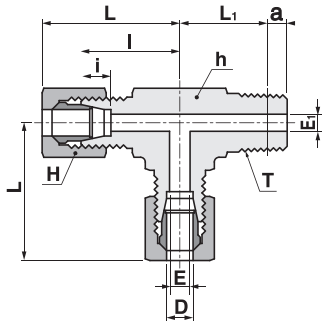
Male Branch Tee

BBTM



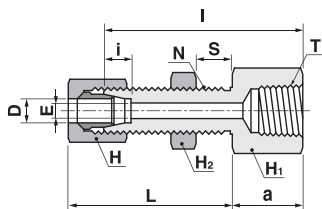
Part No.	Tube O.D	PT T	E	E ₁	Basic Gauge	Width across flat		i	I	Approx	
	D				length a	h	H			L	L ₁
BBTM-06-01R	6	1/8	4	4	3.97	14	14	7	20	30.5	14
BBTM-06-02R	6	1/4	4	7	6.01	17	14	7	23	33.5	17
BBTM-08-01R	8	1/8	6	4	3.97	17	17	7	23	33.5	16
BBTM-08-02R	8	1/4	6	7	6.01	17	17	7	23	33.5	18
BBTM-10-02R	10	1/4	8	7	6.01	17	19	7	23	34.5	19
BBTM-10-03R	10	3/8	8	9	6.35	19	19	7	24	35.5	19.5
BBTM-12-02R	12	1/4	10	7	6.01	19	22	7	24	35.5	20
BBTM-12-03R	12	3/8	10	9	6.35	19	22	7	24	35.5	20.5
BBTM-15-03R	15	3/8	12	9	6.35	24	27	7.5	29	41.5	23.5
BBTM-15-04R	15	1/2	12	12	8.16	24	27	7.5	29	41.5	26
BBTM-16-04R	16	1/2	13	12	8.16	27	30	7.5	32	44.5	27
BBTM-18-04R	18	1/2	14	12	8.16	27	32	8	32	44.5	30
BBTM-20-06R	20	3/4	17	16	9.53	30	36	8	33	45.5	30.5
BBTM-22-06R	22	3/4	18	16	9.53	32	36	9	34	46.5	32.5
BBTM-25-06R	25	3/4	20	16	9.53	36	41	10	36	49.5	33.5
BBTM-25-08R	25	1	20	22	10.39	36	41	10	36	49.5	35.5
BBTM-28-08R	28	1	22	22	10.39	41	46	10	41	55	39.5
BBTM-30-08R	30	1	25	22	10.39	41	46	10	41	55.5	39.5
BBTM-30-10R	30	1-1/4	25	31	12.7	46	46	10	46	60.5	42.5
BBTM-32-10R	32	1-1/4	26	31	12.7	46	50	11	46	60.5	43.5
BBTM-35-10R	35	1-1/4	28	31	12.7	46	55	11	46	63.5	45.5
BBTM-38-12R	38	1-1/2	32	36	12.7	50	60	12	50	69.5	48.5
BBTM-40-12R	40	1-1/2	32	36	12.7	55	60	12	55	74.5	49.5
BBTM-06A-02R	10.5	1/4	8	7	6.01	17	19	7	23	34.5	19
BBTM-08A-03R	13.8	3/8	11	9	6.35	22	24	7.5	28	40	22.5
BBTM-10A-04R	17.3	1/2	14	12	8.16	27	32	8	32	44.5	30
BBTM-15A-06R	21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5
BBTM-20A-08R	27.2	1	22	22	10.39	41	46	10	41	55	39.5
BBTM-25A-10R	34.0	1-1/4	28	31	12.7	46	55	11	46	63.5	45.5
BBTM-32A-12R	42.7	1-1/2	34	36	12.7	60	65	12	57	77.5	51.5
BBTM-40A-16R	48.6	2	40	46	15.88	65	75	12	62	83.5	58

Male Run Tee

BRTM

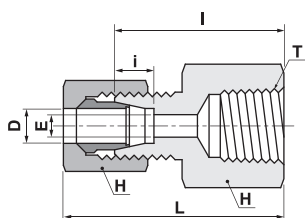
Part No.	Tube O.D	PT	T	E	E ₁	Basic Gauge	Width across flat		i	l	Approx	
	D					length a	h	H			L	L ₁
BRTM-06-01R	6	1/8	4	4	4	3.97	14	14	7	20	30.5	14
BRTM-06-02R	6	1/4	4	7	6	6.01	17	14	7	23	33.5	17
BRTM-08-01R	8	1/8	6	4	4	3.97	17	17	7	23	33.5	16
BRTM-08-02R	8	1/4	6	7	6	6.01	17	17	7	23	33.5	18
BRTM-10-02R	10	1/4	8	7	7	6.01	17	19	7	23	34.5	19
BRTM-10-03R	10	3/8	8	9	8	6.35	19	19	7	24	35.5	19.5
BRTM-12-02R	12	1/4	10	7	7	6.01	19	22	7	24	35.5	20
BRTM-12-03R	12	3/8	10	9	8	6.35	19	22	7	24	35.5	20.5
BRTM-15-03R	15	3/8	12	9	9	6.35	24	27	7.5	29	41.5	23.5
BRTM-15-04R	15	1/2	12	12	10	8.16	24	27	7.5	29	41.5	26
BRTM-16-04R	16	1/2	13	12	11	8.16	27	30	7.5	32	44.5	27
BRTM-18-04R	18	1/2	14	12	12	8.16	27	32	8	32	44.5	30
BRTM-20-06R	20	3/4	17	16	15	9.53	30	36	8	33	45.5	30.5
BRTM-22-06R	22	3/4	18	16	16	9.53	32	36	9	34	46.5	32.5
BRTM-25-06R	25	3/4	20	16	17	9.53	36	41	10	36	49.5	33.5
BRTM-25-08R	25	1	20	22	20	10.39	36	41	10	36	49.5	35.5
BRTM-28-08R	28	1	22	22	21	10.39	41	46	10	41	55	39.5
BRTM-30-08R	30	1	25	22	22	10.39	41	46	10	41	55.5	39.5
BRTM-30-10R	30	1-1/4	25	31	25	12.7	46	46	10	46	60.5	42.5
BRTM-32-10R	32	1-1/4	26	31	26	12.7	46	50	11	46	60.5	43.5
BRTM-35-10R	35	1-1/4	28	31	27	12.7	46	55	11	46	63.5	45.5
BRTM-38-12R	38	1-1/2	32	36	30	12.7	50	60	12	50	69.5	48.5
BRTM-40-12R	40	1-1/2	32	36	32	12.7	55	60	12	55	74.5	49.5
BRTM-06A-02R	10.5	1/4	8	7	7	6.01	17	19	7	23	34.5	19
BRTM-08A-03R	13.8	3/8	11	9	9	6.35	22	24	7.5	28	40	22.5
BRTM-10A-04R	17.3	1/2	14	12	12	8.16	27	32	8	32	44.5	30
BRTM-15A-06R	21.7	3/4	18	16	16	9.53	32	36	9	34	46.5	32.5
BRTM-20A-08R	27.2	1	22	22	21	10.39	41	46	10	41	55	39.5
BRTM-25A-10R	34.0	1-1/4	28	31	27	12.7	46	55	11	46	63.5	45.5
BRTM-32A-12R	42.7	1-1/2	34	36	34	12.7	60	65	12	57	77.5	51.5
BRTM-40A-16R	48.6	2	40	46	40	15.88	65	75	12	62	83.5	58

Bulkhead Female Connector

BBFC

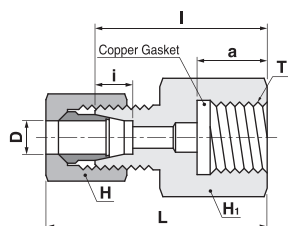
Part No.	Tube O.D	PT T	E	Width across flat			i	l	a	Approx	Panel Hole	Max. Panel
	D			H ₂	H ₁	H				L	Drill Size N	Thickness S
BBFC-06-01R	6	1/8	4	17	17	14	7	45	13	42.5	12.5	13
BBFC-08-02R	8	1/4	6	19	19	17	7	50	18	42.5	14.5	13
BBFC-10-02R	10	1/4	8	22	19	19	7	50	18	43.5	16.5	13
BBFC-10-03R	10	3/8	8	22	24	19	7	52	20	43.5	16.5	13
BBFC-12-02R	12	1/4	10	24	19	22	7	50	18	43.5	18.5	13
BBFC-12-03R	12	3/8	10	24	24	22	7	52	20	43.5	18.5	13
BBFC-15-03R	15	3/8	12	27	27	27	7.5	57	20	49.5	22.5	15
BFCB-15-04R	15	1/2	12	27	30	27	7.5	62	25	49.5	22.5	15
BBFC-16-04R	16	1/2	13	30	30	30	7.5	62	25	49.5	24.5	15
BBFC-18-04R	18	1/2	14	32	30	32	8	64	25	51.5	16.5	15
BBFC-20-06R	20	3/4	17	32	36	36	8	66	27	51.5	28.5	15
BBFC-22-06R	22	3/4	18	36	36	36	9	66	27	51.5	30.5	15
BBFC-25-08R	25	1	20	41	46	41	10	70	31	52.5	35.5	15
BBFC-28-08R	28	1	22	46	46	46	10	72	31	55	38.5	15
BBFC-30-08R	30	1	25	46	46	46	10	72	31	55.5	40.5	15
BBFC-32-10R	32	1-1/4	26	46	55	50	11	78	35	57.5	42.5	15

Female Connector

BFC

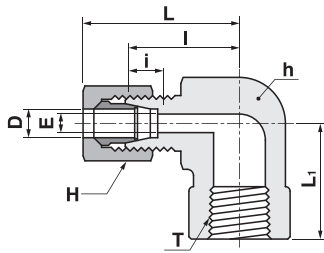
Part No.	Tube O.D	PT T	E	Width across flat		i	I	Approx L
	D			H _i	H			
BFC-06-01R	6	1/8	4	17	14	7	25	35.5
BFC-08-02R	8	1/4	6	19	17	7	30	40.5
BFC-10-02R	10	1/4	8	19	19	7	30	41.5
BFC-10-03R	10	3/8	8	24	19	7	32	43.5
BFC-12-02R	12	1/4	10	19	22	7	30	41.5
BFC-12-03R	12	3/8	10	24	22	7	32	43.5
BFC-15-03R	15	3/8	12	24	27	7.5	34	46.5
BFC-15-04R	15	1/2	12	30	27	7.5	39	51.5
BFC-16-04R	16	1/2	13	30	30	7.5	39	51.5
BFC-18-04R	18	1/2	14	30	32	8	39	51.5
BFC-20-06R	20	3/4	17	36	36	8	41	53.5
BFC-22-06R	22	3/4	18	36	36	9	41	53.5
BFC-25-06R	25	3/4	20	36	41	10	41	54.5
BFC-25-08R	25	1	20	46	41	10	45	58.5
BFC-28-08R	28	1	22	46	46	10	47	61
BFC-30-08R	30	1	25	46	46	10	47	61.5
BFC-30-10R	30	1-1/4	25	55	46	10	51	65.5
BFC-32-10R	32	1-1/4	26	55	50	11	51	65.5
BFC-35-10R	35	1-1/4	28	55	55	11	51	68.5
BFC-38-12R	38	1-1/2	32	65	60	12	51	70.5
BFC-40-12R	40	1-1/2	32	65	60	12	55	74.5
BFC-42-12R	42	1-1/2	34	65	60	12	55	74.5
BFC-06A-02R	10.5	1/4	8	19	19	7	30	41.5
BFC-08A-03R	13.8	3/8	11	24	24	7.5	34	46
BFC-10A-04R	17.3	1/2	14	30	32	8	39	51.5
BFC-15A-06R	21.7	3/4	18	36	36	9	41	53.5
BFC-20A-08R	27.2	1	22	46	46	10	47	61
BFC-25A-10R	34.0	1-1/4	28	55	55	11	51	68.5
BFC-32A-12R	42.7	1-1/2	34	65	65	12	55	78.5
BFC-40A-16R	48.6	2	40	80	75	12	60	81.5

Gauge Connector

BGC

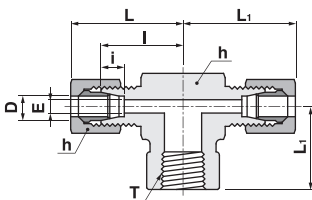
Part No.	Tube O.D	PF T	a	Width across flat		i	I	Approx L
	D			H _i	H			
BGC-06-02G	6	1/4	14	19	14	7	32	42.5
BGC-06-03G	6	3/8	15	24	14	7	34	44.5
BGC-06-04G	6	1/2	16	30	14	7	36	46.5
BGC-08-02G	8	1/4	14	19	17	7	32	42.5
BGC-08-03G	8	3/8	15	24	17	7	34	44.5
BGC-08-04G	8	1/2	16	30	17	7	36	46.5
BGC-10-02G	10	1/4	14	19	19	7	32	43.5
BGC-10-03G	10	3/8	15	24	19	7	34	45.5
BGC-10-04G	10	1/2	16	30	19	7	36	47.5
BGC-12-02G	12	1/4	14	19	22	7	32	43.5
BGC-12-03G	12	3/8	15	24	22	7	34	45.5
BGC-12-04G	12	1/2	16	30	22	7	36	47.5

Female Elbow

BLF

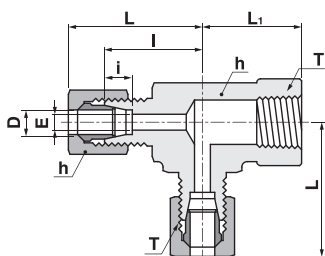
Part No.	Tube O.D	PT T	E	Width across flat		i	I	Approx	
	D			H ₁	H			L ₁	L
BLF-08-02R	8	1/4	6	19	17	7	24	24	34.5
BLF-10-02R	10	1/4	8	19	19	7	24	24	35.5
BLF-12-02R	12	1/4	10	19	22	7	24	24	35.5
BLF-12-03R	12	3/8	10	24	22	7	29	29	40.5
BLF-15-03R	15	3/8	12	24	27	7.5	29	29	41.5
BLF-15-04R	15	1/2	12	30	27	7.5	33	33	45.5
BLF-16-04R	16	1/2	13	30	30	7.5	33	33	45.5
BLF-18-04R	18	1/2	14	30	32	8	33	33	45.5
BLF-20-06R	20	3/4	17	36	36	8	36	36	48.5
BLF-22-06R	22	3/4	18	36	36	9	36	36	48.5
BLF-25-06R	25	3/4	20	36	41	10	36	36	49.5
BLF-25-08R	25	1	20	46	41	10	36	46	59.5
BLF-28-08R	28	1	22	46	46	10	46	46	60
BLF-30-10R	30	1-1/4	25	55	46	10	55	55	69.5
BLF-32-10R	32	1-1/4	26	55	50	11	55	55	69.5
BLF-35-10R	35	1-1/4	28	55	55	11	55	55	72.5

Female Branch Tee

BBTF

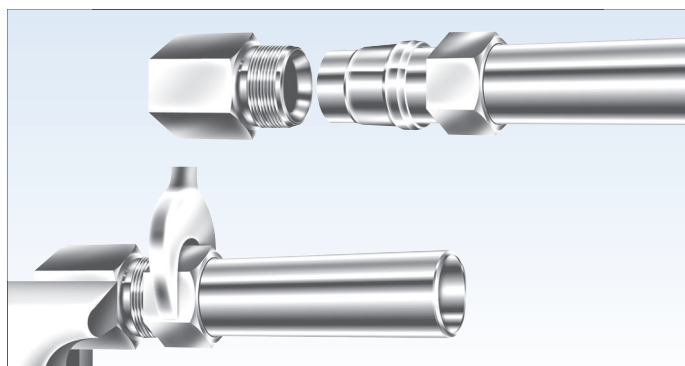
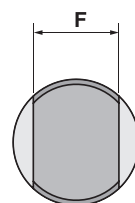
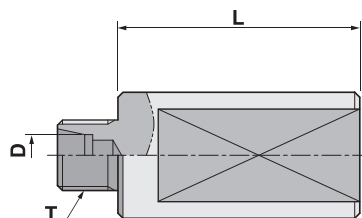
Part No.	Tube O.D	PT T	E	Width across flat		i	I	Approx	
	D			h	H			L	L ₁
BBTF-06-01R	6	1/8	4	17	14	7	23	34.5	24
BBTF-08-02R	8	1/4	6	19	17	7	24	34.5	24
BBTF-10-02R	10	1/4	8	19	19	7	24	35.5	24
BBTF-12-02R	12	1/4	10	19	22	7	24	35.5	24
BBTF-12-03R	12	3/8	10	24	22	7	29	40.5	29
BBTF-15-03R	15	3/8	12	24	27	7.5	29	41.5	29
BBTF-15-04R	15	1/2	12	30	27	7.5	33	45.5	33
BBTF-16-04R	16	1/2	13	30	30	7.5	33	45.5	33
BBTF-18-04R	18	1/2	14	30	32	8	33	45.5	33
BBTF-20-06R	20	3/4	17	36	36	8	36	48.5	36
BBTF-22-06R	22	3/4	18	36	36	9	36	48.5	36
BBTF-25-06R	25	3/4	20	36	41	10	36	49.5	36
BBTF-25-08R	25	1	20	46	41	10	46	59.5	46
BBTF-28-08R	28	1	22	46	46	10	46	60	46
BBTF-30-08R	30	1	25	46	46	10	46	60.5	46
BBTF-30-10R	30	1-1/4	25	55	46	10	55	69.5	55
BBTF-32-10R	32	1-1/4	26	55	50	11	55	69.5	55
BBTF-35-10R	35	1-1/4	28	55	55	11	55	72.5	55
BBTF-06A-02R	10.5	1/4	8	19	19	7	24	35.5	24
BBTF-08A-03R	13.8	3/8	11	24	24	7.5	29	41	29
BBTF-10A-04R	17.3	1/2	14	30	32	8	33	45.5	33
BBTF-15A-06R	21.7	3/4	18	36	36	9	36	48.5	36
BBTF-20A-08R	27.2	1	22	46	46	10	46	60	46
BBTF-25A-10R	34.0	1-1/4	28	55	55	11	55	72.5	55

Female Run Tee

BRTF

Part No.	Tube O.D	PT	E	Width across flat		i	I	Approx	
	D			h	H			L	L ₁
BRTF-06-01R	6	1/8	4	17	14	7	23	34.5	24
BRTF-08-02R	8	1/4	6	19	17	7	24	34.5	24
BRTF-10-02R	10	1/4	8	19	19	7	24	35.5	24
BRTF-12-02R	12	1/4	10	19	22	7	24	35.5	24
BRTF-12-03R	12	3/8	10	24	22	7	29	40.5	29
BRTF-15-03R	15	3/8	12	24	27	7.5	29	41.5	29
BRTF-15-04R	15	1/2	12	30	27	7.5	33	45.5	33
BRTF-16-04R	16	1/2	13	30	30	7.5	33	45.5	33
BRTF-18-04R	18	1/2	14	30	32	8	33	45.5	33
BRTF-20-06R	20	3/4	17	36	36	8	36	48.5	36
BRTF-22-06R	22	3/4	18	36	36	9	36	48.5	36
BRTF-25-06R	25	3/4	20	36	41	10	36	49.5	36
BRTF-25-08R	25	1	20	46	41	10	46	59.5	46
BRTF-28-08R	28	1	22	46	46	10	46	60	46
BRTF-30-08R	30	1	25	46	46	10	46	60.5	46
BRTF-30-10R	30	1-1/4	25	55	46	10	55	69.5	55
BRTF-32-10R	32	1-1/4	26	55	50	11	55	69.5	55
BRTF-35-10R	35	1-1/4	28	55	55	11	55	72.5	55
BRTF-06A-02R	10.5	1/4	8	19	19	7	24	35.5	24
BRTF-08A-03R	13.8	3/8	11	24	24	7.5	29	41	29
BRTF-10A-04R	17.3	1/2	14	30	32	8	33	45.5	33
BRTF-15A-06R	21.7	3/4	18	36	36	9	36	48.5	36
BRTF-20A-08R	27.2	1	22	46	46	10	46	60	46
BRTF-25A-10R	34.0	1-1/4	28	55	55	11	55	72.5	55

Preswaging Tool

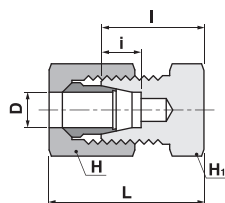
BPST

When assembling Bite type fitting in close corner or in cabinet it may be advantageous to use this jig. It allows presetting sleeve on to the tube in a more open or safe area. After using this jig, follow the reassembly instruction.

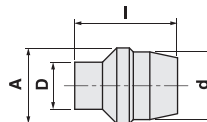
Tubing may occasionally stick in the jig after pull-up. When this happens, loosen the tube by gently rocking back and forth. Do not rock up and down or turn the tube as this may damage sealing surfaces of fitting.

Part No.	Tube O.D	L	F	T
	D			
BPST-06	6	40	17	M12 x 1.5
BPST-08	8	40	17	M14 x 1.5
BPST-10	10	40	17	M16 x 1.5
BPST-12	12	40	27	M18 x 1.5
BPST-15	15	40	27	M22 x 1.5
BPST-16	16	40	27	M24 x 1.5
BPST-18	18	40	27	M26 x 1.5
BPST-20	20	40	41	M28 x 1.5
BPST-22	22	40	41	M30 x 1.5
BPST-25	25	40	41	M35 x 1.5
BPST-06A	10.5	40	17	M16 x 1.5
BPST-08A	13.8	40	27	M20 x 1.5
BPST-10A	17.3	40	27	M26 x 1.5
BPST-15A	21.7	40	41	M30 x 1.5

Cap BC



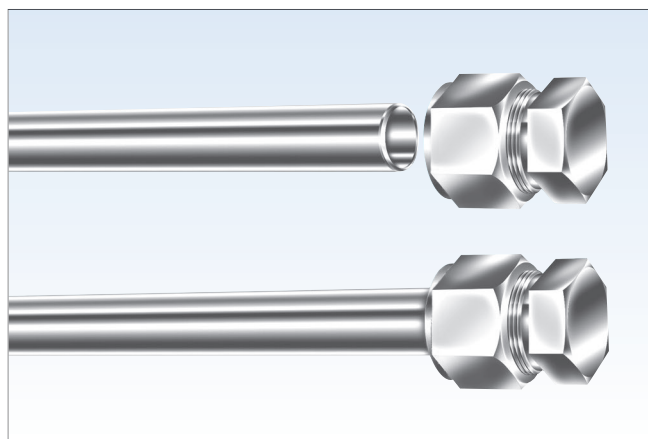
Plug BP



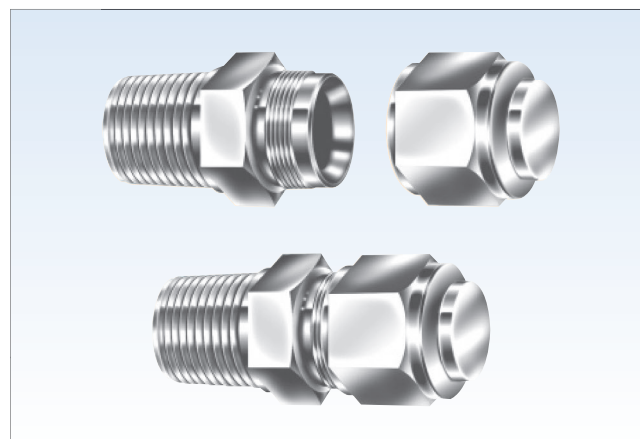
Part No.	Tube O.D	Width across flat		i	I	Approx
	D	H ₁	H			L
BC-06	6	14	14	7	18	28.5
BC-08	8	17	17	7	19	29.5
BC-10	10	17	19	7	20	31.5
BC-12	12	19	22	7	20	31.5
BC-15	15	24	27	7.5	22	34.5
BC-16	16	27	30	7.5	24	36.5
BC-18	18	27	32	8	24	36.5
BC-20	20	30	36	8	24	36.5
BC-22	22	32	36	9	25	37.5
BC-25	25	36	41	10	25	38.5
BC-28	28	41	46	10	28	42
BC-30	30	41	46	10	28	42.5
BC-32	32	46	50	11	30	44.5

Part No.	Tube O.D	E	A	I
	D			
BP-06	6	8	9	13.5
BP-08	8	10	11	13.5
BP-10	10	12	13	14.5
BP-12	12	14	15	14.5
BP-15	15	17	18	16
BP-16	16	18	19	16
BP-18	18	20	21	17.5
BP-20	20	22	23	17.5
BP-22	22	24	25	17.5
BP-25	25	27.4	28.5	19
BP-28	28	30.4	31.5	19
BP-30	30	32.4	33.5	20
BP-32	32	34.4	35.5	20

Cap for tube end

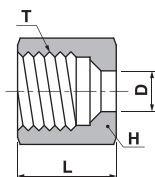


Plug for unused Bite type fitting port



Nut

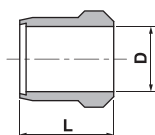
BN



Part No.	Tube O.D	T	Width across flat	L
	D		H	
BN-06	6	M12 x 1.5	14	15
BN-08	8	M14 x 1.5	17	15
BN-10	10	M16 x 1.5	19	16
BN-12	12	M18 x 1.5	22	16
BN-15	15	M22 x 1.5	27	19
BN-16	16	M24 x 1.5	30	19
BN-18	18	M26 x 1.5	32	19
BN-20	20	M28 x 1.5	36	19
BN-22	22	M30 x 1.5	36	19
BN-25	25	M35 x 1.5	41	20
BN-28	28	M38 x 1.5	46	21
BN-30	30	M40 x 1.5	46	22
BN-32	32	M42 x 1.5	50	22
BN-35	35	M45 x 1.5	55	25
BN-38	38	M48 x 1.5	60	27
BN-40	40	M52 x 2.0	60	29.5
BN-42	42	M52 x 2.0	60	29.5
BN-06A	10.5	M16 x 1.5	19	16
BN-08A	13.8	M20 x 1.5	24	18
BN-10A	17.3	M26 x 1.5	32	19
BN-15A	21.7	M30 x 1.5	36	19
BN-20A	27.2	M38 x 1.5	46	21
BN-25A	34.0	M45 x 1.5	55	25
BN-32A	42.7	M56 x 2.0	65	30.5
BN-40A	48.6	M64 x 2.0	75	31.5

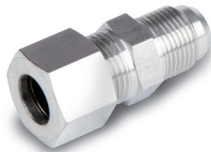
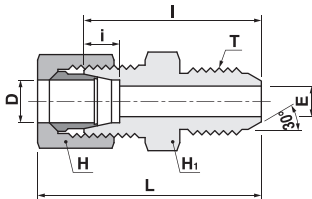
Sleeve

BS



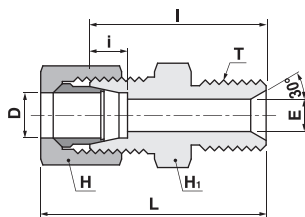
Part No.	Tube O.D	L
	D	
BS-06	6	9
BS-08	8	9
BS-10	10	10
BS-12	12	10
BS-15	15	10
BS-16	16	10
BS-18	18	10
BS-20	20	10
BS-22	22	10
BS-25	25	11
BS-28	28	11
BS-30	30	11
BS-32	32	11
BS-35	35	14
BS-38	38	14
BS-40	40	14
BS-42	42	14
BS-06A	10.5	10
BS-08A	13.8	10
BS-10A	17.3	10
BS-15A	21.7	10
BS-20A	27.2	11
BS-25A	34.0	14
BS-32A	42.7	14
BS-40A	48.6	14

Hose Male Union

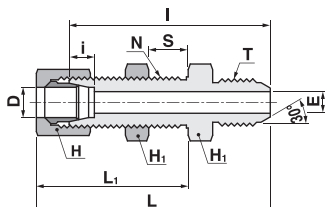
BHUM

Part No.	Tube O.D	PF T	E	Width across flat		i	I	L
	D			H ₁	H			
BHUM-06-01G	6	1/8	4	14	14	7	34	44.5
BHUM-08-02G	8	1/4	6	17	17	7	35	45.5
BHUM-08-03G	8	3/8	6	19	17	7	37	47.5
BHUM-10-02G	10	1/4	6	17	19	7	35	46.5
BHUM-10-03G	10	3/8	8	19	19	7	37	48.5
BHUM-10-04G	10	1/2	8	22	19	7	40	51.5
BHUM-12-02G	12	1/4	6	19	22	7	35	46.5
BHUM-12-03G	12	3/8	9	19	22	7	37	48.5
BHUM-12-04G	12	1/2	10	22	22	7	40	51.5
BHUM-15-03G	15	3/8	9	24	27	7.5	40	52.5
BHUM-15-04G	15	1/2	12	24	27	7.5	42	54.5
BHUM-16-03G	16	3/8	9	27	30	7.5	40	52.5
BHUM-16-04G	16	1/2	12	27	30	7.5	42	54.5
BHUM-18-04G	18	1/2	12	27	32	8	42	54.5
BHUM-20-06G	20	3/4	16	30	36	8	46	58.5
BHUM-22-04G	22	1/2	12	32	36	9	44	56.5
BHUM-22-06G	22	3/4	16	32	36	9	46	58.5
BHUM-25-06G	25	3/4	16	36	41	10	47	60.5
BHUM-25-08G	25	1	20	36	41	10	49	62.5
BHUM-28-06G	28	3/4	16	41	46	10	49	63
BHUM-28-08G	28	1	22	41	46	10	51	65
BHUM-30-06G	30	3/4	16	41	46	10	49	63.5
BHUM-30-08G	30	1	22	41	46	10	51	65.5
BHUM-32-08G	32	1	22	46	50	11	52	66.5
BHUM-32-10G	32	1-1/4	28	46	50	11	56	70.5

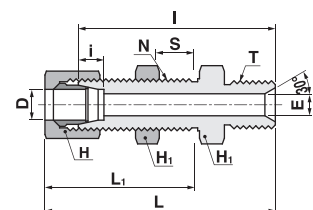
Hose Female Union

BHUF

Part No.	Tube O.D	PF T	E	Width across flat		i	I	L
	D			H ₁	H			
BHUF-06-01G	6	1/8	4	14	14	7	32	43.5
BHUF-08-02G	8	1/4	6	17	17	7	33	43.5
BHUF-08-03G	8	3/8	6	19	17	7	34	44.5
BHUF-10-02G	10	1/4	6	17	19	7	33	44.5
BHUF-10-03G	10	3/8	8	19	19	7	34	45.5
BHUF-10-04G	10	1/2	8	22	19	7	38	49.5
BHUF-12-02G	12	1/4	6	19	22	7	33	44.5
BHUF-12-03G	12	3/8	9	19	22	7	34	45.5
BHUF-12-04G	12	1/2	10	22	22	7	38	49.5
BHUF-15-03G	15	3/8	9	24	27	7.5	37	49.5
BHUF-15-04G	15	1/2	12	24	27	7.5	40	52.5
BHUF-16-03G	16	3/8	9	27	30	7.5	37	49.5
BHUF-16-04G	16	1/2	12	27	30	7.5	40	52.5
BHUF-18-04G	18	1/2	12	27	32	8	40	52.5
BHUF-20-06G	20	3/4	16	30	36	8	43	55.5
BHUF-22-04G	22	1/2	12	32	36	9	42	54.5
BHUF-22-06G	22	3/4	16	32	36	9	43	55.5
BHUF-25-06G	25	3/4	16	36	41	10	44	57.5
BHUF-25-08G	25	1	20	36	41	10	46	59.5
BHUF-28-06G	28	3/4	16	41	46	10	46	60
BHUF-28-08G	28	1	22	41	46	10	48	62
BHUF-30-06G	30	3/4	16	41	46	10	46	60.5
BHUF-30-08G	30	1	22	41	46	10	48	62.5
BHUF-32-08G	32	1	22	46	50	11	49	63.5
BHUF-32-10G	32	1-1/4	28	46	50	11	55	69.5
BHUF-38-12G	38	1-1/2	32	50	60	12	57	76.5
BHUF-40-12G	40	1-1/2	32	55	60	12	62	81.5

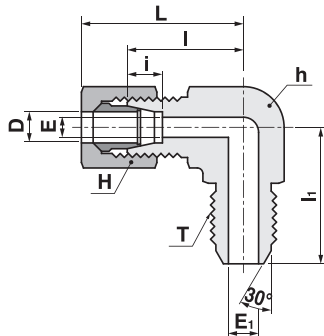
Hose Bulkhead
Male Union**BHBM**

Part No.	Tube O.D	PF T	E	Width across flat		i	I	L ₁	L	Panel Hole Drill Size N	Max. Panel Thickness S
	D			H ₁	H						
BHBM-06-01G	6	1/8	4	17	14	7	54	42.5	63.5	12.5	13
BHBM-08-02G	8	1/4	6	19	17	7	55	42.5	65.5	14.5	13
BHBM-08-03G	8	3/8	6	19	17	7	57	42.5	67.5	14.5	13
BHBM-10-02G	10	1/4	6	22	19	7	56	43.5	67.5	16.5	13
BHBM-10-03G	10	3/8	8	22	19	7	58	43.5	69.5	16.5	13
BHBM-10-04G	10	1/2	8	22	19	7	60	43.5	71.5	16.5	13
BHBM-12-02G	12	1/4	6	24	22	7	56	43.5	67.5	18.5	13
BHBM-12-03G	12	3/8	9	24	22	7	58	43.5	69.5	18.5	13
BHBM-12-04G	12	1/2	10	24	22	7	60	43.5	71.5	18.5	13
BHBM-15-03G	15	3/8	9	27	27	7.5	63	49.5	75.5	22.5	15
BHBM-15-04G	15	1/2	12	27	27	7.5	65	49.5	77.5	22.5	15
BHBM-16-03G	16	3/8	9	30	30	7.5	65	49.5	77.5	24.5	15
BHBM-16-04G	16	1/2	12	30	30	7.5	67	49.5	79.5	24.5	15
BHBM-18-04G	18	1/2	12	32	32	8	69	51.5	81.5	26.5	15
BHBM-20-06G	20	3/4	16	32	36	8	71	51.5	83.5	28.5	15
BHBM-22-04G	22	1/2	12	36	36	9	70	51.5	82.5	30.5	15
BHBM-22-06G	22	3/4	16	36	36	9	72	51.5	84.5	30.5	15
BHBM-25-06G	25	3/4	16	41	41	10	72	52.5	87.5	35.5	15
BHBM-25-08G	25	1	20	41	41	10	74	52.5	89.5	35.5	15
BHBM-28-06G	28	3/4	16	46	46	10	75	55	89	38.5	15
BHBM-28-08G	28	1	22	46	46	10	77	55	91	38.5	15
BHBM-30-06G	30	3/4	16	46	46	10	75	55.5	89.5	40.5	15
BHBM-30-08G	30	1	22	46	46	10	77	55.5	91.5	40.5	15
BHBM-32-08G	32	1	22	50	50	11	81	57.5	95.5	42.5	15
BHBM-32-10G	32	1-1/4	28	50	50	11	85	57.5	99.5	42.5	15

Hose Bulkhead
Female Union**BHBF**

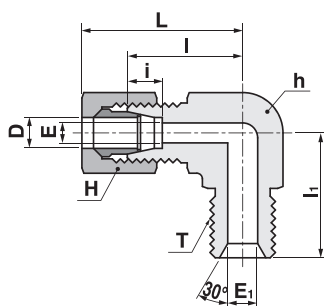
Part No.	Tube O.D	PF T	E	Width across flat		i	I	L ₁	L	Panel Hole Drill Size N	Max. Panel Thickness S
	D			H ₁	H						
BHBF-06-01G	6	1/8	4	17	14	7	52	42.5	62.5	12.5	13
BHBF-08-02G	8	1/4	6	19	17	7	53	42.5	63.5	14.5	13
BHBF-08-03G	8	3/8	6	19	17	7	54	42.5	64.5	14.5	13
BHBF-10-02G	10	1/4	6	22	19	7	54	43.5	65.5	16.5	13
BHBF-10-03G	10	3/8	8	22	19	7	55	43.5	66.5	16.5	13
BHBF-10-04G	10	1/2	8	22	19	7	58	43.5	69.5	16.5	13
BHBF-12-02G	12	1/4	6	24	22	7	54	43.5	65.5	18.5	13
BHBF-12-03G	12	3/8	9	24	22	7	55	43.5	66.5	18.5	13
BHBF-12-04G	12	1/2	10	24	22	7	58	43.5	69.5	18.5	13
BHBF-15-03G	15	3/8	9	27	27	7.5	60	49.5	72.5	22.5	15
BHBF-15-04G	15	1/2	12	27	27	7.5	63	49.5	75.5	22.5	15
BHBF-16-03G	16	3/8	9	30	30	7.5	62	49.5	74.5	24.5	15
BHBF-16-04G	16	1/2	12	30	30	7.5	65	49.5	77.5	24.5	15
BHBF-18-04G	18	1/2	12	32	32	8	67	51.5	79.5	26.5	15
BHBF-20-06G	20	3/4	16	32	36	8	68	51.5	80.5	28.5	15
BHBF-22-04G	22	1/2	12	36	36	9	68	51.5	80.5	30.5	15
BHBF-22-06G	22	3/4	16	36	36	9	69	51.5	81.5	30.5	15
BHBF-25-06G	25	3/4	16	41	41	10	69	52.5	82.5	35.5	15
BHBF-25-08G	25	1	20	41	41	10	71	52.5	84.5	35.5	15
BHBF-28-08G	28	1	22	46	46	10	74	55	88	38.5	15
BHBF-30-06G	30	3/4	16	46	46	10	72	55.5	86.5	40.5	15
BHBF-30-08G	30	1	22	46	46	10	74	55.5	88.5	40.5	15
BHBF-32-08G	32	1	22	50	50	11	78	57.5	92.5	42.5	15
BHBF-32-10G	32	1-1/4	28	50	50	11	84	57.5	98.5	42.5	15
BHBF-38-12G	38	1-1/2	31	55	60	12	87	64.5	106.5	48.5	15
BHBF-40-12G	40	1-1/2	32	60	60	12	94	69.5	113.5	52.5	15

Hose Male Elbow

BHLM

Part No.	Tube O.D	PF T	E	E ₁	Width across flat		i	I	I ₁	L
	D				h	H				
BHLM-06-01G	6	1/8	4	4	14	14	7	20	25	33.5
BHLM-08-02G	8	1/4	6	6	17	17	7	23	25	33.5
BHLM-08-03G	8	3/8	6	9	19	17	7	24	28	34.5
BHLM-10-02G	10	1/4	8	6	19	19	7	24	28	35.5
BHLM-10-03G	10	3/8	8	9	19	19	7	24	28	35.5
BHLM-10-04G	10	1/2	8	12	24	19	7	29	34	40.5
BHLM-12-02G	12	1/4	10	6	19	22	7	24	28	35.5
BHLM-12-03G	12	3/8	10	9	19	22	7	24	28	35.5
BHLM-12-04G	12	1/2	10	12	24	22	7	29	34	40.5
BHLM-15-03G	15	3/8	12	9	24	27	7.5	29	33	41.5
BHLM-15-04G	15	1/2	12	12	24	27	7.5	29	34	41.5
BHLM-16-03G	16	3/8	13	9	27	30	7.5	32	36	44.5
BHLM-16-04G	16	1/2	13	12	27	30	7.5	32	38	44.5
BHLM-18-04G	18	1/2	14	12	27	32	8	32	38	44.5
BHLM-20-06G	20	3/4	17	16	30	36	8	33	41	45.5
BHLM-22-04G	22	1/2	18	12	32	36	9	34	40	46.5
BHLM-22-06G	22	3/4	18	16	32	36	9	34	42	46.5
BHLM-25-06G	25	3/4	20	16	36	41	10	36	44	49.5
BHLM-25-08G	25	1	20	20	36	41	10	36	46	49.5
BHLM-28-06G	28	3/4	22	16	41	46	10	41	47	55
BHLM-28-08G	28	1	22	22	41	46	10	41	49	55
BHLM-30-06G	30	3/4	25	16	41	46	10	41	47	55.5
BHLM-30-08G	30	1	25	22	41	46	10	41	49	55.5
BHLM-32-08G	32	1	26	22	46	50	11	46	54	60.5
BHLM-32-10G	32	1-1/4	26	28	46	50	11	46	56	60.5

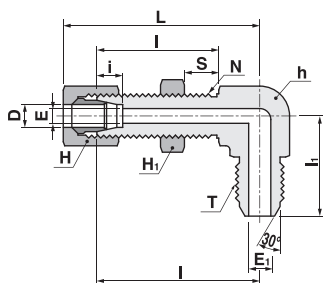
Hose Female Elbow

BHLF

Part No.	Tube O.D	PF T	E	E ₁	Width across flat		i	I	I ₁	L
	D				H ₁	H				
BHLF-08-02G	8	1/4	6	6	17	17	7	23	25	33.5
BHLF-08-03G	8	3/8	6	9	19	17	7	24	27	34.5
BHLF-10-02G	10	1/4	8	6	19	19	7	24	26	35.5
BHLF-10-03G	10	3/8	8	9	19	19	7	24	27	35.5
BHLF-10-04G	10	1/2	8	12	24	19	7	29	23	40.5
BHLF-12-02G	12	1/4	10	6	19	22	7	24	26	35.5
BHLF-12-03G	12	3/8	10	9	19	22	7	24	27	35.5
BHLF-12-04G	12	1/2	10	12	24	22	7	29	33	40.5
BHLF-15-03G	15	3/8	12	9	24	27	7.5	29	30	41.5
BHLF-15-04G	15	1/2	12	12	24	27	7.5	29	33	41.5
BHLF-16-03G	16	3/8	13	9	27	30	7.5	32	33	44.5
BHLF-16-04G	16	1/2	13	12	27	30	7.5	32	36	44.5
BHLF-18-04G	18	1/2	14	12	27	32	8	32	36	44.5
BHLF-20-06G	20	3/4	17	16	30	36	8	33	38	45.5
BHLF-22-04G	22	1/2	18	12	32	36	9	34	38	46.5
BHLF-22-06G	22	3/4	18	16	32	36	9	34	39	46.5
BHLF-25-06G	25	3/4	20	16	36	41	10	36	41	49.5
BHLF-25-08G	25	1	20	20	36	41	10	36	43	49.5
BHLF-28-06G	28	3/4	22	16	41	46	10	41	44	55
BHLF-28-08G	28	1	22	22	41	46	10	41	46	55
BHLF-30-06G	30	3/4	25	16	41	46	10	41	44	55.5
BHLF-30-08G	30	1	25	22	41	46	10	41	46	55.5
BHLF-32-08G	32	1	26	22	46	50	11	46	51	60.5
BHLF-32-10G	32	1-1/4	26	28	46	50	11	46	57	60.5
BHLF-38-12G	38	1-1/2	32	34	50	60	12	50	61	69.5
BHLF-40-12G	40	1-1/2	32	34	55	60	12	55	62	74.5

Hose Bulkhead

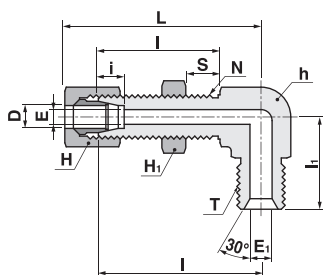
Male Elbow

BHBLM

Part No.	Tube O.D D	PF T	E	E ₁	Width across flat			i	I	I ₁	L ₁	L	Panel Hole Drill Size N	Max. Panel Thickness S
					h	H ₁	H							
BHBLM-06-01G	6	1/8	4	4	17	17	14	7	45	28	42.5	56.5	12.5	13
BHBLM-08-02G	8	1/4	6	6	19	19	17	7	46	28	42.5	56.5	14.5	13
BHBLM-08-03G	8	3/8	6	9	19	19	17	7	46	30	42.5	56.5	14.5	13
BHBLM-10-02G	10	1/4	6	6	22	22	19	7	48	28	43.5	59.5	16.5	13
BHBLM-10-03G	10	3/8	8	9	22	22	19	7	48	30	43.5	59.5	16.5	13
BHBLM-10-04G	10	1/2	8	12	24	22	19	7	49	35	43.5	60.5	16.5	13
BHBLM-12-02G	12	1/4	6	6	24	24	22	7	49	31	43.5	60.5	18.5	13
BHBLM-12-03G	12	3/8	9	9	24	24	22	7	49	33	43.5	60.5	18.5	13
BHBLM-12-04G	12	1/2	10	12	24	24	22	7	49	35	43.5	60.5	18.5	13
BHBLM-15-03G	15	3/8	9	9	27	27	27	7.5	57	36	49.5	69.5	22.5	15
BHBLM-15-04G	15	1/2	12	12	27	27	27	7.5	57	37	49.5	69.5	22.5	15
BHBLM-16-03G	16	3/8	9	9	30	30	30	7.5	59	37	49.5	71.5	24.5	15
BHBLM-16-04G	16	1/2	12	12	30	30	30	7.5	59	38	49.5	71.5	24.5	15
BHBLM-18-04G	18	1/2	12	12	32	32	32	8	63	39	51.5	75.5	26.5	15
BHBLM-20-06G	20	3/4	16	16	32	32	36	8	65	40	51.5	77.5	28.5	15
BHBLM-22-04G	22	1/2	12	12	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLM-22-06G	22	3/4	16	16	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLM-25-06G	25	3/4	16	16	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLM-25-08G	25	1	20	20	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLM-28-06G	28	3/4	16	16	46	46	46	10	74	48	55	88	38.5	15
BHBLM-28-08G	28	1	22	22	46	46	46	10	74	48	55	88	38.5	15
BHBLM-30-06G	30	3/4	16	16	46	46	46	10	74	48	55.5	88.5	40.5	15
BHBLM-30-08G	30	1	22	22	46	46	46	10	74	48	55.5	88.5	40.5	15

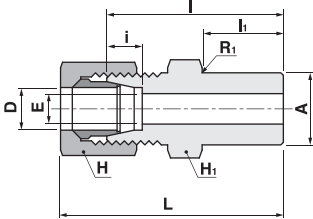
Hose Bulkhead

Female Elbow

BHBLF

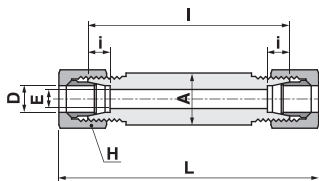
Part No.	Tube O.D D	PF T	E	E ₁	Width across flat			i	I	I ₁	L ₁	L	Panel Hole Drill Size N	Max. Panel Thickness S
					h	H ₁	H							
BHBLF-06-01G	6	1/8	4	4	17	17	14	7	45	26	42.5	56.5	12.5	13
BHBLF-08-02G	8	1/4	6	6	19	19	17	7	46	26	42.5	56.5	14.5	13
BHBLF-08-03G	8	3/8	6	9	19	19	17	7	46	27	42.5	56.5	14.5	13
BHBLF-10-02G	10	1/4	6	6	22	22	19	7	48	28	43.5	59.5	16.5	13
BHBLF-10-03G	10	3/8	8	9	22	22	19	7	48	29	43.5	59.5	16.5	13
BHBLF-10-04G	10	1/2	8	12	22	22	19	7	49	33	43.5	60.5	16.5	13
BHBLF-12-02G	12	1/4	6	6	24	24	22	7	49	30	43.5	60.5	18.5	13
BHBLF-12-03G	12	3/8	9	9	24	24	22	7	49	30	43.5	60.5	18.5	13
BHBLF-12-04G	12	1/2	10	12	24	24	22	7	49	33	43.5	60.5	18.5	13
BHBLF-15-03G	15	3/8	9	9	27	27	27	7.5	57	33	49.5	69.5	22.5	15
BHBLF-15-04G	15	1/2	12	12	27	27	27	7.5	57	36	49.5	69.5	22.5	15
BHBLF-16-03G	16	3/8	9	9	30	30	30	7.5	59	34	49.5	71.5	24.5	15
BHBLF-16-04G	16	1/2	12	12	30	30	30	7.5	59	37	49.5	71.5	24.5	15
BHBLF-18-04G	18	1/2	12	12	32	32	32	8	63	37	51.5	75.5	26.5	15
BHBLF-20-06G	20	3/4	16	16	32	32	36	8	65	40	51.5	77.5	28.5	15
BHBLF-22-04G	22	1/2	12	12	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLF-22-06G	22	3/4	16	16	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLF-25-06G	25	3/4	16	16	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLF-25-08G	25	1	20	20	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLF-28-06G	28	3/4	22	16	46	46	46	10	74	48	55	88	38.5	15
BHBLF-28-08G	28	1	22	22	46	46	46	10	74	48	55	88	38.5	15
BHBLF-30-06G	30	3/4	16	16	46	46	46	10	74	48	55.5	88.5	40.5	15
BHBLF-30-08G	30	1	22	22	46	46	46	10	74	48	55.5	88.5	40.5	15

Welding
Connector
BCW



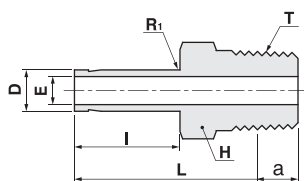
Part No.	Tube O.D	A	E	Width across flat		i	I	I ₁	L
	D			H ₁	H				
BCW-06	6	12	4	14	14	7	29	11	39.5
BCW-08	8	14	6	17	17	7	34	15	44.5
BCW-10	10	16	8	17	19	7	34	15	45.5
BCW-12	12	18	10	19	22	7	34	15	45.5
BCW-15	15	21	12	24	27	7.5	40	18	52.5
BCW-16	16	22	13	27	30	7.5	44	22	56.5
BCW-18	18	25	14	27	32	8	44	22	56.5
BCW-20	20	28	17	30	36	8	46	22	58.5
BCW-22	22	28	18	32	36	9	46	22	58.5
BCW-25	25	33	20	36	41	10	51	26	64.5
BCW-28	28	36	22	41	46	10	55	28	69
BCW-30	30	39	25	41	46	10	55	28	69.5
BCW-32	32	40	26	46	50	11	56	28	70.5
BCW-35	35	43	28	46	55	11	56	28	73.5
BCW-38	38	45	32	50	60	12	58	28	77.5
BCW-40	40	46	32	55	60	12	65	30	84.5
BCW-06A	10.5	16	8	17	19	7	34	15	45.5
BCW-08A	13.8	19	11	22	24	7.5	40	18	52
BCW-10A	17.3	24	14	27	32	8	44	22	56.5
BCW-15A	21.7	28	18	32	36	9	46	22	58.5
BCW-20A	27.2	33	22	41	46	10	52	25	66
BCW-25A	34.0	40	28	46	55	11	56	28	73.5
BCW-32A	42.7	47	34	60	65	12	65	28	85.5
BCW-40A	48.6	55	40	65	75	12	70	30	91.5

Welding Bulkhead
Union
BBUW



Part No.	Tube O.D	A	E	Width across flat	i	I	L
	D			H			
BBUW-06	6	16	4	14	7	74	95
BBUW-08	8	16	6	17	7	74	95
BBUW-10	10	19	8	19	7	74	97
BBUW-12	12	20	10	22	7	74	97
BBUW-15	15	25	12	27	7.5	78	103
BBUW-16	16	28	13	30	7.5	78	103
BBUW-18	18	28	14	32	8	78	103
BBUW-20	20	32	17	36	8	78	103
BBUW-22	22	32	18	36	9	78	103
BBUW-25	25	38	20	41	10	78	105
BBUW-28	28	39	22	46	10	82	110
BBUW-30	30	46	25	46	10	82	111
BBUW-32	32	46	26	50	11	82	111
BBUW-35	35	46	28	55	11	82	117
BBUW-38	38	55	32	60	12	82	121
BBUW-40	40	55	32	60	12	90	129
BBUW-06A	10.5	19	8	19	7	74	97
BBUW-08A	13.8	22	11	24	7.5	78	102
BBUW-10A	17.3	28	14	32	8	78	103
BBUW-15A	21.7	32	18	36	9	78	103
BBUW-20A	27.2	39	22	46	10	82	110
BBUW-25A	34.0	46	28	55	11	82	117
BBUW-32A	42.7	58	34	65	12	90	131
BBUW-40A	48.6	65	40	75	12	90	133

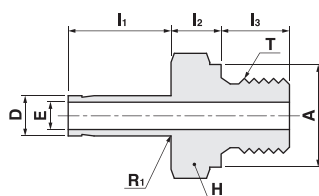
Adapter

BA-R

Part No.	Tube O.D	PT	E	Basic Gauge length	Width across flat	I	L
	D	T		a	H		
BA-06-01R	6	1/8	3	3.97	12	20	32
BA-08-02R	8	1/4	5	6.01	14	20	35
BA-10-02R	10	1/4	6	6.01	14	21	36
BA-10-03R	10	3/8	6	6.35	19	21	36.5
BA-12-02R	12	1/4	7	6.01	14	22	37
BA-12-03R	12	3/8	8	6.35	19	22	37.5
BA-15-03R	15	3/8	8	6.35	19	24	40.5
BA-15-04R	15	1/2	10	8.16	22	24	43
BA-16-04R	16	1/2	11	8.16	22	24	43
BA-18-04R	18	1/2	12	8.16	22	24	43
BA-20-06R	20	3/4	14	9.53	27	25	46.5
BA-22-06R	22	3/4	14	9.53	27	26	47.5
BA-25-06R	25	3/4	16	9.53	27	28	49.5
BA-25-08R	25	1	17	10.39	36	28	52.5
BA-28-08R	28	1	18	10.39	36	28	52.5
BA-30-08R	30	1	20	10.39	36	29	53.5
BA-30-10R	30	1-1/4	20	12.7	46	29	55
BA-32-10R	32	1-1/4	22	12.7	46	30	56
BA-38-12R	38	1-1/2	26	12.7	50	36	64.5
BA-40-12R	40	1-1/2	28	12.7	50	36	64
BA-06A-02R	10.5	1/4	6	6.01	14	21	36
BA-08A-03R	13.8	3/8	9	6.35	19	22	38.5
BA-10A-04R	17.3	1/2	11	8.16	22	24	43
BA-15A-06R	21.7	3/4	14	9.53	27	26	47.5
BA-20A-08R	27.2	1	18	10.39	36	28	52.5
BA-25A-10R	34.0	1-1/4	23	12.7	46	33	59
BA-32A-12R	42.7	1-1/2	29	12.7	50	36	67
BA-40A-16R	48.6	2	33	15.88	65	37	72

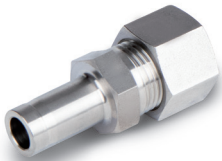
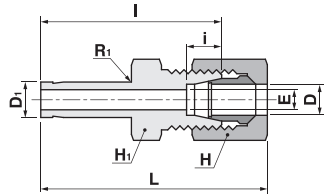
Adapter

(For Bonded Seal Gasket)

BA-G

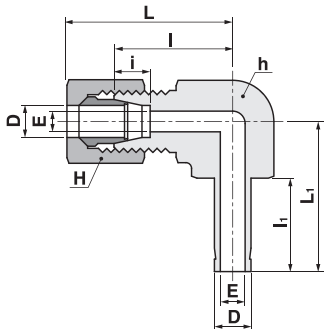
Part No.	Tube O.D	PT	E	Width across flat	A	I ₁	I ₂	I ₃
	D	T		H				
BA-06-01G	6	1/8	3	14	14	20	8	8
BA-08-02G	8	1/4	5	19	18	20	9	12
BA-10-02G	10	1/4	6	19	18	21	9	12
BA-10-03G	10	3/8	6	22	21.5	21	10	12
BA-12-02G	12	1/4	7	19	18	22	9	12
BA-12-03G	12	3/8	8	22	21.5	22	10	12
BA-15-03G	15	3/8	8	22	21.5	24	10	12
BA-15-04G	15	1/2	10	27	25.5	24	13	14
BA-16-04G	16	1/2	11	27	25.5	24	13	14
BA-18-04G	18	1/2	12	27	25.5	24	13	14
BA-20-06G	20	3/4	14	32	31.5	25	16	16
BA-22-06G	22	3/4	14	32	31.5	26	16	16
BA-25-06G	25	3/4	16	32	31.5	28	16	16
BA-25-08G	25	1	17	41	38	28	18	18
BA-28-08G	28	1	18	41	38	28	18	18
BA-30-08G	30	1	20	41	38	29	21	18
BA-30-10G	30	1-1/4	20	50	48.5	29	21	20
BA-32-10G	32	1-1/4	22	50	48.5	30	21	20
BA-38-12G	38	1-1/2	26	55	53.5	36	21	21
BA-40-12G	40	1-1/2	28	55	53.5	36	21	21
BA-06A-02G	10.5	1/4	6	19	18	21	9	12
BA-08A-03G	13.8	3/8	9	22	21.5	22	10	12
BA-10A-04G	17.3	1/2	11	27	25.5	24	13	14
BA-15A-06G	21.7	3/4	14	32	31.5	26	16	16
BA-20A-08G	27.2	1	18	41	38	28	18	18
BA-25A-10G	34.0	1-1/4	23	50	48.5	33	21	20
BA-32A-12G	42.7	1-1/2	29	55	53.5	36	23	21
BA-40A-16G	48.6	2	33	70	66	37	28	24

Reducer

BR

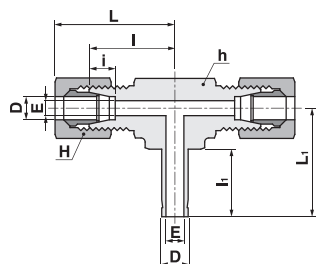
Part No.	Tube O.D		E	Width across flat		i	I	L
	D ₁	D		H ₁	H			
BR-08-06	8	6	4	14	14	7	39	49.5
BR-10-06	10	6	4	14	14	7	40	50.5
BR-10-08	10	8	6	17	17	7	40	50.5
BR-12-06	12	6	4	14	14	7	41	51.5
BR-12-08	12	8	6	17	17	7	41	51.5
BR-12-10	12	10	8	17	19	7	41	52.5
BR-15-08	15	8	6	17	17	7	43	53.5
BR-15-10	15	10	8	17	19	7	43	54.5
BR-16-06	16	6	4	17	14	7	43	53.5
BR-16-10	16	10	8	17	19	7	43	54.5
BR-16-12	16	12	10	19	22	7	43	54.5
BR-18-10	18	10	8	19	19	7	44	55.5
BR-18-15	18	15	12	24	27	7.5	45	57.5
BR-20-06	20	6	4	22	14	7	45	55.5
BR-20-12	20	12	10	22	22	7	45	56.5
BR-20-16	20	16	13	27	30	7.5	47	59.5
BR-22-15	22	15	12	24	27	7.5	48	60.5
BR-22-18	22	18	14	27	32	8	48	60.5
BR-25-16	25	16	13	27	30	7.5	50	62.5
BR-25-20	25	20	17	30	36	8	52	64.5
BR-28-18	28	18	14	30	32	8	52	64.5
BR-28-22	28	22	18	32	36	9	52	64.5
BR-30-20	30	20	17	32	36	8	53	65.5
BR-30-25	30	25	20	36	41	10	54	67.5
BR-32-25	32	25	20	36	41	10	55	68.5
BR-35-22	35	22	18	36	36	9	58	70.5
BR-35-28	35	28	22	41	46	10	60	74
BR-38-25	38	25	20	41	41	10	61	74.5
BR-38-30	38	30	25	41	46	10	63	77.5
BR-08A-6A	13.8	10.5	8	17	19	7	41	52.5
BR-10A-6A	17.3	10.5	8	19	19	7	44	55.5
BR-10A-8A	17.3	13.8	11	22	24	7.5	46	58
BR-15A-8A	21.7	13.8	11	24	24	7.5	48	60
BR-15A-10A	21.7	17.3	14	27	32	8	48	60.5
BR-20A-10A	27.2	17.3	14	30	32	8	52	64.5
BR-20A-15A	27.2	21.7	18	32	36	9	52	64.5
BR-25A-15A	34	21.7	18	36	36	9	58	70.5
BR-25A-20A	34	27.2	22	41	46	10	60	74

Positionable Elbow

BLA

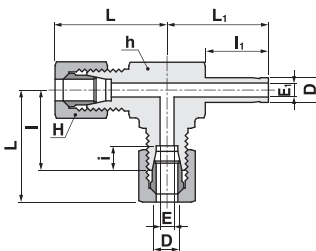
Part No.	Tube O.D	E	Width across flat		i	I	I ₁	L ₁	L
	D		h	H					
BLA-10	10	8	17	19	7	23	21	34.5	35
BLA-12	12	10	19	22	7	24	22	35.5	36
BLA-15	15	12	24	27	7.5	29	24	44.5	40
BLA-16	16	13	27	30	7.5	32	24	44.5	43
BLA-18	18	14	27	32	8	32	24	44.5	43
BLA-20	20	17	30	36	8	33	25	45.5	45
BLA-22	22	18	32	36	9	34	26	46.5	46
BLA-25	25	20	36	41	10	36	28	49.5	48
BLA-28	28	22	41	46	10	41	28	55	53
BLA-30	30	25	41	46	10	41	29	55.5	54
BLA-32	32	26	46	50	11	50	30	64.5	66
BLA-38	38	32	50	60	12	50	36	69.5	72

Positionable
Branch Tee
BBTA



Part No.	Tube O.D	E	E ₁	Width across flat		i	I	I ₁	L	L ₁
	D			h	H					
BBTA-10	10	8	6	17	19	7	23	21	34.5	35
BBTA-12	12	10	8	19	22	7	24	22	35.5	37
BBTA-15	15	12	10	24	27	7.5	29	24	44.5	43
BBTA-16	16	13	11	27	30	7.5	32	24	44.5	43
BBTA-18	18	14	12	27	32	8	32	24	44.5	43
BBTA-20	20	17	14	30	36	8	33	25	45.5	45
BBTA-22	22	18	14	32	36	9	34	26	46.5	46
BBTA-25	25	20	17	36	41	10	36	28	49.5	49

Positionable
Run Tee
BRTA



Part No.	Tube O.D	E	E ₁	Width across flat		i	I	I ₁	L	L ₁
	D			h	H					
BRTA-10	10	8	6	17	19	7	23	21	34.5	35
BRTA-12	12	10	8	19	22	7	24	22	35.5	37
BRTA-15	15	12	10	24	27	7.5	29	24	44.5	43
BRTA-16	16	13	11	27	30	7.5	32	24	44.5	43
BRTA-18	18	14	12	27	32	8	32	24	44.5	43
BRTA-20	20	17	14	30	36	8	33	25	45.5	45
BRTA-22	22	18	14	32	36	9	34	26	46.5	46
BRTA-25	25	20	17	36	41	10	36	28	49.5	49

37° Flare Fittings (SAE J514)

The best partner for value creation
We support the innovations of customer

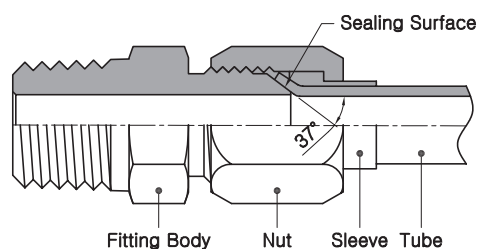


04



Catalogue No. S-LOK Mar.2024

Design Standards



- S-LOK 37° flare fittings consists of body, sleeve and nut and meets the requirements of SAE J514 and ISO 8434-2 standards.
- Tapered threads meet the requirements of ASME B 1.20.1 (NPT), ISO 7/1, BS 21 (BSPT), JIS B 0203 (PT).
- Parallel threads meet the requirements of ASME B 1.1 (UN/UNF), ISO 228/1, BS 2799 (BSPP), JIS B 0202 (PF).

Material Standards

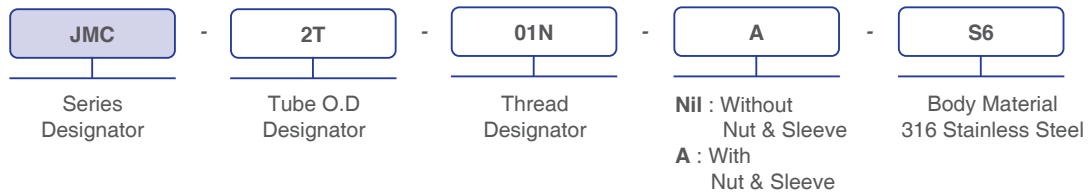
Materials / Material designator	Body		Nut & Sleeve	Applicable Tubing Spec.
	Bar Stock	Forging		
Stainless Steel 316/316L / S6	ASTM A276/A479 Type 316/316L	ASTM A182 F316/F316L	ASTM A276/A479 Type 316/316L	ASTM A269/A213
Carbon Steel / CS	ASTM A108 JIS G4051 S45C	ASTM A105 JIS G4051 S45C	ASTM A108 JIS G4051 S45C	ASTM A179/A161

Working Pressure Ratings

SAE Dash Size	Tube O.D		SAE Thread	Union & Bulkhead		Fitting with Female Swivel		Fitting with Pipe Thread	
	inch	mm		psi	bar	psi	bar	psi	bar
2	1/8	3	5/16 - 24	5000	345	5000	345	5000	345
3	3/16	4	3/8 - 24	5000	345	5000	345	5000	345
4	1/4	6	7/16 - 20	5000	345	4500	310	5000	345
5	5/16	8	1/2 - 20	5000	345	4000	275	5000	345
6	3/8	10	9/16 - 18	5000	345	4000	275	4000	275
8	1/2	12	3/4 - 16	4500	310	4000	275	3000	210
10	5/8	16	7/8 - 14	3500	240	3000	210	3000	210
12	3/4	18, 20	1 1/16 - 12	3500	240	3000	210	2500	170
14	7/8	22	1 3/16 - 12	3000	210	2500	170	2500	170
16	1	25	1 5/16 - 12	3000	210	2500	170	2000	140
20	1-1/4	32	1 5/8 - 12	2500	170	2000	140	1150	80
24	1-1/2	38	1 7/8 - 12	2000	140	1500	105	1000	70
32	2	50	2 1/2 - 12	1500	105	1125	80	1000	70

Ordering Information

Selection the applicable options from designators listed.



Tube O.D Designators

Tube O.D Size, inch												
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
2T	3T	4T	5T	6T	8T	10T	12T	14T	16T	20T	24T	32T

Tube O.D Size, metric												
3	4	6	8	10	12	16	18	20	22	25	32	38
3M	4M	6M	8M	10M	12M	16M	18M	20M	22M	25M	32M	38M

Pipe Thread Designators

Thread Type	Standard	Pipe Thread Size								
		1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
NPT	ASME B 1.20.1	01N	02N	03N	04N	06N	08N	10N	12N	16N
PT	ISO 7-1, BS-21, JIS B0203	01R	02R	03R	04R	06R	08R	10R	12R	16R
PF	ISO 228-1, BS 2779, JIS B 0202	01G	02G	03G	04G	06G	08G	10G	12G	16G

Unified Thread Designators

Standard	Unified Inch Thread Size												
	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14	1-1/16-12	1-3/16-12	1-5/16-12	1-5/8-12	1-7/8-12	2-1/2-12
ASME B 1.1	02U	03U	04U	05U	06U	08U	10U	12U	14U	16U	20U	24U	32U

Tube to Tube Union

Union
JU  166

Union Elbow
JL  166

Union Tee
JT  167

Union Cross
JX  167

Bulkhead Union
JUB  168

Weld Bulkhead Union
JUBW  168

Bulkhead Union Elbow
JBL  169

Tube to Male Pipe

Male Connector
JMC  169

Male Elbow
JLM  170

Male Elbow
JTRM  170

Male Branch Tee
JTBM  171

45° Male Elbow
JLBM  171

Tube to Female Pipe

Female Connector
JCF  172

Bulkhead Female Connector
JCBF  172

Female Elbow
JLFF  173

Female Run Tee
JTRF  173

Female Branch Tee
JTBF  174

Tube to Straight Thread

O-Seal Male Connector (PF)
JMCS-G  174

O-Seal Male Connector (UNF)
JMCS-U  175

O-Seal Male Elbow (UNF)
JLS-U  175

O-Seal 45° Male Elbow (UNF)
JLBS-U  176

O-Seal Run Tee (UNF)
JTRS-U  176

O-Seal Branch Tee (UNF)
JTBS-U  177

Swivel Fittings

Swivel Connector

JSMC



177

O-Seal Swivel Connector (UNF)

JSMCS-U



178

Swivel Female Connector

JSCF



178

Swivel Elbow

JSL



179

Swivel Run Tee

JSTR



179

Swivel Branch Tee

JSTB



180

Spare Parts

Nut

JN



180

Sleeve

JS



180

Plug

JP



181

Cap

JCA



181

Fitting Port Reducer

JPR



182

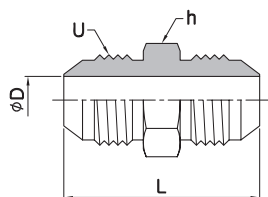
Bulkhead Lock Nut

JLN



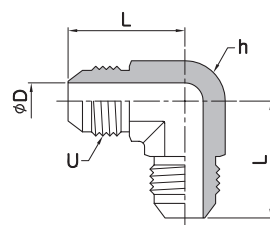
182

Union
JU



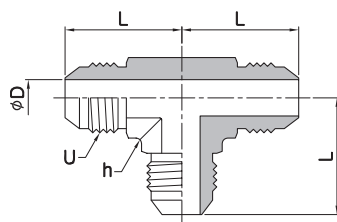
Part No.	Tube O.D		U (UN / UNF)	D	L	h (HEX)
	inch	mm				
JU-2T	1/8	3	5/16 - 24	1.6	29.7	11.1
JU-3T	3/16	4	3/8 - 24	3.2	31.2	11.1
JU-4T	1/4	6	7/16 - 20	4.4	34.8	12.7
JU-5T	5/16	8	1/2 - 20	6.0	34.8	14.3
JU-6T	3/8	10	9/16 - 18	7.5	35.8	15.8
JU-8T	1/2	12	3/4 - 16	9.9	41.1	20.6
JU-10T	5/8	16	7/8 - 14	12.3	47.8	23.8
JU-12T	3/4	18, 20	1 1/16 - 12	15.5	54.9	28.5
JU-14T	7/8	22	1 3/16 - 12	18.3	56.1	31.7
JU-16T	1	25	1 5/16 - 12	21.4	57.2	34.9
JU-20T	1-1/4	32	1 5/8 - 12	27.4	61.7	46.0
JU-24T	1-1/2	38	1 7/8 - 12	33.3	69.8	50.8
JU-32T	2	50	2 1/2 - 12	45.2	86.4	70.0

Union Elbow
JL



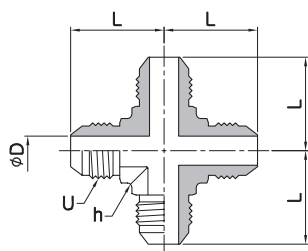
Part No.	Tube O.D		U (UN / UNF)	D	L	h (HEX)
	inch	mm				
JL-2T	1/8	3	5/16 - 24	1.6	19.6	11.1
JL-3T	3/16	4	3/8 - 24	3.2	21.1	11.1
JL-4T	1/4	6	7/16 - 20	4.4	22.6	11.1
JL-5T	5/16	8	1/2 - 20	6.0	24.1	14.3
JL-6T	3/8	10	9/16 - 18	7.5	26.9	14.3
JL-8T	1/2	12	3/4 - 16	9.9	31.8	19.0
JL-10T	5/8	16	7/8 - 14	12.3	36.8	22.2
JL-12T	3/4	18, 20	1 1/16 - 12	15.5	42.2	27.0
JL-14T	7/8	22	1 3/16 - 12	18.3	45.7	33.3
JL-16T	1	25	1 5/16 - 12	21.4	46.0	33.3
JL-20T	1-1/4	32	1 5/8 - 12	27.4	52.3	41.3
JL-24T	1-1/2	38	1 7/8 - 12	33.3	59.2	47.6
JL-32T	2	50	2 1/2 - 12	45.2	77.7	63.5

Union Tee

JT

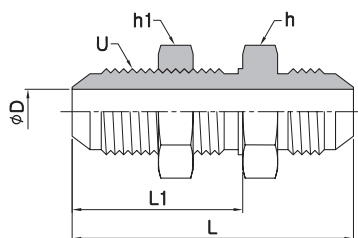
Part No.	Tube O.D.		U (UN / UNF)	D	L	h (HEX)
	inch	mm				
JT-2T	1/8	3	5/16 - 24	1.6	19.6	11.1
JT-3T	3/16	4	3/8 - 24	3.2	21.1	11.1
JT-4T	1/4	6	7/16 - 20	4.4	22.6	11.1
JT-5T	5/16	8	1/2 - 20	6.0	24.1	14.3
JT-6T	3/8	10	9/16 - 18	7.5	26.9	14.3
JT-8T	1/2	12	3/4 - 16	9.9	31.8	19.0
JT-10T	5/8	16	7/8 - 14	12.3	36.8	22.2
JT-12T	3/4	18, 20	1 1/16 - 12	15.5	42.2	27.0
JT-14T	7/8	22	1 3/16 - 12	18.3	45.7	33.3
JT-16T	1	25	1 5/16 - 12	21.4	46.0	33.3
JT-20T	1-1/4	32	1 5/8 - 12	27.4	52.3	41.3
JT-24T	1-1/2	38	1 7/8 - 12	33.3	59.2	47.6
JT-32T	2	50	2 1/2 - 12	45.2	77.7	63.5

Union Cross

JX

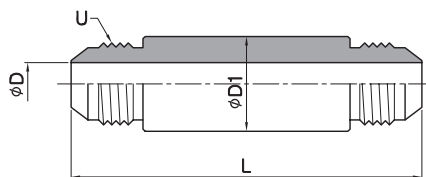
Part No.	Tube O.D.		U (UN / UNF)	D	L	h (HEX)
	inch	mm				
JX-2T	1/8	3	5/16 - 24	1.6	19.6	11.1
JX-3T	3/16	4	3/8 - 24	3.2	21.1	11.1
JX-4T	1/4	6	7/16 - 20	4.4	22.6	11.1
JX-5T	5/16	8	1/2 - 20	6.0	24.1	14.3
JX-6T	3/8	10	9/16 - 18	7.5	26.9	14.3
JX-8T	1/2	12	3/4 - 16	9.9	31.8	19.0
JX-10T	5/8	16	7/8 - 14	12.3	36.8	22.2
JX-12T	3/4	18, 20	1 1/16 - 12	15.5	42.2	27.0
JX-14T	7/8	22	1 3/16 - 12	18.3	45.7	33.3
JX-16T	1	25	1 5/16 - 12	21.4	46.0	33.3
JX-20T	1-1/4	32	1 5/8 - 12	27.4	52.3	41.3
JX-24T	1-1/2	38	1 7/8 - 12	33.3	59.2	47.6
JX-32T	2	50	2 1/2 - 12	45.2	77.7	63.5

Bulkhead Union

JUB


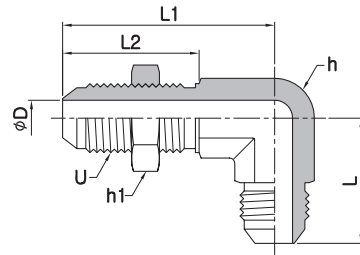
Part No.	Tube O.D		U (UN / UNF)	D	L	L1	h (HEX)	h1 (HEX)
	inch	mm						
JUB-2T	1/8	3	5/16 - 24	1.6	47.5	28.2	11.1	14.3
JUB-3T	3/16	4	3/8 - 24	3.2	48.3	28.2	11.1	15.8
JUB-4T	1/4	6	7/16 - 20	4.4	52.6	30.5	12.7	17.4
JUB-5T	5/16	8	1/2 - 20	6.0	52.6	30.5	14.3	19.0
JUB-6T	3/8	10	9/16 - 18	7.5	55.4	32.5	15.8	20.6
JUB-8T	1/2	12	3/4 - 16	9.9	62.0	36.6	20.6	25.4
JUB-10T	5/8	16	7/8 - 14	12.3	69.6	40.1	23.8	28.5
JUB-12T	3/4	18, 20	1 1/16 - 12	15.5	78.5	44.4	28.5	34.9
JUB-14T	7/8	22	1 3/16 - 12	18.3	79.2	44.4	31.7	38.1
JUB-16T	1	25	1 5/16 - 12	21.4	79.8	44.4	34.9	41.2
JUB-20T	1-1/4	32	1 5/8 - 12	27.4	84.1	45.7	46.0	47.6
JUB-24T	1-1/2	38	1 7/8 - 12	33.3	89.4	46.0	53.9	53.9
JUB-32T	2	50	2 1/2 - 12	45.2	106.7	53.1	70.0	69.8

Weld Bulkhead Union

JUBW


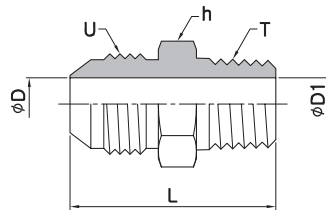
Part No.	Tube O.D		U (UN / UNF)	D	D1	L
	inch	mm				
JUBW-2T	1/8	3	5/16 - 24	1.6	11.0	70.0
JUBW-3T	3/16	4	3/8 - 24	3.2	11.0	70.0
JUBW-4T	1/4	6	7/16 - 20	4.4	14.0	80.0
JUBW-5T	5/16	8	1/2 - 20	6.0	16.0	100.0
JUBW-6T	3/8	10	9/16 - 18	7.5	17.0	100.0
JUBW-8T	1/2	12	3/4 - 16	9.9	22.0	100.0
JUBW-10T	5/8	16	7/8 - 14	12.3	25.0	110.0
JUBW-12T	3/4	18, 20	1 1/16 - 12	15.5	30.0	120.0
JUBW-14T	7/8	22	1 3/16 - 12	18.3	32.0	130.0
JUBW-16T	1	25	1 5/16 - 12	21.4	40.0	130.0
JUBW-20T	1-1/4	32	1 5/8 - 12	27.4	46.0	140.0
JUBW-24T	1-1/2	38	1 7/8 - 12	33.3	50.0	140.0
JUBW-32T	2	50	2 1/2 - 12	45.2	70.0	150.0

Bulkhead Union Elbow

JBL

Part No.	Tube O.D		U (UN / UNF)	D	L	L1	L2	h (HEX)	h1 (HEX)
	inch	mm							
JBL-2T	1/8	3	5/16 - 24	1.6	22.4	38.1	23.4	11.1	14.3
JBL-3T	3/16	4	3/8 - 24	3.2	23.9	38.1	23.4	11.1	15.8
JBL-4T	1/4	6	7/16 - 20	4.4	24.6	40.4	25.9	11.1	17.4
JBL-5T	5/16	8	1/2 - 20	6.0	26.9	43.7	25.9	14.3	19.0
JBL-6T	3/8	10	9/16 - 18	7.5	27.7	46.0	27.7	14.3	20.6
JBL-8T	1/2	12	3/4 - 16	9.9	34.5	53.6	31.8	19.0	25.4
JBL-10T	5/8	16	7/8 - 14	12.3	39.6	60.7	35.3	22.2	28.5
JBL-12T	3/4	18, 20	1 1/16 - 12	15.5	45.2	67.8	39.6	27.0	34.9
JBL-14T	7/8	22	1 3/16 - 12	18.3	48.8	71.1	39.6	33.3	38.1
JBL-16T	1	25	1 5/16 - 12	21.4	49.3	71.1	39.6	33.3	41.2
JBL-20T	1-1/4	32	1 5/8 - 12	27.4	55.1	79.2	40.9	41.3	47.6
JBL-24T	1-1/2	38	1 7/8 - 12	33.3	59.4	86.9	41.1	47.6	53.9
JBL-32T	2	50	2 1/2 - 12	45.2	73.4	104.4	48.5	63.5	69.8

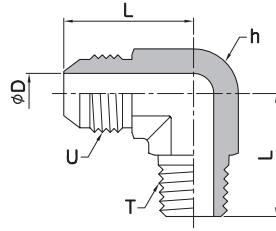
Male Connector

JMC

Part No.	Tube O.D		U (UN / UNF)	T (NPT)	D	D1	L	h (HEX)
	inch	mm						
JMC-2T-01N	1/8	3	5/16 - 24	1/8	1.6	4.8	28.2	11.1
JMC-3T-01N	3/16	4	3/8 - 24	1/8	3.2	4.8	29.0	11.1
JMC-4T-01N	1/4	6	7/16 - 20	1/8	4.4	4.8	31.0	12.7
JMC-5T-01N	5/16	8	1/2 - 20	1/8	6.0	4.8	31.0	14.3
JMC-6T-02N	3/8	10	9/16 - 18	1/4	7.5	7.0	36.3	15.8
JMC-8T-03N	1/2	12	3/4 - 16	3/8	9.9	10.3	38.9	20.6
JMC-10T-04N	5/8	16	7/8 - 14	1/2	12.3	13.5	48.0	23.8
JMC-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	18.3	52.3	28.5
JMC-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	18.3	53.1	31.7
JMC-16T-08N	1	25	1 5/16 - 12	1	21.4	23.8	58.4	34.9
JMC-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	31.7	62.2	46.0
JMC-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	38.0	68.1	50.8
JMC-32T-16N	2	50	2 1/2 - 12	2	45.2	49.0	79.0	70.0

Male Elbow

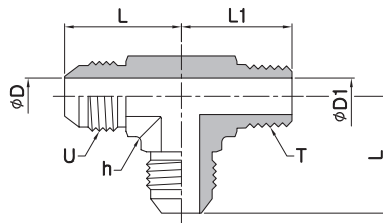
JLM



Part No.	Tube O.D.		U (UN / UNF)	T (NPT)	D	D1	L	L1	h (HEX)
	inch	mm							
JLM-2T-01N	1/8	3	5/16 - 24	1/8	1.6	4.8	19.6	18.3	11.1
JLM-3T-01N	3/16	4	3/8 - 24	1/8	3.2	4.8	21.1	18.3	11.1
JLM-4T-01N	1/4	6	7/16 - 20	1/8	4.4	4.8	22.6	19.8	11.1
JLM-5T-01N	5/16	8	1/2 - 20	1/8	6.0	4.8	24.1	19.8	14.3
JLM-6T-02N	3/8	10	9/16 - 18	1/4	7.5	7.0	26.9	27.7	14.3
JLM-8T-03N	1/2	12	3/4 - 16	3/8	9.9	10.3	31.8	31.0	19.0
JLM-10T-04N	5/8	16	7/8 - 14	1/2	12.3	13.5	36.8	37.3	22.2
JLM-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	18.3	42.2	40.4	27.0
JLM-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	18.3	45.7	42.9	33.3
JLM-16T-08N	1	25	1 5/16 - 12	1	21.4	23.8	46.0	50.0	33.3
JLM-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	31.7	52.3	60.5	41.3
JLM-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	38.0	59.2	67.1	47.6
JLM-32T-16N	2	50	2 1/2 - 12	2	45.2	49.0	77.7	76.2	63.5

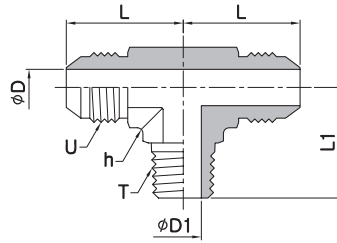
Male Run Tee

JTRM



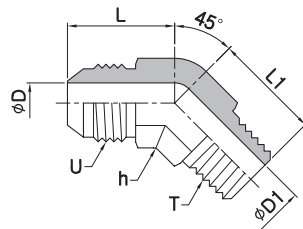
Part No.	Tube O.D.		U (UN / UNF)	T (NPT)	D	D1	L	L1	h (HEX)
	inch	mm							
JTRM-2T-01N	1/8	3	5/16 - 24	1/8	1.6	4.8	19.6	18.3	11.1
JTRM-3T-01N	3/16	4	3/8 - 24	1/8	3.2	4.8	21.1	18.3	11.1
JTRM-4T-01N	1/4	6	7/16 - 20	1/8	4.4	4.8	22.6	19.8	11.1
JTRM-5T-01N	5/16	8	1/2 - 20	1/8	6.0	4.8	24.1	19.8	14.3
JTRM-6T-02N	3/8	10	9/16 - 18	1/4	7.5	7.0	26.9	27.7	14.3
JTRM-8T-03N	1/2	12	3/4 - 16	3/8	9.9	10.3	31.8	31.0	19.0
JTRM-10T-04N	5/8	16	7/8 - 14	1/2	12.3	13.5	36.8	37.3	22.2
JTRM-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	18.3	42.2	40.4	27.0
JTRM-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	18.3	45.7	42.9	33.3
JTRM-16T-08N	1	25	1 5/16 - 12	1	21.4	23.8	46.0	50.0	33.3
JTRM-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	31.7	52.3	60.5	41.3
JTRM-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	38.0	59.2	67.1	47.6
JTRM-32T-16N	2	50	2 1/2 - 12	2	45.2	49.0	77.7	76.2	63.5

Male Branch Tee

JTBM

Part No.	Tube O.D		U (UN / UNF)	T (NPT)	D	D1	L	L1	h (HEX)
	inch	mm							
JTBM-2T-01N	1/8	3	5/16 - 24	1/8	1.6	4.8	19.6	18.3	11.1
JTBM-3T-01N	3/16	4	3/8 - 24	1/8	3.2	4.8	21.1	18.3	11.1
JTBM-4T-01N	1/4	6	7/16 - 20	1/8	4.4	4.8	22.6	19.8	11.1
JTBM-5T-01N	5/16	8	1/2 - 20	1/8	6.0	4.8	24.1	19.8	14.3
JTBM-6T-02N	3/8	10	9/16 - 18	1/4	7.5	7.0	26.9	27.7	14.3
JTBM-8T-03N	1/2	12	3/4 - 16	3/8	9.9	10.3	31.8	31.0	19.0
JTBM-10T-04N	5/8	16	7/8 - 14	1/2	12.3	13.5	36.8	37.3	22.2
JTBM-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	18.3	42.2	40.4	27.0
JTBM-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	18.3	45.7	42.9	33.3
JTBM-16T-08N	1	25	1 5/16 - 12	1	21.4	23.8	46.0	50.0	33.3
JTBM-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	31.7	52.3	60.5	41.3
JTBM-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	38.0	59.2	67.1	47.6
JTBM-32T-16N	2	50	2 1/2 - 12	2	45.2	49.0	77.7	76.2	63.5

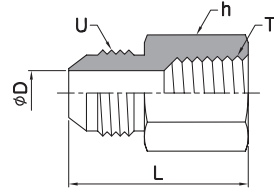
45° Male Elbow

JLBM

Part No.	Tube O.D		U (UN / UNF)	T (NPT)	D	D1	L	L1	h (HEX)
	inch	mm							
JLBM-2T-01N	1/8	3	5/16 - 24	1/8	1.6	4.8	17.5	13.2	11.1
JLBM-3T-01N	3/16	4	3/8 - 24	1/8	3.2	4.8	17.5	13.2	11.1
JLBM-4T-01N	1/4	6	7/16 - 20	1/8	4.4	4.8	18.3	16.3	11.1
JLBM-5T-01N	5/16	8	1/2 - 20	1/8	6.0	4.8	19.6	16.3	14.3
JLBM-6T-02N	3/8	10	9/16 - 18	1/4	7.5	7.0	21.1	21.8	14.3
JLBM-8T-03N	1/2	12	3/4 - 16	3/8	9.9	10.3	24.9	24.1	19.0
JLBM-10T-04N	5/8	16	7/8 - 14	1/2	12.3	13.5	28.2	29.7	22.2
JLBM-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	18.3	32.5	30.5	27.0
JLBM-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	18.3	36.8	33.0	33.3
JLBM-16T-08N	1	25	1 5/16 - 12	1	21.4	23.8	37.3	37.6	33.3
JLBM-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	31.7	40.4	42.4	41.3
JLBM-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	38.0	45.2	45.0	47.6
JLBM-32T-16N	2	50	2 1/2 - 12	2	45.2	49.0	56.4	53.6	63.5

Female Connector

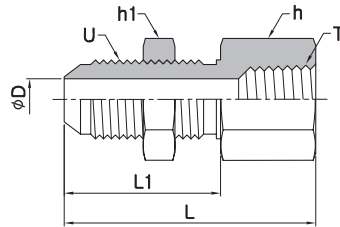
JCF



Part No.	Tube O.D		U (UN / UNF)	T (NPT)	D	L	h (HEX)
	inch	mm					
JCF-2T-01N	1/8	3	5/16 - 24	1/8	1.6	28.4	14.3
JCF-3T-01N	3/16	4	3/8 - 24	1/8	3.2	28.7	14.3
JCF-4T-01N	1/4	6	7/16 - 20	1/8	4.4	30.2	14.3
JCF-5T-01N	5/16	8	1/2 - 20	1/8	6.0	29.7	14.3
JCF-6T-02N	3/8	10	9/16 - 18	1/4	7.5	35.6	19.0
JCF-8T-03N	1/2	12	3/4 - 16	3/8	9.9	39.6	22.2
JCF-10T-04N	5/8	16	7/8 - 14	1/2	12.3	48.0	28.5
JCF-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	52.3	34.9
JCF-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	52.3	34.9
JCF-16T-08N	1	25	1 5/16 - 12	1	21.4	59.7	41.2
JCF-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	63.2	50.8
JCF-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	66.5	60.3
JCF-32T-16N	2	50	2 1/2 - 12	2	45.2	75.4	73.0

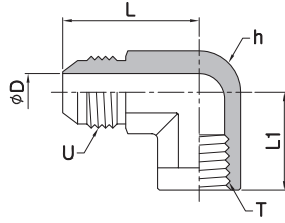
Bulkhead Female Connector

JCBF



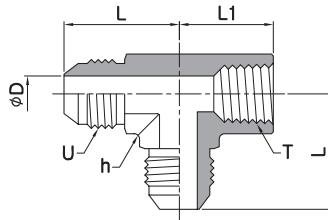
Part No.	Tube O.D		U (UN / UNF)	T (NPT)	D	L	L1	h (HEX)	h1 (HEX)
	inch	mm							
JCBF-2T-01N	1/8	3	5/16 - 24	1/8	1.6	41.2	28.2	14.3	14.3
JCBF-3T-01N	3/16	4	3/8 - 24	1/8	3.2	41.2	28.2	14.3	15.8
JCBF-4T-01N	1/4	6	7/16 - 20	1/8	4.4	46.7	30.5	14.3	17.4
JCBF-5T-01N	5/16	8	1/2 - 20	1/8	6.0	43.5	30.5	14.3	19.0
JCBF-6T-02N	3/8	10	9/16 - 18	1/4	7.5	52.3	32.5	19.0	20.6
JCBF-8T-03N	1/2	12	3/4 - 16	3/8	9.9	54.4	36.6	22.2	25.4
JCBF-10T-04N	5/8	16	7/8 - 14	1/2	12.3	67.5	40.1	28.5	28.5
JCBF-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	73.9	44.4	34.9	34.9
JCBF-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	73.4	44.4	34.9	38.1
JCBF-16T-08N	1	25	1 5/16 - 12	1	21.4	78.5	44.4	41.2	41.2
JCBF-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	80.7	45.7	50.8	47.6
JCBF-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	85.1	46.0	60.3	53.9
JCBF-32T-16N	2	50	2 1/2 - 12	2	45.2	93.1	53.1	73.0	69.8

Female Elbow

JLF

Part No.	Tube O.D		U (UN / UNF)	T (NPT)	D	L	L1	h (HEX)
	inch	mm						
JLF-2T-01N	1/8	3	5/16 - 24	1/8	1.6	25.4	16.8	14.3
JLF-3T-01N	3/16	4	3/8 - 24	1/8	3.2	26.2	16.8	14.3
JLF-4T-01N	1/4	6	7/16 - 20	1/8	4.4	27.4	16.8	14.3
JLF-5T-01N	5/16	8	1/2 - 20	1/8	6.0	27.4	16.8	14.3
JLF-6T-02N	3/8	10	9/16 - 18	1/4	7.5	31.2	22.4	19.0
JLF-8T-03N	1/2	12	3/4 - 16	3/8	9.9	36.1	25.9	22.2
JLF-10T-04N	5/8	16	7/8 - 14	1/2	12.3	41.7	31.2	27.0
JLF-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	48.0	34.5	33.3
JLF-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	47.2	36.1	33.3
JLF-16T-08N	1	25	1 5/16 - 12	1	21.4	55.1	41.1	41.3
JLF-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	59.2	43.2	47.6
JLF-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	73.4	52.8	65.1
JLF-32T-16N	2	50	2 1/2 - 12	2	45.2	83.8	60.7	71.4

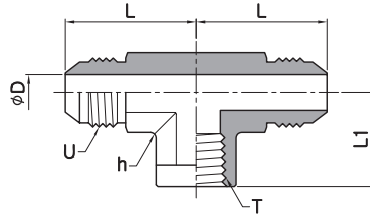
Female Run Tee

JTRF

Part No.	Tube O.D		U (UN / UNF)	T (NPT)	D	L	L1	h (HEX)
	inch	mm						
JTRF-2T-01N	1/8	3	5/16 - 24	1/8	1.6	25.4	16.8	14.3
JTRF-3T-01N	3/16	4	3/8 - 24	1/8	3.2	26.2	16.8	14.3
JTRF-4T-01N	1/4	6	7/16 - 20	1/8	4.4	27.4	16.8	14.3
JTRF-5T-01N	5/16	8	1/2 - 20	1/8	6.0	27.4	16.8	14.3
JTRF-6T-02N	3/8	10	9/16 - 18	1/4	7.5	31.2	22.4	19.0
JTRF-8T-03N	1/2	12	3/4 - 16	3/8	9.9	36.1	25.9	22.2
JTRF-10T-04N	5/8	16	7/8 - 14	1/2	12.3	41.7	31.2	27.0
JTRF-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	48.0	34.5	33.3
JTRF-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	47.2	36.1	33.3
JTRF-16T-08N	1	25	1 5/16 - 12	1	21.4	55.1	41.1	41.3
JTRF-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	59.2	43.2	47.6
JTRF-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	73.4	52.8	65.1
JTRF-32T-16N	2	50	2 1/2 - 12	2	45.2	83.8	60.7	71.4

Female Branch Tee

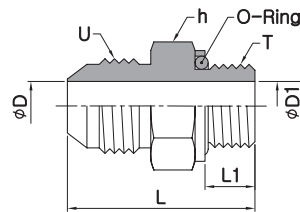
JTBF



Part No.	Tube O.D		U (UN / UNF)	T (NPT)	D	L	L1	h (HEX)
	inch	mm						
JTBF-2T-01N	1/8	3	5/16 - 24	1/8	1.6	25.4	16.8	14.3
JTBF-3T-01N	3/16	4	3/8 - 24	1/8	3.2	26.2	16.8	14.3
JTBF-4T-01N	1/4	6	7/16 - 20	1/8	4.4	27.4	16.8	14.3
JTBF-5T-01N	5/16	8	1/2 - 20	1/8	6.0	27.4	16.8	14.3
JTBF-6T-02N	3/8	10	9/16 - 18	1/4	7.5	31.2	22.4	19.0
JTBF-8T-03N	1/2	12	3/4 - 16	3/8	9.9	36.1	25.9	22.2
JTBF-10T-04N	5/8	16	7/8 - 14	1/2	12.3	41.7	31.2	27.0
JTBF-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	48.0	34.5	33.3
JTBF-14T-06N	7/8	22	1 3/16 - 12	3/4	18.3	47.2	36.1	33.3
JTBF-16T-08N	1	25	1 5/16 - 12	1	21.4	55.1	41.1	41.3
JTBF-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	59.2	43.2	47.6
JTBF-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	73.4	52.8	65.1
JTBF-32T-16N	2	50	2 1/2 - 12	2	45.2	83.8	60.7	71.4

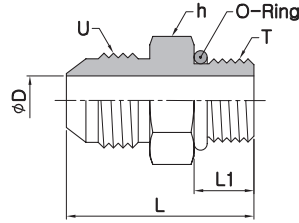
O-Seal Male Connector (PF)

JMCS-G



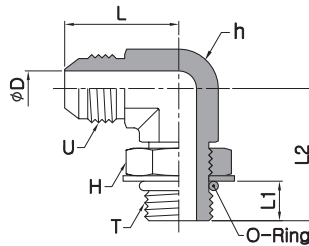
Part No.	Tube O.D		U (UN / UNF)	T (PF)	D	D1	L	L1	h (HEX)
	inch	mm							
JMCS-4T-01G	1/4	6	7/16 - 20	1/8	4.4	4.4	28.7	6.2	17.0
JMCS-5T-01G	5/16	8	1/2 - 20	1/8	6.0	4.0	28.7	6.2	17.0
JMCS-6T-02G	3/8	10	9/16 - 18	1/4	7.5	6.0	32.0	9.3	19.1
JMCS-8T-03G	1/2	12	3/4 - 16	3/8	9.9	9.9	36.0	9.3	22.2
JMCS-10T-04G	5/8	16	7/8 - 14	1/2	12.3	12.3	43.9	12.6	30.0
JMCS-12T-06G	3/4	18, 20	1 1/16 - 12	3/4	15.5	15.5	47.5	12.6	36.0
JMCS-16T-08G	1	25	1 5/16 - 12	1	21.4	21.4	53.6	15.9	46.0
JMCS-20T-10G	1-1/4	32	1 5/8 - 12	1-1/4	27.4	27.4	56.4	15.9	50.0
JMCS-24T-12G	1-1/2	38	1 7/8 - 12	1-1/2	33.3	33.3	61.0	15.9	55.0
JMCS-32T-16G	2	50	2 1/2 - 12	2	45.2	45.2	80.5	25.0	70.0

O-Seal Male Connector (UNF)

JMCS-U

Part No.	Tube O.D		U (UN / UNF)	T (UN / UNF)	D	L	L1	h (HEX)
	inch	mm						
JMCS-2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	26.9	7.5	11.1
JMCS-3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	27.9	7.5	12.7
JMCS-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	31.2	9.1	14.3
JMCS-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	31.2	9.1	15.8
JMCS-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	33.0	9.9	17.4
JMCS-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	37.6	11.1	22.2
JMCS-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	43.2	12.7	25.4
JMCS-12T-12U	3/4	18, 20	1 1/16 - 12	1 1/16 - 12	15.5	50.0	15.1	31.7
JMCS-14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	50.5	15.1	34.9
JMCS-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	51.8	15.1	38.1
JMCS-20T-20U	1-1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	55.1	15.1	47.6
JMCS-24T-24U	1-1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	60.2	15.1	53.9
JMCS-32T-32U	2	50	2 1/2 - 12	2 1/2 - 12	45.2	70.6	15.1	69.8

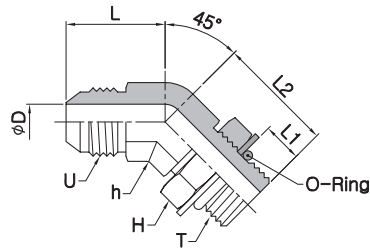
O-seal Male Elbow (UNF)

JLS-U

Part No.	Tube O.D		U (UN / UNF)	T (UN / UNF)	D	L	L1	L2	h (HEX)	H (HEX)
	inch	mm								
JLS-2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	19.6	8.4	23.9	11.1	14.3
JLS-3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	21.1	8.5	23.9	11.1	15.8
JLS-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	22.6	9.8	26.2	11.1	17.4
JLS-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	24.1	9.8	28.7	14.3	19.0
JLS-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	26.9	11.0	31.8	14.3	20.6
JLS-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	31.8	12.5	36.8	19.0	25.4
JLS-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	36.8	14.3	43.2	22.2	28.5
JLS-12T-12U	3/4	18, 20	1 1/16 - 12	1 1/16 - 12	15.5	42.2	16.5	49.3	27.0	34.9
JLS-14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	45.7	16.5	50.8	33.3	38.1
JLS-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	46.0	16.5	52.1	33.3	41.2
JLS-20T-20U	1-1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	52.3	16.5	57.2	41.3	47.6
JLS-24T-24U	1-1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	59.2	16.5	60.7	47.6	53.9
JLS-32T-32U	2	50	2 1/2 - 12	2 1/2 - 12	45.2	77.7	16.5	73.4	63.5	69.8

O-Seal 45° Male Elbow (UNF)

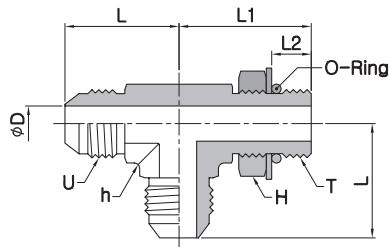
JLBS-U



Part No.	Tube O.D		U (UN / UNF)	T (UN / UNF)	D	L	L1	L2	h (HEX)	H (HEX)
	inch	mm								
JLBS-2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	17.5	8.4	22.4	11.1	14.3
JLBS-3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	17.5	9.5	22.4	11.1	15.8
JLBS-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	18.3	9.8	26.7	11.1	17.4
JLBS-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	19.6	9.8	26.7	14.3	19.0
JLBS-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	21.1	11.0	29.0	14.3	20.6
JLBS-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	24.9	12.5	33.0	19.0	25.4
JLBS-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	28.2	14.3	38.6	22.2	28.5
JLBS-12T-12U	3/4	18, 20	1 1/16 - 12	1 1/16 - 12	15.5	32.5	16.5	43.9	27.0	34.9
JLBS-14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	36.8	16.5	47.2	33.3	38.1
JLBS-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	37.3	16.5	47.2	33.3	41.2
JLBS-20T-20U	1-1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	40.4	16.5	48.5	41.3	47.6
JLBS-24T-24U	1-1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	45.2	16.5	48.5	47.6	53.9
JLBS-32T-32U	2W	50	2 1/2 - 12	2 1/2 - 12	45.2	56.4	16.5	47.2	63.5	69.8

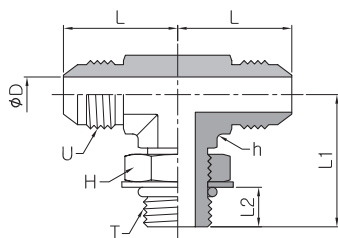
O-Seal Tee (UNF)

JTRS-U



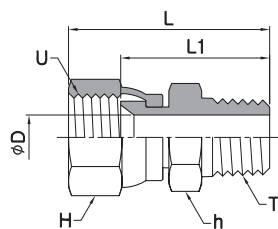
Part No.	Tube O.D		U (UN / UNF)	T (UN / UNF)	D	L	L1	L2	h (HEX)	H (HEX)
	inch	mm								
JTRS-2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	19.6	23.9	8.4	11.1	14.3
JTRS-3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	21.1	23.9	8.5	11.1	15.8
JTRS-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	22.6	26.2	9.8	11.1	17.4
JTRS-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	24.1	28.7	9.8	14.3	19.0
JTRS-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	26.9	31.8	11.0	14.3	20.6
JTRS-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	31.8	36.8	12.5	19.0	25.4
JTRS-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	36.8	43.2	14.3	22.2	28.5
JTRS-12T-12U	3/4	18, 20	1 1/16 - 12	1 1/16 - 12	15.5	42.2	49.3	16.5	27.0	34.9
JTRS-14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	45.7	50.8	16.5	33.3	38.1
JTRS-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	46.0	52.1	16.5	33.3	41.2
JTRS-20T-20U	1-1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	52.3	57.2	16.5	41.3	47.6
JTRS-24T-24U	1-1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	59.2	60.7	16.5	47.6	53.9
JTRS-32T-32U	2	50	2 1/2 - 12	2 1/2 - 12	45.2	77.7	73.4	16.5	63.5	69.8

O-Seal Branch Tee (UNF)

JTBS-U

Part No.	Tube O.D		U (UN / UNF)	T (UN / UNF)	D	L	L1	L2	h (HEX)	H (HEX)
	inch	mm								
JTBS-2T-02U	1/8	3	5/16 - 24	5/16 - 24	1.6	19.6	23.9	8.4	11.1	14.3
JTBS-3T-03U	3/16	4	3/8 - 24	3/8 - 24	3.2	21.1	23.9	8.5	11.1	15.8
JTBS-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	22.6	26.2	9.8	11.1	17.4
JTBS-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	24.1	28.7	9.8	14.3	19.0
JTBS-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	26.9	31.8	11.0	14.3	20.6
JTBS-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	31.8	36.8	12.5	19.0	25.4
JTBS-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	36.8	43.2	14.3	22.2	28.5
JTBS-12T-12U	3/4	18, 20	1 1/16 - 12	1 1/16 - 12	15.5	42.2	49.3	16.5	27.0	34.9
JTBS-14T-14U	7/8	22	1 3/16 - 12	1 3/16 - 12	18.3	45.7	50.8	16.5	33.3	38.1
JTBS-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	46.0	52.1	16.5	33.3	41.2
JTBS-20T-20U	1-1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	52.3	57.2	16.5	41.3	47.6
JTBS-24T-24U	1-1/2	38	1 7/8 - 12	1 7/8 - 12	33.3	59.2	60.7	16.5	47.6	53.9
JTBS-32T-32U	2	50	2 1/2 - 12	2 1/2 - 12	45.2	77.7	73.4	16.5	63.5	69.8

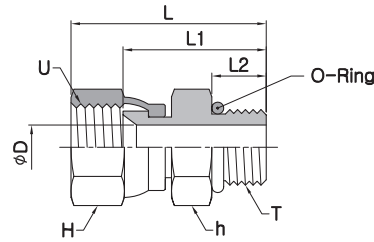
Swivel Connector

JSMC

Part No.	Tube O.D		U (UN / UNF)	T (NPT)	D	L	L1	h (HEX)	H (HEX)
	inch	mm							
JSMC-4T-01N	1/4	6	7/16 - 20	1/8	4.4	28.7	20.0	12.7	14.3
JSMC-6T-02N	3/8	10	9/16 - 18	1/4	7.5	40.4	30.9	15.8	17.4
JSMC-8T-03N	1/2	12	3/4 - 16	3/8	9.9	41.9	32.2	20.6	22.2
JSMC-10T-04N	5/8	16	7/8 - 14	1/2	12.3	52.1	39.4	22.2	25.4
JSMC-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	54.6	40.3	28.5	31.7
JSMC-16T-08N	1	25	1 5/16 - 12	1	21.4	63.5	48.4	34.9	38.1
JSMC-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	70.1	54.2	42.8	50.8
JSMC-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	77.5	58.9	50.8	57.1
JSMC32T-16N	2	50	2 1/2 - 12	2	45.2	85.9	62.1	66.6	69.8

O-Seal Swivel Connector (UNF)

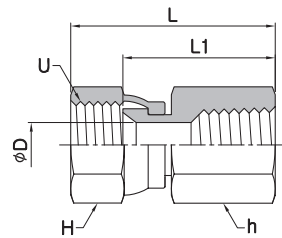
JSMCS-U



Part No.	Tube O.D		U (UN / UNF)	T (UN / UNF)	D	L	L1	L2	h (HEX)	H (HEX)
	inch	mm								
JSMCS-4T-04U	1/4	6	7/16 - 20	7/16 - 20	4.4	33.3	24.6	9.1	14.3	14.3
JSMCS-5T-05U	5/16	8	1/2 - 20	1/2 - 20	6.0	34.3	24.8	9.1	15.8	15.8
JSMCS-6T-06U	3/8	10	9/16 - 18	9/16 - 18	7.5	36.3	26.8	9.9	17.4	17.4
JSMCS-8T-08U	1/2	12	3/4 - 16	3/4 - 16	9.9	40.9	30.2	11.1	22.2	22.2
JSMCS-10T-10U	5/8	16	7/8 - 14	7/8 - 14	12.3	46.7	34.0	12.7	25.4	25.4
JSMCS-12T-12U	3/4	18, 20	1 1/16 - 12	1 1/16 - 12	15.5	52.6	38.3	15.1	31.7	31.7
JSMCS-16T-16U	1	25	1 5/16 - 12	1 5/16 - 12	21.4	57.9	42.8	15.1	38.1	38.1
JSMCS-20T-20U	1-1/4	32	1 5/8 - 12	1 5/8 - 12	27.4	63.2	47.4	15.1	50.8	50.8

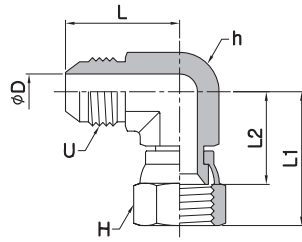
Swivel Female Connector

JSCF



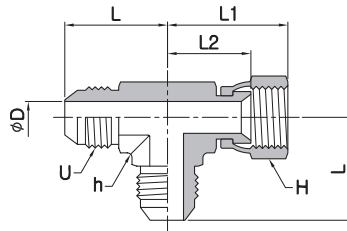
Part No.	Tube O.D		U (UN / UNF)	T (NPT)	D	L	L1	h (HEX)	H (HEX)
	inch	mm							
JSCF-4T-01N	1/4	6	7/16 - 20	1/8	4.4	32.1	23.4	14.3	14.3
JSCF-6T-02N	3/8	10	9/16 - 18	1/4	7.5	36.4	26.9	19.0	17.4
JSCF-8T-03N	1/2	12	3/4 - 16	3/8	9.9	40.7	31.2	22.2	22.2
JSCF-10T-04N	5/8	16	7/8 - 14	1/2	12.3	48.0	37.3	28.5	25.4
JSCF-12T-06N	3/4	18, 20	1 1/16 - 12	3/4	15.5	51.1	38.4	34.9	31.7
JSCF-16T-08N	1	25	1 5/16 - 12	1	21.4	62.1	47.0	41.2	38.1
JSCF-20T-10N	1-1/4	32	1 5/8 - 12	1-1/4	27.4	71.0	55.1	50.8	50.8
JSCF-24T-12N	1-1/2	38	1 7/8 - 12	1-1/2	33.3	76.0	57.4	60.3	57.1
JSCF-32T-16N	2	50	2 1/2 - 12	2	45.2	86.0	62.2	73.0	69.8

Swivel Elbow

JSL

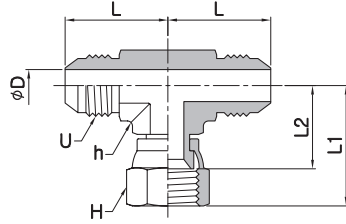
Part No.	Tube O.D		U (UN / UNF)	D	L	L1	L2	h (HEX)	H1(HEX)
	inch	mm							
JSL-2T	1/8	3	5/16 - 24	1.6	19.6	24.6	16.7	11.1	11.1
JSL-3T	3/16	4	3/8 - 24	3.2	21.1	25.4	17.1	11.1	12.7
JSL-4T	1/4	6	7/16 - 20	4.4	22.6	25.4	16.7	11.1	14.2
JSL-5T	5/16	8	1/2 - 20	6.0	24.1	26.9	17.4	14.3	15.8
JSL-6T	3/8	10	9/16 - 18	7.5	26.9	31.8	22.3	14.3	17.4
JSL-8T	1/2	12	3/4 - 16	9.9	31.8	35.1	24.4	19.0	22.2
JSL-10T	5/8	16	7/8 - 14	12.3	36.8	41.1	28.4	22.2	25.4
JSL-12T	3/4	18, 20	1 1/16 - 12	15.5	42.2	44.4	30.1	27.0	31.7
JSL-14T	7/8	22	1 3/16 - 12	18.3	45.7	45.2	30.5	33.3	34.9
JSL-16T	1	25	1 5/16 - 12	21.4	46.0	50.8	35.7	33.3	38.1
JSL-20T	1-1/4	32	1 5/8 - 12	27.4	52.3	58.7	42.8	41.3	50.8
JSL-24T	1-1/2	38	1 7/8 - 12	33.3	59.2	65.8	47.2	47.6	57.1
JSL-32T	2	50	2 1/2 - 12	45.2	77.7	85.9	62.1	63.5	69.8

Swivel Run Tee

JSTR

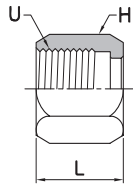
Part No.	Tube O.D		U (UN / UNF)	D	L	L1	L2	h (HEX)	H (HEX)
	inch	mm							
JSTR-2T	1/8	3	5/16 - 24	1.6	19.6	24.6	16.7	11.1	11.1
JSTR-3T	3/16	4	3/8 - 24	3.2	21.1	25.4	17.1	11.1	12.7
JSTR-4T	1/4	6	7/16 - 20	4.4	22.6	25.4	16.7	11.1	14.2
JSTR-5T	5/16	8	1/2 - 20	6.0	24.1	26.9	17.4	14.3	15.8
JSTR-6T	3/8	10	9/16 - 18	7.5	26.9	31.8	22.3	14.3	17.4
JSTR-8T	1/2	12	3/4 - 16	9.9	31.8	35.1	24.4	19.0	22.2
JSTR-10T	5/8	16	7/8 - 14	12.3	36.8	41.1	28.4	22.2	25.4
JSTR-12T	3/4	18, 20	1 1/16 - 12	15.5	42.2	44.4	30.1	27.0	31.7
JSTR-14T	7/8	22	1 3/16 - 12	18.3	45.7	45.2	30.5	33.3	34.9
JSTR-16T	1	25	1 5/16 - 12	21.4	46.0	50.8	35.7	33.3	38.1
JSTR-20T	1-1/4	32	1 5/8 - 12	27.4	52.3	58.7	42.8	41.3	50.8
JSTR-24T	1-1/2	38	1 7/8 - 12	33.3	59.2	65.8	47.2	47.6	57.1
JSTR-32T	2	50	2 1/2 - 12	45.2	77.7	85.9	62.1	63.5	69.8

Swivel Branch Tee

JSTB


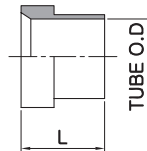
Part No.	Tube O.D.		U (UN / UNF)	D	L	L1	L2	h (HEX)	H (HEX)
	inch	mm							
JSTB-2T	1/8	3	5/16 - 24	1.6	19.6	24.6	16.7	11.1	11.1
JSTB-3T	3/16	4	3/8 - 24	3.2	21.1	25.4	17.1	11.1	12.7
JSTB-4T	1/4	6	7/16 - 20	4.4	22.6	25.4	16.7	11.1	14.2
JSTB-5T	5/16	8	1/2 - 20	6.0	24.1	26.9	17.4	14.3	15.8
JSTB-6T	3/8	10	9/16 - 18	7.5	26.9	31.8	22.3	14.3	17.4
JSTB-8T	1/2	12	3/4 - 16	9.9	31.8	35.1	24.4	19.0	22.2
JSTB-10T	5/8	16	7/8 - 14	12.3	36.8	41.1	28.4	22.2	25.4
JSTB-12T	3/4	18, 20	1 1/16 - 12	15.5	42.2	44.4	30.1	27.0	31.7
JSTB-14T	7/8	22	1 3/16 - 12	18.3	45.7	45.2	30.5	33.3	34.9
JSTB-16T	1	25	1 5/16 - 12	21.4	46.0	50.8	35.7	33.3	38.1
JSTB-20T	1-1/4	32	1 5/8 - 12	27.4	52.3	58.7	42.8	41.3	50.8
JSTB-24T	1-1/2	38	1 7/8 - 12	33.3	59.2	65.8	47.2	47.6	57.1
JSTB-32T	2	50	2 1/2 - 12	45.2	77.7	85.9	62.1	63.5	69.8

Nut

JN


Part No.	Tube O.D.		U (UN / UNF)	L	H (HEX)
	inch	mm			
JN-2T	1/8	-	5/16 - 24	14.0	9.5
JN-3T	3/16	-	3/8 - 24	15.5	11.0
JN-4T	1/4	6	7/16 - 20	15.8	14.3
JN-5T	5/16	8	1/2 - 20	17.3	15.8
JN-6T	3/8	10	9/16 - 18	18.5	17.4
JN-8T	1/2	12	3/4 - 16	21.6	22.2
JN-10T	5/8	16	7/8 - 14	24.9	25.4
JN-12T	3/4	18	1 1/16 - 12	26.2	31.7
JN-20M	-	20	1 1/16 - 12	26.2	31.7
JN-14T	7/8	22	1 3/16 - 12	27.7	34.9
JN-16T	1	25	1 5/16 - 12	28.7	38.1
JN-20T	1-1/4	32	1 5/8 - 12	31.2	50.8
JN-24T	1-1/2	38	1 7/8 - 12	36.1	57.1
JN-32T	2	50	2 1/2 - 12	44.5	73.0

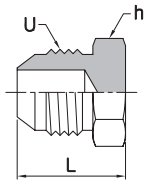
Sleeve

JS


Part No.	Tube O.D.		L
	inch		
JS-2T	1/8		8.6
JS-3T	3/16		8.6
JS-4T	1/4		10.4
JS-5T	5/16		11.2
JS-6T	3/8		12.7
JS-8T	1/2		14.2
JS-10T	5/8		16.8
JS-12T	3/4		17.3
JS-14T	7/8		19.3
JS-16T	1		19.8
JS-20T	1-1/4		23.1
JS-24T	1-1/2		28.4
JS-32T	2		30.2

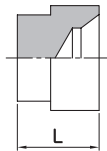
Part No.	Tube O.D.		L
	metric		
JS-3M	3		8.6
JS-4M	4		8.6
JS-6M	6		10.4
JS-8M	8		11.2
JS-10M	10		12.7
JS-12M	12		14.2
JS-16M	16		16.8
JS-18M	18		17.3
JS-20M	20		17.3
JS-22M	22		19.3
JS-25M	25		19.8
JS-32M	32		23.1
JS-38M	38		28.4

Plug
JP



Part No.	Tube O.D.		U (UN / UNF)	L	H (HEX)
	inch	mm			
JP-2T	1/8	3	5/16 - 24	17.8	11.1
JP-3T	3/16	4	3/8 - 24	18.5	11.1
JP-4T	1/4	6	7/16 - 20	20.3	12.7
JP-5T	5/16	8	1/2 - 20	20.3	14.2
JP-6T	3/8	10	9/16 - 18	21.3	15.8
JP-8T	1/2	12	3/4 - 16	23.9	20.6
JP-10T	5/8	16	7/8 - 14	27.9	23.8
JP-12T	3/4	18, 20	1 1/16 - 12	32.5	28.5
JP-14T	7/8	22	1 3/16 - 12	33.3	31.7
JP-16T	1	25	1 5/16 - 12	33.8	34.9
JP-20T	1-1/4	32	1 5/8 - 12	36.8	46.0
JP-24T	1-1/2	38	1 7/8 - 12	41.9	50.8
JP-32T	2	50	2 1/2 - 12	52.1	70.0

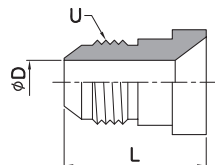
Cap
JCA



Part No.	Tube O.D.		L
	inch	mm	
JCA-2T	1/8	3	9.5
JCA-3T	3/16	4	9.5
JCA-4T	1/4	6	8.7
JCA-5T	5/16	8	10.3
JCA-6T	3/8	10	11.9
JCA-8T	1/2	12	13.5
JCA-10T	5/8	16	13.5
JCA-12T	3/4	18, 20	16.7
JCA-14T	7/8	22	15.9
JCA-16T	1	25	15.9
JCA-20T	1-1/4	32	19.1
JCA-24T	1-1/2	38	23.8
JCA-32T	2	50	30.1

Fitting Port Reducer

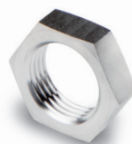
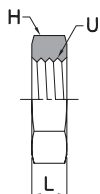
JPR



Part No.	Tube O.D.		U (UN / UNF)	D	L
	inch				
JPR-6T-4T	3/8 x 1/4		7/16 - 20	4.4	24.6
JPR-8T-4T	1/2 x 1/4		7/16 - 20	4.4	25.4
JPR-8T-6T	1/2 x 3/8		9/16 - 18	7.5	25.4
JPR-10T-4T	5/8 x 1/4		7/16 - 20	4.4	26.2
JPR-10T-6T	5/8 x 3/8		9/16 - 18	7.5	26.2
JPR-12T-4T	3/4 x 1/4		7/16 - 20	4.4	27.7
JPR-12T-6T	3/4 x 3/8		9/16 - 18	7.5	27.7
JPR-12T-8T	3/4 x 1/2		3/4 - 16	10.0	30.2
JPR-16T-12T	1 x 3/4		1 1/16 - 12	15.5	37.3
JPR-20T-12T	1-1/4 x 3/4		1 1/16 - 12	15.5	38.3
JPR-20T-16T	1-1/4 x 1		1 5/16 - 12	21.4	40.3
JPR-24T-20T	1-1/2 x 1-1/4		1 5/8 - 12	27.4	42.9

Bulkhead Lock Nut

JLN



Part No.	Tube O.D.		U (UN / UNF)	L	H (HEX)
	inch	mm			
JLN-2T	1/8	3	5/16 - 24	5.6	14.3
JLN-3T	3/16	4	3/8 - 24	5.6	15.8
JLN-4T	1/4	6	7/16 - 20	7.1	17.4
JLN-5T	5/16	8	1/2 - 20	7.1	19.0
JLN-6T	3/8	10	9/16 - 18	6.9	20.6
JLN-8T	1/2	12	3/4 - 16	7.9	25.4
JLN-10T	5/8	16	7/8 - 14	9.1	28.5
JLN-12T	3/4	18, 20	1 1/16 - 12	10.4	34.9
JLN-14T	7/8	22	1 3/16 - 12	10.4	38.1
JLN-16T	1	25	1 5/16 - 12	10.4	41.2
JLN-20T	1-1/4	32	1 5/8 - 12	10.4	47.6
JLN-24T	1-1/2	38	1 7/8 - 12	10.4	53.9
JLN-32T	2	50	2 1/2 - 12	10.4	69.8

SCO O-Ring Face Seal Fittings

The best partner for value creation
We support the innovations of customer



05



Catalogue No. S-LOK Mar.2024

Union Gland



186

**S-LOK Tube
Connector Gland**



186

Tube Adapter Gland



187

**Tube Socket Weld
Gland**



187

**Tube Socket Weld
Reducing Gland**



187

Male Tube Weld Gland



188

**Automatic Tube Weld
Gland**



188

Male Connector Gland



188

**Female Connector
Gland**



189

**Male SAE/MS Connector
Gland**



189

Union Body



190

Reducing Union Body



190

**S-LOK Tube Fitting
Connector Body**



190

Elbow Body



191

Tee Body



191

Bulkhead Union Body



191

**S-LOK Tube Fitting
Bulkhead Connector Body**



192

**S-LOK Tube Fitting
Elbow Body**



192

Tube Socket Weld Body



193

**Automatic Tube Weld
Body**



193

Male Connector Body



193

Female Connector Body



194

**Male SAE/MS Connector
Body**



194

Male Elbow Body



195

**Male SAE/MS
Positionable Elbow Body**



195

Blind



195

Female Nut



196

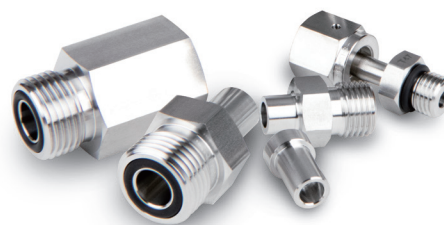
Blind Nut



196

Features

- Designed for quick assembly in pipe, tube and welded systems.
- Easy installation and disassembly
- Leak-tight from vacuum to positive pressure
- Wide range of temperature up to 550°F
- Smooth finish on gland face
- Nuts with two test ports
- Silver plated nut thread



Technical Data

Pressure Ratings

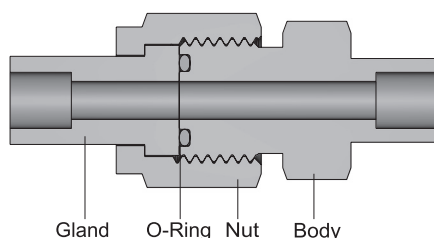
- Pressure ratings comply with calculations in accordance with ASME B31.3 and ASME B31.1.

Temperature Ratings

- Temperature ratings are determined by the O-ring materials.
- Fluorocarbon FKM O-ring is standard.
- Other o-ring materials are available upon request.
- Refer to the table below for the temperature range for o-ring materials.

O-Ring Material	Temperature Rating °F (°C)
Fluorocarbon FKM	400 (204)
Buna N	250 (121)
Perfluoroelastomer	550 (287)
Ethylene propylene	300 (148)
PTFE	450 (232)

Typical Assembly



Standard Materials of Construction

Component	Material
Bodies	316 Stainless Steel
Glands	316 Stainless Steel
Nuts	316 Stainless Steel
Automatic tube weld fittings	316L Stainless Steel
O-ring for SCO bodies	Fluorocarbon FKM (75 durometer)
O-ring for SAE/MS threads	Fluorocarbon FKM (90 durometer)

O-Ring Uniform Size Number

Fluorocarbon FKM O-ring (Hardness Shore A 75) is standard on SCO bodies.

SCO Size inch	O-Ring Uniform Size Number
1/4 (& 1/8)	010
1/2 (& 3/8)	111
3/4	116
1	215

Fluorocarbon FKM O-ring (Hardness Shore A 90) is standard on SAE/MS threads.

SAE/MS Thread Size	O-Ring Uniform Size Number
7/16 – 20	904
9/16 – 18	906
3/4 – 16	908
1-1/16 – 12	912
1-5/16 – 12	916

Helium Leak Testing

- Maximum leak rate : 4×10^{-9} std cm³/s

Ordering Information and Dimension

SCO	-	BU	-	8	-	8T	-	NBR	-	S6
SCO Fitting		Product Type		SCO Size		Tube Size		O-Ring Material		Body Material

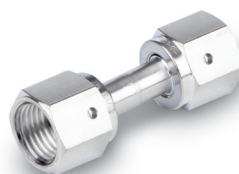
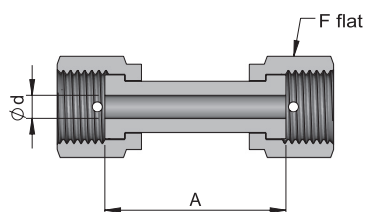
• O-Ring Material

- Nil : Fluorocarbon FKM
- NBR : Buna N
- KA : Perfluoroelastomer
- EP : Ethylene propylene
- TE : PTFE

• Body Material

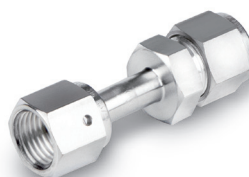
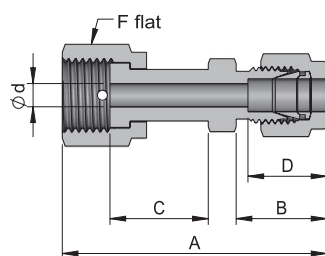
- S6 : SS316
- S6L : SS316L

Union Gland



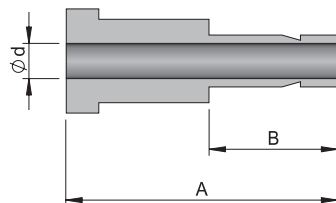
Part Number	SCO Size	Dimensions, inch (mm)			Pressure Rating psig (bar)
		d	A	F	
SCO-GU-4	1/4"	0.18(4.6)	1.42(36.1)	11/16(17.46)	10200(702)
SCO-GU-8	1/2"	0.40(10.2)	1.61(40.9)	1(25.4)	5800(399)

S-LOK Tube Connector Gland



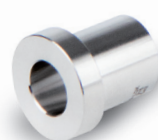
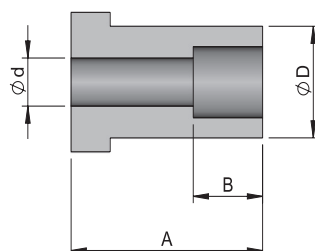
Part Number	SCO Size	Tube O.D.	Dimensions, inch (mm)						Pressure Rating psig (bar)
			d	A	B	C	D	F	
SCO-GSC-4-4T	1/4"	1/4"	0.18(4.6)	1.74(44.2)	0.70(17.8)	0.77(19.6)	0.60(15.2)	11/16(17.46)	10200(702)
SCO-GSC-8-6T	1/2"	3/8"	0.28(7.1)	1.87(47.5)	0.76(19.3)	0.81(20.6)	0.66(16.8)	1(25.40)	5800(399)
SCO-GSC-8-8T	1/2"	1/2"	0.40(10.2)	2.01(51.1)	0.87(22.1)	0.81(20.6)	0.90(22.9)	1(25.40)	5800(399)
SCO-GSC-12-12T	3/4"	3/4"	0.62(15.7)	2.14(54.4)	0.87(22.1)	0.94(23.9)	0.96(24.4)	1-1/2(38.10)	4000(275)
SCO-GSC-16-16T	1"	1"	0.87(22.1)	2.45(62.2)	1.04(26.4)	0.98(24.9)	1.23(31.2)	1-3/4(44.45)	3000(206)

Tube Adapter Gland



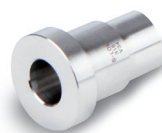
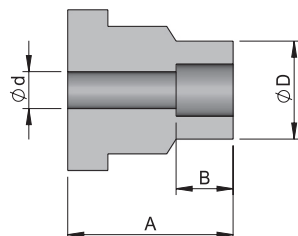
Part Number	SCO Size	Tube O.D.	Dimensions, inch (mm)			Pressure Rating psig (bar)
			d	A	B	
SCO-GA-4-4T	1/4"	1/4"	0.18(4.6)	1.31(33.3)	0.64(16.3)	10200(702)
SCO-GA-8-6T	1/2"	3/8"	0.27(6.8)	1.38(35.1)	0.70(17.8)	6500(447)
SCO-GA-8-8T	1/2"	1/2"	0.37(9.3)	1.62(41.1)	0.96(24.4)	6700(461)
SCO-GA-12-12T	3/4"	3/4"	0.58(14.7)	1.80(45.7)	1.02(25.9)	5800(399)
SCO-GA-16-16T	1"	1"	0.80(20.3)	2.05(52.1)	1.30(33.0)	4700(323)

Tube Socket Weld Gland



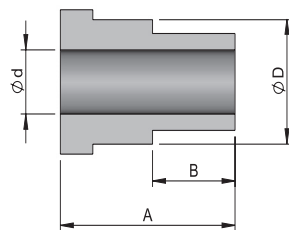
Part Number	SCO Size	Tube O.D.	Dimensions, inch (mm)				Pressure Rating psig (bar)
			d	A	B	D	
SCO-GSWC-4-2T	1/4"	1/8"	0.09(2.3)	0.77(19.6)	0.10(2.5)	0.38(9.7)	15400(1061)
SCO-GSWC-4-4T	1/4"	1/4"	0.18(4.6)	0.77(19.6)	0.28(7.1)	0.38(9.7)	6800(468)
SCO-GSWC-8-6T	1/2"	3/8"	0.28(7.1)	0.81(20.6)	0.31(7.9)	0.60(15.2)	8100(558)
SCO-GSWC-8-8T	1/2"	1/2"	0.40(10.2)	0.81(20.6)	0.38(9.7)	0.73(18.5)	3000(206)
SCO-GSWC-12-12T	3/4"	3/4"	0.62(15.7)	0.94(23.9)	0.44(11.2)	0.92(23.4)	3700(255)
SCO-GSWC-16-16T	1"	1"	0.87(22.1)	0.98(24.9)	0.62(15.7)	1.19(30.2)	3000(206)

Tube Socket Weld Reducing Gland



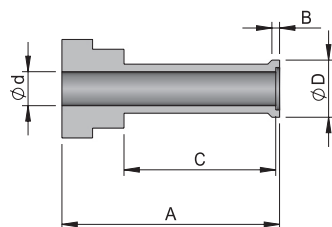
Part Number	SCO Size	Tube O.D.	Dimensions, inch (mm)				Pressure Rating psig (bar)
			d	A	B	D	
SCO-GSWR-4-2T	1/4"	1/8"	0.09(2.3)	0.77(19.6)	0.10(2.5)	0.29(7.4)	12600(868)
SCO-GSWR-8-4T	1/2"	1/4"	0.18(4.6)	0.81(20.6)	0.28(7.1)	0.48(12.2)	10700(737)

Male Tube Weld Gland



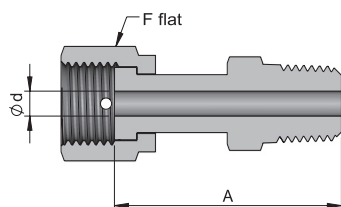
Part Number	SCO Size	Tube O.D	Dimensions, inch (mm)				Pressure Rating psig (bar)
			d	A	B	D	
SCO-GWC-4-2T	1/4"	1/8"	0.06(1.5)	0.77(19.6)	0.28(7.1)	0.38(9.7)	11200(771)
SCO-GWC-4-4T	1/4"	1/4"	0.12(3.0)	1.12(28.4)	0.41(10.4)	0.38(9.7)	11200(771)
SCO-GWC-8-4T	1/2"	1/4"	0.12(3.0)	0.91(23.1)	0.41(10.4)	0.60(15.2)	11200(771)
SCO-GWC-8-6T	1/2"	3/8"	0.23(5.8)	0.84(21.3)	0.41(10.4)	0.60(15.2)	8200(564)
SCO-GWC-8-8T	1/2"	1/2"	0.33(8.4)	1.06(26.9)	0.50(12.7)	0.60(15.2)	7500(516)

Automatic Tube Weld Gland



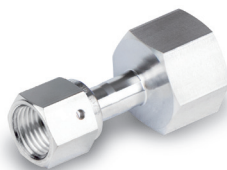
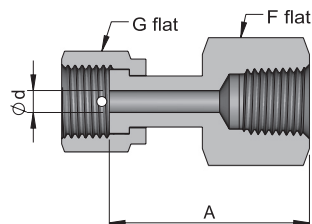
Part Number	SCO Size	Tube O.D	Dimensions, inch (mm)					Pressure Rating psig (bar)
			d	A	B	C	D	
SCO-GWAC-4-4T	1/4"	1/4"	0.18(4.6)	1.12(28.4)	0.02(0.51)	0.78(19.8)	0.29(7.4)	5100(351)
SCO-GWAC-8-6T	1/2"	3/8"	0.31(7.9)	1.13(28.7)	0.03(0.76)	0.79(20.0)	0.41(10.4)	3300(227)
SCO-GWAC-8-8T	1/2"	1/2"	0.40(10.2)	1.14(29.0)	0.04(1.0)	0.80(20.3)	0.55(14.0)	3500(241)
SCO-GWAC-12-12T	3/4"	3/4"	0.65(16.5)	1.20(30.5)	0.04(1.0)	0.80(20.3)	0.80(20.3)	2200(151)
SCO-GWAC-16-16T	1"	1"	0.87(22.1)	1.41(35.8)	0.04(1.0)	1.00(25.4)	1.06(26.9)	2200(151)

Male Connector Gland



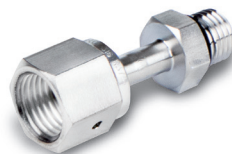
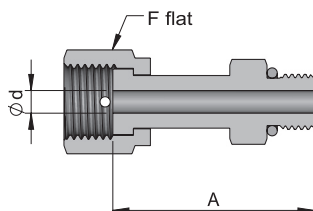
Part Number	SCO Size	NPT Size	Dimensions, inch (mm)			Pressure Rating psig (bar)
			d	A	F	
SCO-GMC-4-4N	1/4"	1/4"	0.18(4.6)	1.59(40.4)	11/16(17.46)	9800(675)
SCO-GMC-8-6N	1/2"	3/8"	0.40(10.2)	1.67(42.4)	1(25.4)	5600(385)
SCO-GMC-8-8N	1/2"	1/2"	0.40(10.2)	1.87(47.5)	1(25.4)	5600(385)
SCO-GMC-12-12N	3/4"	3/4"	0.62(15.7)	2.03(51.6)	1-1/2(38.10)	3900(268)
SCO-GMC-16-16N	1"	1"	0.87(22.1)	2.36(59.9)	1-3/4(44.45)	2900(199)

Female Connector Gland



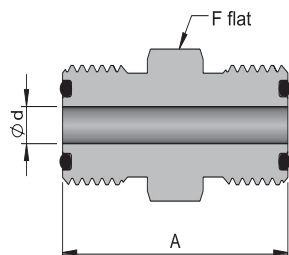
Part Number	SCO Size	NPT Size	Dimensions, inch (mm)				Pressure Rating psig (bar)
			d	A	F	G	
SCO-GFC-4-4N	1/4"	1/4"	0.18(4.6)	1.57(39.9)	3/4(19.05)	11/16(17.46)	6600(454)
SCO-GFC-8-6N	1/2"	3/8"	0.40(10.2)	1.73(43.9)	7/8(22.22)	1(25.4)	5300(365)
SCO-GFC-8-8N	1/2"	1/2"	0.40(10.2)	1.96(49.8)	1-1/16(26.98)	1(25.4)	4900(337)
SCO-GFC-12-12N	3/4"	3/4"	0.62(15.7)	2.12(53.8)	1-5/16(33.33)	1-1/2(38.10)	4000(275)
SCO-GFC-16-16N	1"	1"	0.87(22.1)	2.29(58.2)	1-5/8(41.27)	1-3/4(44.45)	3000(206)

Male SAE/MS Connector Gland



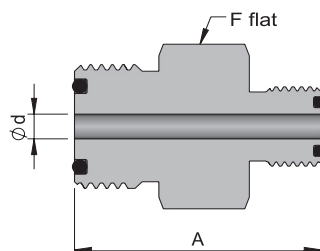
Part Number	SCO Size	Straight Thread Size	Dimensions, inch (mm)			Pressure Rating psig (bar)
			d	A	F	
SCO-GUS-4-4U	1/4"	7/16 – 20	0.18(4.6)	1.54(39.1)	11/16(17.46)	4500(310)
SCO-GUS-8-6U	1/2"	9/16 – 18	0.40(10.2)	1.64(41.7)	1(25.4)	4500(310)
SCO-GUS-8-8U	1/2"	3/4 – 16	0.40(10.2)	1.71(43.4)	1(25.4)	4500(310)
SCO-GUS-12-12U	3/4"	1-1/16 – 12	0.62(15.7)	2.07(52.6)	1-1/2(38.10)	3600(248)
SCO-GUS-16-16U	1"	1-5/16 – 12	0.87(22.1)	2.17(55.1)	1-3/4(44.45)	2900(199)

Union Body



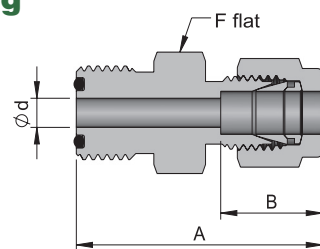
Part Number	SCO Size	Dimensions, inch (mm)			Pressure Rating psig (bar)
		d	A	F	
SCO-BU-4	1/4"	0.18(4.6)	1.25(31.8)	5/8(15.87)	14300(985)
SCO-BU-8	1/2"	0.40(10.2)	1.50(38.1)	15/16(23.81)	11100(764)

Reducing Union Body



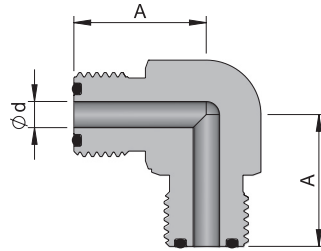
Part Number	SCO Size 1	SCO Size 2	Dimensions, inch (mm)			Pressure Rating psig (bar)
			d	A	F	
SCO-BUR-8-4	1/2"	1/4"	0.18(4.6)	1.43(36.3)	15/16(23.81)	11100(764)

S-LOK Tube Fitting Connector Body



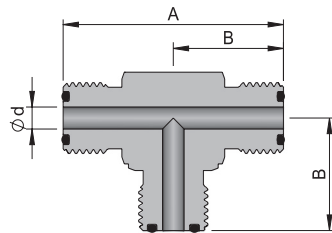
Part Number	SCO Size	Tube O.D.	Dimensions, inch (mm)				Pressure Rating psig (bar)
			d	A	B	F	
SCO-BSC-4-2T	1/4"	1/8"	0.09(2.3)	1.38(35.1)	0.51(13.0)	5/8(15.87)	10900(751)
SCO-BSC-4-4T	1/4"	1/4"	0.18(4.6)	1.47(37.3)	0.60(15.2)	5/8(15.87)	10200(702)
SCO-BSC-8-6T	1/2"	3/8"	0.28(7.1)	1.65(41.9)	0.66(16.8)	15/16(23.81)	6500(447)
SCO-BSC-8-8T	1/2"	1/2"	0.40(10.2)	1.78(45.2)	0.90(22.9)	15/16(23.81)	6700(461)
SCO-BSC-12-12T	3/4"	3/4"	0.62(15.7)	1.86(47.2)	0.96(24.4)	1-5/16(33.33)	5800(399)
SCO-BSC-16-16T	1"	1"	0.87(22.1)	2.06(52.3)	1.23(31.2)	1-5/8(41.27)	4700(323)

Elbow Body



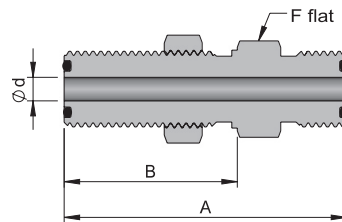
Part Number	SCO Size	Dimensions, inch (mm)		Pressure Rating psig (bar)
		d	A	
SCO-BL-4	1/4"	0.18(4.6)	0.96(24.4)	14300(985)
SCO-BL-8	1/2"	0.40(10.2)	1.26(32.0)	11100(764)
SCO-BL-12	3/4"	0.62(15.7)	1.48(37.6)	10900(751)
SCO-BL-16	1"	0.87(22.1)	1.56(39.6)	8800(606)

Tee Body



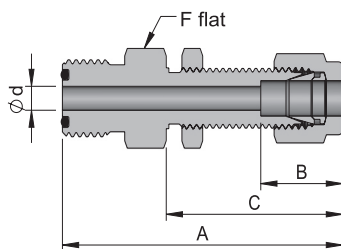
Part Number	SCO Size	Dimensions, inch (mm)			Pressure Rating psig (bar)
		d	A	B	
SCO-BT-4	1/4"	0.18(4.6)	1.92(48.8)	0.96(24.4)	14300(985)
SCO-BT-8	1/2"	0.40(10.2)	2.52(64.0)	1.26(32.0)	11100(764)
SCO-BT-12	3/4"	0.62(15.7)	2.96(75.2)	1.48(37.6)	10900(751)
SCO-BT-16	1"	0.87(22.1)	3.12(79.2)	1.56(39.6)	8800(606)

Bulkhead Union Body



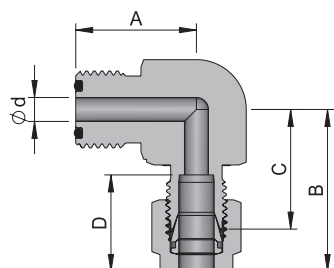
Part Number	SCO Size	Dimensions, inch (mm)						Pressure Rating psig (bar)
		d	A	B	F	Panel Hole Drill Size	Max. Panel Thickness	
SCO-BBU-4	1/4"	0.18(4.6)	1.88(47.8)	1.06(26.9)	3/4(19.05)	37/64(14.68)	0.36(9.1)	14300(985)
SCO-BBU-8	1/2"	0.40(10.2)	2.09(53.1)	1.19(30.2)	1-1/16(26.98)	57/64(22.62)	0.40(10.2)	11100(764)

S-LOK Tube Fitting Bulkhead Connector Body



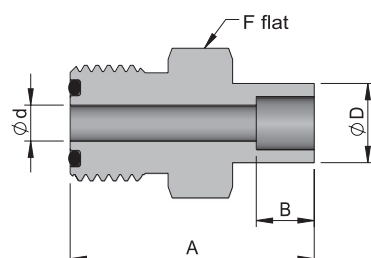
Part Number	SCO Size	Tube O.D.	Dimensions, inch (mm)							Pressure Rating psig (bar)
			d	A	B	C	F	Panel Hole Drill Size	Max. Panel THK.	
SCO-BSCB-4-4T	1/4"	1/4"	0.18(4.6)	2.10(53.3)	0.60(15.2)	1.32(33.5)	5/8(15.87)	29/64(11.50)	0.40(10.2)	10200(702)
SCO-BSCB-8-6T	1/2"	3/8"	0.28(7.1)	2.34(59.4)	0.66(16.8)	1.45(36.8)	15/16(23.81)	37/64(14.68)	0.44(11.2)	6500(447)
SCO-BSCB-8-8T	1/2"	1/2"	0.40(10.2)	2.55(64.8)	0.90(22.9)	1.65(41.9)	15/16(23.81)	49/64(19.44)	0.50(12.7)	6700(461)
SCO-BSCB-12-12T	3/4"	3/4"	0.62(15.7)	2.86(72.6)	0.96(24.4)	1.87(47.5)	1-5/16(33.33)	1-1/64(25.79)	0.66(16.8)	5800(399)
SCO-BSCB-16-16T	1"	1"	0.87(22.1)	3.29(83.6)	1.23(31.2)	2.26(57.4)	1-5/8(41.27)	1-21/64(33.73)	0.75(19.0)	4700(323)

S-LOK Tube Fitting Elbow Body



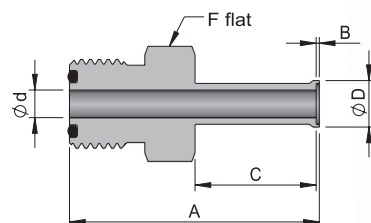
Part Number	SCO Size	Tube O.D.	Dimensions, inch (mm)					Pressure Rating psig (bar)
			d	A	B	C	D	
SCO-BSL-4-4T	1/4"	1/4"	0.18(4.6)	0.96(24.4)	1.19(30.2)	0.90(22.9)	0.60(15.2)	10200(702)
SCO-BSL-8-6T	1/2"	3/8"	0.28(7.1)	1.26(32.0)	1.39(35.3)	1.10(27.9)	0.66(16.8)	6500(447)
SCO-BSL-8-8T	1/2"	1/2"	0.40(10.2)	1.26(32.0)	1.50(38.1)	1.10(27.9)	0.90(22.9)	6700(461)
SCO-BSL-12-12T	3/4"	3/4"	0.62(15.7)	1.48(37.6)	1.80(45.7)	1.40(35.6)	0.96(24.4)	5800(399)
SCO-BSL-16-16T	1"	1"	0.87(22.1)	1.56(39.6)	2.04(51.8)	1.56(39.6)	1.23(31.2)	4700(323)

Tube Socket Weld Body



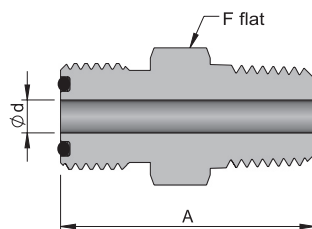
Part Number	SCO Size	Tube O.D.	Dimensions, inch (mm)					Pressure Rating psig (bar)
			d	A	B	D	F	
SCO-BSWC-4-2T	1/4"	1/8"	0.09(2.3)	0.88(22.4)	0.10(2.5)	0.29(7.4)	5/8(15.87)	12600(868)
SCO-BSWC-4-4T	1/4"	1/4"	0.18(4.6)	1.09(27.7)	0.28(7.1)	0.38(9.7)	5/8(15.87)	6800(468)
SCO-BSWC-8-6T	1/2"	3/8"	0.28(7.1)	1.28(32.5)	0.31(7.9)	0.60(15.2)	15/16(23.81)	8100(558)
SCO-BSWC-8-8T	1/2"	1/2"	0.40(10.2)	1.34(34.0)	0.38(9.7)	0.73(18.5)	15/16(23.81)	3000(206)
SCO-BSWC-12-12T	3/4"	3/4"	0.62(15.7)	1.50(38.1)	0.44(11.2)	0.92(23.4)	1-5/16(33.33)	3700(254)
SCO-BSWC-16-16T	1"	1"	0.87(22.1)	1.72(43.7)	0.62(15.7)	1.19(30.2)	1-5/8(41.27)	3000(206)

Automatic Tube Weld Body



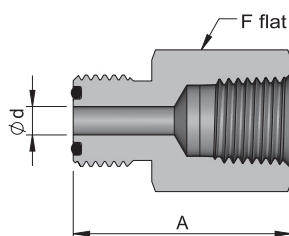
Part Number	SCO Size	Tube O.D.	Dimensions, inch (mm)					Pressure Rating psig (bar)
			d	A	B	C	D	
SCO-BWAC-4-4T	1/4"	1/4"	0.18(4.6)	1.59(40.4)	0.02(0.51)	0.78(19.8)	0.29(7.4)	5100(351)
SCO-BWAC-8-6T	1/2"	3/8"	0.31(7.9)	1.74(44.2)	0.03(0.76)	0.79(20.0)	0.41(10.4)	3300(227)
SCO-BWAC-8-8T	1/2"	1/2"	0.40(10.2)	1.75(44.4)	0.04(1.0)	0.80(20.3)	0.55(14.0)	3500(241)
SCO-BWAC-12-12T	3/4"	3/4"	0.65(16.5)	1.78(45.2)	0.04(1.0)	0.80(20.3)	0.80(20.3)	2200(151)
SCO-BWAC-16-16T	1"	1"	0.87(22.1)	20.3(51.6)	0.04(1.0)	1.00(25.4)	1.06(26.9)	2200(151)

Male Connector Body



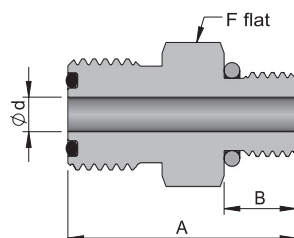
Part Number	SCO Size	NPT Size	Dimensions, inch (mm)			Pressure Rating psig (bar)
			d	A	F	
SCO-BMC-4-2N	1/4"	1/8"	0.18(4.6)	1.16(29.5)	5/8(15.87)	10000(689)
SCO-BMC-4-4N	1/4"	1/4"	0.18(4.6)	1.34(34.0)	5/8(15.87)	13400(923)
SCO-BMC-8-6N	1/2"	3/8"	0.38(9.7)	1.46(37.1)	15/16(23.81)	7800(537)
SCO-BMC-8-8N	1/2"	1/2"	0.40(10.2)	1.65(41.9)	15/16(23.81)	10000(689)
SCO-BMC-12-12N	3/4"	3/4"	0.62(15.7)	1.75(44.4)	1-5/16(33.33)	7300(502)
SCO-BMC-16-16N	1"	1"	0.87(22.1)	1.97(50.0)	1-5/8(41.27)	5300(365)

Female Connector Body



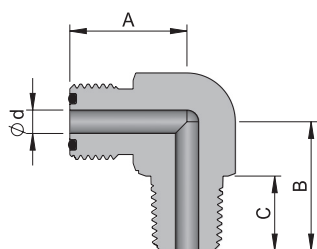
Part Number	SCO Size	NPT Size	Dimensions, inch (mm)			Pressure Rating psig (bar)
			d	A	F	
SCO-BFC-4-2N	1/4"	1/8"	0.18(4.6)	1.25(31.8)	5/8(15.87)	8400(578)
SCO-BFC-4-4N	1/4"	1/4"	0.18(4.6)	1.39(35.3)	3/4(19.05)	6600(454)
SCO-BFC-8-6N	1/2"	3/8"	0.40(10.2)	1.57(39.9)	15/16(23.81)	6600(454)
SCO-BFC-8-8N	1/2"	1/2"	0.40(10.2)	1.77(45.0)	1-1/16(26.98)	4900(337)
SCO-BFC-12-12N	3/4"	3/4"	0.62(15.7)	1.93(49.0)	1-5/16(33.33)	4600(316)
SCO-BFC-16-16N	1"	1"	0.87(22.1)	2.02(51.3)	1-5/8(41.27)	4400(303)

Male SAE/MS Connector Body



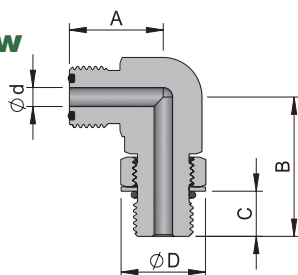
Part Number	SCO Size	Straight Thread Size	Dimensions, inch (mm)				Pressure Rating psig (bar)
			d	A	B	F	
SCO-BUS-4-4U	1/4"	7/16 – 20	0.18(4.6)	1.24(31.5)	0.36(9.1)	11/16(17.46)	4500(310)
SCO-BUS-4-6U	1/4"	9/16 – 18	0.18(4.6)	1.17(29.7)	0.39(9.9)	11/16(17.46)	4500(310)
SCO-BUS-8-4U	1/2"	7/16 – 20	0.18(4.6)	1.36(34.5)	0.36(9.1)	15/16(23.81)	4500(310)
SCO-BUS-8-6U	1/2"	9/16 – 18	0.30(7.6)	1.39(35.3)	0.39(9.9)	15/16(23.81)	4500(310)
SCO-BUS-8-8U	1/2"	3/4 – 16	0.40(10.2)	1.47(37.3)	0.44(11.2)	1(25.40)	4500(310)
SCO-BUS-12-12U	3/4"	1-1/16 – 12	0.62(15.7)	1.73(43.9)	0.59(15.0)	1-3/8(34.92)	3600(248)
SCO-BUS-16-16U	1"	1-5/16 – 12	0.85(21.6)	1.79(45.5)	0.59(15.0)	1-5/8(41.27)	2900(199)

Male Elbow Body



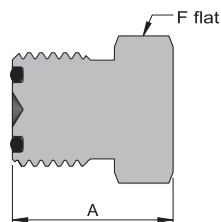
Part Number	SCO Size	NPT Size	Dimensions, inch (mm)				Pressure Rating psig (bar)
			d	A	B	C	
SCO-BLM-4-2N	1/4"	1/8"	0.18(4.6)	0.96(24.4)	0.87(22.1)	0.38(9.7)	10000(689)
SCO-BLM-4-4N	1/4"	1/4"	0.18(4.6)	0.96(24.4)	1.05(26.7)	0.56(14.2)	8000(551)
SCO-BLM-8-6N	1/2"	3/8"	0.38(9.7)	1.26(32.0)	1.26(32.0)	0.56(14.2)	7800(537)
SCO-BLM-8-8N	1/2"	1/2"	0.40(10.2)	1.26(32.0)	1.45(36.8)	0.75(19.0)	7700(530)
SCO-BLM-12-12N	3/4"	3/4"	0.62(15.7)	1.48(37.6)	1.67(42.4)	0.75(19.0)	7300(502)
SCO-BLM-16-16N	1"	1"	0.87(22.1)	1.56(39.6)	1.94(49.3)	0.94(23.9)	5300(365)

Male SAE/MS Positionable Elbow Body



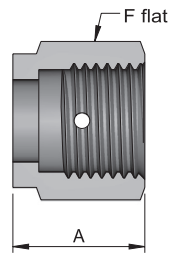
Part Number	SCO Size	Straight Thread Size	Dimensions, inch (mm)					Pressure Rating psig (bar)
			d	A	B	C	D	
SCO-BLS-4-4U	1/4"	7/16 – 20	0.18(4.6)	0.96(24.4)	1.19(30.2)	0.39(9.9)	0.65(16.5)	4500(310)
SCO-BLS-8-6U	1/2"	9/16 – 18	0.30(7.6)	1.33(33.8)	1.54(39.1)	0.44(11.2)	0.79(20.1)	3600(248)
SCO-BLS-8-8U	1/2"	3/4 – 16	0.40(10.2)	1.33(33.8)	1.65(41.9)	0.50(12.7)	1.01(25.7)	3600(248)
SCO-BLS-12-12U	3/4"	1-1/16 – 12	0.62(15.7)	1.53(38.9)	2.13(54.1)	0.66(16.8)	1.44(36.6)	2900(199)
SCO-BLS-16-16U	1"	1-5/16 – 12	0.87(22.1)	1.72(43.7)	2.31(58.7)	0.66(16.8)	1.73(43.9)	2300(158)

Blind



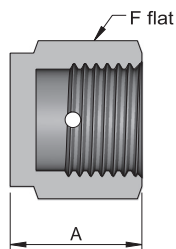
Part Number	SCO Size	Dimensions, inch (mm)	
		A	F
SCO-CAP-4	1/4"	0.77(19.6)	5/8(15.87)
SCO-CAP-8	1/2"	0.89(22.6)	15/16(23.81)
SCO-CAP-12	3/4"	0.99(25.1)	1-5/16(33.33)
SCO-CAP-16	1"	1.02(25.9)	1-5/8(41.27)

Female Nut



Part Number	SCO Size	Dimensions, inch (mm)	
		A	F
SCO-NUT-4	1/4"	0.66(16.8)	11/16(17.46)
SCO-NUT-8	1/2"	0.69(17.5)	1(25.40)
SCO-NUT-12	3/4"	0.81(20.6)	1-1/2(38.10)
SCO-NUT-16	1"	0.81(20.6)	1-3/4(44.45)

Blind Nut

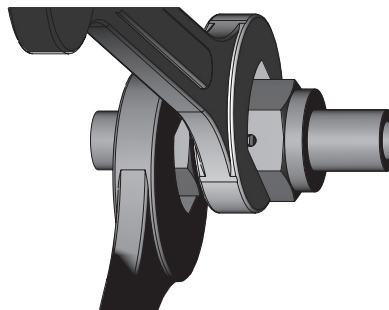
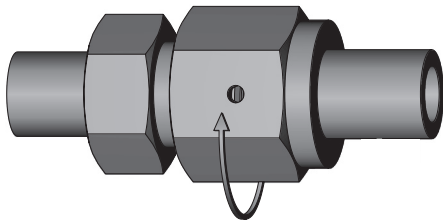


Part Number	SCO Size	Dimensions, inch (mm)	
		A	F
SCO-BLNUT-4	1/4"	0.44(11.2)	11/16(17.46)
SCO-BLNUT-8	1/2"	0.56(14.2)	1(25.40)
SCO-BLNUT-12	3/4"	0.75(19.0)	1-1/2(38.10)
SCO-BLNUT-16	1"	0.81(20.6)	1-3/4(44.45)

SCO Fitting Installation Instruction

1. Rotate the nut finger-tight.

2. Tighten the nut 1/8 turn with spanner.

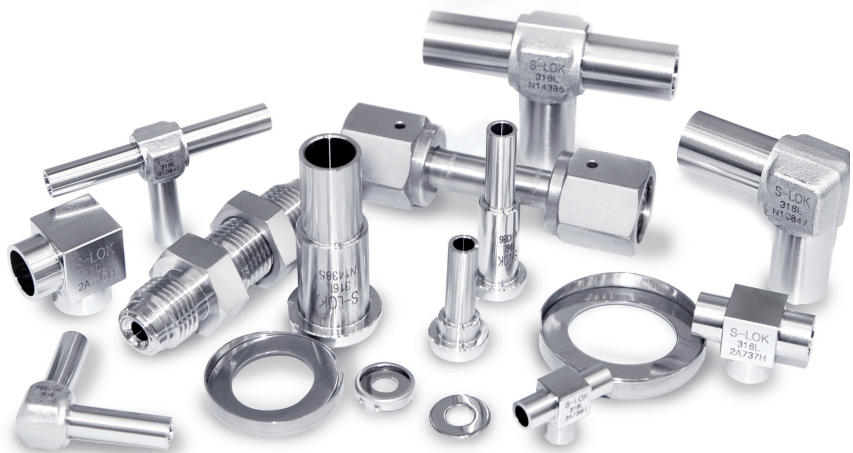


NOTE

O-ring should be removed to prevent thermal damage when welding of bodies or glands.

UHP Fittings (Clean Fittings)

The best partner for value creation
We support the innovations of customer



06



Catalogue No. S-LOK Mar.2024

Micro Weld Fittings

Micro Elbow

C-ML



202

Micro 45° Elbow

C-MLB



202

Micro Reducing Elbow

C-MRL



203

Micro Tee

C-MT



203

Micro Reducing Tee

C-MRT



204

Micro Cross

C-MX



204

Micro Tribow

C-MTB



205

Micro Reducing Union

C-MRU



205

Tube Butt Weld Fittings

Long Elbow

C-LL



207

Long Reducing Elbow

C-LRL



207

Long Tee

C-LT



208

Long Reducing Tee

C-LRT



209

Long Cross

C-LX



210

Long Reducing Union

C-LRU



211

Metal Face Seal Fittings

Micro Gland for Female Nut

C-MGF



213

Micro Gland for male Nut

C-MGM



213

Long Gland for Female Nut

C-LGF



214

Long Gland for Male Nut

C-LGM



214

ATW Long Gland for Female Nut

C-ALGF



215

ATW Long Gland for Male Nut

C-ALGM



215

Soket Weld Gland

C-GSW



216

Male Weld Gland
C-GMW



216

Tube Adapter Gland
C-GA



217

Blind Gland
C-GBL



217

Union
C-U



218

Bulkhead Union
C-BU



218

Male Connector
C-MC-N



219

Tube Butt Weld Connector
C-TC



219

Tube Butt Weld Bulkhead Connector
C-TCB



220

Coupling
C-CG



220

Union Elbow
C-L



221

Male Elbow
C-MLC



221

Union Tee
C-T



222

Union Cross
C-X



222

S-LOK Tube Fitting Connector
C-US



223

S-LOK Tube Fitting Connector
Bulkhead Connector
C-USB



223

Male Bulkhead Connector
Male Connector (Straight Thread)
C-MBC/C-MC-U



224

Female Connector
C-FC



225

Gasket Retainer Assembly
C-GTR



225

Gasket
C-GT



226

Female Nut
C-NF



226

Male Nut / Cap
C-NM/C-CP



227

Plug
C-PG



228

High Flow Gland
C-HG



228

Welded Assemblies



229

Technical Data

Pressure Ratings

- Pressure ratings are based on allowable stress value of 20,000psi as specified in ASME B31.3 for 316 stainless steel.
- Pressure ratings of Metal Face Seal Fittings determined at room temperature with gasket materials shown.
- For pressure ratings of ASME B31.1, multiply working pressure by 0.94.
- Allowable working pressure at temperatures greater than 100°C (37°C) may be determined by multiple factors in the table below.

Material	SS316	SS316L
Temperature, °F (°C)	Factor	
-20 (28) to 100 (37)	1.00	1.00
200 (93)	1.00	0.83
400 (204)	0.96	0.77
600 (315)	0.85	0.67
800 (426)	0.79	0.62
1000 (537)	0.76	0.56

Cleaning and Packaging

- Passivation in a nitric environment
- Ultra-sonic cleaning with minimum 18M of D.I water after passivation.
- All fittings are double packaged in the clean room.
- Sealing parts are protected with a plastic cap.

Temperature Ratings

Components	Material	Temperature °F (°C)
Fittings	316 Stainless Steel & 316L Stainless Steel	1000 (537)
	316L Stainless Steel Single Melt	
	316L Stainless Steel Double Melt	
Gaskets	316L Stainless Steel	1000 (537)
	Nickel	600 (315)

Materials

Material	Designator	Specifications
316 Stainless Steel	S6	Bar Stock : ASTM A479 ASTM A276
316L Stainless Steel	S6L	Forging : ASTM A182
316L Stainless Steel Single Melt (VOD)	S6LS	Bar Stock : ASTM A479 ASTM A276
316L Stainless Steel Double Melt (VAR)	S6LV	Forging : ASTM A182 SEMI SPEC. F20-0706E
316L Stainless Steel Double Melt (VIM/VAR)	S6LVV	JIS SPEC. Chemical Composition

Product Grade

Level	Inner Surface Roughness	
	Ra	Ry
EP	≤ 5 μ inch	≤ 0.7 μm
BA	≤ 10 μ inch	≤ 3.0 μm
AP	≤ 100 μ inch	≤ 25 μm

Chemical Composition

Element	Composition, Wt%									
	C	Si	Mn	P	S	Ni	Cr	Mo	Cu	Al
SS316L Singe Melt	≤ 0.03	≤ 1.0	≤ 0.8	≤ 0.045	≤ 0.005	12.0~15.0	16.0~18.0	2.0~3.0	≤ 0.3	-
SS316L Double Melt	≤ 0.025	≤ 0.3	≤ 0.4	≤ 0.045	≤ 0.005	14.5~15.0	16.0~17.0	2.2~2.5	≤ 0.03	≤ 0.01
SS316L VIM/VAR	≤ 0.01	≤ 0.2	≤ 0.05	≤ 0.02	≤ 0.003	14.5~15.0	16.5~17.0	2.2~2.5	≤ 0.2	≤ 0.01

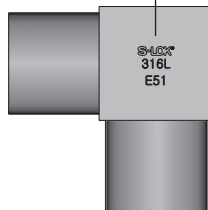
Micro Weld Fittings

Features

- Compact design for mainly gas line
- Suitable for miniature tubing system
- Allows close component spacing
- Provides flow capacity equal to larger weld fittings

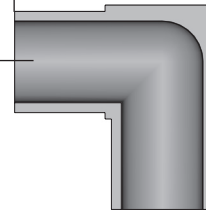


Laser marking
Manufacturer / Material / HCN



Sharp and burr-free
tube weld end.

Standard surface finish is
BA: Ra 0.25 μm
EP: Ra 0.13 μm



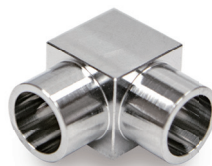
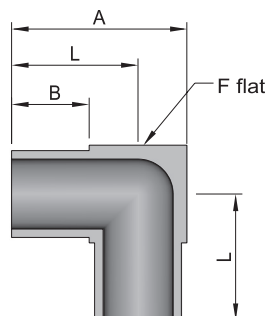
Radius junction for
smooth transition
and elimination
of entrapment zones

Ordering Information



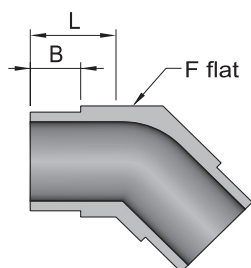
Clean Fitting	Product Type	Connection Size	Product Grade	Body Material
- C : S-LOK UHP Product	Refer to the basic ordering number in the dimension table.	- 4 : 1/4" - 6 : 3/8" - 8 : 1/2" - 12 : 3/4"	- BA : BA - EP : EP	- S6LS : SS316L Single Melt - S6LV : SS316L Double Melt

Micro Elbow



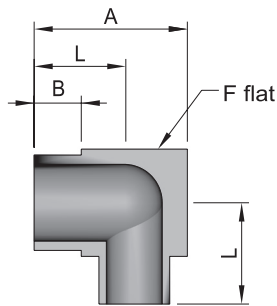
Basic Ordering Number	Tube O.D.	Wall THK.	Dimensions, mm (inch)				Pressure Rating bar (psig)
			A	B	L	F	
C-ML-2	1/8"	0.028"	14.4 (0.56)	6.4 (0.25)	10.4 (0.41)	7.94 (5/16)	585 (8500)
C-ML-4	1/4"	1mm	14.4 (0.56)	6.4 (0.25)	10.4 (0.41)	7.94 (5/16)	351 (5100)
C-ML-4T35		0.035"					
C-ML-6	3/8"	1mm	17.4 (0.69)	6.4 (0.25)	11.9 (0.47)	11.11 (7/16)	227 (3300)
C-ML-6T35		0.035"					
C-ML-8	1/2"	0.049"	20.6 (0.81)	6.4 (0.25)	13.5 (0.53)	14.28 (9/16)	254 (3700)
C-ML-12	3/4"	0.065"	27.0 (1.06)	6.4 (0.25)	16.7 (0.66)	20.64 (13/16)	165 (2400)

Micro 45° Elbow



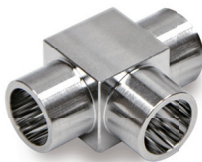
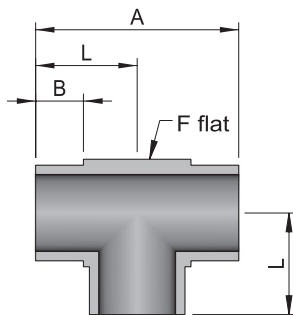
Basic Ordering Number	Tube O.D.	Wall THK.	Dimensions, mm (inch)			Pressure Rating bar (psig)
			B	L	F	
C-MLB-4	1/4"	1mm	6.35 (0.25)	10.10 (0.40)	7.94 (5/16)	351 (5100)
C-MLB-4T35	1/4"	0.035"	6.35 (0.25)	10.10 (0.40)	7.94 (5/16)	351 (5100)
C-MLB-6	3/8"	1mm	6.35 (0.25)	11.91 (0.47)	11.11 (7/16)	227 (3300)
C-MLB-6T35	3/8"	0.035"	6.35 (0.25)	11.91 (0.47)	11.11 (7/16)	227 (3300)
C-MLB-8	1/2"	0.049"	6.35 (0.25)	13.50 (0.53)	14.29 (9/16)	254 (3700)

Micro Reducing Elbow



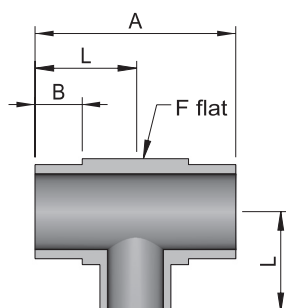
Basic Ordering Number	Tube O.D 1 x Wall THK.	Tube O.D 2 x Wall THK.	Dimensions, mm (inch)				Pressure Rating bar (psig)
			A	B	L	F	
C-MRL-4-2	1/4" x 1mm	1/8" x 0.028"	14.4 (0.56)	6.4 (0.25)	10.4 (0.41)	7.94 (5/16)	351 (5100)
C-MRL-6-4	3/8" x 1mm	1/4" x 1mm	17.4 (0.69)	6.4 (0.25)	11.9 (0.47)	11.11 (7/16)	227 (3300)
C-MRL-6-4-035	3/8" x 0.035"	1/4" x 0.035"					
C-MRL-8-4	1/2" x 0.049"	1/4" x 1mm	20.6 (0.81)	6.4 (0.25)	13.5 (0.53)	14.28 (9/16)	254 (3700)
C-MRL-8-4T35		1/4" x 0.035"					
C-MRL-8-6	1/2" x 0.049"	3/8" x 1mm	20.6 (0.81)	6.4 (0.25)	13.5 (0.53)	14.28 (9/16)	227 (3300)
C-MRL-8-6T35		3/8" x 0.035"					
C-MRL-12-4	3/4" x 0.065"	1/4" x 1mm	27.0 (1.06)	6.4 (0.25)	16.7 (0.66)	20.64 (13/16)	165 (2400)
C-MRL-12-6		3/8" x 1mm					
C-MRL-12-8		1/2" x 0.049"					

Micro Tee



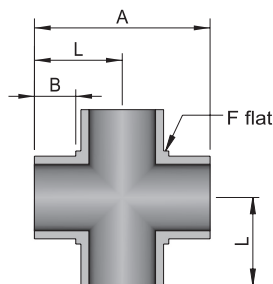
Basic Ordering Number	Tube O.D	Wall THK.	Dimensions, mm (inch)				Pressure Rating bar (psig)
			A	B	L	F	
C-MT-2	1/8"	0.028"	20.8 (0.82)	6.4 (0.25)	10.4 (0.41)	7.94 (5/16)	585 (8500)
C-MT-4	1/4"	1mm	20.8 (0.82)	6.4 (0.25)	10.4 (0.41)	7.94 (5/16)	351 (5100)
C-MT-4T35		0.035"					
C-MT-6	3/8"	1mm	23.8 (0.94)	6.4 (0.25)	11.9 (0.47)	11.11 (7/16)	227 (3300)
C-MT-6T35		0.035"					
C-MT-8	1/2"	0.049"	27.0 (1.06)	6.4 (0.25)	13.5 (0.53)	14.28 (9/16)	254 (3700)
C-MT-12	3/4"	0.065"	33.4 (1.31)	6.4 (0.25)	16.7 (0.66)	20.64 (13/16)	165 (2400)

Micro Reducing Tee



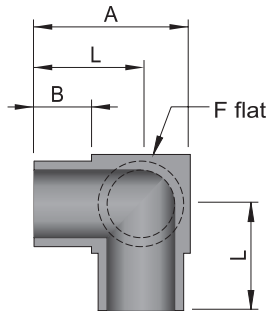
Basic Ordering Number	Tube O.D 1 x Wall THK.	Tube O.D 2 x Wall THK.	Dimensions, mm (inch)				Pressure Rating bar (psig)
			A	B	L	F	
C-MRT-4-2	1/4" x 1mm	1/8" x 0.028"	20.8 (0.82)	6.4 (0.25)	10.4 (0.41)	7.94 (5/16)	351 (5100)
C-MRT-6-4	3/8" x 1mm	1/4" x 1mm	23.8 (0.94)	6.4 (0.25)	11.9 (0.47)	11.11 (7/16)	227 (3300)
C-MRT-6-4-035	3/8" x 0.035"	1/4" x 0.035"					
C-MRT-8-4	1/2" x 0.049"	1/4" x 1mm	27.0 (1.06)	6.4 (0.25)	13.5 (0.53)	14.28 (9/16)	254 (3700)
C-MRT-8-4T35		1/4" x 0.035"					
C-MRT-8-6	1/2" x 0.049"	3/8" x 1mm	27.0 (1.06)	6.4 (0.25)	13.5 (0.53)	14.28 (9/16)	227 (3300)
C-MRT-8-6T35		3/8" x 0.035"					
C-MRT-12-4	3/4" x 0.065"	1/4" x 1mm	33.4 (1.31)	6.4 (0.25)	16.7 (0.66)	20.64 (13/16)	165 (2400)
C-MRT-12-6		3/8" x 1mm					
C-MRT-12-8		1/2" x 0.049"					

Micro Cross



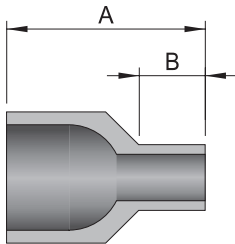
Basic Ordering Number	Tube O.D	Wall THK.	Dimensions, mm (inch)				Pressure Rating bar (psig)
			A	B	L	F	
C-MX-4	1/4"	1mm	20.8 (0.82)	6.4 (0.25)	10.4 (0.41)	7.94 (5/16)	351 (5100)
C-MX-4T35		0.035"					
C-MX-6	3/8"	1mm	23.8 (0.94)	6.4 (0.25)	11.9 (0.47)	11.11 (7/16)	227 (3300)
C-MX-6T35		0.035"					
C-MX-8	1/2"	0.049"	27.0 (1.06)	6.4 (0.25)	13.5 (0.53)	14.28 (9/16)	254 (3700)

Micro Tribow



Basic Ordering Number	Tube O.D	Wall THK.	Dimensions, mm (inch)				Pressure Rating bar (psig)
			A	B	L	F	
C-MTB-4	1/4"	1mm	14.4 (0.56)	6.4 (0.25)	10.4 (0.41)	7.94 (5/16)	351 (5100)
C-MTB-4T35		0.035"					
C-MTB-6	3/8"	1mm	17.4 (0.69)	6.4 (0.25)	11.9 (0.47)	11.11 (7/16)	227 (3300)
C-MTB-6T35		0.035"					
C-MTB-8	1/2"	0.049"	20.6 (0.81)	6.4 (0.25)	13.5 (0.53)	14.28 (9/16)	254 (3700)

Micro Reducing Union



Basic Ordering Number	Tube O.D 1 x Wall THK.	Tube O.D 2 x Wall THK.	Dimensions, mm (inch)		Pressure Rating bar (psig)
			A	B	
C-MRU-6-4	3/8" x 1mm	1/4" x 1mm	19.1 (0.75)	6.4 (0.25)	227 (3300)
C-MRU-6-4-035	3/8" x 0.035"	1/4" x 0.035"			
C-MRU-8-4	1/2" x 0.049"	1/4" x 1mm	19.1 (0.75)	6.4 (0.25)	254 (3700)
C-MRU-8-4T35		1/4" x 0.035"			
C-MRU-8-6	1/2" x 0.049"	3/8" x 1mm	19.1 (0.75)	6.4 (0.25)	227 (3300)
C-MRU-8-6T35		3/8" x 0.035"			
C-MRU-12-4	3/4" x 0.065"	1/4" x 1mm	19.1 (0.75)	6.4 (0.25)	165 (2400)
C-MRU-12-6		3/8" x 1mm			
C-MRU-12-8		1/2" x 0.049"			

Tube Butt Weld Fittings

Features

- Square, sharp, burr-free tube weld ends
- Laser marking – Manufacturer, Material, HCN
- Machined for optimal tube butt welding suitable automatic TIG welder.

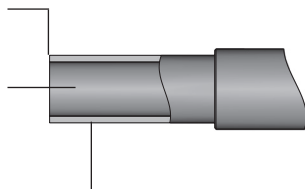


Tube Butt Weld Fitting

Sharp and burr-free tube weld end.

Standard surface finish is
BA: Ra 0.25 μm
EP: RA 0.13 μm

Precisely finished diameter matches tube diameter.

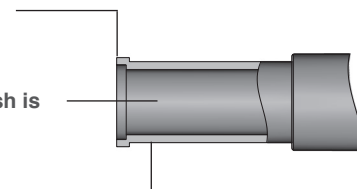


Automatic Tube Butt Weld Fitting

Sharp and burr-free tube weld end.

Standard surface finish is
BA: Ra 0.25 μm
EP: RA 0.13 μm

Precisely finished diameter matches tube diameter.

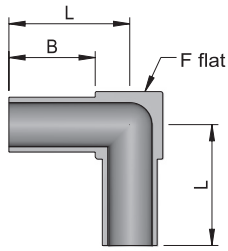


Ordering Information



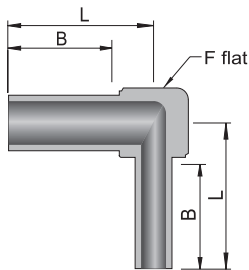
Clean Fitting	Product Type	Connection Size	Product Grade	Body Material
- C : S-LOK UHP Product	Refer to the basic ordering number in the dimension table.	- 4 : 1/4" - 6 : 3/8" - 8 : 1/2" - 12 : 3/4" - 16 : 1"	- BA : BA - EP : EP	- S6LS : SS316L Single Melt - S6LV : SS316L Double Melt

Long Elbow



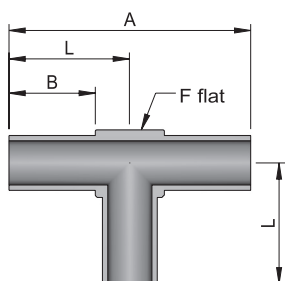
Basic Ordering Number	Tube O.D.	Wall THK.	Dimensions, mm (inch)			Pressure Rating bar (psig)
			B	L	F	
C-LL-4	1/4"	1mm	19.1 (0.75)	25.0 (0.98)	11.1 (0.44)	351 (5100)
C-LL-4T35		0.035"				
C-LL-4-L10		1mm	10.0 (0.39)	15.9 (0.63)		
C-LL-6	3/8"	1mm	19.1 (0.75)	25.0 (0.98)	11.1 (0.44)	227 (3300)
C-LL-6T35		0.035"				
C-LL-6-L10		1mm	10.0 (0.39)	15.9 (0.63)		
C-LL-8	1/2"	0.049"	19.1 (0.75)	29.0 (1.14)	17.0 (0.67)	254 (3700)
C-LL-8-L10			10.0 (0.39)	19.9 (0.78)		
C-LL-12	3/4"	0.065"	22.5 (0.89)	33.5 (1.32)	25.0 (0.98)	165 (2400)
C-LL-12T49		0.049"				
C-LL-12-L10		0.065"	10.0 (0.39)	22.4 (0.88)		
C-LL-16	1"	0.065"	23.3 (0.92)	38.3 (1.51)	30.0 (1.18)	165 (2400)

Long Reducing Elbow



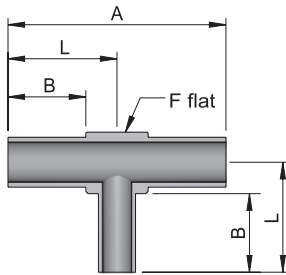
Basic Ordering Number	Tube O.D 1 x Wall THK.	Tube O.D 2 x Wall THK.	Dimensions, mm (inch)			Pressure Rating bar (psig)
			B	L	F	
C-LRL-6-4	3/8" x 1mm	1/4" x 1mm	19.1 (0.75)	25.0 (0.98)	11.1 (0.44)	227 (3300)
C-LRL-6-4-035	3/8" x 0.035"	1/4" x 0.035"				
C-LRL-6-4-L10	3/8" x 1mm	1/4" x 1mm	10.0 (0.39)	15.9 (0.63)		
C-LRL-8-4	1/2" x 0.049"	1/4" x 1mm	19.1 (0.75)	29.0 (1.14)	17.0 (0.67)	254 (3700)
C-LRL-8-4T35		1/4" x 0.035"				
C-LRL-8-4-L10		1/4" x 1mm	10.0 (0.39)	19.9 (0.78)		
C-LRL-8-6	1/2" x 0.049"	3/8" x 1mm	19.1 (0.75)	29.0 (1.14)	17.0 (0.67)	227 (3300)
C-LRL-8-6T35		3/8" x 0.035"				
C-LRL-8-6-L10		3/8" x 1mm	10.0 (0.39)	19.9 (0.78)		
C-LRL-12-4	3/4" x 0.065"	1/4" x 1mm	22.5 (0.89)	33.5 (1.32)	25.0 (0.98)	165 (2400)
C-LRL-12-4T35		1/4" x 0.035"				
C-LRL-12-4-L10		1/4" x 1mm	10.0 (0.39)	22.4 (0.88)		
C-LRL-16-8	1" x 0.065"	1/2" x 0.049"	23.3 (0.92)	38.3 (1.51)	30.0 (1.18)	165 (2400)

Long Tee



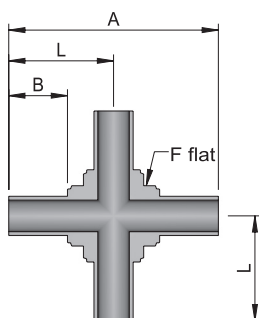
Basic Ordering Number	Tube O.D.	Wall THK.	Dimensions, mm (inch)				Pressure Rating bar (psig)
			A	B	L	F	
C-LT-4	1/4"	1mm	50.0 (1.97)	19.1 (0.75)	25.0 (0.98)	11.1 (0.44)	351 (5100)
C-LT-4T35		0.035"					
C-LT-4-L10		1mm	31.8 (1.25)	10.0 (0.39)	15.9 (0.63)		
C-LT-6	3/8"	1mm	50.0 (1.97)	19.1 (0.75)	25.0 (0.98)	11.1 (0.44)	227 (3300)
C-LT-6T35		0.035"					
C-LT-6-L10		1mm	31.8 (1.25)	10.0 (0.39)	15.9 (0.63)		
C-LT-8	1/2"	0.049"	58.0 (2.28)	19.1 (0.75)	29.0 (1.14)	17.0 (0.67)	254 (3700)
C-LT-8-L10			39.8 (1.57)	10.0 (0.39)	19.9 (0.78)		
C-LT-12	3/4"	0.065"	67.0 (2.64)	22.5 (0.89)	33.5 (1.32)	25.0 (0.98)	165 (2400)
C-LT-12T49		0.049"					
C-LT-12-L10		0.065"	44.8 (1.76)	10.0 (0.39)	22.4 (0.88)		
C-LT-16	1"	0.065"	76.6 (3.02)	23.3 (0.92)	38.3 (1.51)	30.0 (1.18)	165 (2400)

Long Reducing Tee



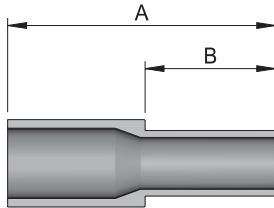
Basic Ordering Number	Tube O.D 1 x Wall THK.	Tube O.D 2 x Wall THK.	Dimensions, mm (inch)				Pressure Rating bar (psig)
			A	B	L	F	
C-LRT-6-4	3/8" x 1mm	1/4" x 1mm	50.0 (1.97)	19.1 (0.75)	25.0 (0.98)	11.1 (0.44)	227 (3300)
C-LRT-6-4-035	3/8" x 0.035"	1/4" x 0.035"					
C-LRT-6-4-L10	3/8" x 1mm	1/4" x 1mm	31.8 (1.25)	10.0 (0.39)	15.9 (0.63)		
C-LRT-8-4	1/2" x 0.049"	1/4" x 1mm	58.0 (2.28)	19.1 (0.75)	29.0 (1.14)	17.0 (0.67)	254 (3700)
C-LRT-8-4T35		1/4" x 0.035"					
C-LRT-8-4-L10		1/4" x 1mm	39.8 (1.57)	10.0 (0.39)	19.9 (0.78)		
C-LRT-8-6	1/2" x 0.049"	3/8" x 1mm	58.0 (2.28)	19.1 (0.75)	29.0 (1.14)	17.0 (0.67)	227 (3300)
C-LRT-8-6T35		3/8" x 0.035"					
C-LRT-8-6-L10		3/8" x 1mm	39.8 (1.57)	10.0 (0.39)	19.9 (0.78)		
C-LRT-12-4	3/4" x 0.065"	1/4" x 1mm	67 (2.64)	22.5 (0.89)	33.5 (1.32)	25.0 (0.98)	165 (2400)
C-LRT-12-4T35		1/4" x 0.035"					
C-LRT-12-4-L10		1/4" x 1mm	44.8 (1.76)	10.0 (0.39)	22.4 (0.88)		
C-LRT-12-6	3/4" x 0.065"	3/8" x 1mm	67 (2.64)	22.5 (0.89)	33.5 (1.32)	25.0 (0.98)	165 (2400)
C-LRT-12-6T35		3/8" x 0.035"					
C-LRT-12-6-L10		3/8" x 1mm	44.8 (1.76)	10.0 (0.39)	22.4 (0.88)		
C-LRT-12-8	3/4" x 0.065"	1/2" x 0.049"	67 (2.64)	22.5 (0.89)	33.5 (1.32)	25.0 (0.98)	165 (2400)
C-LRT-12-8-L10		1/2" x 0.049"	44.8 (1.76)	10.0 (0.39)	22.4 (0.88)		
C-LRT-16-4	1" x 0.065"	1/4" x 1mm				30.0 (1.18)	165 (2400)
C-LRT-16-4T35		1/4" x 0.035"	76.6 (3.02)	23.3 (0.92)	38.3 (1.51)		
C-LRT-16-8		1/2" x 0.049"					

Long Cross



Basic Ordering Number	Tube O.D	Wall THK.	Dimensions, mm (inch)				Pressure Rating bar (psig)
			A	B	L	F	
C-LX-4	1/4"	1mm	50.0 (1.97)	19.1 (0.75)	25.0 (0.98)	11.1 (0.44)	351 (5100)
C-LX-4T35		0.035"					
C-LX-4-L10		1mm	31.8 (1.25)	10.0 (0.39)	15.9 (0.63)		
C-LX-6	3/8"	1mm	50.0 (1.97)	19.1 (0.75)	25.0 (0.98)	11.1 (0.44)	227 (3300)
C-LX-6T35		0.035"					
C-LX-6-L10		1mm	31.8 (1.25)	10.0 (0.39)	15.9 (0.63)		
C-LX-8	1/2"	0.049"	58.0 (2.28)	19.1 (0.75)	29.0 (1.14)	17.0 (0.67)	254 (3700)
C-LX-8-L10			39.8 (1.57)	10.0 (0.39)	19.9 (0.78)		
C-LX-12	3/4"	0.065"	67.0 (2.64)	22.5 (0.89)	33.5 (1.32)	25.0 (0.98)	165 (2400)
C-LX-12T49		0.049"					
C-LX-12-L10		0.065"	44.8 (1.76)	10.0 (0.39)	22.4 (0.88)		

Long Reducing Union

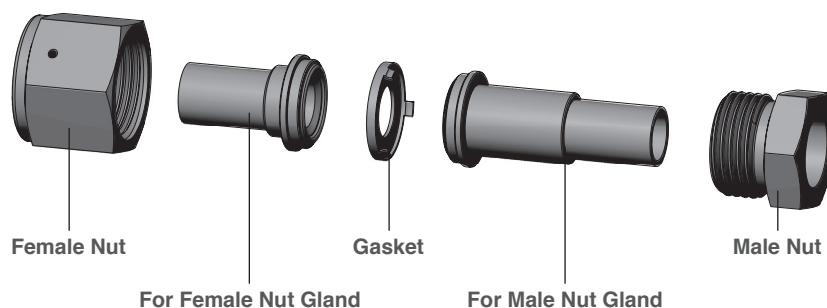


Basic Ordering Number	Tube O.D 1 x Wall THK.	Tube O.D 2 x Wall THK.	Dimensions, mm (inch)		Pressure Rating bar (psig)
			A	B	
C-LRU-6-4	3/8" x 1mm	1/4" x 1mm	38.1 (1.5)	19.1 (0.75)	227 (3300)
C-LRU-6-4-035	3/8" x 0.035"	1/4" x 0.035"			
C-LRU-6-4-L10	3/8" x 1mm	1/4" x 1mm	20.0 (0.79)	10.0 (0.39)	
C-LRU-8-4	1/2" x 0.049"	1/4" x 1mm	38.1 (1.5)	19.1 (0.75)	254 (3700)
C-LRU-8-4T35		1/4" x 0.035"			
C-LRU-8-4-L10		1/4" x 1mm	20.0 (0.79)	10.0 (0.39)	
C-LRU-8-6	1/2" x 0.049"	3/8" x 1mm	38.1 (1.5)	19.1 (0.75)	227 (3300)
C-LRU-8-6T35		3/8" x 0.035"			
C-LRU-8-6-L10		3/8" x 1mm	20.0 (0.79)	10.0 (0.39)	
C-LRU-12-4	3/4" x 0.065"	1/4" x 1mm	42.9 (1.69)	19.1 (0.75)	165 (2400)
C-LRU-12-4T35		1/4" x 0.035"			
C-LRU-12-4-L10		1/4" x 1mm	20.0 (0.79)	10.0 (0.39)	
C-LRU-12-6	3/4" x 0.065"	3/8" x 1mm	42.9 (1.69)	19.1 (0.75)	165 (2400)
C-LRU-12-6T35		3/8" x 0.035"			
C-LRU-12-6-L10		3/8" x 1mm	20.0 (0.79)	10.0 (0.39)	
C-LRU-12-8	3/4" x 0.065"	1/2" x 0.049"	42.9 (1.69)	19.1 (0.75)	165 (2400)
C-LRU-12-8-L10		1/2" x 0.049"	20.0 (0.79)	10.0 (0.39)	
C-LRU-16-4	1" x 0.065"	1/4" x 1mm	44.5 (1.75)	19.1 (0.75)	165 (2400)
C-LRU-16-4T35		1/4" x 0.035"			
C-LRU-16-6		3/8" x 1mm			
C-LRU-16-6T35		3/8" x 0.035"			
C-LRU-16-8		1/2" x 0.049"			
C-LRU-16-12		3/4" x 0.065"	48.5 (1.91)	23.3 (0.92)	

Metal Face Seal Fittings

Features

- High purity metal-to-metal seal
- Leak-tight from vacuum to positive pressure
- Minimization of clearance needed for removal and installation
- Two test ports are provided for easy leak test



Testing

- Products are rated to a helium leak rate of 1×10^{-9} atm cc/sec.
- Tested in accordance with SEMI F1-96.

Plating

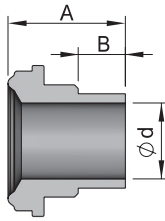
- Female nut threads are silver plated to prevent galling, ensure convenient assembly and consistent make-up.
- Chemical processes for cleaning, electro-polishing and passivation may remove plating.
- Damaged or removed plating may cause thread galling, damage of fitting components and preventing a proper seal.

Ordering Information

C	-	LGF	-	8	-	EP	-	S6LS
Clean Fitting		Product Type		Connection Size		Product Grade		Material

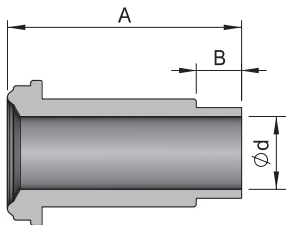
Clean Fitting	Product Type	Connection Size	Product Grade	Body Material
- C : S-LOK UHP Product	Refer to the basic ordering number in the dimension table.	- 4 : 1/4" - 6 : 3/8" - 8 : 1/2" - 12 : 3/4" - 16 : 1"	- BA : BA - EP : EP	- S6LS : SS316L Single Melt - S6LV : SS316L Double Melt

Micro Gland for Female Nut



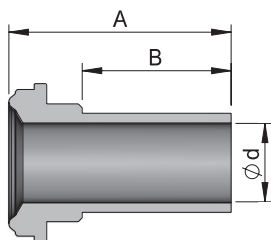
Basic Ordering Number	Head Size	Tube O.D x Wall THK.	Dimensions, mm (inch)			Pressure Rating bar (psig)	
			d	A	B	NI	SS316L
C-MGF-2	1/8"	1/8" x 0.028"	1.8 (0.07)	14.7 (0.58)	6.4 (0.25)	585 (8500)	585 (8500)
C-MGF-4	1/4"	1/4" x 1mm	4.35 (0.17)	15.2 (0.60)	6.4 (0.25)	351 (5100)	351 (5100)
C-MGF-4T35		1/4" x 0.035"	4.57 (0.18)				
C-MGF-6	1/2"	3/8" x 1mm	7.53 (0.30)	15.8 (0.62)	6.4 (0.25)	227 (3300)	227 (3300)
C-MGF-6T35		3/8" x 0.035"	7.75 (0.31)				
C-MGF-8	1/2"	1/2" x 0.049"	10.22 (0.40)	15.8 (0.62)	6.4 (0.25)	241 (3500)	241 (3500)
C-MGF-8-4		1/4" x 1mm	4.35 (0.17)				296 (4300)
C-MGF-8-4T35		1/4" x 0.035"	4.57 (0.18)				

Micro Gland for Male Nut



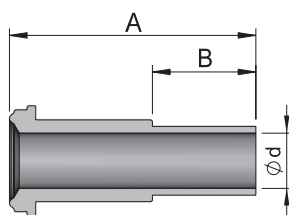
Basic Ordering Number	Head Size	Tube O.D x Wall THK.	Dimensions, mm (inch)			Pressure Rating bar (psig)	
			d	A	B	NI	SS316L
C-MGM-2	1/8"	1/8" x 0.028"	1.8 (0.07)	23.3 (0.92)	6.4 (0.25)	585 (8500)	585 (8500)
C-MGM-4	1/4"	1/4" x 1mm	4.35 (0.17)	30.5 (1.20)	6.4 (0.25)	351 (5100)	351 (5100)
C-MGM-4T35		1/4" x 0.035"	4.57 (0.18)				
C-MGM-6	1/2"	3/8" x 1mm	7.53 (0.30)	32.8 (1.29)	6.4 (0.25)	227 (3300)	227 (3300)
C-MGM-6T35		3/8" x 0.035"	7.75 (0.31)				
C-MGM-8	1/2"	1/2" x 0.049"	10.22 (0.40)	32.8 (1.29)	6.4 (0.25)	241 (3500)	241 (3500)
C-MGM-8-4		1/4" x 1mm	4.35 (0.17)				296 (4300)
C-MGM-8-4T35		1/4" x 0.035"	4.57 (0.18)				

Long Gland for Female Nut



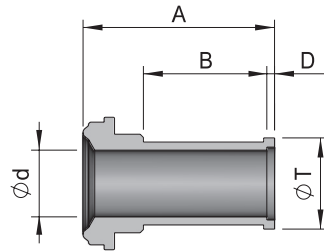
Basic Ordering Number	Head Size	Tube O.D x Wall THK.	Dimensions, mm (inch)			Pressure Rating bar (psig)	
			d	A	B	NI	SS316L
C-LGF-2	1/8"	1/8" x 0.028"	1.8 (0.07)	27.4 (1.08)	19.1 (0.75)	585 (8500)	585 (8500)
C-LGF-4	1/4"	1/4" x 1mm	4.35 (0.17)	28.0 (1.10)	19.1 (0.75)	351 (5100)	351 (5100)
C-LGF-4T35		1/4" x 0.035"	4.57 (0.18)				
C-LGF-4L10		1/4" x 1mm	4.35 (0.17)	18.9 (0.74)	10.0 (0.39)		
C-LGF-6	1/2"	3/8" x 1mm	7.53 (0.30)	28.5 (1.12)	19.1 (0.75)	227 (3300)	227 (3300)
C-LGF-6T35		3/8" x 0.035"	7.75 (0.31)				
C-LGF-6L10		3/8" x 1mm	7.53 (0.30)	19.4 (0.76)	10.0 (0.39)		
C-LGF-8	1/2"	1/2" x 0.049"	10.22 (0.40)	28.5 (1.12)	19.1 (0.75)	241 (3500)	241 (3500)
C-LGF-8L10				19.4 (0.76)	10.0 (0.39)		
C-LGF-8-4		1/4" x 1mm	4.35 (0.17)	28.5 (1.12)	19.1 (0.75)	241 (3500)	296 (4300)
C-LGF-12	3/4"	3/4" x 0.065"	15.75 (0.62)	34.5 (1.36)	19.1 (0.75)	165 (2400)	165 (2400)
C-LGF-16	1"	1" x 0.065"	22.10 (0.87)	38.6 (1.52)	19.1 (0.75)	165 (2400)	165 (2400)

Long Gland for Male Nut



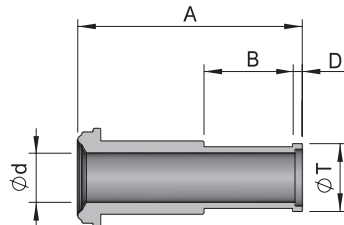
Basic Ordering Number	Head Size	Tube O.D x Wall THK.	Dimensions, mm (inch)			Pressure Rating bar (psig)	
			d	A	B	NI	SS316L
C-LGM-2	1/8"	1/8" x 0.028"	1.8 (0.07)	36 (1.42)	19.1 (0.75)	585 (8500)	585 (8500)
C-LGM-4	1/4"	1/4" x 1mm	4.35 (0.17)	43.2 (1.70)	19.1 (0.75)	351 (5100)	351 (5100)
C-LGM-4T35		1/4" x 0.035"	4.57 (0.18)				
C-LGM-4L10		1/4" x 1mm	4.35 (0.17)	34.1 (1.34)	10.0 (0.39)		
C-LGM-6	1/2"	3/8" x 1mm	7.53 (0.30)	45.5 (1.79)	19.1 (0.75)	227 (3300)	227 (3300)
C-LGM-6T35		3/8" x 0.035"	7.75 (0.31)				
C-LGM-6L10		3/8" x 1mm	7.53 (0.30)	36.4 (1.43)	10.0 (0.39)		
C-LGM-8	1/2"	1/2" x 0.049"	10.22 (0.40)	45.5 (1.79)	19.1 (0.75)	241 (3500)	241 (3500)
C-LGM-8L10				36.4 (1.43)	10.0 (0.39)		
C-LGM-8-4		1/4" x 1mm	4.35 (0.17)	45.5 (1.79)	19.1 (0.75)	241 (3500)	296 (4300)
C-LGM-12	3/4"	3/4" x 0.065"	15.75 (0.62)	51.6 (1.36)	19.1 (0.75)	165 (2400)	165 (2400)
C-LGM-16	1"	1" x 0.065"	22.10 (0.87)	58.9 (1.52)	19.1 (0.75)	165 (2400)	165 (2400)

ATW Long Gland for Female Nut



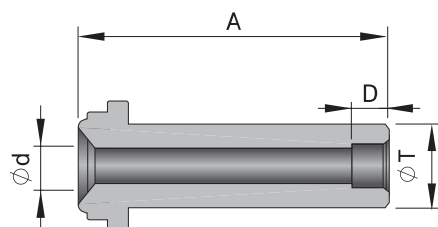
Basic Ordering Number	Head Size	Tube O.D	Dimensions, mm (inch)					Pressure Rating bar (psig)	
			d	T	A	B	D	NI	SS316L
C-ALGF-4	1/4"	1/4"	4.57 (0.18)	7.4 (0.29)	28.5 (1.12)	19.1 (0.75)	0.5 (0.02)	351 (5100)	351 (5100)
C-ALGF-6	1/2"	3/8"	7.75 (0.31)	10.4 (0.41)	29.2 (1.15)	19.1 (0.75)	0.8 (0.03)	227 (3300)	227 (3300)
C-ALGF-8	1/2"	1/2"	10.22 (0.40)	14.0 (0.55)	29.5 (1.16)	19.1 (0.75)	1.0 (0.04)	241 (3500)	241 (3500)

ATW Long Gland for Male Nut



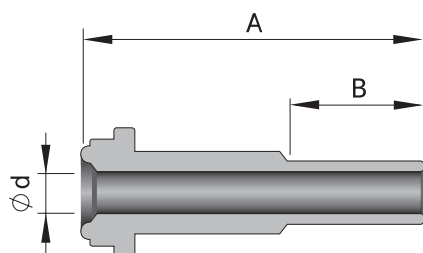
Basic Ordering Number	Head Size	Tube O.D	Dimensions, mm (inch)					Pressure Rating bar (psig)	
			d	T	A	B	D	NI	SS316L
C-ALGM-4	1/4"	1/4"	4.57 (0.18)	7.4 (0.29)	43.7 (1.72)	19.1 (0.75)	0.5 (0.02)	351 (5100)	351 (5100)
C-ALGM-6	1/2"	3/8"	7.75 (0.31)	10.4 (0.41)	46.2 (1.82)	19.1 (0.75)	0.8 (0.03)	227 (3300)	227 (3300)
C-ALGM-8	1/2"	1/2"	10.22 (0.40)	14.0 (0.55)	46.5 (1.83)	19.1 (0.75)	1.0 (0.04)	241 (3500)	241 (3500)
C-ALGM-8-4		1/4"	4.57 (0.18)	7.4 (0.29)	46.2 (1.82)	19.1 (0.75)	0.5 (0.02)		
C-ALGM-12	3/4"	3/4"	16.50 (0.65)	20.3 (0.80)	52.6 (2.07)	19.1 (0.75)	1.0 (0.04)	165 (2400)	165 (2400)
C-ALGM-16	1"	1"	22.10 (0.87)	26.9 (1.06)	65.3 (2.57)	24.4 (0.96)	1.0 (0.04)	165 (2400)	165 (2400)

Socket Weld Gland



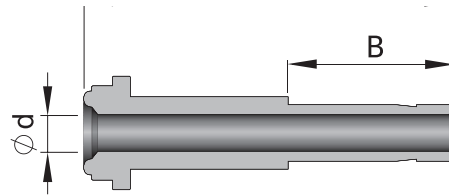
Basic Ordering Number	Head Size	Tube O.D	Dimensions, mm (inch)				Pressure Rating bar (psig)	
			d	T	A	D	NI	SS316L
C-GSW-4	1/4"	1/4"	4.57 (0.18)	8.9 (0.35)	33.3 (1.31)	7.1 (0.28)	378 (5500)	378 (5500)
C-GSW-4-12.7L					12.7 (0.50)			
C-GSW-4-19.1L					19.1 (0.75)			
C-GSW-6	1/2"	3/8"	7.11 (0.28)	15.2 (0.60)	38.1 (1.50)	7.9 (0.31)	241 (3500)	296 (4300)
C-GSW-8	1/2"	1/2"	10.22 (0.40)	15.2 (0.60)	38.1 (1.50)	9.6 (0.38)	206 (3000)	206 (3000)
C-GSW-8-4	1/2"	1/4"	4.57 (0.18)	15.2 (0.60)	38.1 (1.50)	7.1 (0.28)	241 (3500)	241 (3500)
C-GSW-12	3/4"	3/4"	15.74 (0.62)	22.4 (0.88)	50.8 (2.00)	11.2 (0.44)	192 (2800)	192 (2800)
C-GSW-16	1"	1"	22.10 (0.87)	30.2 (1.19)	56.4 (2.22)	15.7 (0.62)	165 (2400)	206 (3000)

Male Weld Gland



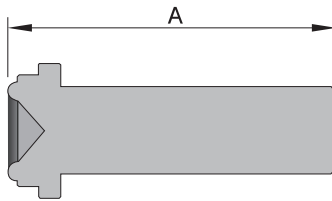
Basic Ordering Number	Head Size	Tube O.D	Dimensions, mm (inch)			Pressure Rating bar (psig)	
			d	A	B	NI	SS316L
C-GMW-4	1/4"	1/4"	3.00 (0.12)	33.3 (1.31)	10.4 (0.41)	551 (8000)	689 (10000)
C-GMW-6	1/2"	3/8"	7.11 (0.28)	38.1 (1.50)	10.4 (0.41)	241 (3500)	296 (4300)
C-GMW-8	1/2"	1/2"	10.22 (0.40)	38.1 (1.50)	12.7 (0.50)	241 (3500)	241 (3500)
C-GMW-8-4	1/2"	1/4"	3.00 (0.12)	38.1 (1.50)	10.4 (0.41)	241 (3500)	296 (4300)
C-GMW-12	3/4"	3/4"	13.50 (0.53)	50.8 (2.00)	15.7 (0.62)	206 (3000)	254 (3700)
C-GMW-16	1"	1"	19.1 (0.75)	56.4 (2.22)	20.6 (0.81)	165 (2400)	206 (3000)

Tube Adapter Gland



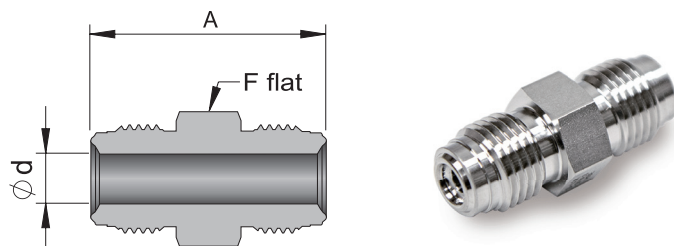
Basic Ordering Number	Head Size	Tube O.D.	Dimensions, mm (inch)			Pressure Rating bar (psig)	
			d	A	B	NI	SS316L
C-GA-4	1/4"	1/4"	4.3 (0.17)	41.0 (1.62)	16.2 (0.64)	551 (8000)	689 (10000)
C-GA-6	1/2"	3/8"	6.8 (0.27)	46.0 (1.81)	17.8 (0.70)	241 (3500)	296 (4300)
C-GA-8	1/2"	1/2"	9.4 (0.37)	49.3 (1.94)	24.4 (0.96)	241 (3500)	296 (4300)

Blind Gland



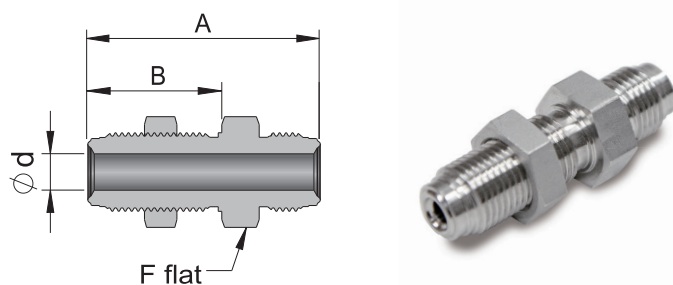
Basic Ordering Number	Head Size	Dimensions, mm (inch)
		A
C-GBL-4	1/4"	33.3 (1.31)
C-GBL-8	1/2"	38.1 (1.50)
C-GBL-12	3/4"	50.8 (2.00)
C-GBL-16	1"	56.4 (2.22)

Union



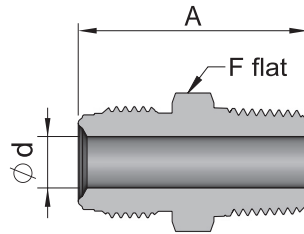
Basic Ordering Number	Head Size	Dimensions, mm (inch)			Pressure Rating bar (psig)	
		d	A	F	NI	SS316L
C-U-4	1/4"	4.3 (0.17)	39.4 (1.55)	15.88 (5/8)	551 (8000)	689 (10000)
C-U-8	1/2"	10.2 (0.40)	46.7 (1.84)	23.81 (15/16)	241 (3500)	296 (4300)
C-U-8-4	1/2" x 1/4"	10.2 x 4.3 (0.40 x 0.17)	43.4 (1.71)	23.81 (15/16)	241 (3500)	296 (4300)
C-U-12	3/4"	15.7 (0.62)	62.0 (2.44)	33.33 (1-5/16)	206 (3000)	254 (3700)
C-U-16	1"	22.1 (0.87)	65.8 (2.59)	41.28 (1-5/8)	165 (2400)	206 (3000)

Bulkhead Union



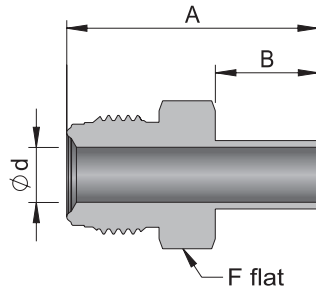
Basic Ordering Number	Head Size	Dimensions, mm (inch)				Pressure Rating bar (psig)	
		d	A	B	F	NI	SS316L
C-BU-4	1/4"	4.3 (0.17)	56.6 (2.23)	33.0 (1.30)	19.05 (3/4)	551 (8000)	689 (10000)
C-BU-8	1/2"	10.2 (0.40)	65.3 (2.57)	37.6 (1.48)	26.98 (1-1/16)	241 (3500)	296 (4300)
C-BU-12	3/4"	15.7 (0.62)	79.0 (3.11)	43.0 (1.69)	38.10 (1-1/2)	206 (3000)	254 (3700)
C-BU-16	1"	22.1 (0.87)	86.0 (3.39)	47.0 (1.85)	44.45 (1-3/4)	165 (2400)	206 (3000)

Male Connector



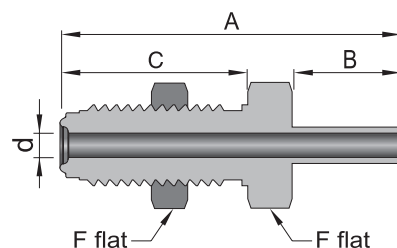
Basic Ordering Number	Head Size	NPT Size	Dimensions, mm (inch)			Pressure Rating bar (psig)	
			d	A	F	NI	SS316L
C-MC-4-2N	1/4"	1/8"	4.3 (0.17)	33.3 (1.31)	15.88 (5/8)	551 (8000)	689 (10000)
C-MC-4-4N		1/4"		37.8 (1.49)			
C-MC-8-4N	1/2"	1/4"	7.1 (0.28)	41.9 (1.65)	23.81 (15/16)	241 (3500)	296 (4300)
C-MC-8-6N		3/8"	9.6 (0.38)	41.9 (1.65)			
C-MC-8-8N		1/2"	10.2 (0.40)	46.7 (1.84)			
C-MC-12-12N	3/4"	3/4"	15.7 (0.62)	55.6 (2.19)	33.33 (1-5/16)	206 (3000)	254 (3700)
C-MC-16-16N	1"	1"	22.1 (0.87)	62.7 (2.47)	41.28 (1-5/8)	165 (2400)	206 (3000)

Tube Butt Weld Connector



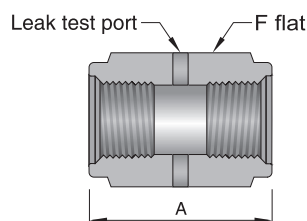
Basic Ordering Number	Head Size	Tube O.D x Wall THK.	Dimensions, mm (inch)				Pressure Rating bar (psig)	
			d	A	B	F	NI	SS316L
C-TC-4-4	1/4"	1/4" x 1mm	4.35 (0.17)	42.7 (1.68)	19.1 (0.75)	15.88 (5/8)	351 (5100)	351 (5100)
C-TC-4-4T35		1/4" x 0.035"	4.57 (0.18)					
C-TC-8-6	1/2"	3/8" x 1mm	7.53 (0.30)	46.7 (1.84)	19.1 (0.75)	23.81 (15/16)	227 (3300)	227 (3300)
C-TC-8-6T35		3/8" x 0.035"	7.75 (0.31)					
C-TC-8-8	1/2"	1/2" x 0.049"	10.22 (0.40)	46.7 (1.84)	19.1 (0.75)	23.81 (15/16)	241 (3500)	241 (3500)
C-TC-12-12	3/4"	3/4" x 0.065"	15.75 (0.62)	55.6 (2.19)	19.1 (0.75)	33.33 (1-5/16)	165 (2400)	165 (2400)

Tube Butt Weld Bulkhead Connector



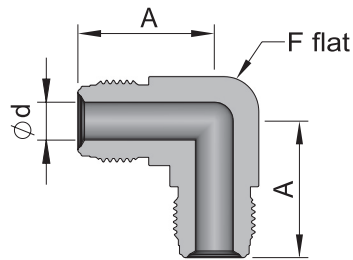
Basic Ordering Number	Head Size	Dimensions, mm (inch)					Pressure Rating bar (psig)	
		d	A	B	C	F	NI	SS316L
C-TCB-4-4	1/4"	4.35 (0.17)	59.9 (2.36)	19.1 (0.75)	33.0 (1.30)	19.05 (3/4)	351 (5100)	351 (5100)
C-TCB-4-4T35		4.57 (0.18)						
C-TCB-8-8	1/2"	10.22 (0.40)	65.3 (2.57)	19.1 (0.75)	37.6 (1.48)	26.99 (1-1/16)	241 (3500)	241 (3500)
C-TCB-12-12	3/4"	15.75 (0.62)	71.3 (2.81)	19.1 (0.75)	43.0 (1.69)	38.1 (1-1/2)	165 (2400)	165 (2400)

Coupling



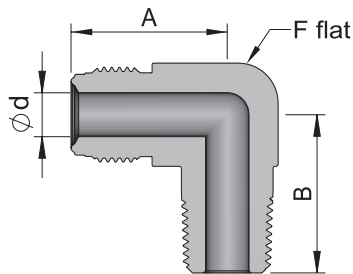
Basic Ordering Number	Head Size	Dimensions, mm (inch)	
		A	F
C-CG-2	1/8"	16.8 (0.66)	11.11 (7/16)
C-CG-4	1/4"	30.2 (1.19)	19.05 (3/4)
C-CG-8	1/2"	33.3 (1.31)	26.98 (1-1/16)
C-CG-12	3/4"	42.7 (1.68)	38.1 (1-1/2)
C-CG-16	1"	51.8 (2.04)	44.45 (1-3/4)

Union Elbow



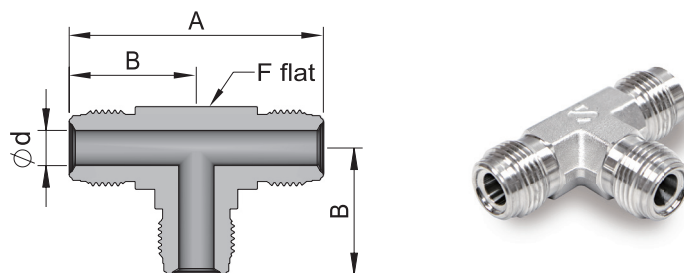
Basic Ordering Number	Head Size	Dimensions, mm (inch)			Pressure Rating bar (psig)	
		d	A	F	NI	SS316L
C-L-4	1/4"	4.3 (0.17)	27.2 (1.07)	12.7 (1/2)	551 (8000)	689 (10000)
C-L-8	1/2"	10.2 (0.40)	36.8 (1.45)	20.6 (13/16)	241 (3500)	296 (4300)
C-L-12	3/4"	15.7 (0.62)	48.8 (1.92)	31.8 (1-1/4)	206 (3000)	254 (3700)
C-L-16	1"	22.1 (0.87)	50.8 (2.00)	42.8 (1-11/16)	165 (2400)	206 (3000)

Male Elbow



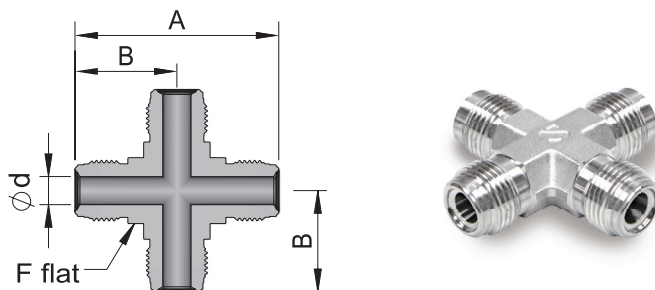
Basic Ordering Number	Head Size	NPT Size	Dimensions, mm (inch)				Pressure Rating bar (psig)	
			d	A	B	F	NI	SS316L
C-MLC-4-2N	1/4"	1/8"	4.3 (0.17)	27.2 (1.07)	22.1 (0.87)	12.7 (1/2)	551 (8000)	689 (10000)
C-MLC-4-4N		1/4"			26.7 (1.05)			
C-MLC-8-6N	1/2"	3/8"	10.2 (0.40)	36.8 (1.45)	32.0 (1.26)	20.6 (13/16)	241 (3500)	296 (4300)
C-MLC-8-8N		1/2"			36.8 (1.45)			

Union Tee



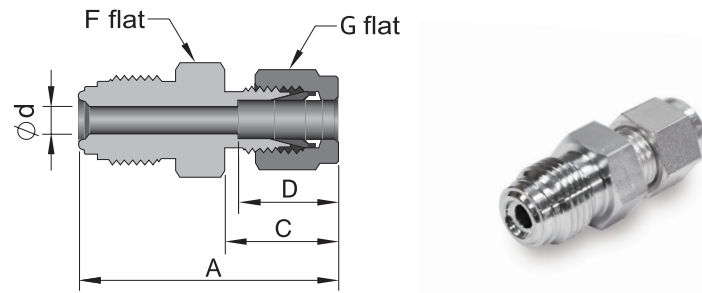
Basic Ordering Number	Head Size	Dimensions, mm (inch)				Pressure Rating bar (psig)	
		d	A	B	F	NI	SS316L
C-T-4	1/4"	4.3 (0.17)	54.4 (2.14)	27.2 (1.07)	12.7 (1/2)	551 (8000)	689 (10000)
C-T-8	1/2"	10.2 (0.40)	73.6 (2.90)	36.8 (1.45)	20.6 (13/16)	241 (3500)	296 (4300)
C-T-12	3/4"	15.7 (0.62)	97.6 (3.84)	48.8 (1.92)	31.8 (1-1/4)	206 (3000)	254 (3700)
C-T-16	1"	22.1 (0.87)	101.6 (4.00)	50.8 (2.00)	42.8 (1-11/16)	165 (2400w)	206 (3000)

Union Cross



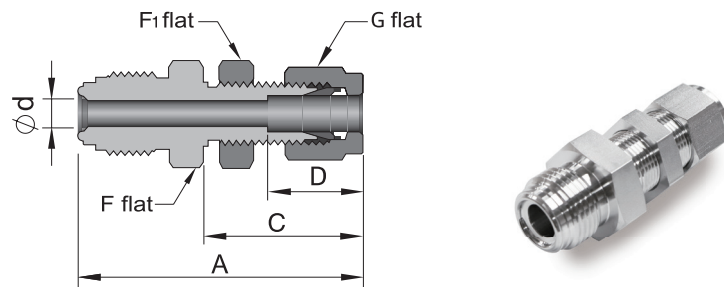
Basic Ordering Number	Head Size	Dimensions, mm (inch)				Pressure Rating bar (psig)	
		d	A	B	F	NI	SS316L
C-X-4	1/4"	4.3 (0.17)	54.4 (2.14)	27.2 (1.07)	12.7 (1/2)	551 (8000)	689 (10000)
C-X-8	1/2"	10.2 (0.40)	73.6 (2.90)	36.8 (1.45)	20.6 (13/16)	241 (3500)	296 (4300)
C-X-12	3/4"	15.7 (0.62)	97.6 (3.84)	48.8 (1.92)	31.8 (1-1/4)	206 (3000)	254 (3700)
C-X-16	1"	22.1 (0.87)	101.6 (4.00)	50.8 (2.00)	42.8 (1-11/16)	165 (2400)	206 (3000)

S-LOK Tube Fitting Connector



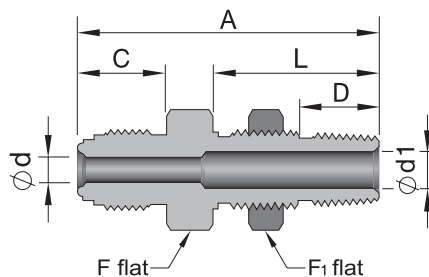
Basic Ordering Number	Head Size	Tube O.D.	Dimensions, mm (inch)						Pressure Rating bar (psig)	
			d	A	C	D	F	G	NI	SS316L
C-US-4-4T	1/4"	1/4"	4.3 (0.17)	41.1 (1.62)	17.8 (0.70)	15.2 (0.60)	15.88 (5/8)	14.28 (9/16)	551 (8000)	689 (10000)
C-US-8-6T	1/2"	3/8"	7.1 (0.28)	46.7 (1.84)	19.3 (0.76)	16.8 (0.66)	23.81 (15/16)	17.46 (11/16)	241 (3500)	296 (4300)
C-US-8-8T	1/2"	1/2"	10.2 (0.40)	49.5 (1.95)	21.8 (0.86)	22.9 (0.90)	23.81 (15/16)	22.22 (7/8)	241 (3500)	296 (4300)

S-LOK Tube Fitting Bulkhead Connector



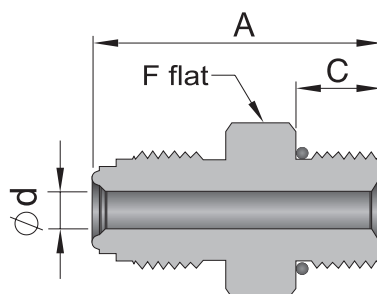
Basic Ordering Number	Head Size	Tube O.D.	Dimensions, mm (inch)									Pressure Rating bar (psig)	
			d	A	C	D	F	F1	G	Panel Drill Size	Max. Panel Thk.	NI	SS316L
C-USB-4-4T	1/4"	1/4"	4.3 (0.17)	57.2 (2.25)	33.5 (1.32)	15.2 (0.60)	15.88 (5/8)	15.88 (5/8)	14.28 (9/16)	11.9 (15/32)	10.2 (0.40)	551 (8000)	689 (10000)
C-USB-8-6T	1/2"	3/8"	7.1 (0.28)	64.5 (2.54)	36.8 (1.45)	16.8 (0.66)	23.81 (15/16)	19.05 (3/4)	17.46 (11/16)	15.0 (19/32)	11.2 (0.44)	241 (3500)	296 (4300)
C-USB-8-8T	1/2"	1/2"	10.2 (0.40)	69.6 (2.74)	41.9 (1.65)	22.9 (0.90)	23.81 (15/16)	23.81 (15/16)	22.22 (7/8)	19.8 (25/32)	12.7 (0.50)	241 (3500)	296 (4300)

Male Bulkhead Connector



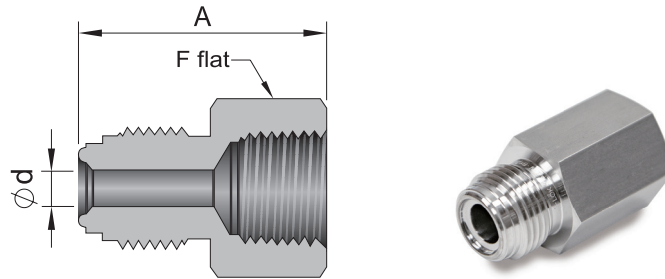
Basic Ordering Number	Head Size	NPT Size	Dimensions, mm (inch)									Pressure Rating bar (psig)		
			d	d1	A	C	D	F	F1	L	Panel Drill Size	Max. Panel Thk.	NI	SS316L
C-MBC-4-4N	1/4"	1/4"	4.3 (0.17)	7.1 (0.28)	56.1 (2.21)	15.7 (0.62)	14.2 (0.56)	20.63 (13/16)	20.63 (13/16)	31.5 (1.24)	16.8 (21/32)	9.7 (0.38)	551 (8000)	551 (8000)
C-MBC-8-4N	1/2"	1/4"	10.2 (0.40)	7.1 (0.28)	59.4 (2.34)	19.1 (0.75)	14.2 (0.56)	23.81 (15/16)	20.63 (13/16)	31.5 (1.24)	16.8 (21/32)	9.7 (0.38)	241 (3500)	301 (4370)

Male Connector (Straight Thread)



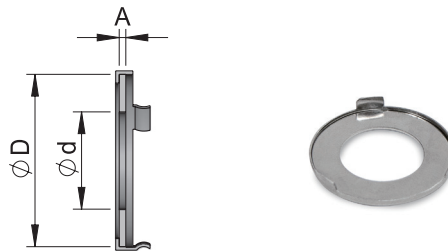
Basic Ordering Number	Head Size	Straight Thread Size	Dimensions, mm (inch)				Pressure Rating bar (psig)	
			d	A	C	F	NI	SS316L
C-MC-4-6U	1/4"	9/16-18	4.3 (0.17)	33.8 (1.33)	9.9 (0.39)	19.1 (3/4)	310 (4500)	310 (4500)
C-MC-8-6U	1/2"	9/16-18	7.1 (0.28)	37.6 (1.48)	9.9 (0.39)	23.8 (15/16)	241 (3500)	241 (3500)
C-MC-8-10U	1/2"	7/8-14	10.2 (0.40)	42.2 (1.66)	12.7 (0.50)	25.4 (1)	241 (3500)	241 (3500)

Female Connector



Basic Ordering Number	Head Size	NPT Size	Dimensions, mm (inch)			Pressure Rating bar (psig)	
			d	A	F	NI	SS316L
C-FC-4-2N	1/4"	1/8"	4.3 (0.17)	35.8 (1.41)	15.88 (5/8)	551 (8000)	551 (8000)
C-FC-4-4N		1/4"		39.1 (1.54)	19.05 (3/4)	454 (6600)	454 (6600)
C-FC-8-6N	1/2"	3/8"	10.2 (0.40)	44.7 (1.76)	23.81 (15/16)	241 (3500)	296 (4300)
C-FC-8-8N		1/2"		50.5 (1.99)	26.98 (1-1/16)		
C-FC-12-12N	3/4"	3/4"	15.7 (0.62)	59.9 (2.36)	33.33 (1-5/16)	206 (3000)	254 (3700)
C-FC-16-16N	1"	1"	22.1 (0.87)	63.8 (2.51)	41.28 (1-5/8)	165 (2400)	206 (3000)

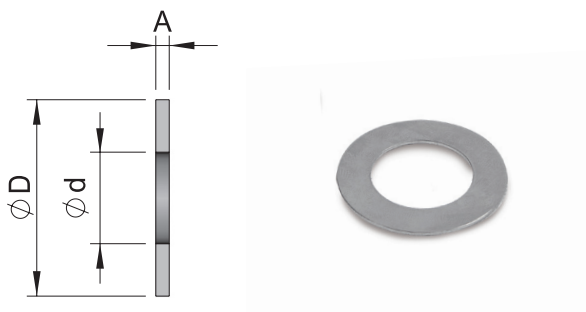
Gasket Retainer Assembly



Basic Ordering Number	Head Size (ØD)	Dimensions, mm (inch)		
		d	D	A
C-GTR-4	1/4"	5.6 (0.22)	11.9 (0.47)	0.8 (0.03)
C-GTR-8	1/2"	11.2 (0.44)	19.2 (0.76)	0.8 (0.03)
C-GTR-12	3/4"	16.8 (0.66)	28.5 (1.12)	0.8 (0.03)
C-GTR-16	1"	22.6 (0.89)	35.1 (1.38)	0.8 (0.03)

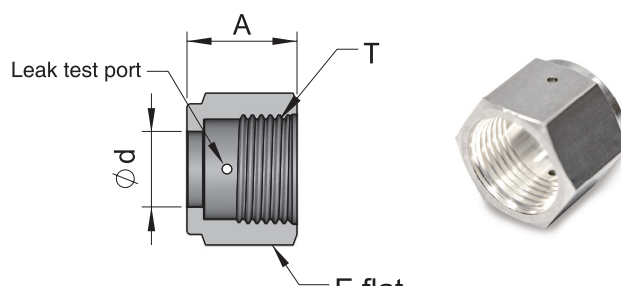
• Basic ordering number of gasket retainer assembly is "C-GTR".

Gasket



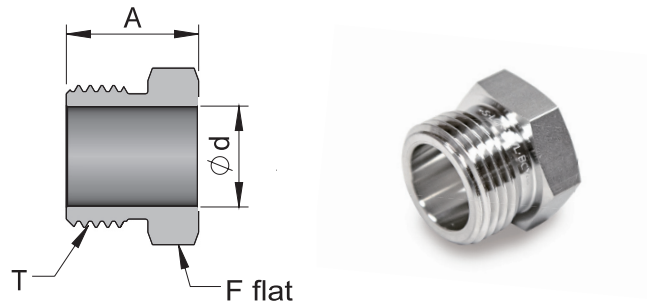
Basic Ordering Number	Head Size	Dimensions, mm (inch)		
		d	D	A
C-GT-2	1/8"	2.3 (0.09)	6.6 (0.26)	0.8 (0.03)
C-GT-4	1/4"	5.6 (0.22)	12.5 (0.49)	0.8 (0.03)
C-GT-8	1/2"	11.2 (0.44)	19.8 (0.78)	0.8 (0.03)
C-GT-12	3/4"	16.8 (0.66)	29.0 (1.14)	0.8 (0.03)
C-GT-16	1"	22.6 (0.89)	35.6 (1.40)	0.8 (0.03)

Female Nut



Basic Ordering Number	Head Size	Dimensions, mm (inch)			Thread T
		d	A	F	
C-NF-2	1/8"	5.3 (0.21)	13.5 (0.53)	11.11 (7/16)	5/16-24UNF
C-NF-4	1/4"	9.1 (0.36)	20.6 (0.81)	19.05 (3/4)	9/16-18UNF
C-NF-8	1/2"	15.5 (0.61)	22.4 (0.88)	26.98 (1-1/16)	7/8-14UNF
C-NF-12	3/4"	22.6 (0.89)	28.4 (1.12)	38.10 (1-1/2)	1-1/4-18UNEF
C-NF-16	1"	30.5 (1.20)	34.0 (1.34)	44.45 (1-3/4)	1-1/2-20UN

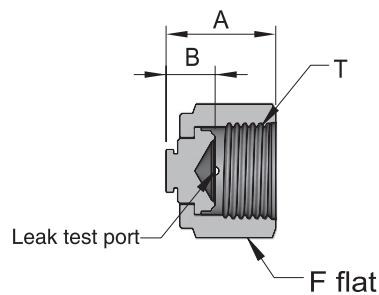
Male Nut



Basic Ordering Number	Head Size	Dimensions, mm (inch)			Thread T
		d	A	F	
C-NM-2	1/8"	5.3 (0.21)	12.7 (0.5)	9.52 (3/8)	5/16-24UNF
C-NM-4	1/4"	9.1 (0.36)	18.0 (0.71)	15.88 (5/8)	9/16-18UNF
C-NM-4A			13.7 (0.54)		
C-NM-4-54			16.5 (0.65)		
C-NM-4-65					
C-NM-8	1/2"	15.5 (0.61)	20.6 (0.81)	23.81 (15/16)	7/8-14UNF
C-NM-12	3/4"	22.6 (0.89)	25.4 (1.00)	33.33 (1-5/16)	1-1/4-18UNEF
C-NM-16	1"	30.5 (1.20)	30.2 (1.19)	41.28 (1-5/8)	1-1/2-20UN

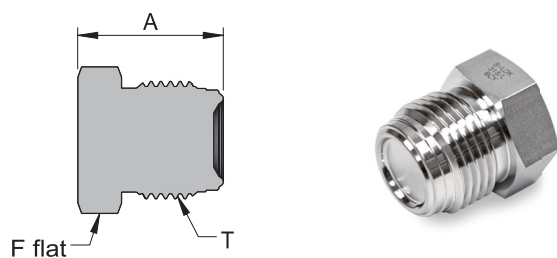
• C-NM-4A has a taper at hex end, allowing the nut to move around 90° tube bends.

Cap



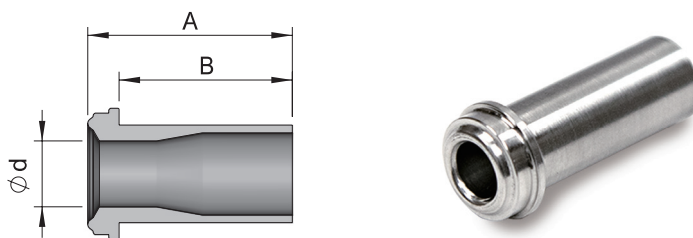
Basic Ordering Number	Head Size	Dimensions, mm (inch)			Thread T
		A	B	F	
C-CP-4	1/4"	23.9 (0.94)	11.2 (0.44)	19.05 (3/4)	9/16-18UNF
C-CP-8	1/2"	25.6 (1.01)	11.4 (0.45)	26.98 (1-1/16)	7/8-14UNF
C-CP-12	3/4"	32.8 (1.29)	13.7 (0.54)	38.10 (1-1/2)	1-1/4-18UNEF
C-CP-16	1"	39.1 (1.54)	16.0 (0.63)	44.45 (1-3/4)	1-1/2-20UN

Plug



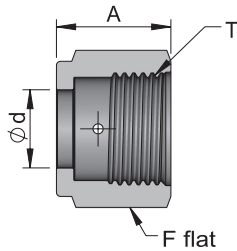
Basic Ordering Number	Head Size	Dimensions, mm (inch)		Thread T
		A	F	
C-PG-4	1/4"	23.4 (0.94)	15.88 (5/8)	9/16-18UNF
C-PG-8	1/2"	27.4 (1.01)	23.81 (15/16)	7/8-14UNF
C-PG-12	3/4"	36.3 (1.29)	33.33 (1-5/16)	1-1/4-18UNEF
C-PG-16	1"	38.6 (1.54)	41.28 (1-5/8)	1-1/2-20UN

High Flow Gland



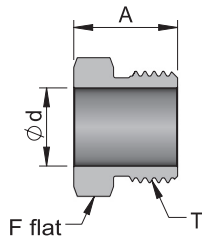
Basic Ordering Number	Head Size	Tube O.D x Wall THK.	Dimensions, mm (inch)			Pressure Rating bar (psig)	
			d	A	B	NI	SS316L
C-HG-4-6	1/4"	3/8" x 1mm	6.4 (0.25)	33.2 (1.31)	28.4 (1.12)	V227 (3300)	V227 (3300)
C-HG-4-6T35		3/8" x 0.035"					

High Flow Female Nut



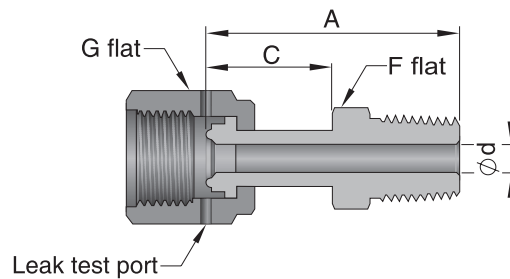
Basic Ordering Number	Head Size	Dimensions, mm (inch)			Thread T
		d	A	F	
C-HNF-4	1/4"	9.90 (0.39)	20.75 (0.82)	19.05 (3/4)	9/16-18UNF

High Flow Male Nut



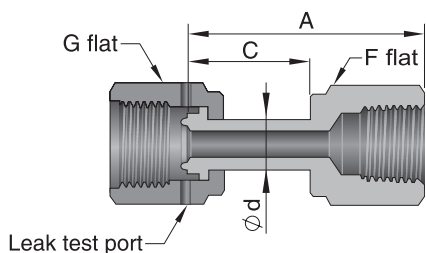
Basic Ordering Number	Head Size	Dimensions, mm (inch)			Thread T
		d	A	F	
C-HNM-4	1/4"	9.90 (0.39)	18.30 (0.72)	15.88 (5/8)	9/16-18UNF

Welded Male Connector



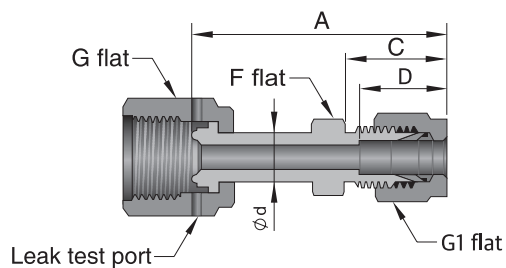
Basic Ordering Number	Head Size	NPT Size	Dimensions, mm (inch)				
			d	A	C	F	G
C-WMC-4-4N	1/4"	1/4"	4.3 (0.17)	45.5 (1.79)	23.4 (0.92)	14.28 (9/16)	19.05 (3/4)
C-WMC-8-6N	1/2"	3/8"	10.2 (0.40)	48.0 (1.89)	25.4 (1.00)	17.46 (11/16)	26.98 (1-1/16)
C-WMC-8-8N	1/2"	1/2"	10.2 (0.40)	53.1 (2.09)	25.6 (1.01)	22.22 (7/8)	26.98 (1-1/16)

Welded Female Connector



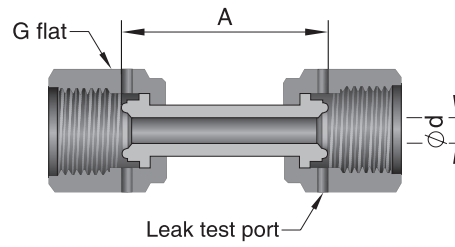
Basic Ordering Number	Head Size	NPT Size	Dimensions, mm (inch)				
			d	A	C	F	G
C-WFC-4-4N	1/4"	1/4"	4.3 (0.17)	45.0 (1.77)	23.4 (0.92)	19.05 (3/4)	19.05 (3/4)
C-WFC-8-6N	1/2"	3/8"	10.2 (0.40)	49.5 (1.95)	26.9 (1.06)	22.22 (7/8)	26.98 (1-1/16)
C-WFC-8-8N	1/2"	1/2"	10.2 (0.40)	55.4 (2.18)	26.4 (1.04)	26.98 (1-1/16)	26.98 (1-1/16)

Welded S-LOK Tube Fitting Connector



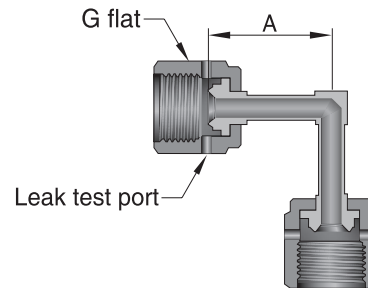
Basic Ordering Number	Head Size	Tube Size	Dimensions, mm (inch)						
			d	A	C	D	F	G	G1
C-WUS-4-4T	1/4"	1/4"	4.3 (0.17)	49.3 (1.94)	17.8 (0.70)	15.2 (0.60)	12.7 (1/2)	19.05 (3/4)	14.28 (9/16)
C-WUS-4-6T	1/4"	3/8"	4.3 (0.17)	50.0 (1.97)	19.3 (0.76)	16.8 (0.66)	15.88 (5/8)	19.05 (3/4)	17.46 (11/16)
C-WUS-8-8T	1/2"	1/2"	10.2 (0.40)	56.6 (2.23)	21.8 (0.86)	22.9 (0.90)	20.63 (13/16)	26.98 (1-1/16)	22.22 (7/8)

Close Coupling



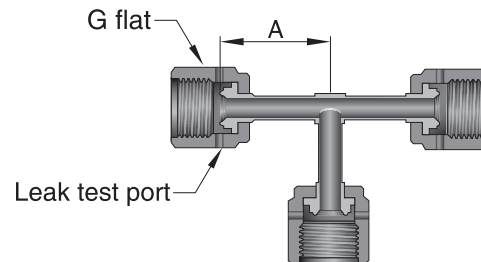
Basic Ordering Number	Head Size	Dimensions, mm (inch)		
		d	A	G
C-CC-4	1/4"	4.3 (0.17)	43.4 (1.71)	19.05 (3/4)
C-CC-8	1/2"	10.2 (0.40)	46.7 (1.84)	26.98 (1-1/16)

Welded Elbow Female Union



Basic Ordering Number	Head Size	Dimensions, mm (inch)	
		A	G
C-WL-FF-4	1/4"	38.3 (1.51v)	19.05 (3/4)
C-WL-FF-4L25	1/4"	25.4 (1.00)	19.05 (3/4)

Welded Tee Female Union



Basic Ordering Number	Head Size	Dimensions, mm (inch)	
		A	G
C-WT-FFF-4	1/4"	38.3 (1.51)	19.05 (3/4)
C-WT-FFF-4L25	1/4"	25.4 (1.00)	19.05 (3/4)

S-LOK®

Instrument Thread & Weld Fittings

The best partner for value creation
We support the innovations of customer



07



Catalogue No. S-LOK Mar.2024

Features

- All instrument thread fittings are designed in accordance with ASME B31.3 for instrument and process.
- Male thread are protected with cap.
- Burr-free internal and outside surfaces.
- NPT threads are based on requirement of ASME B1.20.1

Material Standards & Temperature Ratings

Material	Bar Stock	Forgings	Temperature
SS316	ASTM A479, ASTM A276	ASTM A182	-325°F to 1200°F (-198°C to 648°C)
Brass	ASTM B16, ASTM B453	ASTM B283	-325°F to 400°F (-198°C to 204°C)
Carbon steel	ASTM A108, JIS G4051	JIS G4051	-20°F to 350°F (-29°C to 176°C)

Pressure Ratings

Size Designator	NPT Size	316 Stainless Steel				Brass				Carbon steel			
		Male		Female		Male		Female		Male		Female	
		psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar
1	1/16	11,000	758	6,700	462	5,500	379	3,300	227	11,000	758	6,700	462
2	1/8	10,000	689	6,500	448	5,000	345	3,200	221	10,000	689	6,500	448
4	1/4	8,000	551	6,600	455	4,000	276	3,300	227	8,000	551	6,600	455
6	3/8	7,800	538	5,300	365	3,900	269	2,600	179	7,800	538	5,300	365
8	1/2	7,700	531	4,900	338	3,800	262	2,400	165	7,700	531	4,900	338
12	3/4	7,300	503	4,600	317	3,600	248	2,300	159	7,300	503	4,600	317
16	1	5,300	365	4,400	303	2,600	179	2,200	152	5,300	365	4,400	303
20	1-1/4	6,000	414	5,000	345	3,000	207	2,500	172	6,000	414	5,000	345
24	1-1/2	5,000	345	4,600	317	2,500	172	2,300	159	5,000	344	4,600	317
32	2	3,900	269	3,900	269	1,900	131	1,900	131	3,900	269	3,900	269

- Pressure ratings listed are for temperature up to 37.8C (100 °F).
- Based on Pressure Pipe Code ASME B31.3 pressure rating is calculated with an allowable stress value of 20,000psi for SS316, 10,000psi for Brass 20,000psi for Carbon Steel.
- To determine the working pressure in accordance with Power Pipe Code ASME B31.1, multiply psig by 0.94.
- Brass pressure ratings remain the same.
- Due to larger outer diameter of female threads rating of female are lower than male threads.
- To determine kPa rating, multiply psig by 6.89.
- Reducing Hex Bushing (P-SHB) pressure rating is not covered in this table. See the pressure rating in the dimensional data chart.

Ordering Information

Material	S.Steel 316	S.Steel 316L	Carbon Steel	Brass
Identifier	S6	S6L	CS	BS

• Example : P - SHN - 8N - S6

Pipe fitting Name of fitting Pipe thread Size Material

Pipe Thread Symbol & Designator

Pipe Size	Designator	NPT	Tapered (PT)	Parallel (PF)
			ISO 7/1, JIS B0203	ISO 228/1, JIS B0202
1/8	2	2N	2R	2G
1/4	4	4N	4R	4G
3/8	6	6N	6R	6G
1/2	8	8N	8R	8G
3/4	12	12N	12R	12G
1	16	16N	16R	16G

Close Nipple
(Male NPT both ends)

P-SCN



236

Hex Coupling
(Female NPT both ends)

P-SHC



239

Fusible Plug
P-SFP



243

Hex Nipple
(Male NPT both ends)

P-SHN



236

Hex Reducing Coupling
(Female NPT to reduced female NPT)

P-SHRC



239

Snubber Fittings
P-MFAA



243

Hex Reducing Nipple
(Male NPT to reduced male NPT)

P-SHRN



236

Elbow
(Female NPT both ends)

P-SL



240

Vent Protector
P-SVP



244

Hex Nipple
(Male NPT to ISO tapered)

P-SHN



236

Street Elbow
(Female to male NPT)

P-SSL



240

Union
(Socket weld Ends)
P-SWFC



245

Hex Nipple
(Male NPT to male ISO parallel)

P-SHN



237

Reducing Street Elbow
(Female to male NPT)

P-SRSL



240

Union Elbow
(Socket weld Ends)
P-SWLA



245

Hex Long Nipple
(Male NPT both ends)

P-SHLN



237

Male Elbow
(Male NPT both ends)

P-SML



240

Union Tee
(Socket weld Ends)
P-SWTA



246

Adapter
(Male NPT to female NPT)

P-MFAA



237

Tee
(Female NPT)

P-ST



241

Male Connector
P-SSA



246

Reducing Adapter
(Male NPT to reduced female NPT)

P-MFRA



237

Run Tee
(Female to male to Female NPT)

P-SRT



241

Female Connector
P-SSB



246

Adapter
(Male ISO tapered to female NPT)

P-MFAA



238

Branch Tee
(Female to male to male NPT)

P-SBT



241

Male Elbow
P-SMLSW



246

Adapter
(Male ISO parallel to female NPT)

P-MFAB



238

Male Tee
(Male NPT)

P-SMT



241

Female Elbow
P-SFLSW



247

Reducing Hex Bushing
(Male NPT to reduced female NPT)

P-SHB



238

Cross
(Female NPT)

P-SX



242

**Pipe Weld to
Tube Socket Weld**
P-SWRM



247

Pipe Cap
(Female NPT)

P-SC



239

Union Ball Joint
(Female NPT both ends)

P-SUJ



242

**Tube Weld to
Tube Socket Weld**
P-SWRM



247

Pipe Plug
(Male NPT)

P-SP



239

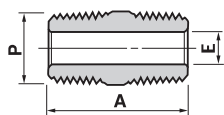
ISO Parallel Gasket
SGC



242

Close Nipple
(Male NPT both ends)

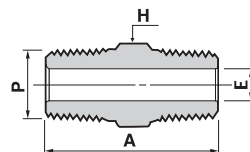
P-SCN



Part Number	P NPT Size	A	E
P-SCN-2N	1/8	19.05	4.8
P-SCN-4N	1/4	28.4	7.1
P-SCN-6N	3/8	28.4	9.6
P-SCN-8N	1/2	31.7	11.9
P-SCN-12N	3/4	31.7	15.7
P-SCN-16N	1	47.8	22.4

Hex Nipple
(Male NPT both ends)

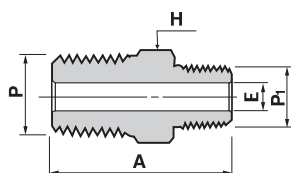
P-SHN



Part Number	P NPT Size	A	E	H Hex
P-SHN-2N	1/8	25.4	4.8	11.1
P-SHN-4N	1/4	35.3	7.1	14.2
P-SHN-6N	3/8	36.1	9.6	17.4
P-SHN-8N	1/2	46.7	11.9	22.2
P-SHN-12N	3/4	46.7	15.7	26.9
P-SHN-16N	1	58.7	22.4	34.9
10,000psig				
P-SHN-4N-10K	1/4	35.6	5.8	14.2
P-SHN-8N-10K	1/2	46.7	9.9	22.2

Hex Reducing Nipple
(Male NPT to reduced male NPT)

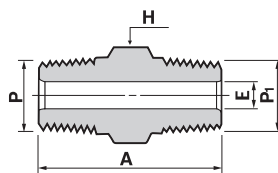
P-SHRN



Part Number	P NPT Size	P ₁ Reduced NPT Size	A	E	H Hex
P-SHRN-4-2N	1/4	1/8	30.7	4.8	14.2
P-SHRN-6-2N	3/8	1/8	32.0	4.8	17.4
P-SHRN-6-4N	3/8	1/4	36.1	7.1	17.4
P-SHRN-8-2N	1/2	1/8	37.2	4.8	22.2
P-SHRN-8-4N	1/2	1/4	41.7	7.1	22.2
P-SHRN-8-6N	1/2	3/8	41.7	9.6	22.2
P-SHRN-12-4N	3/4	1/4	41.7	7.1	26.9
P-SHRN-12-8N	3/4	1/2	46.7	11.9	26.9
P-SHRN-16-4N	1	1/4	49.3	7.1	34.9
P-SHRN-16-8N	1	1/2	54.1	11.9	34.9
10,000psig					
P-SHRN-8-4N-10K	1/2	1/4	41.9	5.8	22.2

Hex Nipple
(Male NPT to ISO tapered)

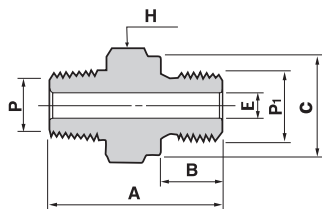
P-SHN



Part Number	P NPT Size	P ₁ PT Size	A	E	H Hex
P-SHN-2NR	1/8	1/8	24.6	4.8	11.1
P-SHN-4NR	1/4	1/4	35.3	7.1	14.2
P-SHN-6NR	3/8	3/8	36.1	9.6	17.4
P-SHN-8NR	1/2	1/2	46.7	11.9	22.2
P-SHN-12NR	3/4	3/4	46.7	15.7	26.9
P-SHN-16NR	1	1	58.7	22.4	34.9

Hex Nipple
(Male NPT to male parallel)

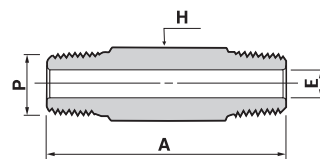
P-SHN



Part Number	P NPT Size	P ₁ PF Size	A	B	C	E	H Hex
P-SHN-2NG	1/8	1/8	27.4	7.1	13.7	4.1	14.2
P-SHN-4NG	1/4	1/4	36.8	11.2	17.8	5.8	19.05
P-SHN-6NG	3/8	3/8	37.6	11.2	21.8	7.9	22.2
P-SHN-8NG	1/2	1/2	45.0	14.2	26.1	11.9	26.9
P-SHN-12NG	3/4	3/4	49.0	15.7	31.5	15.7	33.3
P-SHN-16NG	1	1	56.9	18.3	38.9	19.8	41

Hex Long Nipple
(Male NPT both ends)

P-SHLN

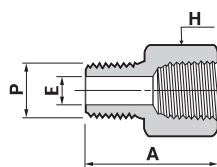


Part Number	P NPT Size	A	E	H Hex
P-SHLN-2N	1/8	★	4.8	11.1
P-SHLN-4N	1/4	★	7.1	14.2
P-SHLN-6N	3/8	★	9.7	17.4
P-SHLN-8N	1/2	★	11.9	22.2
P-SHLN-12N	3/4	★	15.7	26.9
P-SHLN-16N	1	★	22.4	34.9

★: Configure to order

Adapter
(Male NPT to female NPT)

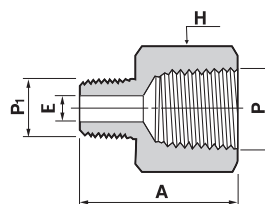
P-MFAA



Part Number	P NPT Size	A	E	H Hex
P-MFAA-2N	1/8	27.4	4.8	14.2
P-MFAA-4N	1/4	35.6	7.1	19.05
P-MFAA-6N	3/8	37.8	9.6	22.2
P-MFAA-8N	1/2	49.0	11.9	26.9
P-MFAA-12N	3/4	50.3	15.7	33.3
P-MFAA-16N	1	58.0	22.4	41.2
10,000psig				
P-MFAA-4N-10K	1/4	36.3	5.8	25.4
P-MFAA-8N-10K	1/2	51.3	9.9	38.1

Reducing Adapter
(Male NPT to reduced female NPT)

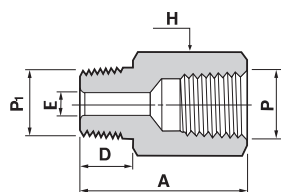
P-MFRA



Part Number	P ₁ Male NPT Size	P Female NPT Size	A	E	H Hex
P-MFRA-2-4N	1/8	1/4	31.5	4.8	19.05
P-MFRA-2-6N	1/8	3/8	33.5	4.8	22.2
P-MFRA-4-6N	1/4	3/8	37.8	7.1	22.2
P-MFRA-2-8N	1/8	1/2	40.0	4.8	26.9
P-MFRA-4-8N	1/4	1/2	44.5	7.1	26.9
P-MFRA-6-8N	3/8	1/2	44.5	9.6	26.9
P-MFRA-4-12N	1/4	3/4	45.7	7.1	33.3
P-MFRA-6-12N	3/8	3/4	45.7	9.6	33.3
P-MFRA-8-12N	1/2	3/4	51.1	11.9	33.3
P-MFRA-4-16N	1/4	1	50.8	7.1	41.2
P-MFRA-8-16N	1/2	1	54.9	11.9	41.2
P-MFRA-12-16N	3/4	1	55.1	15.7	41.2
10,000psig					
P-MFRA-8-4N-10K	1/2	1/4	46.0	5.8	38.1

Adapter
(Male ISO tapered to female NPT)

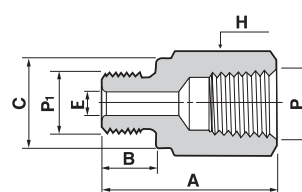
P-MFAA



Part Number	P ₁ PT Size	P NPT Size	A	D	E	H Hex
P-MFAA-2RN	1/8	1/8	27.4	9.7	4.8	14.2
P-MFAA-4RN	1/4	1/4	35.8	14.2	7.1	19.05
P-MFAA-6RN	3/8	3/8	37.6	14.2	9.7	22.2
P-MFAA-8RN	1/2	1/2	49.0	19.1	11.9	26.9
P-MFAA-12RN	3/4	3/4	50.3	19.1	15.7	33.3
P-MFAA-16RN	1	1	58.0	23.9	22.4	41.2

Adapter
(Male ISO paralalled to female NPT)

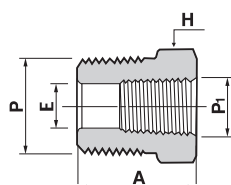
P-MFAB



Part Number	P ₁ PF Size	P NPT Size	A	B	C	E	H Hex
P-MFAB-2GN	1/8	1/8	24.9	7.1	13.7	4.1	14.2
P-MFAB-4GN	1/4	1/4	33.3	11.2	17.8	5.8	19.05
P-MFAB-6GN	3/8	3/8	37.8	11.2	21.8	7.9	22.2
P-MFAB-8GN	1/2	1/2	43.9	14.2	26.1	11.9	26.9
P-MFAB-12GN	3/4	3/4	50.8	15.7	31.5	15.7	33.3
P-MFAB-16GN	1	1	53.1	18.3	38.9	19.8	41.2

Reducing Hex Bushing
(Male NPT to reduced female NPT)

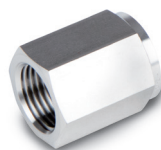
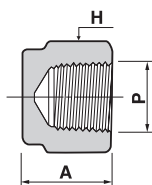
P-SHB



Part Number	P Male NPT Size	P ₁ Female NPT Size	A	E	H Hex	Pressure Rating (psig)		
						316SS	Brass	Carbon Steel
P-SHB-4-2N	1/4	1/8	26.7	7.1	14.2	6,500	3,300	6,500
P-SHB-6-2N	3/8	1/8	21.8	8.5	17.4	9,200	4,700	9,200
P-SHB-6-4N	3/8	1/4	30.0	9.6	19.05	6,600	3,300	6,600
P-SHB-8-2N	1/2	1/8	27.4	8.5	22.2	12,200	6,200	12,200
P-SHB-8-4N	1/2	1/4	27.4	11.0	22.2	8,300	4,400	8,300
P-SHB-8-6N	1/2	3/8	35.6	11.9	22.2	5,300	2,600	5,300
P-SHB-12-4N	3/4	1/4	27.4	11.0	26.9	12,000	6,000	12,000
P-SHB-12-6N	3/4	3/8	27.4	15.0	26.9	8,200	4,300	8,200
P-SHB-12-8N	3/4	1/2	41.4	15.7	26.9	4,900	2,400	4,900
P-SHB-16-4N	1	1/4	34.8	11.0	34.9	14,500	7,400	14,500
P-SHB-16-8N	1	1/2	34.8	18.5	34.9	8,600	4,300	8,600
P-SHB-16-12N	1	3/4	34.8	22.4	34.9	5,300	2,600	5,300

Pipe Cap
(Female NPT)

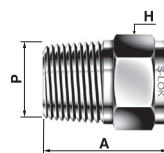
P-SC



Part Number	P NPT Size	A	H Hex
P-SC-2N	1/8	19.1	14.2
P-SC-4N	1/4	22.9	19.05
P-SC-6N	3/8	26.2	22.2
P-SC-8N	1/2	34.0	26.9
P-SC-12N	3/4	36.6	33.3
P-SC-16N	1	41.1	41.2
10,000psig			
P-SC-4N-10K	1/4	28.2	25.4
P-SC-8N-10K	1/2	40.1	38.1

Pipe Plug
(Male NPT)

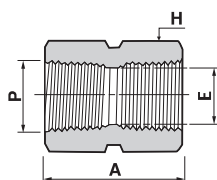
P-SP



Part Number	P NPT Size	A	H Hex
P-SP-2N	1/8	19.05	11.1
P-SP-4N	1/4	24.1	14.2
P-SP-6N	3/8	25.0	17.4
P-SP-8N	1/2	30.5	22.2
P-SP-12N	3/4	30.5	26.9
P-SP-16N	1	38.1	34.9

Hex Coupling
(Female NPT both ends)

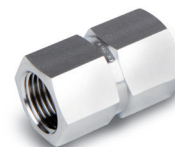
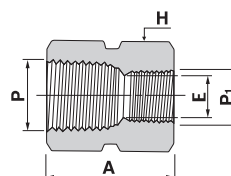
P-SHC



Part Number	P NPT Size	A	E	H Wrench Flat
P-SHC-2N	1/8	20.3	8.5	14.2
P-SHC-4N	1/4	30.0	11.0	19.05
P-SHC-6N	3/8	33.0	14.4	22.2
P-SHC-8N	1/2	39.4	17.8	26.9
P-SHC-12N	3/4	41.0	23.0	33.3
P-SHC-16N	1	50.5	29.0	41.2
10,000psig				
P-SHC-4N-10K	1/4	30.2	11.4	25.4
P-SHC-8N-10K	1/2	39.6	18.5	38.1

Hex Reducing Coupling
(Female NPT to reduced female NPT)

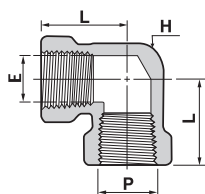
P-SHRC



Part Number	P NPT Size	P ₁ Reduced NPT Size	A	E	H Hex
P-SHRC-4-2N	1/4	1/8	31.2	8.5	19.05
P-SHRC-6-4N	3/8	1/4	34.8	11.0	22.2
P-SHRC-8-2N	1/2	1/8	39.4	8.5	26.9
P-SHRC-8-4N	1/2	1/4	44.2	11.0	26.9
P-SHRC-8-6N	1/2	3/8	45.0	14.5	26.9
P-SHRC-12-4N	3/4	1/4	45.7	11.0	33.3
P-SHRC-12-8N	3/4	1/2	52.0	17.8	33.3
P-SHRC-16-4N	1	1/4	50.8	11.0	41.2
P-SHRC-16-8N	1	1/2	55.4	17.8	41.2
P-SHRC-16-12N	1	3/4	57.0	23.0	41.2
10,000psig					
P-SHRC-8-4N-10K	1/2	1/4	46.0	5.8	38.1

Elbow
(Female NPT both ends)

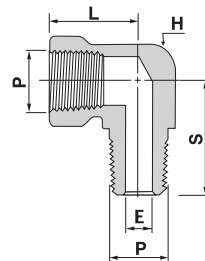
P-SL



Part Number	P NPT Size	L	E	H Wrench Flat
P-SL-2N	1/8	24.1	8.5	12.7
P-SL-4N	1/4	29.0	11.0	17.5
P-SL-6N	3/8	34.5	14.4	20.6
P-SL-8N	1/2	37.0	17.8	25.4
P-SL-12N	3/4	46.5	23.0	31.8
P-SL-16N	1	48.8	29.0	42.9
10,000psig				
P-SL-4N-10K	1/4	39.6	11.4	25.4
P-SL-8N-10K	1/2	50.0	18.5	42.9

Street Elbow
(Female to male NPT)

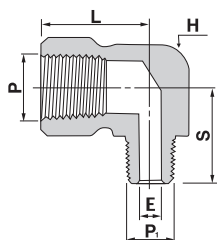
P-SSL



Part Number	P NPT Size	L	S	E	H Wrench Flat
P-SSL-2N	1/8	24.1	19.6	4.8	12.7
P-SSL-4N	1/4	29.0	26.5	7.1	17.5
P-SSL-6N	3/8	34.5	28.2	9.6	20.6
P-SSL-8N	1/2	37.0	35.3	11.9	25.4
P-SSL-12N	3/4	46.5	39.6	15.7	31.8
P-SSL-16N	1	48.8	49.2	22.3	42.9

Reducing Street Elbow
(Female to male NPT)

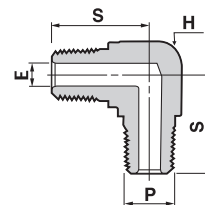
P-SRSL



Part Number	P Female NPT Size	P ₁ Male NPT Size	L	S	E	H Wrench Flat
P-SRSL-4-2N	1/4	1/8	29.0	22.4	4.8	17.5
P-SRSL-6-4N	3/8	1/4	34.5	28.2	7.1	20.6
P-SRSL-8-4N	1/2	1/4	37.0	30.5	7.1	25.4
P-SRSL-8-6N	1/2	3/8	37.0	30.5	9.6	25.4
P-SRSL-12-8N	3/4	1/2	46.5	39.6	11.9	31.8
P-SRSL-16-8N	1	1/2	48.8	44.5	11.9	42.9

Male Elbow
(Male NPT both ends)

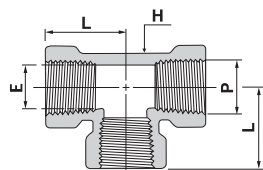
P-SML



Part Number	P NPT Size	L	E	H Wrench Flat
P-SML-2N	1/8	19.05	4.8	12.7
P-SML-4N	1/4	24.5	7.1	12.7
P-SML-6N	3/8	26.9	9.6	17.5
P-SML-8N	1/2	33.2	11.9	20.6
P-SML-12N	3/4	35.3	15.7	25.4
P-SML-16N	1	44.5	22.4	31.8

Tee
(Female NPT)

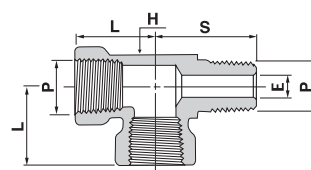
P-ST



Part Number	P NPT Size	L	E	H Wrench Flat
P-ST-2N	1/8	24.1	8.5	12.7
P-ST-4N	1/4	29.0	11.0	17.5
P-ST-6N	3/8	34.5	14.4	20.6
P-ST-8N	1/2	37.0	17.8	25.4
P-ST-12N	3/4	46.5	23.0	31.8
P-ST-16N	1	48.8	29.0	42.9
10,000psig				
P-ST-4N-10K	1/4	39.6	11.4	25.4
P-ST-8N-10K	1/2	50.0	18.5	42.9

Run Tee
(Female to male to Female NPT)

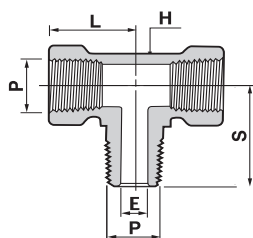
P-SRT



Part Number	P NPT Size	L	S	E	H Wrench Flat
P-SRT-2N	1/8	24.1	19.6	4.8	12.7
P-SRT-4N	1/4	29.0	26.5	7.1	17.5
P-SRT-6N	3/8	34.5	28.2	9.6	20.6
P-SRT-8N	1/2	37.0	35.3	11.9	25.4
P-SRT-12N	3/4	46.5	39.6	15.7	31.8
P-SRT-16N	1	48.8	49.2	22.4	42.9

Branch Tee
(Female to male to male NPT)

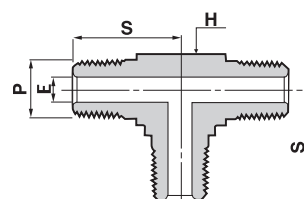
P-SBT



Part Number	P NPT Size	L	S	E	H Wrench Flat
P-SBT-2N	1/8	24.1	19.6	4.8	12.7
P-SBT-4N	1/4	29.0	26.5	7.1	17.5
P-SBT-6N	3/8	34.5	28.2	9.6	20.6
P-SBT-8N	1/2	37.0	35.3	11.9	25.4
P-SBT-12N	3/4	46.5	39.6	15.7	31.8
P-SBT-16N	1	48.8	49.2	22.4	42.9

Male Tee
(Male NPT)

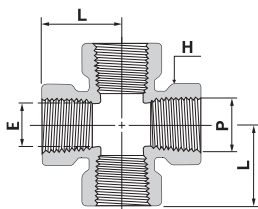
P-SMT



Part Number	P NPT Size	S	E	H Wrench Flat
P-SMT-2N	1/8	19.05	4.8	12.7
P-SMT-4N	1/4	24.5	7.1	12.7
P-SMT-6N	3/8	26.9	9.6	17.5
P-SMT-8N	1/2	33.2	11.9	20.6
P-SMT-12N	3/4	35.3	15.7	25.4
P-SMT-16N	1	44.5	22.4	31.8

Cross (Female NPT)

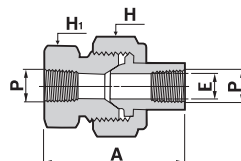
P-SX



Part Number	P NPT Size	L	E	H Wrench Flat
P-SX-2N	1/8	24.1	8.5	12.7
P-SX-4N	1/4	29.0	11.0	17.5
P-SX-6N	3/8	34.5	14.4	20.6
P-SX-8N	1/2	37.0	17.8	25.4
P-SX-12N	3/4	46.5	23.0	31.8
P-SX-16N	1	48.8	29.0	42.9
10,000psig				
P-SX-4N-10K	1/4	39.6	11.4	25.4
P-SX-8N-10K	1/2	49.5	17.8	42.9

Union Ball Joint (Female NPT both ends)

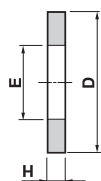
P-SUJ



Part Number	P NPT Size	A	E	H Hex	H ₁ Hex
P-SUJ-F-2N	1/8	45.7	6.9	28.6	23.8
P-SUJ-F-4N	1/4	59.4	9.1	34.9	30.2
P-SUJ-F-6N	3/8	63.5	13.2	38.1	33.3
P-SUJ-F-8N	1/2	68.6	15.7	44.5	41.3
P-SUJ-F-12N	3/4	79.2	22.4	50.8	47.6
P-SUJ-F-16N	1	90.4	26.2	63.5	60.3

ISO Parallel Gasket

SGC



Part Number	PF Size	E	H	D
SGC-2	1/8	9.9	1.0	15.0
SGC-4	1/4	13.2	1.5	19.1
SGC-6	3/8	16.8	1.5	23.1
SGC-8	1/2	21.1	1.5	26.9
SGC-12	3/4	26.7	2.0	33.0
SGC-16	1	33.3	2.0	40.1



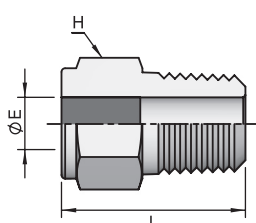
Fusible Plug

Features

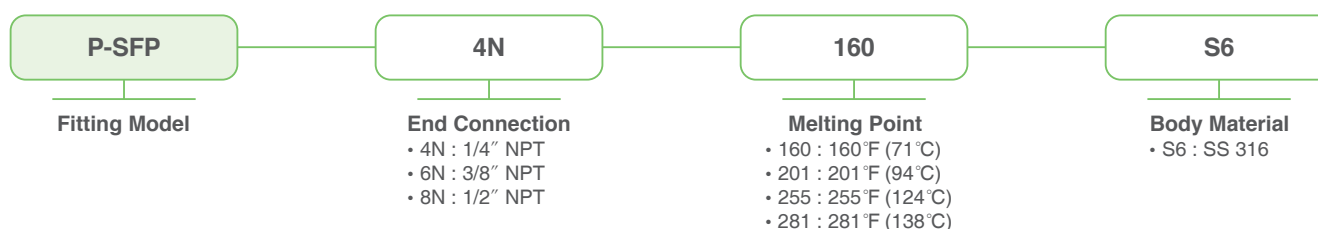
- Fusible plugs consist of 316 stainless steel body and eutectic alloy with a specific melting point.
- When fusible plug is exposed to a temperature above its melting point, the eutectic alloy melts and the pressure inside the fitting is released to atmosphere.
- Fusible plugs are used where heat can cause a fire or an explosive chemical reaction.
- Fusible plugs are mainly installed onto compression cylinders, oil, liquified gas and steam boilers.



Ordering Information and Dimension



Basic Ordering Number	NPT Thread Size	Dimensions, mm (inch)		
		L	E	H
P-SFP-4N	1/4"	24.1 (0.95)	6.4 (0.25)	14.2 (9/16)
P-SFP-6N	3/8"	25.0 (0.98)	6.4 (0.25)	17.4 (11/16)
P-SFP-8N	1/2"	30.5 (1.20)	8.7 (0.34)	22.2 (7/8)



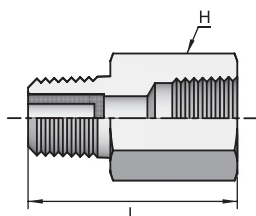
Snubber Fitting

Features

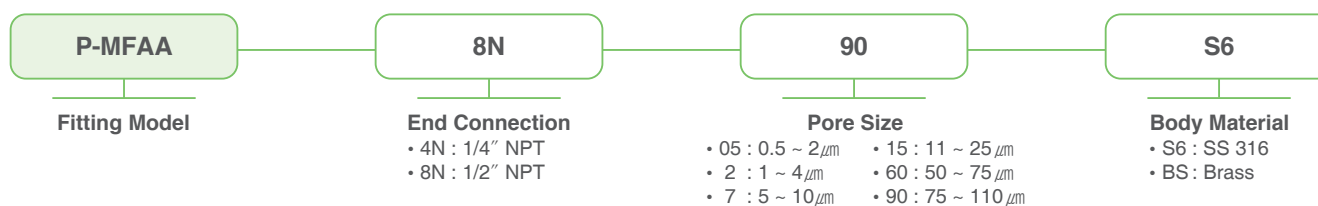
- Snubber fittings protect gauges and instruments from system pressure surge and shock.
- Snubber fitting consists of 316 stainless steel or brass body and sintered 316 stainless steel element.
- Pressure damping is accomplished through sintered 316 stainless steel element.



Ordering Information and Dimension



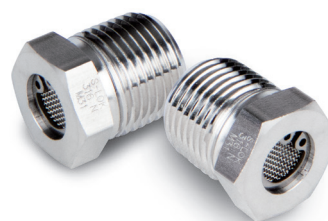
Basic Ordering Number	NPT Thread Size	Dimensions, mm (inch)		Working Pressure, psig (bar) @ 20°C (70°F)	
		L	H	SS 316	Brass
P-MFAA-4N	1/4"	35.6 (1.40)	19.05 (3/4)	4,400 (303)	2,200 (151)
P-MFAA-8N	1/2"	49.0 (1.93)	26.98 (1-1/16)	4,900 (337)	2,400 (165)



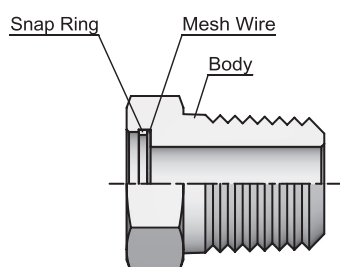
Vent Protector

Features

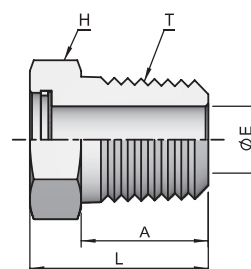
- S-LOK vent protectors, more commonly known as mud dauber fittings, protect open ends of instrument, tubing, outlet vent, and bleed-off lines.
- The mesh wire screen prevents foreign object, such as mud insects, from entering and clogging various systems and causing damage.
- Vent protectors are available in stainless steel and brass.
- Dimensions are for reference only and are subject to change without prior notice.



Materials of Construction



Dimensions

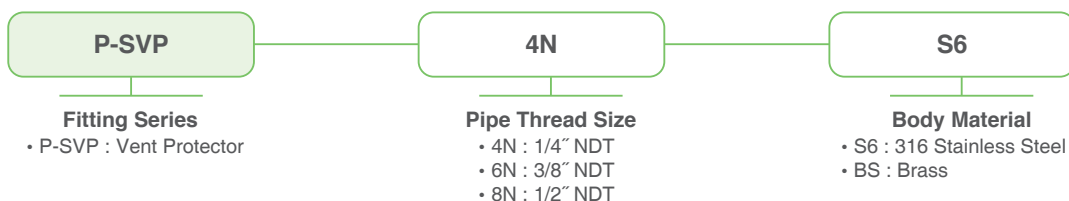


No	Parts Name	Material
1	Body	316 Stainless steel or Brass
2	Vent	316 Stainless steel
3	Snap Ring	Stainless steel

Basic Ordering Number	E	T (NPT)	A	L	H
P-SVP-4N	7.1	1/4	14	19.8	14.28
P-SVP-6N	10.4	3/8	15	20.6	17.46
P-SVP-8N	10.4	1/2	19	26.2	22.22

Ordering Information

- Selection the applicable options from designators listed.

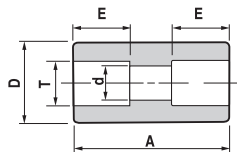


Instrument Weld Fittings

Features

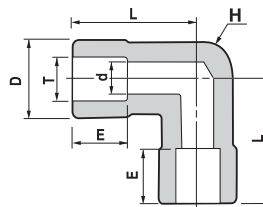
- S-LOK instrument weld fittings are designed in accordance with ASME B16.11 welding connections.
- All socket weld ports have a tapered shape at the end that hold tubing properly and consistent alignment.
- Pressure ratings for weld fittings are in accordance with ASME B31.3 and safety factor 4:1

Union P-SWFC



Part Number	T Tube O.D.	d	D	E	A	Working Psig	Pressure bar
P-SWFC-4T	1/4	4.8	13.0	7.1	19.0	10,000	689
P-SWFC-6T	3/8	7.1	15.8	7.9	22.4	7,600	523
P-SWFC-8T	1/2	10.2	19.0	9.7	26.9	6,200	427
P-SWFC-10T	5/8	12.7	24.0	10.4	30.2	6,400	440
P-SWFC-12T	3/4	15.7	26.9	11.2	33.3	5,500	378
P-SWFC-16T	1	22.1	35.0	15.7	36.6	5,200	358

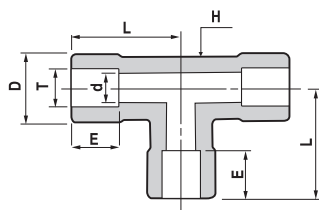
Union Elbow P-SWLA



Part Number	T Tube O.D.	d	D	E	H Wrench Flat	L	Working Psig	Pressure bar
P-SWLA-4T	1/4	4.6	13.4	7.1	12.7	21.8	11,300	778
P-SWLA-6T	3/8	7.1	15.8	7.9	12.7	24.5	8,400	578
P-SWLA-8T	1/2	10.2	20.6	9.7	17.5	29.0	7,800	537
P-SWLA-10T	5/8	12.7	23.8	10.4	20.6	34.5	6,700	461
P-SWLA-12T	3/4	15.7	28.6	11.2	25.4	37.0	6,700	461
P-SWLA-16T	1	22.1	35.0	15.7	31.8	46.5	6,100	420

Union Tee

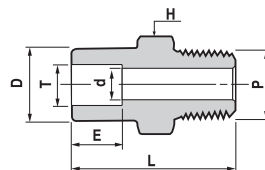
P-SWTA



Part Number	T Tube O.D.	d	D	E	H Wrench Flat	L	Working Psig	Pressure bar
P-SWTA-2T	1/8	2.3	13.4	2.5	12.7	15.0	11,800	813
P-SWTA-4T	1/4	4.6	13.4	7.1	12.7	21.8	11,300	778
P-SWTA-6T	3/8	7.1	15.8	7.9	12.7	24.5	8,400	578
P-SWTA-8T	1/2	10.2	20.6	9.7	17.4	29.0	7,800	537
P-SWTA-10T	5/8	12.7	23.8	10.4	20.6	34.5	6,700	461
P-SWTA-12T	3/4	15.7	28.6	11.2	25.4	37.0	6,700	461
P-SWTA-16T	1	22.1	36.12	15.7	36.12	46.5	6,100	420

Male Connector

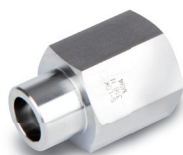
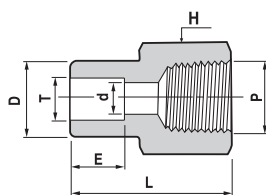
P-SSA



Part Number	T Tube O.D.	P- NPT	d	D	E	H Hex	L	Working Psig	Pressure bar
P-SSA-4T-4N	1/4	1/4	4.6	12.2	7.1	14.2	29.2	7,500	516
P-SSA-6T-4N	3/8	1/4	7.1	15.3	7.9	15.8	31.8	7,500	516
P-SSA-6T-6N	3/8	3/8	7.1	15.3	7.9	17.4	31.8	7,300	502
P-SSA-6T-8N	3/8	1/2	7.1	15.3	7.9	22.2	37.3	7,200	496
P-SSA-8T-4N	1/2	1/4	7.1	18.5	9.7	19.05	33.3	6,200	427
P-SSA-8T-6N	1/2	3/8	9.4	18.5	9.7	19.05	33.3	6,200	427
P-SSA-8T-8N	1/2	1/2	10.2	18.5	9.7	22.2	38.9	6,200	427

Female Connector

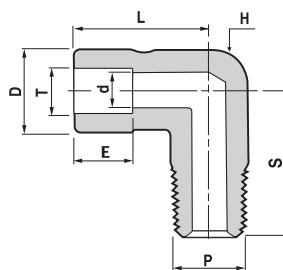
P-SSB



Part Number	T Tube O.D.	P-NPT Female Pipe Size	d	D	E	H Hex	L	Working Psig	Pressure bar
P-SSB-2T-2N	1/8	1/8	2.3	7.4	2.5	14.2	21.1	6,100	420
P-SSB-4T-2N	1/4	1/8	4.6	12.2	7.1	14.2	26.7	6,100	420
P-SSB-4T-4N	1/4	1/4	4.6	12.2	7.1	19.05	30.0	6,200	427
P-SSB-6T-4N	3/8	1/4	7.1	15.3	7.9	19.05	31.5	6,200	427
P-SSB-8T-6N	1/2	3/8	10.2	18.5	9.7	22.2	34.5	5,000	344
P-SSB-8T-8N	1/2	1/2	10.2	18.5	9.7	26.9	40.4	4,600	316
P-SSB-10T-8N	5/8	1/2	12.7	23.4	10.4	26.9	41.9	4,600	316
P-SSB-12T-12N	3/4	3/4	15.7	26.7	11.2	33.3	43.9	4,300	296

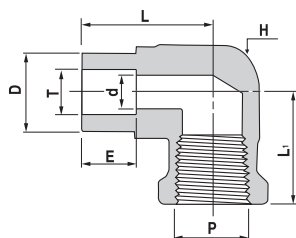
Male Elbow

P-SMLSW



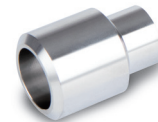
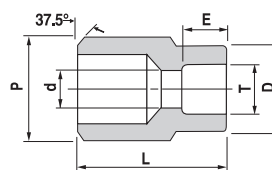
Part Number	T Tube O.D.	P- NPT	d	D	E	H Wrench Flat	L	S	Working Psig	Pressure bar
P-SMLSW-4T-4N	1/4	1/4	4.6	15.8	7.1	12.7	20.1	24.5	7,500	516
P-SMLSW-6T-4N	3/8	1/4	7.1	15.8	7.9	12.7	24.1	24.5	7,500	516
P-SMLSW-6T-6N	3/8	3/8	7.1	20.6	7.9	17.5	24.6	29.0	7,300	502
P-SMLSW-6T-8N	3/8	1/2	7.1	23.8	7.9	20.6	25.9	34.5	7,200	496
P-SMLSW-8T-8N	1/2	1/2	10.2	23.8	9.7	20.6	27.4	34.5	6,200	427
P-SMLSW-12T-12N	3/4	3/4	15.7	28.6	11.2	25.4	37.0	37.0	6,700	461

Female Elbow

P-SFLSW

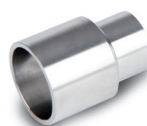
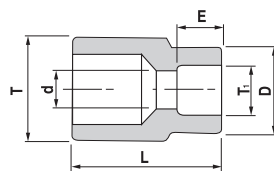
Part Number	T Tube O.D.	P-NPT Female Pipe Size	d	D	E	H Wrench Flat	L	L ₁	Working Psig	Pressure bar
P-SFLSW-4T-4N	1/4	1/4	4.6	12.2	7.1	17.5	22.9	29.7	6,200	427
P-SFLSW-6T-4N	3/8	1/4	7.1	15.3	7.9	17.5	25.1	29.7	7,000	482
P-SFLSW-6T-8N	3/8	1/2	7.1	15.3	7.9	25.4	28.7	37.0	5,400	372
P-SFLSW-8T-8N	1/2	1/2	10.2	18.5	9.7	25.4	30.2	38.0	5,400	372

Pipe Weld to Tube Socket Weld

P-SWRM

Part Number	P Pipe Size	T Tube Socket Size	d	D	E	L	Working Psig	Pressure bar
P-SWRM-4P-4T	1/4	1/4	4.6	13.7	7.1	22.4	9,600	661
P-SWRM-6P-6T	3/8	3/8	7.1	15.3	7.9	26.2	7,600	523
P-SWRM-6P-8T	3/8	1/2	10.2	18.5	9.7	27.9	6,200	427
P-SWRM-8P-4T	1/2	1/4	4.6	12.2	7.1	28.4	7,300	502
P-SWRM-8P-6T	1/2	3/8	7.1	15.3	7.9	28.4	7,300	502
P-SWRM-8P-8T	1/2	1/2	10.2	18.5	9.7	30.2	6,200	427
P-SWRM-12P-6T	3/4	3/8	7.1	15.3	7.9	38.1	6,200	427
P-SWRM-12P-8T	3/4	1/2	10.2	18.5	9.7	38.1	6,200	427

Tube Weld to Tube Socket Weld

P-SWRM

Part Number	T Tube O.D.	T ₁ Tube Socket Size	d	D	E	L	Working Psig	Pressure bar
P-SWRM-4T-2T	1/4	1/8	2.3	7.4	2.5	14.2	11,800	813
P-SWRM-6T-4T	3/8	1/4	4.6	12.2	7.1	19.1	7,700	530
P-SWRM-8T-4T	1/2	1/4	4.6	18.2	7.1	22.4	7,000	482
P-SWRM-8T-6T	1/2	3/8	8.1	15.7	7.9	22.4	7,000	482
P-SWRM-12T-8T	3/4	1/2	10.2	18.5	9.7	28.4	5,900	406
P-SWRM-16T-8T	1	1/2	10.2	18.5	9.7	35.1	5,000	344

S-LOK®

Hose Adapter Fittings

The best partner for value creation
We support the innovations of customer



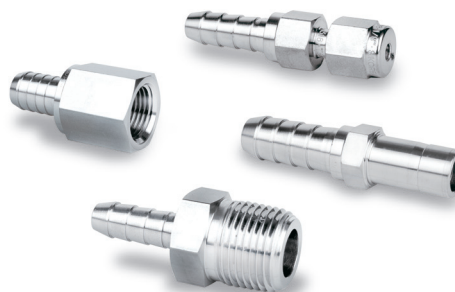
08



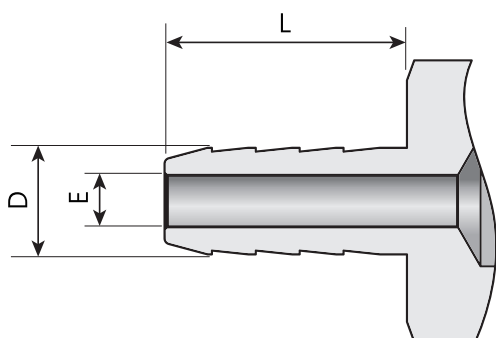
Catalogue No. S-LOK Mar.2024

Features

- S-LOK Hose Connectors allow easy installation of soft plastic or rubber tubing.
- Hose barb design holds soft plastic or rubber tubing inside diameter securely.
- Reusable to other assemblies
- Stainless steel and brass construction.
- Size range : 1/8 ~ 1 in.
- Can be used without hose clamp in low pressure application.
- Hose clamps may be required for high pressure application.



Hose Barb Dimensions

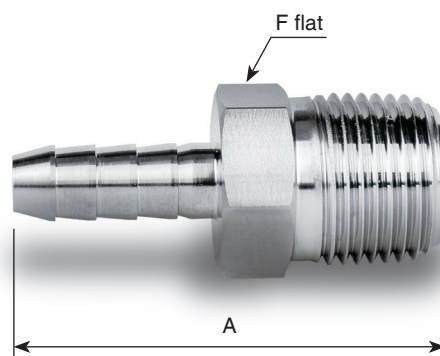


Nominal Hose I.D.	Width across flat		
	D	E	L
1/8	0.15 (3.8)	0.08 (2.0)	0.40 (10.2)
3/16	0.23 (5.8)	0.12 (3.0)	0.59 (15.0)
1/4	0.30 (7.6)	0.19 (4.8)	0.79 (20.1)
5/16	0.38 (9.7)	0.19 (4.8)	0.87 (22.1)
3/8	0.45 (11.4)	0.30 (7.6)	0.87 (22.1)
1/2	0.60 (15.2)	0.38 (9.7)	0.94 (23.9)
5/8	0.75 (19.0)	0.50 (12.7)	0.98 (24.9)
3/4	0.90 (22.9)	0.63 (16.0)	1.05 (26.7)
1	1.20 (30.5)	0.88 (22.4)	1.19 (30.2)

Ordering Information

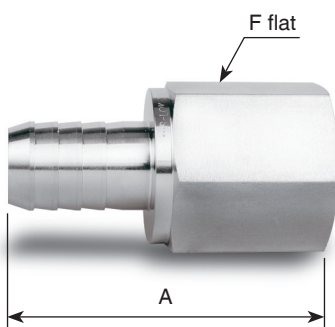
SPHA	4	4T	S6
Fitting Series	Nominal Hose I.D	Connection Size	Material
• SHAM : Male Connector • SHAF : Female Connector • SHAT : S-LOK Tube Adapter • SHAS : S-LOK Tube Fitting Connector	• 2 : 1/8" • 3 : 3/16" • 4 : 1/4" • 5 : 5/16" • 6 : 3/8" • 8 : 1/2" • 10 : 5/8" • 12 : 3/4" • 16 : 1"	• 2N : 1/8" NPT • 4N : 1/4" NPT • 6N : 3/8" NPT • 8N : 1/2" NPT • 12N : 3/4" NPT • 16N : 1" NPT • 2T : 1/8" TUBE O.D • 4T : 1/4" TUBE O.D • 6T : 3/8" TUBE O.D • 8T : 1/2" TUBE O.D • 12T : 3/4" TUBE O.D • 16T : 1" TUBE O.D	• S6 : 316 Stainless Steel • BS : Brass

Male Connectors



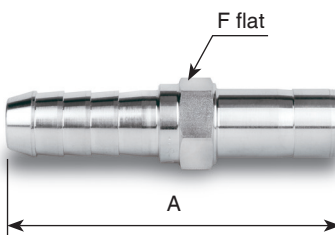
Ordering Number	End Connections		Dimensions, in. (mm)		
	Nominal Hose I.D	Male NPT	F Hex flat	A Length	Min. Inside Diameter
SHAM-2-2N	1/8	1/8	7/16 (11.1)	1.08 (27.4)	0.08 (2.0)
SHAM-2-4N	1/8	1/4	9/16 (14.2)	1.26 (32.0)	0.08 (2.0)
SHAM-3-2N	3/16	1/8	7/16 (11.1)	1.27 (32.2)	0.12 (3.0)
SHAM-3-4N	3/16	1/4	9/16 (14.2)	1.45 (36.8)	0.12 (3.0)
SHAM-4-2N	1/4	1/8	7/16 (11.1)	1.47 (37.3)	0.19 (4.8)
SHAM-4-4N	1/4	1/4	9/16 (14.2)	1.65 (41.9)	0.19 (4.8)
SHAM-4-6N	1/4	3/8	11/16 (17.4)	1.66 (42.2)	0.19 (4.8)
SHAM-4-8N	1/4	1/2	7/8 (22.2)	1.85 (47.0)	0.19 (4.8)
SHAM-5-2N	5/16	1/8	7/16 (11.1)	1.55 (39.4)	0.19 (4.8)
SHAM-5-4N	5/16	1/4	9/16 (14.2)	1.73 (43.9)	0.19 (4.8)
SHAM-5-6N	5/16	3/8	11/16 (17.4)	1.74 (44.2)	0.19 (4.8)
SHAM-5-8N	5/16	1/2	7/8 (22.2)	1.96 (49.8)	0.19 (4.8)
SHAM-6-4N	3/8	1/4	9/16 (14.2)	1.73 (43.9)	0.30 (7.6)
SHAM-6-6N	3/8	3/8	11/16 (17.4)	1.74 (44.2)	0.30 (7.6)
SHAM-6-8N	3/8	1/2	7/8 (22.2)	1.96 (49.8)	0.30 (7.6)
SHAM-8-4N	1/2	1/4	11/16 (17.4)	1.80 (45.7)	0.28 (7.1)
SHAM-8-6N	1/2	3/8	11/16 (17.4)	1.81 (46.0)	0.38 (9.7)
SHAM-8-8N	1/2	1/2	7/8 (22.2)	2.03 (51.6)	0.38 (9.7)
SHAM-10-6N	5/8	3/8	1-1/16 (26.9)	1.88 (47.8)	0.38 (9.7)
SHAM-10-8N	5/8	1/2	1-1/16 (26.9)	2.07 (52.6)	0.47 (11.9)
SHAM-10-12N	5/8	3/4	1-1/16 (26.9)	2.07 (52.6)	0.50 (12.7)
SHAM-12-8N	3/4	1/2	1-1/16 (26.9)	2.14 (54.4)	0.47 (11.9)
SHAM-12-12N	3/4	3/4	1-1/16 (26.9)	2.14 (54.4)	0.63 (16.0)
SHAM-12-16N	3/4	1	1-3/8 (34.9)	2.43 (61.7)	0.63 (16.0)
SHAM-16-12N	1	3/4	1-3/8 (34.9)	2.38 (60.5)	0.63 (16.0)
SHAM-16-16N	1	1	1-3/8 (34.9)	2.57 (65.3)	0.88 (22.4)

Female Connectors



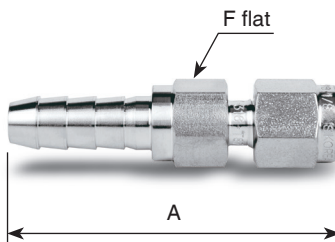
Ordering Number	End Connections		Dimensions, in. (mm)		
	Nominal Hose I.D	Female NPT	F Hex flat	A Length	Diameter
SHAF-2-2N	1/8	1/8	9/16 (14.2)	1.11 (28.2)	0.08 (2.0)
SHAF-2-4N	1/8	1/4	3/4 (19.0)	1.26 (32.0)	0.08 (2.0)
SHAF-3-2N	3/16	1/8	9/16 (14.2)	1.29 (32.8)	0.12 (3.0)
SHAF-3-4N	3/16	1/4	3/4 (19.0)	1.44 (36.6)	0.12 (3.0)
SHAF-4-2N	1/4	1/8	9/16 (14.2)	1.47 (37.3)	0.19 (4.8)
SHAF-4-4N	1/4	1/4	3/4 (19.0)	1.64 (41.7)	0.19 (4.8)
SHAF-4-6N	1/4	3/8	7/8 (22.2)	1.71 (43.4)	0.19 (4.8)
SHAF-5-4N	5/16	1/4	3/4 (19.0)	1.73 (43.9)	0.19 (4.8)
SHAF-5-6N	5/16	3/8	7/8 (22.2)	1.82 (46.2)	0.19 (4.8)
SHAF-6-4N	3/8	1/4	3/4 (19.0)	1.69 (42.9)	0.30 (7.6)
SHAF-6-6N	3/8	3/8	7/8 (22.2)	1.78 (45.2)	0.30 (7.6)
SHAF-6-8N	3/8	1/2	1-1/16 (26.9)	2.03 (51.6)	0.30 (7.6)
SHAF-8-8N	1/2	1/2	1-1/16 (26.9)	2.13 (54.1)	0.38 (9.7)

S-LOK Tube Adapters



Ordering Number	End Connections		Dimensions, in. (mm)		
	Nominal Hose I.D	Tube O.D	F Hex flat	A Length	Min. Inside Diameter
SHAT-2-2T	1/8	1/8	5/16 (7.9)	1.36 (34.5)	0.08 (2.0)
SHAT-2-4T	1/8	1/4	3/8 (9.5)	1.45 (36.8)	0.08 (2.0)
SHAT-4-4T	1/4	1/4	7/16 (11.1)	1.85 (47.0)	0.19 (4.8)
SHAT-4-6T	1/4	3/8	7/16 (11.1)	1.91 (48.5)	0.19 (4.8)
SHAT-5-4T	5/16	1/4	7/16 (11.1)	1.93 (49.0)	0.19 (4.8)
SHAT-6-4T	3/8	1/4	9/16 (14.2)	1.93 (49.0)	0.17 (4.3)
SHAT-6-6T	3/8	3/8	9/16 (14.2)	1.99 (50.5)	0.27 (6.9)
SHAT-6-8T	3/8	1/2	5/8 (15.8)	2.25 (57.2)	0.30 (7.6)
SHAT-8-6T	1/2	3/8	11/16 (17.4)	2.06 (52.3)	0.27 (6.9)
SHAT-8-8T	1/2	1/2	11/16 (17.4)	2.32 (58.9)	0.38 (9.7)
SHAT-12-12T	3/4	3/4	1-3/16 (30.1)	2.49 (63.3)	0.58 (14.7)
SHAT-16-16T	1	1	1-3/8 (34.9)	3.05 (77.5)	0.80 (20.3)

S-LOK Tube Fitting Connectors



Ordering Number	End Connections		Dimensions, in. (mm)		
	Nominal Hose I.D	Tube O.D	F Hex flat	A Length	Min. Inside Diameter
SHAS-2-2T	1/8	1/8	7/16 (11.1)	1.42 (36.1)	0.08 (2.0)
SHAS-4-2T	1/4	1/8	7/16 (11.1)	1.81 (46.0)	0.09 (2.3)
SHAS-4-4T	1/4	1/4	9/16 (14.2)	1.92 (48.8)	0.19 (4.8)
SHAS-6-4T	3/8	1/4	9/16 (14.2)	1.99 (50.6)	0.19 (4.8)
SHAS-6-6T	3/8	3/8	3/4 (19.0)	2.06 (52.3)	0.28 (7.1)
SHAS-8-8T	1/2	1/2	7/8 (22.2)	2.24 (56.9)	0.38 (9.7)

Push-On Hose Fittings

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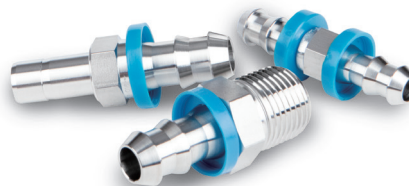
09



Catalogue No. S-LOK Mar.2024

Features

- No use special tools can quick installation.
- Easy and fast.
- Possible use hose size range of 1/4 to 1 in.
- All push on-hose fittings are reusable.



How to Assembly



1. Trim the hose end for leave flat and clean hose end.



2. Insert fitting first barb into hose.
(use light oil or soapy water lubricate help to ease assembly)



3. Grip the hose or fitting and push on hose until hose seats into blue finishing cap.
4. Completed Assembly, ensure that the hose is completely inserted.

How to Disassembly

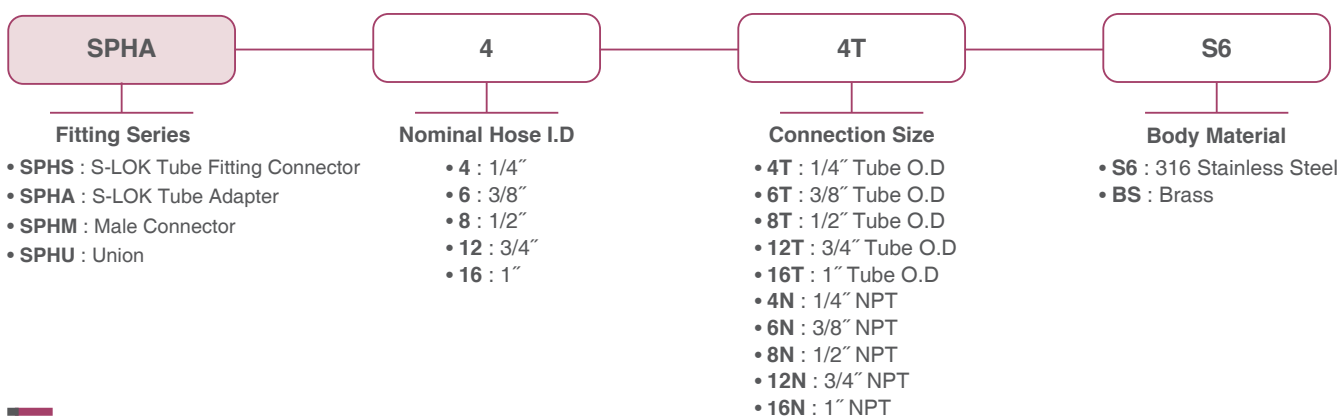


1. Cut hose lengthwise from blue finishing cap to end of barb.

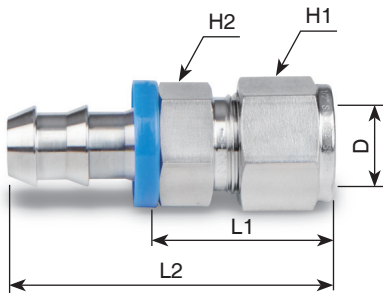


2. Bend hose to expose barbs, then remove hose by quickly pulling.

Ordering Information

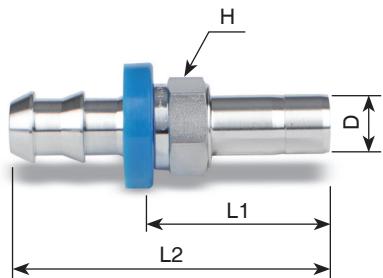


S-LOK Tube Fitting Connectors



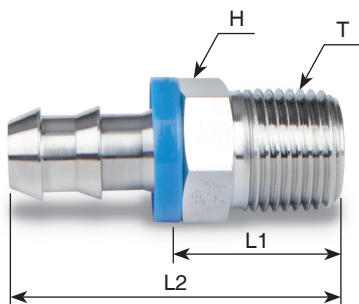
Basic Ordering Number	Nominal Hose I.D	Tube O.D D	HEX. H ₁	HEX. H ₂	Dimension, mm		
					L ₁	L ₂	MIN.ID
SPHS-4-4T	1/4"	1/4"	9/16"	1/2"	26.7	46.5	4.3
SPHS-6-6T	3/8"	3/8"	11/16"	5/8"	29.4	51.5	6.9
SPHS-8-8T	1/2"	1/2"	7/8"	13/16"	33.2	60.1	9.1
SPHS-12-12T	3/4"	3/4"	1-1/8"	1-1/16"	34.5	76.7	14.7
SPHS-16-16T	3/4"	3/4"	1-1/2"	1-3/8"	41.0	88.0	20.3

S-LOK Tube Adapters



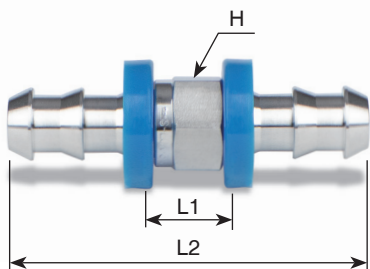
Basic Ordering Number	Nominal Hose I.D	Tube O.D D	HEX. H	Dimension, mm		
				L ₁	L ₂	MIN.ID
SPHA-4-4T	1/4"	1/4"	7/16"	25.2	45.0	4.3
SPHA-6-6T	3/8"	3/8"	9/16"	29.5	51.6	6.9
SPHA-8-8T	1/2"	1/2"	11/16"	35.8	62.7	9.1
SPHA-12-12T	3/4"	3/4"	15/16"	37.6	79.8	14.7
SPHA-16-16T	1"	1"	1-1/4"	46.7	93.7	20.3

Male Connectors



Basic Ordering Number	Nominal Hose I.D	Thread T (NPT)	HEX. H	Dimension, mm		
				L ₁	L ₂	MIN.ID
SPHM-4-4N	1/4"	1/4"	9/16"	22.9	42.7	4.3
SPHM-6-4N	3/8"	1/4"	9/16"	22.9	45.0	6.9
SPHM-6-6N	3/8"	3/8"	11/16"	24.6	46.7	6.9
SPHM-8-8N	1/2"	1/2"	7/8"	28.7	55.6	9.1
SPHM-12-12N	3/4"	3/4"	1-1/16"	33.8	76.0	14.7
SPHM-16-16N	1"	1"	1-3/8"	38.6	85.6	20.3

Unions



Basic Ordering Number	Nominal Hose I.D	HEX. H	Dimension, mm		
			L ₁	L ₂	MIN.ID
SPHU-4-4	1/4"	7/16"	10.7	50.3	4.3
SPHU-6-6	3/8"	9/16"	13.2	57.4	6.9
SPHU-8-8	1/2"	11/16"	13.7	67.5	9.1
SPHU-12-12	3/4"	15/16"	14.3	98.7	14.7
SPHU-16-16	1"	1-1/4"	16.5	110.5	20.3

S-LOK[®]

Ultra Vacuum Fittings

The best partner for value creation
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10



Catalogue No. S-LOK Mar.2024

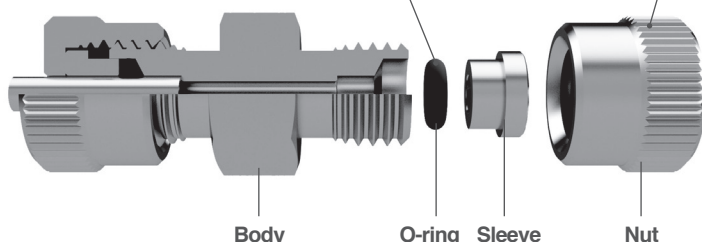
Features

- Sealing performance is maintained with repeated separation operation.
- All Stainless Steel 316 and FKM O-Ring
- Temperature Rating : -31 to 204°C (-25 to 400°F)
- The helium leak tested to a maximum leak rate of 4×10^{-9} atm. cc/s at ambient temperature.



O-ring seals Glass, plastic and metal tubing.

Knurled nut for easy assembly with finger-tight.



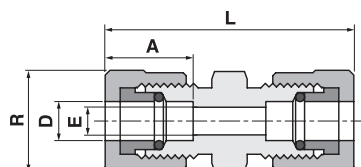
Ordering Information and Dimensions

- Dimensions are for reference only and are subject to change.
- The E dimension refers to the smallest nominal inside diameter of the part.

UTMC	8	8N	S6
Fitting Series	Ultra Vacuum Fitting Size	Connection Size	Body Material
• UTU : Union • UTL : Union Elbow • UTT : Union Tee • UTUR : Reducing Union • UTMC : Male Connector • UTA : S-LOK Tube Adapter • UTUS : S-LOK Fitting Connector • UTN : Nut	• 1 : 1/16" • 2 : 1/8" • 4 : 1/4" • 6 : 3/8" • 8 : 1/2" • 10 : 5/8" • 12 : 3/4" • 16 : 1" • 24 : 1-1/2"	• 4 : 1/4" • 6 : 3/8" • 8 : 1/2" • 10 : 5/8" • 12 : 3/4" • 16 : 1" • 20 : 1-1/4" • 24 : 1-1/2" • 2N : 1/8" NPT • 4N : 1/4" NPT • 6N : 3/8" NPT • 8N : 1/2" NPT • 12N : 3/4" NPT • 16N : 1" NPT	• S6 : 316 Stainless Steel

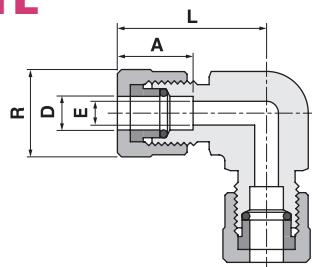
Union

UTU



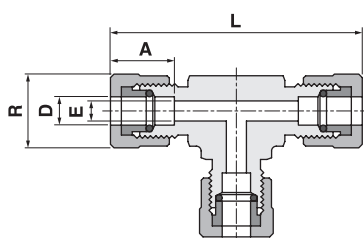
Part No.	Tube O.D		Dimensions mm			
	D		E	R	A	L
	in.	mm				
UTU-1	1/16	1.59	1.3	12.0	10.7	31.2
UTU-2	1/8	3.17	2.3	14.0	12.2	38.0
UTU-4	1/4	6.35	4.6	17.5	14.9	41.9
UTU-6	3/8	9.52	7.1	20.0	17.8	46.5
UTU-8	1/2	12.70	10.2	23.5	20.5	47.0
UTU-10	5/8	15.87	12.7	27.5	22.6	49.3
UTU-12	3/4	19.05	15.7	31.5	25.3	55.1
UTU-16	1	25.40	22.1	39.5	27.6	57.7
UTU-24	1-1/2	38.10	35.1	52.0	27.6	60.7

Union Elbow

UTL

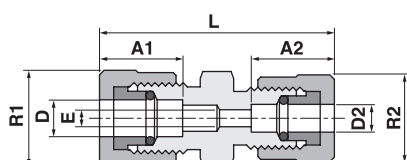
Part No.	Tube O.D		Dimensions mm			
	D		E	R	A	L
	in.	mm				
UTL-4	1/4	6.35	4.6	17.5	14.9	29.2
UTL-6	3/8	9.52	7.1	20.0	17.8	34.8
UTL-8	1/2	12.70	10.2	23.5	20.5	34.8

Union Tee

UTT

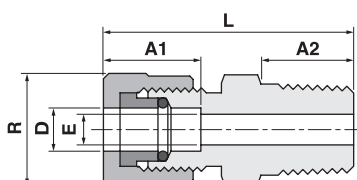
Part No.	Tube O.D		Dimensions mm				
	D		E	R	A	I	L
	in.	mm					
UTT-2	1/8	3.17	2.3	14.0	12.2	26.4	52.8
UTT-4	1/4	6.35	4.6	17.5	14.9	29.0	58.0
UTT-6	3/8	9.52	7.1	20.0	17.8	34.8	69.6
UTT-8	1/2	12.70	10.2	23.5	20.5	34.8	69.6
UTT-12	3/4	19.05	15.7	31.5	25.3	43.3	86.9
UTT-16	1	25.40	22.1	39.5	27.6	47.8	95.5

Reducing Union

UTUR

Part No.	Tube O.D				Dimensions mm					
	D ₁		D ₂		E	R ₁	R ₂	A ₁	A ₂	L
	in.	mm	in.	mm						
UTUR-6-4	3/8	9.52	1/4	6.35	4.6	20.0	17.5	17.8	14.9	45.5
UTUR-8-4	1/2	12.70	1/4	6.35	4.6	23.5	17.5	20.5	14.9	48.1

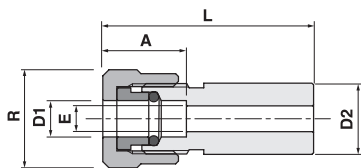
Male Connector

UTMC

Part No.	Tube O.D		T	Dimensions mm				
	D			E	R	A ₁	A ₂	L
	in.	mm						
UTMC-1-2N	1/16	1.59	1/8	1.3	12.0	10.7	10.0	30.4
UTMC-2-2N	1/8	3.17	1/8	2.3	14.0	12.2	10.0	32.6
UTMC-4-2N	1/4	6.35	1/8	4.6	17.5	14.9	10.0	35.6
UTMC-4-4N	1/4	6.35	1/4	4.6	17.5	14.9	14.0	39.1
UTMC-6-2N	3/8	9.52	1/8	4.6	20.0	17.8	10.0	36.8
UTMC-6-4N	3/8	9.52	1/4	7.1	20.0	17.8	14.0	41.4
UTMC-8-6N	1/2	12.70	3/8	10.2	23.5	20.5	15.0	42.2
UTMC-8-8N	1/2	12.70	1/2	10.2	23.5	20.5	19.0	47.0
UTMC-12-12N	3/4	19.05	3/4	15.7	31.5	25.3	19.0	51.3
UTMC-16-16N	1	25.4	1	22.1	39.5	27.6	24.0	57.2

S-Lok Tube Adapter

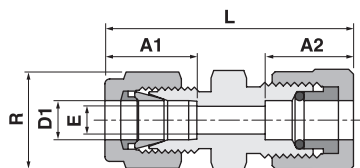
UTA



Part No.	Tube O.D				Dimensions mm			
	D ₁		D ₂		E	R	A	L
	in.	mm	in.	mm				
UTA-1-4	1/16	1.59	1/4	6.35	1.3	12.0	10.7	29.0
UTA-2-4	1/8	3.17	1/4	6.35	2.3	14.0	12.2	31.5
UTA-2-6	1/8	3.17	3/8	9.52	2.3	14.0	12.2	31.8
UTA-4-4	1/4	6.35	1/4	6.35	4.6	17.5	14.9	34.0
UTA-4-6	1/4	6.35	3/8	9.52	4.6	17.5	14.9	34.0
UTA-4-8	1/4	6.35	1/2	12.7	4.6	17.5	14.9	37.6
UTA-6-6	3/8	9.52	3/8	9.52	7.1	20.0	17.8	37.6
UTA-6-8	3/8	9.52	1/2	12.7	7.1	20.0	17.8	40.4
UTA-8-10	1/2	12.7	5/8	15.87	10.2	23.5	20.5	41.7
UTA-8-12	1/2	12.7	3/4	19.05	10.2	23.5	20.5	43.2
UTA-12-16	3/4	19.05	1	25.4	15.7	31.5	25.3	45.7
UTA-16-20	1	25.4	1 1/4	31.57	22.1	39.5	27.6	45.8
UTA-24-24	1 1/2	38.1	1 1/2	38.1	35.1	52.0	27.6	51.8

S-Lok Tube Fitting Connector

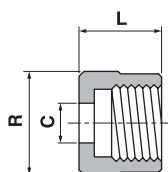
UTUS



Part No.	Tube O.D		Dimensions mm				
	D		E	R	A ₁	A ₂	L
	in.	mm					
UTUS-4	1/4	6.35	4.6	17.5	14.9	15.2	42.4
UTUS-6	3/8	9.52	7.1	20.0	17.8	16.9	46.2
UTUS-8	1/2	12.7	10.2	23.5	20.5	22.9	49.8

Nut

UTN



Part No.	Tube O.D		Thread Size	Dimensions mm (in.)		
	D			C	R	L
	in.	mm				
UTN-1	1/16	1.59	1/4-20 UNC	1.7	12.0	10.6
UTN-2	1/8	3.17	3/8-20 UN	3.3	14.0	10.6
UTN-4	1/4	6.35	1/2-20 UNF	6.5	17.5	13.5
UTN-6	3/8	9.52	5/8-20 UN	9.6	20.0	15.5
UTN-8	1/2	12.70	3/4-20 UNEF	12.8	23.5	15.7
UTN-10	5/8	15.87	15/16-20 UNEF	16.0	27.5	15.7
UTN-12	3/4	19.05	11/16-20 UN	19.2	31.5	18.3
UTN-16	1	25.40	13/8-20 UN	25.5	39.5	18.3
UTN-24	11/2	38.10	17/8-20 UN	38.2	52.0	18.3

Forged Fittings

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11



Catalogue No. S-LOK Mar.2024

90° Elbow

SWLA



266

45° Elbow

SWLB



266

Tee

SWTA



267

Cross

SWXA



267

Full Coupling

SWFC



268

Half Coupling

SWHC



268

Cap

SWCA



269

Boss

SWBA



269

Union

SWUA



270

Union

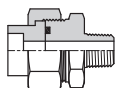
SWUAO



270

Male Connector

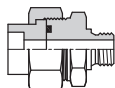
SWMC-R



271

Male Connector

SWMC-G



271

Reducing Insert

SWRM



272

Reducing Coupling

SWRC



273

Boss Type R

SWBR



273

90° Elbow

SLA



274

45° Elbow

SLB



274

Tee

STA



275

Cross

SXA



275

Full Coupling

SFC



276

Half Coupling

SHC



276

Cap

SCA



276

Hex Head Pulg

SPB



277

Squire Pulg

SPD



277

Round Plug

SPE



277

Reducing Coupling

SRC



277

Hex Nipple

SNA



278

Reducing Nipple

SNR



278



Hex Socket

SSA



278

Hex Bushing

SHB



279

Boss

SBA



279

Boss

SBR



279

Union

SUA



280

Union

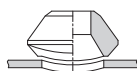
SUAO



280

Weldolet

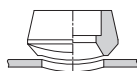
SWLT



281

Sockolet

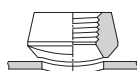
SCLT



282

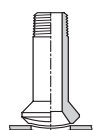
Thredolet

STLT



282

Nippolet



283

Swage Nipple



283

SOCKET WELDING & THREADED FITTINGS

Pressure Ratings

These fittings shall be designated as pressure class 2000, 3000 And 6000 fittings for threading and pressure class 3000,6000 and 9000 for socket-welding. This designation identifies the fittings with their ratings as shown as follow, Table 1.

Table 1:Correlation of Fittings Class With Schedule Number of Wall Designation of Pipe for Calculation of Ratings.

Pressure Class Designation of Fitting	Type of Fitting	Pipe Used for Rating Basic	
		Schedule No.	Wall Designation
2000 lb	Threaded	80	X-S
3000 lb	Threaded	160	-
6000 lb	Threaded	-	XX-S
3000 lb	Socket-Welding	80	X-S
6000 lb	Socket-Welding	160	-
9000 lb	Socket-Welding	-	XX-S

- This table is not intended to restrict the use of pipe of thinner or thicker wall with fittings.
- Pipe actually used may be thinner or thicker in nominal wall than that shown in Table 1.
- When thinner pipe is used its strength may govern the rating.
- When thicker pipe is used (e.g., for mechanical strength) the strength of the fitting governs the rating.

Table 2 : Nominal wall thickness of Schedule 160 and Double Extra Strong Pipe.

NPS.	Schedule 160		XX-S	
	in	mm	in	mm
1/8	0.124	3.15	0.190	4.83
1/4	0.145	3.68	0.230	6.05
3/8	0.158	4.01	0.252	6.40

Table 3 : Pressure/ Temperature Ratings Non-shock Working Pressure in Pounds per Square Inch

Service Temperature Degree°F	2000lb Threaded Fittings					3000lb Socket Welding and Threaded Fittings					6000lb Socket Welding and Threaded Fittings				
	Carbon steel	F304	F316	F22	F5	Carbon steel	F304	F316	F22	F5	Carbon steel	F304	F316	F22	F5
100	2000	1715	2000	2000	2000	3000	2570	3000	3000	3000	6000	5145	6000	6000	6000
150	1970	1615	1970	1970	1970	2950	2425	2950	2950	2950	5915	4855	5915	5915	5915
200	1940	1520	1940	1940	1940	2915	2280	2915	2915	2915	5830	4565	5830	5830	5830
250	1915	1445	1915	1915	1915	2875	2170	2975	2975	2975	5750	4340	5750	5750	5750
300	1975	1370	1896	1895	1895	2845	2055	2845	2845	2845	5690	4115	5690	5690	5690
350	1875	1310	1875	1875	1875	2810	1965	2810	2810	2810	5625	3930	5690	5625	5625
400	1850	1245	1850	1850	1850	2775	1870	2775	2775	2775	5550	3745	5550	5550	5550
450	1810	1195	1810	1710	1810	2715	1790	2715	2715	2715	5430	3585	5430	5430	5430
500	1735	1140	1735	1635	1735	2605	1715	2605	2605	2605	5210	3430	5210	5210	5210
550	1640	1100	1640	1540	1640	2460	1650	2460	2460	2460	4925	3305	4925	4925	4925
600	1540	1060	1540	1440	1540	2310	1590	2310	2310	2310	4620	3180	4620	4620	4620
650	1430	1020	1430	1330	1430	2150	1535	2150	2150	2150	4300	3070	4300	4300	4300
700	1305	985	1370	1240	1340	1960	1480	2055	2010	2010	3920	2960	4110	4025	4025
750	1180	950	1305	1145	1245	1775	1425	1960	1870	1870	3550	2850	3920	3745	3745
800	1015	915	1240	1055	1155	1525	1370	1865	1735	1735	3050	2745	3730	3470	3470
850	830	880	1180	1060	1060	1250	1330	1770	1595	1595	2500	2660	3540	3190	3190
900	615	860	1115	970	970	925	1290	1675	1455	1455	1885	2580	3350	2915	2915
950	425	845	1055	880	880	640	1270	1580	1320	1320	1295	2540	3165	2640	2640
1000	235	830	990	740	695	350	1250	1485	1115	1240	715	2500	2975	2230	2085

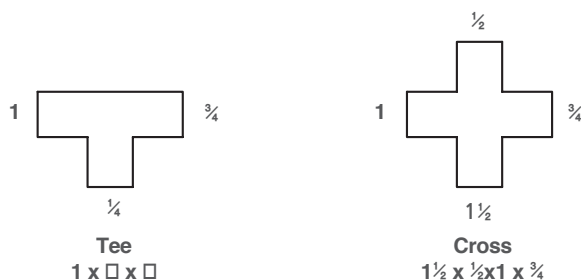
Size Identification

The size of a fitting is identified by the nominal pipe size.

For reducing fittings, the size of the largest run opening is to be given first, followed by the size of the opening opposite of the same run.

The branch size of a Tee is given last.

Where the case is a Cross, the largest side-outlet is thirdly given, then the opening opposite.



Threads

- Unless otherwise specified in inquiry, all threaded fittings are supplied with NPT threads (ANSI B2.1 American Standard Taper Pipe Thread) for reference, other available threads are:

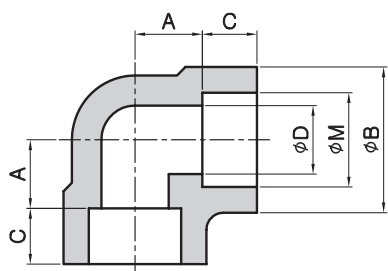
- ISO/R7, Pipe Threads for Gas List Tubes and Screwed Fittings where Pressure-tight Joints are made on the threads (BS 2.1 & JIS B0203PT Thread).

- API 5B, Line Pipe Threads.

- KSB0222 Taper Pipe Threads

90° Elbow

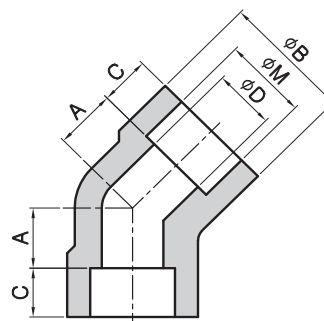
SWLA



Part No.	Size	M	B	D	A	C	Unit Weight (kg)
3000 lb							
SWLA80-02	¼	See Note (1) To be specified by purchaser	23	9.4	11.1	10	0.132
SWLA80-03	⅜		26.5	12.7	13.4	10	0.113
SWLA80-04	½		34.0	16.1	16.0	13	0.226
SWLA80-06	¾		38.5	21.2	20.0	16	0.312
SWLA80-08	1		46.5	27.0	23.0	16	0.596
SWLA80-10	1¼		56.5	35.4	28.0	18	0.709
SWLA80-12	1½		63.5	41.2	33.0	20	0.850
SWLA80-16	2		76.0	52.7	40.0	22	1.474
SWLA80-20	2½		92.0	62.7	42.0	24	2.460
SWLA80-24	3		110.0	78.0	57.1	31.5	4.650
SWLA80-32	4		146.0	102.0	70.0	45	9.410
6000 lb							
SWLA160-04	½	See Note (1)	38.5	12.0	20.0	16	0.425
SWLA160-06	¾		46.5	15.8	23.0	16	0.652
SWLA160-08	1		56.5	21.0	28.0	18	1.020
SWLA160-10	1¼		63.5	29.7	33.0	20	1.446
SWLA160-12	1½		76.0	34.2	40.0	22	2.380
SWLA160-16	2		92.0	43.1	42.0	24	3.760
SWLA160-20	2½		110.0	54.0	57.1	24	6.120
SWLA160-24	3		121.0	67.7	66.0	31.5	8.760
SWLA160-32	4		152.0	87.0	70.0	45	14.300
9000 lb							
SWLAXXS-04	½	See Note (1)	46.5	6.4	23.0	16	0.510
SWLAXXS-06	¾		56.5	11.0	28.0	16	0.782
SWLAXXS-08	1		63.5	15.2	33.0	18	1.224
SWLAXXS-10	1¼		76.0	22.7	40.0	20	1.807
SWLAXXS-12	1½		92.0	27.9	42.0	22	2.975
SWLAXXS-16	2		110.0	38.1	54.0	24	4.700
SWLAXXS-20	2½		121.0	45.0	66.0	24	10.512
SWLAXXS-24	3		146.0	58.4	70.0	31.5	13.020

45° Elbow

SWLB

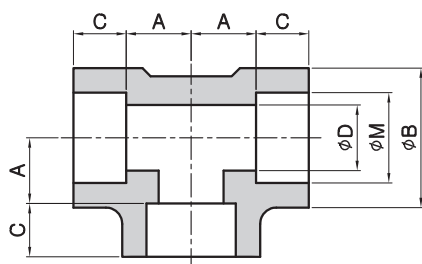


Part No.	Size	M	B	D	A	C	Unit Weight (kg)
3000 lb							
SWLB80-02	¼	See Note (1) To be specified by purchaser	23	9.4	7.9	10	0.093
SWLB80-03	⅜		26.5	12.7	7.9	10	0.142
SWLB80-04	½		34.0	16.1	13.0	13	0.264
SWLB80-06	¾		38.5	21.2	13.0	14	0.397
SWLB80-08	1		46.5	27.0	14.0	16	0.624
SWLB80-10	1¼		56.5	35.4	18.0	18	0.907
SWLB80-12	1½		63.5	41.2	22.0	20	0.782
SWLB80-16	2		76.0	52.7	24.0	22	1.265
SWLB80-20	2½		92.0	62.7	29.0	24	3.062
SWLB80-24	3		110.0	78.0	34.0	31.5	4.763
SWLB80-32	4		146.0	102.0	42.0	45	8.250
6000 lb							
SWLB160-04	½	See Note (1)	38.5	12.0	13	16	0.397
SWLB160-06	¾		46.5	15.8	14	16	0.595
SWLB160-08	1		56.5	21.0	22	18	0.935
SWLB160-10	1 ¼		63.5	29.7	22	20	1.157
SWLB160-12	1½		76.0	34.2	24	22	1.982
SWLB160-16	2		92.0	43.1	29	24	4.000
SWLB160-20	2½		110.0	54.0	34	24	5.875
SWLB160-24	3		121.0	67.7	34	31.5	6.509
SWLB160-32	4		152.0	87.0	42	45	12.360
9000 lb							
SWLBXXS-04	½	See Note (1)	46.5	6.4	14	16	0.875
SWLBXXS-06	¾		56.5	11.0	22	16	1.369
SWLBXXS-08	1		63.5	15.2	22	18	1.725
SWLBXXS-10	1¼		76.0	22.7	24	20	2.931
SWLBXXS-12	1½		92.0	27.9	29	22	5.062
SWLBXXS-16	2		110.0	38.1	34	24	6.400
SWLBXXS-20	2½		121.0	45.0	34	24	7.925
SWLBXXS-24	3		146.0	58.4	42	31.5	11.569

(1) For the 'Bore'(M) other than standard pipe outside diameter.
-Dimensions are in millimeters.
-Dimensional Tolerances See ANSI B16.11 or JIS B2316

Tee

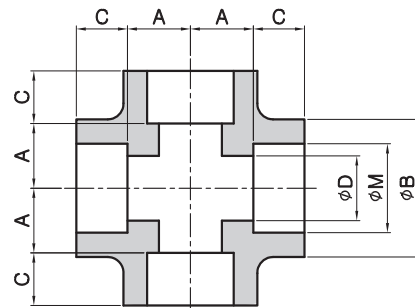
SWTA



Part No.	Size	M	B	D	A	C	Unit Weight (kg)
3000 lb							
SWTA80-02	¼	See Note (1) To be specified by purchaser	23	9.4	11.1	10	0.161
SWTA80-03	⅜		26.5	12.7	13.4	10	0.142
SWTA80-04	½		34.0	16.1	16.0	13	0.170
SWTA80-06	¾		38.5	21.2	20.0	16	0.397
SWTA80-08	1		46.5	27.0	23.0	16	0.624
SWTA80-10	1¼		56.5	35.4	28.0	18	0.907
SWTA80-12	1½		63.5	41.2	33.0	20	1.134
SWTA80-16	2		76.0	52.7	40.0	22	1.701
SWTA80-20	2½		92.0	62.7	42.0	24	3.424
SWTA80-24	3		110.0	78.0	57.1	31.5	5.670
SWTA80-32	4		146.0	102.0	70.0	45	12.247
6000 lb							
SWTA160-04	½	See Note (1)	38.5	12.0	20.0	16	0.623
SWTA160-06	¾		46.5	15.8	23.0	16	0.907
SWTA160-08	1		56.5	21.0	28.0	18	1.503
SWTA160-10	1¼		63.5	29.7	33.0	20	1.701
SWTA160-12	1½		76.0	34.2	40.0	22	2.948
SWTA160-16	2		92.0	43.1	42.0	24	3.702
SWTA160-20	2½		110.0	54.0	57.1	24	8.723
SWTA160-24	3		121.0	67.7	66.0	31.5	10.660
SWTA160-32	4		152.0	87.0	70.0	45	19.020
9000 lb							
SWTAXXS-04	½	See Note (1)	46.5	6.4	23.0	16	0.779
SWTAXXS-06	¾		56.5	11.0	28.0	16	1.333
SWTAXXS-08	1		63.5	15.2	33.0	18	1.879
SWTAXXS-10	1¼		76.0	22.7	40.0	20	2.126
SWTAXXS-12	1½		92.0	27.9	42.0	22	3.685
SWTAXXS-16	2		110.0	38.1	54.0	24	4.627
SWTAXXS-20	2½		121.0	45.0	66.0	24	10.903
SWTAXXS-24	3		146.0	58.4	70.0	31.5	13.325

Cross

SWXA



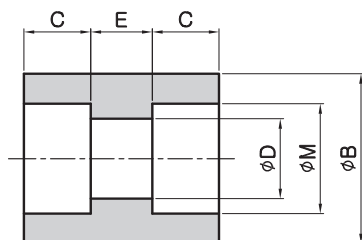
Part No.	Size	M	B	D	A	C	Unit Weight (kg)
3000 lb							
SWXA80-02	¼	See Note (1) To be specified by purchaser	23	9.4	9.4	10	0.182
SWXA80-03	⅜		26.5	12.7	12.7	10	0.170
SWXA80-04	½		34.0	16.1	16.1	13	0.368
SWXA80-06	¾		38.5	21.2	21.2	16	0.519
SWXA80-08	1		46.5	27.0	27.0	16	0.680
SWXA80-10	1¼		56.5	35.4	35.4	18	1.020
SWXA80-12	1½		63.5	41.2	41.2	20	1.389
SWXA80-16	2		76.0	52.7	52.7	22	2.326
SWXA80-20	2½		92.0	62.7	62.7	24	7.484
SWXA80-24	3		110.0	78.0	78.0	31.5	10.432
SWXA80-32	4		146.0	102.0	102.0	45	18.144
6000 lb							
SWXA160-04	½	See Note (1)	38.5	12.0	20.0	16	0.660
SWXA160-06	¾		46.5	15.8	23.0	16	1.120
SWXA160-08	1		56.5	21.0	28.0	18	1.730
SWXA160-10	1¼		63.5	29.7	33.0	20	2.381
SWXA160-12	1½		76.0	34.2	40.0	22	3.750
SWXA160-16	2		92.0	43.1	42.0	24	7.860
SWXA160-20	2½		110.0	54.0	57.1	24	10.600
SWXA160-24	3		121.0	67.7	66.0	31.5	13.600
SWXA160-32	4		152.0	87.0	70.0	45	26.000
9000 lb							
SWXAXXS-04	½	See Note (1)	46.5	6.4	23.0	16	1.615
SWXAXXS-06	¾		56.5	11.0	28.0	16	2.113
SWXAXXS-08	1		63.5	15.2	33.0	18	3.896
SWXAXXS-10	1¼		76.0	22.7	40.0	20	6.298
SWXAXXS-12	1½		92.0	27.9	42.0	22	9.280
SWXAXXS-16	2		110.0	38.1	54.0	24	18.741
SWXAXXS-20	2½		121.0	45.0	66.0	24	25.702
SWXAXXS-24	3		146.0	58.4	70.0	31.5	33.761

(1) For the 'Bore'(M) other than standard pipe outside diameter.

-Dimensions are in millimeters.

-Dimensional Tolerances See ANSI B16.11 or JIS B2316

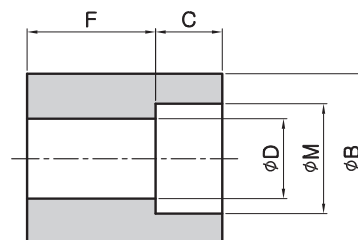
Full Coupling SWFC



Part No.	Size	M	B	D	C	E	Unit Weight (kg)
3000 lb							
SWFC80-02	¼	See Note (1) To be specified by purchaser	22.0	9.4	10	6.4	0.05
SWFC80-03	⅜		26.0	12.7	10	6.4	0.12
SWFC80-04	½		32.0	16.1	10	9.6	0.12
SWFC80-06	¾		38.0	21.2	13	9.6	0.18
SWFC80-08	1		46.0	27.0	13	12.7	0.26
SWFC80-10	1¼		55.0	35.4	13	12.7	0.35
SWFC80-12	1½		63.0	41.2	13	12.7	0.47
SWFC80-16	2		75.0	52.7	16	19.1	0.81
SWFC80-20	2½		95.0	65.3	16	19.1	1.25
SWFC80-24	3		110.0	78.0	16	19.1	1.53
SWFC80-32	4	140.0	102.0	19	19.1	2.91	
6000 lb							
SWFC160-04	½	See Note (1)	35.0	12.0	10	9.6	0.170
SWFC160-06	¾		42.0	15.8	13	9.6	0.249
SWFC160-08	1		50.0	21.0	13	12.7	0.420
SWFC160-10	1¼		60.0	29.7	13	12.7	0.525
SWFC160-12	1½		68.0	34.2	13	12.7	0.665
SWFC160-16	2		85.0	43.1	16	19.1	1.240
SWFC160-20	2½		100.0	54.0	16	19.1	1.640
SWFC160-24	3		114.3	67.7	16	19.1	2.746
SWFC160-32	4		160.0	87.0	19	19.1	4.679
9000 lb							
SWFCXXS-04	½	See Note (1)	42.0	6.4	10	9.6	0.270
SWFCXXS-06	¾		48.0	11.0	13	9.6	0.327
SWFCXXS-08	1		60.0	15.2	13	12.7	0.518
SWFCXXS-10	1¼		70.0	22.7	13	12.7	0.813
SWFCXXS-12	1½		75.0	27.9	13	12.7	0.940
SWFCXXS-16	2		90.0	38.1	16	19.1	1.553
SWFCXXS-20	2½		110.0	45.0	16	19.1	2.430
SWFCXXS-24	3		130.0	58.4	16	19.1	3.721
SWFCXXS-32	4		160.0	80.3	19	19.1	5.137

-Note
(1) For the 'Bore'(M) other than standard pipe outside diameter.
-Dimensions are in millimeters.
-Dimensional Tolerances See ANSI B16.11 or JIS B2316

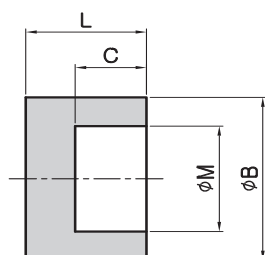
Half Coupling SWHC



Part No.	Size	M	B	D	C	F	Unit Weight (kg)
3000 lb							
SWHC80-02	¼	See Note (1) To be specified by purchaser	22.0	9.4	10	15.7	0.058
SWHC80-03	⅜		26.0	12.7	10	17.5	0.073
SWHC80-04	½		32.0	16.1	10	22.4	0.138
SWHC80-06	¾		38.0	21.2	13	23.9	0.203
SWHC80-08	1		46.0	27.0	13	28.4	0.313
SWHC80-10	1¼		55.0	35.4	13	30.2	0.431
SWHC80-12	1½		63.0	41.2	13	31.8	0.593
SWHC80-16	2		75.0	52.7	16	41.1	1.280
SWHC80-20	2½		95.0	62.7	16	42.9	1.490
SWHC80-24	3		110.0	78.0	16	44.5	2.202
SWHC80-32	4	140.0	102.0	19	47.7	4.250	
6000 lb							
SWHC160-04	½	See Note (1)	35.0	12.0	10	22.4	0.193
SWHC160-06	¾		42.0	15.8	13	23.9	0.284
SWHC160-08	1		50.0	21.0	13	28.4	0.488
SWHC160-10	1¼		60.0	29.7	13	30.2	0.583
SWHC160-12	1½		68.0	34.2	13	31.8	0.640
SWHC160-16	2		85.0	43.1	16	41.1	1.726
SWHC160-20	2½		100.0	54.0	16	42.9	2.247
SWHC160-24	3		114.3	67.7	16	44.5	3.412
SWHC160-32	4		160.0	87.0	19	47.7	5.730
9000 lb							
SWHCXXS-04	½	See Note (1)	46.5	6.4	14	16	0.875
SWHCXXS-06	¾		56.5	11.0	22	16	1.369
SWHCXXS-08	1		63.5	15.2	22	18	1.725
SWHCXXS-10	1¼		76.0	22.7	24	20	2.931
SWHCXXS-12	1½		92.0	27.9	29	22	5.062
SWHCXXS-16	2		110.0	38.1	34	24	6.400
SWHCXXS-20	2½		121.0	45.0	34	24	7.925
SWHCXXS-24	3		146.0	58.4	42	31.5	11.569
SWHCXXS-32	4		160.0	160.0	19	47.7	7.610

Caps

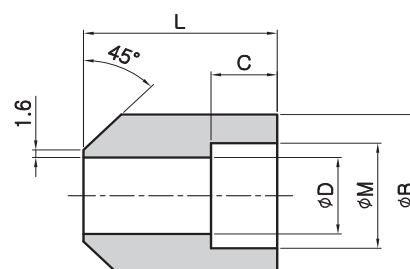
SWCA



Part No.	Size	M	B	C	L	Unit Weight (kg)
3000 lb						
SWCA80-02	¼	See Note (1) To be specified by purchaser	22.0	10	20	0.048
SWCA80-03	⅜		26.0	10	20	0.076
SWCA80-04	½		32.0	10	20	0.100
SWCA80-06	¾		38.0	13	25	0.182
SWCA80-08	1		46.0	13	27	0.241
SWCA80-10	1¼		55.0	13	30	0.350
SWCA80-12	1½		63.0	13	30	0.612
SWCA80-16	2		75.0	16	36	0.880
SWCA80-20	2½		95.0	16	42	1.520
SWCA80-24	3		110.0	16	46	2.208
SWCA80-32	4		140.0	19	55	4.417
6000 lb						
SWCA160-04	½	See Note (1)	35.0	10	26	0.055
SWCA160-06	¾		42.0	13	27	0.223
SWCA160-08	1		50.0	13	30	0.382
SWCA160-10	1¼		60.0	13	35	0.511
SWCA160-12	1½		68.0	13	36	0.735
SWCA160-16	2		85.0	16	39	1.289
SWCA160-20	2½		100.0	16	45	2.056
SWCA160-24	3		114.3	16	52	3.364
9000 lb						
SWCAXXS-04	½	See Note (1)	42.0	10	30	0.262
SWCAXXS-06	¾		48.0	13	30	0.320
SWCAXXS-08	1		60.0	13	33	0.520
SWCAXXS-10	1¼		70.0	13	40	1.256
SWCAXXS-12	1½		75.0	13	40	1.440
SWCAXXS-16	2		90.0	16	43	1.686
SWCAXXS-20	2½		110.0	16	50	2.986
SWCAXXS-24	3		130.0	16	58	4.666

Boss

SWBA



Part No.	Size	M	B	D	C	L	Unit Weight (kg)
3000 lb							
SWBA80-02	¼	See Note (1) To be specified by purchaser	22.0	9.4	10	30	0.09
SWBA80-03	⅜		26.0	12.7	10	30	0.14
SWBA80-04	½		32.0	16.1	10	33	0.24
SWBA80-06	¾		38.0	21.2	13	35	0.28
SWBA80-08	1		46.0	27.0	13	43	0.41
SWBA80-10	1¼		55.0	35.4	13	46	0.44
SWBA80-12	1½		63.0	41.2	13	50	0.63
SWBA80-16	2		75.0	52.7	16	57	1.09
6000 lb							
SWBA160-04	½	See Note (1)	35.0	12.0	10	33	0.45
SWBA160-06	¾		42.0	15.8	13	35	0.52
SWBA160-08	1		50.0	21.0	13	43	0.73
SWBA160-10	1¼		60.0	29.7	13	46	0.77
SWBA160-12	1½		68.0	34.2	13	50	0.12
SWBA160-16	2		85.0	43.1	16	57	1.82

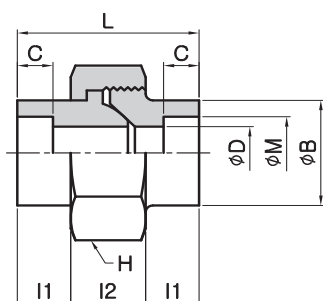
-Note

(1) For the 'Bore'(M) other than standard pipe outside diameter.

-Dimensions are in millimeters.

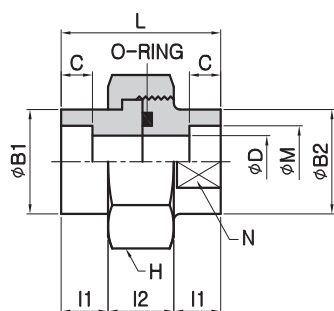
-Dimensional Tolerances See ANSI B16.11 or JIS B2316

R.J Union
SWUA



Part No.	Size	M	B	ℓ_1	ℓ_2	L	C	D	H	Unit Weight (kg)
3000 lb										
SWUA80-02	¼	See Note (1) To be specified by purchaser	21.0	11.5	18	41	10.0	9.4	35HEX	0.187
SWUA80-03	⅜		25.0	14.0	18	46	10.0	12.7	40HEX	0.245
SWUA80-04	½		32.0	15.0	21	51	10.0	16.1	46HEX	0.430
SWUA80-06	¾		40.0	17.0	23	57	13.0	21.2	58HEX	0.620
SWUA80-08	1		48.0	19.5	25	64	13.0	27.0	65HEX	1.030
SWUA80-10	1¼		55.0	22.5	27	72	13.0	35.4	76OCT	1.150
SWUA80-12	1½		63.5	24.0	30	78	13.0	41.2	83OCT	1.530
SWUA80-16	2		76.0	26.0	36	88	16.0	52.7	103OCT	3.050
SWUA80-20	2½		95.0	34.0	42	110	18.0	62.7	124OCT	5.140
SWUA80-24	3		116.0	37.5	45	120	22.5	78.0	142OCT	7.120
SWUA80-32	4	148.0	45.0	50	140	25.0	102.0	176OCT	12.400	
6000 lb										
SWUA160-04	¼	See Note (1)	40.0	17.0	23	57	13	12.0	56HEX	0.62
SWUA160-06	⅜		44.5	19.5	25	64	13	15.8	65HEX	0.94
SWUA160-08	1		51.0	22.5	27	72	13	21.0	74OCT	1.98
SWUA160-10	1¼		57.2	24.0	30	78	16	29.7	83OCT	1.41
SWUA160-12	1½		71.5	26.0	36	88	16	34.2	103OCT	2.75
SWUA160-16	2		90.0	34.0	42	110	16	43.1	124OCT	5.05
SWUA160-20	2½		105.0	35.0	45	120	18	54.0	150OCT	6.87
SWUA160-24	3		125.0	45.0	50	140	22	67.7	176OCT	10.85

O-Ring Union
SWUAO



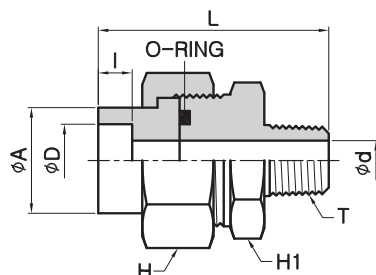
Part No.	Size	M	B1	B2	D	C	ℓ_1	ℓ_2	L	N	H	O-Ring	Unit Weight (kg)
3000 lb													
SWUAO80-02	¼	See Note (1) To be specified by purchaser	22	24	10	10	10	18	38	21	35HEX	P18	0.160
SWUAO80-03	⅜		27	30	12	10	10	18	38	26	41HEX	P20	0.228
SWUAO80-04	½		32	35	16	10	12	20	44	32	46HEX	G25	0.328
SWUAO80-06	¾		38	42	20	13	12	26	50	38	54HEX	G30	0.535
SWUAO80-08	1		47	52	25	13	15	26	56	46	63HEX	G35	0.786
SWUAO80-10	1¼		56	60	32	13	15	30	60	54	77HEX	G45	1.104
SWUAO80-12	1½		63	68	38	13	18	36	72	63	80OCT	G50	1.542
SWUAO80-16	2		76	82	48	17	18	36	72	77	95OCT	G65	2.080

(1) For the 'Bore'(M) other than standard pipe outside diameter.

-Dimensions are in millimeters.

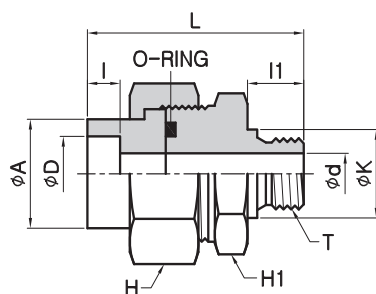
-Dimensional Tolerances See ANSI B16.11 or JIS B2316

Male Connector

SWMC-R


Part No.	Size	D	ℓ	d	A	L	H		H ₁		T (PT)	O-Ring
SWMC02-02R	¼	14.3	10	7	22	54	HEX	36	HEX	30	¼	P18
SWMC02-03R	¼	14.3	10	9	22	55	HEX	36	HEX	30	⅜	P18
SWMC03-03R	⅜	17.8	10	9	27	56	HEX	41	HEX	36	⅜	P20
SWMC03-04R	⅜	17.8	10	12	27	56	HEX	41	HEX	36	½	P20
SWMC04-04R	½	22.2	10	12	32	60	HEX	46	HEX	41	½	G25
SWMC04-06R	½	22.2	10	16	32	66	HEX	46	HEX	41	¾	G25
SWMC06-06R	¾	27.7	13	16	37	72	HEX	55	HEX	46	¾	G30
SWMC06-08R	¾	27.7	13	20	37	75	HEX	55	HEX	46	1	G30
SWMC08-08R	1	34.5	13	20	44	82	HEX	60	HEX	55	1	G35
SWMC08-10R	1	34.5	13	25	44	84	HEX	60	HEX	55	1¼	G35
SWMC10-10R	1¼	43.2	13	25	54	90	OCT	75	OCT	65	1¼	G45
SWMC10-12R	1¼	43.2	13	32	54	91	OCT	75	OCT	65	1½	G45
SWMC12-12R	1½	49.1	13	32	63	99	OCT	85	OCT	75	1½	G50
SWMC12-16R	1½	49.1	13	38	63	103	OCT	85	OCT	75	2	G50
SWMC16-16R	2	61.1	16	38	76	103	OCT	100	OCT	90	2	G65

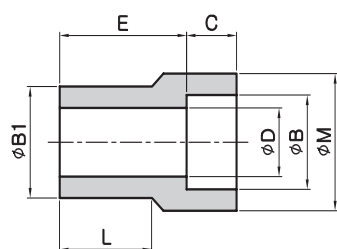
Male Connector

SWMC-G


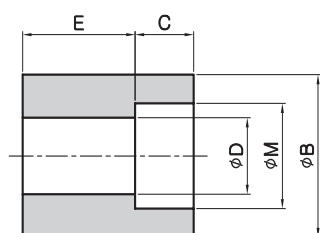
Part No.	Size	D	ℓ	ℓ_1	d	A	L	K	H		H ₁		T (PF)	O- Ring
SWMC02-02G	¼	14.3	10	12	7	22	54	18	HEX	36	HEX	30	¼	P18
SWMC02-03G	¼	14.3	10	12	9	22	55	21.5	HEX	36	HEX	30	⅜	P18
SWMC03-03G	⅜	17.8	10	12	9	27	56	21.5	HEX	41	HEX	36	⅜	P20
SWMC03-04G	⅜	17.8	10	14	12	27	56	25.5	HEX	41	HEX	36	½	P20
SWMC04-04G	½	22.2	10	14	12	32	60	25.5	HEX	46	HEX	41	½	G25
SWMC04-06G	½	22.2	10	16	16	32	66	31.5	HEX	46	HEX	41	¾	G25
SWMC06-06G	¾	27.7	13	16	16	37	72	31.5	HEX	55	HEX	46	¾	G30
SWMC06-08G	¾	27.7	13	18	20	37	75	38	HEX	55	HEX	46	1	G30
SWMC08-08G	1	34.5	13	18	20	44	82	38	HEX	60	HEX	55	1	G35
SWMC08-10G	1	34.5	13	20	25	44	84	48.5	HEX	60	HEX	55	1¼	G35
SWMC10-10G	1¼	43.2	13	20	25	54	90	48.5	OCT	75	OCT	65	1¼	G45
SWMC10-12G	1¼	43.2	13	22	32	54	91	53.5	OCT	75	OCT	65	1½	G45
SWMC12-12G	1½	49.1	13	22	32	63	99	53.5	OCT	85	OCT	75	1½	G50
SWMC12-16G	1½	49.1	13	24	38	63	103	66	OCT	85	OCT	75	2	G50
SWMC16-16G	2	61.1	16	24	38	76	103	66	OCT	100	OCT	90	2	G65

Reducing Insert

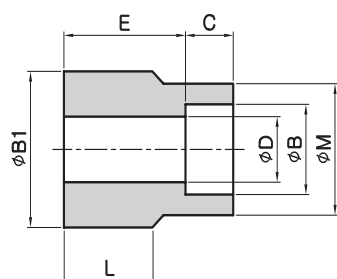
SWRM



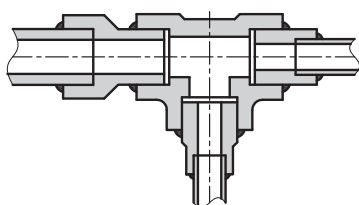
Type-1



Type-2



Type-3



Application of Reducing Insert

Part No.	Size	Type	M	B	B ₁	C(Min.)	E	L	D	Unit Weight (kg)
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3000 lb

SWRM0302-S80	⅜	¼	1	22.2	See Note (1) To be specified by purchaser	See Note (1) To be specified by purchaser	9.6	21	16	9.4	0.051
SWRM0402-S80	½	¼	2	-			9.6	15	-	9.4	0.052
SWRM0403-S80	½	⅜	1	25.4			9.6	24	20	12.7	0.086
SWRM0602-S80	¾	¼	3	-			9.6	19	7	9.4	0.109
SWRM0603-S80	¾	⅜	2	-			9.6	19	-	12.7	0.697
SWRM0604-S80	¾	½	1	31.8			9.6	26	22	16.1	0.146
SWRM0803-S80	1	⅜	3	25.4			9.6	22	7	12.7	0.161
SWRM0804-S80	1	½	2	-			9.6	22	-	16.1	0.183
SWRM0806-S80	1	¾	1	38.1			12.7	29	23	21.4	0.208
SWRM1004-S80	1¼	1	3	31.8			9.6	24	7	16.1	0.273
SWRM1006-S80	1¼	¾	2	-			12.7	24	-	21.4	0.286
SWRM1008-S80	1¼	½	1	46.0			12.7	32	24.5	27.2	0.436
SWRM1206-S80	1½	¾	3	38.1			12.7	26	8	21.4	0.348
SWRM1208-S80	1½	1	2	-			12.7	26	-	27.2	0.384
SWRM1210-S80	1½	1¼	1	55.0			12.7	35	27	35.5	0.463
SWRM1208-S80	1½	1	3	46.0			12.7	29	8	27.2	0.615
SWRM1610-S80	2	1¼	2	-			12.7	29	-	35.5	0.647
SWRM1612-S80	2	1½	1	65.0			12.7	37	29	41.2	0.661
SWRM2010-S80	2½	1¼	3	55.0			12.7	35	8	35.5	1.183
SWRM2012-S80	2½	1½	3	65.0			12.7	35	8	41.2	1.107
SWRM2016-S80	2½	2	1	76.0			15.9	39	30	52.7	1.200
SWRM2412-S80	3	1½	3	65.0			12.7	39	8	41.2	1.715
SWRM2416-S80	3	2	3	75.0			15.9	39	10	52.7	1.542
SWRM2420-S80	3	2½	1	95.0			15.9	51	33.5	65.9	1.825

6000 lb

SWRM0302-S160	⅜	¼	1	38.1	See Note (1) To be specified by purchaser	See Note (1) To be specified by purchaser	12.3	23	12.3	12.3	0.316
SWRM0402-S160	½	¼	1	38.1			12.3	24	12.3	12.3	0.354
SWRM0403-S160	½	⅜	1	46.0			16.2	26	16.2	16.2	0.526
SWRM0602-S160	¾	¼	2	-			12.3	-	12.3	12.3	0.415
SWRM0603-S160	¾	⅜	1	46.0			16.2	28	16.2	16.2	0.557
SWRM0604-S160	¾	½	1	55.0			21.2	28	21.2	21.2	0.765
SWRM0803-S160	1	⅜	2	-			16.2	-	16.2	16.2	0.619
SWRM0804-S160	1	½	1	55.0			21.2	28	21.2	21.2	0.723
SWRM0806-S160	1	⅜	1	62.0			29.9	32	29.9	29.9	0.957
SWRM1004-S160	1¼	½	3	-			21.2	8	21.2	21.2	1.026
SWRM1006-S160	1¼	¾	1	62.0			29.9	34	29.9	29.9	1.137
SWRM1008-S160	1¼	1	1	75.0			34.4	34	34.4	34.4	0.911
SWRM1206-S160	1½	¾	3	62.0			29.9	8	29.9	29.9	1.478
SWRM1208-S160	1½	1	2	-			34.4	-	34.4	34.4	1.881
SWRM1210-S160	1½	1¼	1	95.0			43.1	36	43.1	43.1	2.918
SWRM1208-S160	1½	1	3	75.0			34.4	8	34.4	34.4	2.370
SWRM1610-S160	2	1¼	2	95.0			43.1	-	43.1	43.1	3.313
SWRM1612-S160	2	1½	1	110.0			57.3	38	57.3	57.3	3.562

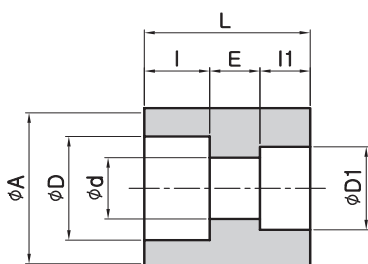
(1) For the 'Bore'(M) other than standard pipe outside diameter.

-Dimensions are in millimeters.

-Dimensional Tolerances See ANSI B16.11 or JIS B2316

Reducing Coupling

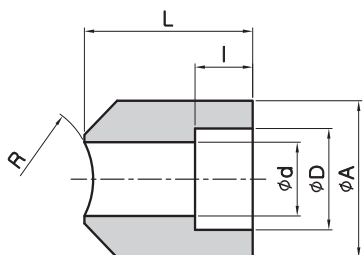
SWRC



Part No.	Size		D	D ₁	ℓ	ℓ ₁	d	A	E	L
3000 lb										
SWRC0302-S80	¾	¼	17.8	14.3	10	10	9.4	26	6.4	26.4
SWRC0402-S80	½	¼	22.2	14.3	10	10	9.4	32	9.5	29.5
SWRC0403-S80	½	⅜	22.2	17.8	10	10	12.7	32	9.5	29.5
SWRC0602-S80	¾	¼	27.7	14.3	13	10	9.4	38	9.5	32.5
SWRC0603-S80	¾	⅜	27.7	17.8	13	10	12.7	38	9.5	32.5
SWRC0604-S80	¾	½	27.7	22.2	13	10	16.1	38	9.5	32.5
SWRC0803-S80	1	⅜	34.5	17.8	13	10	12.7	46	12.7	35.7
SWRC0804-S80	1	½	34.5	22.2	13	10	16.1	46	12.7	35.7
SWRC0806-S80	1	¾	34.5	27.2	13	13	21.4	46	12.7	38.7
SWRC1004-S80	1¼	½	43.2	22.2	13	10	16.1	55	12.7	35.7
SWRC1006-S80	1¼	¾	43.2	27.7	13	13	21.4	55	12.7	38.7
SWRC1008-S80	1¼	1	43.2	34.5	13	13	27.2	55	12.7	38.7
SWRC1206-S80	1½	¾	49.1	27.7	13	13	21.4	63	12.7	38.7
SWRC1208-S80	1½	1	49.1	34.5	13	13	27.2	63	12.7	38.7
SWRC1210-S80	1½	1¼	49.1	43.2	13	13	35.5	63	12.7	38.7
SWRC1608-S80	2	1	61.1	34.5	16	13	27.2	75	19.1	48.1
SWRC1610-S80	2	1¼	61.1	43.2	16	13	35.5	75	19.1	48.1
SWRC1612-S80	2	1½	61.1	49.1	16	13	41.2	75	19.1	48.1
6000 lb										
SWRC0604-S160	¾	½	27.7	22.2	13	13	12.3	42	9.5	35.5
SWRC0804-S160	1	½	34.5	22.2	13	13	12.3	50	12.7	38.7
SWRC0806-S160	1	¾	34.5	27.7	13	13	16.2	50	12.7	38.7
SWRC1004-S160	1¼	½	43.2	22.2	13	13	12.3	60	12.7	38.7
SWRC1006-S160	1¼	¾	43.2	27.7	13	13	16.2	60	12.7	38.7
SWRC1008-S160	1¼	1	43.2	34.5	13	13	21.2	60	12.7	38.7
SWRC1206-S160	1½	¾	49.1	27.7	16	13	16.2	68	12.7	41.7
SWRC1208-S160	1½	1	49.1	34.5	16	13	21.2	68	12.7	41.7
SWRC1210-S160	1½	1¼	49.1	43.2	16	13	29.9	68	12.7	41.7
SWRC1608-S160	2	1	61.1	34.5	16	13	21.2	85	19.1	48.1
SWRC1610-S160	2	1¼	61.1	43.2	16	13	29.9	85	19.1	48.1
SWRC1612-S160	2	1½	61.1	49.1	16	16	34.4	85	19.1	51.1

Boss Type R

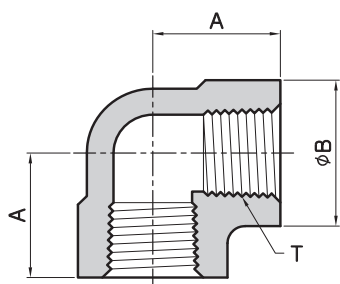
SWBR



Part No.	Size	D	ℓ	d	A	R	L
3000 lb							
SWBR02-S80	¾	14.3	10	9.4	22	25	30
SWBR03-S80	⅝	17.8	10	12.7	26	25	30
SWBR04-S80	½	22.2	10	16.1	32	30	33
SWBR06-S80	¾	27.7	13	21.4	38	30	35
SWBR08-S80	1	34.5	13	27.2	46	40	43
SWBR10-S80	1¼	43.2	13	35.5	55	45	46
SWBR12-S80	1½	49.1	13	41.2	63	55	50
SWBR16-S80	2	61.1	16	52.7	75	60	57
6000 lb							
SWBR04-S160	½	22.2	13	12.3	35	30	33
SWBR06-S160	¾	27.7	13	16.2	42	30	35
SWBR08-S160	1	34.5	13	21.2	55	40	43
SWBR10-S160	¾	43.2	13	29.9	60	45	46
SWBR12-S160	1	49.1	16	34.4	70	55	50
SWBR16-S160	1¼	61.1	16	43.1	85	60	57

90° Elbow

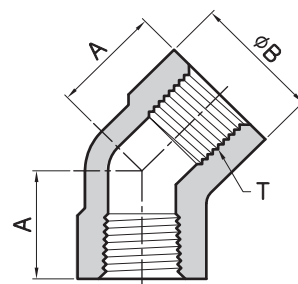
SLA



Part No.	Size T	B	A	Unit Weight (kg)
2000 lb				
SLA40-02	¼	23	25.4	0.13
SLA40-03	⅜	26.5	25.4	0.12
SLA40-04	½	34.0	28.5	0.23
SLA40-06	¾	38.5	33.5	0.36
SLA40-08	1	46.5	38.1	0.55
SLA40-10	1¼	56.5	44.5	0.95
SLA40-12	1½	63.5	50.8	1.12
SLA40-16	2	76.0	60.5	1.96
SLA40-20	2½	92.0	76.0	3.25
SLA40-24	3	110.0	86.0	5.64
SLA40-26	3½	121.0	95.5	6.92
SLA40-32	4	146.0	106.5	10.43
3000 lb				
SLA80-02	¼	26.5	25.4	0.120
SLA80-03	⅜	34.0	28.5	0.235
SLA80-04	½	38.5	33.5	0.390
SLA80-06	¾	46.5	38.1	0.570
SLA80-08	1	56.5	44.5	0.990
SLA80-10	1¼	63.5	50.8	1.260
SLA80-12	1½	76.0	60.5	2.125
SLA80-16	2	84.0	64.0	3.520
SLA80-20	2½	110.0	83.0	5.460
SLA80-24	3	121.0	95.5	8.000
SLA80-26	3½	146.0	106.5	11.230
SLA80-32	4	152.0	114.3	13.500
6000 lb				
SLA160-03	⅜	38.5	33.5	0.40
SLA160-04	½	46.5	38.5	0.68
SLA160-06	¾	56.5	44.5	1.13
SLA160-08	1	63.5	50.8	1.59
SLA160-10	1¼	76.0	60.5	2.60
SLA160-12	1½	84.0	64.0	4.32
SLA160-16	2	110.0	85.0	7.33
SLA160-20	2½	121.0	95.5	9.25
SLA160-24	3	146.0	106.5	12.05
SLA160-26	3½	152.0	114.3	14.30
SLA160-32	4	152.0	114.3	14.10

45° Elbow

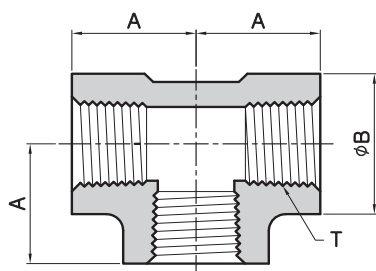
SLB



Part No.	Size T	B	A	Unit Weight (kg)
2000 lb				
SLB40-02	¼	23	19.1	0.16
SLB40-03	⅜	26.5	19.1	0.13
SLB40-04	½	34.0	26.0	0.25
SLB40-06	¾	38.5	28.6	0.32
SLB40-08	1	46.5	30.0	0.43
SLB40-10	1¼	56.5	33.3	0.75
SLB40-12	1½	63.5	42.0	1.06
SLB40-16	2	76.0	46.0	1.49
SLB40-20	2½	92.0	53.0	2.45
SLB40-24	3	110.0	64.0	4.00
SLB40-26	3½	121.0	64.0	5.12
SLB40-32	4	146.0	80.0	8.68
3000 lb				
SLB80-02	¼	26.5	19.1	0.16
SLB80-03	⅜	34.0	26.0	0.28
SLB80-04	½	38.5	28.6	0.38
SLB80-06	¾	46.5	30.0	0.51
SLB80-08	1	56.5	33.3	1.03
SLB80-10	1¼	63.5	42.0	1.22
SLB80-12	1½	76.0	46.0	2.36
SLB80-16	2	84.0	53.0	3.66
SLB80-20	2½	110.0	64.0	6.12
SLB80-24	3	121.0	64.0	6.12
SLB80-26	3½	146.0	80.0	8.40
SLB80-32	4	152.0	80.0	11.30
6000 lb				
SLB160-03	⅜	38.5	28.6	0.45
SLB160-04	½	46.5	30.0	0.72
SLB160-06	¾	56.5	33.3	1.00
SLB160-08	1	63.5	42.0	1.56
SLB160-10	1¼	76.0	46.0	2.29
SLB160-12	1½	84.0	53.0	3.80
SLB160-16	2	110.0	64.0	5.76
SLB160-20	2½	121.0	64.0	7.20
SLB160-24	3	146.0	80.0	11.30
SLB160-26	3½	152.0	80.0	13.20
SLB160-32	4	152.0	80.0	11.80

90° Elbow

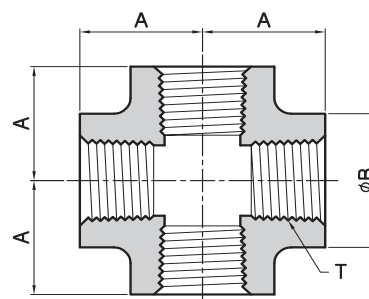
STA



Part No.	Size T	B	A	Unit Weight (kg)
2000 lb				
STA40-02	¼	23	25.4	0.14
STA40-03	⅜	26.5	25.4	0.18
STA40-04	½	34.0	28.5	0.26
STA40-06	¾	38.5	33.5	0.43
STA40-08	1	46.5	38.1	0.65
STA40-10	1¼	56.5	44.5	0.91
STA40-12	1½	63.5	50.8	1.25
STA40-16	2	76.0	60.5	2.10
STA40-20	2½	92.0	76.0	3.94
STA40-24	3	110.0	86.0	5.98
STA40-26	3½	121.0	95.5	7.41
STA40-32	4	146.0	106.5	12.36
3000 lb				
STA80-02	¼	26.5	25.4	0.18
STA80-03	⅜	34.0	28.5	0.32
STA80-04	½	38.5	33.5	0.52
STA80-06	¾	46.5	38.1	0.73
STA80-08	1	56.5	44.5	1.26
STA80-10	1¼	63.5	50.8	1.65
STA80-12	1½	76.0	60.5	2.81
STA80-16	2	84.0	64.0	4.35
STA80-20	2½	110.0	83.0	6.26
STA80-24	3	121.0	95.5	10.05
STA80-26	3½	146.0	106.5	14.62
STA80-32	4	152.0	114.3	16.50
6000 lb				
STA160-03	⅜	38.5	33.5	0.59
STA160-04	½	46.5	38.5	0.96
STA160-06	¾	56.5	44.5	1.50
STA160-08	1	63.5	50.8	2.10
STA160-10	1¼	76.0	60.5	3.30
STA160-12	1½	84.0	64.0	5.72
STA160-16	2	110.0	85.0	9.64
STA160-20	2½	121.0	95.5	13.40
STA160-24	3	146.0	106.5	16.15
STA160-26	3½	152.0	114.3	18.23
STA160-32	4	152.0	114.3	16.70

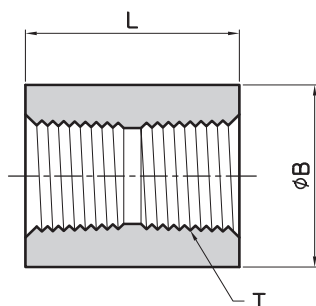
Cross

SXA



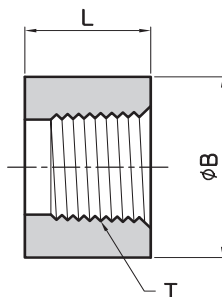
Part No.	Size T	B	A	Unit Weight (kg)
2000 lb				
SXA40-02	¼	23	25.4	0.14
SXA40-03	⅜	26.5	25.4	0.22
SXA40-04	½	34.0	28.5	0.37
SXA40-06	¾	38.5	33.5	0.52
SXA40-08	1	46.5	38.1	0.79
SXA40-10	1¼	56.5	44.5	1.28
SXA40-12	1½	63.5	50.8	1.62
SXA40-16	2	76.0	60.5	2.62
SXA40-20	2½	92.0	76.0	4.66
SXA40-24	3	110.0	86.0	7.10
SXA40-26	3½	121.0	95.5	8.85
SXA40-32	4	146.0	106.5	14.83
3000 lb				
SXA80-02	¼	26.5	25.4	0.23
SXA80-03	⅜	34.0	28.5	0.40
SXA80-04	½	38.5	33.5	0.63
SXA80-06	¾	46.5	38.1	0.93
SXA80-08	1	56.5	44.5	1.47
SXA80-10	1¼	63.5	50.8	1.78
SXA80-12	1½	76.0	60.5	3.42
SXA80-16	2	84.0	64.0	5.50
SXA80-20	2½	110.0	83.0	7.66
SXA80-24	3	121.0	95.5	11.21
SXA80-26	3½	146.0	106.5	16.72
SXA80-32	4	152.0	114.3	19.00
6000 lb				
SXA160-03	⅜	38.5	33.5	0.67
SXA160-04	½	46.5	38.5	1.12
SXA160-06	¾	56.5	44.5	1.90
SXA160-08	1	63.5	50.8	2.90
SXA160-10	1¼	76.0	60.5	4.20
SXA160-12	1½	84.0	64.0	6.65
SXA160-16	2	110.0	85.0	10.00
SXA160-20	2½	121.0	95.5	16.00
SXA160-24	3	146.0	106.5	19.87
SXA160-26	3½	152.0	114.3	28.10
SXA160-32	4	152.0	114.3	24.60

Full Coupling
SFC



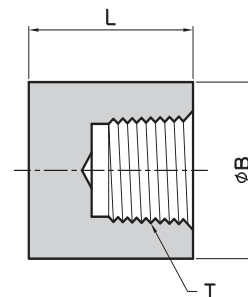
Part No.	Size T	B	L	Unit Weight (kg)
3000 lb				
SFC80-02	¼	22.0	35.1	0.050
SFC80-03	⅜	25.0	38.1	0.061
SFC80-04	½	30.0	48.0	0.142
SFC80-06	¾	35.0	51.0	0.218
SFC80-08	1	45.0	61.0	0.418
SFC80-10	1¼	57.0	67.0	0.720
SFC80-12	1½	63.5	80.0	1.065
SFC80-16	2	76.0	86.0	1.400
SFC80-20	2½	92.0	92.0	2.550
SFC80-24	3	108.0	108.0	3.830
SFC80-26	3½	127.0	114.3	5.720
SFC80-32	4	140.0	121.0	6.350
6000 lb				
SFC160-02	¼	25.0	35.0	0.120
SFC160-03	⅜	32.0	38.0	0.180
SFC160-04	½	38.1	48.0	0.280
SFC160-06	¾	45.0	51.0	0.450
SFC160-08	1	57.0	61.0	0.800
SFC160-10	1¼	63.5	67.0	1.400
SFC160-12	1½	76.0	80.0	1.950
SFC160-16	2	92.0	86.0	2.800
SFC160-20	2½	108.0	92.0	3.800
SFC160-24	3	127.0	108.0	6.010
SFC160-26	3½	140.0	114.3	8.250
SFC160-32	4	160.0	121.0	10.700

Half Coupling
SHC



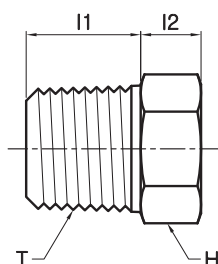
Part No.	Size T	B	L	Unit Weight (kg)
3000 lb				
SHC80-02	¼	22.0	17.5	0.025
SHC80-03	⅜	25.0	19.0	0.030
SHC80-04	½	30.0	24.0	0.070
SHC80-06	¾	35.0	25.5	0.100
SHC80-08	1	45.0	30.5	0.210
SHC80-10	1¼	57.0	33.5	0.365
SHC80-12	1½	63.5	40.0	0.520
SHC80-16	2	76.0	43.0	0.690
SHC80-20	2½	92.0	46.0	1.250
SHC80-24	3	108.0	54.0	1.840
SHC80-26	3½	127.0	57.5	2.860
SHC80-32	4	140.0	60.5	3.510
6000 lb				
SHC160-02	¼	25.0	17.5	0.06
SHC160-03	⅜	32.0	19.0	0.09
SHC160-04	½	38.1	24.0	0.14
SHC160-06	¾	45.0	25.5	0.23
SHC160-08	1	57.0	30.5	0.37
SHC160-10	1¼	63.5	33.5	0.70
SHC160-12	1½	76.0	40.0	0.90
SHC160-16	2	92.0	43.0	1.22
SHC160-20	2½	108.0	46.0	1.85
SHC160-24	3	127.0	54.0	2.95
SHC160-26	3½	140.0	57.5	4.12
SHC160-32	4	160.0	60.5	5.40

CAP
SCA



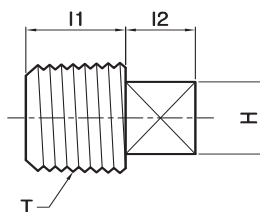
Part No.	Size T	B	L	Unit Weight (kg)
3000 lb				
SCA80-02	¼	22.0	25	0.05
SCA80-03	⅜	25.0	25	0.08
SCA80-04	½	30.0	32	0.12
SCA80-06	¾	35.0	37	0.20
SCA80-08	1	45.0	41	0.31
SCA80-10	1¼	57.0	44	0.60
SCA80-12	1½	63.5	44	0.73
SCA80-16	2	76.0	48	1.05
SCA80-20	2½	92.0	60	2.27
SCA80-24	3	108.0	65	3.83
SCA80-26	3½	127.0	68	4.52
SCA80-32	4	140.0	68	6.35
6000 lb				
SCA160-02	¼	25.0	27	0.09
SCA160-03	⅜	32.0	27	0.14
SCA160-04	½	38.1	33	0.25
SCA160-06	¾	45.0	38	0.36
SCA160-08	1	57.0	43	0.70
SCA160-10	1¼	63.5	46	0.80
SCA160-12	1½	76.0	48	1.28
SCA160-16	2	92.0	51	2.16
SCA160-20	2½	108.0	64	2.72
SCA160-24	3	127.0	68	4.95
SCA160-26	3½	140.0	70	6.84
SCA160-32	4	160.0	75	9.21

Hex Head Pulg

SPB


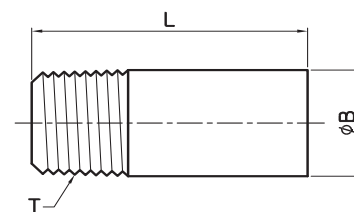
Part No.	Size T	l_1	l_2	H	Unit Weight (kg)
3000 lb					
SPB-01	$\frac{1}{8}$	11	6.3	11.0	0.03
SPB-02	$\frac{1}{4}$	13	6.3	14.0	0.03
SPB-03	$\frac{3}{8}$	14	8.0	19.0	0.06
SPB-04	$\frac{1}{2}$	18	8.0	22.0	0.08
SPB-06	$\frac{3}{4}$	19	10.0	27.0	0.14
SPB-08	1	21	10.0	35.0	0.22
SPB-10	$1\frac{1}{4}$	22	14.0	46.0	0.51
SPB-12	$1\frac{1}{2}$	24	16.0	50.0	0.62
SPB-16	2	25	18.0	63.5	1.02
SPB-20	$2\frac{1}{2}$	32	19.0	76.2	1.76
SPB-24	3	40	21.0	99.0	2.66
SPB-26	$3\frac{1}{2}$	41	22.0	103.0	3.72
SPB-32	4	42	32.0	117.0	5.90

Square Pulg

SPD


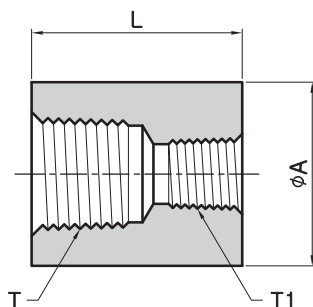
Part No.	Size T	l_1	l_2	H	Unit Weight (kg)
3000 lb					
SPD-01	$\frac{1}{8}$	9.9	6.6	7.0	0.007
SPD-02	$\frac{1}{4}$	13.0	6.6	9.0	0.014
SPD-03	$\frac{3}{8}$	13.0	7.9	12.0	0.028
SPD-04	$\frac{1}{2}$	15.0	9.9	14.0	0.057
SPD-06	$\frac{3}{4}$	16.0	11.0	17.0	0.085
SPD-08	1	20.1	13.0	19.0	0.140
SPD-10	$1\frac{1}{4}$	21.1	15.0	24.0	0.255
SPD-12	$1\frac{1}{2}$	21.1	16.0	27.0	0.397
SPD-16	2	23.1	18.0	32.0	0.680
SPD-20	$2\frac{1}{2}$	27.0	20.0	38.1	1.020
SPD-24	3	29.0	21.0	42.9	1.301
SPD-26	$3\frac{1}{2}$	30.0	22.2	47.6	2.050
SPD-32	4	32.0	25.0	63.5	3.257

Round Plug

SPE


Part No.	Size T	B	L	Unit Weight (kg)
3000 lb				
SPE-01	$\frac{1}{8}$	10.3	35.0	0.057
SPE-02	$\frac{1}{4}$	13.5	41.3	0.057
SPE-03	$\frac{3}{8}$	17.5	41.3	0.085
SPE-04	$\frac{1}{2}$	21.4	44.5	0.170
SPE-06	$\frac{3}{4}$	27.0	44.5	0.170
SPE-08	1	33.4	50.8	0.340
SPE-10	$1\frac{1}{4}$	42.9	50.8	0.340
SPE-12	$1\frac{1}{2}$	48.4	50.8	0.710
SPE-16	2	60.3	63.5	1.361
SPE-20	$2\frac{1}{2}$	73.0	70.0	2.155
SPE-24	3	88.9	70.0	3.456
SPE-26	$3\frac{1}{2}$	101.6	76.2	4.216
SPE-32	4	114.3	76.2	5.838

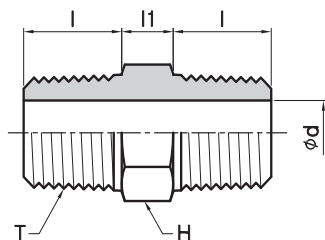
Reducing Coupling

SRC


Part No.	T (PT)	T ₁ (PT)	A	L
SRC02-01R	$\frac{1}{4}$	$\frac{1}{8}$	22	35.1
SRC03-02R	$\frac{3}{8}$	$\frac{1}{4}$	25	38.1
SRC04-02R	$\frac{1}{2}$	$\frac{1}{4}$	30	47.8
SRC04-03R	$\frac{1}{2}$	$\frac{3}{8}$	30	47.8
SRC06-02R	$\frac{3}{4}$	$\frac{1}{4}$	35	50.8
SRC06-03R	$\frac{3}{4}$	$\frac{3}{8}$	35	50.8
SRC06-04R	$\frac{3}{4}$	$\frac{1}{2}$	35	50.8
SRC08-03R	1	$\frac{3}{8}$	45	60.5
SRC08-04R	1	$\frac{1}{2}$	45	60.5
SRC08-06R	1	$\frac{3}{4}$	45	60.5
SRC10-04R	$1\frac{1}{4}$	$\frac{1}{2}$	60	66.5
SRC10-06R	$1\frac{1}{4}$	$\frac{3}{4}$	60	66.5
SRC10-08R	$1\frac{1}{4}$	1	60	66.5
SRC12-06R	$1\frac{1}{2}$	$\frac{3}{4}$	65	79.3
SRC12-08R	$1\frac{1}{2}$	1	65	79.3
SRC12-10R	$1\frac{1}{2}$	$1\frac{1}{4}$	65	79.3
SRC16-08R	2	1	80	85.9
SRC16-10R	4	$1\frac{1}{4}$	80	85.9

Hex Nipple

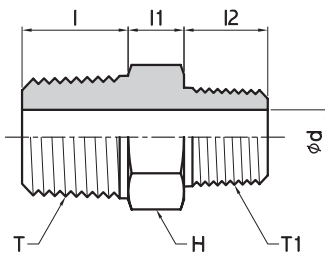
SNA



Part No.	T (PT)	d	H	ℓ	ℓ_1
SNA-01R	$\frac{1}{8}$	4	HEX 12	10	6
SNA-02R	$\frac{1}{4}$	7	HEX 17	14	8
SNA-03R	$\frac{3}{8}$	9	HEX 19	15	8
SNA-04R	$\frac{1}{2}$	12	HEX 22	19	9
SNA-06R	$\frac{3}{4}$	16	HEX 27	21	10
SNA-08R	1	20	HEX 36	24	11
SNA-10R	$1\frac{1}{4}$	28	HEX 46	27	12
SNA-12R	$1\frac{1}{2}$	32	HEX 50	27	14
SNA-16R	2	40	HEX 65	31	16

Reducing Nipple

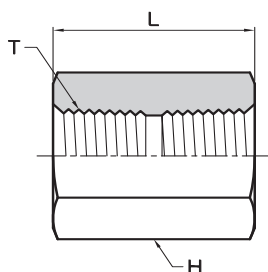
SNR



Part No.	T (PT)	x	T1 (PT)	d	H	ℓ	ℓ_1	ℓ_2
SNR02-01R	$\frac{1}{4}$	x	$\frac{1}{8}$	4	HEX 17	14	8	10
SNR03-02R	$\frac{3}{8}$	x	$\frac{1}{4}$	7	HEX 19	15	8	14
SNR04-02R	$\frac{1}{2}$	x	$\frac{1}{4}$	7	HEX 22	19	9	14
SNR04-03R	$\frac{1}{2}$	x	$\frac{3}{8}$	9	HEX 22	19	9	15
SNR06-02R	$\frac{3}{4}$	x	$\frac{1}{4}$	7	HEX 27	21	10	14
SNR06-03R	$\frac{3}{4}$	x	$\frac{3}{8}$	9	HEX 27	21	10	15
SNR06-04R	$\frac{3}{4}$	x	$\frac{1}{2}$	12	HEX 27	21	10	19
SNR08-03R	1	x	$\frac{3}{8}$	9	HEX 36	24	11	15
SNR08-04R	1	x	$\frac{1}{2}$	12	HEX 36	24	11	19
SNR08-06R	1	x	$\frac{3}{4}$	16	HEX 36	24	11	21
SNR10-04R	$1\frac{1}{4}$	x	$\frac{1}{2}$	12	HEX 46	27	12	19
SNR10-06R	$1\frac{1}{4}$	x	$\frac{3}{4}$	16	HEX 46	27	12	21
SNR10-08R	$1\frac{1}{4}$	x	1	20	HEX 46	27	12	24
SNR12-06R	$1\frac{1}{2}$	x	$\frac{3}{4}$	16	HEX 50	27	14	21
SNR12-08R	$1\frac{1}{2}$	x	1	20	HEX 50	27	14	24
SNR12-10R	$1\frac{1}{2}$	x	$1\frac{1}{4}$	28	HEX 50	27	14	27
SNR16-08R	2	x	1	20	HEX 65	31	16	24
SNR16-10R	2	x	$1\frac{1}{4}$	28	HEX 65	31	16	27
SNR16-12R	2	x	$1\frac{1}{2}$	32	HEX 65	31	16	27

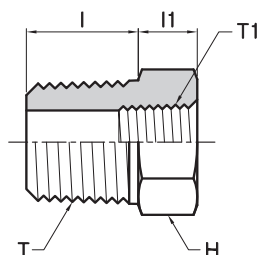
Reducing Nipple

SSA



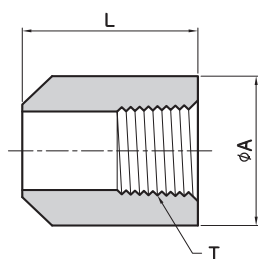
Part No.	T (PT)	H	L
SSA-01R	$\frac{1}{8}$	HEX 19	30
SSA-02R	$\frac{1}{4}$	HEX 22	30
SSA-03R	$\frac{3}{8}$	HEX 24	30
SSA-04R	$\frac{1}{2}$	HEX 32	40
SSA-06R	$\frac{3}{4}$	HEX 36	42
SSA-08R	1	HEX 46	50
SSA-10R	$1\frac{1}{4}$	HEX 55	55
SSA-12R	$1\frac{1}{2}$	HEX 65	55
SSA-16R	2	HEX 75	64

Hex Bushing

SHB


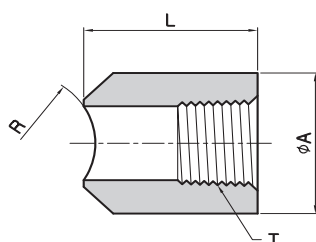
Part No.	T (PT)	x	T1 (PT)	H	ℓ	ℓ_1
SHB02-01R	$\frac{1}{4}$	x	$\frac{1}{8}$	HEX 17	14	8
SHB03-02R	$\frac{3}{8}$	x	$\frac{1}{4}$	HEX 19	15	8
SHB04-02R	$\frac{1}{2}$	x	$\frac{1}{4}$	HEX 24	19	9
SHB04-03R	$\frac{1}{2}$	x	$\frac{3}{8}$	HEX 24	19	9
SHB06-02R	$\frac{3}{4}$	x	$\frac{1}{4}$	HEX 30	21	10
SHB06-03R	$\frac{3}{4}$	x	$\frac{3}{8}$	HEX 30	21	10
SHB06-04R	$\frac{3}{4}$	x	$\frac{1}{2}$	HEX 30	21	10
SHB08-02R	1	x	$\frac{1}{4}$	HEX 36	24	11
SHB08-03R	1	x	$\frac{3}{8}$	HEX 36	24	11
SHB08-04R	1	x	$\frac{1}{2}$	HEX 36	24	11
SHB08-06R	1	x	$\frac{3}{4}$	HEX 36	24	11
SHB10-04R	$1\frac{1}{4}$	x	$\frac{1}{2}$	HEX 46	27	12
SHB10-06R	$1\frac{1}{4}$	x	$\frac{3}{4}$	HEX 46	27	12
SHB10-08R	$1\frac{1}{4}$	x	1	HEX 46	27	12
SHB12-04R	$1\frac{1}{2}$	x	$\frac{1}{2}$	HEX 50	27	14
SHB12-06R	$1\frac{1}{2}$	x	$\frac{3}{4}$	HEX 50	27	14
SHB12-08R	$1\frac{1}{2}$	x	1	HEX 50	27	14
SHB12-10R	$1\frac{1}{2}$	x	$1\frac{1}{4}$	HEX 50	27	14
SHB16-06R	2	x	$\frac{3}{4}$	HEX 65	31	16
SHB16-08R	2	x	1	HEX 65	31	16
SHB16-10R	2	x	$1\frac{1}{4}$	HEX 65	31	16
SHB16-12R	2	x	$1\frac{1}{2}$	HEX 65	31	16

Boss Type A

SBA


Part No.	T (PT)	A	L
SBA-02R	$\frac{1}{4}$	22	30
SBA-03R	$\frac{3}{8}$	26	30
SBA-04R	$\frac{1}{2}$	32	33
SBA-06R	$\frac{3}{4}$	38	35
SBA-08R	1	46	43
SBA-10R	$1\frac{1}{4}$	55	46
SBA-12R	$1\frac{1}{2}$	65	50
SBA-16R	2	75	57

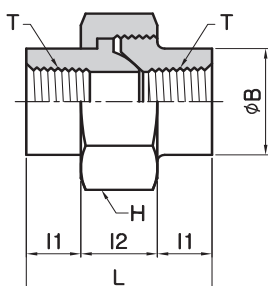
Boss Type R

SBR


Part No.	T (PT)	A	L	R
SBA-02R	$\frac{1}{4}$	22	30	25
SBA-03R	$\frac{3}{8}$	26	30	25
SBA-04R	$\frac{1}{2}$	32	33	30
SBA-06R	$\frac{3}{4}$	38	35	30
SBA-08R	1	46	43	40
SBA-10R	$1\frac{1}{4}$	55	46	45
SBA-12R	$1\frac{1}{2}$	65	50	55
SBA-16R	2	75	57	60

R.J Union

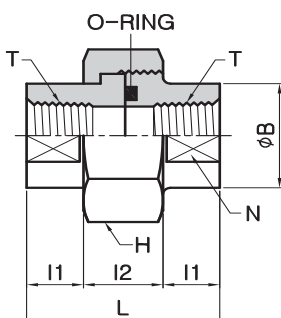
SUA



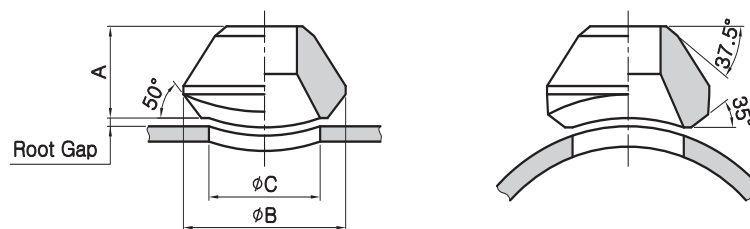
Part No.	Size T	B	l_1	l_2	L	H	Unit Weight (kg)
3000 lb							
SUA80-02	¼	21.0	11.5	18	41	HEX 35	0.19
SUA80-03	⅜	25.0	14.0	18	46	HEX 40	0.25
SUA80-04	½	32.0	15.0	21	51	HEX 46	0.43
SUA80-06	¾	40.0	17.0	23	57	HEX 58	0.62
SUA80-08	1	48.0	19.5	25	64	HEX 65	1.03
SUA80-10	1¼	55.5	22.5	27	72	OCT 76	1.15
SUA80-12	2	63.5	24.0	30	78	OCT 83	1.54
SUA80-16	2	76.0	26.0	36	88	OCT 103	3.05
SUA80-20	2½	95.0	34.0	42	110	OCT 124	5.14
SUA80-24	3	116.0	37.0	45	120	OCT 150	7.12
SUA80-32	4	148.0	45.0	50	140	OCT 180	12.40
6000 lb							
SUA160-02	¼	25.4	13.5	19	46	HEX 40	0.25
SUA160-03	⅜	32.0	15.0	21	51	HEX 46	0.43
SUA160-04	½	40.0	17.0	23	57	HEX 56	0.62
SUA160-06	¾	44.5	19.5	25	64	HEX 65	0.94
SUA160-08	1	51.0	22.5	27	72	OCT 74	1.08
SUA160-10	1¼	57.2	24.0	30	78	OCT 83	1.41
SUA160-12	1½	71.5	26.0	36	88	OCT 103	2.75
SUA160-16	2	90.0	34.0	42	110	OCT 124	5.05
SUA160-20	2½	105.0	37.5	45	120	OCT 150	6.87
SUA160-24	3	125.0	45.0	50	140	OCT 180	10.85

O-Ring Union

SUAO



Part No.	Size T	B	l_1	l_2	L	N	H	O-Ring	Unit Weight (kg)
3000 lb									
SUAO80-02	¼	22	10	18	38	21	HEX 35	P18	0.160
SUAO80-03	⅜	27	10	18	38	26	HEX 41	P20	0.215
SUAO80-04	½	32	12	20	44	32	HEX 46	G25	0.312
SUAO80-06	¾	38	12	26	50	38	HEX 54	G30	0.477
SUAO80-08	1	47	15	26	56	46	HEX 63	G35	0.764
SUAO80-10	1¼	56	15	30	60	54	HEX 77	G45	1.106
SUAO80-12	1½	63	18	36	72	63	OCT 80	G50	1.327
SUAO80-16	2	76	18	36	72	77	OCT 95	G65	1.856

Weldolet
SWLT

STD, X-S

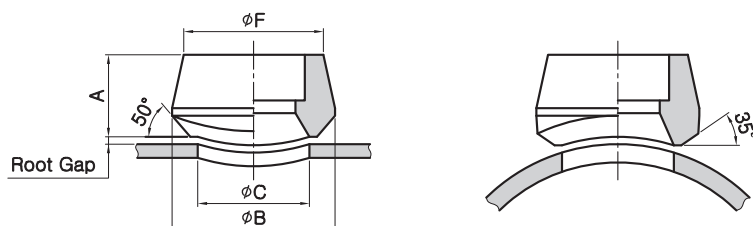
Outlet Size	A		B		C		APP Weight(kg)	
	STD	X-S	STD	X-S	STD	X-S	STD	X-S
½	19.1	19.1	34.9	34.9	23.8	23.8	0.08	0.09
¾	22.2	22.2	44.5	44.5	30.2	30.2	0.11	0.14
1	27.0	27.0	54.0	54.0	36.5	36.5	0.23	0.21
1¼	31.8	31.8	65.1	65.1	44.5	44.5	0.36	0.41
1½	33.3	33.3	73.0	73.0	50.8	50.8	0.45	0.50
2	38.1	38.1	88.9	88.9	65.1	65.1	0.80	0.80
2½	41.3	41.3	103.2	103.2	76.2	76.2	1.14	1.20
3	44.5	44.5	122.2	122.2	93.7	93.7	1.82	1.90
4	50.8	50.8	152.4	152.4	120.7	120.7	2.86	2.90
5	57.2	57.2	179.4	179.4	141.3	141.3	4.66	4.70
6	60.3	77.8	215.9	225.4	169.9	169.9	6.45	10.50
8	69.9	98.5	263.5	292.1	220.7	220.7	10.68	16.80
10	77.8	93.7	322.3	323.9	274.7	265.1	17.73	20.90
12	85.7	103.2	377.8	397.4	325.4	317.5	26.82	27.70
14	88.9	100.0	409.6	431.8	357.2	350.8	30.00	31.80
16	93.7	106.4	463.6	466.7	408.0	403.2	34.10	46.40
18	96.8	111.1	520.7	523.9	458.8	455.6	44.10	59.10
20	101.6	119.1	571.5	582.6	508.0	509.6	53.60	71.80
24	115.9	139.7	689.0	708.0	614.4	638.2	100.00	131.80

Sch 160, XX-S

Outlet Size	A		B		C		APP Weight(kg)	
	Sch 160	XX-s	Sch 160	XX-s	Sch 160	XX-s	Sch 160	XX-s
½	28.6	28.6	34.9	34.9	14.3	14.3	0.11	-
¾	31.8	31.8	44.5	44.5	19.1	19.1	0.32	-
1	38.1	38.1	50.8	50.8	25.4	25.4	0.38	0.38
1¼	44.5	44.5	61.9	61.9	33.3	33.3	0.57	0.57
1½	50.8	50.8	69.9	69.9	38.1	38.1	0.80	0.80
2	55.6	55.6	81.0	81.0	42.9	42.9	1.00	1.00
2½	61.9	61.9	96.8	96.8	54.0	54.0	1.54	1.54
3	73.0	73.0	120.7	120.7	73.0	73.0	2.90	2.90
4	84.1	84.1	152.4	152.4	98.4	98.4	4.80	4.80
5	93.7	93.7	187.3	187.3	122.2	122.2	6.50	6.50
6	104.8	104.8	220.7	220.7	146.1	146.1	12.70	12.70
8	111.1	111.1	284.2	284.2	173.0	173.0	20.50	20.50
10	125.4	125.4	312.7	312.7	215.9	215.9	38.60	38.60

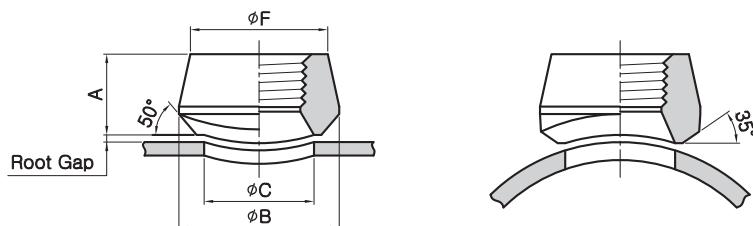
- Applicable run pipe sizes are from outlet size to 36inch

Sockolet SCLT



Outlet Size	A		B		C		F		APP Weight(kg)	
	3000#	6000#	3000#	6000#	3000#	6000#	3000#	6000#	3000#	6000#
½	25.4	31.8	34.9	44.5	23.8	19.1	31.8	39.7	0.14	0.23
¾	27.0	36.5	44.5	50.8	30.2	25.4	36.5	46.6	0.15	0.36
1	33.3	39.7	54.0	61.9	36.5	33.3	46.0	57.2	0.27	0.59
1¼	33.3	41.3	65.1	69.9	44.5	38.1	55.6	65.1	0.39	0.73
1½	34.9	42.9	73.0	82.6	50.8	49.2	61.9	76.2	0.47	0.91
2	38.1	58.7	88.9	103.2	65.1	58.7	74.6	92.1	0.73	2.33
2½	46.0	-	103.2	-	76.2	-	87.3	-	1.25	-
3	50.8	-	122.2	-	93.7	-	104.8	-	1.73	-
4	57.2	-	152.4	-	120.7	-	130.2	-	3.30	-

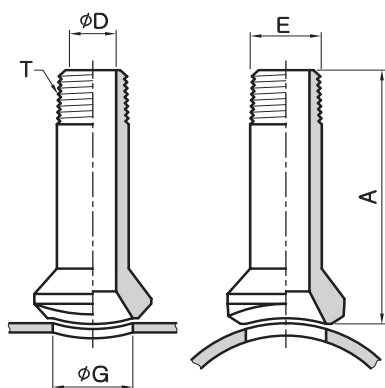
Threadolet STLT



Outlet Size	A		B		C		F		APP Weight(kg)	
	3000#	6000#	3000#	6000#	3000#	6000#	3000#	6000#	3000#	6000#
½	25.4	31.8	34.9	44.5	23.8	19.1	31.8	39.7	0.11	0.20
¾	27.0	36.5	44.5	50.8	30.2	25.4	36.5	46.6	0.16	0.34
1	33.3	39.7	54.0	61.9	36.5	33.3	46.0	57.2	0.28	0.56
1¼	33.3	41.3	65.1	69.9	44.5	38.1	55.6	65.1	0.41	0.71
1½	34.9	42.9	73.0	82.6	50.8	49.2	61.9	76.2	0.45	0.89
2	38.1	52.4	88.9	103.2	65.1	69.9	74.6	92.1	0.80	2.31
2½	46.0	-	103.2	-	76.2	-	87.3	-	1.36	-
3	50.8	-	122.2	-	93.7	-	104.8	-	1.98	-
4	57.2	-	152.4	-	120.7	-	130.2	-	3.23	-

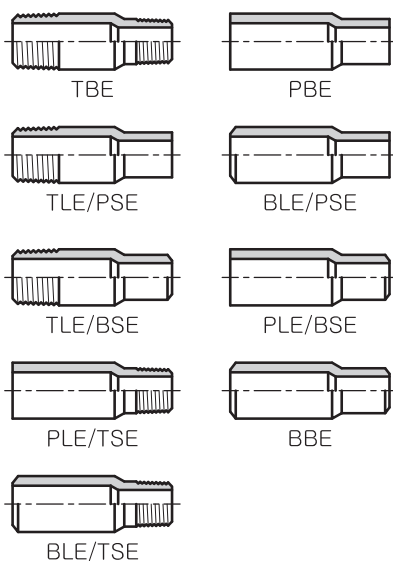
- Applicable run pipe sizes are from outlet size to 36inch

Nippolet



Run Pipe Size	Outlet Size T	A	G	D	E	Unit Weight (kg)
36-3/4	1/2	88.9	23.9	14.0	21.3	0.36
36-1	3/4	88.9	30.2	18.8	26.7	0.56
36-1	1	88.9	36.5	24.4	33.3	0.84
36-1	1 1/4	88.9	44.5	32.5	42.2	1.22
36-2	1 1/2	88.9	50.8	38.1	48.3	2.00
36-2	2	88.9	65.1	49.3	60.5	3.12

Swaged Nipple



Large end Size	Small end Size	Length(mm)
1/2	3/8 - 1/8	70
3/4	1/2 - 1/8	76
1	1 - 1/8	89
1 1/4	1 1/4 - 1/8	102
1 1/2	1 1/2 - 1/8	114
2	1 1/2 - 1/8	165
2 1/2	2 - 1/8	178
3	2 1/2 - 1/8	203
3 1/2	3 - 1/8	203
4	3 1/2 - 1/8	229

TBE: Threaded both end
PBE: Plain both end
PLE/TSE: Plain large end-Threaded small end
BLE/TSE: Beveled large end-Threaded small end
BLE/PSE: Beveled large end-Plain small end
TLE/PSE: Threaded large end-Plain small-end

Swaged Nipples are made from Forged Steel or Pipe

1. Forged Socket Welding. Threaded Fitting Bore

in millimeters.

Nominal Pipe Size	ANSI B16.11				JIS B2316		
	Socket Welding(M)		Threaded(T)		Socket Welding(M)	Threaded(T)	
$\frac{1}{8}"$	10.90,	10.65	NPT	$\frac{1}{8}$	11.0	PT	$\frac{1}{8}$
$\frac{1}{4}"$	14.35,	14.10	NPT	$\frac{1}{4}$	14.3	PT	$\frac{1}{4}$
$\frac{3}{8}"$	17.80,	17.55	NPT	$\frac{3}{8}$	17.8	PT	$\frac{3}{8}$
$\frac{1}{2}"$	21.95,	21.70	NPT	$\frac{1}{2}$	22.2	PT	$\frac{1}{2}$
$\frac{3}{4}"$	27.30,	27.05	NPT	$\frac{3}{4}$	27.7	PT	$\frac{3}{4}$
1"	34.05,	33.80	NPT	1	34.5	PT	1
1 $\frac{1}{4}"$	42.80,	42.55	NPT	1 $\frac{1}{4}$	43.2	PT	1 $\frac{1}{4}$
1 $\frac{1}{2}"$	48.90,	48.65	NPT	1 $\frac{1}{2}$	49.1	PT	1 $\frac{1}{2}$
2"	61.35,	61.10	NPT	2	61.1	PT	2
2 $\frac{1}{2}"$	74.20,	73.80	NPT	2 $\frac{1}{2}$	77.1	PT	2 $\frac{1}{2}$
3"	90.15,	89.80	NPT	3	90.0	PT	3
4"	115.8,	115.45	NPT	4	115.4	PT	4

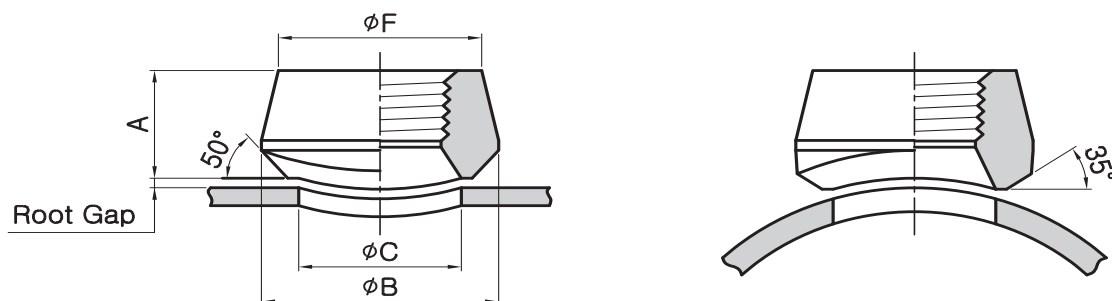
2. Tolerance

Forged Socket Welding, Threaded Fitting (ASME B16.11)

in millimeters.

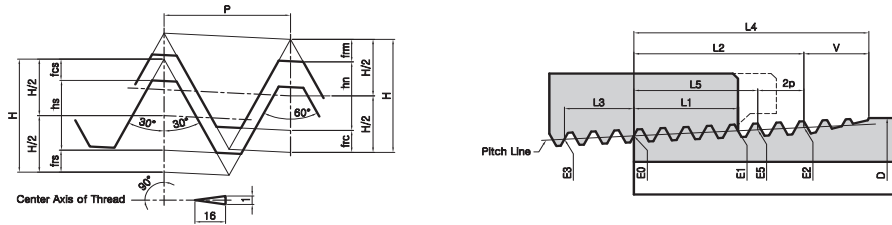
Nominal Pipe Size	All Fittings				Elbow, Tee, Cross	Coupling	Half Coupling
	Socket Bore Dia	Bore Dia. of Fitting	Concentricity of Bore	Coincidence of Axis	Center to Bottom of Socket	Bottom to Bottom of Socket	Bottom of Socket to Opposite Face
$\frac{1}{8}$ - $\frac{1}{4}$	+ 0.012 - 0.000	±0.03	Socket and Fitting bores within ±0.03	Maximum variation in alignment of socket and fitting bores for $\frac{1}{8}$ in 12	±0.03	±0.06	±0.03
$\frac{3}{8}$ - $\frac{3}{4}$	+ 0.012 - 0.000	±0.03			±0.06	±0.12	±0.06
1-2	+ 0.012 - 0.000	±0.03			±0.08	±0.16	±0.08
2 $\frac{1}{2}$ -3	+ 0.012 - 0.000	±0.06			±0.10	±0.20	±0.10

3. KS B0222 & JIS B0203 Pipe Threads



Nominal Size		Nominal Size	Screw Thread			Basic Diameter			Position of Basic Diameter			Tolerances on Basic Diameters of Internal Parallel Thread	Effective Thread Length (Min)				Nominal Pipe Size (For Reference)					
			Pitch	Height of Thread	Rounding	External Thread			External Thread		Internal Thread		Fitting Allowance	Internal Thread								
						Major Diameter d	Pitch Diameter d2	Minor Diameter d1	From the End' of Pipe	The End of Pipe	When there is an Incomplete thread or More			When There is on Incomplete Thread								
															Internal Thread				Internal Taper Thread	Internal Parallel Thread	Internal Taper and parallel Thread	
															Major Diameter	Pitch Diameter						Minor Diameter
			n	p	h	r	D	D2	D1	a	±b		±C	±	f	l			l	t	Outside Diameter	Wall thickness
PT	15 (½)	14	1.8143	1.162	0.25	20.955	19.793	18.631	8.16	1.81	2.27	0.142	5.00	12.7	15.0	9.1	21.7	2.8				
PT	20 (¾)	14	1.8143	1.162	0.25	26.441	25.279	24.117	9.53	1.81	2.27	0.142	5.60	14.1	16.3	10.2	27.2	2.8				
PT	25(1)	11	2.3091	1.479	0.32	33.249	31.770	30.291	10.39	2.31	2.89	0.180	6.40	16.2	19.0	11.5	34.0	3.2				
PT	32(1¼)	11	2.3091	1.479	0.32	41.910	40.431	38.952	12.70	2.31	2.89	0.180	6.40	18.5	21.4	13.4	42.7	3.5				
PT	40(1½)	11	2.3091	1.479	0.32	47.803	46.324	44.845	12.70	2.31	2.89	0.180	6.40	18.5	21.4	13.4	48.6	3.5				
PT	50(2)	11	2.3091	1.479	0.32	59.614	58.135	56.656	15.88	2.31	2.89	0.180	7.50	22.8	25.7	16.9	60.5	3.8				
PT	65(2½)	11	2.3091	1.479	0.32	75.184	73.705	72.226	17.46	3.64	3.46	0.217	9.22	26.7	30.2	18.6	76.3	4.2				
PT	80(3)	11	2.3091	1.479	0.32	87.884	86.405	84.926	20.64	3.64	3.46	0.217	9.22	29.9	33.3	21.1	89.1	4.2				
PT	90(3½)	11	2.3091	1.479	0.32	100.330	98.851	97.372	22.23	3.64	3.46	0.217	9.30	31.5	34.9	22.4	101.6	4.2				
PT	100(4)	11	2.3091	1.479	0.32	113.030	111.551	110.072	25.40	3.64	3.46	0.217	10.40	35.9	39.3	25.9	114.3	4.5				
PT	125(5)	11	2.3091	1.479	0.32	138.430	136.952	135.472	25.58	3.64	3.46	0.217	11.40	40.1	43.6	29.3	139.8	4.5				
PT	150(6)	11	2.3091	1.479	0.32	163.830	162.351	160.872	28.58	3.64	3.46	0.217	11.50	40.1	43.6	29.3	165.2	5.0				

4. ASME B2.1 Taper Pipe Threads. (Except Dryseal)



Thread Element	27 Threads Per inch p= 0.03704	18 Threads Per inch p= 0.05556	14 Threads Per inch p= 0.07143	11½ Threads Per inch p= 0.08696	8 Threads Per inch p= 0.12500
H=0.866p	0.0321	0.4810	0.0619	0.0753	0.1082
hs=hh=0.760p	0.0281	0.0422	0.0543	0.0661	0.0950
frs=frn=0.033p	0.0012	0.0088	0.0024	0.0029	0.0041
fcs=fcn=0.073p	0.0027	0.0041	0.0052	0.0063	0.0091

Nominal Pipe Size (NPT)	Outside Diameter of Pipe D	Threads Per inch n	Pitch of Thread P	Pitch Effective Thread, External Diameter at beginning of External Thread	Handtight Engagement			Effective Thread, External		
					Length L1		Dia E1	Length L2		Dia E2
					In.	Thds.		In.	Thds.	
1	2	3	4	5	6	7	8	9	10	11
1/8	0.405	27.0	0.03704	0.36351	0.1615	4.36	0.37360	0.2639	7.12	0.38000
1/4	0.540	18.0	0.05556	0.47739	0.2278	4.10	0.49163	0.4018	7.23	0.50250
3/8	0.675	18.0	0.05556	0.61201	0.2400	4.32	0.62701	0.4078	7.43	0.63750
1/2	0.840	14.0	0.07143	0.75843	0.3200	4.48	0.77843	0.5337	7.47	0.79179
3/4	1.050	14.0	0.07143	0.96768	0.3390	4.75	0.98887	0.5457	7.64	1.00179
1	1.315	11.5	0.08696	1.21363	0.4000	4.60	1.23863	0.6828	7.85	1.25630
1 1/4	1.660	11.5	0.08696	1.55713	0.4200	4.83	1.58338	0.7068	8.13	1.60130
1 1/2	1.900	11.5	0.08696	1.79609	0.4200	4.83	1.82234	0.7235	8.32	1.84130
2	2.375	11.5	0.08696	2.26902	0.4360	5.01	2.29627	0.7565	8.70	2.31630
2 1/2	2.875	8.0	0.12500	2.71953	0.6820	5.46	2.76216	1.1375	9.10	2.79062
3	3.500	8.0	0.12500	3.34062	0.7660	6.13	3.38850	1.2000	9.60	3.41562
3 1/2	4.000	8.0	0.12500	3.83750	0.8210	6.57	3.88881	1.2500	10.00	3.91562
4	4.500	8.0	0.12500	4.33438	0.8440	6.75	4.38712	1.3000	10.40	4.41562

Nominal Pipe Size (NPT)	Wrench Makeup Length for External Thread L ² L ¹		Wrench Makeup Length for External Thread			Vanish Thread V		Overall Length External Thread L ⁴	Nominal, Complet External Threads ^s		Height of Thread h	Increase in Dia per Thread, 0.0625/n	Basic Minor Dia at Sma End of Pipe, Ka
			Length L ³		Dia E ³	In.	Thds.		Length L ⁵	Dia L ⁵			
	In.	Thds.	In	Thds.									
1	12	13	14	15	16	17	18	19	20	21	22	23	24
⅛	0.1024	2.76	0.1111	3	0.35656	0.1285	3.47	0.3924	0.1898	0.37537	0.02963	0.00231	0.3339
¼	0.1740	3.13	0.1667	3	0.46697	0.1928	3.47	0.5946	0.2907	0.49556	0.04444	0.00347	0.4329
⅜	0.1678	3.02	0.1667	3	0.60160	0.1928	3.47	0.6006	0.2967	0.63056	0.04444	0.00347	0.5676
½	0.2137	2.99	0.2143	3	0.74504	0.2478	3.47	0.7815	0.3909	0.78286	0.05714	0.00446	0.7013
¾	0.2067	2.89	0.2143	3	0.95429	0.2478	3.47	0.7935	0.4029	0.99286	0.05714	0.00446	0.9105
1	0.2828	3.25	0.2609	3	1.19733	0.3017	3.47	0.9845	0.5089	1.24543	0.06957	0.00543	1.1441
1¼	0.2868	3.30	0.2609	3	1.54083	0.3017	3.47	1.0085	0.5329	1.59043	0.06957	0.00543	1.4876
1½	0.3035	3.49	0.2609	3	1.77978	0.3017	3.47	1.0252	0.5496	1.83043	0.06957	0.00543	1.7265
2	0.3205	3.69	0.2609	3	2.25272	0.3017	3.47	1.0582	0.5826	2.30543	0.06957	0.00543	2.1995
2½	0.4555	3.64	0.2500 ⁷	2	2.70391	0.4337	3.47	1.5712	0.8875	2.77500	0.10000	0.00781	2.6195
3	0.4340	3.47	0.2500 ⁷	2	3.32500	0.4337	3.47	1.6337	0.9500	3.40000	0.10000	0.00781	3.2406
3½	0.4290	3.43	0.2500	2	3.82188	0.4337	3.47	1.6837	1.0000	3.90000	0.10000	0.00781	3.7375
4	0.4560	3.65	0.2500	2	4.31875	0.4337	3.47	1.7337	1.0500	4.40000	0.10000	0.00781	4.2344

5. Wall Thickness Schedules.

Nominal Pipe Size		Outside Diameter		Nominal Wall Thickness								
A	B	JIS	ANSI	Sch5S	SchS10S	Sch20S	GS	Sch10	LG(7.9)	Sch20	Sch30	STD
8	¼	13.8	13.7	1.2	1.65	2.0	2.3	-	-	-	-	(2.2)
10	⅜	17.3	17.1	1.2	1.65	2.0	2.3	-	-	-	-	(2.3)
15	½	21.7	21.3	1.65	2.1	2.5	2.8	-	-	-	-	(2.8)
20	¾	27.2	26.7	1.65	2.1	2.5	2.8	-	-	-	-	(2.9)
25	1	34.0	33.4	1.65	2.8	3.0	3.2	-	-	-	-	(3.4)
32	1-¼	42.7	42.2	1.65	2.8	3.0	3.5	-	-	-	-	(3.6)
40	1-½	48.6	48.3	1.65	2.8	3.0	3.5	-	-	-	-	(3.7)
50	2	60.5	60.3	1.65	2.8	3.5	3.8	-	-	-	-	(3.9)
65	2-½	76.3	73.0	2.1	3.0	3.5	4.2	-	-	-	-	(5.2)
80	3	89.1	88.9	2.1	3.0	4.0	4.2	-	-	-	-	(5.5)
90	3-½	101.6	101.6	2.1	3.0	4.0	4.2	-	-	-	-	(5.7)
100	4	114.3	114.3	2.1	3.0	4.0	4.5	-	-	-	-	(6.0)
125	5	139.8	141.3	2.8	3.4	5.0	4.5	-	-	-	-	(6.6)
150	6	165.2	168.3	2.8	3.4	5.0	5.0	-	5.0	-	-	(7.1)
175	7	190.7	-	-	-	-	5.3	-	-	-	-	-
200	8	216.3	219.1	2.8	3.8	6.5	5.8	-	5.8	6.4	7.0	(8.2)
225	9	241.8	-	-	-	-	6.2	-	-	-	-	-
250	10	267.4	273.1	3.4	4.2	6.5	6.6	-	6.6	6.4	7.8	(9.3)
300	12	318.5	323.9	4.0	4.6	6.5	6.9	-	6.9	6.4	8.4	9.5
350	14	355.6	355.6	4.0	4.8	7.9	7.9	6.4	7.9	7.9	9.5	9.5
400	16	406.4	406.4	4.2	4.8	7.9	7.9	6.4	7.9	7.9	9.5	9.5
450	18	457.2	457.2	4.2	4.8	7.9	7.9	6.4	7.9	7.9	11.1	9.5
500	20	508.0	508.0	4.8	5.5	7.9	7.9	6.4	7.9	9.5	12.7	9.5
550	22	558.8	558.8	4.8	5.5	-	-	6.4	7.9	9.5	12.7	9.5
600	24	609.6	609.6	5.5	6.4	-	-	6.4	7.9	9.5	14.3	9.5
650	26	660.4	660.4	-	-	-	-	7.9	7.9	12.7	-	9.5
700	28	711.2	711.2	-	-	-	-	7.9	7.9	12.7	15.9	9.5
750	30	762.0	762.0	6.4	7.9	-	-	7.9	7.9	12.7	15.9	9.5
800	32	812.8	812.8	-	-	-	-	7.9	7.9	12.7	15.9	9.5
850	34	863.6	863.6	-	-	-	-	7.9	7.9	12.7	15.9	9.5
900	36	914.4	914.4	-	-	-	-	7.9	7.9	12.7	15.9	9.5
950	38	965.2	965.2	-	-	-	-	-	7.9	-	-	9.5
1000	40	1016.0	1016.0	-	-	-	-	-	7.9	-	-	9.5
1050	42	1066.8	1066.8	-	-	-	-	-	7.9	-	-	9.5
1100	44	1117.6	1117.6	-	-	-	-	-	7.9	-	-	9.5
1150	46	1168.4	1168.4	-	-	-	-	-	7.9	-	-	9.5
1200	48	1219.2	1219.2	-	-	-	-	-	7.9	-	-	9.5
1250	50	1270.0	1270.0	-	-	-	-	-	*7.9	-	-	*9.5
1300	52	1320.8	1320.8	-	-	-	-	-	*7.9	-	-	*9.5
1350	54	1371.6	1371.6	-	-	-	-	-	*7.9	-	-	*9.5
1400	56	1422.4	1422.4	-	-	-	-	-	*7.9	-	-	*9.5
1450	58	1473.2	1473.2	-	-	-	-	-	*7.9	-	-	*9.5
1500	60	1524.0	1524.0	-	-	-	-	-	*7.9	-	-	*9.5

JIS G3448 ANSI B36.10M
JIS G3454 ANSI B36.19M
JIS G3455
JIS G3459

(in mm)

Nominal Wall Thickness									Outside Diameter		Nominal Pipe Size	
Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS	JIS	ANSI	A	B
2.2	2.4	(3.0)	3.0	-	-	-	-	-	13.8	13.7	8	¼
2.3	2.8	(3.2)	3.2	-	-	-	-	-	17.3	17.1	10	⅜
2.8	3.2	(3.7)	3.7	-	-	-	4.7	7.5	21.7	21.3	15	½
2.9	3.4	(3.9)	3.9	-	-	-	5.5	7.8	27.2	26.7	20	¾
3.4	3.9	(4.5)	4.5	-	-	-	6.4	9.1	34.0	33.5	25	1
3.6	4.5	(4.9)	4.9	-	-	-	6.4	9.7	42.7	42.2	32	1-¼
3.7	4.5	(5.1)	5.1	-	-	-	7.1	10.2	48.6	48.3	40	1-½
3.9	4.9	(5.5)	5.5	-	-	-	8.7	11.1	60.5	60.3	50	2
5.2	6.0	(7.0)	7.0	-	-	-	9.5	14.0	76.3	73.0	65	2-½
5.5	6.6	(7.6)	7.6	-	-	-	11.1	15.2	89.1	88.9	80	3
5.7	7.0	(8.1)	8.1	-	-	-	12.7	-	101.6	101.6	90	3-½
6.0	7.1	(8.6)	8.6	-	11.1	-	13.5	17.1	114.3	114.3	100	4
6.6	8.1	(9.5)	9.5	-	12.7	-	15.9	19.0	139.8	141.3	125	5
7.1	9.3	(11.0)	11.0	-	14.3	-	18.2	21.9	165.2	168.3	150	6
-	-	-	-	-	-	-	-	-	190.7	-	175	7
8.2	10.3	(12.7)	12.7	15.1	18.2	20.6	23.0	22.2	216.3	219.1	200	8
-	-	-	-	-	-	-	-	-	241.8	-	225	9
9.3	12.7	12.7	15.1	18.3	21.4	25.4	28.6	25.4	267.4	273.1	250	10
10.3	14.3	12.7	17.4	21.4	25.4	28.6	33.3	25.4	318.5	323.9	300	12
11.1	15.1	12.7	19.0	23.8	27.8	31.8	35.7	-	355.6	355.6	350	14
12.7	16.7	12.7	21.4	26.2	30.9	36.5	40.5	-	406.4	406.4	400	16
14.3	19.0	12.7	23.8	29.4	34.9	39.7	45.2	-	457.2	457.2	450	18
15.1	20.6	12.7	26.2	32.5	38.1	44.4	50.0	-	508.0	508.0	500	20
-	22.2	12.7	28.6	34.9	41.3	47.6	54.0	-	558.8	558.8	550	22
17.5	24.6	12.7	31.0	38.9	46.0	52.4	59.5	-	609.6	609.6	600	24
-	-	12.7	-	-	-	-	-	-	660.4	660.4	650	26
-	-	12.7	-	-	-	-	-	-	711.2	711.2	700	28
-	-	12.7	-	-	-	-	-	-	762.0	762.0	750	30
17.5	-	12.7	-	-	-	-	-	-	812.8	812.8	800	32
17.5	-	12.7	-	-	-	-	-	-	863.6	863.6	850	34
19.1	-	12.7	-	-	-	-	-	-	914.4	914.4	900	36
-	-	12.7	-	-	-	-	-	-	965.2	965.2	950	38
-	-	12.7	-	-	-	-	-	-	1016.0	1016.0	1000	40
-	-	12.7	-	-	-	-	-	-	1066.8	1066.8	1050	42
-	-	12.7	-	-	-	-	-	-	1117.6	1117.6	1100	44
-	-	12.7	-	-	-	-	-	-	1168.4	1168.4	1150	46
-	-	12.7	-	-	-	-	-	-	1219.2	1219.2	1200	48
-	-	12.7	-	-	-	-	-	-	1270.0	1270.0	1250	50
-	-	12.7	-	-	-	-	-	-	1320.8	1320.8	1300	52
-	-	12.7	-	-	-	-	-	-	1371.6	1371.6	1350	54
-	-	12.7	-	-	-	-	-	-	1422.4	1422.4	1400	56
-	-	12.7	-	-	-	-	-	-	1473.2	1473.2	1450	58
-	-	12.7	-	-	-	-	-	-	1524.0	1524.0	1500	60

6. Material Specifications

ASTM	Grade	Classification		C %	Mn %	P Max. %	S Max. %	Si %	Ni %	Cr %	Mo %	T.S. Min. psi (kg/mm ²)	Y.S. Min. psi (kg/mm ²)	EL Min. %	RED Min. %	HB
A-105*		Carbon Steel		Max 0.35	0.60~1.05	0.040	0.050	MAX 0.35	MAX 0.40	MAX 0.30	MAX 0.12	70,000 (49.2)	36,000 (25.3)	22	30	MAX 187
A-181*	60	Carbon Steel		Max 0.35	MAX 0.90	0.050	0.050	MAX (0.35)				60,000 (42.2)	30,000 (21.1)	22	35	
A-181	70	Carbon Steel		Max 0.35	MAX 0.90	0.050	0.050	MAX (0.35)				70,000 (49.2)	36,000 (25.3)	18	24	
A-182	F1	½	Mo	Max 0.35	0.60~0.90	0.045	0.045	0.15~0.35			0.44~0.65	70,000 (49.2)	40,000 (28.1)	20	30	143~192
A-182	F5	5Cr-½	Mo	Max 0.15	0.30~0.60	0.030	0.030	MAX 0.50	MAX 0.50	4.00~6.00	0.44~0.65	70,000 (49.2)	40,000 (28.1)	20	35	143~217
A-182	F5a	5Cr-½	Mo	Max 0.25	MAX 0.60	0.040	0.030	MAX 0.50	MAX 0.50	4.00~6.00	0.44~0.65	90,000 (63.3)	65,000 (45.7)	22	50	187~248
A-182	F11-1	1¼Cr-½	Mo	0.05~0.15	0.30~0.60	0.030	0.030	0.50~1.00		1.00~1.50	0.44~0.65	60,000 (42.2)	30,000 (21.1)	20	45	121~174
A-182	F11-2	1¼Cr-½	Mo	0.10~0.20	0.30~0.80	0.040	0.040	0.50~1.00		1.00~1.50	0.44~0.65	70,000 (49.2)	40,000 (28.1)	20	30	143~207
A-182	F11-3	1Cr-½	Mo	0.10~0.20	0.30~0.80	0.040	0.040	0.50~1.00		1.00~1.50	0.44~0.65	75,000 (52.7)	45,000 (31.6)	20	30	156~207
A-182	F12-1	1Cr-½	Mo	0.05~0.15	0.30~0.60	0.045	0.045	MAX 0.50		0.80~1.25	0.44~0.65	60,000 (42.2)	30,000 (21.1)	20	45	121~174
A-182	F12-2	1¼Cr-½	Mo	0.10~0.20	0.30~0.80	0.040	0.040	0.10~0.60		0.80~1.25	0.44~0.65	70,000 (49.2)	40,000 (28.1)	20	30	143~174
A-182	F11	1Cr-½	Mo	0.10~0.20	0.30~0.60	0.040	0.040	0.50~1.00		1.00~1.50	0.44~0.65	70,000 (49.2)	40,000 (28.1)	20	30	143~207
A-182	F12	1Cr-½	Mo	0.10~0.20	0.30~0.80	0.040	0.040	0.10~0.60		0.80~1.25	0.44~0.65	70,000 (49.2)	40,000 (28.1)	20	30	143~207
A-182	F22	2¼Cr-1	Mo	MAX 0.15	0.30~0.60	0.040	0.040	MAX 0.50		2.00~2.50	0.87~1.13	75,000 (52.7)	45,000 (31.6)	20	30	156~207
A-182	F304	18Cr-8	Ni	MAX 0.08	MAX 2.00	0.040	0.030	MAX 1.00	8.00~11.00	18.00~20.00		75,000 (52.7)	30,000 (21.1)	30	50	
A-182	F304L	18Cr-8 Low	Ni	MAX 0.035	MAX 2.00	0.040	0.030	MAX 1.00	8.00~13.00	18.00~20.00		75,000 (49.2)	25,000 (17.6)	30	50	
A-182	F316	18Cr-8 MO	Ni	MAX 0.08	MAX 2.00	0.040	0.030	MAX 1.00	10.00~14.00	16.00~18.00	2.00~3.00	75,000 (52.7)	30,000 (21.7)	30	50	
A-182	F316L	18Cr-8 MO-LOW	Ni	MAX 0.035	MAX 2.00	0.040	0.030	MAX 1.00	10.00~15.00	16.00~18.00	2.00~3.00	65,000 (45.7)	25,000 (17.6)	30	50	
A-182	F321	18Cr-8 Ti	Ni	MAX 0.08	MAX 2.00	0.030	0.030	MAX 1.00	9.00~12.00	Min 17.00		75,000 (52.7)	30,000 (21.1)	30	50	
A-182	F347	18Cr-8 Cb	Ni	MAX 0.08	MAX 2.00	0.030	0.030	MAX 1.00	9.00~13.00	17.00~20.00		75,000 (52.7)	30,000 (21.1)	30	50	
A-350*	LF1	Carbon Steel		MAX 0.30	0.75~1.05	0.035	0.040	0.15~0.30	MAX 0.40	MAX 0.30	MAX 0.12	60,000~85,000 (42.2~59.7)	30,000 (21.1)	25	38	
A-350*	LF2	Carbon Steel		MAX 0.30	MAX 1.35	0.035	0.040	0.15~0.30	MAX 0.40	MAX 0.30	MAX 0.12	70,000~95,000 (49.2~66.8)	36,000 (25.3)	22	30	
A-350*	LF3	3½	Ni	MAX 0.20	MAX 1.35	0.035	0.040	0.20~0.35	3.25~3.75	MAX 0.30	MAX 0.12	70,000~95,000 (49.2~66.8)	37,500 (26.4)	22	35	

*OTHER ELEMENTS : copper (0.40% MAX.), Vanadium, (0.03% MAX.), Columbium (0.02% MAX.)

*The sum of Cu, Ni, Cr and Mo Shall not be exceed 1.00%

*The sum of Cr and Mo shall not be exceed 0.32%

S-LOK®

Medium Pressure Cone and Thread Fittings

The best partner for value creation
We support the innovations of customer



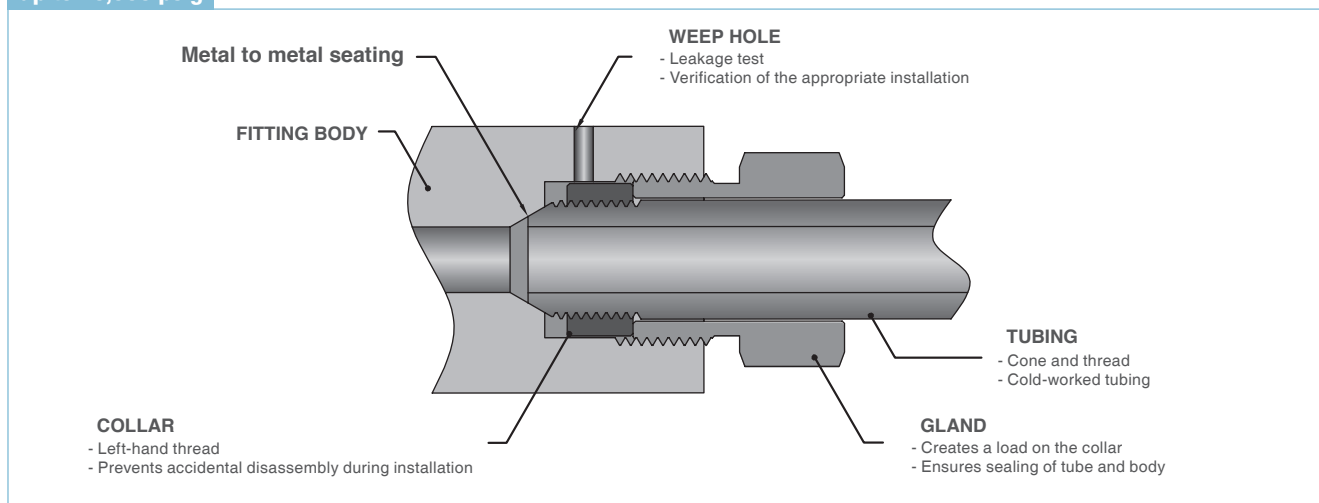
12



Catalogue No. S-LOK Mar.2024

Medium Pressure Cone and Thread Fitting - MP Series

up to 20,000 psig



Features

- Cone and thread connection provides dependable medium and high pressure performance.
- Pressures to 20,000 psi (1,379 bar)
- Available manufactured from cold worked 316 Stainless steel.
- Operating Temperatures from -423°F (-252°C) to 1200°F (650°C).
- Anti-vibration connection components available.
- All items available in special material.

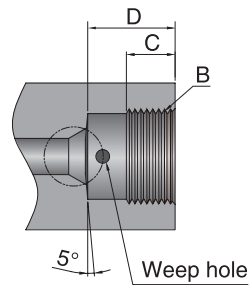
Materials of Construction

Component	Material
Body	Stainless Steel 316
Gland	Stainless Steel 316
Collar	Stainless Steel 316

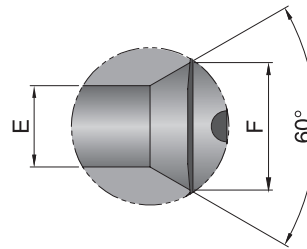
Ordering Information

MPL	-	8	-	S6LS
Fitting Series & Product Type		Connection Size		Material
Product Type	Connection Size		Material	
Refer to the basic ordering number in the dimension table.	- 4 : 1/4" - 6 : 3/8" - 9 : 9/16" - 12 : 3/4" - 16 : 1"		- S6 : Stainless Steel 316	

Cone & Thread Tube End Dimensions

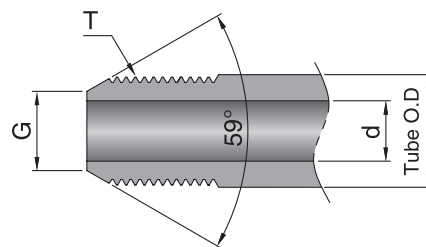


Female Pocket



Female Seat

Tube O.D. inch	Dimensions, mm(inch)				
	B	C	D	E	F
1/4	7/16-20	7.1(0.28)	12.7(0.50)	2.8(0.11)	4.8(0.19)
3/8	9/16-18	9.7(0.38)	16.0(0.63)	5.1(0.20)	7.9(0.31)
9/16	13/16-16	11.2(0.44)	19.1(0.75)	7.9(0.31)	12.7(0.50)
3/4	3/4-14 NPSM	12.7(0.50)	23.9(0.94)	11.2(0.44)	16.0(0.63)
1	1 3/8-12	20.6(0.81)	33.3(1.31)	14.2(0.56)	22.4(0.88)



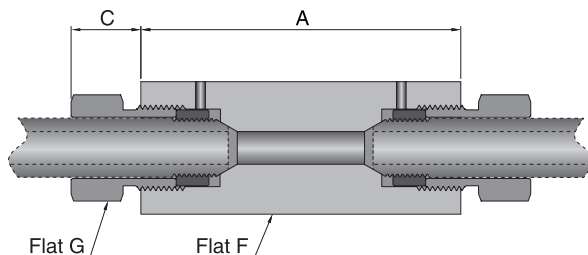
Male Coned Tube

Tube O.D. inch	Dimensions, mm(inch)			Working Pressure, psig(bar)		
	G	d	T Left Hand Thread	Strain-Hardened 316 SS		
				200°F (93°C)	400°F (204°C)	600°F (316°C)
1/4(6.35)	3.6(0.14)	2.77(0.109)	1/4-28	20,000(1,379)	19,000(1,310)	18,000(1,241)
3/8(9.53)	6.4(0.25)	5.16(0.203)	3/8-24	20,000(1,379)	19,000(1,310)	18,000(1,241)
9/16(14.29)	10.4(0.41)	7.92(0.312)	9/16-18	20,000(1,379)	19,000(1,310)	18,000(1,241)
3/4(19.05)	14.2(0.56)	11.13(0.438)	3/4-16	20,000(1,379)	19,000(1,310)	18,000(1,241)
1(25.40)	18.3(0.72)	14.27(0.562)	1-14	20,000(1,379)	19,000(1,310)	18,000(1,241)

Basic Ordering Number and Dimensions

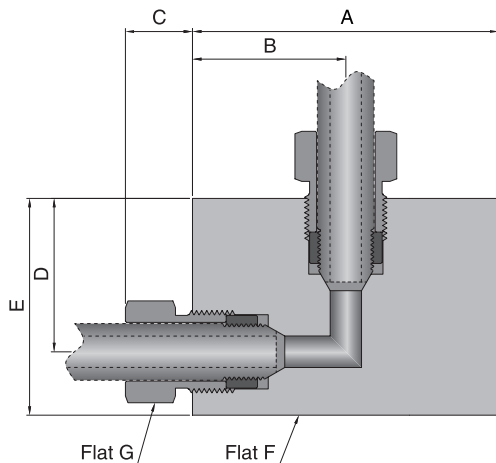
Dimensions are for reference only and are subject to change. Dimensions shown with collar and gland finger-tight.

Coupling



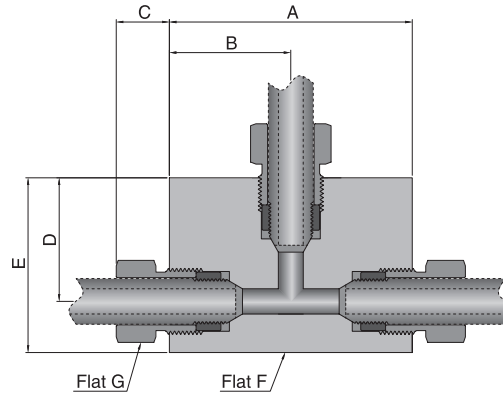
Basic Ordering Number	Tube O.D	Dimensions, mm (inch)			
		A	C	F	G
MPU-4	1/4	38.1(1.50)	9.7(0.38)	3/4	1/2
MPU-6	3/8	44.5(1.75)	12.2(0.48)	3/4	5/8
MPU-9	9/16	53.8(2.12)	17.3(0.68)	1	7/8
MPU-12	3/4	63.5(2.50)	15.0(0.59)	1 3/8	1 3/16
MPU-16	1	88.9(3.50)	18.8(0.74)	1 3/4	1 3/8

Elbow



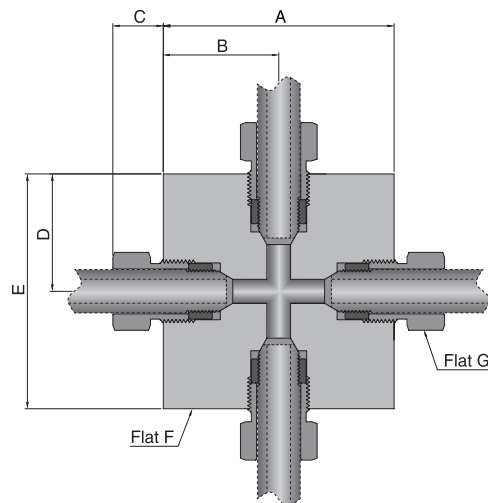
Basic Ordering Number	Tube O.D	Dimensions, mm (inch)						
		A	B	C	D	E	F	G
MPL-4	1/4	38.1(1.50)	19.1(0.75)	9.7(0.38)	19.1(0.75)	28.6(1.13)	5/8	1/2
MPL-6	3/8	50.8(2.00)	25.4(1.00)	12.2(0.48)	25.4(1.00)	35.1(1.38)	3/4	5/8
MPL-9	9/16	63.5(2.50)	31.8(1.25)	17.3(0.68)	31.8(1.25)	44.5(1.75)	1	7/8
MPL-12	3/4	76.2(3.00)	38.1(1.50)	15(0.59)	38.1(1.50)	57.2(2.25)	1 3/8	1 3/16
MPL-16	1	105(4.13)	52.3(2.06)	18.8(0.74)	52.3(2.06)	76.2(3.00)	1 3/4	1 3/8

Tee



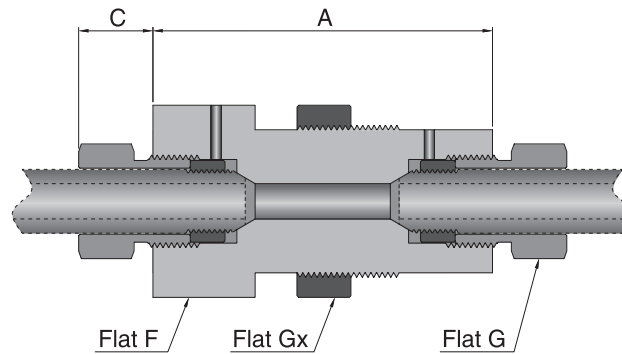
Basic Ordering Number	Tube O.D	Dimensions, mm (inch)						
		A	B	C	D	E	F	G
MPT-4	1/4	38.1(1.50)	19.1(0.75)	9.7(0.38)	19.1(0.75)	28.6(1.13)	5/8	1/2
MPT-6	3/8	50.8(2.00)	25.4(1.00)	12.2(0.48)	25.4(1.00)	35.1(1.38)	3/4	5/8
MPT-9	9/16	63.5(2.50)	31.8(1.25)	17.3(0.68)	31.8(1.25)	44.5(1.75)	1	7/8
MPT-12	3/4	76.2(3.00)	38.1(1.50)	15(0.59)	38.1(1.50)	57.2(2.25)	1 3/8	1 3/16
MPT-16	1	105(4.12)	52.3(2.06)	18.8(0.74)	52.3(2.06)	76.2(3.00)	1 3/4	1 3/8

Cross



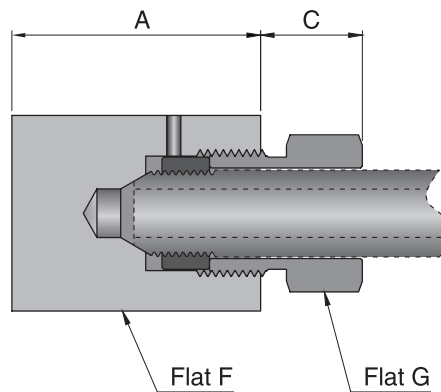
Basic Ordering Number	Tube O.D	Dimensions, mm (inch)						
		A	B	C	D	E	F	G
MPX-4	1/4	38.1(1.50)	19.1(0.75)	9.7(0.38)	19.1(0.75)	38.1(1.50)	5/8	1/2
MPX-6	3/8	50.8(2.00)	25.4(1.00)	12.2(0.48)	25.4(1.00)	50.8(2.00)	3/4	5/8
MPX-9	9/16	63.5(2.50)	31.8(1.25)	17.3(0.68)	31.8(1.25)	63.5(2.50)	1	7/8
MPX-12	3/4	76.2(3.00)	38.1(1.50)	15(0.59)	38.1(1.50)	76.2(3.00)	1 3/8	1 3/16
MPX-16	1	105(4.12)	52.3(2.06)	18.8(0.74)	52.3(2.06)	105(4.12)	1 3/4	1 3/8

Bulkhead



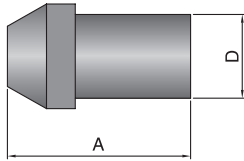
Basic Ordering Number	Tube O.D	Dimensions, mm (inch)						
		A	C	F	G	Gx	Panel hole Size	Maximum Panel Thickness
MPBH-4	1/4	50.8(2.00)	9.7(0.38)	1	1/2	1	22.4(0.88)	9.7(0.38)
MPBH-6	3/8	50.8(2.00)	12.2(0.48)	1	5/8	1	23.9(0.94)	9.7(0.38)
MPBH-9	9/16	66.5(2.62)	17.3(0.68)	1 3/8	7/8	1 3/8	31.8(1.25)	12.7(0.50)
MPBH-12	3/4	66.5(2.62)	15(0.59)	1 7/8	1 3/16	1 7/8	42.9(1.69)	9.7(0.38)
MPBH-16	1	88.9(3.50)	18.8(0.74)	2 1/8	1 3/8	2 1/8	50.8(2.00)	12.7(0.50)

Cap



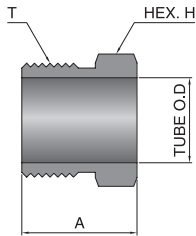
Basic Ordering Number	Tube O.D	Dimensions, mm (inch)			
		A	C	F	G
MPC-4	1/4	25.4(1.00)	9.7(0.38)	5/8	1/2
MPC-6	3/8	31.8(1.25)	12.2(0.48)	3/4	5/8
MPC-9	9/16	38.1(1.50)	17.3(0.68)	1	7/8
MPC-12	3/4	44.5(1.75)	15(0.59)	1 3/8	1 3/16
MPC-16	1	57.2(2.25)	18.8(0.74)	1 3/4	1 3/8

Plug



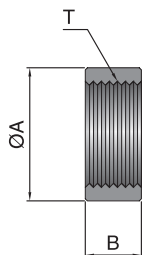
Basic Ordering Number	Tube O.D	Dimensions, mm (inch)	
		A	D
MPP-4	1/4	25.4(1.00)	6.4(0.25)
MPP-6	3/8	31.8(1.25)	9.5(0.38)
MPP-9	9/16	39.6(1.56)	14.2(0.56)
MPP-12	3/4	41.2(1.62)	19.1(0.75)
MPP-16	1	55.6(2.19)	25.4(1.00)

Gland



Basic Ordering Number	Tube O.D	Dimensions, mm (inch)		
		A	H	Thread, T
MPG-4	1/4"	14.2 (0.56)	12.7 (0.5)	7/16 - 20 UNF
MPG-6	3/8"	18.3 (0.72)	15.8 (0.62)	9/16 - 18 UNF
MPG-9	9/16"	25.4 (1.00)	22.2 (0.87)	13/16 - 16 UNF
MPG-12	3/4"	23.9 (0.94)	28.5 (1.12)	3/4 - 14 NPSM
MPG-16	1"	35.1 (1.38)	34.9 (1.37)	1-3/8 - 12 UNF

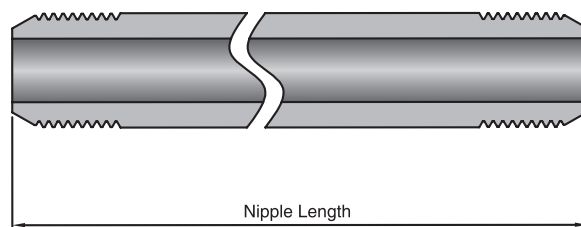
Collar



Basic Ordering Number	Tube O.D	Dimensions, mm (inch)		
		A	B	Thread, T
MPC-4	1/4"	9.7 (0.38)	5.6 (0.22)	1/4 - 28 L.H
MPC-6	3/8"	11.9 (0.47)	6.4 (0.25)	3/8 - 24 L.H
MPC-9	9/16"	18.3 (0.72)	7.9 (0.31)	9/16 - 18 L.H
MPC-12	3/4"	23.9 (0.94)	9.7 (0.37)	3/4 - 16 L.H
MPC-16	1"	31.8 (1.25)	12.7 (0.5)	1 - 14 L.H

Cone & Thread Nipples

Cone & Thread Nipple's standard material is 316 stainless steel.
The length is up to 304.8mm (12"), gland and collar are not included.
Product number is shown in the table below.



Tube O.D inch	Tube I.D inch	Working Pressure, psi						
		Nipple Length, mm (inch)						
		70 (2.75)	76.2 (3)	101.6 (4)	152.4 (6)	203.2 (8)	254 (10)	304.8 (12)
1/4	7/64	MPN-4-2.75S	MPN-4-3S	MPN-4-4S	MPN-4-6S	MPN-4-8S	MPN-4-10S	MPN-4-12S
3/8	13/64		MPN-6-3	MPN-6-4S	MPN-6-6S	MPN-6-8S	MPN-6-10S	MPN-6-12S
9/16	5/16			MPN-9-4S	MPN-9-6S	MPN-9-8S	MPN-9-10S	MPN-9-12S
3/4	7/16				MPN-12-6S	MPN-12-8S	MPN-12-10S	MPN-12-12S
1	9/16				MPN-16-6S	MPN-16-8S	MPN-16-10S	MPN-16-12S

Tubing

Cold-drawn 1/2 hard condition seamless tubing.
Tubing with approximately 40% higher strength than annealed tubing.
Standard length is 6 meters.
Standard material is 316 stainless steel.



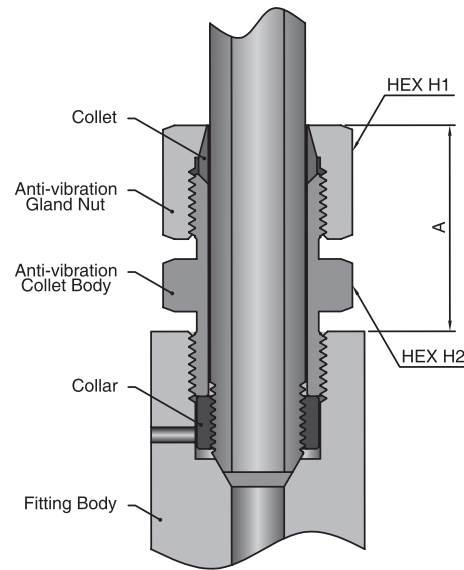
Basic Ordering Number	Tube O.D inch	Tube I.D mm (inch)
MPTSS-4-6M	1/4	2.8 (0.109)
MPTSS-6-6M	3/8	5.2 (0.203)
MPTSS-9-6M	9/16	7.9 (0.312)
MPTSS-12-6M	3/4	11.1 (0.438)
MPTSS-16-6M	1	14.3 (0.563)

✚ Anti-vibration Assemblies

For Piping systems subjects to severe vibration and shock, it is recommended to use anti-vibration assemblies.

Using anti-vibration assemblies can help ensure stability of the system and extend life of tube connection.

Anti-vibration assemblies are available for all S-LOK medium pressure fitting - MP Series



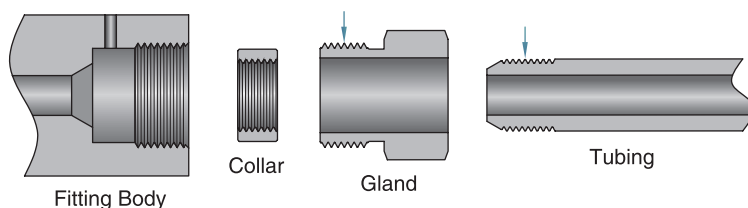
Basic Ordering Number	Tube O.D inch	Dinmensions, mm (inch)		
		A	H1	H2
MPAV-4	1/4	23.9 (0.94)	15.8 (0.62)	15.8 (0.62)
MPAV-6	3/8	30 (1.18)	19.1 (0.75)	19.1 (0.75)
MPAV-9	9/16	36.6 (1.44)	23.9 (0.94)	23.9 (0.94)
MPAV-12	3/4	39.6 (1.56)	34.9 (1.37)	34.9 (1.37)
MPAV-16	1	44.5 (1.75)v	44.5 (1.75)	44.5 (1.75)

Anti-vibration Components

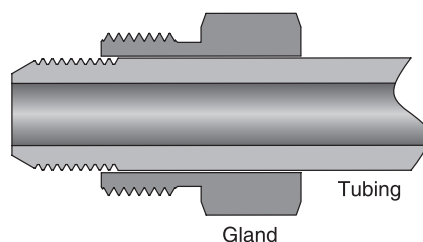
Tube O.D inch	Basic Ordering Number			
	Collet	Anti-vibration Gland Nut	Anti-vibration Collet Body	Collar
1/4	MPAVC-4	MPAVN-4	MPAVB-4	MPC-4
3/8	MPAVC-6	MPAVN-6	MPAVB-6	MPC-6
9/16	MPAVC-9	MPAVN-9	MPAVB-9	MPC-9
3/4	MPAVC-12	MPAVN-12	MPAVB-12	MPC-12
1	MPAVC-16	MPAVN-16	MPAVB-16	MPC-16

Installation Instructions - Medium Pressure Cone and Thread Fitting - MP Series

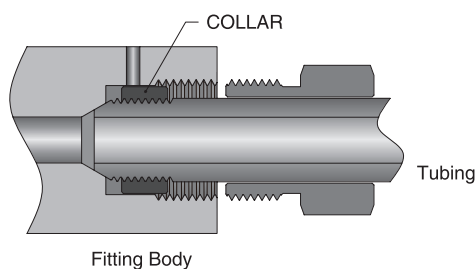
1. Lubricate all male threads with anti-seize lubricant.
Lubricate cone end of the tube with system a compatible lubricant.



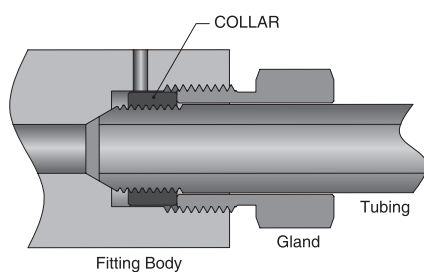
2. For standard fittings, slide the tubing into the gland.
For anti-vibration assemblies, slide the tubing into the anti-vibration collet body and collet onto tubing.



3. Rotate the collar counter-clockwise until 1 ~ 2 full threads are exposed at the conical end of the tube, then insert into the fitting body. Make sure the conical end of the tubing rests firmly on the angled seat of the fitting body.



4. For standard fittings thread the gland into the fitting body until finger tight.
Hold the fitting body firmly and tighten the gland to the required torque.
For anti-vibration assemblies, thread the anti-vibration collet body into the fitting body until finger tight.
Tighten the anti-vibration collet body to specified torque.
Then thread the anti-vibration gland nut onto the anti-vibration collet body until finger tight.
Tighten the anti-vibration gland nut to the required torque.



Tube O.D inch	Required Torque N-m (kgf-cm)
1/4	27 (275.3)
3/8	40.5 (413)
9/16	75.5 (769.9)
3/4	125 (127.4)
1	215 (2192)