

Ferrule Tube Fittings

Ferrule fittings provide reliable, leak-free connections at pipeline joints. Their torque-free sealing design eliminates the risk of leaks that could otherwise compromise instrumentation and process piping systems. All installation actions are axial — along the tube — rather than rotational. This means no torque is transferred to the system during installation, preserving the structural integrity and eliminating initial stress in the tubing.

A secure and stable system depends on several critical factors: material compatibility, proper component grades, correct installation, and routine operation and maintenance. These responsibilities are shared by both system designers and end-users.

Instrumentation tube fittings offer robust protection against fluid leakage. All fittings are pressure-rated, ensuring safe operation even during instrument calibration or fluid processing, thereby preventing harmful leaks from occurring.

To ensure optimal performance, an instrumentation tube fitting consists of five precisely engineered components: the nut, back ferrule, front ferrule, body, and tubing. These components are manufactured under stringent quality control standards, with minimal dimensional tolerances, ensuring a high-quality product.

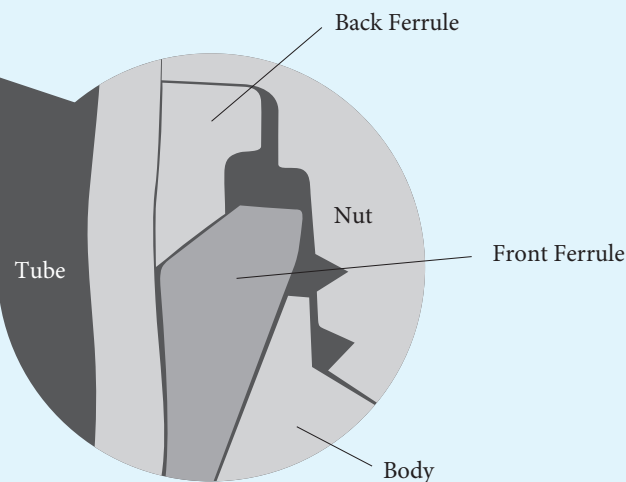
Installation is simple and does not require special tools, making it highly convenient for users.

For maximum reliability, each of the four core components of a ferrule fitting — nut, back ferrule, front ferrule, and body — is made with precision machining and tightly controlled tolerances. This ensures excellent compatibility among components and consistent high performance even under demanding environmental conditions.



During the assembly process, the front ferrule is driven into the fitting body and the tubing to form the primary seal, while the back ferrule hinges inward to create a strong mechanical grip on the tube.

The geometry of the back ferrule enables an engineered hinge-collet action, which transforms axial movement into a radial swaging action on the tubing. This design ensures a secure hold while operating under relatively low assembly torque requirements.



instruments and meters



petroleum and chemical industries



Control System



Power Electric supply



paper manufacturing

Although the fitting is composed of four parts, once installed with the tubing, it becomes a five-part assembly. The dual-ferrule design ensures a standardized, sequential installation that guarantees a secure, leak-free connection. Moreover, the installation process remains straightforward and tool-friendly, requiring no specialized expertise.

Installation

Installation Instructions

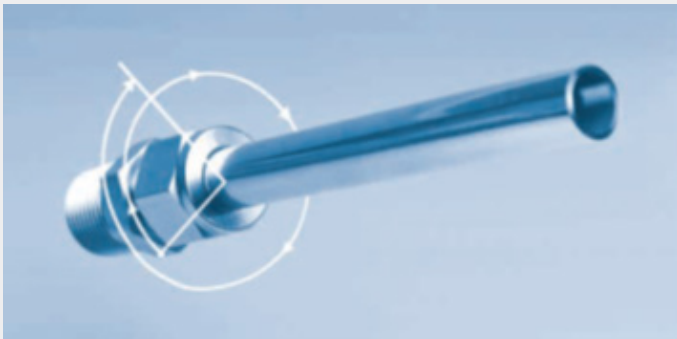
Ferrule Fittings can be installed using standard wrenches.



Step 1:
Insert the tubing into the fitting until it bottoms out in the fitting body.
Ensure the nut is hand-tightened firmly.



Step 2:
Hold the fitting body securely with your fingers or a wrench.
Using a wrench, tighten the nut 3/4 turn from the hand-tight position.
(This step applies to fittings with tube sizes between 1/16" and 3/16".)



Step 3:
For ferrule fittings with tube sizes from 1/4" to 1", tighten the nut 1-1/4 turns from the hand-tight position.

AKJia ferrule fittings are compatible with various tubing materials and wall thicknesses. This ensures that the nut can be easily removed during disassembly and allows for multiple reliable reassemblies without compromising performance.

Sealing Performance

Backed by extensive testing and over 20 years of experience in manufacturing high-quality tube fittings, AKJia ferrule fittings have proven to deliver qualified and reliable sealing performance.ο

Tube Outside Diameter Tolerance

Dimension (inch)	Tolerance (inch)	Dimension (mm)	Tolerance (mm)
1/16 - 1/8	±0.003	2 - 3	±0.076
3/16 - 1 1/4	±0.005	4 - 25	±0.127
1 1/2 - 2	±0.006	38 - 50	±0.152



Table 1: Stainless Steel Tubing — Inch Sizes

Tubing Material Requirements

Tubing shall be annealed 304 or 316 stainless steel conforming to ASTM A213, ASTM A269, or equivalent specifications.

- Metal temperature range: -20°F to 100°F (-29°C to 37°C)
- Tubing must comply with ASTM A269 or A213 (or equivalent standards), and may be either seamless or welded.
- The maximum hardness shall not exceed 90 HRB (200 HV).
- Tubing must be free from scratches and suitable for flaring and bending operations.

OD Outside Diameter (inch)	Wall Thickness (inch)												
	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
1/16	5600	6800	8100	9400	12000								
1/8						8000	10900						
3/16						5400	7000	10200					
1/4						4000	5100	7500	10200				
5/16							4000	5800	8000				
3/8							3300	4800	6500				
1/2							2400	3500	4700	6200			
5/8								2900	4000	5200	6000		
3/4								2400	3300	4200	4900	5800	
7/8								2000	2800	3600	4200	4800	
1									2400	3100	3600	4200	4700



Table 2: Stainless Steel Tubing — Metric Sizes

Material Requirements:

Tubing shall be annealed 304 or 316 stainless steel, manufactured in accordance with ASTM A213, ASTM A269, or equivalent specifications.

- Operating Temperature Range: -20°F to 100°F (-29°C to 37°C)
- Tubing must be seamless or welded, and conform to ASTM A213 or A269, or equivalent international standards.
- Maximum hardness: 90 HRB (200 HV)
- Tubing must be free of surface scratches and suitable for flaring and bending operations.

OD Outside Diameter (mm)	Wall Thickness (inch)														
	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	
3	670														
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		120	160	200	230	260	300	340							
25				180	200	230	260	290	320						



Table 3: Steel Tube Wall Thickness (inches)

Steel Tube OD Outer Diameter	Tube Wall Thickness (inch)								
mm	inch	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
2	1/8	2700	3600						
3	3/16	1800	23 00	3400					
6	1/4	1300	1600	2500	3500				
8	5/16		1300	1900	2700				
10	3/8		1000	1600	2200				
12	1/2		800	1100	1600	2100			
16	5/8			900	1200	1600	1900		
20	3/4			700	1000	1300	1500	1800	
22	7/8			600	800	1100	1300	1500	
25	1			500	700	900	1100	1300	1500

Table 4: Temperature Derating Factors for Pressure Ratings

Example:
At 800°F (427°C), the allowable working pressure for 1/2" 316 stainless steel tubing is reduced based on a temperature derating factor of 0.79. If the rated pressure at 100°F is 3750 psi, then:
 $3750\text{psi} \times 0.79 = 2962.5\text{psi}$, So, the allowable pressure at 800°F is 2962.5 psi.

° F	° C	SS 316	Copper
200	93	1	0.80
400	204	0.96	0.50
600	316	0.85	
800	427	0.79	
1000	538	0.76	
1200	649	0.37	



Tubing for Gas Service Applications

Gases, due to their **small molecular size**, can escape through even the smallest potential leak paths in a tubing system. Therefore, it is recommended to use tubing with thicker walls for gas applications to reduce the risk of leakage and enhance system integrity.

Table 5 below lists the recommended minimum wall thicknesses for gas service to ensure safe and reliable performance.

Imperial (Inch)		Metric (mm)	
Tube (OD)	Min. Wall Thickness	Tube (OD)	Min. Wall Thickness
1/8	0.028	3	0.8
3/16	0.028	6	0.8
1/4	0.028	8	1.0
5/16	0.035	10	1.0
3/8	0.035	12	1.0
1/2	0.049	14	1.2
5/8	0.065	16	1.5
3/4	0.065	18	1.5
7/8	0.083	20	1.8
1	0.083	22	2.0
1 1/4	0.095	25	2.2
1 1/2	0.120	38	3.0
2	0.156	50	4.5



Table 6: Pressure Ratings Tapered Pipe Thread

Allowable Working Pressures for 316 Stainless Steel and Brass components with male and female tapered pipe thread ends.

NPT / ISO Thread Size	316 Stainless Steel		Brass	
	Male Thread	Female Thread	Male Thread	Female Thread
1/16	11000	6700	5500	3300
1/8	10000	6500	5000	3200
1/4	8000	6600	4000	3300
3/8	7800	5300	3900	2600
1/2	7700	4900	3800	2400
3/4	7300	4600	3600	2300
1	5300	4400	2600	2200
1 1/4	6000	50000	3000	2500
1 1/2	5000	4600	2500	2300
2	3900	3900	1900	1900

Table 7: Pressure Ratings ORB Thread

Allowable Working Pressures for 316 Stainless Steel components with male and female SAE ORB Thread

(LOB) SAE J1926 Thread Size	316 Stainless Steel	
	不可定位	可定位
inch	psi	
5/16 - 24	4568	4568
7/16 - 20	4568	4568
1/2 - 20	4568	4568
9/16 - 18	4568	3626
3/4 - 16	4568	3626
7/8 - 14	3626	2900
1 1/16 - 12	3626	2900
1 3/16 - 12	2900	2320
1 5/16 - 12	2900	2320
1 5/8 - 12	2320	1813
1 7/8 - 12	2320	1813
2 1/2 - 12	1813	1450



Table 8: Pressure Ratings BSPP Thread

(G) ISO / BSPP Thread Size	316 Stainless Steel
inch	psi
1/8	4568
1/4	4568
3/8	4568
1/2	2320

Materials

Tube Material	Solid Material	Forged	Tube Standard
Stainless Steel	ASTM A479, ASTM A276, ASME SA479, JIS G4303	ASTM A182, 316, ASME SA182 F316, JIS G3214	ASTM A213
			ASME SA213
			ASTM A249
			ASTM A269
			MIL T8504
			MIL T8506
			JIS G3459

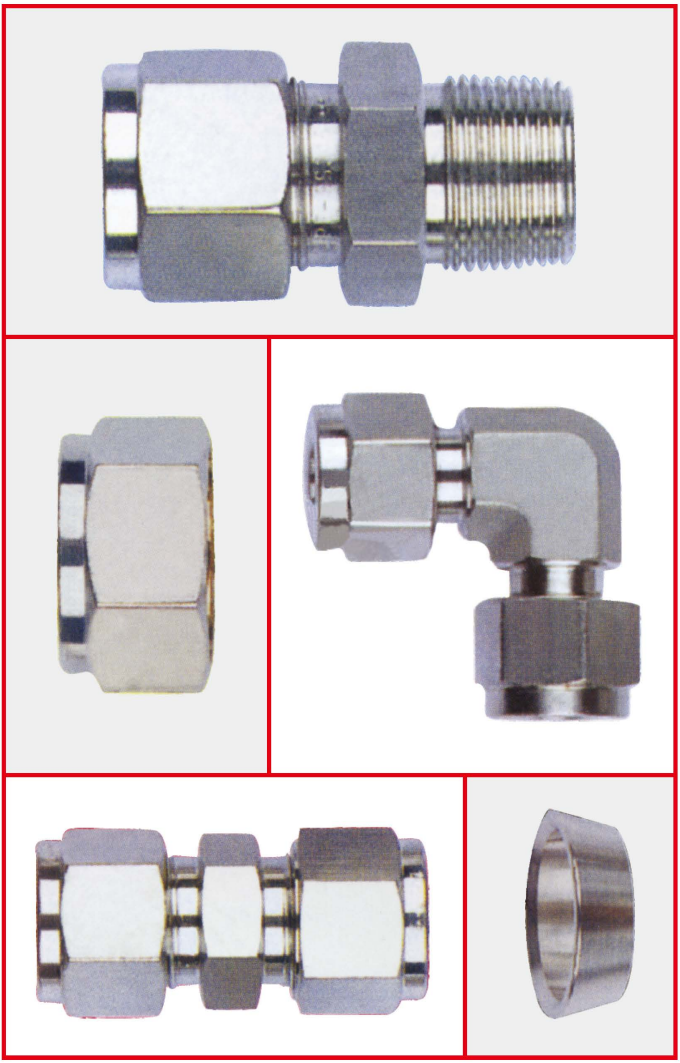
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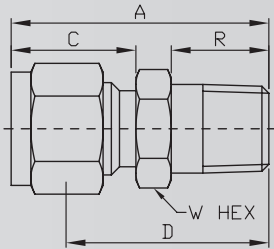
A B C D E
SS - 2 - MC - 2 - AN

A: Material	B: Tube Size		C: Connect Type	D: Second connect size		E: second connect type
	Imperial	Metric		Imperial	Metric	
SS	2		MC	2		AN
SS 316	2: 1/8"	3MO: 3mm	AN: AN Thread (37° JIC)	2: 1/8"	3MO: 3mm	AN: 37° AN fittings
	3: 3/16"	6MO: 6mm	BAD: Bulkhead	3: 3/16"	6MO: 6mm	ANF: 37° AN Female Fittings
	4: 1/4"	8MO: 8mm	BAN: 37° AN Fitting Bulkhead	4: 1/4"	8MO: 8mm	BT: Through-hole
	5: 5/16"	10MO: 10mm	BF: Back Ferrule	5: 5/16"	10MO: 10mm	F: Female Thread
	6: 3/8"	12MO: 12mm	CP: Caps	6: 3/8"	12MO: 12mm	RG: ISO/BSP Parallel pipe thread (Pressure gauge)
	8: 1/2"	14MO: 14mm	FAD: Female Thread Adapter	8: 1/2"	14MO: 14mm	RJ: ISO/BSP Parallel pipe thread (Japanese pressure gauge)
	10: 5/8"	16MO: 16mm	FBC: Female Thread Bulkhead	10: 5/8"	16MO: 16mm	RP: ISO/BSP Parallel pipe thread
	12: 3/4"	18MO: 18mm	FBT: Female Thread Branch Tee	12: 3/4"	18MO: 18mm	RS: ISO/BSP Parallel pipe thread
	14: 7/8"	20MO: 20mm	FC: Female Thread Connector	14: 7/8"	20MO: 20mm	RT: ISO/BSP Taped Pipe Thread
	16: 1"	22MO: 22mm	FE: Female Thread Elbow	16: 1"	22MO: 22mm	W: welding
		25MO: 25mm	FF: Front Ferrule		25MO: 25mm	
			FRT: Female Run Tee			
			HME: 45° Elbow Male Thread			
			MAD: Male Thread Adapter			
			MBC: Male Thread Bulkhead			
			MBT: Male Thread Branch Tee			
			MC: Male Thread Connector			
			MCOR: Male Thread connector O Seal			
			MCST: SAE Male Thread Connector			
			MCW: Male Pipe Weld Connector			
			ME: Male Thread 90 ° elbow			
			MEPR: Male Thread 90° Elbow(positionable)			
			MRT: Male Thread, Run, TEE Connector			
			MTC: Through-hole Male Thread Connector (thermocouples or dip tubes)			
			NU: Nut			
			PG: Plug			
			PO: Port Connector			
			RD: Reducer			
			RU: Reducing Union			
			SET: ferrule set			
			UC: Cross Unions			
			UE: 90° Elbow Unions			
			UN: Straight Unions			
			UT: TEE Unions			



Ferrule Tube Fittings

NPT Male Thread (Imperial Tube)



Unit = mm

Item Number	Swagelok	Imperial Tube						
		Tube OD	NPT Thread	A	C	D	R	W HEX
2-MC-2	200-1-2	1/8	1/8	1.20	0.60	0.94	0.38	7/16
2-MC-4	200-1-4	1/8	1/4	1.40	0.60	1.14	0.56	9/16
2-MC-6	200-1-6	1/8	3/8	1.42	0.60	1.16	0.56	11/16
2-MC-8	200-1-8	1/8	1/2	1.67	0.60	1.41	0.75	7/8
3-MC-2	300-1-2	3/16	1/8	1.23	0.64	0.97	0.38	7/16
3-MC-4	300-1-4	3/16	1/4	1.43	0.64	1.17	0.56	9/16
4-MC-2	400-1-2	1/4	1/8	1.29	0.70	1.00	0.38	1/2
4-MC-4	400-1-4	1/4	1/4	1.49	0.70	1.20	0.56	9/16
4-MC-6	400-1-6	1/4	3/8	1.51	0.70	1.22	0.56	11/16
4-MC-8	400-1-8	1/4	1/2	1.76	0.70	1.47	0.75	7/8
4-MC-12	400-1-12	1/4	3/4	1.82	0.70	1.53	0.75	1-1/16
5-MC-2	500-1-2	5/16	1/8	1.34	0.73	1.05	0.38	9/16
5-MC-4	500-1-4	5/16	1/4	1.52	0.73	1.23	0.56	9/16
5-MC-6	500-1-6	5/16	3/8	1.55	0.73	1.25	0.56	11/16
5-MC-8	500-1-8	5/16	1/2	1.79	0.73	1.50	0.75	7/8
6-MC-2	600-1-2	3/8	1/8	1.38	0.76	1.09	0.38	5/8
6-MC-4	600-1-4	3/8	1/4	1.57	0.76	1.28	0.56	5/8
6-MC-6	600-1-6	3/8	3/8	1.57	0.76	1.28	0.56	11/16
6-MC-8	600-1-8	3/8	1/2	1.82	0.76	1.53	0.75	7/8
6-MC-12	600-1-12	3/8	3/4	1.88	0.76	1.59	0.75	1-1/16
8-MC-2	810-1-2	1/2	1/8	1.53	0.87	1.13	0.38	13/16
8-MC-4	810-1-4	1/2	1/4	1.71	0.87	1.31	0.56	13/16
8-MC-6	810-1-6	1/2	3/8	1.71	0.87	1.31	0.56	13/16
8-MC-8	810-1-8	1/2	1/2	1.93	0.87	1.53	0.75	7/8
8-MC-12	810-1-12	1/2	3/4	1.99	0.87	1.59	0.75	1-1/16
8-MC-16	810-1-16	1/2	1	2.28	0.87	1.88	0.94	1-3/8
10-MC-6	1010-1-6	5/8	3/8	1.74	0.87	1.34	0.56	15/16
10-MC-8	1010-1-8	5/8	1/2	1.93	0.87	1.53	0.75	15/16
10-MC-12	1010-1-12	5/8	3/4	1.99	0.87	1.59	0.75	1-1/16
12-MC-8	1210-1-8	3/4	1/2	1.99	0.87	1.59	0.75	1-1/16
12-MC-12	1210-1-12	3/4	3/4	1.99	0.87	1.59	0.75	1-1/16
12-MC-16	1210-1-16	3/4	1	2.28	0.87	1.88	0.94	1-3/8
14-MC-12	1410-1-12	7/8	3/4	1.99	0.87	1.59	0.75	1-3/16
14-MC-16	1410-1-16	7/8	1	2.28	0.87	1.88	0.94	1-3/8
16-MC-8	1610-1-8	1	1/2	2.27	1.05	1.78	0.75	1-3/8
16-MC-12	1610-1-12	1	3/4	2.27	1.05	1.78	0.75	1-3/8
16-MC-16	1610-1-16	1	1	2.46	1.05	1.97	0.94	1-3/8

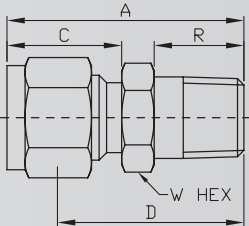
Swagelok: our ferrule tube fittings are interchangeable with Swagelok Brand

NPT Male Thread (Metric Tube)

Item Number	Swagelok	Metric Tube						
		Tube OD	NPT Thread	A	C	D	R	W HEX
3MO-MC-2	3MO-1-2	3	1/8	29,7	15,3	23,1	9,5	12,0
3MO-MC-4	3MO-1-4	3	1/4	35,3	15,3	28,7	14,3	14,0
4MO-MC-2	4MO-1-2	4	1/8	31,2	16,1	24,6	9,5	12,0
4MO-MC-4	4MO-1-4	4	1/4	36,3	16,1	29,7	14,3	14,0
6MO-MC-2	6MO-1-2	6	1/8	32,9	17,7	25,4	9,5	14,0
6MO-MC-4	6MO-1-4	6	1/4	38,1	17,7	30,6	14,3	14,0
6MO-MC-6	6MO-1-6	6	3/8	38,5	17,7	31,0	14,3	18,0
6MO-MC-8	6MO-1-8	6	1/2	44,8	17,7	37,3	19,1	22,0
8MO-MC-2	8MO-1-2	8	1/8	34,2	18,6	26,7	9,5	15,0
8MO-MC-4	8MO-1-4	8	1/4	38,8	18,6	31,3	14,3	15,0
8MO-MC-6	8MO-1-6	8	3/8	39,3	18,6	31,8	14,3	18,0
8MO-MC-8	8MO-1-8	8	1/2	45,6	18,6	38,1	19,1	22,0
10MO-MC-2	10MO-1-2	10	1/8	36,1	19,5	28,6	9,5	18,0
10MO-MC-4	10MO-1-4	10	1/4	40,9	19,5	33,3	14,3	18,0
10MO-MC-6	10MO-1-6	10	3/8	40,9	19,5	33,3	14,3	18,0
10MO-MC-8	10MO-1-8	10	1/2	47,5	19,5	38,9	19,1	22,0
10MO-MC-12	10MO-1-12	10	3/4	46,4	19,5	38,9	19,1	27,0
10MO-MC-16	10MO-1-16	10	1	55,0	19,5	47,5	23,8	35,0
12MO-MC-4	12MO-1-4	12	1/4	43,4	22,0	33,3	14,3	22,0
12MO-MC-6	12MO-1-6	12	3/8	43,4	22,0	33,3	14,3	22,0
12MO-MC-8	12MO-1-8	12	1/2	49,0	22,0	38,9	19,1	22,0
12MO-MC-12	12MO-1-12	12	3/4	50,5	22,0	40,4	19,1	27,0
14MO-MC-4	14MO-1-4	14	1/4	44,2	22,0	34,1	14,3	24,0
14MO-MC-6	14MO-1-6	14	3/8	44,2	22,0	34,1	14,3	24,0
14MO-MC-8	14MO-1-8	14	1/2	49,0	22,0	38,9	19,1	24,0
15MO-MC-8	15MO-1-8	15	1/2	49,0	22,0	38,9	19,1	24,0
16MO-MC-6	16MO-1-6	16	3/8	44,1	22,0	34,01	14,3	24,0
16MO-MC-8	16MO-1-8	16	1/2	49,0	22,0	38,9	19,1	24,0
16MO-MC-12	16MO-1-12	16	3/4	50,5	22,0	40,5	19,1	27,0
18MO-MC-8	18MO-1-8	18	1/2	50,6	22,0	40,5	19,1	27,0
18MO-MC-12	18MO-1-12	18	3/4	50,6	22,0	40,5	19,1	27,0
20MO-MC-8	20MO-1-8	20	1/2	50,6	22,0	42,2	19,1	30,0
20MO-MC-12	20MO-1-12	20	3/4	52,3	22,0	42,2	19,1	30,0
20MO-MC-16	20MO-1-16	20	1	57,7	22,0	47,6	23,8	35,0
22MO-MC-12	22MO-1-12	22	3/4	52,3	22,0	42,2	19,1	35,0
25MO-MC-8	25MO-1-8	25	1/2	57,5	22,0	45,3	19,1	35,0
25MO-MC-12	25MO-1-12	25	3/4	57,5	22,0	45,2	19,1	35,0
25MO-MC-16	25MO-1-16	25	1	62,3	22,0	50,0	23,8	35,0

Swagelok: our ferrule tube fittings are interchangeable with Swagelok Brand

BSPT Male Thread (Imperial Tube)



Unit = mm

Item Number	Swagelok	Imperial Tube							
		Tube OD	BSPT Thread	A	C	D	R	W HEX	ID
5-MC-2RT	500-1-2RT	5/16	1/8	1.34	0.73	1.05	0.38	9/16	0.19
5-MC-4RT	500-1-4RT	5/16	1/4	1.52	0.73	1.23	0.56	9/16	0.19
6-MC-2RT	600-1-2RT	3/8	1/8	1.39	0.76	1.09	0.38	5/8	0.19
6-MC-4RT	600-1-4RT	3/8	1/4	1.57	0.76	1.28	0.56	5/8	0.28
6-MC-6RT	600-1-6RT	3/8	3/8	1.57	0.76	1.28	0.56	11/16	0.28
6-MC-8RT	600-1-8RT	3/8	1/2	1.82	0.76	1.53	0.75	7/8	0.28
8-MC-4RT	810-1-4RT	1/2	1/4	1.69	0.86	1.31	0.56	13/16	0.28
8-MC-6RT	810-1-6RT	1/2	3/8	1.69	0.86	1.31	0.56	13/16	0.38
8-MC-8RT	810-1-8RT	1/2	1/2	1.91	0.86	1.53	0.75	7/8	0.41

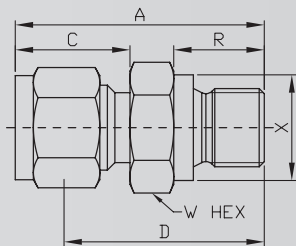
Swagelok: our ferrule tube fittings are interchangeable with Swagelok Brand

BSPT Male Thread (Metric Tube)

Item Number	Swagelok	Metric Tube						
		Tube OD	BSPT	A	C	D	R	W HEX
3MO-MC-2RT	3MO-1-2RT	3	1/8	29,7	15,3	23,1	9,7	12,0
3MO-MC-4RT	3MO-1-4RT	3	1/4	35,3	15,3	28,7	14,2	14,0
4MO-MC-2RT	4MO-1-2RT	4	1/8	31,2	16,1	24,6	9,7	12,0
4MO-MC-4RT	4MO-1-4RT	4	1/4	36,3	16,1	29,7	14,2	14,0
6MO-MC-2RT	6MO-1-2RT	6	1/8	32,9	17,7	25,4	9,7	14,0
6MO-MC-4RT	6MO-1-4RT	6	1/4	40,0	17,7	30,5	14,2	14,0
6MO-MC-6RT	6MO-1-6RT	6	3/8	38,5	17,7	31,0	14,2	18,0
6MO-MC-8RT	6MO-1-8RT	6	1/2	45,6	17,7	38,1	19,1	22,0
8MO-MC-2RT	8MO-1-2RT	8	1/8	33,9	18,6	26,4	9,5	15,0
8MO-MC-4RT	8MO-1-4RT	8	1/4	38,7	18,6	31,2	14,2	15,0
8MO-MC-6RT	8MO-1-6RT	8	3/8	39,3	18,6	31,8	14,2	18,0
8MO-MC-8RT	8MO-1-8RT	8	1/2	45,6	18,6	38,1	19,1	22,0
10MO-MC-2RT	10MO-1-2RT	10	1/8	36,2	19,5	28,6	9,5	18,0
10MO-MC-4RT	10MO-1-4RT	10	1/4	40,9	19,5	33,3	14,2	18,0
10MO-MC-6RT	10MO-1-6RT	10	3/8	40,9	19,5	33,3	14,2	18,0
10MO-MC-8RT	10MO-1-8RT	10	1/2	46,5	19,5	38,9	19,1	22,0
12MO-MC-4RT	12MO-1-4RT	12	1/4	43,4	22,0	33,3	14,2	22,0
12MO-MC-6RT	12MO-1-6RT	12	3/8	43,4	22,0	33,3	14,2	22,0
12MO-MC-8RT	12MO-1-8RT	12	1/2	49,0	22,0	38,9	19,1	22,0
12MO-MC-12RT	12MO-1-12RT	12	3/4	49,5	22,0	40,4	19,1	27,0
15MO-MC-8RT	15MO-1-8RT	15	1/2	49,0	22,0	38,9	19,1	24,0
16MO-MC-6RT	16MO-1-6RT	16	3/8	44,2	22,0	34,1	14,2	24,0
16MO-MC-8RT	16MO-1-8RT	16	1/2	49,0	22,0	38,9	19,1	24,0
16MO-MC-12RT	16MO-1-12RT	16	3/4	49,5	22,0	40,5	19,1	27,0
18MO-MC-1-8RT	18MO-1-8RT	18	1/2	50,6	22,0	40,4	19,1	27,0
18MO-MC-1-12RT	18MO-1-12RT	18	3/4	50,6	22,0	40,4	19,1	27,0
20MO-MC-1-8RT	20MO-1-8RT	20	1/2	52,3	22,0	42,2	19,1	30,0
20MO-MC-1-12RT	20MO-1-12RT	20	3/4	52,3	22,0	42,2	19,1	30,0
22MO-MC-1-12RT	22MO-1-12RT	22	3/4	52,3	22,0	42,2	19,1	30,0
25MO-MC-12RT	25MO-1-12RT	25	3/4	57,5	26,5	45,2	19,1	35,0
25MO-MC-16RT	25MO-1-16RT	25	1	62,3	26,5	50,0	23,9	35,0

Swagelok: our ferrule tube fittings are interchangeable with Swagelok Brand

BSPP Male Thread (Imperial Tube)



Unit = mm

Part Number	Swagelok	Imperial Tube								Through hole
		Tube OD	BSPP Thread	A	C	D	R	X	W HEX	
2-MC-2RS	200-1-2RS	1/8	1/8	1.18	0.60	.922	0.28	0.54	9/16	0.16
2-MC-4RS	200-1-4RS	1/8	1/4	1.27	0.60	1.13	0.44	0.70	3/4	0.09
2-MC-6RS	200-1-6RS	1/8	3/8	1.46	0.60	1.172	0.44	0.86	7/8	0.28
4-MC-2RS	400-1-2RS	1/4	1/8	1.28	0.70	.98	0.28	0.54	9/16	0.16
4-MC-4RS	400-1-4RS	1/4	1/4	1.49	0.70	1.19	0.44	0.70	3/4	0.19
4-MC-6RS	400-1-6RS	1/4	3/8	1.55	0.70	1.25	0.44	0.86	7/8	0.19
4-MC-8RS	400-1-8RS	1/4	1/2	1.77	0.70	1.47	0.56	1.01	1-1/16	0.19
6-MC-2RS	600-1-2RS	3/8	1/8	1.35	0.76	1.06	0.28	0.54	5/8	0.16
6-MC-4RS	600-1-4RS	3/8	1/4	1.54	0.76	1.25	0.44	0.70	3/4	0.25
6-MC-6RS	600-1-6RS	3/8	3/8	1.57	0.76	1.28	0.44	0.86	7/8	0.28
6-MC-8RS	600-1-8RS	3/8	1/2	1.82	0.76	1.53	0.56	1.01	1-1/16	0.28
8-MC-4RS	810-1-4RS	1/2	1/4	1.66	0.86	1.28	0.44	0.70	13/16	0.25
8-MC-6RS	810-1-6RS	1/2	3/8	1.69	0.86	1.31	0.44	0.86	7/8	0.31
8-MC-8RS	810-1-8RS	1/2	1/2	1.91	0.86	1.53	0.56	1.01	1-1/16	0.41
12-MC-8RS	1210-1-8RS	3/4	1/2	1.93	0.86	1.531	0.56	1.01	1-1/16	0.41
12-MC-12RS	1210-1-12RS	3/4	3/4	2.07	0.86	1.69	0.63	1.25	1-3/8	0.63
16-MC-8RS	1610-1-8RS	1	1/2	2.21	1.04	1.719	0.56	1.01	1-3/8	0.41
16-MC-16RS	1610-1-16RS	1	1	2.35	1.04	1.88	0.72	1.52	1-5/8	0.88

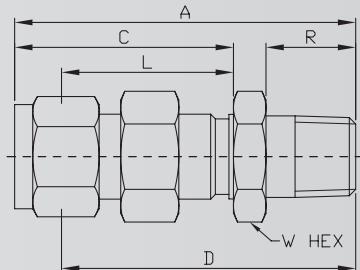
Swagelok: our ferrule tube fittings are interchangeable with Swagelok Brand

BSPP Male Thread (Metric Tube)

Item Number	Swagelok	Metric Tube							
		Tube OD	BSPP	A	C	D	R	X	W HEX
2MO-MC-2RS	2MO-1-2RS	2	1/8	28,4	15,3	21,8	7,1	14,0	13,7
3MO-MC-2RS	3MO-1-2RS	3	1/8	30,0	15,3	23,4	7,1	13,7	14,0
3MO-MC-4RS	3MO-1-4RS	3	1/4	35,3	15,3	28,7	11,2	17,8	19,0
6MO-MC-2RS	6MO-1-2RS	6	1/8	32,5	17,7	25,0	7,1	13,7	14,0
6MO-MC-4RS	6MO-1-4RS	6	1/4	37,7	17,7	30,2	11,2	17,8	19,0
6MO-MC-6RS	6MO-1-6RS	6	3/8	39,0	17,7	31,5	11,2	21,8	22,0
6MO-MC-8RS	6MO-1-8RS	6	1/2	45,6	17,7	38,1	14,2	25,7	27,0
8MO-MC-2RS	8MO-1-2RS	8	1/8	33,1	18,6	25,6	7,1	15,0	13,7
8MO-MC-4RS	8MO-1-4RS	8	1/4	38,5	18,6	31,0	11,2	17,8	19,0
8MO-MC-6RS	8MO-1-6RS	8	3/8	39,8	18,6	32,3	11,2	21,8	22,0
8MO-MC-8RS	8MO-1-8RS	8	1/2	45,6	18,6	38,1	14,2	25,7	27,0
10MO-MC-4RS	10MO-1-4RS	10	1/4	39,4	19,5	31,8	11,2	17,8	19,0
10MO-MC-6RS	10MO-1-6RS	10	3/8	40,6	19,5	33,0	11,2	21,8	22,0
10MO-MC-8RS	10MO-1-8RS	10	1/2	46,5	19,5	38,9	14,2	25,7	27,0
12MO-MC-4RS	12MO-1-4RS	12	1/4	42,6	22,0	32,5	11,2	17,8	22,0
12MO-MC-6RS	12MO-1-6RS	12	3/8	43,1	22,0	33,0	11,2	21,8	22,0
12MO-MC-8RS	12MO-1-8RS	12	1/2	49,0	22,0	38,9	14,2	25,7	27,0
12MO-MC-12RS	12MO-1-12RS	12	3/4	52,8	22,0	42,7	16,0	31,8	35,0
16MO-MC-6RS	16MO-1-6RS	16	3/8	43,5	22,0	33,4	11,2	22,0	21,8
16MO-MC-8RS	16MO-1-8RS	16	1/2	49,0	22,0	38,9	14,2	26,0	27,0
18MO-MC-8RS	18MO-1-8RS	18	1/2	49,0	22,0	38,9	14,2	26,0	27,0
18MO-MC-12RS	18MO-1-12RS	18	3/4	53,1	22,0	43,0	16,0	35,0	32,0
20MO-MC-8RS	20MO-1-8RS	20	1/2	50,5	22,0	40,4	14,2	30,0	25,7
20MO-MC-12RS	20MO-1-12RS	20	3/4	52,8	22,0	42,7	16,0	32,0	35,0
22MO-MC-12RS	22MO-1-12RS	22	3/4	52,8	22,0	42,7	16,0	32,0	35,0
25MO-MC-12RS	25MO-1-12RS	25	3/4	59,8	26,5	47,6	16,0	35,0	31,8
25MO-MC-16RS	25MO-1-16RS	25	1	60,1	26,5	47,8	18,3	39,0	41,0

Swagelok: our ferrule tube fittings are interchangeable with Swagelok Brand

NPT Male Thread, Bulkhead (Imperial Tube)



Unit = mm

Part Number	Swagelok	Imperial Tube							
		Tube OD	NPT Thread	A	C	D	L	R	W HEX
1-MBC-1	100-11-1	1/16	1/16	1.19	0.68	1.038	0.53	0.38	5/16
1-MBC-2	100-11-2	1/16	1/8	1.27	0.68	1.116	0.53	0.38	7/16
2-MBC-2	200-11-2	1/8	1/8	1.83	1.23	1.571	0.97	0.38	1/2
3-MBC-2	300-11-2	3/16	1/8	1.89	1.26	1.634	1.00	0.38	9/16
4-MBC-2	400-11-2	1/4	1/8	1.95	1.31	1.655	1.02	0.38	5/8
4-MBC-4	400-11-4	1/4	1/4	2.132	1.31	1.842	1.02	0.56	5/8
4-MBC-6	400-11-6	1/4	3/8	2.162	1.31	1.872	1.02	0.56	11/16
4-MBC-8	400-11-8	1/4	1/2	2.374	1.31	2.084	1.02	0.75	7/8
5-MBC-2	500-11-2	5/16	1/8	2.08	1.42	1.779	1.12	0.38	11/16
5-MBC-4	500-11-4	5/16	1/4	2.27	1.42	1.966	1.12	0.56	11/16
6-MBC-2	600-11-2	3/8	1/8	2.08	1.44	1.788	1.15	0.38	3/4
6-MBC-4	600-11-4	3/8	1/4	2.265	1.44	1.975	1.15	0.56	3/4
6-MBC-6	600-11-6	3/8	3/8	2.265	1.44	1.975	1.15	0.56	3/4
6-MBC-8	600-11-8	3/8	1/2	2.48	1.44	2.219	1.15	0.75	7/8
8-MBC-4	810-11-4	1/2	1/4	2.494	1.65	2.094	1.25	0.56	15/16
8-MBC-6	810-11-6	1/2	3/8	2.494	1.65	2.094	1.25	0.56	15/16
8-MBC-8	810-11-8	1/2	1/2	2.712	1.65	2.312	1.25	0.75	15/16
8-MBC-12	810-11-12	1/2	3/4	2.722	1.65	2.322	1.25	0.75	1-1/8
10-MBC-6	1010-11-6	5/8	3/8	2.628	1.68	2.228	1.28	0.56	1-1/16
10-MBC-8	1010-11-8	5/8	1/2	2.816	1.68	2.416	1.28	0.75	1-1/16
12-MBC-8	1210-11-8	3/4	1/2	3.00	1.87	2.601	1.47	0.75	1-3/16
12-MBC-12	1210-11-12	3/4	3/4	3.00	1.87	2.601	1.47	0.75	1-3/16
14-MBC-12	1410-11-12	7/8	3/4	3.31	2.09	2.913	1.69	0.75	1-3/8
16-MBC-12	1610-11-12	1	3/4	3.54	2.27	3.006	1.78	0.75	1-5/8
16-MBC-16	1610-11-16	1	1	3.72	2.27	3.194	1.78	0.94	1-5/8

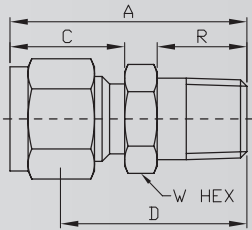
Swagelok: our ferrule tube fittings are interchangeable with Swagelok Brand

NPT Male Thread, Bulkhead (Metric Tube)

Part Number	Swagelok	Metric Tube									
		Tube OD	NPT Thread	A	C	D	L	R	W HEX	Hole	Thickness
6MO-MBC-2	6MO-11-2	6	1/8	49,6	33,7	42,1	26,2	9,5	16,0	11,5	10,2
6MO-MBC-4	6MO-11-4	6	1/4	53,5	33,7	46,0	26,2	14,3	16,0	11,5	10,2
8MO-MBC-2	8MO-11-2	8	1/8	52,3	36,0	44,8	28,5	9,5	18,0	13,1	11,2
8MO-MBC-4	8MO-11-4	8	1/4	57,5	36,0	50,0	28,5	14,3	18,0	13,1	11,2
10MO-MBC-4	10MO-11-4	10	1/4	58,4	37,0	50,8	29,4	14,3	22,0	16,3	11,2
10MO-MBC-6	10MO-11-6	10	3/8	58,4	37,0	50,8	29,4	14,3	22,0	16,3	11,2
10MO-MBC-8	10MO-11-8	10	1/2	63,1	37,0	55,5	29,4	19,0	22,0	16,3	11,2
12MO-MBC-4	12MO-11-4	12	1/4	63,3	10,1	53,2	31,8	14,3	24,0	19,5	12,7
12MO-MBC-6	12MO-11-6	12	3/8	64,5	10,1	54,4	31,8	14,3	24,0	19,5	12,7
12MO-MBC-8	12MO-11-8	12	1/2	67,5	10,1	57,4	31,8	19,0	24,0	19,5	12,7

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Through-hole NPT (Imperial Tube) (thermocouples or dip tubes)

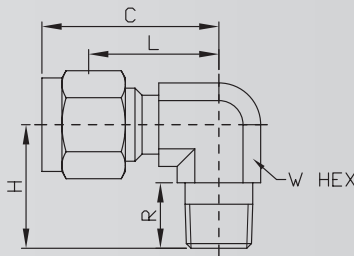


Unit = mm

Part Number	Swagelok	Imperial Tube						
		Tube OD	NPT Thread	A	C	D	R	W HEX
2-MTC-2BT	200-1-2BT	1/8	1/8	1.20	0.60	0.94	0.38	7/16
2-MTC-4BT	200-1-4BT	1/8	1/4	1.40	0.60	1.14	0.56	9/16
3-MTC-2BT	300-1-2BT	3/16	1/8	1.23	0.64	0.97	0.38	7/16
3-MTC-4BT	300-1-4BT	3/16	1/4	1.43	0.64	1.17	0.56	9/16
4-MTC-2BT	400-1-2BT	1/4	1/8	1.29	0.70	1.00	0.38	1/2
4-MTC-4BT	400-1-4BT	1/4	1/4	1.49	0.70	1.20	0.56	9/16
4-MTC-6BT	400-1-6BT	1/4	3/8	1.60	0.70	1.22	0.56	11/16
4-MTC-8BT	400-1-8BT	1/4	1/2	1.87	0.70	1.47	0.75	7/8
5-MTC-4BT	500-1-4BT	5/16	1/4	1.52	0.73	1.22	0.56	9/16
6-MTC-4BT	600-1-4BT	3/8	1/4	1.57	0.76	1.28	0.56	5/8
6-MTC-6BT	600-1-6BT	3/8	3/8	1.57	0.76	1.28	0.56	11/16
6-MTC-8BT	600-1-8BT	3/8	1/2	1.82	0.76	1.53	0.75	7/8
6-MTC-12BT	600-1-12BT	3/8	3/4	1.88	0.76	1.59	0.75	1-1/16
8-MTC-8BT	810-1-8BT	1/2	1/2	1.93	0.87	1.53	0.76	7/8
8-MTC-12BT	810-1-12BT	1/2	3/4	1.99	0.87	1.59	0.75	1-1/16
10-MTC-12BT	1010-1-12BT	5/8	3/4	1.99	0.87	1.59	0.75	1-1/16
12-MTC-12BT	1210-1-12BT	3/4	3/4	1.99	0.87	1.59	0.75	1-1/16
16-MTC-16BT	1610-1-16BT	1	1	2.46	1.05	1.97	0.94	1-3/8

Swagelok: our ferrule tube fittings are interchangeable with Swagelok Brand

NPT Male 90° Elbow (Imperial Tube)



Unit = mm

Part Number	Swagelok	Imperial Tube						
		Tube OD	NPT Thread	C	H	L	R	W HEX
2-ME-2	200-2-2	1/8	1/8	0.93	0.70	0.67	0.38	7/16
2-ME-4	200-2-4	1/8	1/4	0.97	0.93	0.72	0.56	9/16
3-ME-2	300-2-2	3/16	1/8	1.00	0.74	0.74	0.38	1/2
3-ME-4	300-2-4	3/16	1/4	1.00	0.93	0.74	0.56	9/16
4-ME-2	400-2-2	1/4	1/8	1.06	0.74	0.77	0.38	1/2
4-ME-4	400-2-4	1/4	1/4	1.06	0.93	0.77	0.56	9/16
4-ME-6	400-2-6	1/4	3/8	1.17	1.04	0.88	0.56	11/16
4-ME-8	400-2-8	1/4	1/2	1.25	1.31	0.96	0.75	13/16
5-ME-2	500-2-2	5/16	1/8	1.13	0.79	0.84	0.38	9/16
5-ME-4	500-2-4	5/16	1/4	1.13	0.97	0.84	0.56	9/16
6-ME-2	600-2-2	3/8	1/8	1.20	0.82	0.91	0.38	5/8
6-ME-4	600-2-4	3/8	1/4	1.20	1.01	0.91	0.56	5/8
6-ME-6	600-2-6	3/8	3/8	1.23	1.13	0.97	0.56	11/16
6-ME-8	600-2-8	3/8	1/2	1.31	1.31	1.02	0.75	13/16
6-ME-12	600-2-12	3/8	3/4	1.46	1.46	1.17	0.75	1-1/16
8-ME-4	810-2-4	1/2	1/4	1.42	1.12	1.02	0.56	13/16
8-ME-6	810-2-6	1/2	3/8	1.42	1.12	1.02	0.56	13/16
8-ME-8	810-2-8	1/2	1/2	1.42	1.31	1.02	0.75	13/16
8-ME-12	810-2-12	1/2	3/4	1.57	1.46	1.17	0.75	1-1/16
10-ME-6	1010-2-6	5/8	3/8	1.50	1.20	1.10	0.56	15/16
10-ME-8	1010-2-8	5/8	1/2	1.50	1.39	1.10	0.75	15/16
10-ME-12	1010-2-12	5/8	3/4	1.57	1.46	1.17	0.75	1-1/16
12-ME-8	1210-2-8	3/4	1/2	1.57	1.46	1.17	0.75	1-1/16
12-ME-12	1210-2-12	3/4	3/4	1.57	1.46	1.17	0.75	1-1/16
14-ME-12	1410-2-12	7/8	3/4	1.76	1.65	1.36	0.75	1-3/8
16-ME-12	1610-2-12	1	3/4	1.93	1.65	1.45	0.75	1-3/8
16-ME-16	1610-2-16	1	1	1.93	1.84	1.45	0.94	1-3/8

Swagelok: our ferrule tube fittings are interchangeable with Swagelok Brand

NPT Male 90° Elbow (Metric Tube)

Part Number	Swagelok	Metric Tube						
		Tube OD	NPT Thread	C	H	L	R	W HEX
3MO-ME-4	3MO-2-4	3	1/4	24,6	23,4	18,0	14,2	1/2
4MO-ME-2	4MO-2-2	4	1/8	25,4	18,8	19,2	9,7	1/2
4MO-ME-4	4MO-2-4	4	1/4	26,2	25,4	19,6	14,2	1/2
6MO-ME-2	6MO-2-2	6	1/8	27,0	18,8	19,6	9,7	1/2
6MO-ME-4	6MO-2-4	6	1/4	27,0	23,4	19,6	14,2	1/2
6MO-ME-6	6MO-2-6	6	3/8	29,8	26,2	22,4	14,2	11/16
6MO-ME-8	6MO-2-8	6	1/2	31,8	33,0	24,4	19,0	13/16
8MO-ME-2	8MO-2-2	8	1/8	28,8	19,8	21,3	9,7	9/16
8MO-ME-4	8MO-2-4	8	1/4	28,8	24,4	21,3	14,2	9/16
8MO-ME-6	8MO-2-6	8	3/8	30,6	26,2	23,1	14,2	11/16
8MO-ME-8	8MO-2-8	8	1/2	32,7	33,0	25,2	19,1	13/16
10MO-ME-2	10MO-2-2	10	1/8	31,5	21,6	23,9	9,7	11/16
10MO-ME-4	10MO-2-4	10	1/4	31,5	26,2	23,9	14,2	11/16
10MO-ME-6	10MO-2-6	10	3/8	31,5	26,2	23,9	14,2	11/16
10MO-ME-8	10MO-2-8	10	1/2	33,5	33,0	25,9	19,0	15/16
12MO-ME-4	12MO-2-4	12	1/4	36,0	28,2	25,9	14,2	15/16
12MO-ME-6	12MO-2-6	12	3/8	36,0	28,2	25,9	14,2	15/16
12MO-ME-8	12MO-2-8	12	1/2	36,0	33,0	25,9	19,0	1-1/16
12MO-ME-12	12MO-2-12	12	3/4	39,8	36,8	29,7	19,0	1-1/16
15MO-ME-8	15MO-2-8	15	1/2	38,0	35,1	27,9	19,0	15/16
16MO-ME-6	16MO-2-6	16	3/8	38,0	30,2	27,9	14,2	15/16
16MO-ME-8	16MO-2-8	16	1/2	38,0	35,1	27,9	19	15/16
16MO-ME-12	16MO-2-12	16	3/4	39,8	36,8	29,7	19,0	1-1/16
18MO-ME-8	18MO-2-8	18	1/2	39,8	36,8	29,7	19,0	1-1/16
18MO-ME-12	18MO-2-12	18	3/4	39,8	36,8	29,7	19,0	1-1/16
20MO-ME-8	20MO-2-8	20	1/2	44,6	41,7	34,5	19,0	1-3/8
20MO-ME-12	20MO-2-12	20	3/4	44,6	41,7	34,5	19,0	1-3/8
22MO-ME-12	22MO-2-12	22	3/4	44,6	41,7	34,5	19,0	1-3/8
25MO-ME-12	25MO-2-12	25	3/4	49,1	41,7	36,8	19,0	1-3/8
25MO-ME-16	25MO-2-16	25	1	49,1	46,5	36,8	23,9	1-3/8

Run, NPT Male (Imperial Tube)



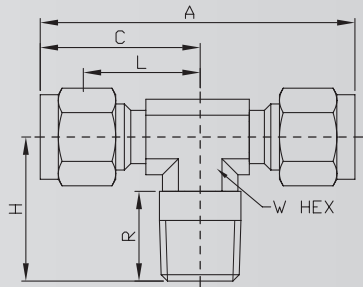
Unit = mm

Part Number	Swagelok	Imperial Tube							
		Tube OD	NPT Thread	A	C	H	L	R	W HEX
2-MRT-2TMT	200-3TMT	1/8	1/8	1.63	0.93	0.71	0.66	0.38	7/16
2-MRT-4TMT	200-3-4TMT	1/8	1/4	1.89	0.97	0.93	0.70	0.56	9/16
3-MRT-2TMT	300-3TMT	3/16	1/8	1.66	0.96	0.70	0.70	0.38	7/16
4-MRT-2TMT	400-3TMT	1/4	1/8	1.80	1.06	0.74	0.77	0.38	1/2
4-MRT-4TMT	400-3-4TMT	1/4	1/4	1.98	1.06	0.93	0.77	0.56	1/2
5-MRT-2TMT	500-3TMT	5/16	1/8	1.99	1.17	0.82	0.88	0.38	5/8
5-MRT-4TMT	500-3-4TMT	5/16	1/4	2.18	1.17	1.01	0.88	0.56	5/8
6-MRT-4TMT	600-3TMT	3/8	1/4	2.20	1.20	1.01	0.91	0.56	5/8
6-MRT-6TMT	600-3-6TMT	3/8	3/8	2.42	1.31	1.12	1.02	0.56	13/16
8-MRT-6TMT	810-3TMT	1/2	3/8	2.53	1.42	1.12	1.02	0.56	13/16
8-MRT-8TMT	810-3-8TMT	1/2	1/2	2.72	1.42	1.31	1.02	0.75	7/8
10-MRT-8TMT	1010-3TMT	5/8	1/2	2.88	1.50	1.39	1.10	0.75	15/16
12-MRT-12TMT	1210-3TMT	3/4	3/4	3.02	1.57	1.46	1.17	0.75	1-1/16
14-MRT-12TMT	1410-3-12TMT	7/8	3/4	3.41	1.76	1.65	1.36	0.75	1-3/8
16-MRT-12TMT	1610-3-12TMT	1	3/4	3.59	1.94	1.65	1.45	0.75	1-3/8
16-MRT-16TMT	1610-3-16TMT	1	1	3.78	1.94	1.84	1.45	0.94	1-3/8

Run, NPT Male (Metric Tube)

Part Number	Swagelok	imperial Tube							inch
		Tube OD	NPT Thread	A	C	H	L	R	W HEX
6MO-MRT-2TMT	6MO-3TMT	6	1/8	45.8	27.0	18.0	19.6	9.7	1/2
6MO-MRT-4TMT	6MO-3-4TMT	6	1/4	50.3	27.0	23.4	19.6	14.2	1/2
8MO-MRT-2TMT	8MO-3-2TMT	8	1/8	50.7	29.9	20.8	22.4	9.7	5/8
8MO-MRT-4TMT	8MO-3-4TMT	8	1/4	55.3	29.9	25.4	22.4	14.2	5/8
10MO-MRT-4TMT	10MO-3-4TMT	10	1/4	61.7	33.5	28.2	25.9	14.2	13/16
10MO-MRT-8TMT	10MO-3-8TMT	10	1/2	66.5	33.5	33.0	25.9	19.0	13/16
12MO-MRT-4TMT	12MO-3-4TMT	12	1/4	64.2	36.0	28.2	25.9	14.2	13/16
12MO-MRT-6TMT	12MO-3-6TMT	12	3/8	64.2	36.0	28.2	25.9	14.2	13/16
12MO-MRT-8TMT	12MO-3-8TMT	12	1/2	69.0	36.0	33.0	25.9	19.0	13/16
16MO-MRT-16TMT	16MO-3TMT	16	1	93.1	46.6	46.5	34.4	23.9	1-3/8

Branch, NPT Male (Imperial Tube)



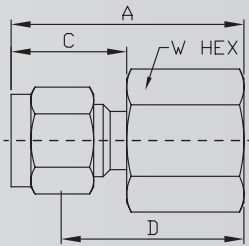
Unit = mm

Part Number	Swagelok	Imperial Tube							
		Tube OD	NPT Thread	A	C	H	L	R	W HEX
2-MBT-2TTM	200-3TTM	1/8	1/8	1.84	0.92	0.70	0.66	0.38	7/16
2-MBT-4TTM	200-3-4TTM	1/8	1/4	1.96	0.98	0.93	0.72	0.56	1/2
3-MBT-2TTM	300-3TTM	3/16	1/8	2.00	1.00	0.74	0.74	0.38	1/2
4-MBT-2TTM	400-3TTM	1/4	1/8	2.12	1.06	0.74	0.77	0.38	1/2
4-MBT-4TTM	400-3-4TTM	1/4	1/4	2.12	1.07	0.93	0.77	0.56	1/2
5-MBT-2TTM	500-3TTM	5/16	1/8	2.34	1.17	0.82	0.88	0.38	5/8
5-MBT-4TTM	500-3-4TTM	5/16	1/4	2.34	1.17	1.01	0.88	0.56	5/8
6-MBT-4TTM	600-3TTM	3/8	1/4	2.40	1.20	1.01	0.91	0.56	5/8
6-MBT-6TTM	600-3-6TTM	3/8	3/8	2.62	1.31	1.12	1.02	0.56	13/16
8-MBT-6TTM	810-3TTM	1/2	3/8	2.84	1.42	1.12	1.02	0.56	13/16
8-MBT-8TTM	810-3-8TTM	1/2	1/2	2.86	1.43	1.31	1.03	0.75	7/8
10-MBT-8TTM	1010-3TTM	5/8	1/2	2.86	1.53	1.42	1.13	0.75	1
12-MBT-12TTM	1210-3TTM	3/4	3/4	3.14	1.57	1.46	1.17	0.75	1-1/16
14-MBT-12TTM	1410-3-12TTM	7/8	3/4	3.52	1.76	1.65	1.36	0.75	1-3/8
16-MBT-12TTM	1610-3-12TTM	1	3/4	3.88	1.94	1.65	1.45	0.75	1-3/8
16-MBT-16TTM	1610-3TTM	1	1	3.88	1.94	1.84	1.45	0.94	1-3/8

Branch, NPT Male (Metric Tube)

Part Number	Swagelok	Metric Tube							inch
		Tube OD	NPT NPT	A	C	H	L	R	W HEX
6MO-MBT-2TTM	6MO-3TTM	6	1/8	53,9	27,0	18,8	19,6	9,7	1/2
6MO-MBT-4TTM	6MO-3-4TTM	6	1/4	53,9	27,0	23,4	19,6	14,2	1/2
8MO-MBT-2TTM	8MO-3TTM	8	1/8	59,7	29,9	20,8	22,4	9,7	5/8
8MO-MBT-4TTM	8MO-3-4TTM	8	1/4	59,7	29,9	25,4	22,4	14,2	5/8
10MO-MBT-4TTM	10MO-3TTM	10	1/4	67,0	33,5	28,2	25,9	14,2	13/16
10MO-MBT-6TTM	10MO-3-6TTM	10	3/8	67,0	33,5	28,2	25,9	14,2	13/16
12MO-MBT-4TTM	12MO-3-4TTM	12	1/4	72,0	36,0	28,2	25,9	14,2	13/16
12MO-MBT-6TTM	12MO-3TTM	12	3/8	72,0	36,0	28,2	25,9	14,2	13/16
12MO-MBT-8TTM	12MO-3-8TTM	12	1/2	72,0	36,0	33,0	25,9	19,0	13/16
16MO-MBT-8TTM	16MO-3TTM	16	1/2	77,6	38,8	35,8	28,7	19,1	1

NPT Female (Imperial Tube)



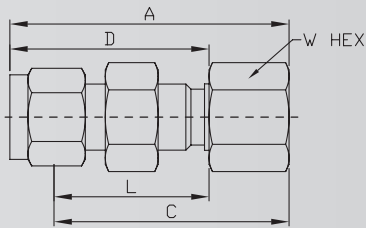
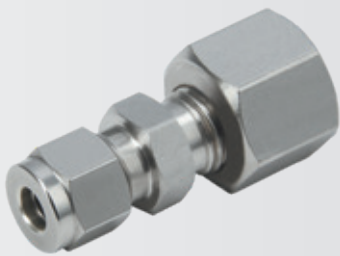
Unit = mm

Part Number	Swagelok	Imperial Tube					
		Tube OD	NPT Thread	A	C	D	W HEX
2-FC-2	200-7-2	1/8	1/8	1.14	0.60	0.88	9/16
2-FC-4	200-7-4	1/8	1/4	1.32	0.60	1.06	3/4
3-FC-2	300-7-2	3/16	1/8	1.17	0.64	0.91	9/16
3-FC-4	300-7-4	3/16	1/4	1.35	0.64	1.09	3/4
4-FC-2	400-7-2	1/4	1/8	1.23	0.70	0.94	9/16
4-FC-4	400-7-4	1/4	1/4	1.42	0.70	1.13	3/4
4-FC-6	400-7-6	1/4	3/8	1.48	0.70	1.19	7/8
4-FC-8	400-7-8	1/4	1/2	1.67	0.70	1.38	1-1/16
5-FC-2	500-7-2	5/16	1/8	1.27	0.73	0.97	9/16
5-FC-4	500-7-4	5/16	1/4	1.46	0.73	1.16	3/4
5-FC-6	500-7-6	5/16	3/8	1.51	0.73	1.219	7/8
6-FC-2	600-7-2	3/8	1/8	1.29	0.76	1.00	5/8
6-FC-4	600-7-4	3/8	1/4	1.48	0.76	1.19	3/4
6-FC-6	600-7-6	3/8	3/8	1.54	0.76	1.25	7/8
6-FC-8	600-7-8	3/8	1/2	1.73	0.76	1.44	1-1/16
6-FC-12	600-7-12	3/8	3/4	1.85	0.76	1.56	1-1/4
8-FC-4	810-7-4	1/2	1/4	1.59	0.87	1.19	13/16
8-FC-6	810-7-6	1/2	3/8	1.65	0.87	1.25	7/8
8-FC-8	810-7-8	1/2	1/2	1.84	0.87	1.44	1-1/16
8-FC-12	810-7-12	1/2	3/4	1.96	0.87	1.56	1-1/4
10-FC-6	1010-7-6	5/8	3/8	1.65	0.87	1.25	15/16
10-FC-8	1010-7-8	5/8	1/2	1.84	0.87	1.44	1-1/16
10-FC-12	1010-7-12	5/8	3/4	1.96	0.87	1.56	1-3/8
12-FC-8	1210-7-8	3/4	1/2	1.84	0.87	1.44	1-1/16
12-FC-12	1210-7-12	3/4	3/4	1.96	0.87	1.56	1-3/8
14-FC-12	1410-7-12	7/8	3/4	1.96	0.87	1.56	1-3/8
16-FC-12	1610-7-12	1	3/4	2.1 5	1.05	1.66	1-3/8
16-FC-16	1610-7-16	1	1	2.46	1.05	1.97	1-5/8

NPT Female (Metric Tube)

Part Number	Swagelok	Metric Tube					
		Tube OD	NPT Thread	A	C	D	W HEX
3MO-FC-2	3MO-7-2	3	1/8	28,8	15,3	22,2	14,0
3MO-FC-4	3MO-7-4	3	1/4	33,6	15,3	27,0	19,0
4MO-FC-2	4MO-7-2	4	1/8	29,6	16,1	23,0	14,0
6MO-FC-2	6MO-7-2	6	1/8	31,3	17,7	23,8	14,0
6MO-FC-4	6MO-7-4	6	1/4	36,1	17,7	28,6	19,0
6MO-FC-6	6MO-7-6	6	3/8	37,7	17,7	30,2	22,0
6MO-FC-8	6MO-7-8	6	1/2	42,5	17,7	35,0	27,0
8MO-FC-2	8MO-7-2	8	1/8	32,1	18,6	24,6	14,0
8MO-FC-4	8MO-7-4	8	1/4	36,9	18,6	29,4	19,0
8MO-FC-6	8MO-7-6	8	3/8	38,5	18,6	31,0	22,0
10MO-FC-4	10MO-7-4	10	1/4	37,8	19,5	30,2	19,0
10MO-FC-6	10MO-7-6	10	3/8	39,4	19,5	31,8	22,0
10MO-FC-8	10MO-7-8	10	1/2	44,1	19,5	36,5	27,0
12MO-FC-4	12MO-7-4	12	1/4	41,9	22,0	31,8	22,0
12MO-FC-6	12MO-7-6	12	3/8	41,9	22,0	31,8	22,0
12MO-FC-8	12MO-7-8	12	1/2	46,6	22,0	36,5	27,0
16MO-FC-6	16MO-7-6	16	3/8	41,9	22,0	31,8	27,0
16MO-FC-8	16MO-7-8	16	1/2	46,9	22,0	36,5	27,0
20MO-FC-8	20MO-7-8	20	1/2	47,9	22,0	37,8	30,0
20MO-FC-12	20MO-7-12	20	3/4	49,7	22,0	39,6	35,0
22MO-FC-12	22MO-7-12	22	3/4	49,7	22,0	39,6	35,0
25MO-FC-12	25MO-7-12	25	3/4	53,6	26,5	41,3	35,0
25MO-FC-16	25MO-7-16	25	1	62,3	26,5	50,0	41,0

Bulkhead NPT Female (Imperial Tube)



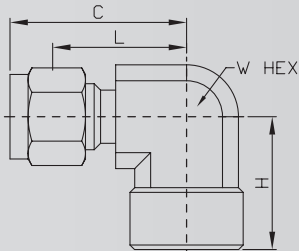
Unit = mm

Part Number	Swagelok	Imperial Tube						
		Tube OD	NPT Thread	A	C	D	L	W HEX
2-FBC-2	200-71-2	1/8	1/8	1.76	1.23	1.50	0.97	9/16
3-FBC-2	300-71-2	3/16	1/8	1.79	1.26	1.53	1.00	9/16
4-FBC-2	400-71-2	1/4	1/8	1.86	1.31	1.56	1.02	5/8
4-FBC-4	400-71-4	1/4	1/4	2.04	1.31	1.75	1.02	3/4
5-FBC-2	500-71-2	5/16	1/8	1.96	1.42	1.66	1.12	11/16
5-FBC-8	500-71-8	5/16	1/2	2.38	1.42	2.08	1.12	1-1/16
6-FBC-4	600-71-4	3/8	1/4	2.17	1.44	1.88	1.15	3/4
8-FBC-6	810-71-6	1/2	3/8	2.43	1.65	2.03	1.25	15/16
8-FBC-8	810-71-8	1/2	1/2	2.62	1.65	2.22	1.25	1-1/16
10-FBC-8	1010-71-8	5/8	1/2	2.65	1.68	2.25	1.28	1-1/16
12-FBC-12	1210-71-12	3/4	3/4	2.90	1.87	2.50	1.47	1-3/8
14-FBC-12	1410-71-12	7/8	3/4	3.18	2.09	2.78	1.69	1-3/8
16-FBC-16	1610-71-16	1	1	3.68	2.27	3.19	1.78	1-5/8

Bulkhead NPT Female (Metric Tube)

Part Number	Swagelok	Metric Tube								
		Tube OD	NPT Thread	A	C	D	L	W HEX	Hole Size	Thickness
6MO-FBC-2	6MO-71-2	6	1/8	47,2	33,7	39,7	26,2	16,0	11,5	10,2
6MO-FBC-4	6MO-71-4	6	1/4	52,0	33,7	44,5	26,2	19,0	11,5	10,2
8MO-FBC-2	8MO-71-2	8	1/8	49,6	36,1	42,1	28,5	18,0	13,1	11,2
10MO-FBC-4	10MO-71-4	10	1/4	55,2	37,0	47,6	29,4	19,0	16,3	11,2
12MO-FBC-6	12MO-71-6	12	3/8	60,9	41,9	50,8	31,8	24,0	19,5	12,7
12MO-FBC-8	12MO-71-8	12	1/2	66,4	41,9	56,3	31,8	27,0	19,5	12,7

NPT Female, 90° Elbow (Imperial Tube)



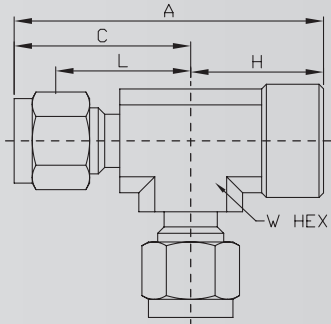
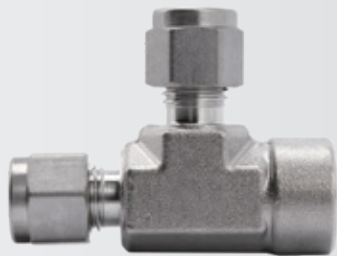
Unit = mm

Part Number	Swagelok	Imperial Tube					
		Tube OD	NPT Thread	C	H	L	W HEX
2-FE-2	200-8-2	1/8	1/8	0.97	0.75	0.71	9/16
2-FE-4	200-8-4	1/8	1/4	1.10	0.88	0.84	3/4
3-FE-2	300-8-2	3/16	1/8	1.00	0.75	0.74	9/16
4-FE-2	400-8-2	1/4	1/8	1.06	0.75	0.77	9/16
4-FE-4	400-8-4	1/4	1/4	1.20	0.88	0.91	11/16
4-FE-6	400-8-6	1/4	3/8	1.25	0.88	0.96	13/16
4-FE-8	400-8-8	1/4	1/2	1.36	1.13	1.07	1
5-FE-2	500-8-2	5/16	1/8	1.13	0.75	0.84	16/19
5-FE-4	500-8-4	5/16	1/4	1.24	0.88	0.94	11/16
6-FE-2	600-8-2	3/8	1/8	1.20	0.75	0.91	5/8
6-FE-4	600-8-4	3/8	1/4	1.26	0.88	0.97	11/16
6-FE-6	600-8-6	3/8	3/8	1.31	0.88	1.02	13/16
6-FE-8	600-8-8	3/8	1/2	1.42	1.13	1.13	1
8-FE-4	810-8-4	1/2	1/4	1.42	0.88	1.02	13/16
8-FE-6	810-8-6	1/2	3/8	1.42	0.88	1.02	13/16
8-FE-8	810-8-8	1/2	1/2	1.53	1.13	1.13	1
10-FE-6	1010-8-6	5/8	3/8	1.50	0.88	1.10	15/16
10-FE-8	1010-8-8	5/8	1/2	1.57	1.13	1.17	1-1/16
12-FE-8	1210-8-8	3/4	1/2	1.57	1.13	1.17	1-1/16
12-FE-12	1210-8-12	3/4	3/4	1.76	1.25	1.36	1-3/8
14-FE-12	1410-8-12	7/8	3/4	1.76	1.25	1.36	1-3/8
16-FE-12	1610-8-12	1	3/4	1.93	1.25	1.45	1-3/8
16-FE-16	1610-8-16	1	1	2.02	1.50	1.53	1-5/8

NPT Female, 90° Elbow (Metric Tube)

Part Number	Swagelok	Metric Tube					inch
		Tube OD	NPT Thread	C	H	L	W HEX
6MO-FE-2	6MO-8-2	6	1/8	27,0	19,0	19,6	1/2
6MO-FE-4	6MO-8-4	6	1/4	29,8	22,4	22,4	11/16
8MO-FE-2	8MO-8-2	8	1/8	28,8	19,1	21,3	9/16
8MO-FE-4	8MO-8-4	8	1/4	30,6	22,4	23,1	11/16
10MO-FE-4	10MO-8-4	10	1/4	33,5	22,4	25,9	13/16
10MO-FE-6	10MO-8-6	10	3/8	33,5	22,4	25,9	13/16
10MO-FE-8	10MO-8-8	10	1/2	36,3	28,5	28,7	1
12MO-FE-4	12MO-8-4	12	1/4	36,0	22,4	25,9	13/16
12MO-FE-6	12MO-8-6	12	3/8	36,0	22,4	25,9	13/16
12MO-FE-8	12MO-8-8	12	1/2	38,8	28,4	28,7	1
16MO-FE-6	16MO-8-6	16	3/8	39,5	23,6	29,7	1-1/16
16MO-FE-8	16MO-8-8	16	1/2	39,5	28,4	29,7	1-1/16

Run, NPT Female (Imperial Tube)



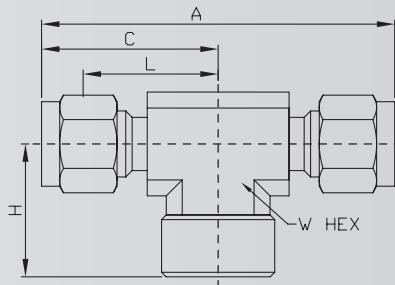
Unit = mm

Part Number	Swagelok	Imperial Tube						
		Tube OD	NPT Thread	A	C	H	L	W HEX
2-FRT-2TFT	200-3-2TFT	1/8	1/8	1.72	0.96	0.75	0.70	1/2
3-FRT-2TFT	300-3-2TFT	3/16	1/8	1.76	1.01	0.75	0.74	1/2
4-FRT-2TFT	400-3-2TFT	1/4	1/8	1.81	1.06	0.75	0.77	1/2
4-FRT-4TFT	400-3-4TFT	1/4	1/4	2.05	1.17	0.88	0.88	11/16
5-FRT-2TFT	500-3-2TFT	5/16	1/8	1.92	1.17	0.75	0.88	5/8
6-FRT-4TFT	600-3-4TFT	3/8	1/4	2.11	1.23	0.88	0.94	11/16
8-FRT-4TFT	810-3-4TFT	1/2	1/4	2.56	1.42	0.88	1.02	13/16
8-FRT-6TFT	810-3-6TFT	1/2	3/8	2.30	1.42	0.88	1.02	7/8
8-FRT-8TFT	810-3-8TFT	1/2	1/2	2.66	1.53	1.13	1.13	1
10-FRT-8TFT	1010-3-8TFT	5/8	1/2	2.70	1.57	1.13	1.17	1-1/16
12-FRT-12TFT	1210-3-12TFT	3/4	3/4	3.01	1.76	1.25	1.36	1-3/8
14-FRT-8TFT	1410-3-8TFT	7/8	1/2	3.01	1.76	1.25	1.36	1-3/8
14-FRT-12TFT	1410-3-12TFT	7/8	3/4	3.01	1.76	1.25	1.36	1-3/8
16-FRT-12TFT	1610-3-12TFT	1	3/4	3.18	1.93	1.25	1.45	1-3/8
16-FRT-16TFT	1610-3-16TFT	1	1	3.52	2.02	1.50	1.65	1-3/8

Run, NPT Female (Metric Tube)

Part Number	Swagelok	Metric Tube						inch
		Tube OD	NPT Thread	A	C	H	L	W HEX
6MO-FRT-2TFT	6MO-3TFT	6	1/8	46,0	27,0	19,6	19,6	1/2
6MO-FRT-4TFT	6MO-3-4TFT	6	1/4	52,1	29,8	22,4	22,4	11/16
8MO-FRT-2TFT	8MO-3TFT	8	1/8	48,9	29,9	19,0	22,4	5/8
10MO-FRT-2TFT	10MO-3TFT	10	1/4	55,9	33,5	22,4	25,9	13/16
10MO-FRT-4TFT	12MO-3-4TFT	12	1/4	58,4	36,0	22,4	25,9	13/16
12MO-FRT-6TFT	12MO-3TFT	12	3/8	58,4	36,0	22,4	25,9	13/16
12MO-FRT-8TFT	12MO-3-8TFT	12	1/2	67,3	38,8	28,5	28,7	1
16MO-FRT-12TFT	16MO-3TFT	16	1/2	68,2	39,8	28,4	29,7	1-1/16

Branch, NPT Female (Imperial Tube)



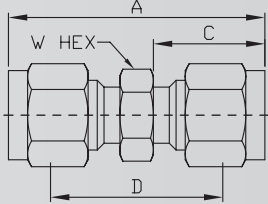
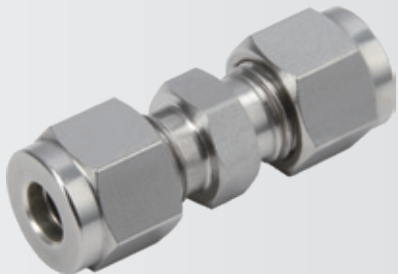
Unit = mm

Part Number	Swagelok	Imperial Tube						
		Tube OD	NPT Thread	A	C	H	L	W HEX
2-FBT-2TTF	200-3-2TTF	1/8	1/8	1.91	1.01	0.75	0.70	1/2
3-FBT-2TTF	300-3-2TTF	3/16	1/8	2.02	1.01	0.75	0.74	1/2
4-FBT-2TTF	400-3-2TTF	1/4	1/8	2.12	1.06	0.75	0.77	1/2
4-FBT-4TTF	400-3-4TTF	1/4	1/4	2.34	1.17	0.88	0.88	11/16
5-FBT-2TTF	500-3-2TTF	5/16	1/8	2.34	1.17	0.75	0.88	5/8
6-FBT-4TTF	600-3-4TTF	3/8	1/4	2.46	1.23	0.88	0.94	11/16
8-FBT-4TTF	810-3-4TTF	1/2	1/4	2.84	1.42	0.88	1.02	13/16
8-FBT-6TTF	810-3-6TTF	1/2	3/8	2.84	1.42	0.88	1.02	7/8
8-FBT-8TTF	810-3-8TTF	1/2	1/2	3.06	1.53	1.13	1.13	1
10-FBT-8TTF	1010-3-8TTF	5/8	1/2	3.06	1.53	1.13	1.13	1
12-FBT-12TTF	1210-3-12TTF	3/4	3/4	3.52	1.76	1.25	1.36	1-3/8
14-FBT-12TTF	1410-3-12TTF	7/8	3/4	3.52	1.76	1.25	1.36	1-3/8
16-FBT-12TTF	1610-3-12TTF	1	3/4	3.86	1.94	1.25	1.45	1-3/8
16-FBT-16TTF	1610-3-16TTF	1	1	4.28	2.14	1.50	1.65	1-3/8

Branch, NPT Female (Metric Tube)

Part Number	Swagelok	Metric Tube						inch
		Tube OD	NPT Thread	A	C	H	L	W HEX
6M-FBT-2TTF	6MO-3-2TTF	6	1/8	53,9	27,0	19,0	19,6	1/2
6M-FBT-4TTF	6MO3-4TTF	6	1/4	59,5	29,8	22,4	22,4	11/16
8M-FBT-3TTF	8MO-3TTF	8	1/8	59,7	29,9	19,0	22,4	5/8
10M-FBT-3TTF	10MO-3TTF	10	1/4	67,0	33,5	22,4	25,9	13/16
12M-FBT-3TTF	12MO-3TTF	12	1/8	72,0	36,0	22,3	25,9	13/16
12M-FBT-4TTF	12MO-3-4TTF	12	1/4	72,0	36,0	22,3	25,9	13/16
12M-FBT-3TTF	12MO-3TTF	12	3/8	72,0	36,0	22,4	25,9	13/16
12M-FBT-8TTF	12MO-3-8TTF	12	1/2	77,6	38,8	28,5	28,7	1
16M-FBT-TTF	16MO-3TTF	16	1/2	77,6	38,8	28,4	28,7	1

Unions Straight (Imperial Tube)



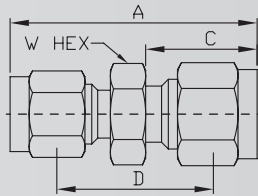
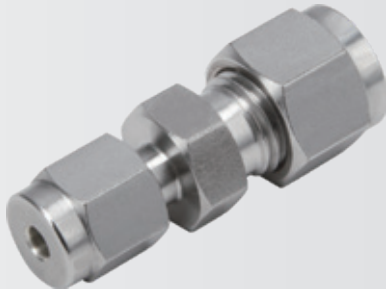
Unit = mm

Item Number	Swagelok	Imperial Tube				
		Tube OD	A	C	D	W HEX
2-UN	200-6	1/8	1.39	0.60	0.88	7/16
3-UN	300-6	3/16	1.48	0.64	0.95	7/16
4-UN	400-6	1/4	1.62	0.70	1.03	1/2
5-UN	500-6	5/16	1.70	0.73	1.11	9/16
6-UN	600-6	3/8	1.77	0.76	1.19	5/8
8-UN	810-6	1/2	2.02	0.87	1.22	13/16
10-UN	1010-6	5/8	2.05	0.87	1.25	15/16
12-UN	1210-6	3/4	2.11	0.87	1.31	1-1/16
14-UN	1410-6	7/8	2.18	0.87	1.38	1-3/8
16-UN	1610-6	1	2.57	1.05	1.59	1-3/8

Unions Straight (Metric Tube)

Part Number	Swagelok	Metric Tube				
		Tube OD	A	C	D	W HEX
3MO-UN	3MO-6	3	35,3	15,3	22,1	12,0
4MO-UN	4MO-4	4	37,4	16,1	24,2	12,0
6MO-UN	6MO-6	6	41,2	17,7	26,2	14,0
8MO-UN	8MO-6	8	43,2	18,6	28,2	15,0
10MO-UN	10MO-6	10	46,2	19,5	31,0	18,0
12MO-UN	12MO-6	12	51,2	22,0	31,0	22,0
14MO-UN	14MO-6	14	52,0	22,0	31,8	24,0
15MO-UN	15MO-6	15	52,0	22,0	31,8	24,0
16MO-UN	16MO-6	16	52,0	22,0	31,8	24,0
18MO-UN	18MO-6	18	53,5	22,0	33,3	27,0
20MO-UN	20MO-6	20	55,0	22,0	34,8	30,0
22MO-UN	22MO-6	22	55,0	22,0	34,8	30,0
25MO-UN	25MO-6	25	65,1	26,5	40,5	35,0

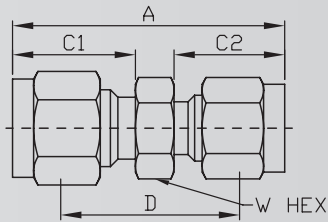
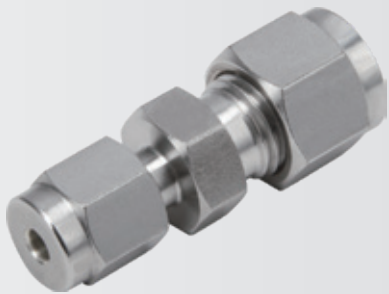
Union (Metric to Imperial)



Unit = mm

Item Number	Swagelok	Tube OD		Metric to Imperial Tube				
		T1	T2	A	C1	C2	D	W HEX
3MO-UN-2	3MO-6-2	3	1/8	36,3	15,3	15,3	22,6	12,0
4MO-UN-2	4MO-6-2	4	1/8	36,5	16,1	15,3	23,6	12,0
4MO-UN-4	4MO-6-4	4	1/4	39,3	16,1	17,7	26,4	14,0
6MO-UN-2	6MO-6-2	6	1/8	38,5	17,7	15,3	24,6	14,0
6MO-UN-4	6MO-6-4	6	1/4	41,1	17,7	17,7	25,9	14,0
6MO-UN-5	6MO-6-5	6	5/16	42,3	17,7	18,8	27,2	14,0
8MO-UN-4	8MO-6-4	8	1/4	42,3	18,6	17,7	27,2	15,0
8MO-UN-6	8MO-6-6	8	6	44,0	18,6	19,3	29,1	15,0
10MO-UN-2	10MO-6-2	10	1/8	41,8	19,5	15,3	27,9	18,0
10MO-UN-4	10MO-6-4	10	1/4	44,5	19,5	17,7	29,2	18,0
10MO-UN-6	10MO-6-6	10	3/8	46,0	19,5	19,3	30,7	18,0
12MO-UN-6	12MO-6-6	12	3/8	48,4	22,0	19,3	30,7	22,0
12MO-UN-8	12MO-6-8	12	1/2	51,1	22,0	21,8	31,0	22,0
15MO-UN-8	15MO-6-8	15	1/2	52,0	22,0	21,8	32,0	24,0
16MO-UN-6	16MO-6-6	16	3/8	52,0	22,0	19,3	34,3	24,0
18MO-UN-12	18MO-6-12	18	3/4	53,5	22,0	21,8	33,5	27,0

Reducing Union (Imperial Tube)



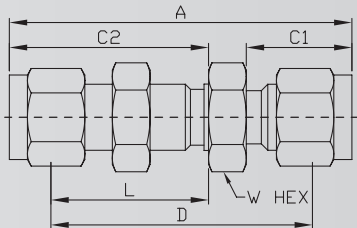
Unit = mm

Item Number	Swagelok	Imperial Tube						
		T ₁ Tube OD	T ₂ Tube OD	A	D	C1	C2	W HEX
3-RU-2	300-6-2	3/16	1/8	1.44	0.92	0.64	0.60	7/16
4-RU-2	400-6-2	1/4	1/8	1.52	0.97	0.70	0.60	1/2
4-RU-3	400-6-3	1/4	3/16	1.55	1.00	0.70	0.64	1/2
5-RU-2	500-6-2	5/16	1/8	1.58	1.03	0.73	0.60	9/16
5-RU-4	500-6-4	5/16	1/4	1.67	1.08	0.73	0.70	9/16
6-RU-2	600-6-2	3/8	1/8	1.61	1.06	0.76	0.60	5/8
6-RU-4	600-6-4	3/8	1/4	1.71	1.13	0.76	0.70	5/8
6-RU-5	600-6-5	3/8	5/16	1.75	1.16	0.76	0.73	5/8
8-RU-2	810-6-2	1/2	1/8	1.75	1.09	0.87	0.60	13/16
8-RU-4	810-6-4	1/2	1/4	1.85	1.16	0.87	0.70	13/16
8-RU-6	810-6-6	1/2	3/8	1.91	1.22	0.87	0.76	13/16
10-RU-6	1010-6-6	5/8	3/8	1.94	1.25	0.87	0.76	15/16
10-RU-8	1010-6-8	5/8	1/2	2.05	1.25	0.87	0.87	15/16
12-RU-4	1210-6-4	3/4	1/4	1.95	1.25	0.87	0.76	1-1/16
12-RU-6	1210-6-6	3/4	3/8	2.00	1.31	0.87	0.76	1-1/16
12-RU-8	1210-6-8	3/4	1/2	2.11	1.31	0.87	0.87	1-1/16
12-RU-10	1210-6-10	3/4	5/8	2.11	1.31	0.87	0.87	1-1/16
16-RU-8	1610-6-8	1	1/2	2.39	1.50	1.05	0.87	1-3/8
16-RU-12	1610-6-12	1	3/4	2.39	1.50	1.05	0.87	1-3/8

Reducing Union(Metric Tube)

Item Number	Swagelok	Metric Tube						
		T ₁ Tube OD	T ₂ Tube OD	A	C1	C2	D	W HEX
3MO-RU-2MO	3MO-6-2M	3	2	35,8	15,3	15,3	22,6	12,0
6MO-RU-2MO	6MO-6-2M	6	2	38,7	17,7	15,3	24,6	14,0
6MO-RU-3MO	6MO-6-3M	6	3	38,7	17,7	15,3	24,6	14,0
6MO-RU-4MO	6MO-6-4M	6	4	39,5	17,7	16,1	25,4	14,0
8MO-RU-6MO	8MO-6-6M	8	6	42,4	18,6	17,7	27,4	15,0
10MO-RU-6MO	10MO-6-6M	10	6	44,5	19,5	17,7	29,4	18,0
10MO-RU-8MO	10MO-6-8M	10	8	44,5	19,5	18,6	29,4	18,0
12MO-RU-8MO	12MO-6-6M	12	6	47,0	22,0	17,7	29,4	22,0
12MO-RU-8MO	12MO-6-8M	12	8	47,8	22,0	18,6	30,2	22,0
12MO-RU-10MO	12MO-6-10M	12	10	48,7	22,0	19,5	31,0	22,0
16MO-RU-10MO	16MO-6-10M	16	10	49,5	22,0	19,5	31,8	24,0
16MO-RU-12MO	16MO-6-12M	16	12	52,0	22,0	22,0	31,8	24,0
18MO-RU-12MO	18MO-6-12M	18	12	53,5	22,0	22,0	33,3	27,0
25MO-RU-18MO	25MO-6-18M	25	18	60,5	26,5	22,0	38,1	35,0
25MO-RU-20MO	25MO-6-20M	25	20	62,3	26,5	22,0	39,9	35,0

Bulkhead Union(Imperial Tube)



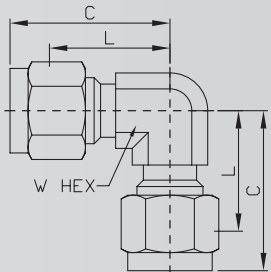
Unit = mm

Item Number	Swagelok	Imperial Tube								
		Tube OD	A	C ₁	C ₂	D	L	W HEX	Hole Size	Thickness
2-BU-2	200-61	1/8	2.02	0.60	1.23	1.50	0.97	1/2	21/64	1/2
3-BU-3	300-61	3/16	2.11	0.64	1.26	1.59	1.00	9/16	25/64	1/2
4-BU-2	400-61-2	1/4	2.17	0.70	1.23	1.03	0.97	5/8	21/64	1/2
4-BU-4	400-61	1/4	2.27	0.70	1.31	1.69	1.02	5/8	29/64	17/32
5-BU-5	500-61	5/16	2.40	0.73	1.42	1.81	1.12	11/16	33/64	9/16
6-BU-6	600-61	3/8	2.46	0.76	1.44	1.88	1.15	3/4	37/64	9/16
8-BU-8	810-61	1/2	2.80	0.87	1.65	2.00	1.25	15/16	49/64	19/32
10-BU-10	1010-61	5/8	2.86	0.87	1.68	2.06	1.28	1-1/16	57/64	19/32
12-BU-12	1210-61	3/4	3.11	0.87	1.87	2.31	1.47	1-3/16	1-1/64	25/32
14-BU-14	1410-61	7/8	3.33	0.87	2.09	2.53	1.69	1-3/8	1-9/64	15/16
16-BU-16	1610-61	1	3.78	1.05	2.27	2.81	1.78	1-5/8	1-21/64	15/16

Bulkhead Union(Metric Tube)

Item Number	Swagelok	Metric Tube								
		Tube OD	A	C ₁	C ₂	D	L	W HEX	Hole Size	Thickness
3MO-BU-3	3MO-61	3	51,3	15,3	31,2	38,2	24,6	14,0	8,3	12,7
4MO-BU-4	4MO-61	4	53,7	16,1	32,0	40,5	25,4	14,0	9,9	12,7
6MO-BU-6	6MO-61	6	57,9	17,7	33,7	42,9	26,2	16,0	11,5	10,2
8MO-BU-8	8MO-61	8	61,0	18,6	36,0	46,0	28,5	18,0	13,1	11,2
10MO-BU-10	10MO-61	10	63,6	19,5	37,0	48,4	29,4	22,0	16,3	11,2
12MO-BU-12	12MO-61	12	71,0	22,0	41,9	50,8	31,8	24,0	19,5	12,7
15MO-BU-15	15MO-61	15	72,5	22,0	42,6	52,3	32,5	27,0	22,5	12,7
16MO-BU-16	16MO-61	16	72,6	22,0	42,6	52,4	32,5	27,0	22,5	12,7
18MO-BU-18	18MO-61	18	78,9	22,0	47,4	58,7	37,3	30,0	26,0	16,8
20MO-BU-20	20MO-61	20	88,2	22,0	51,0	68,0	40,9	35,0	29,0	19,0
25MO-BU-25	25MO-61	25	95,8	26,5	54,4	71,4	42,2	41,0	33,8	24,0

90° Elbow Unions (Imperial Tube)



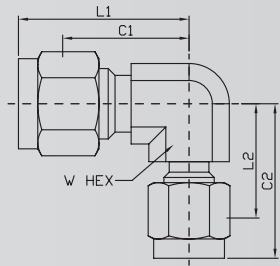
Unit= mm

Item Number	Swagelok	Imperial Tube			
		Tube OD	C	L	W HEX
2-UE	200-9	1/8	0.88	0.62	3/8
3-UE	300-9	3/16	1.00	0.74	1/2
4-UE	400-9	1/4	1.06	0.77	1/2
5-UE	500-9	5/16	1.13	0.84	9/16
6-UE	600-9	3/8	1.20	0.91	5/8
8-UE	810-9	1/2	1.42	1.02	13/16
10-UE	1010-9	5/8	1.50	1.10	15/16
12-UE	1210-9	3/4	1.57	1.17	1-1/16
14-UE	1410-9	7/8	1.76	1.36	1-3/8
16-UE	1610-9	1	1.93	1.45	1-3/8

90° Elbow Unions(Metric Tube)

Item Number	Swagelok	Metric Tube			in inch
		Tube OD	C	L	W HEX
3MO-UE	3MO-9	3	22,3	15,7	3/8
4MO-UE	4MO-9	4	25,4	18,8	1/2
6MO-UE	6MO-9	6	27,0	19,6	1/2
8MO-UE	8MO-9	8	28,8	21,3	9/16
10MO-UE	10MO-9	10	31,5	23,9	11/16
12MO-UE	12MO-9	12	36,0	25,9	13/16
14MO-UE	14MO-9	14	38,1	28,0	15/16
15MO-UE	15MO-9	15	38,0	27,9	15/16
16MO-UE	16MO-9	16	38,0	27,9	15/16
18MO-UE	18MO-9	18	39,8	29,7	1-1/16
20MO-UE	20MO-9	20	44,6	34,5	1-3/8
22MO-UE	22MO-9	22	44,6	34,5	1-3/8
25MO-UE	25MO-9	25	49,1	36,8	1-3/8

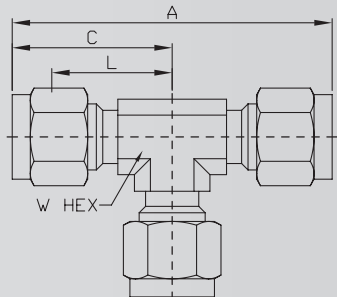
90° Elbow Reducing Union(Imperial Tube)



Unit = mm

Item Number	Swagelok	Imperial Tube					
		Tube OD	L ₁	C ₁	L ₂	C ₂	W HEX
3-UE-2	300-9-2	3/16-1/8	0.74	1.01	0.70	0.96	1/2
4-UE-2	400-9-2	1/4-1/8	0.77	1.06	0.70	0.96	1/2
5-UE-2	500-9-2	5/16-1/8	0.88	1.17	0.78	1.04	5/8
5-UE-4	500-9-4	5/16-1/4	0.88	1.17	0.85	1.14	5/8
6-UE-2	600-9-2	3/8-1/8	0.91	1.20	0.78	1.04	5/8
6-UE-4	600-9-4	3/8-1/4	.91	1.20	.85	1.17	5/8
6-UE-5	600-9-5	3/8-5/16	.91	1.20	.88	1.17	5/8
8-UE-4	810-9-4	1/2-1/4	1.02	1.42	.96	1.25	13/16
8-UE-5	810-9-5	1/2-5/16	1.02	1.42	.99	1.28	13/16
8-UE-6	810-9-6	1/2-3/8	1.02	1.42	1.02	1.31	13/16
10-UE-6	1010-9-6	5/8-3/8	1.10	1.50	1.10	1.39	15/16
10-UE-8	1010-9-8	5/8-1/2	1.10	1.50	1.10	1.50	15/16
12-UE-4	1210-9-4	3/4-1/4	1.16	1.56	1.10	1.39	1-1/16
12-UE-6	1210-9-6	3/4-3/8	1.16	1.56	1.16	1.45	1-1/16
12-UE-8	1210-9-8	3/4-1/2	1.16	1.56	1.16	1.56	1-1/16
14-UE-4	1410-9-4	7/8-1/4	1.36	1.76	1.30	1.59	1-3/8
16-UE-8	1610-9-8	1-1/2	1.45	1.94	1.36	1.76	1-5/16
16-UE-12	1610-9-12	1-3/4	1.45	1.94	1.36	1.76	1-3/8

Tees Unions(Imperial Tube)



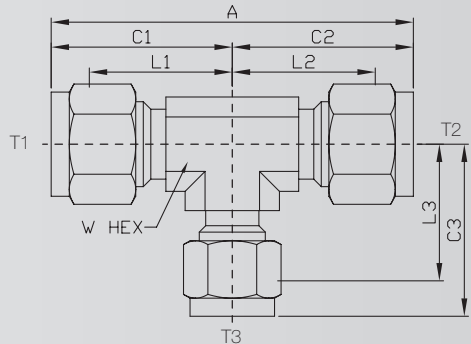
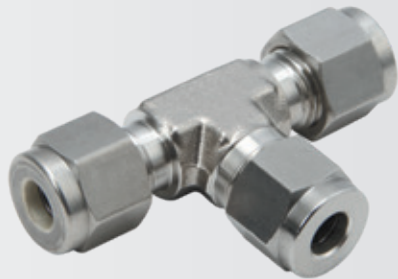
Unit = mm

Item Number	Swagelok	Imperial Tube				
		Tube OD	A	C	L	W HEX
2-UT	200-3	1/8	1.76	.88	0.62	3/8
3-UT	300-3	3/16	1.96	0.96	0.70	7/16
4-UT	400-3	1/4	2.12	1.06	0.77	1/2
5-UT	500-3	5/16	2.34	1.17	0.88	5/8
6-UT	600-3	3/8	2.40	1.20	0.91	5/8
8-UT	810-3	1/2	2.84	1.42	1.02	13/16
10-UT	1010-3	5/8	3.06	1.53	1.13	1
12-UT	1210-3	3/4	3.14	1.57	1.16	1-1/16
14-UT	1410-3	7/8	3.52	1.76	1.36	1-3/8
16-UT	1610-3	1	3.86	1.93	1.45	1-3/8

Tees Unions(Metric Tube)

Item Number	Swagelok	Metric Tube				In Inch
		Tube OD	A	C	L	W HEX
3MO-UT	3MO-3	3	44,7	22,3	15,7	3/8
4MO-UT	4MO-3	4	50,8	25,4	18,8	1/2
6MO-UT	6MO-3	6	53,9	27,0	19,6	1/2
8MO-UT	8MO-3	8	59,7	29,9	22,4	5/8
10MO-UT	10MO-3	10	63,0	31,5	23,9	11/16
12MO-UT	12MO-3	12	72,0	36,0	25,9	13/16
14MO-UT	14MO-3	14	77,6	38,8	28,7	1
15MO-UT	15MO-3	15	77,6	38,8	28,7	1
16MO-UT	16MO-3	16	77,6	38,8	28,7	1
18MO-UT	18MO-3	18	79,5	38,8	29,7	1-1/16
20MO-UT	20MO-3	20	89,3	44,6	34,5	1-3/8
22MO-UT	22MO-3	22	89,3	44,6	34,5	1-3/8
25MO-UT	25MO-3	25	98,3	49,1	36,8	1-3/8

Tees reducing Unions

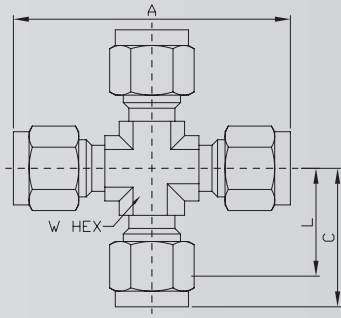


Unit = mm

Item Number	Swagelok	Imperial Tube										
		T ₁ Tube OD	T ₂ Tube OD	T ₃ Tube OD	A	L ₁	C ₁	L ₂	C ₂	L ₃	C ₃	W HEX
4-UT-4-2	400-3-4-2	1/4	1/4	1/8	2.10	.76	1.05	.76	1.05	.70	.96	1/2
6-UT-6-2	600-3-6-4	3/8	3/8	1/2	2.40	.91	1.20	.91	1.20	.85	1.14	5/8
6-UT-6-4	600-3-4-6	3/8	3/8	1/4	2.34	.91	1.20	.85	1.14	.91	1.20	5/8
8-UT-8-4	810-3-8-4	1/2	1/4	1/4	2.84	1.02	1.42	1.02	1.42	1.02	1.31	13/16
8-UT-8-6	810-3-6-8	1/2	3/8	1/2	2.73	1.02	1.42	1.02	1.31	1.02	1.42	13/16
10-UT-10-6	1010-3-10-6	5/8	5/8	3/8	3.06	1.13	1.53	1.13	1.53	1.13	1.53	7/8
10-UT-10-8	1010-3-10-8	5/8	5/8	1/2	3.06	1.13	1.53	1.13	1.53	1.13	1.53	7/8
10-UT-8-8	1010-3-8-8	5/8	1/2	1/2	3.06	1.13	1.53	1.13	1.53	1.13	1.53	7/8
10-UT-8-6	1010-3-8-6	5/8	1/2	3/8	3.06	1.13	1.53	1.13	1.53	1.13	1.42	7/8
10-UT-6-6	1010-3-6-6	5/8	3/8	3/8	2.95	1.13	1.53	.1.13	1.42	1.13	142	7/8
10-UT-6-8	1010-3-6-8	5/8	3/8	1/2	2.95	1.13	1.53	1.13	1.42	1.13	1.53	7/8
12-UT-12-10	1210-3-12-10	3/4	3/4	5/8	3.12	1.16	1.56	1.16	1.56	1.16	1.56	1-1/16
12-UT-12-8	1210-3-12-8	3/4	3/4	1/2	3.12	1.16	1.56	1.16	1.56	1.16	1.56	1-1/16
12-UT-12-6	1210-3-12-6	3/4	3/4	3/8	3.12	1.16	1.56	1.16	1.56	1.16	1.45	1-1/16
12-UT-12-4	1210-3-12-4	3/4	3/4	1/4	3.12	1.16	1.56	1.16	1.56	1.09	1.38	1-1/16
12-UT-10-10	1210-3-10-10	3/4	5/8	5/8	3.12	1.16	1.56	1.16	1.56	1.16	1.56	1-1/16
12-UT-8-8	1210-3-8-8	3/4	1/2	1/2	3.12	1.16	1.56	1.16	1.56	1.16	1.56	1-1/16
12-UT-6-6	1210-3-6-6	3/4	3/8	3/8	3.01	1.16	1.56	1.16	1.45	1.16	1.45	1-1/16
12-UT-10-8	1210-3-10-8	3/4	5/8	1/2	3.12	1.16	1.56	1.16	1.56	1.16	1.56	1-1/16
12-UT-10-6	1210-3-10-6	3/4	5/8	3/8	3.12	1.16	1.56	1.16	1.56	1.16	1.45	1-1/16

Item Number	Swagelok	Imperial Tube										
		T ₁ Tube OD	T ₂ Tube OD	T ₃ Tube OD	A	L ₁	C ₁	L ₂	C ₂	L ₃	C ₃	W HEX
12-UT-8-6	1210-3-8-6	3-4	1/2	3/8	3.12	1.16	1.56	1.16	1.56	1.16	1.45	1-1/16
14-UT-14-6	1410-3-14-6	7/8	7/8	3/8	3.52	1.36	1.76	1.36	1.76	1.36	1.65	1-3/8
14-UT-14-4	1410-3-14-4	7/8	7/8	1/4	3.52	1.36	1.76	1.36	1.76	1.30	1.59	1-3/8
14-UT-12-12	1410-3-12-12	7/8	3/4	3/4	3.52	1.36	1.76	1.36	1.76	1.36	1.76	1-3/8
14-UT-12-10	1410-3-12-8	7/8	3/4	1/2	3.52	1.36	1.76	1.36	1.76	1.36	1.76	1-3/8
14-UT-12-6	1410-3-12-6	7/8	3/4	3/8	3.52	1.36	1.76	1.36	1.76	1.36	1.65	1-3/8
14-UT-10-6	1410-3-10-6	7/8	5/8	3/8	3.52	1.36	1.76	1.36	1.76	1.36	1.65	1-3/8
14-UT-8-12	1410-3-8-12	7/8	1/2	3/4	3.52	1.36	1.76	1.36	1.76	1.36	1.76	1-3/8
16-UT-16-12	1610-3-16-12	1	1	3/4	3.88	1.45	1.94	1.45	1.94	1.36	1.76	1-3/8
16-UT-16-10	1610-3-16-10	1	1	5/8	3.88	1.45	1.94	1.45	1.94	1.36	1.76	1-3/8
16-UT-16-8	1610-3-16-8	1	1	1/2	3.88	1.45	1.94	1.45	1.94	1.36	1.76	1-3/8
16-UT-16-10	1610-3-16-6	1	1	3/8	3.88	1.45	1.94	1.45	1.94	1.36	1.65	1-3/8
16-UT-16-4	1610-3-16-4	1	1	1/4	3.88	1.45	1.94	1.45	1.94	1.30	1.59	1-3/8
16-UT-12-16	1610-3-12-16	1	3/4	1	3.70	1.45	1.94	1.36	1.76	1.45	1.94	1-3/8
16-UT-14-14	1610-3-14-14	1	7/8	7/8	3.70	1.45	1.94	1.36	1.76	1.36	1.76	1-3/8
16-UT-14-12	1610-3-14-12	1	7/8	3/4	3.70	1.45	1.94	1.36	1.76	1.36	1.76	1-3/8
16-UT-14-8	1610-3-14-8	1	7/8	1/2	3.70	1.45	1.94	1.36	1.76	1.36	1.76	1-3/8
16-UT-14-6	1610-3-14-6	1	7/8	3/8	3.70	1.45	1.94	1.36	1.76	1.36	1.65	1-3/8
16-UT-14-4	1610-3-14-4	1	7/8	1/4	3.70	1.45	1.94	1.36	1.76	1.30	1.59	1-3/8
16-UT-16-14	1610-3-16-14	1	1	7/8	3.88	1.45	1.94	1.45	1.94	1.36	1.76	1-3/8
16-UT-12-10	1610-3-12-10	1	3/4	5/8	3.70	1.45	1.94	1.36	1.76	1.36	1.76	1-3/8
16-UT-12-8	1610-3-12-8	1	3/4	1/2	3.70	1.45	1.94	1.36	1.76	1.36	1.76	1-3/8
16-UT-10-6	1610-3-10-6	1	5/8	3/8	3.70	1.45	1.94	1.36	1.76	1.36	1.65	1-3/8
16-UT-8-16	1610-3-8-16	1	1/2	1	3.70	1.45	1.94	1.36	1.76	1.45	1.94	1-3/8
16-UT-8-8	1610-3-8-8	1	1/2	1/2	3.70	1.45	1.94	1.36	1.76	1.36	1.76	1-3/8
16-UT-8-6	1610-3-8-6	1	1/2	3/8	3.70	1.45	1.94	1.36	1.76	1.36	1.65	1-3/8
16-UT-8-4	1610-3-8-4	1	1/2	1/4	3.70	1.45	1.94	1.36	1.76	1.30	1.59	1-3/8
16-UT-6-6	1610-3-6-6	1	3/8	3/8	3.59	1.45	1.94	1.36	1.65	1.36	1.65	1-3/8

Cross Unions(Imperial Tube)



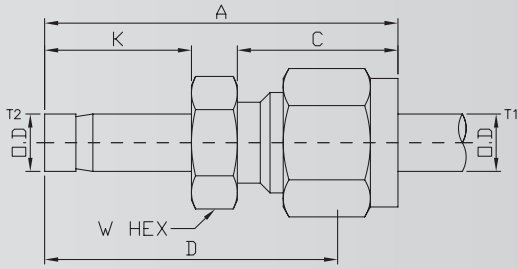
Unit = mm

Item Number	Swagelok	Imperial Tube				
		Tube OD	A	C	L	W HEX
2-UC	200-4	1/8	1.76	0.98	0.62	7/16
3-UC	300-4	3/16	1.83	0.96	0.70	7/16
4-UC	400-4	1/4	2.12	1.06	0.76	1/2
5-UC	500-4	5/16	2.34	1.17	0.88	5/8
6-UC	600-4	3/8	2.40	1.20	0.91	5/8
8-UC	810-4	1/2	2.84	1.42	1.02	13/16
10-UC	1010-4	5/8	3.06	1.53	1.13	1-1/16
12-UC	1210-4	3/4	3.12	1.57	1.16	1-1/16
14-UC	1410-4	7/8	3.52	1.76	1.36	1-5/16
16-UC	1610-4	1	3.86	1.93	1.45	1-5/16

Cross Unions (Metric Tube)

Item Number	Swagelok	(Metric Tube)				in inch
		Tube OD	A	C	L	W HEX
3MO-UC	3MO-4	3	44,7	22,3	15,7	7/16
4MO-UC	4MO-4	4	50,8	25,4	18,8	1/2
6MO-UC	6MO-6	6	53,9	27,0	19,6	1/2
8MO-UC	8MO-8	8	59,7	29,9	22,4	5/8
10MO-UC	10MO-10	10	67,0	33,5	25,9	13/16
12MO-UC	12MO-12	12	72,0	36,0	25,9	13/16
16MO-UC	16MO-16	16	74,0	37,0	26,9	15/16
18MO-UC	18MO-18	18	76,6	38,3	28,2	1-1/16

Reducer(Imperial Tube)



Unit= mm

Item Number	Swagelok	Imperial Tube							
		T ₁ Tube OD	T ₂ Tube OD	A	C	D	K	W HEX	Hole ID
2-RD-2	200-R-2	1/8	1/8	1.34	0.43	1.09	0.54	7/16	0.07
2-RD-3	200-R-3	1/8	3/16	1.35	0.60	1.09	0.58	7/16	0.09
2-RD-4	200-R-4	1/8	1/4	1.42	0.60	1.16	0.63	7/16	0.09
2-RD-6	200-R-6	1/8	3/8	1.48	0.60	1.22	0.69	7/16	0.09
2-RD-8	200-R-8	1/8	1/2	1.74	0.60	1.48	0.91	9/16	0.09
3-RD-2	300-R-2	3/16	1/8	1.37	0.63	1.11	0.53	7/16	0.08
3-RD-4	300-R-4	3/16	1/4	1.46	0.63	1.20	0.63	7/16	0.13
4-RD-2	400-R-2	1/4	1/8	1.45	0.70	1.16	0.53	1/2	0.08
4-RD-3	400-R-3	1/4	3/16	1.48	0.60	1.19	0.56	1/2	0.12
4-RD-4	400-R-4	1/4	1/4	1.54	0.70	1.25	0.63	1/2	0.19
4-RD-5	400-R-5	1/4	5/16	1.57	0.70	1.28	0.66	1/2	0.19
4-RD-6	400-R-6	1/4	3/8	1.60	0.70	1.31	0.69	1/2	0.19
4-RD-8	400-R-8	1/4	1/2	1.82	0.70	1.53	0.91	9/16	0.19
4-RD-10	400-R-10	1/4	5/8	1.89	0.70	1.60	0.97	11/16	0.19
4-RD-12	400-R-12	1/4	3/4	1.88	0.70	1.59	0.97	13/16	0.19
5-RD-6	500-R-6	5/16	3/8	1.65	0.73	1.36	0.69	9/16	0.25
5-RD-8	500-R-8	5/16	1/2	1.87	0.73	1.58	0.91	9/16	0.25
6-RD-4	600-R-4	3/8	1/4	1.63	0.76	1.34	0.63	5/8	0.19
6-RD-6	600-R-6	3/8	3/8	1.70	0.76	1.41	0.69	5/8	0.28
6-RD-8	600-R-8	3/8	1/2	1.91	0.76	1.62	0.91	5/8	0.28
6-RD-10	600-R-10	3/8	5/8	1.98	0.76	1.69	0.97	11/16	0.28
6-RD-12	600-R-12	3/8	3/4	1.98	0.76	1.69	0.97	13/16	0.28
8-RD-4	810-R-4	1/2	1/4	1.77	0.87	1.37	0.63	13/16	0.19
8-RD-6	810-R-6	1/2	3/8	1.84	0.87	1.44	0.69	13/16	0.19
8-RD-10	810-R-10	1/2	5/8	2.12	0.87	1.72	0.97	13/16	0.41
8-RD-12	810-R-12	1/2	3/4	2.12	0.87	1.72	0.97	13/16	0.41
8-RD-16	810-R-16	1/2	1	2.37	0.87	1.97	1.22	1-1/16	0.41
10-RD-12	1010-R-12	5/8	3/4	2.15	0.87	1.75	0.97	15/16	0.50
10-RD-14	1010-R-14	5/8	7/8	2.21	0.87	1.81	1.03	15/16	0.50
10-RD-16	1010-R-16	5/8	1	2.40	0.87	2.00	1.22	1-1/16	0.50
12-RD-8	1210-R-8	3/4	1/2	2.15	0.87	1.75	0.91	1-1/16	0.39
12-RD-16	1210-R-16	3/4	1	2.46	0.87	2.06	1.22	1-1/16	0.63
16-RD-24	1610-R-24	1	1-1/2	3.519	1.05	3.03	2.05	1-5/8	0.88

Reducer (Metric to Fractional)

Item Number	Swagelok	Tube OD		unit = mm					
		T ₁ inch	T ₂ MM	A	C	D	K	W HEX	hole ID
3MO-RD-2	3MO-R-2	3	1/8	34,3	15,3	27,7	13,5	12,0	1,4
3MO-RD-4	3MO-R-4	3	1/4	36,1	15,3	29,5	16,0	12,0	4,8
6MO-RD-4	6MO-R-4	6	1/4	39,3	17,7	31,8	16,0	14,0	4,8
6MO-RD-5	6MO-R-5	6	5/16	40,0	17,7	32,5	16,8	14,0	6,4
6MO-RD-6	6MO-R-6	6	3/8	40,8	17,7	33,3	17,5	14,0	7,1
6MO-RD-8	6MO-R-8	6	1/2	46,4	17,7	38,9	23,1	14,0	9,9
8MO-RD-6	8MO-R-6	8	3/8	42,0	18,6	34,5	17,5	15,0	7,1
8MO-RD-8	8MO-R-8	8	1/2	47,5	18,6	40,1	23,1	15,0	9,9
10MO-RD-6	10MO-R-6	10	3/8	44,4	19,5	36,8	17,5	18,0	7,1
10M-RD-8	10MO-R-8	10	1/2	47,6	19,5	41,4	23,1	18,0	9,9
12MO-RD-8	12MO-R-8	12	1/2	52,3	22,0	42,2	23,1	22,0	9,9
12MO-RD-12	12MO-R-12	12	3/4	53,8	22,0	43,7	24,6	22,0	15,1
18MO-RD-12	18MO-R-12	18	3/4	57,5	22,0	47,5	24,6	27,0	15,1

Reducer (Metric)

Item Number	Swagelok	unit = mm								
		Tube OD		A	C	D	K	Q	W HEX	Hole ID
		T ₁	T ₂							
3MO-RD-4MO	3MO-R-4M	3	4	35,0	15,3	28,4	14,3	1,0	12,0	2,0
3MO-RD-6MO	3MO-R-6M	3	6	36,1	15,3	29,5	15,9	1,0	12,0	2,4
3MO-RD-10MO	3MO-R-10M	3	10	38,6	15,3	32,0	17,7	2,0	15,3	12,0
4MO-RD-6MO	4MO-R-6M	4	6	37,1	16,1	30,5	15,9	1,0	12,0	3,0
6MO-RD-3MO	6MO-R-3M	6	3	37,0	17,7	29,5	13,5	0,6	14,0	1,4
6MO-RD-6MO	6MO-R-8M	6	8	40,0	17,7	32,5	16,7	0,8	14,0	4,8
6MO-RD-10MO	6MO-R-10M	6	10	40,8	17,7	33,3	17,5	1,3	14,0	4,8
6MO-RD-12MO	6MO-R-12M	6	12	46,4	17,7	38,9	23,0	1,4	14,0	4,8
8MO-RD-6MO	8MO-R-6M	8	6	40,0	18,6	32,5	15,9	1,0	15,0	4,0
8MO-RD-10MO	8MO-R-10M	8	10	42,0	18,6	34,5	17,5	1,3	15,0	6,4
8MO-RD-12MO	8MO-R-12M	8	12	47,6	18,6	40,1	23,0	1,4	15,0	6,4
10MO-RD-6MO	10MO-R-6M	10	6	41,7	19,5	34,1	15,9	1,0	18,0	4,0
10MO-RD-6MO	10MO-R-8M	10	8	43,4	19,5	35,8	15,3	1,5	19,5	18,0
10MO-RD-12MO	10MO-R-12M	10	12	49,7	19,5	42,1	23,0	1,4	18,0	7,9
10MO-RD-15MO	10MO-R-15M	10	15	51,3	19,5	43,7	23,8	1,6	27,0	7,9
12MO-RD-6MO	12MO-R-6M	12	6	44,9	22,0	34,8	15,9	1,0	22,0	4,0
12MO-RD-10MO	12MO-R-10M	12	10	46,6	22,0	36,5	17,5	1,3	22,0	7,5
12MO-RD-16MO	12MO-R-16M	12	16	53,8	22,0	43,7	24,6	1,7	22,0	9,5
12MO-RD-16MO	12MO-R-18M	12	18	53,8	22,0	43,7	24,6	2,0	22,0	9,5
12MO-RD-20MO	12MO-R-20M	12	20	56,1	22,0	46,0	25,4	2,5	22,0	9,5
12MO-RD-25MO	12MO-R-25M	12	25	60,9	22,0	50,8	31,8	2,6	27,0	9,5
16MO-RD-12MO	16MO-R-12M	16	12	53,0	22,0	42,9	23,0	1,4	24,0	9,1
16MO-RD-18MO	16MO-R-18M	16	18	54,7	22,0	44,6	24,8	2,5	22,0	24,0
16MO-RD-20MO	16MO-R-20M	16	20	55,3	22,0	45,2	25,6	2,5	22,0	24,0
16MO-RD-25MO	16MO-R-25M	16	25	64,0	22,0	51,8	32,0	3,0	22,0	27,
18MO-RD-12MO	18MO-R-12M	18	12	54,6	22,0	44,5	23,0	1,4	27,0	9,1
18MO-RD-16MO	18MO-R-16M	18	16	56,1	22,0	46,0	24,6	1,7	27,0	12,7
18MO-RD-20MO	18MO-R-20M	18	20	57,6	22,0	47,5	25,4	2,5	27,0	15,1
18MO-RD-22MO	18MO-R-22M	18	22	56,1	22,0	46,0	26,2	2,5	27,0	15,1
18MO-RD-25MO	18MO-R-25M	18	25	62,5	22,0	52,4	31,8	2,6	27,0	15,1
20MO-RD-16MO	20MO-R-16M	20	16	57,9	22,0	47,8	24,6	1,7	27,0	12,7
20MO-RD-18MO	20MO-R-18M	20	18	57,9	22,0	47,8	24,6	2,0	30,0	13,9
25MO-RD-16MO	25MO-R-16M	25	16	63,2	26,5	51,0	24,8	2,0	26,5	35,0
25MO-RD-18MO	25MO-R-18M	25	18	63,1	26,5	50,8	24,6	2,0	35,0	14,0
25MO-RD-20MO	25MO-R-20M	25	20	64,5	26,5	52,3	25,4	2,5	35,0	15,1
20MO-RD-22MO	20MO-R-22M	20	22	57,7	22,0	47,6	26,2	2,5	30,0	15,8
20MO-RD-25MO	20MO-R-25M	20	25	64,2	22,0	54,1	31,8	2,6	30,0	15,8

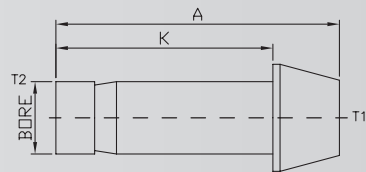
Bulkhead Reducer (Imperial Tube)



Unit = mm

Item Number	Swagelok	Imperial Tube							
		Tube OD	A	C	L	K	D	Hole ID	W HEX
2-BAD-2	200-R1-2	1/8	1.95	1.23	.97	0.53	1.69	0.093	1/2
4-BAD-4	400-R1-4	1/4	2.20	1.31	1.02	0.63	1.91	0.187	5/8
6-BAD-6	600-R1-6	3/8	2.42	1.44	1.15	0.69	2.13	0.281	3/4
8-BAD-8	810-R1-8	1/2	2.87	1.65	1.25	0.91	2.47	0.406	15/16

Port Connector(Imperial Tube)



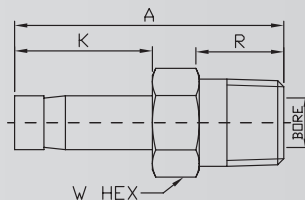
Unit= mm

Item Number	Swagelok	Imperial Tube				
		Tube OD		A	K	ID
		T ₁	T ₂			
2-PO-2	201-PC	1/8	1/8	0.95	0.54	.078
3-PO-3	301-PC	3/16	3/16	.981	0.67	0.116
4-PO-2	401-PC-2	1/4	1/8	1.05	0.54	.078
4-PO-4	401-PC	1/4	1/4	1.07	0.76	.156
6-PO-2	601-PC-2	3/8	1/8	1.09	0.54	.031
6-PO-4	601-PC-4	3/8	1/4	1.15	0.64	0.156
6-PO-6	601-PC	3/8	3/8	1.16	0.84	0.281
8-PO-4	811-PC-4	1/2	1/4	1.36	0.64	0.156
8-PO-6	811-PC-6	1/2	3/8	1.40	0.72	0.281
8-PO-8	811-PC	1/2	1/2	1.59	1.11	0.375
12-PO-8	1211-PC-8	3/4	1/2	1.72	0.91	0.375
12-PO-12	1211-PC	3/4	3/4	1.65	1.16	0.578
16-PO-16	1611-PC	1	1	2.12	1.44	0.813

Port Connector (Metric Tube)

Item Number	Swagelok	Metric Tube				
		Tube OD		A	K	ID
		T ₁	T ₂			
3MO-PO	3M1-PC	3	3	22,2	15,7	1,6
6MO-PO	6M1-PC	6	6	24,6	18,7	3,0
6MO-PO-3MO	6M1-PC-3M	6	3	22,6	13,5	1,6
8MO-PO	8M1-PC	8	8	25,9	20,2	5,0
8MO-PO-6MO	8M1-PC-6M	8	6	25,5	16,1	3,0
10MO-PO	10M1-PC	10	10	26,1	20,0	6,0
10MO-PO-6MO	10M1-PC-6M	10	6	25,5	16,1	3,0
10MO-PO-6MO	12M1-PC-6M	12	6	31,2	16,1	3,0
10MO-PO-8MO	10M1-PC-8M	10	8	29,5	16,8	5,0
12MO-PO	12M1-PC	12	12	35,8	26,0	8,0
12MO-PO	16M1-PC	16	16	40,5	27,7	12,0
18MO-PO	18M1-PC	18	18	40,8	27,7	13,0
12MO-PO-8MO	12M1-PC-8M	12	8	31,4	16,8	5,0

Tube Adapter Male NPT (Imperial Tube)



Unit = mm

Item Number	Swagelok	Imperial Tube						
		Tube OD	NPT	A	R	K	W HEX	ID
2-MAD-2	2-TA-1-2	1/8	1/8	1.16	0.38	0.54	7/16	0.078
2-MAD-4	2-TA-1-4	1/8	1/4	1.38	0.56	0.54	9/16	0.078
3-MAD-2	3-TA-1-2	3/16	1/8	1.20	0.38	0.58	7/16	0.116
3-MAD-4	3-TA-1-4	3/16	1/4	1.42	0.56	0.58	9/16	0.116
4-MAD-2	4-TA-1-2	1/4	1/8	1.25	0.38	0.63	7/16	0.156
4-MAD-4	4-TA-1-4	1/4	1/4	1.46	0.56	0.63	9/16	0.156
4-MAD-6	4-TA-1-6	1/4	3/8	1.49	0.56	0.63	11/16	0.156
4-MAD-8	4-TA-1-8	1/4	1/2	1.71	0.75	0.63	7/8	0.156
5-MAD-2	5-TA-1-2	5/16	1/8	1.29	0.38	0.66	7/16	0.219
5-MAD-4	5-TA-1-4	5/16	1/4	1.50	0.56	0.66	9/16	0.219
5-MAD-6	5-TA-1-6	5/16	3/8	1.53	0.56	0.66	11/16	0.219
5-MAD-8	5-TA-1-8	5/16	1/2	1.74	0.75	0.66	7/8	0.219
6-MAD-2	6-TA-1-2	3/8	1/8	1.32	0.38	0.69	7/16	0.281
6-MAD-4	6-TA-1-4	3/8	1/4	1.53	0.56	0.69	9/16	0.281
6-MAD-6	6-TA-1-6	3/8	3/8	1.56	0.56	0.69	11/16	0.281
6-MAD-8	6-TA-1-8	3/8	1/2	1.78	0.75	0.69	7/8	0.281
8-MAD-4	8-TA-1-4	1/2	1/4	1.75	0.56	0.91	9/16	0.281
8-MAD-6	8-TA-1-6	1/2	3/8	1.78	0.56	0.91	11/16	0.375
8-MAD-8	8-TA-1-8	1/2	1/2	2.00	0.75	0.91	7/8	0.375
10-MAD-8	10-TA-1-8	5/8	1/2	2.06	0.75	0.97	7/8	0.469
12-MAD-8	12-TA-1-8	3/4	1/2	2.06	0.75	0.97	7/8	0.469
12-MAD-12	12-TA-1-12	3/4	3/4	2.06	0.75	0.97	1-1/16	0.578
12-MAD-16	12-TA-1-16	3/4	1	2.41	0.94	0.97	1-3/8	0.813
16-MAD-12	16-TA-1-12	1	3/4	2.31	0.75	1.22	1-1/16	0.813
16-MAD-16	16-TA-1-16	1	1	2.68	0.94	1.22	1-3/8	0.813

Tube Adapter Male NPT (Metric Tube)

Item Number	Swagelok	Metric Tube						
		Tube OD	NPT	A	K	R	W HEX	ID
3MO-MAD-2	3-MTA-1-2	3	1/8	29,4	13,5	9,7	12,0	1,8
4MO-MAD-2	4-MTA-1-2	4	1/8	29,4	14,3	9,7	12,0	2,0
6MO-MAD-2	6-MTA-1-2	6	1/8	31,0	15,9	9,7	12,0	4,0
6MO-MAD-4	6-MTA-1-4	6	1/4	35,7	15,9	14,2	14,0	4,0
6MO-MAD-6	6-MTA-1-6	6	3/8	36,5	16,1	14,2	18,0	3,0
6MO-MAD-8	6-MTA-1-8	6	1/2	42,1	16,1	19,1	22,0	3,0
8MO-MAD-4	8-MTA-1-4	8	1/4	37,3	16,7	14,2	14,0	6,4
8MO-MAD-6	8-MTA-1-6	8	3/8	38,1	16,7	14,2	12,0	6,4
10MO-MAD-4	10-MTA-1-4	10	1/4	38,1	17,5	14,2	14,0	7,1
10MO-MAD-6	10-MTA-1-6	10	3/8	43,7	17,5	14,2	18,0	7,5
10MO-MAD-8	10-MTA-1-8	10	1/2	44,5	17,5	19,1	22,0	7,5
12MO-MAD-4	12-MTA-1-4	12	1/4	43,7	23,0	14,2	14,0	7,1
12MO-MAD-6	12-MTA-1-6	12	3/8	44,5	23,0	14,2	27,0	9,1
12MO-MAD-8	12-MTA-1-8	12	1/2	49,2	23,0	19,1	22,0	9,1
16MO-MAD-8	16-MTA-1-8	16	1/2	50,8	24,6	19,1	22,0	12,7
16MO-MAD-12	16-MTA-1-12	16	3/4	51,6	24,6	19,1	27,0	12,7
18MO-MAD-8	18-MTA-1-8	18	1/2	50,8	24,6	19,1	22,0	12,7
18MO-MAD-12	18-MTA-1-12	18	3/4	51,6	24,6	19,1	27,0	14,0
20MO-MAD-8	20-MTA-1-8	20	1/2	51,8	25,6	19,1	22,0	15,0
20MO-MAD-12	20-MTA-1-12	20	3/4	52,4	25,4	19,1	27,0	15,1
25MO-MAD-16	25-MTA-1-16	25	1	65,9	31,8	23,9	35,0	19,8

Tube Adapter Female NPT (Imperial Tube)



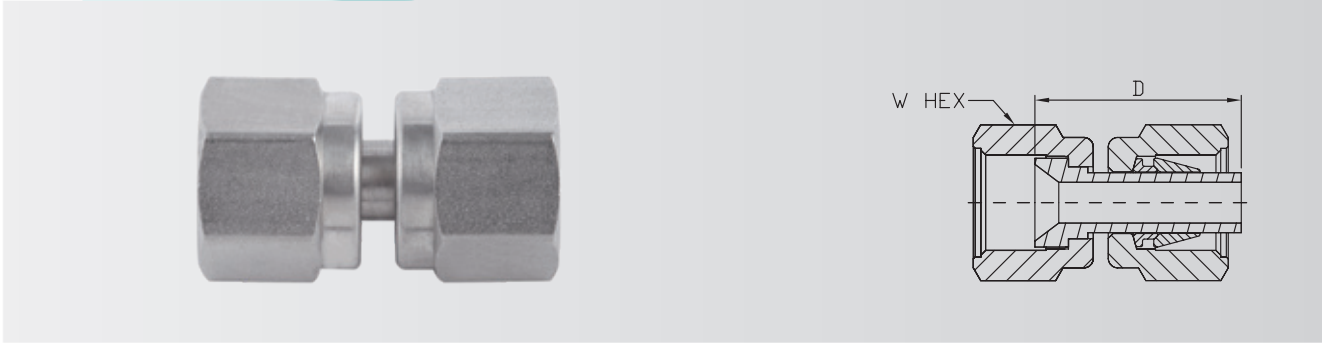
Unit = mm

Item Number	Swagelok	(Imperial Tube)					
		Tube OD	NPT	A	K	W HEX	ID
2-FAD-2	2-TA-7-2	1/8	1/8	1.23	0.53	9/16	0.093
2-FAD-4	2-TA-7-4	1/8	1/4	1.38	0.53	3/4	0.093
3-FAD-2	3-TA-7-2	3/16	1/8	1.25	0.56	9/16	0.116
3-FAD-4	3-TA-7-4	3/16	1/4	1.42	0.56	3/4	0.116
4-FAD-2	4-TA-7-2	1/4	1/8	1.31	0.63	9/16	0.188
4-FAD-4	4-TA-7-4	1/4	1/4	1.47	0.63	3/4	0.188
4-FAD-6	4-TA-7-6	1/4	3/8	1.56	0.63	7/8	0.188
4-FAD-8	4-TA-7-8	1/4	1/2	1.80	0.63	1-1/16	0.188
5-FAD-2	5-TA-7-2	5/16	1/8	1.34	0.66	9/16	0.219
5-FAD-4	5-TA-7-4	5/16	1/4	1.50	0.66	3/4	0.219
5-FAD-6	5-TA-7-6	5/16	3/8	1.59	0.66	7/8	0.219
6-FAD-2	6-TA-7-2	3/8	1/8	1.36	0.69	9/16	0.281
6-FAD-8	6-TA-7-4	3/8	1/4	1.55	0.69	3/4	0.281
6-FAD-6	6-TA-7-6	3/8	3/8	1.59	0.69	7/8	0.281
6-FAD-8	6-TA-7-8	3/8	1/2	1.84	0.69	1-1/16	0.281
8-FAD-4	8-TA-7-4	1/2	1/4	1.72	0.91	3/4	0.391
8-FAD-6	8-TA-7-6	1/2	3/8	1.80	0.91	7/8	0.391
9-FAD-8	8-TA-7-8	1/2	1/2	2.10	0.91	1-1/16	0.390
10-FAD-6	10-TA-7-6	5/8	3/8	1.86	0.97	7/8	0.469
10-FAD-8	10-TA-7-8	5/8	1/2	2.09	0.97	1-1/16	0.469
12-FAD-8	12-TA-7-8	3/4	1/2	2.10	0.97	1-1/16	0.578
12-FAD-12	12-TA-7-12	3/4	3/4	2.16	0.97	1-1/4	0.578
12-FAD-16	12-TA-7-16	3/4	1	2.30	0.97	1-5/8	0.578
14-FAD-12	14-TA-7-12	7/8	3/4	2.22	1.02	1-5/16	0.578
16-FAD-12	16-TA-7-12	1	3/4	2.41	1.22	1-5/16	0.813
16-FAD-16	16-TA-7-16	1	1	2.54	1.22	1-5/8	0.813

Tube Adapter Female NPT (Metric Tube)

Item Number	Swagelok	Metric Tube					
		Tube OD	NPT	A	K	W HEX	ID
3MO-FAD-2	3-MTA-7-2	3	1/8	31,3	13,5	14,0	1,3
4MO-FAD-2	4-MTA-7-2	4	1/8	29,4	14,3	14,0	2,0
6MO-FAD-2	6-MTA-7-2	6	1/8	29,4	15,9	14,0	4,0
6MO-FAD-4	6-MTA-7-4	6	1/4	34,1	15,9	19,0	4,0
8MO-FAD-2	8-MTA-7-2	8	1/8	35,5	16,7	14,0	6,4
8MO-FAD-4	8-MTA-7-4	8	1/4	35,1	16,7	19,0	6,4
8MO-FAD-6	8-MTA-7-6	8	3/8	36,5	16,7	22,0	6,4
10MO-FAD-4	10-MTA-7-4	10	1/4	37,3	17,5	19,0	7,5
10MO-FAD-6	10-MTA-7-6	10	3/8	37,3	17,5	22,0	7,5
10MO-FAD-8	10-MTA-7-8	10	1/2	42,1	17,5	27,0	7,5
12MO-FAD-4	12-MTA-7-4	12	1/4	41,3	23,0	19,0	9,1
12MO-FAD-6	12-MTA-7-6	12	3/8	42,9	23,0	22,0	9,1
12MO-FAD-8	12-MTA-7-8	12	1/2	47,6	23,0	27,0	9,1
16MO-FAD-8	16-MTA-7-8	16	1/2	49,2	24,6	27,0	12,7
18MO-FAD-12	18-MTA-7-12	18	3/4	52,4	24,6	33,0	14,0
20MO-FAD-8	20-MTA-7-8	20	1/2	50,0	25,6	27,0	15,0
20MO-FAD-12	20-MTA-7-12	20	3/4	53,2	25,4	33,0	15,1
25MO-FAD-16	25-MTA-7-16	25	1	66,7	31,8	41,0	19,8

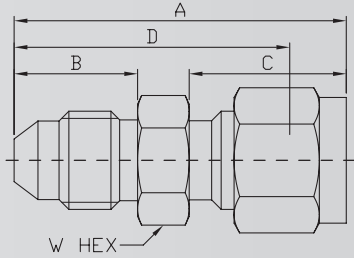
AN Thread



Unit= mm

Item Number	Swagelok	(Imperial Tube)		
		Tube OD	D	W HEX
2-AN-2F	200-A-2ANF	1/8	0.88	3/8
4-AN-4F	400-A-4ANF	1/4	0.96	9/16
6-AN-6F	600-A-6ANF	3/8	1.07	11/16
8-AN-8F	810-A-8ANF	1/2	1.37	7/8
12-AN-12F	1210-A-12ANF	3/4	1.49	1-1/4
16-AN-16F	1610-A-16ANF	1	1.80	1-1/2

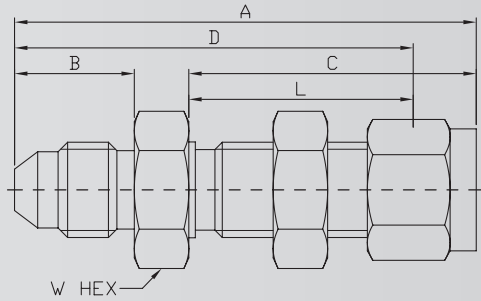
AN Fitting Male 37° JIC



Unit = mm

Item Number	Swagelok	(Imperial Tube)						
		Tube OD	FLARE END	A	B	C	D	W HEX
2-AN-2	200-6-2AN	1/8	1/8	1.28	0.45	0.60	1.02	7/16
2-AN-4	200-6-4AN	1/8	1/4	1.39	0.55	0.60	1.13	1/2
3-AN-3	300-6-3AN	3/16	3/16	1.32	0.48	0.64	1.06	7/16
4-AN-4	400-6-4AN	1/4	1/4	1.48	0.55	0.70	1.19	1/2
5-AN-5	500-6-5AN	5/16	5/16	1.52	0.55	0.73	1.22	9/16
6-AN-4	600-6-4AN	3/8	1/4	1.56	0.55	0.76	1.27	5/8
6-AN-6	600-6-6AN	3/8	3/8	1.56	0.56	0.76	1.27	5/8
8-AN-8	810-6-8AN	1/2	1/2	1.81	0.66	0.87	1.41	13/16
10-AN-10	1010-6-10AN	5/8	5/8	1.93	0.76	0.87	1.53	15/16
12-AN-12	1210-6-12AN	3/4	3/4	2.11	0.86	0.87	1.70	1-1/8
16-AN-16	1610-6-16AN	1	1	2.43	0.91	1.05	1.94	1-3/8

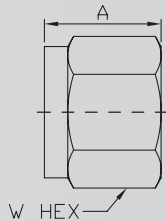
AN Bulkhead Fitting 37° JIC



Unit = mm

Item Number	Swagelok	(Imperial Tube)							
		Tube OD	FLARE END	A	D	C	L	B	W HEX
2-BAN-2	200-61-2 AN	1/8	1/8	1.91	1.65	1.23	0.97	0.45	1/2
2-BAN-4	200-61-4 AN	1/8	1/4	2.04	1.78	1.23	0.97	0.55	5/8
3-BAN-3	300-61-3 AN	3/16	3/16	1.98	1.71	1.26	1.00	0.48	9/16
4-BAN-4	400-61-4 AN	1/4	1/4	2.12	1.83	1.31	1.02	0.55	5/8
5-BAN-5	500-61-5 AN	5/16	5/16	2.21	1.92	1.41	1.12	0.55	11/16
6-BAN-2	600-61-4 AN	3/8	1/4	2.25	1.96	1.44	1.15	0.55	3/4
6-BAN-8	600-61-6 AN	3/8	3/8	2.25	1.96	1.44	.115	0.56	3/4
8-BAN-8	810-61-8 AN	1/2	1/2	2.59	2.19	1.65	1.25	0.66	15/16
10-BAN-10	1010-61-10 AN	5/8	5/8	2.74	2.34	1.68	1.28	0.76	1-1/16
12-BAN-12	1210-61-12 AN	3/4	3/4	3.11	2.71	1.87	1.47	0.86	1-3/16
16-BAN-16	1610-61-16 AN	1	1	3.65	3.16	2.27	1.78	0.91	1-9/16

Nuts (Imperial Tube)



Unit= mm

Item Number	Swagelok	(Imperial Tube)		
		Tube OD	A	W HEX
1-NU	102-1	1/16	0.31	5/16
2-NU	202-1	1/8	0.47	7/16
3-NU	302-1	3/16	0.47	1/2
4-NU	402-1	1/4	0.50	9/16
5-NU	502-1	5/16	0.53	5/8
6-NU	602-1	3/8	0.56	11/16
8-NU	812-1	1/2	0.69	7/8
10-NU	1012-1	5/8	0.69	1
12-NU	1212-1	3/4	0.69	1-1/8
14-NU	1412-1	7/8	0.69	1-1/4
16-NU	1612-1	1	0.81	1-1/2

Nuts (Metric Tube)

Item Number	Swagelok	UN THREAD	(Metric Tube)		
			Tube OD	A	W HEX
2MO-NU	2M2-1	2	5/16-20	11,9	12,0
3MO-NU	3M2-1	3	5/16-20	11,9	12,0
4MO-NU	4M2-1	4	3/8-20	11,9	12,0
6MO-NU	6M2-1	6	7/16-20	12,7	14,0
8MO-NU	8M2-1	8	1/2-20	13,5	16,0
10MO-NU	10M2-1	10	5/8-20	15,1	19,0
12MO-NU	12M2-1	12	3/4-20	17,5	22,0
14MO-NU	14M2-1	14	7/8-20	17,5	25,0
15MO-NU	15M2-1	15	7/8-20	17,5	25,0
16MO-NU	16M2-1	16	7/8-20	17,5	25,0
18MO-NU	18M2-1	18	1-20	17,5	30,0
20MO-NU	20M2-1	20	1.1/8-20	17,5	32,0
22MO-NU	22M2-1	22	1.1/8-20	17,5	32,0
25MO-NU	25M2-1	25	1.5/16-20	20,6	38,0

Ferrules Front (Imperial Tube)



Unit = mm

Item Number	Swagelok	Tube OD
1-FF	103-1	1/16
2-FF	203-1	1/8
3-FF	303-1	3/16
4-FF	403-1	1/4
5-FF	503-1	5/16
6-FF	603-1	3/8
8-FF	813-1	1/2
10-FF	1013-1	5/8
12-FF	1213-1	3/4
14-FF	1413-1	7/8
16-FF	1613-1	1

Ferrules Front (Metric Tube)

Item Number	Swagelok	Tube OD
2MO-FF	2M3-1	2
3MO-FF	3M3-1	3
4MO-FF	4M3-1	4
6MO-FF	6M3-1	6
8MO-FF	8M3-1	8
10MO-FF	10M3-1	10
12MO-FF	12M3-1	12
14MO-FF	14M3-1	14
15MO-FF	15M3-1	15
16MO-FF	16M3-1	16
18MO-FF	18M3-1	18
20MO-FF	20M3-1	20
22MO-FF	22M3-1	22
25MO-FF	25M3-1	25

Ferrules Back (Imperial Tube)



Unit = mm

Item Number	Swagelok	Tube OD
1-BF	104-1	1/16
2-BF	204-1	1/8
3-BF	304-1	3/16
4-BF	404-1	1/4
5-BF	504-1	5/16
6-BF	604-1	3/8
8-BF	814-1	1/2
10-BF	1014-1	5/8
12-BF	1214-1	3/4
14-BF	1414-1	7/8
16-BF	1614-1	1

Ferrules Back (Metric Tube)

Item Number	Swagelok	Tube OD
2MO-BF	2M4-1	2
3MO-BF	3M4-1	3
4MO-BF	4M4-1	4
6MO-BF	6M4-1	6
8MO-BF	8M4-1	8
10MO-BF	10M4-1	10
12MO-BF	12M4-1	12
14MO-BF	14M4-1	14
15MO-BF	15M4-1	15
16MO-BF	16M4-1	16
18MO-BF	18M4-1	18
20MO-BF	20M4-1	20
22MO-BF	22M4-1	22
25MO-BF	25M4-1	25

Ferrule-Pak

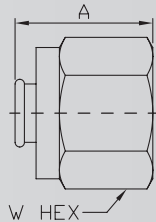


Unit= mm

Item Number	T Tube OD (inch)
2-SET	1/8
4-SET	1/4
6-SET	3/8
8-SET	1/2
12-SET	3/4
16-SET	1

Item Number	T Tube OD (mm)
3MO-SET	3
4MO-SET	4
6MO-SET	6
8MO-SET	8
10MO-SET	10
12MO-SET	12
14MO-SET	14
15MO-SET	15
16MO-SET	16
18MO-SET	18
20MO-SET	20
22MO-SET	22
25MO-SET	25

Plug (Imperial Tube)



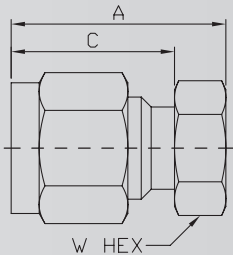
Unit = mm

Item Number	Swagelok	(Imperial Tube)		
		Tube OD	A	W HEX
1-PG	100-P	1/16	0.31	5/16
2-PG	200-P	1/8	0.47	7/16
3-PG	300-P	3/16	0.47	1/2
4-PG	400-P	1/4	0.50	9/16
5-PG	500-P	5/16	0.53	5/8
6-PG	600-P	3/8	0.56	11-16
8-PG	810-P	1/2	0.69	7/8
10-PG	1010-P	5/8	0.69	1
12-PG	1210-P	3/4	0.69	1-1/8
14-PG	1410-P	7/8	0.69	1-1/4
16-PG	1610-P	1	0.81	1-1/2

Plug (Metric Tube)

Item Number	Swagelok	(Metric Tube)		
		Tube OD	A	W HEX
2MO-PG	2MO-P	2	11,9	12,0
3MO-PG	3MO-P	3	11,9	12,0
4MO-PG	4MO-P	4	11,9	12,0
6MO-PG	6MO-P	6	12,7	14,0
8MO-PG	8MO-P	8	13,5	16,0
10MO-PG	10MO-P	10	15,1	19,0
12MO-PG	12MO-P	12	17,5	22,0
14MO-PG	14MO-P	14	17,5	25,0
15MO-PG	15MO-P	15	17,5	25,0
16MO-PG	16MO-P	16	17,5	25,0
18MO-PG	18MO-P	18	17,5	30,0
20MO-PG	20MO-P	20	17,5	32,0
22MO-PG	22MO-P	22	17,5	32,0
25MO-PG	25MO-P	25	20,6	38,0

Cap (Imperial Tube)



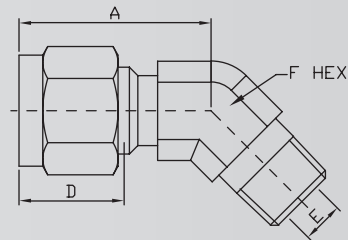
Unit = mm

Item Number	Swagelok	(Imperial Tube)			
		Tube OD	A	C	W HEX
2-CP	200-C	1/8	0.79	0.60	7/16
3-CP	300-C	3/16	0.84	0.64	7/16
4-CP	400-C	1/4	0.92	0.70	1/2
5-CP	500-C	5/16	0.96	0.73	9/16
6-CP	600-C	3/8	1.01	0.76	5/8
8-CP	810-C	1/2	1.15	0.87	13/16
10-CP	1010-C	5/8	1.18	0.87	15/16
12-CP	1210-C	3/4	1.25	0.87	1-1/16
14-CP	1410-C	7/8	1.31	0.87	1-3/16
16-CP	1610-C	1	1.52	1.05	1-3/8

Cap (Metric Tube)

Item Number	Swagelok	(Metric Tube)			
		Tube OD	A	C	W HEX
3MO-CP	3MO-C	3	13,5	15,3	12,0
4MO-CP	4MO-C	4	14,3	16,1	12,0
6MO-CP	6MO-C	6	15,9	17,7	14,0
8MO-CP	8MO-C	8	17,1	18,6	15,0
10MO-CP	10MO-C	10	19,1	19,5	18,0
12MO-CP	12MO-C	12	19,1	22,0	22,0
14MO-CP	14MO-C	14	19,8	22,0	24,0
15MO-CP	15MO-C	15	19,8	22,0	24,0
16MO-CP	16MO-C	16	19,8	22,0	24,0
18MO-CP	18MO-C	18	21,3	22,0	27,0
20MO-CP	20MO-C	20	23,9	22,0	30,0
22MO-CP	22MO-C	22	23,9	22,0	30,0
25MO-CP	25MO-C	25	26,2	26,5	35,0

45° Elbows NPT



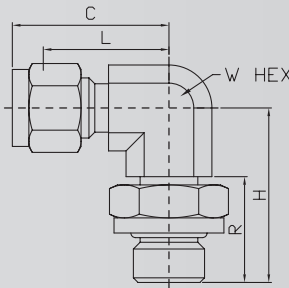
Unit = mm

Item Number	Swagelok	(Imperial Tube)						
		Tube OD	NPT	C	L	P	R	W HEX
2-HME-2	200-5-2	1/8	1/8	0.60	0.53	0.57	0.38	7/16
3-HME-2	300-5-2	3/16	1/8	0.64	0.56	0.58	0.38	7/16
4-HME-2	400-5-2	1/4	1/8	0.70	0.66	0.66	0.38	9/16
4-HME-4	400-5-4	1/4	1/4	0.70	0.66	0.86	0.56	9/16
5-HME-2	500-5-2	5/16	1/8	0.73	0.66	0.66	0.38	9/16
6-HME-2	600-5-2	3/8	1/8	0.76	0.72	0.67	0.38	9/16
6HME-4	600-5-4	3/8	1/4	0.76	0.72	0.86	0.56	9/16
6-HME-6	600-5-6	3/8	3/8	0.76	0.75	0.95	0.56	3/4
8-HME-6	810-5-6	1/2	3/8	0.87	0.75	0.95	0.56	3/4
10-HME-8	1010-5-8	5/8	1/2	0.87	0.84	1.20	0.75	1-1/16
12-HME-12	1210-5-12	3/4	3/4	0.87	0.84	1.20	0.75	1-1/16
14-HME-12	1410-5-8	7/8	3/4	0.87	1.36	1.27	0.75	1-5/16
16-HME-16	1610-5-12	1	1	1.05	1.19	1.14	0.94	1-5/16

45° Elbows NPT

Item Number	Swagelok	(Metric Tube)						
		Tube OD	NPT	C	L	P	R	W HEX
6MO-HME-2	-	6	1/8	17.7	16.0	16.8	9.5	14.0
6MO-HME-4	-	6	1/4	17.7	16.0	21.8	14.3	14.0
8MO-HME-2	-	8	1/8	18.6	16.8	16.8	9.5	14.0
10MO-HME-4	-	10	1/4	19.5	19.0	24.1	14.3	19.0
12MO-HME-6	-	12	3/8	22.0	19.0	24.1	14.3	19.0
12MO-HME-8	-	12	1/2	22.0	20.6	29.7	19.0	22.0
16MO-HME-8	-	16	1/2	22.0	20.6	29.7	19.0	22.0

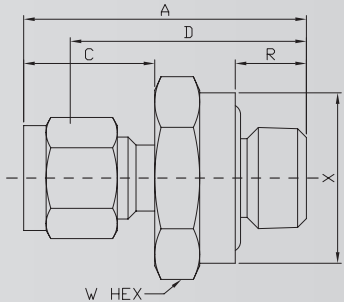
Positionable, ISO/BSP Parallel Thread (PR)



Unit = mm

Item Number	Swagelok	(Imperial Tube)						
		Tube OD	BSPP	C	H	L	R	W HEX
4-MEPR-2	400-2-2PR	1/4	1/8-28	1.06	1.04	0.77	0.81	9/16
4-MEPR-4	400-2-4PR	1/4	1/4-19	1.14	1.27	0.85	0.83	9/16
6-MEPR-4	600-2-4PR	3/8	1/4-19	1.20	1.27	0.85	0.83	9/16
6-MEPR-6	600-2-6PR	3/8	3/8-19	1.31	1.46	1.02	0.83	3/4
8-MEPR-4	810-2-4PR	1/2	1/4-19	1.50	1.38	1.10	0.83	7/8
8-MEPR-6	810-2-6PR	1/2	3/8-19	1.50	1.46	1.10	0.85	7/8
8-MEPR-8	810-2-8PR	1/2	1/2-14	1.50	1.71	1.10	1.09	7/8
10-MEPR-8	1010-2-8PR	5/8	1/2-14	1.50	1.81	1.10	1.09	1-1/16
12-MEPR-12	1210-2-8PR	3/4	1/2-14	1.57	1.81	1.17	1.09	1-1/16
12-MEPR-12	1210-2-12PR	3/4	3/4-14	1.57	1.92	1.17	1.20	1-1/16
16-MEPR-12	1610-2-12PR	1	3/4-14	1.93	2.11	1.45	1.20	1-5/16
16-MEPR-16	1610-2-16PR	1	1-11	1.93	2.11	1.45	1.20	1-5/16

O-Seal (SAE/MS Straight Thread)



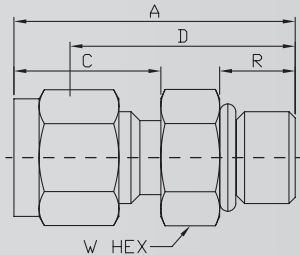
Unit= mm

Item Number	Swagelok	(Imperial Tube)								O-Ring NO.
		Tube OD	STRAIGHT THREAD	A	C	D	R	X	W HEX	
1-MCOR	100-1-OR	1/16	5/16-24	1.06	0.43	0.91	0.34	0.55	9/16	
2-MCOR	200-1-OR	1/8	5/16-24	1.29	0.60	1.03	0.34	0.55	9/16	
3-MCOR	300-1-OR	3/16	3/8-24	1.35	0.64	1.09	0.38	0.62	5/8	
4-MCOR	400-1-OR	1/4	7/16-20	1.51	0.70	1.22	0.41	0.74	3/4	
5-MCOR	500-1-OR	5/16	1/2-20	1.61	0.73	1.31	0.44	0.86	7/8	
6-MCOR	600-1-OR	3/8	9/16-18	1.67	0.76	1.38	0.44	0.93	15/16	
8-MCOR	810-1-OR	1/2	3/4-16	1.81	0.87	1.41	0.47	1.12	1-1/8	
10-MCOR	1010-1-OR	5/8	7/8-14	1.90	0.87	1.50	0.47	1.30	1-3/8	
12-MCOR	1210-1-OR	3/4	1-1/16-12	2.06	0.87	1.66	0.56	1.49	1-1/2	
14-MCOR	1410-1-OR	7/8	1-1/16-12	2.06	0.87	1.66	0.56	1.49	1-1/2	
16-MCOR	1610-1-OR	1	1-5/16-12	2.30	1.05	1.81	0.56	1.74	1-3/4	

O-Seal (NPT)

Item Number	Swagelok	(Imperial Tube)								O-Ring NO.
		Tube OD	NPT	A	C	D	R	X	W HEX	
1-MCOR-2	100-1-2-OR	1/16	1/8	1.12	0.43	0.97	0.28	0.74	3/4	
2-MCOR-2	200-1-2-OR	1/8	1/8	1.29	0.60	1.03	0.28	0.74	3/4	
2-MCOR-4	200-1-4-OR	1/8	1/4	1.43	0.60	1.17	0.38	0.93	15/16	
3-MCOR-2	300-1-2-OR	3/16	1/8	1.32	0.64	1.06	0.28	0.74	3/4	
3-MCOR-4	300-1-4-OR	3/16	1/4	1.46	0.64	1.20	0.38	0.93	15/16	
4-MCOR-2	400-1-2-OR	1/4	1/8	1.38	0.70	1.09	0.28	0.74	3/4	
4-MCOR-4	400-1-4-OR	1/4	1/4	1.51	0.70	1.22	0.38	0.93	15/16	
4-MCOR-6	400-1-6-OR	1/4	3/8	1.57	0.70	1.28	0.41	1.12	1-1/8	
5-MCOR-2	500-1-2-OR	5/16	1/8	1.43	0.73	1.13	0.28	0.74	3/4	
5-MCOR-4	500-1-4-OR	5/16	1/4	1.46	0.73	1.25	0.38	0.93	15/16	
6-MCOR-2	600-1-2-OR	3/8	1/8	1.45	0.76	1.16	0.28	0.74	3/4	
6-MCOR-4	600-1-4-OR	3/8	1/4	1.57	0.76	1.28	0.38	0.93	15/16	
6-MCOR-6	600-1-6-OR	3/8	3/8	1.63	0.76	1.34	0.41	1.12	1-1/8	
6-MCOR-8	600-1-8-OR	3/8	1/2	1.85	0.76	1.56	0.53	1.30	1-3/8	
8-MCOR-4	810-1-4-OR	1/2	1/4	1.68	0.87	1.28	0.36	0.93	15/16	
8-MCOR-6	810-1-6-OR	1/2	3/8	1.76	0.87	1.36	0.41	1.12	1-1/8	
8-MCOR-8	810-1-8-OR	1/2	1/2	1.98	0.87	1.58	0.53	1.30	1-3/8	
10-MCOR-8	1010-1-8-OR	5/8	1/2	1.86	0.87	1.56	0.53	1.30	1-3/8	
10-MCOR-12	1010-1-12-OR	5/8	3/4	2.06	0.87	1.66	0.56	1.49	1-1/2	
12-MCOR-8	1210-1-8-OR	3/4	1/2	1.98	0.87	1.58	0.53	1.30	1-3/8	
12-MCOR-12	1210-1-12-OR	3/4	3/4	2.06	0.87	1.66	0.56	1.49	1-1/2	
16-MCOR-12	1610-1-12-OR	1	3/4	2.24	1.05	1.75	0.56	1.49	1-1/2	
16-MCOR-16	1610-1-16-OR	1	1	2.40	1.05	1.91	0.66	1.74	1-3/4	

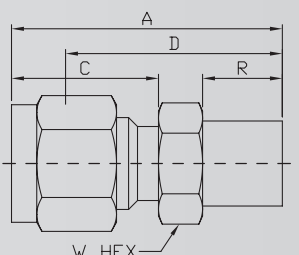
SAE/MS Straight Thread (ST)



Unit = mm

Item Number	Swagelok	(Imperial Tube)							O-Ring NO.
		Tube OD	STRAIGHT THREAD	A	C	D	R	W HEX	
1-MCST-5	100-1-2ST	1/16	5/16-24	0.92	0.43	0.77	0.30	7/16	
2-MCST-5	200-1-2ST	1/8	5/16-24	1.18	0.60	0.92	0.30	7/16	
2-MCST-9	200-1-6ST	1/8	9/16-18	1.35	0.60	1.06	0.39	11/16	
3-MCST-6	300-1-3ST	3/16	3/8-24	1.20	0.64	0.94	0.30	1/2	
4-MCST-7	400-1-4ST	1/4	7/16-20	1.34	0.70	1.05	0.36	9/16	
4-MCST-9	400-1-6ST	1/4	9/16-18	1.40	0.70	1.11	0.39	11/16	
4-MCST-12	400-1-8ST	1/4	3/4-16	1.48	0.70	1.19	0.44	7/8	
4-MCST-14	400-1-10ST	1/4	7/8-14	1.60	0.70	1.31	0.50	1	
5-MCST-8	500-1-5ST	5/16	1/2-20	1.37	0.73	1.08	0.36	5/8	
6-MCST-7	600-1-4ST	3/8	7/16-20	1.40	0.76	1.11	0.36	5/8	
6-MCST-9	600-1-6ST	3/8	9/16-18	1.46	1.01	1.17	0.39	11/16	
6-MCST-12	600-1-8ST	3/8	3/4-16	1.54	1.01	1.25	0.44	7/8	
6-MCST-14	600-1-10ST	3/8	7/8-14	1.67	1.06	1.38	0.50	1	
8-MCST-9	810-1-6ST	1/2	9/16-18	1.54	1.17	1.14	0.39	7/8	
8-MCST-12	810-1-8ST	1/2	3/4-16	1.65	1.17	1.25	0.44	7/8	
8-MCST-17	810-1-12ST	1/2	1-1/16-12	1.93	1.01	1.53	0.59	1-1/4	
10-MCST-14	1010-1-10ST	5/8	7/8-14	1.78	1.01	1.38	0.50	1	
12-MCST-14	1210-1-10ST	3/4	7/8-14	1.68	1.06	1.28	0.50	1-1/8	
12-MCST-17	1210-1-12ST	3/4	1-1/16-12	1.93	1.17	1.53	0.59	1-1/4	
14-MCST-19	1410-1-14ST	7/8	1-3/16-12	1.93	1.17	1.53	0.59	1-3/8	
16-MCST-13	1610-1-12ST	1	1-1/16-12	2.12	1.23	1.63	0.59	1-3/8	
16-MCST-21	1610-1-16ST	1	1-5/16-12	2.15	1.42	1.66	0.59	1-1/2	
20-MCST-26	2010-1-20ST	1-1/4	1-5/8-12	2.59	1.42	1.82	0.59	1-7/8	
24-MCST-30	2410-1-24ST	1-1/2	1-7/8-12	3.05	1.53	1.99	0.59	2-1/8	
32-MCST-40	3210-1-32ST	2	2-1/2-12	4.00	1.53	2.53	0.59	2-3/4	

Male Pipe Weld (Fractional)



Unit = mm

Item Number	Swagelok	(Imperial Tube)							
		Tube OD	BUTTWELD SIZE	A	C	D	R	X	W HEX
2-MCW-2	200-1-2W	1/8	1/8	1.20	0.60	0.94	0.38	0.405	7/16
3-MCW-2	300-1-2W	3/16	1/8	1.24	0.61	0.97	0.38	0.405	7/16
4-MCW-2	400-1-2W	1/4	1/8	1.29	0.66	1.00	0.38	0.405	1/2
4-MCW-4	400-1-4W	1/4	1/4	1.46	0.66	1.17	0.56	0.540	9/16
5-MCW-2	500-1-2W	5/16	1/8	1.48	0.73	1.22	0.38	0.405	1/2
5-MCW-4	500-1-4W	5/16	1/4	1.49	0.73	1.23	0.56	0.540	9/16
6-MCW-4	600-1-4W	3/8	1/4	1.49	0.70	1.20	0.56	0.540	9/16
6-MCW-6	600-1-6W	3/8	3/8	1.60	0.70	1.31	0.56	0.675	3/4
6-MCW-8	600-1-8W	3/8	1/2	1.82	0.70	1.53	0.75	0.840	7/8
6-MCW-12	600-1-12W	3/8	3/4	1.88	0.70	1.59	0.75	1.050	1-1/8
8-MCW-6	810-1-6W	1/2	3/8	1.71	0.84	1.31	0.56	0.675	13/16
8-MCW-8	810-1-8W	1/2	1/2	1.90	0.84	1.50	0.75	0.840	7/8
8-MCW-12	810-1-12W	1/2	3/4	1.96	0.84	1.56	0.75	1.050	1-1/16
10-MCW-8	1010-1-8W	5/8	1/2	1.93	0.87	1.53	0.75	0.840	15/16
12-MCW-12	1210-1-12W	3/4	3/4	1.99	0.87	1.59	0.75	1.050	7/8
16-MCW-16	1610-1-16W	1	1	2.46	0.96	1.97	0.94	1.310	1-1/16