

Tube Fittings



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Introduction

PANAM has emerged as renowned name in Global market for 'Instrumentation Fittings & Valves'. Since its inception in 1998 to present day, **PANAM** has added new product every year and has broadened its product portfolio and its clientele base by supplying to potential customers worldwide. Key core values like Timely Delivery, Quality Consistency, Product Improvisation and after sales service has been instrumental in the phase wise evolution of company. Continuous improvement is the key to success, Customer feedback are taken with positive attitude and product are constantly groomed to a new quality and performance level to cope up with the competition. Our products are known for providing high-quality, high-reliability, low-cost options for the oil and gas industry. Over the year, the company has evolved from a product based company to a complete system solution provider. Over the coming years the entity of the company will attain state of the art operational efficiency for maintaining a competitive edge, with the advent increase in the utilization of its products in oil, gas and power sector.

PANAM is having state of the art manufacturing facility span over an area of 65,000 sqft with a fleet of CNC machines, VMC machines, Semi-Automatic Lathe machines, High pressure test bench with SCADA control, Configuration centre for transmitters and dedicated R&D Team.

PANAM is manufacturing a wide range of Tube Fittings and Instrumentation products in different sizes and materials like Stainless Steel & Other Alloys (e.g. Monel, Hastalloy, Duplex, Super Duplex etc. as per the customer's requirements). **PANAM** offers its products in various end connections like NPT, BSPP, BSPT, ISO Tapered, ISO Parallel, Tube & Pipe Socket Welded Ends, etc.

PANAM meets and even exceeds the requirements of ASME and MSS Series Standards. All materials are supplied in compliance with ASTM Specifications and verified by NABL approved third party laboratories.

PANAM Tube Fittings are 100% factory tested and are in compliance with NACE MR0175 & NACE MR0103 with Heat Code Traceability. Working pressure upto 6,000 psig (413 bar) and also available in higher ratings on request.

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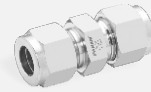
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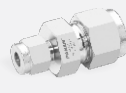
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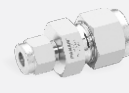
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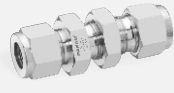
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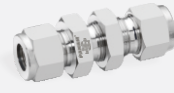
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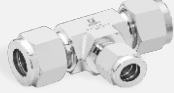
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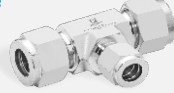
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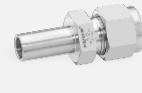
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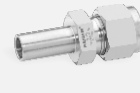
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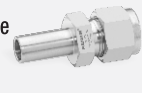
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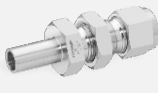
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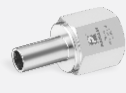
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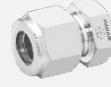
Tube Plug
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Tube Cap
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Front Ferrule
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Back Ferrule
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Features

- Easy to install.
- Sizes range available from 1/16" to 2" and 2 mm to 50 mm. Diverse materials and configurations are available.
- Female nut threads are silver-plated to reduce the friction against the body threads & to prevent galling.
- Fittings are easy to disassemble & re-assemble.
- Precisely machined components ensure perfect deformation of the ferrules and tubing.
- Every fitting is stamped with size, material, and heat code.

Function

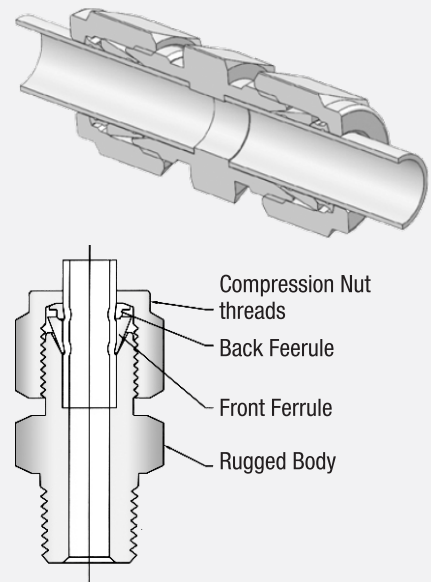
The **PANAM** tube fitting is a mechanism used both to seal and to grip tubing. The geometry **PANAM** fitting produces a leak-tight assembly.

To assemble, simply insert the tube into the complete assembly until the tube bottoms-out against the shoulder of the **PANAM** fitting body. The two ferrules are driven forward between the nut and fitting body using the mechanical force created by rotating the nut clockwise using wrench. Compression nut threads are silver plated which prevents galling. The back ferrule is driven against the tapered rear of the front ferrule and the front ferrule is driven by force into the tapered mouth of the body. The rear ferrule is swaged radially inwards on the tube while lifting the front ferrule out to form a full-faced seal on the tapered surface of the body. Back ferrule locks together the fitting and tube forms a primary Seal which absorbs the pressure pulses & vibration. Front ferrule forms a secondary seal which achieves the connection tube and fitting and guarantee a bubble tight Zero Leak Sealing.

The 1-1/4 turn of the nut from the hand tight position assures consistent drive of the sealing members. It ensures an effective seal against high pressure as well as ultra high vacuum conditions

Rugged body construction, High precision machined surface finished and standardize tolerances provides maximum trouble free service life in severe working conditions.

Note: The above illustrated sealing action of a **PANAM** Tube Fitting which takes place when the assembly is fully tightened..

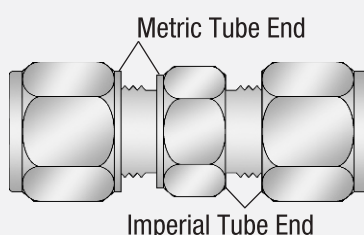


Tube Handling

Careful handling and storage practices will protect tubing from unnecessary scratches, nicks, or degrading the good tubing surface finish.

- Tubing ends should be capped so any foreign materials will not fall inside during transportation and storage.
- Do not drag across tubing rack, cement, gravel or any rough surface.
- Do use correct tube cutter for tube material. The wrong cutter may result in excessive deformation of the tube end.
- Do not cut deep with each turn of cutting.
- Tube cutters and hacksaws should be sharp enough.
- Hacksaw blades should have at least 32 teeth per inch.
- Do deburr tube ends before inserting in fittings.

Identification of **PANAM** Tube Fittings



The metric size of **PANAM** Tube Fittings have extra stepped shoulder on the body and nut to distinguish them from the imperial size.

Standards for Raw Materials

PANAM tube fitting are supplied in various materials to satisfy the needs of various applications including pulp & paper mills, petrochemical, chromatography, on shore & off-shore oil & gas, refinery, analytical instrumentation, steel mill, pharmaceutical, chemical, power generation plants, shipbuilding, and alternative fuels.

Material	Bar Stock	Forging	Tubing
SS 316	ASTM A276 / ASTM A479	ASTM A182 / ASTM SA182	ASTM A213 / ASTM A249 / ASTM A269 / ASTM A1016 / ASTM A632
Alloy 400	ASTM B164 / ASTM SB164	ASTM B564 / ASTM SB564	ASTM B165
Alloy 600	ASTM B166 / ASTM SB166	ASTM B564 / ASTM SB564	ASTM B167
Alloy 625	ASTM B446	ASTM B564 / ASTM SB564	ASTM B444
Alloy 825	ASTM B425	ASTM B564 / ASTM SB564	ASTM B163 / ASTM B423 / ASTM B704
Alloy C-276	ASTM B574	ASTM SB564	ASTM B622 / ASTM B626
Super Duplex (6MO)	ASTM A276 / ASTM A479	ASTM A182	ASTM A269
Super Duplex 2750	ASTM A276 / ASTM A479	ASTM A182	ASTM A789
Duplex 2205	ASTM A479	ASTM A182	ASTM A789
Duplex 2507	ASTM A479	ASTM A182	ASTM A789
Brass	ASTM B16 (Alloy 360 / ASTM B453 (Alloy 345)	ASTM B283 / ASTM B124 (Alloy 377)	ASTM B75 (Temper "O")
Copper	-	-	ASTM B68 / ASTM B88 / ASTM B251 / ASTM B75

Pressure Ratings

PANAM tube fitting ends are rated to the working pressure of tubing as listed in Tubing Section. Careful selection of high-quality tubing is important when installing safe, leak-tight systems.

Stress values are based on ASME Code for Pressure Piping B31.3, Process Piping, at ambient temperature.

Stress Values as per ASME B31.3					
Material	Allowable Stress Values		Design Factor	Ultimate Tensile Strength	
	psi	bar		psig	bar
316SS	20000	1378	3.75:1	75000	5170
Brass	10000	689	4:1	40000	2760
Steel	20000	1378	3:1	60000	4140

NPT & ISO / BSP Tapered threads Ends

Pressure ratings for fittings with both tube fitting and pipe thread ends are determined by the end connection with the lower pressure rating.

NPT or ISO/BSP Tapered Threads Pressure Ratings:

The table lists pressure ratings for male and female tapered pipe thread ends. For female and male pipe threads to have the same pressure rating in the same nominal pipe size, the female thread would require a heavier wall, resulting in a fitting too large and bulky to be practical.

Pressure Ratings for NPT & ISO / BSP Tapered Thread Ends

Thread Size	316 Stainless Steel and Carbon Steel				Brass			
	Male		Female		Male		Female	
	psig	bar	psig	bar	psig	bar	psig	bar
1/16	11000	757	6700	460	5500	378	3300	227
1/8	10000	690	6500	447	5000	344	3200	220
1/4	8000	551	6600	454	4000	275	3300	227
3/8	7800	537	5300	365	3900	268	2600	179
1/2	7700	530	4900	337	3800	261	2400	165
3/4	7300	502	4600	316	3600	248	2300	158
1	5300	365	4400	303	2600	179	2200	151
1-1/4	6000	410	5000	344	3000	200	2500	172
1-1/2	5000	344	4600	317	2500	172	2300	158
2	3900	268	3900	268	1900	130	1900	130

Working pressure is based on Process Piping ANSI/ASME B31.3 at ambient temperature. To determine pressure ratings in accordance with ASME B31.1, Power Piping:

- stainless steel material—multiply by 0.94. • carbon steel material—multiply by 0.85. • Brass material ratings remain the same.
- To determine MPa, multiply bar by 0.10.

SAE / MS Pressure Ratings

Pressure ratings for SAE / MS Threads Ends

Thread Size	316 Stainless Steel and Carbon Steel			
	Non-adjustable		Adjustable	
	psig	bar	psig	bar
5/16-24	4568	315	4568	315
3/8-24				
7/16-20				
1/2-20				
9/16-18	3626	250	3626	250
3/4-16				
7/8-14				
1-1/16 - 12	2900	200	2900	200
1-3/16 - 12				
1-5/16 - 12	2320	160	2320	160
1-5/8 - 12				
1-7/8 - 12				
2-1/2 - 12	1813	125	1450	100

Working pressures are based on SAE J1926/3 & ISO 11926-3 at ambient temperature.

ISO / BSP Parallel Pressure Ratings

Working Pressure of Adjustable ISO / BSP Parallel Thread Ends (PP)

Thread Size	316 Stainless Steel and Carbon Steel	
	psig	bar
1/8	4568	315
1/4		
3/8		
1/2	2320	160
3/4		
1		

Working Pressure

- The maximum working pressures of the tube ends at ambient temperature are determined by the maximum working pressure of the **PANAM** Tubing that is used.
- The maximum working pressures of the thread ends at ambient temperature are as above.
- To get the maximum working pressure at elevated temperature, use the maximum working pressure at ambient temperature to multiply the factors in the form of Elevated Temperature Factors in Tubing Section.
- The maximum working pressure of the whole fitting is determined by the end connection with the lowest pressure rating.

Pipe Thread Sealants

Pipe thread sealant for tapered pipe thread assembly is essential to ensure leak-free thread sealing. Sealant usually contains a lubricant. Thread sealant fills the voids between the threads and prevents thread galling. Wrap PTFE tape clockwise from first thread. Do not overhang the first thread; the tape may get into the fluid system.

Pressure Equivalents:

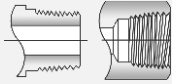

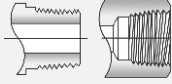

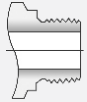
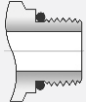
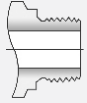
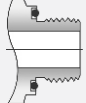
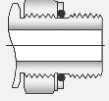
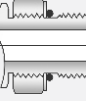
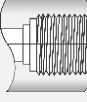
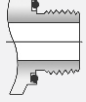
1 bar = 100 kPa = 14.503 psi

1 kPa = 0.01 bar = 0.145 psi

1 psi = 0.069 bar = 6.89 kPa

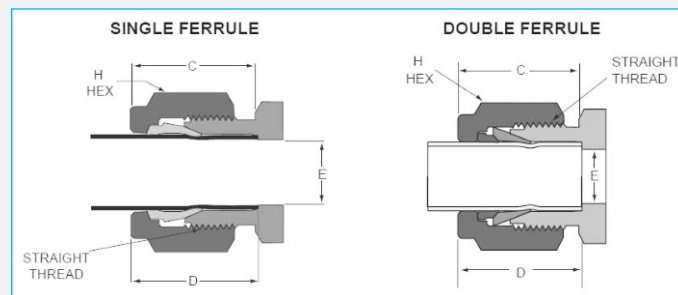
1 kg/cm² = 0.98 bar = 14.22 psi

Standard Thread Sizes

Specification	Thread	Specification	Thread
ASME B1.20.1 (NPT) SAE AS71051		ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 FORM Z	
ISO 7-1 BS EN 10226-1 (BSPT) DIN 2999 (Male Thread Only) JIS B0203 (PT)		ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 FORM Y	
ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 FORM A		ASME B1.1 ISO R725 SAE J475 SAE J514	
ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) DIN 3852 FORM B		ASME B1.1 ISO R725 SAE J475 SAE J514	
ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) SAE J475 SAE 1926		ASME B1.1 ISO R725 SAE J475 SAE J514	
ISO 228-1 BS 2779 (BSPP) JIS B0202 (PF) EN 837-1 & EN 837-3		ASME B1.20.1 SAE AS71051 SAE J514	

Tube End Dimensional Data

Inches						
SIZE	TUBE O.D.	STRAIGHT THREAD	C	H HEX	E DIA	D TUBE INS. DEPTH
1	1/16	10 - 32	0.43	5/16	0.052	0.34
2	1/8	5/16 - 20	0.60	7/16	0.093	0.50
3	3/16	3/8 - 20	0.64	1/2	0.125	0.54
4	1/4	7/16 - 20	0.70	9/16	0.187	0.60
5	5/16	1/2 - 20	0.73	5/8	0.250	0.64
6	3/8	9/16 - 20	0.76	11/16	0.281	0.67
8	1/2	3/4 - 20	0.87	7/8	0.406	0.90
10	5/8	7/8 - 20	0.87	1	0.500	0.96
12	3/4	1 - 20	0.87	1-1/8	0.625	0.96
14	7/8	1-1/8 - 20	0.87	1-1/4	0.750	1.03
16	1	1-5/16 - 20	1.05	1-1/2	0.875	1.24
20	1-1/4	1-5/8 - 20	1.52	1-7/8	1.090	1.61
24	1-1/2	1-15/16 - 20	1.77	2-1/4	1.340	1.96
32	2	2-5/8 - 20	2.47	2-3/4	1.810	2.65



Millimeters						
SIZE	TUBE OD	STRAIGHT THREAD	C	H HEX	E DIA.	D TUBE INS. DEPTH
2	2mm	5/16 - 20	15.3	12.0	1.7	12.9
3	3mm	5/16 - 20	15.3	12.0	2.4	12.9
4	4mm	3/8 - 20	16.1	12.0	2.4	13.7
6	6mm	7/16 - 20	17.7	14.0	4.8	15.3
8	8mm	1/2 - 20	18.6	15.0	6.4	16.2
10	10mm	5/8 - 20	19.5	18.0	7.9	17.2
12	12mm	3/4 - 20	22.0	22.0	9.5	22.8
14	14mm	7/8 - 20	22.0	24.0	11.1	24.4
15	15mm	7/8 - 20	22.0	24.0	11.9	24.4
16	16mm	7/8 - 20	22.0	24.0	12.7	24.4
18	18mm	1 - 20	22.0	27.0	15.1	24.4
20	20mm	1-1/8 - 20	22.0	30.0	15.9	26.0
22	22mm	1-1/8 - 20	22.0	30.0	18.3	26.0
25	25mm	1-5/16 - 20	26.5	35.0	21.8	31.3

Pressure Ratings for Tubes

Fractional Stainless Steel Tubing:

Allowable working pressures are calculated from an S value of 20 000 psi (137.8 MPa) for ASTM A269 tubing at –20 to 100°F (–28 to 37°C), as listed in ASME B31.3 and ASTM A213 tubing at –20 to 100°F (–28 to 37°C), as listed in ASME B31.1, except as noted.

Fractional Seamless Stainless Tubing - Working Pressure in psig

OD	Wall Thickness (in.)														
in.	0.012	0.014	0.016	0.02	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.12	0.134	0.156	0.188
1/16	6800	8100	9400	12000											
1/8					8500	10900									
3/16					5400	7000	10200								
1/4					4000	5100	7500	10200							
5/16						4000	5800	8000							
3/8						3300	4800	6500	8600						
1/2						2400	3500	4700	6200						
5/8							2900	4000	5200	6000					
3/4							2400	3300	4200	4900	5800	6400			
7/8							2000	2800	3600	4200	4800	5400	6100		
1								2400	3100	3600	4200	4700	5300		
1-1/4									2400	2800	3300	3600	4100	4900	
1-1/2										2300	2700	3000	3400	4000	4900
2											2000	2200	2500	2900	3600

Fully annealed austenitic Type 304 or 316 seamless tubing ASTM A269 or ASTM A213, or equivalent.
 Tubing to be free from scratches, draw mark, dirt, dust, flat spots, and suitable for bending and flaring.
 Recommended hardness : 80 HRB or less.
 Safety factor = 4 considering tensile strength to be 75,000 psi at room temperature.

For Welded Tubing

For welded and drawn tubing, a derating factor must be applied for weld integrity:

- For double-welded tubing, multiply working pressure by 0.85
- For single-welded tubing, multiply working pressure by 0.80.

Pressure Ratings for Tubes

Metric Stainless Steel Tubing:

Allowable working pressures are calculated from an S value of 137.8 MPa (20 000 psi) for EN ISO 1127 tubing (D4, T4 tolerance for 3 to 12 mm; D4, T3 tolerance 14 to 50 mm) at -28 to 37°C (-20 to 100°F), as listed in ASME B31.3 and ASTM A213 tubing at -28 to 37°C (-20 to 100°F), as listed in ASME B31.1, except as noted.

Metric Seamless Stainless Tubing - Working Pressure in bar

OD mm	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	710															
6	330	420	520	670												
8		310	380	490												
10		240	300	380												
12		200	240	310	380	430							Working Pressure in bar			
14		180	220	280	340	390	430									
15		170	200	260	320	360	400									
16			190	240	300	330	370									
18			170	210	260	290	320	370								
20			150	190	230	260	290	330	380							
22			130	170	210	230	260	300	340							
25					180	200	230	260	300	320						
28						180	200	230	260	280	330					
30						170	190	210	240	260	310					
32						160	170	200	230	240	290	330				
38							140	170	190	200	240	280	310			
50										150	180	210	240			

High-quality, fully annealed (Type 304, 304/304L, 316, 316/316L, 317, 317/317L, 321, 347) stainless steel tubing, EN ISO 1127 or equivalent.

Tubing to be free from scratches, draw mark, dirt, dust, flat spots, and suitable for bending and flaring.

Recommended hardness : 80 HRB or less.

Safety factor = 4 considering tensile strength to be 75,000 psi at room temperature.

For Welded Tubing

For welded and drawn tubing, a derating factor must be applied for weld integrity:

- For double-welded tubing, multiply working pressure by 0.85
- For single-welded tubing, multiply working pressure by 0.80.

Pressure Ratings for Tubes

Fractional Copper Tubing:

Allowable working pressures are calculated from an S value of 6000 psi (41.3 MPa) for ASTM B75 and ASTM B88 tubing at -20 to 100°F (-28 to 37°C), as listed in ASME B31.3 and ASME B31.1.

Fractional Copper Tubing - Working Pressure in psig

Tube OD	Wall Thickness, in.									
in	0.028	0.030	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134
1/8	2700	3000	3600							
3/16	1800	1900	2300	3400						
1/4	1300	1400	1600	2500	3500					
5/16			1300	1900	2700					
3/8			1000	1600	2200					
1/2			800	1100	1600	2100				
5/8				900	1200	1600	1900			
3/4				700	1000	1300	1500	1800		
7/8				600	800	1100	1300	1500		
1				500	700	900	1100	1300	1500	
1 1/8					600	800	1000	1100	1300	1400

High-quality, soft annealed seamless copper tubing, ASTM B75 or equivalent. Soft annealed (Temper O) copper water tube, type K or type L to ASTM B88. Recommended hardness: 60 HRB or less. Safety factor= 5 considering tensile strength to be 30,000 psi at room temperature.

Metric Copper Tubing:

Allowable working pressures are calculated from an S value of 41.3 MPa (6000 psi) for ASTM B75, ASTM B88, and EN 1057 tubing at -28 to 37°C (-20 to 100°F), as listed in ASME B31.3 and ASME B31.1.

Metric Copper Tubing - Working Pressure in bar

OD	Wall Thickness (mm)										
mm	0.7	0.8	1.0	1.2	1.5	1.6	1.8	2.0	2.2	2.5	3.0
3	225	260									
4	165	191	244	295							
6		122	157	192	245	263					
8		89	114	140	179	193					
10		70	89	109	140	150	172	193			
12		58	73	89	114	123	140	158			
14			62	76	96	103	118	133	148	171	209
16			54	66	83	89	102	114	127	147	180
18			48	58	74	79	90	101	112	129	159
22			39	47	59	64	72	81	90	103	126
25			34	41	52	56	63	71	78	90	110

High-quality, soft annealed seamless copper tubing, ASTM B75 and EN 1057 or equivalent. Soft annealed (Temper O) copper water tube, type K or type L to ASTM B88. Safety factor= 5 considering tensile strength to be 30,000 psi at room temperature.

Pressure Ratings for Tubes

Fractional Alloy 400 Tubing:

Allowable working pressures are calculated from an S value of 18 700 psi (128.9 MPa) for ASTM B165 tubing at -20 to 100°F (-28 to 37°C), as listed in ASME B31.3 and ASME B31.1.

Fractional Alloy 400 Tubing - Working Pressure in psig

OD in.	Wall Thickness (in.)							
	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
1/8	7900	10200						
1/4	3700	4800	7000	9600				Working Pressure in psig
3/8		3100	4400	6100				
1/2		2300	3300	4400				
3/4			2200	3000	4000	4600		
1				2200	2900	3400	3900	4300

High-quality, fully annealed seamless alloy 400 hydraulic tubing, ASTM B165 or equivalent. Hardness not to exceed 75 HRB or 137 HV.

Tubing to be free of scratches, suitable for bending and flaring.

Safety Factor is 3.74 to 1, considering ultimate tensile strength of 70,000 psi.

Metric Alloy 400 Tubing:

Allowable working pressures are calculated from an S value of 128.9 MPa (18 700 psi) for ASTM B165 tubing at -28 to 37°C (-20 to 100°F), as listed in ASME B31.3 and ASME B31.1.

Metric Alloy 400 Tubing - Working Pressure in bar

Tube OD mm	Wall Thickness, mm									
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0
6	310	390	490	620						
8		290	350	450						
10		220	280	350						Working Pressure, bar
12		180	230	290						
14		160	190	240	270					
18			150	200	240	270	300			
20				180	210	240	270	290		
25					170	190	210	240	270	290

High-quality, fully annealed seamless alloy 400 hydraulic tubing, ASTM B165 or equivalent.

Hardness not to exceed 75 HRB or 137 HV.

Tubing to be free of scratches, suitable for bending and flaring.

Pressure Ratings for Tubes

Fractional Alloy C-276 Tubing:

Allowable working pressures are based on equations from ASME B31.3 and ASME B31.1 for a maximum *S* value of 20 000 psi (137.8 MPa).

Fractional Alloy C-276 Tubing - Working Pressure in psig

Tube OD	Tube Wall Thickness, in.			
in.	0.028	0.035	0.049	0.065
1/4	4000	5100	7500	10 200
5/16		4000	5800	7 800
3/8		3300	4800	6 500
1/2		2600	3700	5 100

High-quality, fully annealed alloy C-276 tubing, ASTM B622 or equivalent. Hardness not to exceed 100 HRB or 248 HV. Tubing to be free of scratches, suitable for bending and flaring. Safety factor 3.66 to 1, considering ultimate tensile strength of 1,00,000 psi.

Metric Alloy C-276 Tubing:

Allowable working pressures are based on equations from ASME B31.3 and ASME B31.1 for a maximum *S* value of 137.8 MPa (20 000 psi).

Metric Alloy C-276 Tubing - Working Pressure in bar

Tube OD	Tube Wall Thickness, mm			
mm	0.8	1.0	1.2	1.5
6	310	420	520	670
8		310	390	500
10		240	300	380
12		200	240	310

High-quality, fully annealed alloy C-276 tubing, ASTM B622 or equivalent. Hardness not to exceed 100 HRB or 248 HV. Tubing to be free of scratches, suitable for bending and flaring. OD tolerances not to exceed ± 0.13 mm.

Fractional Alloy 600 Tubing:

Allowable working pressures are based on equations from ASME B31.3 and ASME B31.1 for a maximum *S* value of 20 000 psi (137.8 MPa).

Fractional Alloy 600 Tubing - Working Pressure in psig

Tube OD	Tube Wall Thickness, in.			
in.	0.028	0.035	0.049	0.065
1/4	4000	5100	7500	10 200
3/8		3300	4800	6 500
1/2		2600	3700	5 100

High-quality, fully annealed, cold drawn 1 temper alloy 600 seamless alloy tubing, ASTM B167 or equivalent. Hardness not to exceed 92 HRB or 198 HV. Tubing to be free of scratches, suitable for bending and flaring.

Pressure Ratings for Tubes

Metric Alloy 600 Tubing:

Allowable working pressures are based on equations from ASME B31.3 and ASME B31.1 for a maximum *S* value of 137.8 MPa (20,000 psi).

Metric Alloy 600 Tubing - Working Pressure in bar

Tube OD	Tube Wall Thickness, mm			
mm	0.8	1.0	1.2	1.5
6	310	420	520	670
10		240	300	380
12		200	240	310

High-quality, fully annealed, cold drawn #1 temper alloy 600 seamless alloy tubing, ASTM B167 or equivalent.

Hardness not to exceed 92 HRB or 198 HV.

Tubing to be free of scratches, suitable for bending and flaring.

Fractional Alloy 2507 Super Duplex Tubing:

Allowable working pressures are calculated from an *S* value of 38 700 psi (266.8 MPa) for ASTM A789 tubing at -20 to 100°F (-28 to 37°C), as listed in ASME B31.3.

Fractional Alloy 2507 Super Duplex Tubing - Working Pressure in psig

Tube OD	Tube Wall Thickness, in.				
in.	0.035	0.049	0.065	0.083	0.095
1/4	10 000	15 000			
3/8	6 500	10 100	12 700		
1/2	5 000	7 200	10 100	12 900	
5/8		5 800	7 600	10 100	
3/4		4 700	6 300	8 500	10 000

High-quality, fully annealed alloy 2507 super duplex tubing, ASTM A789 or equivalent. Hardness not to exceed 32 HRC.

Tubing to be free of scratches, suitable for bending and flaring.

Fractional Alloy 825 Tubing:

Allowable working pressures are calculated from an *S* value of 23 300 psi (160.6 MPa) for ASTM B163 and ASTM B423 seamless tubing at -20 to 100°F (-28 to 37°C), as listed in ASME BPV 2007 Section II, Part D or ASME B31.3. For ASTM B704, Class 1 or equivalent welded and drawn tubing, multiply working pressure by 0.85.

Fractional Alloy 825 Tubing - Working Pressure in psig

Tube OD	Tube Wall Thickness, in.				
in.	0.035	0.049	0.065	0.083	0.095
1/4	6400	9300	11 600		
3/8	4100	5900	8 200		
1/2	3000	4300	5 900		
3/4			3 800	4900	5800
1			2 800	3600	4200

High-quality, fully annealed seamless alloy 825 tubing, ASTM B163, ASTM B423, or equivalent. Fully annealed welded alloy 825 tubing, ASTM B704, class 1 or equivalent.

Hardness not to exceed HR 90 or 201 HV.

Tubing to be free of scratches, suitable for bending and flaring.

Pressure Ratings for Tubes

Metric Alloy 825 Tubing:

Allowable working pressures are calculated from an *S* value of 160.6 MPa (23 300 psi) for ASTM B163 and ASTM B423 seamless tubing at –28 to 37°C (–20 to 100°F), as listed in ASME BPV 2007 Section II, Part D or ASME B31.3. For ASTM B704, Class 1 or equivalent welded and drawn tubing, multiply working pressure by 0.85.

Metric Alloy 825 Tubing - Working Pressure in bar

Tube OD	Tube Wall Thickness, mm							
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5
mm								
6	410	530	660					
10		300	370	480				
12		250	300	390	480			
18				240	300	340	380	400
25						240	260	300

High-quality, fully annealed seamless alloy 825 tubing, ASTM B163, ASTM B423, or equivalent.

Fully annealed welded alloy 825 tubing, ASTM B704, class 1 or equivalent.

Hardness not to exceed HR 90 or 201 HV.

Tubing to be free of scratches, suitable for bending and flaring.

Fractional Alloy 625 Tubing:

Allowable working pressures are calculated from an *S* value of 26 700 psi (184.1 MPa) for ASTM B444 Grade 2 tubing at –20 to 100°F (–28 to 37°C), as listed in ASME BPV 2007 Section II, Part D, Table 1B; tubing outside diameter and wall thickness tolerances from ASTM B444 for small-diameter tube.

Fractional Alloy 625 Tubing - Working Pressure in psig

Tube OD	Tube Wall Thickness, in.		
	0.035	0.049	0.065
in.			
1/4	7300	10 700	14 600
3/8	4700	6 800	9 400
1/2	3500	5 000	6 800

High-quality, fully annealed seamless alloy 625 tubing, ASTM B444, Grade 1 or 2, or equivalent.

Hardness not to exceed 25 HRC or 266 HV.

Tubing to be free of scratches, suitable for bending and flaring.

Metric Alloy 625 Tubing:

Allowable working pressures are calculated from an *S* value of 184.1 MPa (26 700 psi) for ASTM B444 Grade 2 tubing at –28 to 37°C (–20 to 100°F), as listed in ASME BPV 2007 Section II, Part D, Table 1B; tubing outside diameter and wall thickness tolerances from ASTM B444 for small-diameter tube.

Metric Alloy 625 Tubing - Working Pressure in bar

Tube OD	Tube Wall Thickness, mm				
	0.8	1.0	1.2	1.5	1.8
mm					
6	470	610	750		
10		350	430	550	
12		290	350	450	550

High-quality, fully annealed seamless alloy 625 tubing, ASTM B444, Grade 1 or 2, or equivalent.

Hardness not to exceed 25 HRC or 266 HV.

Tubing to be free of scratches, suitable for bending and flaring.

Pressure Ratings for Tubes

Fractional Alloy 254 Tubing:

Allowable working pressures are calculated from an S value of 186.8 MPa (27 100 psig) for ASTM A213 tubing at –20 to 100°F (–28 to 37°C), as listed in ASME B31.3 and ASME B31.1, except as noted.

Fractional Alloy 254 Tubing - Working Pressure in psig

Tube OD		Wall Thickness in, in.				
in	0.028	0.035	0.049	0.065	0.083	
1/4	5400	6900	10100	13900		
3/8		4500	6500	8900		
1/2		3500	5000	6900	9000	

High-quality, fully annealed seamless or welded and drawn alloy 254 hydraulic tubing, ASTM A269 or ASTM A213, or equivalent.

Hardness not to exceed 96 HRB.

Tubing to be free of scratches, suitable for bending and flaring.

For Welded Tubing

- For welded and drawn tubing, a derating factor must be applied for weld integrity:
- For double-welded tubing, multiply working pressure by 0.85
- For single-welded tubing, multiply working pressure by 0.80.

Metric Alloy 254 Tubing:

Allowable working pressures are calculated from an S value of 186.8 MPa (27 100 psig) for ASTM A213 tubing at –20 to 100°F (–28 to 37°C), as listed in ASME B31.3 and ASME B31.1, except as noted.

Metric Alloy 254 Tubing - Working Pressure in psig

Tube OD		Wall Thickness in, in.				
mm	0.8	1	1.2	1.5	1.8	2
6	430	580	740	980		
8		420	530	710		
10		330	420	550	700	790
12		270	340	450	570	650

High-quality, fully annealed seamless or welded and drawn alloy 254 hydraulic tubing, ASTM A269 or ASTM A213, or equivalent. Hardness not to exceed 96 HRB.

Tubing to be free of scratches, suitable for bending and flaring.

For Welded Tubing

- For welded and drawn tubing, a derating factor must be applied for weld integrity:
- For double-welded tubing, multiply working pressure by 0.85
- For single-welded tubing, multiply working pressure by 0.80.

Temperature De-Rating Factors

To determine allowable working pressure at elevated temperatures, multiply allowable working pressures from the tubing pressure rating table by a factor shown in the table as below.

Example: Type 316 stainless steel 1/2 in. OD 0.049 in. wall at 1000°F

- The allowable working pressure at –20 to 100°F (–28 to 37°C) is 3700 psig.
- The elevated temperature factor for 1000°F (537°C) is 0.76: 3700 psig 0.76 = 2812 psig
- The allowable working pressure for 316 SS 1/2 in. OD 0.049 in. wall tubing at 1000°F (537°C) is 2812 psig.

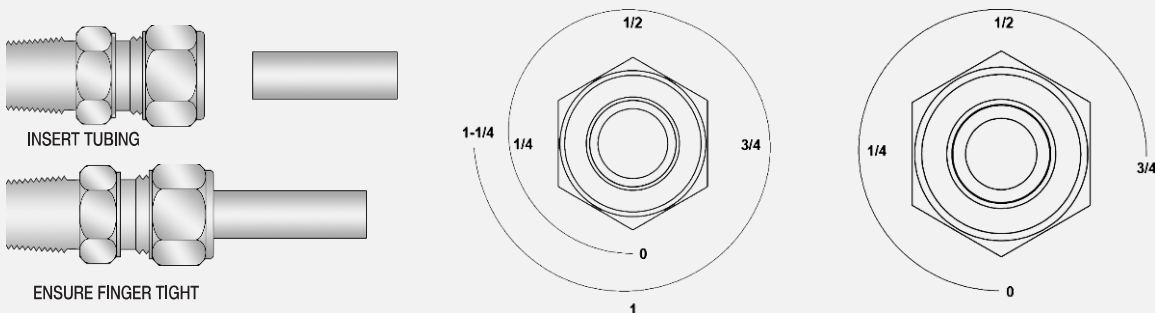
Temperature		Tubing Materials									
°F	°C	Copper	316/316L	Alloy 400	Alloy C-276	Alloy 600	Ti	Alloy 2507	Alloy 825	Alloy 625	Alloy 254
200	93	0.80	1.00	0.87	1.00	1.00	0.86	0.90	1.00	0.93	0.90
400	204	0.50	0.96	0.79	0.96	0.96	0.61	0.82	0.90	0.85	0.74
600	315		0.85	0.79	0.85	0.85	0.45		0.84	0.79	0.67
800	426		0.79	0.75	0.79	0.79			0.81	0.75	
1000	537		0.76		0.76	0.35				0.73	

Dual-certified grades such as 304/304L, 316/316L, and 317/317L meet the requirements for the lower maximum carbon content of the L grades and the higher minimum yield and tensile strength of the non-L grades. Use of 2507 super duplex stainless steel at temperatures above 482°F (250°C) causes micro structural changes that lead to embrittlement and loss of corrosion resistance. Derating factor at 482°F (250°C) is 0.81.

Installation

PANAM Tube Fittings up to 1" or 25 mm

1. Loosen the nut 1/4 turn from finger-tight position.
 2. Insert tubing into the tube fitting, make sure that the tubing rests firmly on the shoulder of the port.
 3. Finger-tighten the nut.
 4. Tighten the nut 1-1/4 turns with wrench while holding the body of the fitting or the valve steady. (Fig.1).
- For small-sized fittings (1/16", 1/8" and 3/16", 2 mm, 3 mm and 4 mm), tighten the nut 3/4 turn with wrench (Fig.2).
For sizes over (1" & 25 mm), tighten the nut 1-1/2 turn with hydraulic swaging tool equipment.



Reinstallation (all sizes)

1. Mark the tube at the back of the nut, mark a line along the nut and fitting body flats.
2. Insert tubing with pre-swaged ferrules into the fitting body until the front ferrule seats.
3. Then rotate the nut with a wrench to the previous pulled-up position as indicated by the marks on the tube and the flats.
4. Tighten the nut slightly with wrench

Plugs and Port Connectors

1. Tighten the plug or port connector 1/4 turn from the finger-tight position while holding the body of the fitting steady.
For small-sized fittings (1/16", 1/8" and 3/16", 2 mm, 3 mm and 4 mm), tighten the nut 1/8 turn with wrench.

Reinstallation

Tighten slightly with a wrench from the finger-tight position.

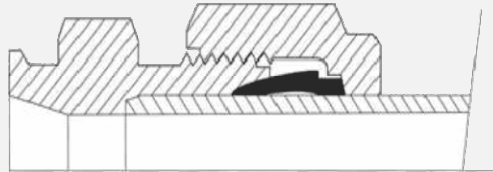
The Installation Instructions of the tube adapter end of Port Connectors are the same as the **PANAM** Tube Fittings..

Single Ferrule Tube Fittings

PANAM Single Ferrule Tube Fittings are identical to **PANAM** Double Ferrule Tube Fittings in pressure and temperature ratings.

Components:

This Fitting includes single ferrule with standard **PANAM** Fitting Body and Nut. Designed with highest quality standards.



Dimensions:

PANAM single ferrule tube fittings are dimensionally identical to **PANAM** double ferrule tube fittings.

Ordering Information:

To order 3/8" OD x 1/4" NPT SS 316 Male Connector with single ferrule, SF should be added at the end of the part number. i.e. PMC-06-4N-SS-SF For more details about part numbers, see ordering information.

Tube Selection Data

Hardness

- Tubing must be softer than fitting material. The metal tubing must be fully annealed and suitable for bending and flaring. Tubing hardness must be selected according to the information as below.

Surface

- Tubing must have a surface free from scratches, draw mark, dirt, dust and flat spots.

Ovality

- Tubing in oval or out-of-roundness way not fit into the fitting. Do not force the tubing into the fitting; it may damage the fitting sealing system on nut, ferrules, and body.

Wall Thickness

- The pressure rating tables list tubing working pressure ratings in a wide range of wall thickness. A too thin wall may collapse and a too thick wall may not properly be deformed by the ferrule action. Do not use tubing wall thickness not listed in the tables below.

Weld Tubing

- Welded tubing should have a not measurable bead on its outside diameter.

Pre-Swaging

Pre-Swaging **PANAM** Ferrules onto tubing.

in	1/2, 5/8, 3/4, 1, 1-1/4, 1-1/2 and 2.
mm	12, 14, 15, 16, 18, 20, 22, 25, 28, 30, 32, 38, 42 and 50.

Pre-swaging unit must be used to install 1-1/4, 1-1/2 and 2in. and 28, 32 and 38mm fittings.

Ordering Information

PANAM

PMC - 06 - 4G - SS - SF - SG

Fitting Type	
MC	Male Connector
MCBT	Male Bore Through Connector
BMC	Bulkhead Male Connector
ME	Male Elbow
LME	Male Elbow 45°
MRT	Male Run Tee
MBT	Male Branch Tee
FC	Female Connector
BFC	Bulkhead Female Connector
FE	Female Elbow
FRT	Female Run Tee
FBT	Female Branch Tee
U	Union
RU	Reducing Union
BU	Bulkhead Union
EU	Union Elbow
UT	Union Tee
RUT	Reducing Union Tee
UC	Union Cross
R	Reducer
BR	Bulkhead Reducer
MA	Male Adapter
FA	Female Adapter
PC	Port Connector
RPC	Reducing Port Connector
MWC	Male Pipe Weld Connector
MWE	Male Pipe Weld Elbow
SWC	Tube Socket Weld Connector
SWE	Tube Socket Weld Elbow
GC	Gauge Connector
TP	Tube Plug
TC	Tube Cap
PN	Nut
FF	Front Ferrule
BF	Back Ferrule

Tube OD			
01	1/16	M02	2mm
02	1/8	M03	3mm
03	3/16	M04	4mm
04	1/4	M06	6mm
05	5/16	M08	8mm
06	3/8	M10	10mm
08	1/2	M12	12mm
10	5/8	M14	14mm
12	3/4	M16	16mm
14	7/8	M18	18mm
16	1	M20	20mm
20	1-1/4	M22	22mm
24	1-1/2	M25	25mm
32	2	M28	28mm
		M30	30mm
		M32	32mm
		M38	38mm
		M50	50mm

P Size	
1	1/16
2	1/8
3	3/16
4	1/4
6	3/8
8	1/2
12	3/4
16	1
20	1-1/4
24	1-1/2
32	2

Thread Type	
N	NPT Threads
R	ISO Tapered Threads
G	ISO Parallel Threads
J	JIC
PBW	Pipe Butt Weld
TSW	Tube Socket Weld

Material	
SS	316 SS
Mo-400	Alloy 400
Mo-600	Alloy 600
INC-625	Alloy 625
INC-825	Alloy 825
HC	Alloy C-276
6MO	Alloy 254 (SMO)
DSS-2750	Super Duplex 2750
DSS-2205	Duplex 2205
B	Brass

Ferrule Type	
SF	Single Ferrule
-	Double Ferrule (Standard)

Special Material	
SG	NACE

Note:

For the fittings which doesn't have pipe threads, the thread type & size designator can be skipped. i.e. for 3/8" OD Union, PU-06-SS-SG-SF can be used for identification. The same can be identified as PU-06-SS-SF if NACE material is not required. The same can be identified as PU-06-SS if double ferrules are required.

Example 1: Tube to Pipe Ends

The part number below shows male connector, stainless steel type 316, Tube OD 1/4" x 1/4" NPT.

P	MC	04	4N	SS
1	2	3	4	5

1. **PANAM** Tube Fitting designates as "P"
2. Name of Fittings: See fitting type designator
3. Tube OD: see tube OD designator
4. Pipe thread end: see pipe threads designator
5. Material: see fitting material designator

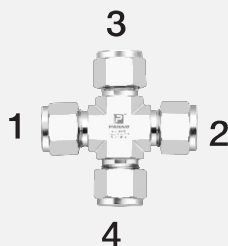
Example 2: Tube to Tube Ends

PANAM Union tube OD 1/4" material SS316

P	U	04	SS
1	2	3	5

Refer to respective designator and symbol

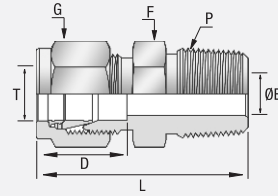
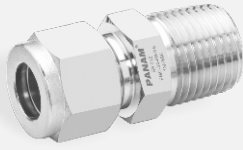
Example 3: Tees and Crosses



For tees, the run (1+2) shall precede the branch (3). For Crosses, the run (1 to 2) shall precede the branch (3 to 4).

* The E dimension is the minimum nominal opening. This fittings may have a larger opening at the pipe / straight thread end. All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

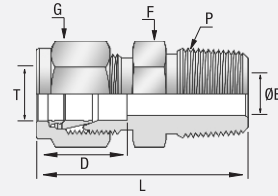
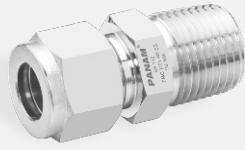
Male Connector



Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E * Min	Width Across Flat		D	L
				F in	G in		
PMC-01-1N-SS	1/16	1/16	1.27	5/16	5/16	8.63	23.83
PMC-01-2N-SS	1/16	1/8	1.27	7/16	5/16	8.63	26.33
PMC-02-2N-SS	1/8	1/8	4.80	7/16	7/16	14.85	33.80
PMC-02-4N-SS	1/8	1/4	4.80	9/16	7/16	14.85	39.30
PMC-02-6N-SS	1/8	3/8	4.80	11/16	7/16	14.85	35.80
PMC-02-8N-SS	1/8	1/2	4.80	7/8	7/16	14.85	42.16
PMC-03-2N-SS	3/16	1/8	3.04	7/16	1/2	13.71	31.24
PMC-03-4N-SS	3/16	1/4	3.04	9/16	1/2	13.71	36.32
PMC-04-2N-SS	1/4	1/8	4.80	1/2	9/16	15.30	34.00
PMC-04-4N-SS	1/4	1/4	4.80	9/16	9/16	15.30	39.00
PMC-04-6N-SS	1/4	3/8	4.80	11/16	9/16	15.30	39.00
PMC-04-8N-SS	1/4	1/2	4.80	7/8	9/16	15.30	45.50
PMC-04-12N-SS	1/4	3/4	4.80	1-1/16	9/16	15.30	46.50
PMC-05-2N-SS	5/16	1/8	4.80	9/16	5/8	16.25	34.03
PMC-05-4N-SS	5/16	1/4	6.35	9/16	5/8	16.25	38.60
PMC-05-6N-SS	5/16	3/8	6.35	11/16	5/8	16.25	39.11
PMC-06-2N-SS	3/8	1/8	4.82	5/8	11/16	17.10	35.30
PMC-06-4N-SS	3/8	1/4	7.10	5/8	11/16	17.10	40.00
PMC-06-6N-SS	3/8	3/8	7.10	11/16	11/16	17.10	40.50
PMC-06-8N-SS	3/8	1/2	7.10	7/8	11/16	17.10	46.50
PMC-06-12N-SS	3/8	3/4	7.10	1-1/16	11/16	17.10	48.40
PMC-08-2N-SS	1/2	1/8	4.80	13/16	7/8	22.80	38.80
PMC-08-4N-SS	1/2	1/4	7.10	7/8	7/8	22.80	46.70
PMC-08-6N-SS	1/2	3/8	7.10	7/8	7/8	22.80	44.50
PMC-08-8N-SS	1/2	1/2	10.40	7/8	7/8	22.80	49.00
PMC-08-12N-SS	1/2	3/4	10.40	1-1/16	7/8	22.80	50.70
PMC-08-16N-SS	1/2	1	10.40	1-3/8	7/8	22.80	57.75
PMC-10-6N-SS	5/8	3/8	7.10	15/16	1	24.30	45.00
PMC-10-8N-SS	5/8	1/2	10.40	15/16	1	24.30	49.00
PMC-10-12N-SS	5/8	3/4	12.70	1-1/16	1	24.30	50.50
PMC-12-8N-SS	3/4	1/2	10.40	1-1/16	1-1/8	22.60	50.00
PMC-12-12N-SS	3/4	3/4	15.00	1-1/16	1-1/8	22.60	51.50
PMC-12-16N-SS	3/4	1	15.00	1-3/8	1-1/8	22.60	58.00
PMC-14-12N-SS	7/8	3/4	15.00	13/16	1-1/4	25.90	50.54
PMC-14-16N-SS	7/8	1	18.28	1-3/8	1-1/4	25.90	57.15
PMC-16-8N-SS	1	1/2	10.40	1-3/8	1-1/2	31.30	57.40
PMC-16-12N-SS	1	3/4	15.00	1-3/8	1-1/2	31.30	57.40
PMC-16-16N-SS	1	1	22.00	1-3/8	1-1/2	31.30	64.00
PMC-20-16N-SS	1-1/4	1	22.00	1-3/4	1-7/8	41.14	77.20
PMC-20-20N-SS	1-1/4	1-1/4	27.68	1-3/4	1-7/8	41.14	77.20
PMC-24-24N-SS	1-1/2	1-1/2	34.00	2-1/8	2-1/4	50.03	88.90
PMC-32-32N-SS	2	2	45.97	2-3/4	3	67.56	113.50

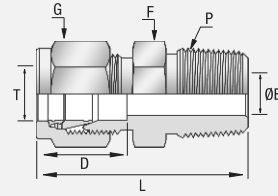
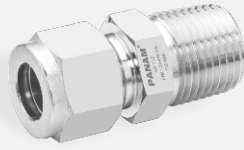
Male Connector



Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E * Min	Width Across Flat		D	L
				F mm	G mm		
PMC-M02-2N-SS	2	1/8	1.70	12	12	12.90	30.50
PMC-M03-2N-SS	3	1/8	2.40	12	12	12.90	29.70
PMC-M03-4N-SS	3	1/4	2.40	14	12	12.90	35.60
PMC-M04-2N-SS	4	1/8	2.40	12	12	13.70	31.20
PMC-M04-4N-SS	4	1/4	2.40	14	12	13.70	36.30
PMC-M06-2N-SS	6	1/8	4.20	12	14	15.50	32.80
PMC-M06-4N-SS	6	1/4	4.20	14	14	15.50	39.50
PMC-M06-6N-SS	6	3/8	4.20	17	14	15.50	41.25
PMC-M06-8N-SS	6	1/2	4.20	22	14	15.50	46.30
PMC-M06-12N-SS	6	3/4	4.20	27	14	15.50	48.00
PMC-M08-2N-SS	8	1/8	4.20	14	16	16.30	34.20
PMC-M08-4N-SS	8	1/4	6.00	15	16	16.30	40.00
PMC-M08-6N-SS	8	3/8	6.00	18	16	16.30	41.50
PMC-M08-8N-SS	8	1/2	6.00	22	16	16.30	46.60
PMC-M10-2N-SS	10	1/8	4.80	18	19	18.10	38.00
PMC-M10-4N-SS	10	1/4	7.10	18	19	18.10	41.70
PMC-M10-6N-SS	10	3/8	8.00	18	19	18.10	42.10
PMC-M10-8N-SS	10	1/2	8.00	22	19	18.10	47.00
PMC-M12-4N-SS	12	1/4	7.10	22	22	22.30	45.00
PMC-M12-6N-SS	12	3/8	7.10	22	22	22.30	43.40
PMC-M12-8N-SS	12	1/2	9.50	22	22	22.30	49.20
PMC-M12-12N-SS	12	3/4	9.50	27	22	22.30	51.60
PMC-M12-16N-SS	12	1	9.50	35	22	22.30	57.70
PMC-M14-8N-SS	14	1/2	11.90	24	25	23.60	49.00
PMC-M15-8N-SS	15	1/2	11.90	24	25	24.40	49.00
PMC-M16-4N-SS	16	1/4	7.10	24	25	24.40	44.10
PMC-M16-6N-SS	16	3/8	9.50	24	25	24.40	44.10
PMC-M16-8N-SS	16	1/2	11.90	24	25	24.40	49.00
PMC-M16-12N-SS	16	3/4	12.70	27	25	24.40	49.00
PMC-M18-8N-SS	18	1/2	11.90	27	30	24.40	49.50
PMC-M18-12N-SS	18	3/4	15.00	27	30	24.40	50.50
PMC-M20-8N-SS	20	1/2	11.90	30	32	26.00	52.30
PMC-M20-12N-SS	20	3/4	15.90	30	32	26.00	52.30
PMC-M22-12N-SS	22	3/4	15.90	30	32	26.00	52.30
PMC-M22-16N-SS	22	1	18.30	35	32	26.00	57.90
PMC-M25-12N-SS	25	3/4	15.90	35	38	31.30	57.50
PMC-M25-16N-SS	25	1	22.80	35	38	31.30	62.30
PMC-M28-16N-SS	28	1	22.80	41	46	36.60	72.40
PMC-M28-20N-SS	28	1-1/4	22.80	46	46	36.60	73.10
PMC-M30-20N-SS	30	1-1/4	26.20	46	50	39.60	77.20
PMC-M32-20N-SS	32	1-1/4	28.60	46	50	42.00	79.60
PMC-M38-24N-SS	38	1-1/2	33.70	55	60	49.40	91.60

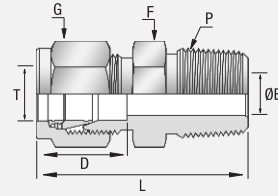
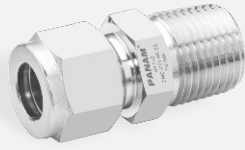
Male Connector



Imperial Tube x ISO Tapered Threads

Part No	Tube O. D. T in	P BSPT	E * Min	Width Across Flat		D	L
				F in	G in		
PMC-01-1R-SS	1/16	1/16	1.27	5/16	5/16	8.63	23.83
PMC-01-2R-SS	1/16	1/8	1.27	7/16	5/16	8.63	26.33
PMC-02-2R-SS	1/8	1/8	4.80	7/16	7/16	14.85	33.80
PMC-02-4R-SS	1/8	1/4	4.80	9/16	7/16	14.85	39.30
PMC-02-6R-SS	1/8	3/8	4.80	11/16	7/16	14.85	35.80
PMC-02-8R-SS	1/8	1/2	4.80	7/8	7/16	14.85	42.16
PMC-03-2R-SS	3/16	1/8	3.04	7/16	1/2	13.71	31.24
PMC-03-4R-SS	3/16	1/4	3.04	9/16	1/2	13.71	36.32
PMC-04-2R-SS	1/4	1/8	4.80	1/2	9/16	15.30	34.00
PMC-04-4R-SS	1/4	1/4	4.80	9/16	9/16	15.30	39.00
PMC-04-6R-SS	1/4	3/8	4.80	11/16	9/16	15.30	39.00
PMC-04-8R-SS	1/4	1/2	4.80	7/8	9/16	15.30	45.50
PMC-04-12R-SS	1/4	3/4	4.80	1-1/16	9/16	15.30	46.50
PMC-05-2R-SS	5/16	1/8	4.80	9/16	5/8	16.25	34.03
PMC-05-4R-SS	5/16	1/4	6.35	9/16	5/8	16.25	38.60
PMC-05-6R-SS	5/16	3/8	6.35	11/16	5/8	16.25	39.11
PMC-06-2R-SS	3/8	1/8	4.82	5/8	11/16	17.10	35.30
PMC-06-4R-SS	3/8	1/4	7.10	5/8	11/16	17.10	40.00
PMC-06-6R-SS	3/8	3/8	7.10	11/16	11/16	17.10	40.50
PMC-06-8R-SS	3/8	1/2	7.10	7/8	11/16	17.10	46.50
PMC-06-12R-SS	3/8	3/4	7.10	1-1/16	11/16	17.10	48.40
PMC-08-2R-SS	1/2	1/8	4.80	13/16	7/8	22.80	38.80
PMC-08-4R-SS	1/2	1/4	7.10	7/8	7/8	22.80	46.70
PMC-08-6R-SS	1/2	3/8	7.10	7/8	7/8	22.80	44.50
PMC-08-8R-SS	1/2	1/2	10.40	7/8	7/8	22.80	49.00
PMC-08-12R-SS	1/2	3/4	10.40	1-1/16	7/8	22.80	50.70
PMC-08-16R-SS	1/2	1	10.40	1-3/8	7/8	22.80	57.75
PMC-10-6R-SS	5/8	3/8	7.10	15/16	1	24.30	45.00
PMC-10-8R-SS	5/8	1/2	10.40	15/16	1	24.30	49.00
PMC-10-12R-SS	5/8	3/4	12.70	1-1/16	1	24.30	50.50
PMC-12-8R-SS	3/4	1/2	10.40	1-1/16	1-1/8	22.60	50.00
PMC-12-12R-SS	3/4	3/4	15.00	1-1/16	1-1/8	22.60	51.50
PMC-12-16R-SS	3/4	1	15.00	1-3/8	1-1/8	22.60	58.00
PMC-14-12R-SS	7/8	3/4	15.00	13/16	1-1/4	25.90	50.54
PMC-14-16R-SS	7/8	1	18.20	1-3/8	1-1/4	25.90	57.15
PMC-16-8R-SS	1	1/2	10.40	1-3/8	1-1/2	31.30	57.40
PMC-16-12R-SS	1	3/4	15.00	1-3/8	1-1/2	31.30	57.40
PMC-16-16R-SS	1	1	22.00	1-3/8	1-1/2	31.30	64.00
PMC-20-16R-SS	1-1/4	1	22.00	1-3/4	1-7/8	41.14	77.20
PMC-20-20R-SS	1-1/4	1-1/4	27.60	1-3/4	1-7/8	41.14	77.20
PMC-24-24R-SS	1-1/2	1-1/2	34.00	2-1/8	2-1/4	50.03	88.90
PMC-32-32R-SS	2	2	45.97	2-3/4	3	67.56	113.50

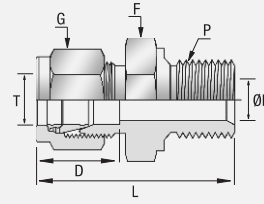
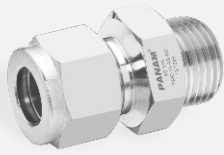
Male Connector



Metric Tube x ISO Tapered Threads

Part No	Tube O. D. T mm	P BSPT	E * Min	Width Across Flat		D	L
				F mm	G mm		
PMC-M02-2R-SS	2	1/8	1.70	12	12	12.90	30.50
PMC-M03-2R-SS	3	1/8	2.40	12	12	12.90	29.70
PMC-M03-4R-SS	3	1/4	2.40	14	12	12.90	35.60
PMC-M04-2R-SS	4	1/8	2.40	12	12	13.70	31.20
PMC-M04-4R-SS	4	1/4	2.40	14	12	13.70	36.30
PMC-M06-2R-SS	6	1/8	4.20	12	14	15.50	32.80
PMC-M06-4R-SS	6	1/4	4.20	14	14	15.50	39.50
PMC-M06-6R-SS	6	3/8	4.20	17	14	15.50	41.25
PMC-M06-8R-SS	6	1/2	4.20	22	14	15.50	46.30
PMC-M06-12R-SS	6	3/4	4.20	27	14	15.50	48.00
PMC-M08-2R-SS	8	1/8	4.20	14	16	16.30	34.20
PMC-M08-4R-SS	8	1/4	6.00	15	16	16.30	40.00
PMC-M08-6R-SS	8	3/8	6.00	18	16	16.30	41.50
PMC-M08-8R-SS	8	1/2	6.00	22	16	16.30	46.60
PMC-M10-2R-SS	10	1/8	4.80	18	19	18.10	38.00
PMC-M10-4R-SS	10	1/4	7.10	18	19	18.10	41.70
PMC-M10-6R-SS	10	3/8	8.00	18	19	18.10	42.10
PMC-M10-8R-SS	10	1/2	8.00	22	19	18.10	47.00
PMC-M12-4R-SS	12	1/4	7.10	22	22	22.30	45.00
PMC-M12-6R-SS	12	3/8	7.10	22	22	22.30	43.40
PMC-M12-8R-SS	12	1/2	9.50	22	22	22.30	49.20
PMC-M12-12R-SS	12	3/4	9.50	27	22	22.30	51.60
PMC-M12-16R-SS	12	1	9.50	35	22	22.30	57.70
PMC-M14-8R-SS	14	1/2	11.90	24	25	23.60	49.00
PMC-M15-8R-SS	15	1/2	11.90	24	25	24.40	49.00
PMC-M16-4R-SS	16	1/4	7.10	24	25	24.40	44.10
PMC-M16-6R-SS	16	3/8	9.50	24	25	24.40	44.10
PMC-M16-8R-SS	16	1/2	11.90	24	25	24.40	49.00
PMC-M16-12R-SS	16	3/4	12.70	27	25	24.40	49.00
PMC-M18-8R-SS	18	1/2	11.90	27	30	24.40	49.50
PMC-M18-12R-SS	18	3/4	15.00	27	30	24.40	50.50
PMC-M20-8R-SS	20	1/2	11.90	30	32	26.00	52.30
PMC-M20-12R-SS	20	3/4	15.90	30	32	26.00	52.30
PMC-M22-12R-SS	22	3/4	15.90	30	32	26.00	52.30
PMC-M22-16R-SS	22	1	18.30	35	32	26.00	57.90
PMC-M25-12R-SS	25	3/4	15.90	35	38	31.30	57.50
PMC-M25-16R-SS	25	1	22.80	35	38	31.30	62.30
PMC-M28-16R-SS	28	1	22.80	41	46	36.60	72.40
PMC-M28-20R-SS	28	1-1/4	22.80	46	46	36.60	73.10
PMC-M30-20R-SS	30	1-1/4	26.20	46	50	39.60	77.20
PMC-M32-20R-SS	32	1-1/4	28.60	46	50	42.00	79.60
PMC-M38-24R-SS	38	1-1/2	33.70	55	60	49.40	91.60

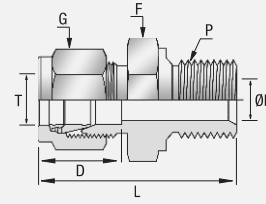
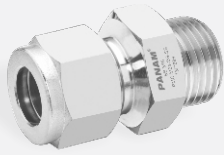
Male Connector



Imperial Tube x ISO Parallel Threads

Part No	Tube O. D. T in	P BSPP	E * Min	Width Across Flat		D	L
				F in	G in		
PMC-02-2G-SS	1/8	1/8	2.30	9/16	7/16	12.70	34.00
PMC-02-4G-SS	1/8	1/4	2.30	3/4	7/16	12.70	35.30
PMC-02-6G-SS	1/8	3/8	2.30	7/8	7/16	12.70	36.32
PMC-02-8G-SS	1/8	1/2	2.30	11/16	7/16	12.70	42.16
PMC-03-2G-SS	3/16	1/8	3.10	9/16	1/2	13.70	30.70
PMC-04-2G-SS	1/4	1/8	4.10	9/16	9/16	15.20	32.26
PMC-04-4G-SS	1/4	1/4	4.80	3/4	9/16	15.20	37.60
PMC-04-6G-SS	1/4	3/8	4.80	7/8	9/16	15.20	38.10
PMC-04-8G-SS	1/4	1/2	4.80	1-1/16	9/16	15.20	44.70
PMC-05-4G-SS	5/16	1/4	5.80	3/4	5/8	16.20	38.36
PMC-05-6G-SS	5/16	3/8	6.40	7/8	5/8	16.20	39.66
PMC-06-2G-SS	3/8	1/8	4.00	5/8	11/16	16.80	34.03
PMC-06-4G-SS	3/8	1/4	5.80	3/4	11/16	16.80	38.50
PMC-06-6G-SS	3/8	3/8	7.10	7/8	11/16	16.80	40.40
PMC-06-8G-SS	3/8	1/2	7.10	1-1/16	11/16	16.80	46.22
PMC-08-4G-SS	1/2	1/4	5.80	13/16	7/8	22.90	42.10
PMC-08-6G-SS	1/2	3/8	7.90	7/8	7/8	22.90	42.10
PMC-08-8G-SS	1/2	1/2	10.40	1-1/16	7/8	22.90	47.40
PMC-08-12G-SS	1/2	3/4	10.40	15/16	7/8	22.90	52.50
PMC-10-6G-SS	5/8	3/8	7.90	15/16	1	24.40	43.96
PMC-10-8G-SS	5/8	1/2	11.90	11/16	1	24.40	49.10
PMC-12-8G-SS	3/4	1/2	11.90	1-1/16	1-1/8	24.40	48.70
PMC-12-12G-SS	3/4	3/4	15.80	1-5/16	1-1/8	24.40	52.50
PMC-16-8G-SS	1	1/2	11.90	1-3/8	1-1/2	31.20	55.80
PMC-16-12G-SS	1	3/4	15.90	1-3/8	1-1/2	31.20	57.40
PMC-16-16G-SS	1	1	19.80	1-5/8	1-1/2	31.20	59.94

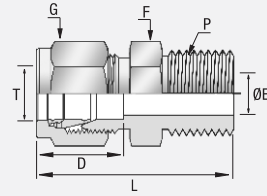
Male Connector



Metric Tube x ISO Parallel Threads

Part No	Tube O. D. T mm	P BSPP	E * Min	Width Across Flat		D	L
				F mm	G mm		
PMC-M03-2G-SS	3	1/8	2.40	14	12	12.90	30.00
PMC-M03-4G-SS	3	1/4	2.40	19	12	12.90	35.30
PMC-M04-2G-SS	4	1/8	2.40	14	12	13.70	30.70
PMC-M06-2G-SS	6	1/8	4.20	14	14	15.30	32.30
PMC-M06-4G-SS	6	1/4	4.20	19	14	15.30	37.60
PMC-M06-6G-SS	6	3/8	4.20	22	14	15.30	38.90
PMC-M06-8G-SS	6	1/2	4.20	27	14	15.30	44.70
PMC-M08-2G-SS	8	1/8	4.00	15	16	16.20	33.20
PMC-M08-4G-SS	8	1/4	6.40	19	16	16.20	39.80
PMC-M08-6G-SS	8	3/8	6.40	22	16	16.20	39.80
PMC-M08-8G-SS	8	1/2	6.40	27	16	16.20	45.60
PMC-M10-4G-SS	10	1/4	5.80	19	19	17.20	39.40
PMC-M10-6G-SS	10	3/8	7.90	22	19	17.20	40.60
PMC-M10-8G-SS	10	1/2	7.90	27	19	17.20	46.50
PMC-M12-4G-SS	12	1/4	5.80	22	22	22.80	42.60
PMC-M12-6G-SS	12	3/8	7.90	22	22	22.80	43.10
PMC-M12-8G-SS	12	1/2	9.50	27	22	22.80	47.40
PMC-M12-12G-SS	12	3/4	9.50	35	22	22.80	52.80
PMC-M14-4G-SS	14	1/4	5.80	24	25	23.60	43.70
PMC-M16-6G-SS	16	3/8	7.90	24	25	24.40	49.00
PMC-M16-8G-SS	16	1/2	11.90	27	25	24.40	43.90
PMC-M18-8G-SS	18	1/2	11.90	27	30	24.40	49.00
PMC-M18-12G-SS	18	3/4	15.10	35	30	24.40	52.80
PMC-M20-8G-SS	20	1/2	11.90	30	32	26.00	50.50
PMC-M20-12G-SS	20	3/4	15.90	32	32	26.00	52.80
PMC-M22-12G-SS	22	3/4	15.90	32	32	26.00	52.80
PMC-M22-16G-SS	22	1	18.30	41	32	26.00	55.30
PMC-M25-12G-SS	25	3/4	15.90	35	38	31.30	57.50
PMC-M25-16G-SS	25	1	19.80	41	38	31.30	60.10

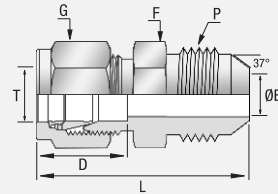
Male Connector



Metric Tube x Metric Threads

Part No	Tube O. D. T mm	P METRIC	E* Min	Width Across Flat		D	L
				F mm	G mm		
PMC-M06-M20x1.5-SS	6	M20*1.5	4.20	22	14	16.00	45.50
PMC-M08-M20x1.5-SS	8	M20*1.5	6.00	22	16	16.30	45.90
PMC-M10-M20x1.5-SS	10	M20*1.5	8.00	22	19	18.10	47.60
PMC-M12-M20x1.5-SS	12	M20*1.5	9.50	22	22	23.30	49.50
PMC-M14-M20x1.5-SS	14	M20*1.5	12.00	24	25	23.60	49.60
PMC-M15-M20x1.5-SS	15	M20*1.5	12.00	24	25	24.40	49.60
PMC-M16-M20x1.5-SS	16	M20*1.5	16.00	24	25	24.40	49.60
PMC-M18-M20x1.5-SS	18	M20*1.5	16.00	27	30	22.60	49.60
PMC-M20-M20x1.5-SS	20	M20*1.5	18.00	29	32	26.00	50.50

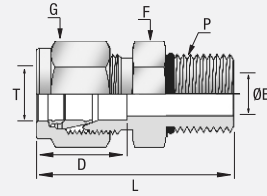
Male Connector



Imperial Tube x Flare Tube

Part No	Tube O. D. T in	P		E* Min	Width Across Flat		D
		TUBE FLARE SIZE	STRAIGHT THREAD (UNF)		F in	G in	
PMC-01-2J-SS	1/16	1/8	5/16-24	1.27	7/16	5/16	8.63
PMC-02-2J-SS	1/8	1/8	5/16-24	1.52	7/16	7/16	12.70
PMC-02-4J-SS	1/8	1/4	7/16-20	2.28	1/2	7/16	12.70
PMC-04-4J-SS	1/4	1/4	7/16-20	4.31	1/2	9/16	15.24
PMC-05-5J-SS	5/16	5/16	1/2-20	5.84	9/16	5/8	16.25
PMC-06-4J-SS	3/8	1/4	7/16-20	4.31	5/8	11/16	16.76
PMC-06-6J-SS	3/8	3/8	9/16-18	7.11	5/8	11/16	16.76
PMC-08-8J-SS	1/2	1/2	3/4-16	9.90	13/16	7/8	22.86
PMC-12-12J-SS	3/4	3/4	1-1/16-12	15.49	1-1/8	1-1/8	24.38
PMC-16-16J-SS	1	1	1-5/16-12	21.33	1-3/8	1-1/2	31.24
PMC-20-20J-SS	1-1/4	1-1/4	1-5/8-12	27.68	1-3/4	1-7/8	41.14
PMC-24-24J-SS	1-1/2	1-1/2	1-7/8-12	33.90	2-1/8	2-1/4	50.03
PMC-32-32J-SS	2	2	2-1/2-12	45.97	2-3/4	3	67.56

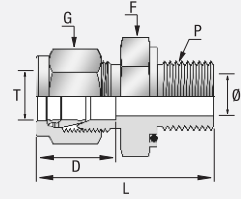
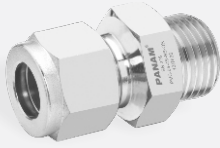
Male Connector



Imperial Tube x SAE/MS Straight Threads

Part No	Tube O. D. T in	P STRAIGHT THREAD(UNF)	E * Min	Width Across Flat		D	L
				F in	G in		
PMC-02-2S-SS	1/8	5/16-24	2.28	7/16	7/16	12.70	29.97
PMC-02-4S-SS	1/8	7/16-20	2.28	9/16	7/16	12.70	31.49
PMC-04-4S-SS	1/4	7/16-20	4.82	9/16	9/16	15.24	34.03
PMC-04-6S-SS	1/4	9/16-18	4.82	11/16	9/16	15.24	35.56
PMC-04-8S-SS	1/4	3/4-16	4.82	7/8	9/16	15.24	37.59
PMC-04-10S-SS	1/4	7/8-14	4.82	1	9/16	15.24	40.64
PMC-05-5S-SS	5/16	1/2-20	5.84	5/8	5/8	16.25	34.79
PMC-06-4S-SS	3/8	7/16-20	5.08	5/8	11/16	16.76	35.56
PMC-06-6S-SS	3/8	9/16-18	7.11	11/16	11/16	16.76	37.08
PMC-06-8S-SS	3/8	3/4-16	7.11	7/8	11/16	16.76	39.11
PMC-06-10S-SS	3/8	7/8-14	7.11	1	11/16	16.76	42.16
PMC-08-06S-SS	1/2	9/16-18	7.11	13/16	7/8	22.86	39.11
PMC-08-8S-SS	1/2	3/4-16	10.41	7/8	7/8	22.86	41.91
PMC-08-10S-SS	1/2	7/8-14	10.41	1	7/8	22.86	44.95
PMC-08-12S-SS	1/2	1-1/16-12	10.41	1-1/4	7/8	22.86	49.02
PMC-10-8S-SS	5/8	3/4-16	10.66	15/16	1	24.38	41.91
PMC-10-10S-SS	5/8	7/8-14	12.70	1	1	24.38	45.21
PMC-12-8S-SS	3/4	3/4-16	10.66	1-1/16	1-1/8	24.38	45.97
PMC-12-12S-SS	3/4	1-1/16-12	15.00	1-1/4	1-1/8	24.38	49.02
PMC-14-14S-SS	7/8	1-3/16-12	18.28	1-3/8	1-1/4	25.90	49.02
PMC-16-12S-SS	1	1-1/16-12	16.76	1-3/8	1-1/2	31.24	53.34
PMC-16-16S-SS	1	1-5/16-12	22.35	1-1/2	1-1/2	31.24	54.35
PMC-20-20S-SS	1-1/4	1-5/8-12	27.68	1-7/8	1-7/8	41.14	68.32
PMC-24-24S-SS	1-1/2	1-7/8-12	34.03	2-1/8	2-1/4	50.03	77.72
PMC-32-32S-SS	2	2-1/2-12	45.97	2-3/4	3	67.56	101.60

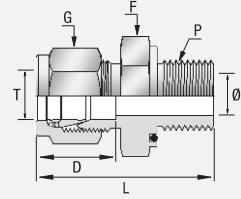
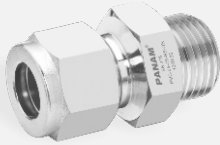
Male Connector



Imperial Tube x SAE/MS Straight Threads with O Seal

Part No	Tube O. D. T in	P	E * Min	Width Across Flat		D	L
		STRAIGHT THREAD(UNF)		F in	G in		
PMC-02-2S-SS-OR	1/8	5/16-24	2.28	9/16	7/16	12.70	32.76
PMC-03-3S-SS-OR	3/16	3/8-24	3.04	5/8	1/2	13.71	34.29
PMC-04-4S-SS-OR	1/4	7/16-20	4.82	3/4	9/16	15.24	38.35
PMC-05-5S-SS-OR	5/16	1/2-20	6.35	7/8	5/8	16.25	40.64
PMC-06-6S-SS-OR	3/8	9/16-18	7.11	15/16	11/16	16.76	42.41
PMC-08-8S-SS-OR	1/2	3/4-16	10.41	1-1/8	7/8	22.86	45.97
PMC-12-12S-SS-OR	3/4	1-1/16-12	15.74	1-1/2	1-1/8	24.38	52.32
PMC-16-16S-SS-OR	1	1-5/16-12	22.35	1-3/4	1-1/2	31.24	58.16

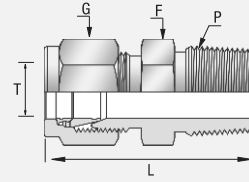
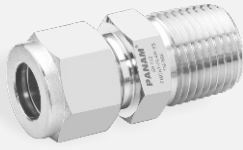
Male Connector



Imperial Tube x ISO Parallel Threads with O Seal

Part No	Tube O. D. T in	P	E * Min	Width Across Flat		D	L
		BSPP		F in	G in		
PMC-04-4G-SS-OR	1/4	1/4	4.80	3/4	9/16	15.24	37.60
PMC-04-8G-SS-OR	1/4	1/2	4.80	1-1/16	9/16	15.24	44.70
PMC-06-6G-SS-OR	3/8	3/8	7.10	7/8	11/16	16.76	40.60
PMC-08-4G-SS-OR	1/2	1/4	6.40	13/16	7/8	22.86	42.90
PMC-08-6G-SS-OR	1/2	3/8	7.90	7/8	7/8	22.86	42.90
PMC-08-8G-SS-OR	1/2	1/2	10.40	1-1/16	7/8	22.86	47.00
PMC-12-12G-SS-OR	3/4	3/4	15.00	1-5/16	1-1/8	24.38	50.30

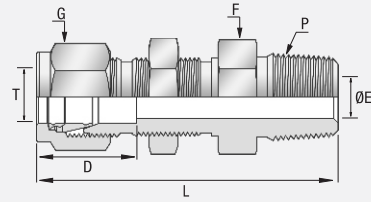
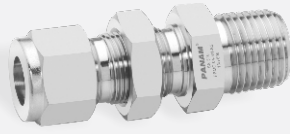
Male Bore Through Connector



Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	Width Across Flat		L
			F	G	
			in	in	
PMCBT-01-1N-SS	1/16	1/16	5/16	5/16	23.83
PMCBT-01-2N-SS	1/16	1/8	7/16	5/16	26.33
PMCBT-01-4N-SS	1/16	1/4	9/16	5/16	31.24
PMCBT-02-1N-SS	1/8	1/16	3/8	7/16	29.70
PMCBT-02-2N-SS	1/8	1/8	7/16	7/16	33.80
PMCBT-02-4N-SS	1/8	1/4	9/16	7/16	39.30
PMCBT-03-2N-SS	3/16	1/8	7/16	1/2	31.24
PMCBT-03-4N-SS	3/16	1/4	9/16	1/2	36.32
PMCBT-04-4N-SS	1/4	1/4	9/16	9/16	37.84
PMCBT-04-6N-SS	1/4	3/8	11/16	9/16	39.00
PMCBT-04-8N-SS	1/4	1/2	7/8	9/16	45.50
PMCBT-06-6N-SS	3/8	3/8	11/16	11/16	40.90
PMCBT-06-8N-SS	3/8	1/2	7/8	11/16	46.50
PMCBT-06-12N-SS	3/8	3/4	1-1/16	11/16	48.40
PMCBT-08-8N-SS	1/2	1/2	7/8	7/8	49.00
PMCBT-08-12N-SS	1/2	3/4	1-1/16	7/8	50.70
PMCBT-12-12N-SS	3/4	3/4	1-1/16	1-1/8	51.50
PMCBT-16-16N-SS	1	1	1-3/8	1-3/8	62.30

Bulkhead Male Connector



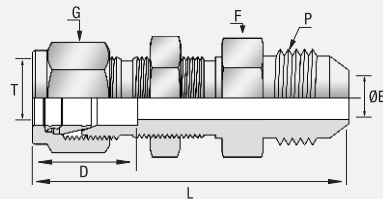
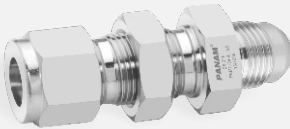
Imperial Tube x NPT Threads

Part No	Tube O. D. T in.	P NPT	E* Min	Width Across Flat		D	L	Panel Hole Drill Size	Panel Max. Thickness
				F in	G in				
PBMC-02-2N-SS	1/8	1/8	2.28	1/2	7/16	12.70	46.48	8.33	12.70
PBMC-04-2N-SS	1/4	1/8	4.80	5/8	9/16	15.30	49.63	11.50	10.16
PBMC-04-4N-SS	1/4	1/4	4.80	5/8	9/16	15.30	53.34	11.50	10.16
PBMC-06-4N-SS	3/8	1/4	7.10	3/4	11/16	16.76	57.40	14.68	11.17
PBMC-06-6N-SS	3/8	3/8	7.10	3/4	11/16	17.10	59.10	16.68	11.17
PBMC-08-6N-SS	1/2	3/8	7.10	15/16	7/8	22.86	63.24	19.44	12.70
PBMC-08-8N-SS	1/2	1/2	10.40	1	7/8	22.86	68.83	19.44	12.70
PBMC-12-12N-SS	3/4	3/4	15.00	1-3/16	1-1/8	24.38	76.20	25.76	16.80
PBMC-16-16N-SS	1	1	22.35	1-5/8	1-1/2	31.24	93.21	33.73	19.10
PBMC-20-20N-SS	1-1/4	1-1/4	27.60	1-7/8	1-7/8	41.14	108.07	41.67	19.10
PBMC-24-24N-SS	1-1/2	1-1/2	33.90	2-1/4	2-1/4	50.03	120.21	49.61	19.05
PBMC-32-32N-SS	2	2	45.90	2-3/4	3	67.56	144.62	64.50	19.05

Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E* Min	Width Across Flat		D	L	Panel Hole Drill Size	Panel Max. Thickness
				F mm	G mm				
PBMC-M06-2N-SS	6	1/8	2.20	14	14	17.00	51.00	11.60	12.00
PBMC-M06-4N-SS	6	1/4	4.20	14	14	17.00	56.00	11.60	12.00
PBMC-M10-4N-SS	10	1/4	7.10	17	19	18.00	60.50	16.40	10.00
PBMC-M12-4N-SS	12	1/4	7.10	22	22	24.00	71.00	19.50	14.00
PBMC-M12-6N-SS	12	3/8	7.10	25	22	22.86	63.24	19.44	12.70
PBMC-M12-8N-SS	12	1/2	7.10	25	22	22.86	68.83	19.44	12.70

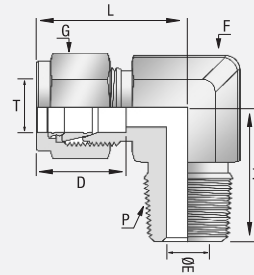
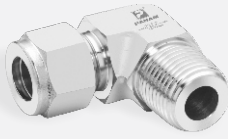
Bulkhead Male Connector



Imperial Tube x Flare Tube

Part No	Tube O. D. T in.	P		E* Min	Width Across Flat		D	L	Panel Hole Drill Size	Panel Max. Thickness
		TUBE FLARE SIZE	STRAIGHT THREAD (UNF)		F in	G in				
PBMC-04-4J-SS	1/4	1/4	7/16-20	4.31	5/8	9/16	15.24	53.84	11.50	10.16
PBMC-06-6J-SS	3/8	3/8	9/16-18	7.11	3/4	11/16	16.76	57.15	14.68	11.17
PBMC-08-8J-SS	1/2	1/2	3/4-16	9.90	1-5/16	7/8	22.86	65.78	19.44	12.70
PBMC-12-12J-SS	3/4	3/4	1-1/16-12	15.49	1-3/16	1-1/8	24.38	78.99	25.79	16.76
PBMC-16-16J-SS	1	1	1-5/16-12	21.33	1-5/8	1-1/2	31.24	92.45	33.73	19.05

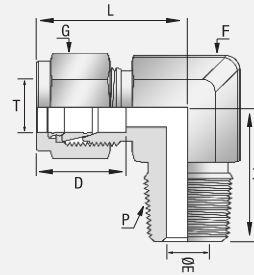
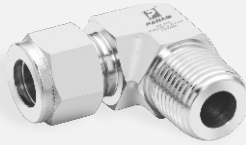
Male Elbow



Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E * Min	Width Across Flat		D	L	L1
				F in	G in			
PME-01-1N-SS	1/16	1/16	1.20	7/16	5/16	8.63	19.05	17.78
PME-01-2N-SS	1/16	1/8	1.20	7/16	5/16	8.63	19.05	17.78
PME-02-2N-SS	1/8	1/8	4.80	1/2	7/16	12.70	26.25	17.00
PME-02-4N-SS	1/8	1/4	6.00	9/16	7/16	12.70	29.75	26.00
PME-03-2N-SS	3/16	1/8	4.80	1/2	1/2	13.71	25.40	18.79
PME-03-4N-SS	3/16	1/4	6.00	9/16	1/2	13.71	25.40	23.36
PME-04-2N-SS	1/4	1/8	4.80	1/2	9/16	15.30	27.00	16.00
PME-04-4N-SS	1/4	1/4	6.00	9/16	9/16	15.30	29.50	24.50
PME-04-6N-SS	1/4	3/8	7.10	11/16	9/16	15.30	32.00	26.00
PME-04-8N-SS	1/4	1/2	10.40	13/16	9/16	15.30	35.00	33.00
PME-05-2N-SS	5/16	1/8	4.80	9/16	5/8	16.25	28.70	19.81
PME-05-4N-SS	5/16	1/4	6.00	9/16	5/8	16.20	29.77	24.50
PME-05-6N-SS	5/16	3/8	4.80	11/16	5/8	16.25	30.48	28.40
PME-06-2N-SS	3/8	1/8	4.80	5/8	11/16	17.10	29.60	20.60
PME-06-4N-SS	3/8	1/4	7.10	5/8	11/16	17.10	30.50	26.00
PME-06-6N-SS	3/8	3/8	7.10	11/16	11/16	17.10	30.00	28.00
PME-06-8N-SS	3/8	1/2	10.40	7/8	11/16	17.10	34.00	33.02
PME-06-12N-SS	3/8	3/4	15.00	1-1/16	11/16	17.10	37.40	41.00
PME-08-4N-SS	1/2	1/4	6.00	13/16	7/8	22.80	36.20	31.00
PME-08-6N-SS	1/2	3/8	7.10	13/16	7/8	22.80	35.50	30.00
PME-08-8N-SS	1/2	1/2	10.40	7/8	7/8	22.80	36.50	33.02
PME-08-12N-SS	1/2	3/4	15.00	1-1/16	7/8	22.80	41.76	41.00
PME10-6N-SS	5/8	3/8	7.10	15/16	1	22.70	42.60	32.00
PME-10-8N-SS	5/8	1/2	10.40	15/16	1	22.70	41.10	40.00
PME-10-12N-SS	5/8	3/4	15.00	1-1/16	1	22.70	42.10	41.00
PME-12-8N-SS	3/4	1/2	10.40	1-1/8	1-1/8	22.60	41.40	36.00
PME-12-12N-SS	3/4	3/4	15.00	1-1/16	1-1/8	22.60	41.90	41.00
PME-14-12N-SS	7/8	3/4	15.00	1-3/8	1-1/4	25.90	44.70	41.65
PME16-12N-SS	1	3/4	15.00	1-3/8	1-1/2	26.80	52.05	45.50
PME-16-16N-SS	1	1	21.00	1-3/8	1-1/2	26.80	50.55	47.00
PME-20-20N-SS	1-1/4	1-1/4	27.68	1-11/16	1-7/8	41.14	66.54	50.50
PME-24-24N-SS	1-1/2	1-1/2	34.00	2	2-1/4	50.00	77.97	58.50
PME-32-32N-SS	2	2	45.97	2-3/4	3	67.56	107.18	60.00

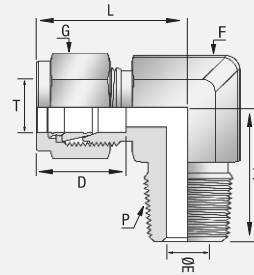
Male Elbow



Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E * Min	Width Across Flat		D	L	L1
				F mm	G mm			
PME-M03-2N-SS	3	1/8	2.40	12	12	12.90	23.60	17.80
PME-M03-4N-SS	3	1/4	2.40	14	12	12.90	24.60	23.40
PME-M04-2N-SS	4	1/8	2.40	12	12	13.70	25.40	18.80
PME-M04-4N-SS	4	1/4	2.40	14	12	13.70	25.40	23.40
PME-M06-2N-SS	6	1/8	4.20	12	14	15.30	27.75	17.00
PME-M06-4N-SS	6	1/4	4.20	14	14	15.30	29.25	24.50
PME-M06-6N-SS	6	3/8	4.20	17	14	15.30	32.25	29.00
PME-M06-8N-SS	6	1/2	4.20	22	14	15.30	34.23	33.00
PME-M08-2N-SS	8	1/8	4.80	15	16	16.20	28.95	19.80
PME-M08-4N-SS	8	1/4	6.00	15	16	16.20	30.65	24.40
PME-M08-6N-SS	8	3/8	6.40	17	16	16.20	30.60	28.00
PME-M08-8N-SS	8	1/2	6.40	22	16	16.20	32.60	33.00
PME-M10-2N-SS	10	1/8	4.80	18	19	17.20	31.50	23.60
PME-M10-4N-SS	10	1/4	7.10	18	19	17.20	32.00	26.00
PME-M10-6N-SS	10	3/8	7.90	18	19	17.20	31.50	28.00
PME-M10-8N-SS	10	1/2	7.90	22	19	17.20	33.50	33.00
PME-M12-2N-SS	12	1/8	4.80	22	22	22.80	36.00	23.60
PME-M12-4N-SS	12	1/4	7.10	22	22	22.80	36.00	28.20
PME-M12-6N-SS	12	3/8	9.50	22	22	22.80	36.00	28.20
PME-M12-8N-SS	12	1/2	9.50	22	22	22.80	36.00	33.00
PME-M12-12N-SS	12	3/4	9.50	27	22	22.80	39.80	36.80
PME-M16-6N-SS	16	3/8	9.50	25	25	24.40	38.00	30.20
PME-M16-8N-SS	16	1/2	11.90	25	25	24.40	38.00	35.10
PME-M16-12N-SS	16	3/4	12.70	27	25	24.40	39.80	36.80
PME-M18-8N-SS	18	1/2	11.90	27	30	24.40	41.40	36.00
PME-M18-12N-SS	18	3/4	15.10	27	30	24.40	39.80	36.80
PME-M20-8N-SS	20	1/2	11.90	30	32	26.00	44.60	41.70
PME-M20-12N-SS	20	3/4	15.90	30	32	26.00	44.60	41.70
PME-M22-12N-SS	22	3/4	15.90	32	32	26.00	44.60	41.70
PME-M22-16N-SS	22	1	18.30	36	32	26.00	44.60	46.50
PME-M25-12N-SS	25	3/4	15.90	36	38	31.30	49.10	41.70
PME-M25-16N-SS	25	1	22.80	36	38	31.30	49.10	46.50
PME-M28-16N-SS	28	1	22.80	41	46	36.60	64.00	53.70
PME-M30-20N-SS	30	1-1/4	26.20	46	50	39.60	69.90	53.10
PME-M32-20N-SS	32	1-1/4	27.80	46	50	42.00	72.30	53.10
PME-M38-24N-SS	38	1-1/2	33.70	60	60	49.40	84.00	60.40

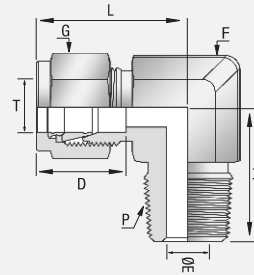
Male Elbow



Imperial Tube x ISO Tapered Threads

Part No	Tube O. D. T in	P BSPT	E * Min	Width Across Flat		D	L	L1
				F in	G in			
PME-01-1R-SS	1/16	1/16	1.20	7/16	7/16	8.63	19.05	17.78
PME-01-2R-SS	1/16	1/8	1.20	7/16	7/16	8.63	19.05	17.78
PME-02-2R-SS	1/8	1/8	4.80	1/2	7/16	12.70	26.25	17.00
PME-02-4R-SS	1/8	1/4	6.00	5/8	7/16	12.70	29.75	26.00
PME-03-2R-SS	3/16	1/8	4.80	1/2	1/2	13.71	25.40	18.79
PME-03-4R-SS	3/16	1/4	6.00	9/16	1/2	13.71	25.40	23.36
PME-04-2R-SS	1/4	1/8	4.80	1/2	9/16	15.30	27.00	16.00
PME-04-4R-SS	1/4	1/4	6.00	5/8	9/16	15.30	29.50	24.50
PME-04-6R-SS	1/4	3/8	7.10	11/16	9/16	15.30	32.00	26.00
PME-04-8R-SS	1/4	1/2	10.40	13/16	9/16	15.30	35.00	33.00
PME-05-2R-SS	5/16	1/8	4.80	9/16	5/8	16.25	28.70	19.81
PME-05-4R-SS	5/16	1/4	6.00	9/16	5/8	16.25	29.77	24.50
PME-05-6R-SS	5/16	3/8	4.80	11/16	5/8	16.25	30.48	28.40
PME-06-2R-SS	3/8	1/8	4.80	5/8	11/16	17.10	29.60	20.60
PME-06-4R-SS	3/8	1/4	7.10	5/8	11/16	17.10	30.50	26.00
PME-06-6R-SS	3/8	3/8	7.10	11/16	11/16	17.10	30.00	28.00
PME-06-8R-SS	3/8	1/2	10.40	7/8	11/16	17.10	34.00	33.02
PME-06-12R-SS	3/8	3/4	15.00	1-1/16	11/16	17.10	37.48	41.00
PME-08-4R-SS	1/2	1/4	6.00	13/16	7/8	22.80	36.20	31.00
PME-08-6R-SS	1/2	3/8	7.10	13/16	7/8	22.80	35.50	30.00
PME-08-8R-SS	1/2	1/2	10.40	7/8	7/8	22.80	36.50	33.02
PME-08-12R-SS	1/2	3/4	15.00	1-1/16	7/8	22.80	41.76	41.00
PME10-6R-SS	5/8	3/8	7.10	15/16	1	22.70	42.60	32.00
PME-10-8R-SS	5/8	1/2	10.40	15/16	1	22.70	41.10	40.00
PME-10-12R-SS	5/8	3/4	15.00	1-1/16	1	22.70	42.10	41.00
PME-12-8R-SS	3/4	1/2	10.40	1-1/8	1-1/8	22.60	41.10	36.00
PME-12-12R-SS	3/4	3/4	15.00	1-1/16	1-1/8	22.60	41.90	41.00
PME-14-12R-SS	7/8	3/4	15.00	1-3/8	1-1/4	25.90	44.70	41.65
PME16-12R-SS	1	3/4	15.00	1-27/64	1-1/2	26.80	52.05	45.50
PME-16-16R-SS	1	1	21.00	1-27/64	1-1/2	26.80	50.55	47.00
PME-20-20R-SS	1-1/4	1-1/4	27.68	1-11/16	1-7/8	41.14	66.54	50.50
PME-24-24R-SS	1-1/2	1-1/2	34.00	2	2-1/4	50.00	77.97	58.50
PME-32-32R-SS	2	2	45.97	2-3/4	3	67.56	107.18	60.00

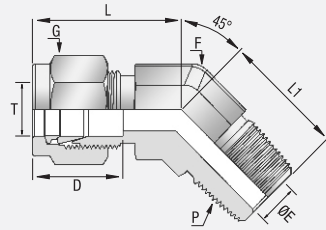
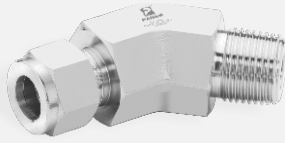
Male Elbow



Metric Tube x ISO Tapered Threads

Part No	Tube O. D. T mm	P BSPT	E * Min	Width Across Flat		D	L	L1
				F mm	G mm			
PME-M03-2R-SS	3	1/8	2.40	12	12	12.90	23.60	17.80
PME-M03-4R-SS	3	1/4	2.40	14	12	12.90	24.60	23.40
PME-M04-2R-SS	4	1/8	2.40	12	12	13.70	25.40	18.80
PME-M04-4R-SS	4	1/4	2.40	14	12	13.70	25.40	23.40
PME-M06-2R-SS	6	1/8	4.20	12	14	15.30	27.75	17.00
PME-M06-4R-SS	6	1/4	4.20	14	14	15.30	29.25	24.50
PME-M06-6R-SS	6	3/8	4.20	17	14	15.30	32.25	29.00
PME-M06-8R-SS	6	1/2	4.20	22	14	15.30	34.23	33.00
PME-M08-2R-SS	8	1/8	4.80	15	16	16.20	28.95	19.80
PME-M08-4R-SS	8	1/4	6.00	15	16	16.20	30.65	24.40
PME-M08-6R-SS	8	3/8	6.40	17	16	16.20	30.60	28.00
PME-M08-8R-SS	8	1/2	6.40	22	16	16.20	32.60	33.00
PME-M10-2R-SS	10	1/8	4.80	18	19	17.20	31.50	23.60
PME-M10-4R-SS	10	1/4	7.10	18	19	17.20	32.00	26.00
PME-M10-6R-SS	10	3/8	7.90	18	19	17.20	31.50	28.00
PME-M10-8R-SS	10	1/2	7.90	22	19	17.20	33.50	33.00
PME-M12-2R-SS	12	1/8	4.80	22	22	22.80	36.00	23.60
PME-M12-4R-SS	12	1/4	7.10	22	22	22.80	36.00	28.20
PME-M12-6R-SS	12	3/8	9.50	22	22	22.80	36.00	28.20
PME-M12-8R-SS	12	1/2	9.50	22	22	22.80	36.00	33.00
PME-M12-12R-SS	12	3/4	9.50	27	22	22.80	39.80	36.80
PME-M16-6R-SS	16	3/8	9.50	25	25	24.40	38.00	30.20
PME-M16-8R-SS	16	1/2	11.90	25	25	24.40	38.00	35.10
PME-M16-12R-SS	16	3/4	12.70	27	25	24.40	39.80	36.80
PME-M18-8R-SS	18	1/2	11.90	27	30	24.40	41.40	36.00
PME-M18-12R-SS	18	3/4	15.10	27	30	24.40	39.80	36.80
PME-M20-8R-SS	20	1/2	11.90	30	32	26.00	44.60	41.70
PME-M20-12R-SS	20	3/4	15.90	30	32	26.00	44.60	41.70
PME-M22-12R-SS	22	3/4	15.90	32	32	26.00	44.60	41.70
PME-M22-16R-SS	22	1	18.30	36	32	26.00	44.60	46.50
PME-M25-12R-SS	25	3/4	15.90	36	38	31.30	49.10	41.70
PME-M25-16R-SS	25	1	22.80	36	38	31.30	49.10	46.50
PME-M28-16R-SS	28	1	22.80	41	46	36.60	64.00	53.70
PME-M30-20R-SS	30	1-1/4	26.20	46	50	39.60	69.90	53.10
PME-M32-20R-SS	32	1-1/4	27.80	46	50	42.00	72.30	53.10
PME-M38-24R-SS	38	1-1/2	33.70	50	60	49.40	84.00	60.40

Male Elbow 45°



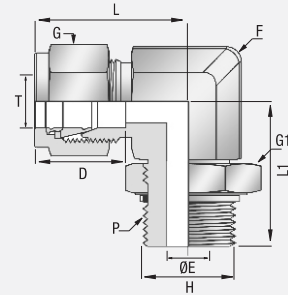
Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E * Min	Width Across Flat		D	L1	L
				F in	G in			
PLME-02-2N-SS	1/8	1/8	2.40	1/2	7/16	12.70	16.51	22.38
PLME-04-2N-SS	1/4	1/8	4.82	1/2	9/16	15.24	16.51	24.63
PLME-04-4N-SS	1/4	1/4	4.82	9/16	9/16	15.24	21.08	24.63
PLME-06-2N-SS	3/8	1/8	4.82	5/8	11/16	16.76	18.28	27.94
PLME-06-4N-SS	3/8	1/4	7.11	5/8	11/16	16.76	22.86	27.94
PLME-06-6N-SS	3/8	3/8	7.11	13/16	11/16	16.76	24.13	29.00
PLME-08-6N-SS	1/2	3/8	7.11	13/16	7/8	22.86	24.13	32.00
PLME-08-8N-SS	1/2	1/2	10.41	7/8	7/8	22.86	28.95	32.00
PLME-12-12N-SS	3/4	3/4	15.00	1-1/8	1-1/8	24.38	30.98	34.00
PLME-16-16N-SS	1	1	22.35	1-3/8	1-1/2	31.24	37.84	40.38

Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E * Min	Width Across Flat		D	L1	L
				F mm	G mm			
PLME-M06-2N-SS	6	1/8	4.20	12	14	15.24	16.80	16.00
PLME-M06-4N-SS	6	1/4	4.20	14	14	15.24	22.80	16.00
PLME-M08-2N-SS	8	1/8	4.80	16	16	16.76	16.80	16.80
PLME-M10-4N-SS	10	1/4	7.10	19	19	16.76	24.10	19.00
PLME-M12-6N-SS	12	3/8	9.50	20	22	16.76	24.10	19.00
PLME-M12-8N-SS	12	1/2	9.50	22	22	22.86	29.70	20.60
PLME-M16-8N-SS	16	1/2	11.90	24	24	24.38	29.70	20.60

Positionable Male Elbow



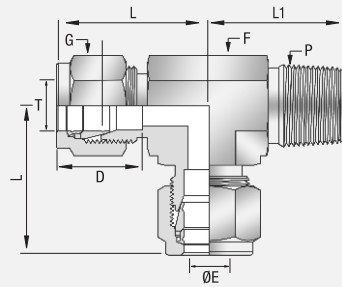
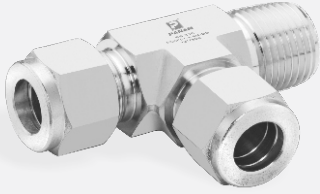
Imperial Tube x SAE/MS Straight Threads

Part No	Tube O. D. T in	P STRAIGHT THREAD (UNF)	E * Min	Width Across Flat			D	L	L1	H
				F in	G in	G1 in				
PPME-04-4S-SS	1/4	7/16-20	4.82	1/2	9/16	9/16	15.24	28.44	28.44	16.51
PPME-04-6S-SS	1/4	9/16-18	4.82	5/8	9/16	11/16	15.24	30.48	32.25	20.06
PPME-05-5S-SS	5/16	1/2-20	5.84	9/16	5/8	5/8	16.25	30.22	29.46	18.28
PPME-06-6S-SS	3/8	9/16-18	7.11	5/8	11/16	11/16	16.76	32.04	32.25	20.06
PPME-06-8S-SS	3/8	3/4-16	7.11	13/16	11/16	7/8	16.76	34.79	37.84	25.65
PPME-08-8S-SS	1/2	3/4-16	10.41	13/16	7/8	7/8	22.86	37.69	37.84	25.66
PPME-10-10S-SS	5/8	7/8-14	12.70	1	1	1	24.38	39.62	43.43	29.46
PPME-12-12S-SS	3/4	1-1/16-12	15.00	1-12/16	1-1/8	1-1/4	24.38	41.40	48.76	36.57
PPME-14-14S-SS	7/8	1-3/16-12	18.28	1-1/4	1-1/4	1-3/8	25.90	43.18	50.54	40.38
PPME-16-16S-SS	1	1-5/16-12	22.35	1-3/8	1-1/2	1-1/2	31.24	50.54	53.59	43.94
PPME-20-20S-SS	1-1/4	1-5/8-12	27.68	1-1/16	1-7/8	1-7/8	41.14	67.81	58.16	54.86
PPME-24-24S-SS	1-1/2	1-7/8-12	34.03	2	2-1/4	2-1/8	50.03	77.97	60.45	62.23
PPME-32-32S-SS	1	2-1/2-12	45.97	2-3/4	3	2-3/4	67.56	107.18	71.62	80.26

Metric Tube x ISO Parallel Threads

Part No	Tube O. D. T in	P BSPP	E * Min	Width Across Flat			D	L	H
				F mm	G mm	G1 mm			
PPME-M06-2G-SS	6	1/8	4.00	13	14	14	15.30	26.40	17.30
PPME-M06-4G-SS	6	1/4	4.80	16	19	14	15.30	32.30	22.90
PPME-M08-2G-SS	8	1/8	4.00	14	14	14	16.20	27.40	17.30
PPME-M08-4G-SS	8	1/4	5.90	16	19	14	16.20	32.20	22.90
PPME-M10-4G-SS	10	1/4	5.90	20	19	19	17.20	35.00	22.90
PPME-M10-6G-SS	10	3/8	7.90	20	22	19	17.20	37.10	26.40
PPME-M12-4G-SS	12	1/4	5.90	20	19	19	22.80	35.00	22.90
PPME-M12-6G-SS	12	3/8	7.90	20	22	22	22.80	37.10	26.40
PPME-M12-8G-SS	12	1/2	9.50	24	27	22	22.80	43.40	32.00
PPME-M12-12G-SS	12	3/4	9.50	27	35	22	22.80	48.80	41.10

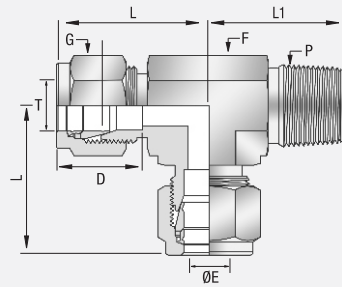
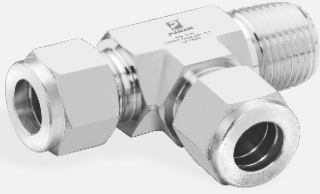
Male Run Tee



Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E * Min	Width Across Flat		D	L1	L
				F in	G in			
PMRT-02-2N-SS	1/8	1/8	2.28	1/2	7/16	14.80	18.90	26.15
PMRT-02-4N-SS	1/8	1/4	2.28	1/2	7/16	14.80	23.05	30.75
PMRT-03-2N-SS	3/16	1/8	3.04	1/2	1/2	13.71	17.78	24.38
PMRT-04-2N-SS	1/4	1/8	4.80	1/2	9/16	15.30	18.79	26.92
PMRT-04-4N-SS	1/4	1/4	4.80	1/2	9/16	15.30	24.60	29.00
PMRT-04-6N-SS	1/4	3/8	4.80	11/16	9/16	15.30	28.56	33.00
PMRT-05-2N-SS	5/16	1/8	4.80	9/16	5/8	16.25	20.82	29.71
PMRT-06-4N-SS	3/8	1/4	6.00	5/8	11/16	17.10	24.40	29.00
PMRT-06-6N-SS	3/8	3/8	7.10	11/16	11/16	17.10	29.70	31.70
PMRT-08-4N-SS	1/2	1/4	6.00	13/16	7/8	22.80	27.00	36.70
PMRT-08-6N-SS	1/2	3/8	7.10	7/8	7/8	22.80	28.50	37.20
PMRT-08-8N-SS	1/2	1/2	10.40	7/8	7/8	22.80	33.48	38.20
PMRT-10-8N-SS	5/8	1/2	10.40	15/16	1	18.10	34.00	38.10
PMRT-12-12N-SS	3/4	3/4	15.00	1-1/16	1-1/8	22.60	39.50	41.90
PMRT-14-12N-SS	7/8	3/4	15.74	1-3/8	1-1/4	25.90	41.65	44.70
PMRT-16-12N-SS	1	3/4	15.74	1-3/8	1-1/2	31.24	42.20	49.02
PMRT-16-16N-SS	1	1	22.35	1-3/8	1-1/2	31.24	46.70	49.00
PMRT-20-20N-SS	1-1/4	1-1/4	27.68	1-11/16	1-7/8	41.14	47.75	66.54
PMRT-24-24N-SS	1-1/2	1-1/2	33.90	2	2-1/4	50.00	60.45	77.97
PMRT-32-32N-SS	2	2	45.97	2-3/4	3	67.56	70.61	107.18

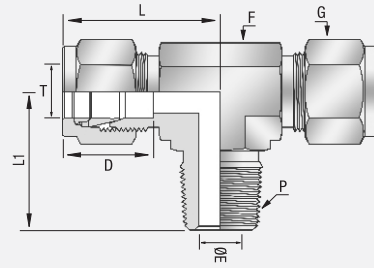
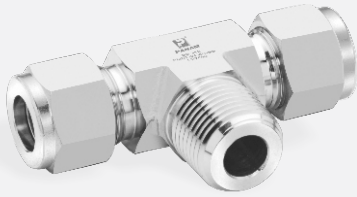
Male Run Tee



Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E * Min	Width Across Flat		D	L1	L
				F mm	G mm			
PMRT-M03-2N-SS	3	1/8	2.40	12	12	12.90	17.60	23.60
PMRT-M03-4N-SS	3	1/4	2.40	12	12	12.90	23.40	24.60
PMRT-M04-2N-SS	4	1/8	2.40	12	12	13.70	18.80	25.40
PMRT-M06-2N-SS	6	1/8	4.80	12	14	15.30	18.80	27.00
PMRT-M06-4N-SS	6	1/4	4.80	14	14	15.30	23.40	27.00
PMRT-M08-2N-SS	8	1/8	4.80	14	16	16.20	19.80	28.80
PMRT-M08-4N-SS	8	1/4	6.40	17	16	16.20	24.40	28.80
PMRT-M10-4N-SS	10	1/4	7.10	17	19	17.20	28.20	31.50
PMRT-M10-6N-SS	10	3/8	7.90	20	19	17.20	28.20	31.50
PMRT-M12-4N-SS	12	1/4	7.10	20	22	22.80	28.20	36.00
PMRT-M12-6N-SS	12	3/8	9.50	20	22	22.80	28.20	36.00
PMRT-M12-8N-SS	12	1/2	9.50	20	22	22.80	33.00	36.00
PMRT-M16-6N-SS	16	3/8	9.50	25	25	24.40	30.20	38.00
PMRT-M16-8N-SS	16	1/2	11.90	25	25	24.40	35.10	38.00
PMRT-M20-12N-SS	20	3/4	15.90	31	32	26.00	41.70	44.60
PMRT-M22-12N-SS	22	3/4	15.90	34	32	26.00	41.70	44.60
PMRT-M22-16N-SS	22	1	18.30	34	32	26.00	46.50	44.60
PMRT-M25-12N-SS	25	3/4	15.90	34	38	31.30	41.70	49.10
PMRT-M25-16N-SS	25	1	22.80	34	38	31.30	46.50	49.10

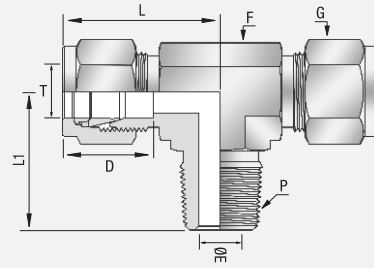
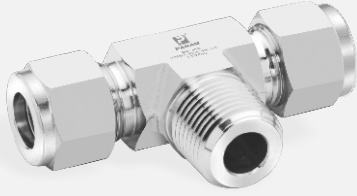
Male Branch Tee



Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E * Min	Width Across Flat		D	L1	L
				F in	G in			
PMBT-02-2N-SS	1/8	1/8	2.28	1/2	7/16	12.70	18.90	24.91
PMBT-02-4N-SS	1/8	1/4	2.28	1/2	7/16	12.70	23.36	24.91
PMBT-03-2N-SS	3/16	1/8	3.04	1/2	1/2	13.71	17.78	24.38
PMBT-04-2N-SS	1/4	1/8	4.80	1/2	9/16	15.30	20.00	28.00
PMBT-04-4N-SS	1/4	1/4	4.80	5/8	9/16	15.30	24.00	29.50
PMBT-04-6N-SS	1/4	3/8	4.80	11/16	9/16	15.30	28.00	32.60
PMBT-05-2N-SS	5/16	1/8	4.80	9/16	5/8	16.25	20.82	29.71
PMBT-06-4N-SS	3/8	1/4	7.10	5/8	11/16	17.10	24.00	29.00
PMBT-06-6N-SS	3/8	3/8	7.10	11/16	11/16	17.10	26.00	32.50
PMBT-06-8N-SS	3/8	1/2	7.10	7/8	11/16	17.10	34.00	33.25
PMBT-08-4N-SS	1/2	1/4	10.40	13/16	7/8	22.80	26.50	37.37
PMBT-08-6N-SS	1/2	3/8	10.40	7/8	7/8	22.80	30.00	38.20
PMBT-08-8N-SS	1/2	1/2	10.40	7/8	7/8	22.80	34.00	36.00
PMBT-10-8N-SS	5/8	1/2	14.00	15/16	1	24.86	35.05	38.10
PMBT-12-12N-SS	3/4	3/4	15.00	1-1/16	1-1/8	22.60	41.00	41.44
PMBT-14-12N-SS	7/8	3/4	15.74	1-3/8	1-1/4	25.90	41.65	44.70
PMBT-16-12N-SS	1	3/4	15.74	1-3/8	1-1/2	31.24	42.20	49.02
PMBT-16-16N-SS	1	1	22.35	1-3/8	1-1/2	31.24	46.70	49.02
PMBT-20-20N-SS	1-1/4	1-1/4	27.68	1-11/16	1-7/8	41.14	47.75	66.54
PMBT-24-24N-SS	1-1/2	1-1/2	33.90	2	2-1/4	50.03	60.45	77.97
PMBT-32-32N-SS	2	2	45.97	2-3/4	3	67.56	70.61	107.18

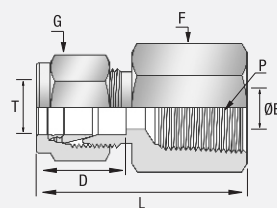
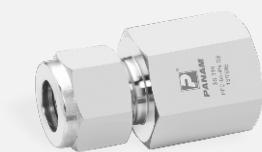
Male Branch Tee



Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E * Min	Width Across Flat		D	L1	L
				F mm	G mm			
PMBT-M03-2N-SS	3	1/8	2.40	12	12	12.90	17.80	23.60
PMBT-M03-4N-SS	3	1/4	2.40	12	12	12.90	23.40	24.60
PMBT-M04-2N-SS	4	1/8	2.40	12	12	13.70	18.80	25.40
PMBT-M06-2N-SS	6	1/8	4.80	12	14	15.30	18.80	27.00
PMBT-M06-4N-SS	6	1/4	4.80	14	14	15.30	23.40	27.00
PMBT-M08-2N-SS	8	1/8	4.80	14	16	16.20	19.80	28.80
PMBT-M08-4N-SS	8	1/4	6.40	17	16	16.20	24.40	28.80
PMBT-M10-4N-SS	10	1/4	7.10	17	19	17.20	28.20	31.50
PMBT-M10-6N-SS	10	3/8	7.90	20	19	17.20	28.20	31.50
PMBT-M12-4N-SS	12	1/4	7.10	20	22	22.80	28.20	36.00
PMBT-M12-6N-SS	12	3/8	7.10	20	22	22.80	28.20	36.00
PMBT-M12-8N-SS	12	1/2	9.50	22	22	22.80	33.00	36.00
PMBT-M16-6N-SS	16	3/8	7.10	25	25	24.40	30.20	38.00
PMBT-M16-8N-SS	16	1/2	11.90	25	25	24.40	35.10	38.00
PMBT-M20-12N-SS	20	3/4	15.90	31	32	26.00	41.70	44.60
PMBT-M22-16N-SS	22	1	18.30	34	32	26.00	46.50	44.60
PMBT-M25-12N-SS	25	3/4	15.90	34	38	31.30	41.70	49.10
PMBT-M25-16N-SS	25	1	22.80	34	38	31.30	46.50	49.10

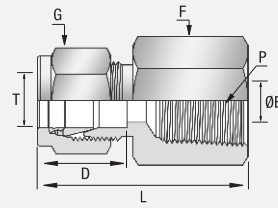
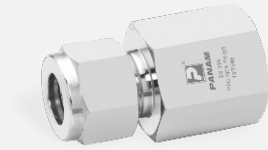
Female Connector



Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E * Min	Width Across Flat		D	L
				F in	G in		
PFC-01-1N-SS	1/16	1/16	1.20	7/16	7/16	8.63	23.60
PFC-01-2N-SS	1/16	1/8	1.20	9/16	7/16	8.63	24.30
PFC-02-2N-SS	1/8	1/8	2.20	9/16	7/16	14.80	33.75
PFC-02-4N-SS	1/8	1/4	2.20	3/4	7/16	14.80	39.25
PFC-03-2N-SS	3/16	1/8	3.04	9/16	1/2	13.71	29.71
PFC-04-2N-SS	1/4	1/8	4.80	9/16	9/16	15.30	31.50
PFC-04-4N-SS	1/4	1/4	4.80	3/4	9/16	15.30	38.00
PFC-04-6N-SS	1/4	3/8	4.80	7/8	9/16	15.30	38.50
PFC-04-8N-SS	1/4	1/2	4.80	1-1/16	9/16	15.30	46.00
PFC-05-2N-SS	5/16	1/8	6.35	9/16	5/8	16.25	32.00
PFC-05-4N-SS	5/16	1/4	6.35	3/4	5/8	16.25	36.83
PFC-06-2N-SS	3/8	1/8	7.10	5/8	11/16	17.10	32.40
PFC-06-4N-SS	3/8	1/4	7.10	3/4	11/16	17.10	39.00
PFC-06-6N-SS	3/8	3/8	7.10	7/8	11/16	17.10	41.00
PFC-06-8N-SS	3/8	1/2	7.10	1-1/16	11/16	17.10	46.70
PFC-06-12N-SS	3/8	3/4	7.10	1-5/16	11/16	17.10	47.40
PFC-08-4N-SS	1/2	1/4	10.40	7/8	7/8	22.80	43.20
PFC-08-6N-SS	1/2	3/8	10.40	7/8	7/8	22.80	43.20
PFC-08-8N-SS	1/2	1/2	10.40	1-1/16	7/8	22.80	50.90
PFC-08-12N-SS	1/2	3/4	10.40	1-5/16	7/8	22.80	51.00
PFC-10-6N-SS	5/8	3/8	12.70	15/16	1	24.38	43.10
PFC-10-8N-SS	5/8	1/2	12.70	1-1/16	1	24.38	50.07
PFC-12-8N-SS	3/4	1/2	15.00	1-1/16	1-1/8	24.38	46.73
PFC-12-12N-SS	3/4	3/4	15.00	1-5/16	1-1/8	24.38	51.90
PFC-14-12N-SS	7/8	3/4	18.28	1-5/16	1-1/4	25.90	49.78
PFC-16-12N-SS	1	3/4	22.35	1-3/8	1-1/2	31.24	54.75
PFC-16-16N-SS	1	1	22.35	1-5/8	1-1/2	31.24	62.23
PFC-20-20N-SS	1-1/4	1-1/4	27.68	2-1/8	1-7/8	41.14	74.67
PFC-24-24N-SS	1-1/2	1-1/2	34.00	2-3/8	2-1/4	50.03	83.31
PFC-32-32N-SS	2	2	45.97	2-7/8	3	67.56	101.60

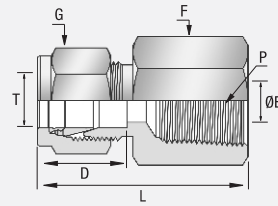
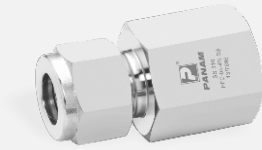
Female Connector



Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E * Min	Width Across Flat		D	L
				F mm	G mm		
PFC-M03-2N-SS	3	1/8	2.40	14	12	12.90	28.70
PFC-M03-4N-SS	3	1/4	2.40	19	12	12.90	33.50
PFC-M04-2N-SS	4	1/8	2.40	14	12	13.70	29.70
PFC-M06-2N-SS	6	1/8	4.20	14	14	15.50	31.30
PFC-M06-4N-SS	6	1/4	4.20	19	14	15.50	40.30
PFC-M06-6N-SS	6	3/8	4.20	22	14	15.50	40.30
PFC-M06-8N-SS	6	1/2	4.20	27	14	15.50	42.50
PFC-M08-2N-SS	8	1/8	6.40	15	16	16.20	32.10
PFC-M08-4N-SS	8	1/4	6.40	19	16	16.20	37.00
PFC-M08-6N-SS	8	3/8	6.00	22	16	16.30	38.65
PFC-M08-8N-SS	8	1/2	6.40	27	16	16.20	43.30
PFC-M10-2N-SS	10	1/8	7.90	18	19	17.20	33.00
PFC-M10-4N-SS	10	1/4	7.10	19	19	18.10	40.60
PFC-M10-6N-SS	10	3/8	7.10	22	19	18.10	40.13
PFC-M10-8N-SS	10	1/2	8.00	27	19	18.10	48.60
PFC-M12-2N-SS	12	1/8	8.30	22	22	22.80	38.50
PFC-M12-4N-SS	12	1/4	9.50	22	22	22.30	42.50
PFC-M12-6N-SS	12	3/8	9.50	22	22	22.30	42.50
PFC-M12-8N-SS	12	1/2	9.50	27	22	22.30	50.30
PFC-M12-12N-SS	12	3/4	9.50	35	22	22.80	54.28
PFC-M15-8N-SS	15	1/2	11.90	27	25	24.40	50.90
PFC-M16-8N-SS	16	1/2	12.70	27	25	24.40	46.90
PFC-M20-8N-SS	20	1/2	15.90	30	32	26.00	47.90
PFC-M20-12N-SS	20	3/4	15.90	35	32	26.00	49.70
PFC-M22-12N-SS	22	3/4	18.30	35	32	26.00	49.70
PFC-M22-16N-SS	22	1	18.30	41	32	26.00	57.90
PFC-M25-12N-SS	25	3/4	22.80	35	38	31.30	53.40
PFC-M25-16N-SS	25	1	22.80	41	38	31.30	62.30

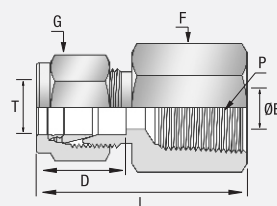
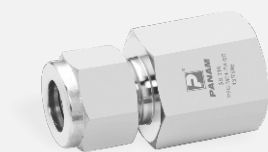
Female Connector



Imperial Tube x ISO Tapered Threads

Part No	Tube O. D. T in	P BSPT	E * Min	Width Across Flat		D	L
				F in	G in		
PFC-01-1R-SS	1/16	1/16	1.20	7/16	7/16	8.63	23.60
PFC-01-2R-SS	1/16	1/8	1.20	9/16	7/16	8.63	24.30
PFC-02-2R-SS	1/8	1/8	2.20	9/16	7/16	14.80	33.75
PFC-02-4R-SS	1/8	1/4	2.20	3/4	7/16	14.80	39.25
PFC-03-2R-SS	3/16	1/8	3.04	9/16	1/2	13.71	29.71
PFC-04-2R-SS	1/4	1/8	4.80	9/16	9/16	15.30	31.50
PFC-04-4R-SS	1/4	1/4	4.80	3/4	9/16	15.30	38.00
PFC-04-6R-SS	1/4	3/8	4.80	7/8	9/16	15.30	38.50
PFC-04-8R-SS	1/4	1/2	4.80	1-1/16	9/16	15.30	46.00
PFC-05-2R-SS	5/16	1/8	6.35	9/16	5/8	16.25	32.00
PFC-05-4R-SS	5/16	1/4	6.35	3/4	5/8	16.25	36.83
PFC-06-2R-SS	3/8	1/8	7.10	5/8	11/16	17.10	32.40
PFC-06-4R-SS	3/8	1/4	7.10	3/4	11/16	17.10	39.00
PFC-06-6R-SS	3/8	3/8	7.10	7/8	11/16	17.10	41.00
PFC-06-8R-SS	3/8	1/2	7.10	1-1/16	11/16	17.10	46.70
PFC-06-12R-SS	3/8	3/4	7.10	1-5/16	11/16	17.10	47.40
PFC-08-4R-SS	1/2	1/4	10.40	7/8	7/8	22.80	43.20
PFC-08-6R-SS	1/2	3/8	10.40	7/8	7/8	22.80	43.20
PFC-08-8R-SS	1/2	1/2	10.40	1-1/16	7/8	22.80	50.90
PFC-08-12R-SS	1/2	3/4	10.40	1-5/16	7/8	22.80	51.00
PFC-10-6R-SS	5/8	3/8	12.70	15/16	1	24.38	43.10
PFC-10-8R-SS	5/8	1/2	12.70	1-1/16	1	24.38	50.80
PFC-12-8R-SS	3/4	1/2	15.00	1-1/16	1-1/8	24.38	46.73
PFC-12-12R-SS	3/4	3/4	15.00	1-5/16	1-1/8	24.38	51.90
PFC-14-12R-SS	7/8	3/4	18.28	1-5/16	1-1/4	25.90	49.78
PFC-16-12R-SS	1	3/4	22.35	1-3/8	1-1/2	31.24	54.75
PFC-16-16R-SS	1	1	22.35	1-5/8	1-1/2	31.24	62.23
PFC-20-20R-SS	1-1/4	1-1/4	27.68	2-1/8	1-7/8	41.14	74.67
PFC-24-24R-SS	1-1/2	1-1/2	34.00	2-3/8	2-1/4	50.03	83.31
PFC-32-32R-SS	2	2	45.97	2-7/8	3	67.56	101.60

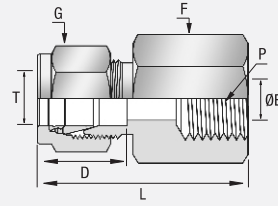
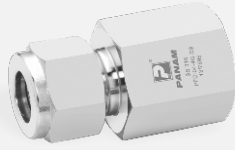
Female Connector



Metric Tube x ISO Tapered Threads

Part No	Tube O. D. T mm	P BSPT	E * Min	Width Across Flat		D	L
				F mm	G mm		
PFC-M03-2R-SS	3	1/8	2.40	14	12	12.90	28.70
PFC-M03-4R-SS	3	1/4	2.40	19	12	12.90	33.50
PFC-M04-2R-SS	4	1/8	2.40	14	12	13.70	29.70
PFC-M06-2R-SS	6	1/8	4.20	14	14	15.50	31.30
PFC-M06-4R-SS	6	1/4	4.20	19	14	15.50	40.30
PFC-M06-6R-SS	6	1/8	4.20	22	14	15.50	40.30
PFC-M06-8R-SS	6	1/2	4.20	27	14	15.50	42.50
PFC-M08-2R-SS	8	1/8	6.40	15	16	16.20	32.10
PFC-M08-4R-SS	8	1/4	6.40	19	16	16.20	37.00
PFC-M08-6R-SS	8	3/8	6.40	22	16	16.30	38.65
PFC-M08-8R-SS	8	1/2	6.40	27	16	16.20	43.30
PFC-M10-2R-SS	10	1/8	7.90	18	19	17.20	33.00
PFC-M10-4R-SS	10	1/4	7.10	19	19	18.10	40.60
PFC-M10-6R-SS	10	3/8	7.10	22	19	18.10	40.13
PFC-M10-8R-SS	10	1/2	8.00	27	19	18.10	48.60
PFC-M12-2R-SS	12	1/8	8.30	22	22	22.80	38.50
PFC-M12-4R-SS	12	1/4	9.50	22	22	22.30	42.50
PFC-M12-6R-SS	12	3/8	9.50	22	22	22.30	42.50
PFC-M12-8R-SS	12	1/2	9.50	27	22	22.30	50.30
PFC-M12-12R-SS	12	3/4	9.50	35	22	22.80	54.28
PFC-M15-8R-SS	15	1/2	11.90	27	25	24.40	50.90
PFC-M16-8R-SS	16	1/2	12.70	27	25	24.40	46.90
PFC-M20-8R-SS	20	1/2	15.90	30	32	26.00	47.90
PFC-M20-12R-SS	20	3/4	15.90	35	32	26.00	49.70
PFC-M22-12R-SS	22	3/4	18.30	35	32	26.00	49.70
PFC-M22-16R-SS	22	1	18.30	41	32	26.00	57.90
PFC-M25-12R-SS	25	3/4	22.80	35	38	31.30	53.40
PFC-M25-16R-SS	25	1	22.80	41	38	31.30	62.30

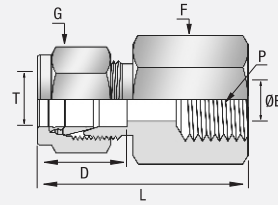
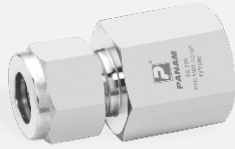
Female Connector



Imperial Tube x ISO Parallel Threads

Part No	Tube O. D. T in	P BSPP	E * Min	Width Across Flat		D	L
				F in	G in		
PFC-02-4G-SS	1/8	1/4	2.30	3/4	7/16	12.70	35.30
PFC-04-2G-SS	1/4	1/8	4.00	9/16	9/16	15.24	32.40
PFC-04-4G-SS	1/4	1/4	4.80	3/4	9/16	15.24	37.60
PFC-04-6G-SS	1/4	3/8	4.80	15/16	9/16	15.24	37.60
PFC-04-8G-SS	1/4	1/2	4.80	1-1/16	9/16	15.24	43.40
PFC-05-4G-SS	5/16	1/4	5.50	3/4	5/8	16.25	38.40
PFC-05-8G-SS	5/16	1/2	7.00	1-1/16	5/8	16.25	40.90
PFC-06-4G-SS	3/8	1/4	5.50	3/4	11/16	17.10	39.10
PFC-06-6G-SS	3/8	3/8	6.60	15/16	11/16	17.10	38.60
PFC-06-8G-SS	3/8	1/2	7.00	1-1/16	11/16	17.10	41.90
PFC-08-6G-SS	1/2	3/8	6.50	15/16	7/8	22.80	44.50
PFC-08-8G-SS	1/2	1/2	7.00	1-1/16	7/8	22.80	48.20

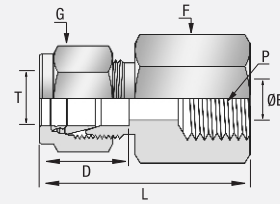
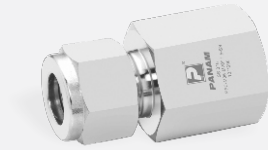
Female Connector



Metric Tube x ISO Parallel Threads

Part No	Tube O. D. T mm	P BSPP	E * Min	Width Across Flat		D	L
				F in	G in		
PFC-M03-4G-SS	3	1/4	2.40	19	12	12.90	35.30
PFC-M06-2G-SS	6	1/8	4.00	14	14	15.50	32.40
PFC-M06-4G-SS	6	1/4	4.20	19	14	15.50	37.60
PFC-M06-6G-SS	6	3/8	4.20	24	14	15.50	37.60
PFC-M06-8G-SS	6	1/2	4.20	27	14	15.50	43.50
PFC-M08-4G-SS	8	1/4	5.50	19	16	16.20	38.50
PFC-M08-6G-SS	8	3/8	6.40	24	16	16.20	36.20
PFC-M08-8G-SS	8	1/2	7.00	27	16	16.20	41.00
PFC-M10-4G-SS	10	1/4	5.50	19	19	17.20	39.40
PFC-M10-6G-SS	10	3/8	6.50	24	19	17.20	38.80
PFC-M10-8G-SS	10	1/2	7.00	27	19	17.20	42.10
PFC-M12-4G-SS	12	1/4	5.50	22	22	22.80	41.90
PFC-M12-6G-SS	12	3/8	6.50	24	22	22.80	44.40
PFC-M12-8G-SS	12	1/2	7.00	27	22	22.80	48.20
PFC-M20-8G-SS	20	1/2	7.00	30	32	26.00	54.30
PFC-M22-8G-SS	22	1/2	7.00	30	32	26.00	54.30

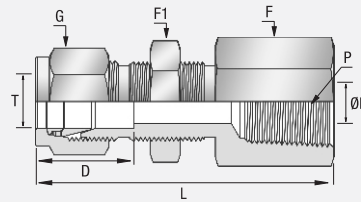
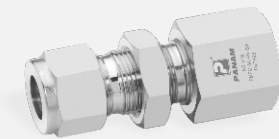
Female Connector



Metric Tube x Metric Threads

Part No	Tube O. D. T mm	P METRIC	E * Min	Width Across Flat		D	L
				F mm	G mm		
PFC-M06-M20*1.5-SS	6	M20*1.5	4.20	27	14	16.00	46.20
PFC-M08-M20*1.5-SS	8	M20*1.5	7.00	27	16	16.30	46.60
PFC-M10-M20*1.5-SS	10	M20*1.5	7.00	27	19	18.10	48.30
PFC-M12-M20*1.5-SS	12	M20*1.5	7.00	27	22	23.30	50.20
PFC-M14-M20*1.5-SS	14	M20*1.5	7.00	27	25	23.60	50.30
PFC-M15-M20*1.5-SS	15	M20*1.5	7.00	27	25	24.40	50.30
PFC-M16-M20*1.5-SS	16	M20*1.5	7.00	27	25	24.40	50.30
PFC-M18-M20*1.5-SS	18	M20*1.5	7.00	28	30	22.60	50.30
PFC-M20-M20*1.5-SS	20	M20*1.5	7.00	30	32	26.00	51.20

Bulkhead Female Connector



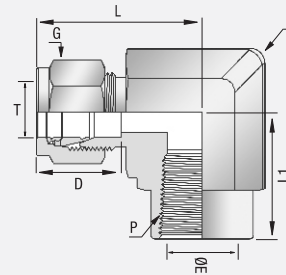
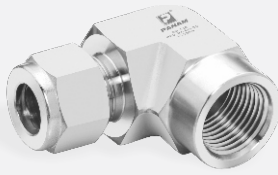
Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P* NPT	E * Min	Width Across Flat			D	L	Panel Hole Drill Size	Panel Max. Thickness
				F in	G in	F1 in				
PBFC-02-2N-SS	1/8	1/8	2.28	9/16	7/16	1/2	14.80	44.70	8.33	12.70
PBFC-04-2N-SS	1/4	1/8	4.80	5/8	9/16	5/8	15.30	46.90	11.50	10.16
PBFC-04-4N-SS	1/4	1/4	4.80	3/4	9/16	5/8	15.30	53.76	11.50	10.16
PBFC-06-4N-SS	3/8	1/4	7.10	3/4	11/16	3/4	17.10	56.50	14.68	11.17
PBFC-08-6N-SS	1/2	3/8	10.40	15/16	7/8	15/16	22.86	61.76	19.44	12.70
PBFC-08-8N-SS	1/2	1/2	10.40	1-1/16	7/8	15/16	22.80	70.80	19.44	12.70
PBFC-12-12N-SS	3/4	3/4	15.00	1-1/4	1-1/8	1-3/16	22.60	74.40	25.79	16.76
PBFC-16-16N-SS	1	1	22.35	1-5/8	1-1/2	1-5/8	31.24	95.55	33.73	19.05
PBFC-20-20N-SS	1-1/4	1-1/4	27.68	1-7/8	1-7/8	1-7/8	41.14	105.59	41.67	19.05
PBFC-24-24N-SS	1-1/2	1-1/2	33.90	1-1/4	2-1/4	2-1/4	50.03	114.57	49.61	19.05
PBFC-32-32N-SS	2	2	45.97	1-3/4	3	2-3/4	67.56	132.63	57.94	19.05

Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P* NPT	E * Min	Width Across Flat			D	L	Panel Hole Drill Size	Panel Max. Thickness
				F mm	G mm	F1 mm				
PBFC-M06-2N-SS	6	1/8	4.20	16	14	16	15.30	46.90	11.50	10.20
PBFC-M06-4N-SS	6	1/4	4.20	19	14	16	15.30	53.76	11.50	10.20
PBFC-M08-4N-SS	8	1/4	6.30	19	16	17	16.20	53.76	13.10	11.20
PBFC-M12-8N-SS	12	1/2	9.50	27	22	24	22.80	70.80	19.50	12.70

Female Elbow



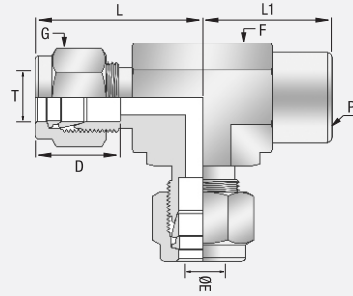
Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E * Min	Width Across Flat		D	L1	L
				F in	G in			
PFE-02-2N-SS	1/8	1/8	2.20	1/2	7/16	12.70	19.05	24.63
PFE-02-4N-SS	1/8	1/4	2.20	11/16	7/16	12.70	22.35	27.82
PFE-03-2N-SS	3/16	1/8	3.04	1/2	1/2	13.71	19.05	25.40
PFE-04-2N-SS	1/4	1/8	4.80	1/2	9/16	15.24	19.05	26.92
PFE-04-4N-SS	1/4	1/4	4.80	3/4	9/16	15.30	26.00	33.50
PFE-04-6N-SS	1/4	3/8	4.80	15/16	9/16	15.30	22.35	31.75
PFE-04-8N-SS	1/4	1/2	4.80	1-1/8	9/16	15.30	30.00	37.50
PFE-05-2N-SS	5/16	1/8	6.35	9/16	5/8	16.25	19.05	28.70
PFE-05-4N-SS	5/16	1/4	6.35	3/4	5/8	16.25	22.35	30.48
PFE-06-2N-SS	3/8	1/8	7.11	5/8	11/16	16.76	19.05	30.48
PFE-06-4N-SS	3/8	1/4	7.11	3/4	11/16	17.10	26.00	34.00
PFE-06-6N-SS	3/8	3/8	7.11	15/16	11/16	17.10	30.50	37.90
PFE-06-8N-SS	3/8	1/2	7.11	1-1/8	11/16	17.10	31.50	38.60
PFE-08-4N-SS	1/2	1/4	10.40	13/16	7/8	22.80	27.50	37.70
PFE-08-6N-SS	1/2	3/8	10.40	15/16	7/8	22.80	30.50	41.70
PFE-08-8N-SS	1/2	1/2	10.40	1-1/8	7/8	22.80	31.50	42.20
PFE-10-6N-SS	5/8	3/8	12.70	15/16	1	24.38	20.35	38.10
PFE-10-8N-SS	5/8	1/2	12.70	1-1/8	1	24.38	28.44	39.87
PFE-12-8N-SS	3/4	1/2	15.00	1-1/8	1-1/8	24.38	28.44	39.87
PFE-12-12N-SS	3/4	3/4	15.00	1-1/4	1-1/8	24.38	31.75	44.70
PFE-14-12N-SS	7/8	3/4	18.28	1-1/4	1-1/4	25.90	31.75	44.70
PFE-16-12N-SS	1	3/4	22.35	1-27/64	1-1/2	31.24	31.75	49.02
PFE-16-16N-SS	1	1	22.35	1-11/16	1-1/2	31.24	38.10	50.29

Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E * Min	Width Across Flat		D	L1	L
				F mm	G mm			
PFE-M06-4N-SS	6	1/4	4.20	19	14	15.50	26.50	33.23
PFE-M06-6N-SS	6	3/8	4.20	24	14	15.30	22.40	29.80
PFE-M06-8N-SS	6	1/2	4.20	28	14	15.30	28.40	34.60
PFE-M08-4N-SS	8	1/4	6.40	19	16	16.20	22.40	30.60
PFE-M08-8N-SS	8	1/2	6.40	28	16	16.20	28.40	35.20
PFE-M10-4N-SS	10	1/4	7.90	19	19	18.10	27.00	33.15
PFE-M10-6N-SS	10	3/8	7.90	24	19	18.10	30.50	39.43
PFE-M10-8N-SS	10	1/2	7.90	28	19	18.10	32.00	40.63
PFE-M12-6N-SS	12	3/8	9.50	24	22	22.30	30.50	41.08
PFE-M12-8N-SS	12	1/2	9.50	28	22	22.30	30.70	41.98
PFE-M16-8N-SS	16	1/2	12.70	27	25	24.40	28.40	39.50

Female Run Tee



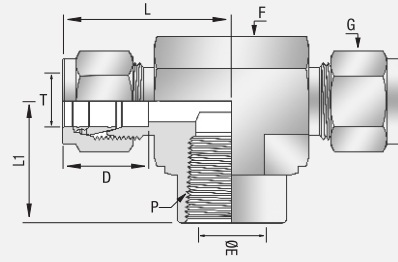
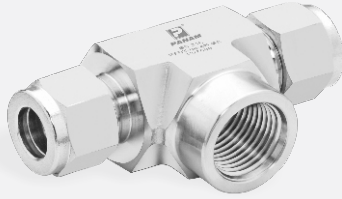
Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E * Min	Width Across Flat		D	L	L1
				F in	G in			
PFRT-02-2N-SS	1/8	1/8	2.28	1/2	7/16	12.70	24.60	19.00
PFRT-04-2N-SS	1/4	1/8	4.82	1/2	9/16	15.20	32.70	20.50
PFRT-04-4N-SS	1/4	1/4	4.80	3/4	9/16	15.30	33.00	25.50
PFRT-06-4N-SS	3/8	1/4	7.11	3/4	11/16	17.10	33.40	26.00
PFRT-08-6N-SS	1/2	3/8	10.40	15/16	7/8	22.80	36.00	22.30
PFRT-08-8N-SS	1/2	1/2	10.40	1-1/8	7/8	22.80	41.50	30.50
PFRT-12-12N-SS	3/4	3/4	15.00	1-1/4	1-1/8	24.30	50.40	39.50
PFRT-16-12N-SS	1	3/4	22.35	1-3/8	1-1/2	38.70	49.00	31.70
PFRT-16-12N-SS	1	1	22.35	1-1/16	1-1/2	38.70	50.20	38.10

Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E * Min	Width Across Flat		D	L	L1
				F mm	G mm			
PFRT-M06-2N-SS	6	1/8	4.80	13	14	15.30	27.00	19.00
PFRT-M06-4N-SS	6	1/4	4.80	19	14	15.30	29.80	22.40
PFRT-M06-8N-SS	6	1/2	4.80	28	14	15.30	34.60	28.40
PFRT-M08-2N-SS	8	1/8	6.40	16	16	16.20	29.90	19.00
PFRT-M08-4N-SS	8	1/4	6.40	19	16	16.20	30.60	22.40
PFRT-M08-6N-SS	8	3/8	6.40	24	16	16.20	32.70	22.40
PFRT-M08-8N-SS	8	1/2	6.40	28	16	16.20	35.50	28.40
PFRT-M12-4N-SS	12	1/4	9.50	20	22	22.80	36.00	22.40
PFRT-M12-6N-SS	12	3/8	9.50	24	22	22.80	36.00	22.40
PFRT-M12-8N-SS	12	1/2	9.50	28	22	22.80	39.80	28.40
PFRT-M16-8N-SS	16	1/2	12.70	28	25	24.40	39.80	28.40

Female Branch Tee



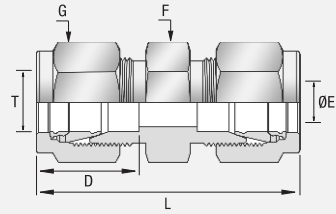
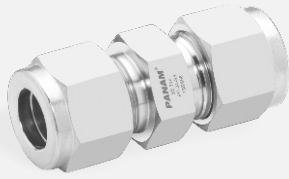
Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E * Min	Width Across Flat		D	L	L1
				F in	G in			
PFBT-02-2N-SS	1/8	1/8	2.28	1/2	7/16	12.70	24.30	19.00
PFBT-04-2N-SS	1/4	1/8	4.80	5/8	9/16	15.30	28.50	20.00
PFBT-04-4N-SS	1/4	1/4	4.80	3/4	9/16	15.30	33.30	25.70
PFBT-06-4N-SS	3/8	1/4	7.10	3/4	11/16	17.10	33.20	25.00
PFBT-06-6N-SS	3/8	3/8	7.10	15/16	11/16	17.10	35.70	28.80
PFBT-06-8N-SS	3/8	1/2	7.10	1-1/8	11/16	17.10	37.00	30.70
PFBT-06-12N-SS	3/8	3/4	7.10	1-3/8	11/16	17.10	46.00	39.00
PFBT-08-4N-SS	1/2	1/4	10.40	13/16	7/8	22.80	37.20	26.00
PFBT-08-6N-SS	1/2	3/8	10.40	1	7/8	22.80	39.20	28.00
PFBT-08-8N-SS	1/2	1/2	10.40	1-1/8	7/8	22.80	41.90	30.70
PFBT-10-8N-SS	5/8	1/2	12.70	1-1/8	1-1/8	24.30	41.80	30.70
PFBT-12-12N-SS	3/4	3/4	15.00	1-1/4	1-1/8	24.30	44.70	31.70
PFBT-16-12N-SS	1	3/4	22.35	1-27/64	1-1/2	31.20	49.00	31.70
PFBT-16-16N-SS	1	1	22.35	1-11/16	1-1/2	31.20	53.50	38.10

Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E * Min	Width Across Flat		D	L	L1
				F mm	G mm			
PFBT-M06-2N-SS	6	1/8	4.80	13	14	15.30	27.00	19.00
PFBT-M06-4N-SS	6	1/4	4.20	19	14	15.50	33.20	25.50
PFBT-M06-6N-SS	6	3/8	4.80	24	14	15.30	31.70	22.40
PFBT-M06-8N-SS	6	1/2	4.80	28	14	15.30	34.70	28.40
PFBT-M08-2N-SS	8	1/8	6.40	16	16	16.20	29.90	19.00
PFBT-M08-4N-SS	8	1/4	6.40	19	16	16.20	30.60	22.40
PFBT-M08-6N-SS	8	3/8	6.40	24	16	16.20	32.40	22.40
PFBT-M08-8N-SS	8	1/2	6.40	28	16	16.20	35.20	28.40
PFBT-M10-4N-SS	10	1/4	7.90	19	19	17.20	33.50	22.40
PFBT-M10-6N-SS	10	3/8	7.90	24	19	17.20	33.30	22.40
PFBT-M10-8N-SS	10	1/2	9.50	28	19	17.20	33.60	22.40
PFBT-M12-4N-SS	12	1/4	9.50	20	22	22.30	36.50	26.00
PFBT-M12-6N-SS	12	3/8	9.50	24	22	22.80	36.00	22.40
PFBT-M12-8N-SS	12	1/2	9.50	28	22	22.30	41.00	30.50
PFBT-M16-8N-SS	16	1/2	12.70	28	25	24.40	38.80	28.70

Union



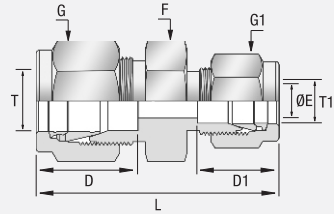
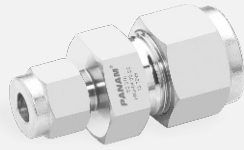
Imperial Tube

Part No	Tube O. D. T in	E * Min	Width Across Flat		D	L
			F in	G in		
PU-01-SS	1/16	1.27	5/16	5/16	8.63	25.15
PU-02-SS	1/8	2.28	7/16	7/16	12.70	35.56
PU-03-SS	3/16	3.04	7/16	1/2	13.71	37.33
PU-04-SS	1/4	4.80	1/2	9/16	15.30	42.50
PU-05-SS	5/16	6.35	9/16	5/8	16.25	42.92
PU-06-SS	3/8	7.10	5/8	11/16	17.10	46.70
PU-08-SS	1/2	10.40	7/8	7/8	22.80	52.40
PU-10-SS	5/8	12.70	15/16	1	24.38	52.10
PU-12-SS	3/4	15.00	1-1/16	1-1/8	24.38	56.00
PU-14-SS	7/8	18.28	1-3/16	1-1/4	25.90	57.30
PU-16-SS	1	22.35	1-3/8	1-1/2	31.24	63.30
PU-20-SS	1-1/4	27.60	1-3/4	1-7/8	41.10	92.20
PU-24-SS	1-1/2	34.00	2-1/8	2-1/4	50.00	107.95
PU-32-SS	2	45.97	2-3/4	3	67.56	149.35

Metric Tube

Part No	Tube O. D. T mm	E * Min	Width Across Flat		D	L
			F mm	G mm		
PU-M02-SS	2	1.70	12	12	12.90	35.60
PU-M03-SS	3	2.40	12	12	12.90	35.30
PU-M04-SS	4	2.40	12	12	13.70	37.30
PU-M06-SS	6	4.20	14	14	15.50	43.50
PU-M08-SS	8	6.40	15	16	16.20	44.60
PU-M10-SS	10	7.90	18	19	18.10	49.30
PU-M12-SS	12	9.50	22	22	22.30	52.50
PU-M15-SS	15	11.90	24	25	24.40	53.60
PU-M20-SS	20	15.90	30	32	26.00	55.00
PU-M22-SS	22	18.30	30	32	26.00	55.00
PU-M25-SS	25	22.80	35	38	31.30	65.00
PU-M28-SS	28	22.80	41	46	36.60	85.00
PU-M30-SS	30	26.20	46	50	39.70	92.90
PU-M32-SS	32	28.60	46	50	42.00	97.30
PU-M35-SS	35	31.50	50	55	42.10	97.60
PU-M38-SS	38	33.70	55	60	49.40	113.60
PU-M42-SS	42	36.80	60	65	49.30	113.40
PU-M50-SS	50	45.20	70	76	67.20	149.00

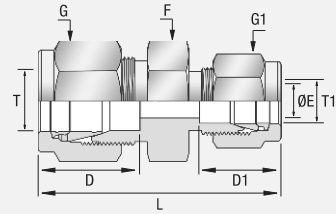
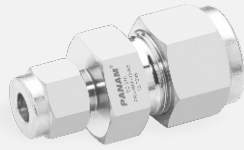
Reducing Union



Imperial Tube

Part No	Tube O. D.		E * Min	Width Across Flat			D	D1	L
	T	T1		F	G	G1			
	in	in		in	in	in			
PRU-02-01-SS	1/8	1/16	1.30	7/16	7/16	5/16	12.70	8.63	30.91
PRU-03-02-SS	3/16	1/8	2.30	7/16	1/2	7/16	13.71	12.70	36.57
PRU-04-02-SS	1/4	1/8	2.20	1/2	9/16	7/16	15.30	14.80	35.50
PRU-04-03-SS	1/4	3/16	3.00	1/2	9/16	1/2	15.24	13.71	39.37
PRU-05-02-SS	5/16	1/8	2.30	9/16	5/8	7/16	16.25	12.70	39.87
PRU-05-04-SS	5/16	1/4	4.80	9/16	5/8	9/16	16.25	15.24	42.16
PRU-06-02-SS	3/8	1/8	2.30	5/8	11/16	7/16	16.76	12.70	42.38
PRU-06-04-SS	3/8	1/4	4.80	5/8	11/16	9/16	17.10	15.30	44.00
PRU-06-05-SS	3/8	5/16	6.40	5/8	11/16	5/8	16.76	16.25	44.19
PRU-08-02-SS	1/2	1/8	2.30	7/8	7/8	7/16	22.86	12.70	46.40
PRU-08-04-SS	1/2	1/4	4.80	7/8	7/8	9/16	22.86	15.24	46.99
PRU-08-06-SS	1/2	3/8	7.10	7/8	7/8	11/16	22.80	17.10	50.00
PRU-10-06-SS	5/8	3/8	7.10	15/16	1	11/16	24.38	16.76	49.80
PRU-10-08-SS	5/8	1/2	10.40	15/16	1	7/8	24.38	22.86	53.58
PRU-12-04-SS	3/4	1/4	4.80	1-1/16	1-1/8	9/16	24.38	15.24	49.27
PRU-12-06-SS	3/4	3/8	7.10	1-1/16	1-1/8	11/16	24.38	16.76	50.80
PRU-12-08-SS	3/4	1/2	10.40	1-1/16	1-1/8	7/8	24.38	22.86	55.50
PRU-12-10-SS	3/4	5/8	12.70	1-1/16	1-1/8	1	24.38	24.38	55.30
PRU-16-08-SS	1	1/2	10.40	1-3/8	1-1/2	7/8	31.24	22.86	64.40
PRU-16-12-SS	1	3/4	15.00	1-3/8	1-1/2	1-1/8	31.24	24.38	65.15

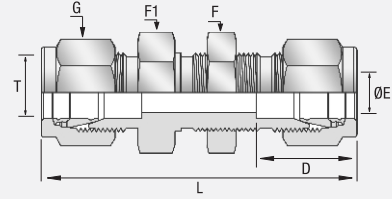
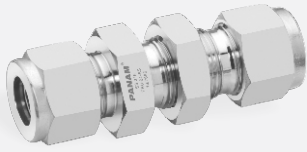
Reducing Union



Metric Tube

Part No	Tube O. D.		E * Min	Width Across Flat			D	D1	L
	T	T1		F	G	G1			
	mm	mm		mm	mm	mm			
PRU-M06-M03-SS	6	3	2.40	14	14	12	15.30	12.90	38.60
PRU-M06-M04-SS	6	4	2.40	14	14	12	15.30	13.70	39.40
PRU-M08-M06-SS	8	6	4.20	16	16	14	16.20	15.30	42.30
PRU-M10-M06-SS	10	6	4.80	18	19	14	17.20	15.30	44.50
PRU-M10-M08-SS	10	8	6.40	18	19	16	17.20	16.20	45.10
PRU-M12-M06-SS	12	6	4.20	22	22	14	22.80	15.30	47.00
PRU-M12-M08-SS	12	8	6.40	22	22	16	22.80	16.20	47.80
PRU-M12-M10-SS	12	10	7.90	22	22	19	22.80	17.20	48.70
PRU-M16-M12-SS	16	12	9.50	24	25	22	24.40	22.80	52.00
PRU-M25-M18-SS	25	18	15.10	35	38	30	31.30	24.40	61.00
PRU-M25-M20-SS	25	20	15.90	35	38	32	31.30	26.00	62.30
PRU-M30-M18-SS	30	18	15.10	46	50	30	39.70	24.40	75.40
PRU-M30-M20-SS	30	20	15.90	46	50	32	39.70	26.00	75.40
PRU-M30-M25-SS	30	25	22.80	46	50	38	39.70	31.30	80.10
PRU-M32-M18-SS	32	18	15.10	46	50	30	42.00	24.40	77.80
PRU-M32-M20-SS	32	20	15.90	46	50	32	42.00	26.00	77.80
PRU-M32-M25-SS	32	25	22.80	46	50	38	42.00	31.30	82.30
PRU-M38-M20-SS	38	20	15.90	55	60	32	49.40	26.00	87.50
PRU-M38-M25-SS	38	25	22.80	55	60	38	49.40	31.30	92.00
PRU-M38-M30-SS	38	30	26.20	55	60	50	49.40	39.70	104.60

Bulkhead Union



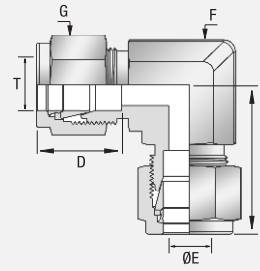
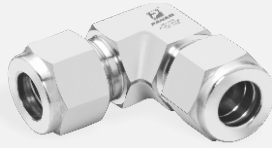
Imperial Tube

Part No	Tube O. D. T in.	E * Min	Width Across Flat			D	L	Panel Hole Drill Size	Panel Max. Thickness
			F in	G in	F1 in				
PBU-01-SS	1/16	1.27	5/16	5/16	5/16	8.63	31.50	5.16	3.05
PBU-02-SS	1/8	2.28	1/2	7/16	1/2	12.70	51.30	8.33	12.70
PBU-03-SS	3/16	3.04	9/16	1/2	9/16	13.71	53.59	9.92	12.70
PBU-04-SS	1/4	4.80	5/8	9/16	5/8	15.30	58.50	11.50	10.16
PBU-05-SS	5/16	6.35	11/16	5/8	11/16	16.25	60.70	13.09	11.17
PBU-06-SS	3/8	7.10	3/4	11/16	3/4	17.10	63.00	14.65	11.17
PBU-08-SS	1/2	10.40	1	7/8	1	22.80	75.00	19.44	12.70
PBU-10-SS	5/8	12.70	1-1/16	1	1-1/16	24.38	72.64	22.62	12.70
PBU-12-SS	3/4	15.00	1-3/16	1-1/8	1-3/16	24.38	78.99	25.79	16.76
PBU-14-SS	7/8	18.28	1-3/8	1-1/4	1-3/8	25.90	84.58	28.97	19.05
PBU-16-SS	1	22.35	1-5/8	1-1/2	1-5/8	31.24	95.75	33.73	19.05
PBU-20-SS	1-1/4	27.68	1-7/8	1-7/8	1-7/8	41.40	123.19	41.67	19.05
PBU-24-SS	1-1/2	34.00	2-1/4	2-1/4	2-1/4	50.00	139.19	49.61	19.05
PBU-32-SS	2	45.90	2-3/4	3	2-3/4	67.56	180.34	67.07	19.05

Metric Tube

Part No	Tube O. D. T mm	E * Min	Width Across Flat			D	L	Panel Hole Drill Size	Panel Max. Thickness
			F mm	G mm	F1 mm				
PBU-M03-SS	3	2.40	14	12	12	12.90	51.30	8.30	12.70
PBU-M04-SS	4	2.40	14	12	14	13.70	53.60	9.90	12.70
PBU-M06-SS	6	4.20	16	14	16	15.50	59.00	11.50	10.20
PBU-M08-SS	8	6.40	16	16	17	16.20	61.00	13.10	11.20
PBU-M10-SS	10	7.10	22	19	22	18.10	63.50	16.20	11.20
PBU-M12-SS	12	7.10	25	22	25	22.30	74.00	19.50	12.70
PBU-M15-SS	15	11.90	27	25	27	24.40	72.50	22.80	12.70
PBU-M16-SS	16	12.70	27	25	27	24.40	72.50	22.80	12.70
PBU-M18-SS	18	15.10	30	30	30	24.40	78.90	26.00	16.80
PBU-M20-SS	20	15.90	35	32	35	26.00	84.50	29.00	17.00
PBU-M22-SS	22	18.30	35	32	35	26.00	84.50	29.00	19.10
PBU-M25-SS	25	22.80	41	38	41	31.30	95.90	33.70	19.10
PBU-M32-SS	32	28.60	50	50	50	42.00	128.30	42.50	19.00
PBU-M38-SS	38	33.70	60	60	60	49.40	144.60	50.50	19.00

Union Elbow



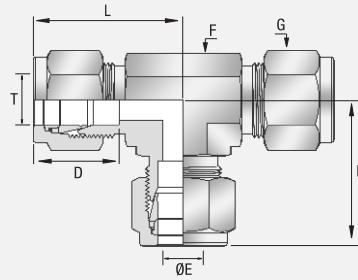
Imperial Tube

Part No	Tube O. D. T in	E * Min	Width Across Flat		D	L
			F in	G in		
PUE-01-SS	1/16	1.27	3/8	5/16	8.63	17.88
PUE-02-SS	1/8	2.28	3/8	7/16	12.70	22.35
PUE-03-SS	3/16	3.04	1/2	1/2	13.71	24.38
PUE-04-SS	1/4	4.80	1/2	9/16	15.30	27.00
PUE-05-SS	5/16	6.35	9/16	5/8	16.25	28.70
PUE-06-SS	3/8	7.10	5/8	11/16	17.10	30.00
PUE-08-SS	1/2	10.40	13/16	7/8	22.80	38.20
PUE-10-SS	5/8	12.70	15/16	1	24.38	38.80
PUE-12-SS	3/4	15.00	1-1/8	1-1/8	24.38	41.00
PUE-14-SS	7/8	18.28	1-1/4	1-1/4	25.90	44.70
PUE-16-SS	1	22.35	1-3/8	1-1/2	31.24	49.02
PUE-20-SS	1-1/4	27.68	1-11/16	1-7/8	41.10	66.54
PUE-24-SS	1-1/2	34.03	2	2-1/4	50.00	77.97
PUE-32-SS	2	45.97	2-3/4	3	67.56	107.18

Metric Tube

Part No	Tube O. D. T mm	E * Min	Width Across Flat		D	L
			F mm	G mm		
PUE-M02-SS	2	1.70	9	12	12.90	22.30
PUE-M03-SS	3	2.40	9	12	12.90	22.30
PUE-M04-SS	4	2.40	12	12	13.70	25.40
PUE-M06-SS	6	4.20	14	14	15.30	27.35
PUE-M08-SS	8	6.40	16	16	16.20	31.29
PUE-M10-SS	10	8.00	18	19	18.10	34.50
PUE-M12-SS	12	9.50	20	22	22.80	37.67
PUE-M15-SS	15	11.90	25	25	24.40	38.80
PUE-M16-SS	16	12.70	25	25	24.40	38.80
PUE-M18-SS	18	15.10	27	30	24.40	39.80
PUE-M20-SS	20	15.90	31	32	26.00	42.60
PUE-M22-SS	22	18.30	31	32	26.00	42.60
PUE-M25-SS	25	22.80	36	38	31.30	49.10
PUE-M28-SS	28	22.80	41	46	36.60	64.00
PUE-M32-SS	32	28.60	46	50	42.00	72.30
PUE-M38-SS	38	33.70	50	60	49.40	84.00
PUE-M42-SS	42	36.80	60	65	49.30	82.50
PUE-M50-SS	50	45.20	70	76	67.20	107.00

Union Tee



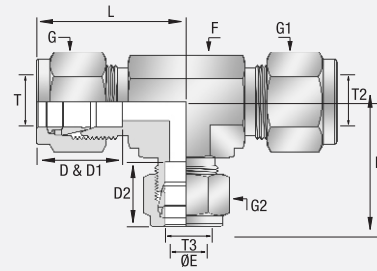
Imperial Tube

Part No	Tube O. D. T in	E * Min	Width Across Flat		D	L
			F in	G in		
PUT-01-SS	1/16	1.27	3/8	5/16	8.63	17.88
PUT-02-SS	1/8	2.28	1/2	7/16	12.70	28.70
PUT-03-SS	3/16	3.04	1/2	1/2	13.71	24.38
PUT-04-SS	1/4	4.8	1/2	9/16	15.30	27.50
PUT-05-SS	5/16	6.35	9/16	5/8	16.25	28.70
PUT-06-SS	3/8	7.10	5/8	11/16	16.50	28.50
PUT-08-SS	1/2	10.40	13/16	7/8	24.10	36.00
PUT-10-SS	5/8	12.70	15/16	1	25.27	39.70
PUT-12-SS	3/4	15.00	1-1/8	1-1/8	25.10	41.70
PUT-14-SS	7/8	18.28	1-1/4	1-1/4	25.90	44.70
PUT-16-SS	1	22.35	1-27/64	1-1/2	31.24	53.43
PUT-20-SS	1-1/4	27.60	1-11/16	1-7/8	41.14	66.54
PUT-24-SS	1-1/2	34.00	2	2-1/4	50.00	77.97
PUT-32-SS	2	45.97	2-3/4	3	67.56	107.18

Metric Tube

Part No	Tube O. D. T mm	E * Min	Width Across Flat		D	L
			F mm	G mm		
PUT-M02-SS	2	1.70	9	12	12.90	22.30
PUT-M03-SS	3	2.40	13	12	12.90	22.30
PUT-M04-SS	4	2.40	13	12	14.00	27.36
PUT-M06-SS	6	4.20	13	14	16.00	27.34
PUT-M08-SS	8	6.00	16	16	16.30	29.15
PUT-M10-SS	10	8.00	18	19	18.10	32.60
PUT-M12-SS	12	9.50	21	22	23.30	35.80
PUT-M14-SS	14	12.00	25	25	23.60	37.00
PUT-M15-SS	15	11.90	21	25	24.40	38.80
PUT-M16-SS	16	12.70	24	25	24.40	38.80
PUT-M18-SS	18	15.00	28	30	22.60	41.34
PUT-M20-SS	20	15.90	32	32	26.00	42.60
PUT-M22-SS	22	18.30	32	32	26.00	42.60
PUT-M25-SS	25	22.80	36	38	31.30	49.10
PUT-M28-SS	28	22.80	41	46	36.60	82.50
PUT-M32-SS	32	28.60	46	50	42.00	72.30
PUT-M38-SS	38	33.70	51	60	49.40	84.00
PUT-M42-SS	42	36.80	60	65	49.30	82.50
PUT-M50-SS	50	45.20	70	76	67.20	107.00

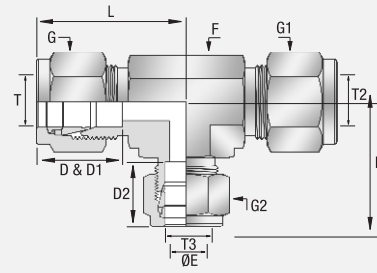
Reducing Union Tee



Imperial Tube

Part No	Tube OD. T in	Tube OD. T1 in	Tube OD. T2 in	E * Min	Width Across Flat				D	D1	D2	L	L1	L2
					F in	G in	G1 in	G2 in						
PRUT-04-04-02-SS	1/4	1/4	1/8	2.20	1/2	9/16	9/16	7/16	15.30	15.30	12.70	26.91	26.91	24.50
PRUT-04-04-06-SS	1/4	1/4	3/8	4.80	5/8	9/16	9/16	11/16	15.30	15.30	17.10	29.28	29.28	30.46
PRUT-04-08-08-SS	1/4	1/2	1/2	4.80	13/16	9/16	7/8	7/8	15.30	22.80	22.80	31.76	36.00	36.00
PRUT-06-04-06-SS	3/8	1/4	3/8	4.80	5/8	11/16	9/16	11/16	17.10	15.30	17.10	28.50	28.50	29.50
PRUT-06-06-04-SS	3/8	3/8	1/4	7.10	5/8	11/16	11/16	9/16	17.10	17.10	15.30	28.50	28.50	29.50
PRUT-06-06-08-SS	1/2	3/8	1/2	7.10	13/16	11/16	11/16	7/8	17.10	17.10	22.80	33.26	33.26	36.00
PRUT-08-04-06-SS	1/2	1/4	3/8	4.80	13/16	7/8	9/16	11/16	22.80	15.30	17.10	36.00	33.26	33.26
PRUT-08-04-08-SS	1/2	1/4	1/2	4.80	13/16	7/8	9/16	7/8	22.80	15.30	22.80	36.00	31.76	36.00
PRUT-08-06-06-SS	1/2	3/8	3/8	7.10	13/16	7/8	11/16	11/16	22.80	17.10	17.10	36.00	33.26	33.26
PRUT-08-08-04-SS	1/2	1/2	1/4	10.40	13/16	7/8	7/8	9/16	22.80	22.80	15.30	36.00	36.00	31.76
PRUT-08-08-06-SS	1/2	1/2	3/8	10.40	13/16	7/8	7/8	11/16	22.80	22.80	17.10	36.00	36.00	33.26
PRUT-10-10-06-SS	5/8	5/8	3/8	14.00	15/16	1	1	11/16	24.38	24.38	17.10	38.86	38.86	36.00
PRUT-12-08-12-SS	3/4	1/2	3/4	10.40	1-1/8	1-1/8	7/8	1-1/8	24.38	22.80	24.38	41.70	39.87	41.70
PRUT-12-12-04-SS	3/4	3/4	1/4	15.00	1-1/8	1-1/8	1-1/8	9/16	24.38	24.38	15.30	41.70	41.70	35.57
PRUT-12-12-06-SS	3/4	3/4	3/8	15.00	1-1/8	1-1/8	1-1/8	11/16	24.38	24.38	17.10	41.70	41.70	35.57
PRUT-12-12-08-SS	3/4	3/4	1/2	15.00	1-1/8	1-1/8	1-1/8	7/8	24.38	24.38	22.80	41.70	41.70	38.37
PRUT-12-12-16-SS	3/4	3/4	1	15.00	1-27/64	1-1/8	1-1/8	1-1/2	24.38	24.38	31.24	49.02	49.02	45.70
PRUT-12-12-20-SS	3/4	3/4	1-1/4	15.00	1-11/16	1-1/8	1-1/8	1-7/8	24.38	24.38	41.10	49.57	49.57	66.55
PRUT-14-14-08-SS	7/8	7/8	1/2	15.00	1-1/4	1-1/4	1-1/4	7/8	25.90	25.90	22.80	44.70	44.70	44.70
PRUT-16-12-12-SS	1	3/4	3/4	15.00	1-27/64	1-1/2	1-1/8	1-1/8	31.24	24.38	24.38	53.40	45.70	45.70
PRUT-16-16-04-SS	1	1	1/4	22.00	1-27/64	1-1/2	1-1/2	9/16	31.24	31.24	15.30	53.40	49.02	40.40
PRUT-16-16-06-SS	1	1	3/8	22.00	1-27/64	1-1/2	1-1/2	11/16	31.24	31.24	17.10	53.40	49.02	41.90
PRUT-16-16-08-SS	1	1	1/2	22.00	1-27/64	1-1/2	1-1/2	7/8	31.24	31.24	22.80	53.40	49.02	44.70
PRUT-16-16-12-SS	1	1	3/4	22.00	1-27/64	1-1/2	1-1/2	1-1/8	31.24	31.24	24.38	53.40	49.02	45.70
PRUT-20-12-12-SS	1-1/4	3/4	3/4	15.00	1-11/16	1-7/8	1-1/8	1-1/8	41.10	24.38	24.38	66.55	49.57	49.57
PRUT-20-20-12-SS	1-1/4	1-1/4	3/4	16.00	1-11/16	1-7/8	1-7/8	1-1/8	41.10	41.10	24.38	66.55	66.55	49.57
PRUT-24-20-20-SS	1-1/2	1-1/4	1-1/4	28.00	2	2-1/4	1-7/8	1-7/8	50.00	41.10	41.10	78.00	71.72	71.72
PRUT-24-24-08-SS	1-1/2	1-1/2	1/2	30.00	2	2-1/4	2-1/4	7/8	50.00	50.00	22.80	78.00	78.00	54.74
PRUT-24-24-12-SS	1-1/2	1-1/2	3/4	30.00	2	2-1/4	2-1/4	1-1/8	50.00	50.00	24.38	78.00	78.00	54.74
PRUT-24-24-16-SS	1-1/2	1-1/2	1	30.00	2	2-1/4	2-1/4	1-1/2	50.00	50.00	31.24	78.00	78.00	60.00

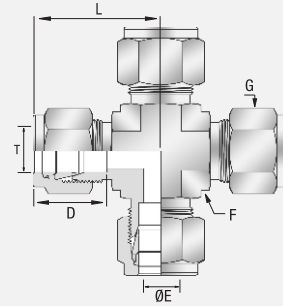
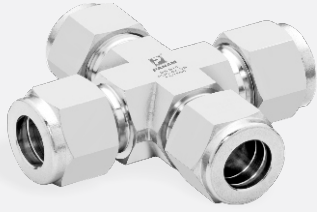
Reducing Union Tee



Metric Tube

Part No	Tube OD. T mm	Tube OD. T1 mm	Tube OD. T2 mm	E * Min	Width Across Flat				D	D1	D2	L	L1	L2
					F	G	G1	G2						
					mm	mm	mm	mm						
PRUT-M03-M03-M06-SS	3	3	6	2.20	12	12	12	14	12.90	12.90	16.00	24.60	24.60	27.36
PRUT-M08-M08-M06-SS	8	8	6	4.80	15	16	16	14	16.30	16.30	16.00	29.15	29.15	28.00
PRUT-M10-M10-M06-SS	10	10	6	4.80	17	19	19	14	18.00	18.00	16.00	32.60	32.60	29.80
PRUT-M10-M10-M12-SS	10	10	12	4.80	20	19	19	22	18.10	18.10	23.30	33.50	33.50	35.80
PRUT-M12-M06-M10-SS	12	6	10	7.10	20	22	14	19	23.30	16.00	18.10	35.80	31.80	33.50
PRUT-M12-M06-M12-SS	12	6	12	7.10	20	22	14	22	23.30	16.00	23.30	35.80	31.80	35.80
PRUT-M12-M10-M10-SS	12	10	10	4.80	20	22	19	19	23.30	18.10	18.10	35.80	33.50	33.50
PRUT-M12-M12-M10-SS	12	12	10	4.80	20	22	22	19	23.30	23.30	18.10	35.80	35.80	33.50
PRUT-M12-M12-M06-SS	12	12	6	7.10	20	22	22	14	23.30	23.30	16.00	35.80	35.80	31.80
PRUT-M15-M15-M12-SS	15	15	12	10.40	24	25	25	22	24.40	24.40	23.30	38.80	38.80	38.80
PRUT-M16-M16-M12-SS	16	16	12	10.40	24	25	25	22	24.40	24.40	23.30	38.80	38.80	33.80
PRUT-M18-M18-M12-SS	18	18	12	14.00	28	30	30	22	22.60	22.60	23.30	41.34	43.34	38.30
PRUT-M20-M12-M20-SS	20	12	20	10.40	31	32	22	32	26.00	23.30	26.00	42.60	42.60	42.60
PRUT-M20-M20-M06-SS	20	20	6	15.00	31	32	32	14	26.00	26.00	18.10	42.60	42.60	38.40
PRUT-M20-M20-M10-SS	20	20	10	15.00	31	32	32	19	26.00	26.00	18.10	42.60	42.60	40.10
PRUT-M20-M20-M12-SS	20	20	12	15.00	31	32	32	22	26.00	26.00	23.30	42.60	42.60	42.60
PRUT-M20-M20-M25-SS	20	20	25	15.00	36	32	32	38	26.00	26.00	31.30	44.40	44.40	49.10
PRUT-M20-M20-M32-SS	20	20	32	15.00	46	32	32	50	26.00	26.00	42.00	52.60	52.60	72.30
PRUT-M22-M22-M12-SS	22	22	12	15.00	31	32	32	22	26.00	26.00	23.30	42.60	42.60	42.60
PRUT-M25-M20-M20-SS	25	20	20	15.00	36	38	32	32	31.30	26.00	26.00	49.10	44.40	44.40
PRUT-M25-M25-M10-SS	25	25	10	22.00	36	38	38	19	31.30	31.30	18.10	49.10	49.10	38.90
PRUT-M25-M25-M12-SS	25	25	12	22.00	36	38	38	22	31.30	31.30	23.30	49.10	49.10	44.40
PRUT-M25-M25-M20-SS	25	25	20	22.00	36	38	38	32	31.30	31.30	26.00	49.10	49.10	44.40
PRUT-M32-M32-M20-SS	32	32	20	22.00	46	50	50	32	42.00	42.00	26.00	72.30	72.30	52.60
PRUT-M38-M32-M32-SS	38	32	32	15.00	50	60	50	50	49.40	42.00	42.00	84.00	77.70	77.70
PRUT-M38-M38-M20-SS	38	38	20	16.00	50	60	60	60	49.40	49.40	26.00	84.00	84.00	58.00
PRUT-M38-M38-M25-SS	38	38	25	28.00	50	60	60	60	49.40	49.40	31.30	84.00	84.00	62.70

Union Cross



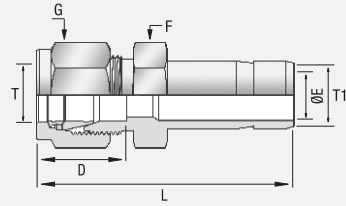
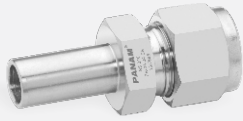
Imperial Tube x NPT Threads

Part No	Tube O. D. T in	E * Min	Width Across Flat		D	L
			F in	G in		
PUC-01-SS	1/16	1.27	1/2	5/16	8.63	17.88
PUC-02-SS	1/8	2.28	1/2	7/16	12.70	26.20
PUC-03-SS	3/16	3.04	1/2	1/2	13.70	26.80
PUC-04-SS	1/4	4.80	1/2	9/16	15.30	29.25
PUC-05-SS	5/16	6.35	9/16	5/8	16.20	29.50
PUC-06-SS	3/8	7.10	5/8	11/16	17.10	30.00
PUC-08-SS	1/2	10.40	13/16	7/8	22.80	37.60
PUC-10-SS	5/8	12.70	15/16	1	24.38	39.65
PUC-12-SS	3/4	15.00	1-1/8	1-1/8	22.60	41.70
PUC-14-SS	7/8	18.28	1-1/4	1-1/4	25.90	44.70
PUC-16-SS	1	22.35	1-27/64	1-1/2	31.24	52.80
PUC-20-SS	1-1/4	27.60	1-11/16	1-7/8	41.14	66.54
PUC-24-SS	1-1/2	34.00	2	2-1/4	50.00	77.97
PUC-32-SS	2	45.97	2-3/4	3	67.56	107.18

Metric Tube x NPT Threads

Part No	Tube O. D. T mm	E * Min	Width Across Flat		D	L
			F mm	G mm		
PUC-M02-SS	2	1.70	9	12	12.90	22.30
PUC-M03-SS	3	2.40	9	12	12.90	22.30
PUC-M04-SS	4	2.40	13	12	14.00	27.50
PUC-M06-SS	6	4.20	13	14	16.00	27.80
PUC-M08-SS	8	6.00	16	16	16.30	29.10
PUC-M10-SS	10	8.00	17	19	18.10	32.60
PUC-M12-SS	12	9.50	20	22	22.30	36.30
PUC-M14-SS	14	12.00	24	25	21.00	37.00
PUC-M15-SS	15	11.90	25	25	24.40	38.80
PUC-M16-SS	16	12.70	25	25	24.40	38.80
PUC-M18-SS	18	15.00	28	30	24.40	41.30
PUC-M20-SS	20	15.90	32	32	26.00	42.60
PUC-M22-SS	22	18.30	32	32	26.00	42.60
PUC-M25-SS	25	22.80	36	38	31.30	49.10
PUC-M28-SS	28	22.80	41	46	36.60	64.00
PUC-M32-SS	32	28.60	46	50	42.00	72.30
PUC-M38-SS	38	33.70	51	60	49.40	84.00
PUC-M42-SS	42	36.80	60	65	49.30	82.50
PUC-M50-SS	50	45.20	70	76	67.20	107.00

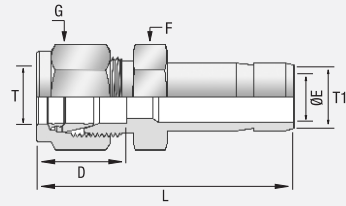
Reducer



Imperial Tube

Part No	Tube O. D.		E * Min	Width Across Flat		D	L
	T	T1		F	G		
	in	in		in	in		
PR-01-02-SS	1/16	1/8	1.20	5/16	7/16	8.63	32.18
PR-01-04-SS	1/16	1/4	1.20	5/16	7/16	8.63	37.48
PR-02-02-SS	1/8	1/8	2.03	7/16	7/16	12.70	33.52
PR-02-03-SS	1/8	3/16	2.28	7/16	7/16	12.70	34.29
PR-02-04-SS	1/8	1/4	2.28	7/16	7/16	12.70	36.06
PR-02-06-SS	1/8	3/8	2.28	7/16	7/16	12.70	37.59
PR-02-08-SS	1/8	1/2	2.28	9/16	7/16	12.70	44.19
PR-03-02-SS	3/16	1/8	2.03	7/16	1/2	13.71	34.79
PR-03-04-SS	3/16	1/4	3.04	7/16	1/2	13.71	37.08
PR-04-02-SS	1/4	1/8	2.03	1/2	9/16	15.24	36.83
PR-04-03-SS	1/4	3/16	3.04	1/2	9/16	15.24	37.59
PR-04-04-SS	1/4	1/4	4.80	1/2	9/16	15.30	43.00
PR-04-05-SS	1/4	5/16	4.80	1/2	9/16	15.24	39.87
PR-04-06-SS	1/4	3/8	4.80	1/2	9/16	15.30	42.00
PR-04-08-SS	1/4	1/2	4.80	9/16	9/16	15.30	49.50
PR-04-10-SS	1/4	5/8	4.82	11/16	9/16	15.24	48.00
PR-04-12-SS	1/4	3/4	4.82	13/16	9/16	15.24	47.75
PR-05-06-SS	5/16	3/8	6.35	9/16	5/8	16.25	41.91
PR-05-08-SS	5/16	1/2	6.35	9/16	5/8	16.25	47.49
PR-06-04-SS	3/8	1/4	4.80	5/8	11/16	17.10	40.90
PR-06-06-SS	3/8	3/8	7.11	5/8	11/16	16.76	43.18
PR-06-08-SS	3/8	1/2	7.10	5/8	11/16	17.10	51.30
PR-06-10-SS	3/8	5/8	7.11	5/8	11/16	16.76	51.30
PR-06-12-SS	3/8	3/4	7.11	11/16	11/16	16.76	51.30
PR-08-04-SS	1/2	1/4	4.82	13/16	7/8	22.86	44.95
PR-08-06-SS	1/2	3/8	7.11	13/16	7/8	22.86	46.73
PR-08-08-SS	1/2	1/2	9.90	13/16	7/8	22.86	52.32
PR-08-10-SS	1/2	5/8	10.40	13/16	7/8	22.86	53.84
PR-08-12-SS	1/2	3/4	10.40	13/16	7/8	22.86	60.80
PR-08-16-SS	1/2	1	10.40	1-1/16	7/8	22.86	60.90
PR-10-12-SS	5/8	3/4	12.70	15/16	1	24.38	54.61
PR-10-14-SS	5/8	7/8	12.70	15/16	1	24.38	56.13
PR-10-16-SS	5/8	1	12.70	1-1/16	1	24.38	60.96
PR-12-08-SS	3/4	1/2	9.90	1-1/16	1-1/8	24.38	54.61
PR-12-16-SS	3/4	1	15.00	1-1/16	1-1/8	24.38	62.48
PR-16-20-SS	1	1-1/4	22.35	1-3/8	1-1/2	31.24	80.50
PR-16-24-SS	1	1-1/2	22.35	1-5/8	1-1/2	31.24	89.15
PR-16-32-SS	1	2	22.35	2-1/8	1-1/2	31.24	112.50
PR-20-20-SS	1-1/4	1-1/4	27.68	1-3/4	1-7/8	41.14	104.00
PR-20-24-SS	1-1/4	1-1/2	27.68	1-7/8	1-7/8	41.14	104.14
PR-20-32-SS	1-1/4	2	27.68	1-7/8	1-7/8	41.14	125.20
PR-24-32-SS	1-1/2	2	34.03	2-1/4	3	50.00	131.30

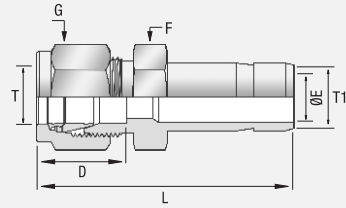
Reducer



Metric Tube

Part No	Tube O. D.		E* Min	Width Across Flat		D	L
	T mm	T1 mm		F mm	G mm		
PR-M03-M06-SS	3	6	2.40	12	12	12.90	36.10
PR-M03-M10-SS	3	10	2.40	12	12	12.90	38.40
PR-M04-M06-SS	4	6	2.40	12	12	13.70	37.10
PR-M06-M03-SS	6	3	1.80	14	14	15.30	36.90
PR-M06-M08-SS	6	8	4.80	14	14	15.30	39.90
PR-M06-M10-SS	6	10	4.80	14	14	15.30	40.70
PR-M06-M12-SS	6	12	4.80	14	14	15.30	46.30
PR-M08-M06-SS	8	6	4.60	15	16	16.20	40.30
PR-M08-M10-SS	8	10	6.40	15	16	16.20	42.40
PR-M08-M12-SS	8	12	6.40	15	16	16.20	47.60
PR-M10-M06-SS	10	6	4.60	18	19	17.20	42.40
PR-M10-M12-SS	10	12	7.90	18	19	17.20	49.80
PR-M10-M15-SS	10	15	7.90	18	19	17.20	51.30
PR-M10-M18-SS	10	18	7.90	19	19	17.20	51.30
PR-M12-M06-SS	12	6	4.60	22	22	22.80	44.90
PR-M12-M10-SS	12	10	7.70	22	22	22.80	46.70
PR-M12-M16-SS	12	16	9.50	22	22	22.80	53.80
PR-M12-M18-SS	12	18	9.50	22	22	22.80	53.80
PR-M12-M20-SS	12	20	9.50	22	22	22.80	56.10
PR-M12-M22-SS	12	22	9.50	24	22	22.80	56.10
PR-M12-M25-SS	12	25	9.50	27	22	22.80	62.40
PR-M16-M12-SS	16	12	9.10	24	25	24.40	53.00
PR-M18-M12-SS	18	12	9.10	27	30	24.40	54.60
PR-M18-M16-SS	18	16	12.70	27	30	24.40	56.10
PR-M18-M20-SS	18	20	15.10	27	30	24.40	57.60
PR-M18-M22-SS	18	22	15.10	27	30	24.40	57.60
PR-M18-M25-SS	18	25	15.10	27	30	24.40	62.40
PR-M20-M16-SS	20	16	12.70	30	32	24.40	57.90
PR-M20-M18-SS	20	18	13.90	30	32	26.00	57.90
PR-M20-M22-SS	20	22	15.80	30	32	26.00	59.40
PR-M20-M25-SS	20	25	15.80	30	32	26.00	64.20
PR-M22-M18-SS	22	18	13.90	30	32	26.00	57.90
PR-M22-M20-SS	22	20	15.10	30	32	26.00	59.40
PR-M22-M25-SS	22	25	18.30	30	32	26.00	64.20
PR-M25-M18-SS	25	18	13.90	35	38	31.30	63.10
PR-M25-M20-SS	25	20	15.10	35	38	31.30	64.60

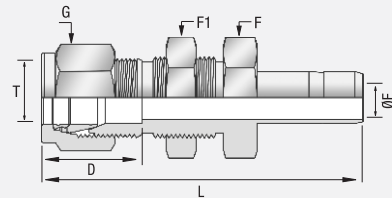
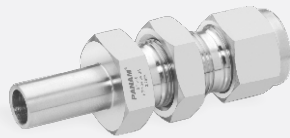
Reducer



Metric Tube x Imperial Tube

Part No	Tube O. D.		E* Min	Width Across Flat		D	L
	T mm	T1 in		F mm	G mm		
PR-M03-02-SS	3	1/8	2.00	12	12	12.90	33.50
PR-M03-04-SS	3	1/4	2.40	12	12	12.90	36.10
PR-M06-04-SS	6	1/4	4.80	14	14	15.30	39.20
PR-M06-05-SS	6	5/16	4.80	14	14	15.30	39.90
PR-M06-06-SS	6	3/8	4.80	14	14	15.30	40.70
PR-M06-08-SS	6	1/2	4.80	14	14	15.30	46.30
PR-M08-06-SS	8	3/8	6.40	15	16	16.20	42.00
PR-M08-08-SS	8	1/2	6.40	15	16	16.20	47.60
PR-M10-06-SS	10	3/8	7.10	18	19	17.20	44.20
PR-M10-08-SS	10	1/2	7.90	18	19	17.20	49.80
PR-M12-08-SS	12	1/2	9.50	22	22	22.80	52.30
PR-M12-12-SS	12	3/4	9.50	22	22	22.80	53.80
PR-M18-12-SS	18	3/4	15.10	27	30	24.40	56.10
PR-M18-16-SS	18	1	15.10	27	30	24.40	62.40
PR-M25-16-SS	25	1	20.20	35	38	31.30	69.50

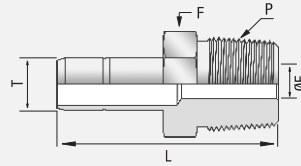
Bulkhead Reducer



Imperial Tube

Part No	Tube O. D. T in.	E* Min	Width Across Flat			D	L	Panel Hole Drill Size	Panel Max. Thickness
			F in	G in	F1 in				
PBR-02-02-SS	1/8	2.03	1/2	7/16	1/2	12.70	49.53	8.33	12.70
PBR-04-04-SS	1/4	4.80	3/4	9/16	3/4	15.30	56.00	11.50	10.16
PBR-06-06-SS	3/8	7.10	5/8	11/16	5/8	17.10	61.50	14.68	11.17
PBR-08-08-SS	1/2	10.40	15/16	7/8	15/16	22.86	75.50	19.44	12.70
PBR-10-10-SS	5/8	12.70	1-1/16	1	1-1/16	24.38	75.18	22.62	12.70
PBR-16-16-SS	1	20.32	1-5/8	1-1/2	1-5/8	31.24	100.30	33.73	19.05
PBR-20-20-SS	1-1/4	27.68	1-7/8	1-7/8	1-7/8	41.14	124.17	41.67	19.05
PBR-24-24-SS	1-1/2	34.03	2-1/4	2-1/4	2-1/4	50.03	145.51	49.61	19.05
PBU-32-32-SS	2	45.97	2-3/4	3	2-3/4	67.56	185.82	57.94	19.05

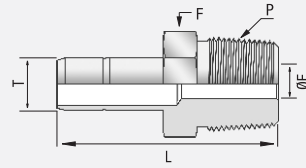
Male Adapter



Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E* Min	Width Across Flat	
				F in	L
PMA-02-2N-SS	1/8	1/8	1.80	7/16	29.50
PMA-02-4N-SS	1/8	1/4	1.80	9/16	34.80
PMA-03-2N-SS	3/16	1/8	2.70	7/16	30.22
PMA-03-4N-SS	3/16	1/4	2.70	9/16	35.56
PMA-04-02-SS	1/4	1/8	4.80	7/16	31.80
PMA-04-4N-SS	1/4	1/4	4.80	9/16	37.00
PMA-04-6N-SS	1/4	3/8	4.80	11/16	37.84
PMA-04-8N-SS	1/4	1/2	4.80	7/8	43.43
PMA-05-2N-SS	5/16	1/8	6.00	7/16	32.76
PMA-05-4N-SS	5/16	1/4	6.00	9/16	38.10
PMA-06-2N-SS	3/8	1/8	7.10	7/16	33.50
PMA-06-4N-SS	3/8	1/4	7.10	9/16	39.60
PMA-06-6N-SS	3/8	3/8	7.10	11/16	39.60
PMA-06-8N-SS	3/8	1/2	7.10	7/8	44.80
PMA-08-4N-SS	1/2	1/4	10.00	9/16	44.50
PMA-08-6N-SS	1/2	3/8	10.00	11/16	47.70
PMA-08-8N-SS	1/2	1/2	10.00	7/8	52.30
PMA-10-6N-SS	5/8	3/8	12.70	11/16	47.40
PMA-10-8N-SS	5/8	1/2	12.70	7/8	52.30
PMA-10-12N-SS	5/8	3/4	12.70	1-1/16	52.30
PMA-12-8N-SS	3/4	1/2	14.90	7/8	53.80
PMA-12-12N-SS	3/4	3/4	14.90	1-1/16	53.80
PMA-12-16N-SS	3/4	1	14.90	1-3/8	57.91
PMA-14-12N-SS	7/8	3/4	17.20	1-1/16	54.30
PMA-16-12N-SS	1	3/4	20.00	1-1/16	58.70
PMA-16-16N-SS	1	1	20.00	1-3/8	66.00
PMA-20-20N-SS	1-1/4	1-1/4	26.50	1-3/4	80.26
PMA-24-24N-SS	1-1/2	1-1/2	32.10	2-1/8	94.48
PMA-32-32N-SS	2	2	40.80	2-3/4	119.38

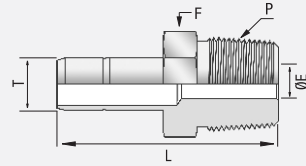
Male Adapter



Metric Tube x NPT Threads

Part No	Tube O. D. T mm	P NPT	E* Min	Width Across Flat	
				F mm	L
PMA-M03-2N-SS	3	1/8	1.80	12	29.40
PMA-M06-2N-SS	6	1/8	4.20	12	32.80
PMA-M06-4N-SS	6	1/4	4.20	14	38.10
PMA-M08-4N-SS	8	1/4	6.00	14	39.10
PMA-M10-4N-SS	10	1/4	7.70	14	39.20
PMA-M10-6N-SS	10	3/8	7.70	17	40.20
PMA-M10-8N-SS	10	1/2	7.70	22	45.20
PMA-M12-4N-SS	12	1/4	9.50	14	46.50
PMA-M12-6N-SS	12	3/8	9.50	17	46.20
PMA-M12-8N-SS	12	1/2	9.50	22	51.80
PMA-M18-8N-SS	18	1/2	13.90	22	53.20
PMA-M18-12N-SS	18	3/4	13.90	27	53.20
PMA-M28-16N-SS	28	1	22.20	35	74.70
PMA-M28-20N-SS	28	1-1/4	23.80	46	76.20
PMA-M32-20N-SS	32	1-1/4	27.40	46	81.00
PMA-M38-24N-SS	38	1-1/2	33.30	55	92.20

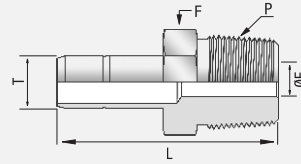
Male Adapter



Imperial Tube x ISO Tapered Threads

Part No	Tube O. D. T in	P BSPT	E* Min	Width Across Flat	L
				F in	
PMA-02-2R-SS	1/8	1/8	1.80	7/16	29.50
PMA-02-4R-SS	1/8	1/4	1.80	9/16	34.80
PMA-03-2R-SS	3/16	1/8	2.70	7/16	30.22
PMA-03-4R-SS	3/16	1/4	2.70	9/16	35.56
PMA-04-2R-SS	1/4	1/8	4.80	7/16	31.80
PMA-04-4R-SS	1/4	1/4	4.80	9/16	37.00
PMA-04-6R-SS	1/4	3/8	4.80	11/16	37.84
PMA-04-8R-SS	1/4	1/2	4.80	7/8	43.43
PMA-05-2R-SS	5/16	1/8	6.00	7/16	32.76
PMA-05-4R-SS	5/16	1/4	6.00	9/16	38.10
PMA-06-2R-SS	3/8	1/8	7.10	7/16	33.50
PMA-06-4R-SS	3/8	1/4	7.10	9/16	39.60
PMA-06-6R-SS	3/8	3/8	7.10	11/16	39.60
PMA-06-8R-SS	3/8	1/2	7.10	7/8	44.80
PMA-08-4R-SS	1/2	1/4	10.00	9/16	44.50
PMA-08-6R-SS	1/2	3/8	10.00	11/16	47.70
PMA-08-8R-SS	1/2	1/2	10.00	7/8	52.30
PMA-10-6R-SS	5/8	3/8	12.70	11/16	47.40
PMA-10-8R-SS	5/8	1/2	12.70	7/8	52.30
PMA-10-12R-SS	5/8	3/4	12.70	1-1/16	52.30
PMA-12-8R-SS	3/4	1/2	14.90	7/8	53.80
PMA-12-12R-SS	3/4	3/4	14.90	1-1/16	53.80
PMA-12-16R-SS	3/4	1	14.90	1-3/8	57.91
PMA-14-12R-SS	7/8	3/4	17.20	1-1/16	54.30
PMA-16-12R-SS	1	3/4	20.00	1-1/16	58.70
PMA-16-16R-SS	1	1	20.00	1-3/8	66.00
PMA-20-20R-SS	1-1/4	1-1/4	26.50	1-3/4	80.26
PMA-24-24R-SS	1-1/2	1-1/2	32.10	2-1/8	94.48
PMA-32-32R-SS	2	2	40.80	2-3/4	119.38

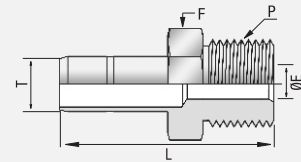
Male Adapter



Metric Tube x ISO Tapered Threads

Part No	Tube O. D. T mm	P BSPT	E* Min	Width Across Flat	
				F mm	L
PMA-M03-2R-SS	3	1/8	1.80	12	29.40
PMA-M06-2R-SS	6	1/8	4.20	12	32.80
PMA-M06-4R-SS	6	1/4	4.20	14	38.10
PMA-M08-4R-SS	8	1/4	6.00	14	39.10
PMA-M10-4R-SS	10	1/4	7.70	14	39.20
PMA-M10-6R-SS	10	3/8	7.70	17	40.60
PMA-M10-8R-SS	10	1/2	7.70	22	45.20
PMA-M12-4R-SS	12	1/4	9.50	14	46.50
PMA-M12-6R-SS	12	3/8	9.50	17	46.20
PMA-M12-8R-SS	12	1/2	9.50	22	51.80
PMA-M18-8R-SS	18	1/2	13.90	22	53.20
PMA-M18-12R-SS	18	3/4	13.90	27	53.20
PMA-M28-16R-SS	28	1	22.20	35	74.70
PMA-M28-20R-SS	28	1-1/4	23.80	46	76.20
PMA-M32-20R-SS	32	1-1/4	27.40	46	81.00
PMA-M38-24R-SS	38	1-1/2	33.30	55	92.20

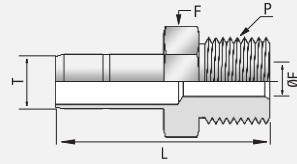
Male Adapter



Imperial Tube x ISO Parallel Threads

Part No	Tube O. D. T in	P BSPP	E* Min	Width Across Flat	
				F mm	L
PMA-02-2G-SS	1/8	1/8	2.00	9/16	31.00
PMA-02-4G-SS	1/8	1/4	2.00	3/4	35.80
PMA-04-2G-SS	1/4	1/8	4.00	9/16	30.50
PMA-04-4G-SS	1/4	1/4	4.20	3/4	36.00
PMA-06-4G-SS	3/8	1/4	5.80	3/4	39.90
PMA-06-6G-SS	3/8	3/8	6.90	7/8	40.60
PMA-08-4G-SS	1/2	1/4	5.80	3/4	47.00
PMA-08-6G-SS	1/2	3/8	7.90	7/8	47.70
PMA-08-8G-SS	1/2	1/2	9.40	1-1/16	49.80
PMA-12-12G-SS	3/4	3/4	15.00	1-5/16	54.90
PMA-16-16G-SS	1	1	19.80	1-5/8	65.80

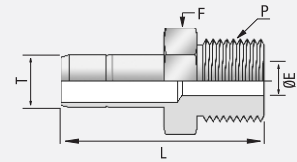
Male Adapter



Metric Tube x ISO Parallel

Part No	Tube O. D. T in	P BSPP	E* Min	Width Across Flat	
				F mm	L
PMA-M06-2G-SS	6	1/8	4.00	14	30.40
PMA-M06-4G-SS	6	1/4	4.00	19	38.90
PMA-M06-6G-SS	8	1/4	5.60	19	40.10
PMA-M10-4G-SS	10	1/4	5.90	19	40.90
PMA-M10-6G-SS	10	3/8	7.10	22	41.70
PMA-M10-8G-SS	10	1/2	7.10	27	44.70
PMA-M12-4G-SS	12	1/4	6.40	19	47.00
PMA-M12-8G-SS	12	3/8	7.90	22	47.20
PMA-M12-8G-SS	12	1/2	8.80	27	50.50
PMA-M18-8G-SS	18	1/2	11.90	27	51.30
PMA-M18-12G-SS	18	3/4	13.90	35	55.90
PMA-M38-20G-SS	38	1-1/2	31.60	55	91.90

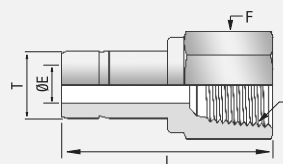
Male Adapter



Imperial Tube x SAE/MS Straight Threads

Part No	Tube O. D. T mm	P SAE/MS	E* Min	Width Across Flat	
				F mm	L
PMA-02-2S-SS	1/8	5/16-24	2.03	7/16	30.48
PMA-04-4S-SS	1/4	7/16-20	4.20	9/16	35.30
PMA-04-6S-SS	1/4	9/16-18	4.20	11/16	36.07
PMA-06-4S-SS	3/8	7/16-20	5.10	9/16	37.08
PMA-06-6S-SS	3/8	9/16-18	6.85	11/16	38.61
PMA-06-8S-SS	3/8	3/4-16	6.85	7/8	40.64
PMA-08-6S-SS	1/2	9/16-18	7.11	11/16	44.20
PMA-08-8S-SS	1/2	3/4-16	9.40	7/8	46.23
PMA-10-10S-SS	5/8	7/8-14	11.94	1	49.28
PMA-12-12S-SS	3/4	11/16-12	15.00	1-1/4	53.34
PMA-16-16S-SS	1	15/16-12	20.32	1-1/2	61.21
PMA-20-20S-SS	1-1/4	15/8-12	26.00	1-7/8	71.37
PMA-24-24S-SS	1-1/2	17/8-12	31.60	2-1/8	83.31

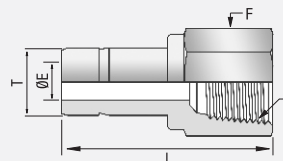
Female Adapter



Imperial Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E* Min	Width Across Flat	
				F in	L
PFA-02-2N-SS	1/8	1/8	1.80	9/16	31.50
PFA-02-4N-SS	1/8	1/4	1.80	3/4	35.30
PFA-03-2N-SS	3/16	1/8	2.70	9/16	32.00
PFA-03-4N-SS	3/16	1/4	2.70	3/4	35.81
PFA-04-2N-SS	1/4	1/8	4.80	9/16	29.60
PFA-04-4N-SS	1/4	1/4	4.80	3/4	35.80
PFA-04-6N-SS	1/4	3/8	4.80	7/8	37.80
PFA-04-8N-SS	1/4	1/2	4.80	1-1/16	43.80
PFA-05-2N-SS	5/16	1/8	6.00	9/16	34.29
PFA-05-4N-SS	5/16	1/4	6.00	3/4	37.59
PFA-06-2N-SS	3/8	1/8	7.10	9/16	34.29
PFA-06-4N-SS	3/8	1/4	7.10	3/4	37.50
PFA-06-6N-SS	3/8	3/8	7.10	7/8	40.38
PFA-06-8N-SS	3/8	1/2	7.10	1-1/16	46.73
PFA-08-4N-SS	1/2	1/4	10.00	3/4	43.43
PFA-08-6N-SS	1/2	3/8	10.00	7/8	47.00
PFA-08-8N-SS	1/2	1/2	10.00	1-1/16	53.00
PFA-10-6N-SS	5/8	3/8	12.70	7/8	48.26
PFA-10-8N-SS	5/8	1/2	12.70	1-1/16	53.84
PFA-10-12N-SS	5/8	3/4	12.70	1-1/4	55.37
PFA-12-8N-SS	3/4	1/2	14.90	1-1/16	54.50
PFA-12-12N-SS	3/4	3/4	14.90	1-1/4	56.50
PFA-12-16N-SS	3/4	1	14.90	1-5/8	58.42
PFA-14-12N-SS	7/8	3/4	17.20	1-1/4	57.15
PFA-16-12N-SS	1	3/4	20.06	1-1/4	63.00
PFA-16-16N-SS	1	1	20.06	1-5/8	64.26
PFA-20-20N-SS	1-1/4	1-1/4	27.68	2-1/8	77.72
PFA-24-24N-SS	1-1/2	1-1/2	33.27	2-3/8	88.90
PFA-32-32N-SS	2	2	44.45	2-7/8	107.44

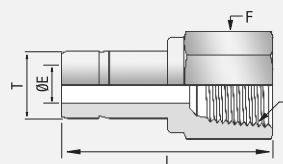
Female Adapter



Metric Tube x NPT Threads

Part No	Tube O. D. T in	P NPT	E* Min	Width Across Flat	
				F mm	L
PFA-M03-2N-SS	3	1/8	1.80	14	31.15
PFA-M06-2N-SS	6	1/8	4.20	14	32.50
PFA-M06-4N-SS	6	1/4	4.20	19	37.10
PFA-M08-4N-SS	8	1/4	6.00	19	37.60
PFA-M10-4N-SS	10	1/4	7.70	19	38.10
PFA-M10-6N-SS	10	3/8	7.70	22	40.10
PFA-M10-8M-SS	10	1/2	7.70	27	46.50
PFA-M12-4N-SS	12	1/4	9.50	19	43.70
PFA-M12-6N-SS	12	3/8	9.50	22	46.00
PFA-M12-8N-SS	12	1/2	9.50	27	52.30
PFA-M18-12N-SS	18	3/4	13.90	32	54.80

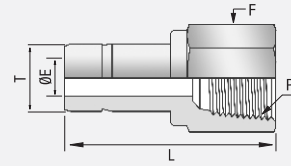
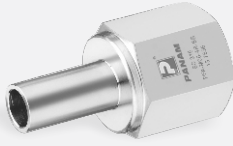
Female Adapter



Imperial x ISO Tapered Threads

Part No	Tube O. D. T in	P BSPT	E* Min	Width Across Flat		L
				F in		
PFA-02-2R-SS	1/8	1/8	1.80	9/16		31.50
PFA-02-4R-SS	1/8	1/4	1.80	3/4		35.30
PFA-03-2R-SS	3/16	1/8	2.70	9/16		32.00
PFA-03-4R-SS	3/16	1/4	2.70	3/4		35.81
PFA-04-2R-SS	1/4	1/8	4.80	9/16		29.60
PFA-04-4R-SS	1/4	1/4	4.80	3/4		35.80
PFA-04-6R-SS	1/4	3/8	4.80	7/8		37.80
PFA-04-8R-SS	1/4	1/2	4.80	1-1/16		43.80
PFA-05-2R-SS	5/16	1/8	6.00	9/16		34.59
PFA-05-4R-SS	5/16	1/4	6.00	3/4		37.59
PFA-06-2R-SS	3/8	1/8	7.10	9/16		34.29
PFA-06-4R-SS	3/8	1/4	7.10	3/4		37.50
PFA-06-6R-SS	3/8	3/8	7.10	7/8		40.38
PFA-06-8R-SS	3/8	1/2	7.10	1-1/16		46.73
PFA-08-4R-SS	1/2	1/4	10.00	3/4		43.43
PFA-08-6R-SS	1/2	3/8	10.00	7/8		47.00
PFA-08-8R-SS	1/2	1/2	10.00	1-1/16		53.00
PFA-10-6R-SS	5/8	3/8	12.70	7/8		48.26
PFA-10-8R-SS	5/8	1/2	12.70	1-1/16		53.84
PFA-10-12R-SS	5/8	3/4	12.70	1-1/4		55.37
PFA-12-8R-SS	3/4	1/2	14.90	1-1/16		54.50
PFA-12-12R-SS	3/4	3/4	14.90	1-1/4		56.50
PFA-12-16R-SS	3/4	1	14.90	1-5/8		58.42
PFA-14-12R-SS	7/8	3/4	17.20	1-1/4		57.15
PFA-16-12N-SS	1	3/4	20.00	1-1/4		63.00
PFA-16-12R-SS	1	1	20.00	1-5/8		64.26
PFA-20-20R-SS	1-1/4	1-1/4	27.60	2-1/8		77.72
PFA-24-24R-SS	1-1/2	1-1/2	33.20	2-3/8		88.90
PFA-32-32R-SS	2	2	44.40	2-7/8		107.40

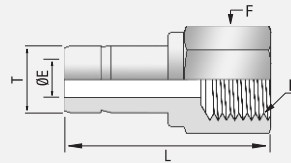
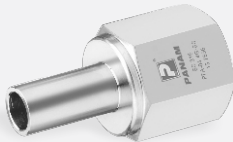
Female Adapter



Metric Tube x ISO Tapered Threads

Part No	Tube O. D. T mm	P BSPT	E* Min	Width Across Flat		L
				F mm		
PFA-M03-2R-SS	3	1/8	1.80	14		31.15
PFA-M06-2R-SS	6	1/8	4.20	14		32.50
PFA-M06-4R-SS	6	1/4	4.20	19		37.10
PFA-M08-4R-SS	8	1/4	6.00	19		37.60
PFA-M10-4R-SS	10	1/4	7.70	19		38.10
PFA-M10-6R-SS	10	3/8	7.70	22		40.10
PFA-M10-8R-SS	10	1/2	7.70	27		46.50
PFA-M12-4R-SS	12	1/4	9.50	19		43.70
PFA-M12-6R-SS	12	3/8	9.50	22		46.00
PFA-M12-8R-SS	12	1/2	9.50	27		52.30
PFA-M18-12R-SS	18	3/4	13.90	32		54.80

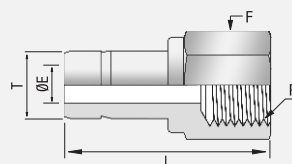
Female Adapter



Imperial Tube x ISO Parallel Threads

Part No	Tube O. D. T mm	P BSPP	E* Min	Width Across Flat		L
				F in		
PFA-04-2G-SS	1/4	1/8	4.57	9/16		32.00
PFA-04-4G-SS	1/4	1/4	4.57	3/4		35.30
PFA-06-6G-SS	3/8	3/8	6.60	15/16		39.37
PFA-08-8G-SS	1/2	1/2	7.11	1-1/16		45.72

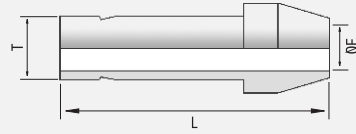
Female Adapter



Metric Tube x ISO Parallel Threads

Part No	Tube O. D. T mm	P BSPP	E* Min	Width Across Flat	
				F mm	L
PFA-M06-2G-SS	6	1/8	4.00	14	32.00
PFA-M06-4G-SS	6	1/4	4.00	19	35.30
PFA-M06-6G-SS	6	3/8	4.00	24	38.40
PFA-M06-8G-SS	6	1/2	4.00	27	42.90
PFA-M08-4G-SS	8	1/4	5.60	19	33.00
PFA-M08-6G-SS	8	3/8	5.60	24	39.30
PFA-M08-8G-SS	8	1/2	5.60	27	43.70
PFA-M10-4G-SS	10	1/4	7.70	19	34.50
PFA-M10-6G-SS	10	3/8	7.70	24	39.30
PFA-M10-8G-SS	10	1/2	7.70	27	40.10
PFA-M12-4G-SS	12	1/4	9.10	19	40.10
PFA-M12-6G-SS	12	3/8	9.10	24	44.90
PFA-M12-8G-SS	12	1/2	9.10	27	48.80
PFA-M15-8G-SS	15	1/2	12.00	27	49.00
PFA-M16-8G-SS	16	1/2	12.00	27	49.00
PFA-M18-8G-SS	18	1/2	13.90	27	49.30
PFA-M22-8G-SS	22	1/2	18.30	27	52.00
PFA-M25-8G-SS	25	1/2	19.80	30	56.10

Port Connector



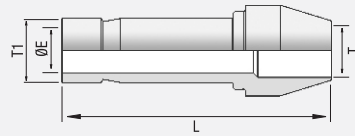
Imperial Tube

Part No	Tube O. D. T in	E* Min	L
PPC-02-SS	1/8	1.80	22.35
PPC-04-SS	1/4	4.20	24.63
PPC-05-SS	5/16	6.00	25.90
PPC-06-SS	3/8	7.10	26.16
PPC-08-SS	1/2	10.00	35.81
PPC-12-SS	3/4	14.98	37.33
PPC-16-SS	1	20.06	48.26

Metric Tube

Part No	Tube O. D. T mm	E* Min	L
PPC-M03-SS	3	2.10	22.20
PPC-M06-SS	6	4.40	24.60
PPC-M08-SS	8	6.20	25.40
PPC-M10-SS	10	8.20	26.10
PPC-M12-SS	12	13.90	35.80
PPC-M16-SS	16	12.70	37.40
PPC-M18-SS	18	13.90	37.40
PPC-M20-SS	20	15.10	38.90
PPC-M22-SS	22	17.90	39.20
PPC-M25-SS	25	19.80	49.50
PPC-M28-SS	28	23.80	63.50
PPC-M32-SS	32	27.40	69.70
PPC-M38-SS	38	33.30	81.90

Reducing Port Connector



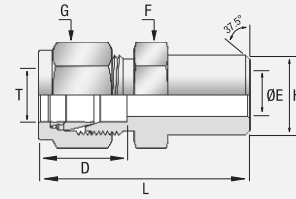
Imperial Tube

Part No	Tube O. D. T in	Reduced O.D. T1 in	E* Min	L
PRPC-02-01-SS	1/8	1/16	1.00	17.27
PRPC-04-02-SS	1/4	1/8	2.28	22.60
PRPC-06-02-SS	3/8	1/8	2.28	23.11
PRPC-06-04-SS	3/8	1/4	4.82	24.89
PRPC-08-04-SS	1/2	1/4	4.82	29.21
PRPC-08-06-SS	1/2	3/8	7.11	30.48
PRPC-12-08-SS	3/4	1/2	9.90	37.85
PRPC-16-08-SS	1	1/2	9.90	42.67
PRPC-16-12-SS	1	3/4	14.98	43.43

Metric Tube

Part No	Tube O. D. T mm	Reduced O.D. T1 mm	E* Min	L
PRPC-M06-M03-SS	6	3	1.80	22.60
PRPC-M08-M06-SS	8	6	4.20	24.70
PRPC-M10-M06-SS	10	6	4.20	25.00
PRPC-M12-M06-SS	12	6	4.20	29.10
PRPC-M12-M08-SS	12	8	6.00	29.80
PRPC-M12-M10-SS	12	10	8.00	30.40
PRPC-M16-M12-SS	16	12	9.50	36.20
PRPC-M28-M25-SS	28	25	19.80	56.50
PRPC-M32-M25-SS	32	25	19.80	60.30
PRPC-M38-M25-SS	38	25	19.80	65.80

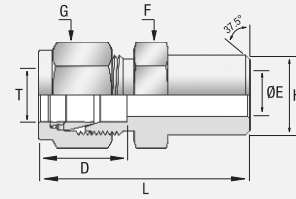
Male Pipe Weld Connector



Imperial Tube x Pipe

Part No	Tube O. D. T in	Male Pipe Size p	E* Min	Width Across Flat		D	H	L
				F in	G in			
PMWC-02-2PBW-SS	1/8	1/8	2.28	7/16	7/16	12.70	10.30	31.24
PMWC-03-2PBW-SS	3/16	1/8	3.04	7/16	1/2	13.71	10.30	31.24
PMWC-04-2PBW-SS	1/4	1/8	4.82	1/2	9/16	15.24	10.30	32.76
PMWC-04-4PBW-SS	1/4	1/4	4.82	9/16	9/16	15.24	13.70	37.84
PMWC-05-2PBW-SS	5/16	1/8	5.08	9/16	5/8	16.25	10.30	37.03
PMWC-05-4PBW-SS	5/16	1/4	6.35	9/16	5/8	16.25	13.70	38.60
PMWC-06-4PBW-SS	3/8	1/4	7.11	5/8	11/16	16.76	13.70	39.87
PMWC-06-6PBW-SS	3/8	3/8	7.11	11/16	11/16	16.76	17.10	39.87
PMWC-06-8PBW-SS	3/8	1/2	7.11	7/8	11/16	16.76	21.30	43.23
PMWC-08-6PBW-SS	1/2	3/8	10.41	13/16	7/8	22.86	17.10	43.43
PMWC-08-8PBW-SS	1/2	1/2	10.41	7/8	7/8	22.86	21.30	49.02
PMWC-08-12PBW-SS	1/2	3/4	10.41	1-1/16	7/8	22.86	26.67	50.54
PMWC-10-8PBW-SS	5/8	1/2	12.70	15/16	1	24.38	21.30	49.02
PMWC-12-12PBW-SS	3/4	3/4	15.00	1-1/16	1-1/8	24.38	26.67	50.54
PMWC-16-16PBW-SS	1	1	22.35	1-3/8	1/1-2	31.24	33.40	62.23
PMWC-20-20PBW-SS	1-1/4	1-1/4	27.68	1-3/4	2	41.40	42.16	77.21
PMWC-24-24PBW-SS	1-1/2	1-1/2	34.00	2-1/8	2-1/4	50.00	48.26	88.90
PMWC-32-32PBW-SS	2	2	47.75	2-3/4	3	68.56	60.32	113.53

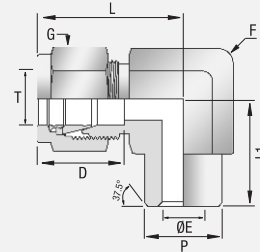
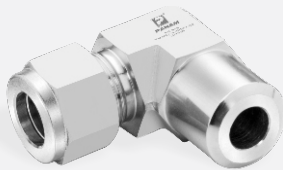
Male Pipe Weld Connector



Metric Tube x Pipe

Part No	Tube O. D. T mm	Male Pipe Size p	E* Min	Width Across Flat		D	H	L
				F mm	G mm			
PMWC-M03-2PBW-SS	3	1/8	2.40	12	12	12.90	10.30	29.70
PMWC-M04-2PBW-SS	4	1/8	2.40	12	12	13.70	10.30	30.70
PMWC-M06-2PBW-SS	6	1/8	4.20	14	14	15.30	10.30	32.80
PMWC-M06-4PBW-SS	6	1/4	4.80	14	14	15.30	13.70	37.60
PMWC-M08-2PBW-SS	8	1/8	5.10	15	16	16.20	10.30	34.20
PMWC-M08-4PBW-SS	8	1/4	6.40	15	16	16.20	13.70	38.70
PMWC-M08-8PBW-SS	8	1/2	6.40	22	16	16.20	21.30	44.80
PMWC-M10-4PBW-SS	10	1/4	7.10	18	19	17.20	13.70	40.90
PMWC-M10-6PBW-SS	10	3/8	7.90	18	19	17.20	17.10	40.10
PMWC-M10-8PBW-SS	10	1/2	7.90	22	19	17.20	21.30	45.70
PMWC-M12-4PBW-SS	12	1/4	7.10	22	22	22.80	13.70	43.40
PMWC-M12-6PBW-SS	12	3/8	9.50	22	22	22.80	17.10	43.40
PMWC-M12-8PBW-SS	12	1/2	9.50	24	22	22.80	21.30	49.20
PMWC-M15-8PBW-SS	15	1/2	11.90	24	24	24.40	21.30	49.00
PMWC-M16-8PBW-SS	16	1/2	12.70	24	24	24.40	21.30	49.00
PMWC-M18-8PBW-SS	18	1/2	13.50	27	30	24.40	21.30	50.05
PMWC-M32-20PBW-SS	32	1-1/4	28.60	46	50	42.00	42.16	79.60
PMWC-M38-24PBW-SS	38	1-1/2	33.70	55	60	49.40	48.26	91.60

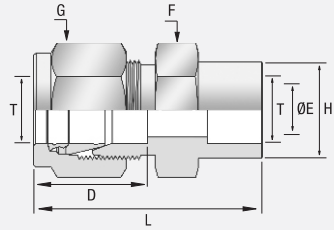
Male Pipe Weld Elbow



Imperial Tube x Pipe

Part No	Tube O. D. T in	Pipe Weld Size p	E* Min	Width Across Flat		D	L	L1
				F in	G in			
PMWE-02-2PBW-SS	1/8	1/8	4.82	1/2	7/16	12.70	26.25	18.79
PMWE-04-4PBW-SS	1/4	1/4	4.82	1/2	9/16	15.24	29.50	23.36
PMWE-06-4PBW-SS	3/8	1/4	7.11	5/8	11/16	16.75	30.48	25.40
PMWE-08-8PBW-SS	1/2	1/2	10.41	13/16	7/8	22.86	36.50	33.02
PMWE-12-12PBW-SS	3/4	3/4	15.00	1-1/16	1-1/8	24.38	42.00	36.83

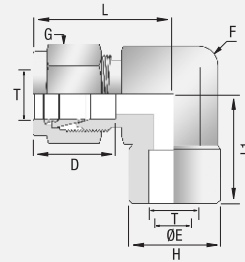
Tube Socket Weld Connector



Imperial Tube

Part No	Tube O. D. T in	E* Min	Width Across Flat		D	H	L
			F in	G in			
PSWC-02-2TSW-SS	1/8	2.28	7/16	7/16	12.70	7.87	28.95
PSWC-04-4TSW-SS	1/4	4.82	1/2	9/16	15.24	11.17	35.52
PSWC-06-6TSW-SS	3/8	7.11	5/8	11/16	16.76	15.74	37.59
PSWC-08-8TSW-SS	1/2	10.41	13/16	7/8	22.86	19.06	41.14
PSWC-12-12TSW-SS	3/4	15.00	1-1/16	1-1/8	24.38	26.67	43.43
PSWC-16-16TSW-SS	1	22.85	1-3/8	1-1/2	31.24	33.27	52.57

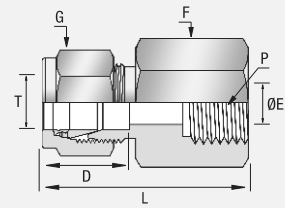
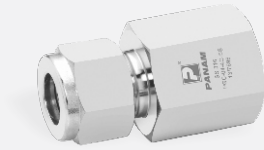
Tube Socket Weld Elbow



Imperial Range

Part No	Tube O. D. T in	E* Min	H	Width Across Flat		D	L	L1
				F in	G in			
PSWE-04-4TSW-SS	1/4	4.82	12.70	1/2	9/16	15.24	29.50	19.55
PSWE-06-6TSW-SS	3/8	7.11	15.74	5/8	11/16	16.76	30.00	23.11
PSWE-08-8TSW-SS	1/2	10.41	20.57	13/16	7/8	22.86	36.55	25.90
PSWE-12-12TSW-SS	3/4	15.74	26.92	1-1/16	1-1/8	24.38	42.00	39.87
PSWE-16-16TSW-SS	1	22.35	35.05	1-3/8	1-1/2	31.24	50.55	49.02

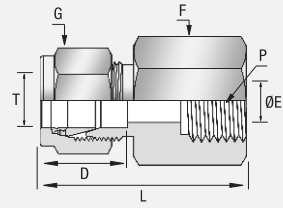
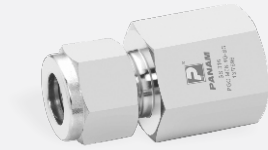
Gauge Connector



Imperial Tube x ISO Parallel Threads

Part No	Tube O. D. T in	P BSPP	E* Min	Width Across Flat		D	L
				F in	G in		
PGC-04-2G-SS	1/4	1/8	4.82	9/16	9/16	15.24	33.55
PGC-04-4G-SS	1/4	1/4	4.82	3/4	9/16	15.24	37.59
PGC-04-6G-SS	1/4	3/8	4.82	15/16	9/16	15.24	37.59
PGC-04-8G-SS	1/4	1/2	4.82	1-1/16	9/16	15.24	43.43
PGC-05-4G-SS	5/16	1/4	5.58	3/4	5/8	16.25	38.35
PGC-05-8G-SS	5/16	1/2	7.11	1-1/16	5/8	16.25	40.38
PGC-06-4G-SS	3/8	1/4	5.58	3/4	11/16	16.76	39.12
PGC-06-6G-SS	3/8	3/8	6.60	15/16	11/16	16.76	38.61
PGC-06-8G-SS	3/8	1/2	7.11	1-1/16	11/16	16.76	41.91
PGC-08-4G-SS	1/2	1/4	5.50	7/8	7/8	22.86	41.95
PGC-08-6G-SS	1/2	3/8	6.60	15/16	7/8	22.86	44.45
PGC-08-8G-SS	1/2	1/2	7.11	1-1/16	7/8	22.86	48.26

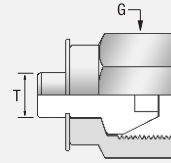
Gauge Connector



Metric Tube x ISO Parallel Threads

Part No	Tube O. D. T mm	P BSPP	E* Min	Width Across Flat		D	L
				F	G		
				in	in		
PGC-M03-4G-SS	3	1/4	2.40	19	12	12.90	35.30
PGC-M06-4G-SS	6	1/4	4.20	19	14	15.30	37.60
PGC-M06-6G-SS	6	3/8	4.20	24	14	15.30	37.60
PGC-M06-8G-SS	6	1/2	4.20	27	14	15.30	43.00
PGC-M08-4G-SS	8	1/4	5.50	19	16	16.20	38.50
PGC-M08-6G-SS	8	3/8	6.50	24	16	16.20	36.20
PGC-M08-8G-SS	8	1/2	7.00	27	16	16.20	40.50
PGC-M10-4G-SS	10	1/4	5.50	19	19	17.20	39.40
PGC-M10-6G-SS	10	3/8	6.50	24	19	17.20	38.80
PGC-M10-8G-SS	10	1/2	7.00	27	19	17.20	41.40
PGC-M12-4G-SS	12	1/4	5.50	22	22	22.80	41.90
PGC-M12-6G-SS	12	3/8	6.50	24	22	22.80	44.40
PGC-M12-8G-SS	12	1/2	7.00	27	22	22.80	48.20
PGC-M14-4G-SS	14	1/4	5.50	24	25	23.60	45.28
PGC-M20-8G-SS	20	1/2	7.00	30	32	26.00	54.30
PGC-M22-8G-SS	22	1/2	7.00	30	32	26.00	54.30
PGC-M12-M20*1.5	12	M20*1.5	7.00	27	22	22.80	48.20
PGC-M14-M20*1.5	14	M20*1.5	7.00	27	22	22.80	49.50

Tube Plug



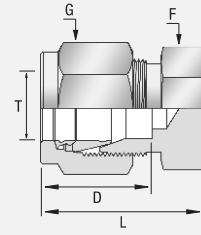
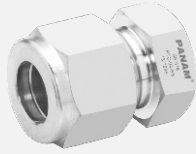
Imperial Tube

Part No	Tube O. D. T in	Width Across Flat	
		G in	
PTP-01-SS	1/16	5/16	
PTP-02-SS	1/8	7/16	
PTP-03-SS	3/16	1/2	
PTP-04-SS	1/4	9/16	
PTP-05-SS	5/16	5/8	
PTP-06-SS	3/8	11/16	
PTP-08-SS	1/2	7/8	
PTP-10-SS	5/8	1	
PTP-12-SS	3/4	1-1/8	
PTP-14-SS	7/8	1-1/4	
PTP-16-SS	1	1-1/2	
PTP-20-SS	1-1/4	1-7/8	
PTP-24-SS	1-1/2	2-1/4	
PTP-32-SS	2	3	

Metric Tube

Part No	Tube O. D. T mm	Width Across Flat	
		G mm	
PTP-M02-SS	2	12	
PTP-M03-SS	3	12	
PTP-M04-SS	4	12	
PTP-M06-SS	6	14	
PTP-M08-SS	8	16	
PTP-M10-SS	10	19	
PTP-M12-SS	12	22	
PTP-M15-SS	15	25	
PTP-M16-SS	16	25	
PTP-M18-SS	18	30	
PTP-M20-SS	20	32	
PTP-M22-SS	22	32	
PTP-M25-SS	25	38	

Tube Cap



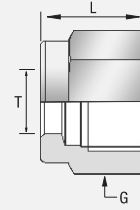
Imperial Tube

Part No	Tube O. D. T in	Width Across Flat		D	L
		F in	G in		
PTC-01-SS	1/16	5/16	5/16	8.63	14.18
PTC-02-SS	1/8	7/16	7/16	15.24	20.06
PTC-03-SS	3/16	7/16	1/2	13.71	21.33
PTC-04-SS	1/4	1/2	9/16	15.30	24.50
PTC-05-SS	5/16	9/16	5/8	16.25	24.38
PTC-06-SS	3/8	5/8	11/16	17.10	26.00
PTC-08-SS	1/2	7/8	7/8	22.80	30.00
PTC-10-SS	5/8	15/16	1	24.38	30.10
PTC-12-SS	3/4	1-1/16	1-1/8	24.38	31.50
PTC-14-SS	7/8	1-3/16	1-1/4	25.90	34.03
PTC-16-SS	1	1-3/8	1-1/2	31.24	38.35
PTC-20-SS	1-1/4	1-3/4	1-7/8	41.14	53.34
PTC-24-SS	1-1/2	2-1/8	2-1/4	50.15	64.51
PTC-32-SS	2	2-3/4	3	67.56	86.61

Metric Tube

Part No	Tube O. D. T mm	Width Across Flat		D	L
		F mm	G mm		
PTC-M02-SS	2	12	12	12.90	20.10
PTC-M03-SS	3	12	12	12.90	20.10
PTC-M04-SS	4	12	12	13.70	21.30
PTC-M06-SS	6	14	14	15.30	23.10
PTC-M08-SS	8	15	16	16.20	24.50
PTC-M10-SS	10	18	19	17.20	29.20
PTC-M12-SS	12	22	22	22.80	29.90
PTC-M15-SS	15	24	25	24.40	29.90
PTC-M16-SS	16	24	25	24.40	29.90
PTC-M18-SS	18	27	30	24.40	31.40
PTC-M20-SS	20	30	32	26.00	34.00
PTC-M22-SS	22	30	32	26.00	34.00
PTC-M25-SS	25	35	38	31.30	38.50
PTC-M28-SS	28	41	46	36.60	48.50
PTC-M32-SS	32	46	50	42.00	55.80
PTC-M38-SS	38	55	60	49.40	65.40

Nut



Imperial Tube

Part No	Tube O. D. T in	Width	L
		G in	
PN-01-SS	1/16	5/16	7.92
PN-02-SS	1/8	7/16	12.00
PN-03-SS	3/16	1/2	12.10
PN-04-SS	1/4	9/16	12.70
PN-05-SS	5/16	5/8	13.50
PN-06-SS	3/8	11/16	14.30
PN-08-SS	1/2	7/8	17.50
PN-10-SS	5/8	1	17.52
PN-12-SS	3/4	1-1/8	17.80
PN-14-SS	7/8	1-1/4	17.92
PN-16-SS	1	1-1/2	21.00
PN-02-SS	1-1/4	1-7/8	31.75
PN-24-SS	1-1/2	2-1/4	38.10
PN-32-SS	2	3	52.32

Metric Tube

Part No	Tube O. D. T mm	Width	L
		G mm	
PN-M03-SS	3	12	12.01
PN-M04-SS	4	12	12.01
PN-M06-SS	6	14	12.70
PN-M08-SS	8	16	13.95
PN-M10-SS	10	19	15.20
PN-M12-SS	12	22	17.50
PN-M15-SS	15	25	17.40
PN-M16-SS	16	25	17.60
PN-M18-SS	18	30	17.60
PN-M20-SS	20	32	18.50
PN-M22-SS	22	32	18.50
PN-M25-SS	25	38	20.60
PN-M28-SS	28	46	30.60
PN-M32-SS	32	50	34.40
PN-M38-SS	38	60	40.60
PN-M42-SS	42	65	40.60
PN-M50-SS	50	76	52.60

Front Ferrule



Imperial Tube

Part No	Tube O. D. T in
PFF-01-SS	1/16
PFF-02-SS	1/8
PFF-03-SS	3/16
PFF-04-SS	1/4
PFF-05-SS	5/16
PFF-06-SS	3/8
PFF-08-SS	1/2
PFF-10-SS	5/8
PFF-12-SS	3/4
PFF-14-SS	7/8
PFF-16-SS	1
PFF-20-SS	1-1/4
PFF-24-SS	1-1/2
PFF-32-SS	2

Metric Tube

Part No	Tube O. D. T mm
PFF-M02-SS	2
PFF-M03-SS	3
PFF-M04-SS	4
PFF-M06-SS	6
PFF-M08-SS	8
PFF-M10-SS	10
PFF-M12-SS	12
PFF-M15-SS	15
PFF-M16-SS	16
PFF-M18-SS	18
PFF-M20-SS	20
PFF-M22-SS	22
PFF-M25-SS	25
PFF-M28-SS	28
PFF-M30-SS	30
PFF-M32-SS	32
PFF-M38-SS	38
PFF-M42-SS	42
PFF-M50-SS	50

Back Ferrule



Imperial Tube

Part No	Tube O. D. T in
PBF-01-SS	1/16
PBF-02-SS	1/8
PBF-03-SS	3/16
PBF-04-SS	1/4
PBF-05-SS	5/16
PBF-06-SS	3/8
PBF-08-SS	1/2
PBF-10-SS	5/8
PBF-12-SS	3/4
PBF-14-SS	7/8
PBF-16-SS	1
PBF-20-SS	1-1/4
PBF-24-SS	1-1/2
PBF-32-SS	2

Metric Tube

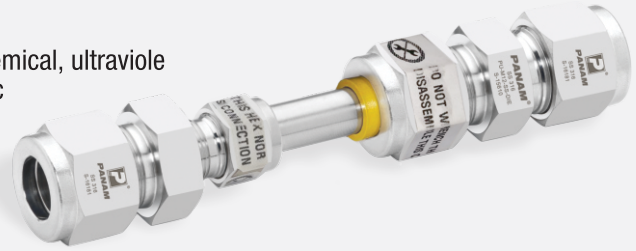
Part No	Tube O. D. T mm
PBF-M02-SS	2
PBF-M03-SS	3
PBF-M04-SS	4
PBF-M06-SS	6
PBF-M08-SS	8
PBF-M10-SS	10
PBF-M12-SS	12
PBF-M15-SS	15
PBF-M16-SS	16
PBF-M18-SS	18
PBF-M20-SS	20
PBF-M22-SS	22
PBF-M25-SS	25
PBF-M28-SS	28
PBF-M30-SS	30
PBF-M32-SS	32
PBF-M38-SS	38
PBF-M42-SS	42
PBF-M50-SS	50

Dielectric Fittings

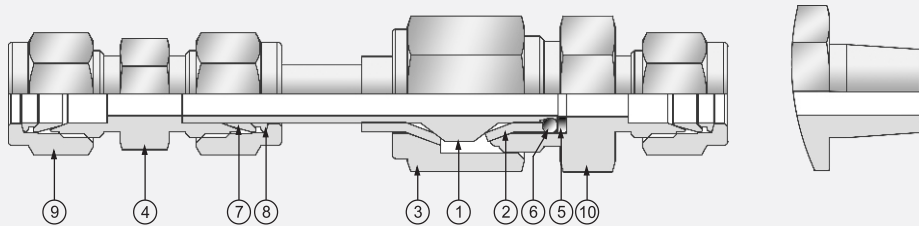
Dielectric Tube Fittings are for use in applications where electrical current flowing through a pipe or tube line must be interrupted to protect vital instrumentation and metering equipment.

Features

- 316 SS for use in rugged environments.
- Polyamide-Imide insulation with excellent electrical, chemical, ultraviolet resistance and low water absorption maintains dielectric strength and integrity over a wide range of operating and climate conditions.
- Tube Fittings or tapered pipe Thread end connections provide direct connection to tubing or piping system.
- Maximum flow capability provided by all sizes of **PANAM** dielectric tube fittings.



Material of Construction



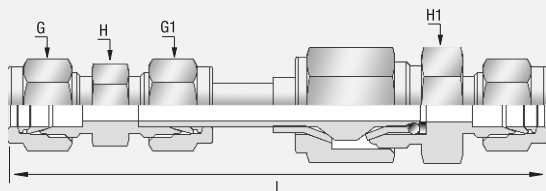
Item No.	Description	Material	Qty.
1	Port Connector	ASTM A 479-316	1
2	Insulator	Polyamide-Lmide	2
3	Nut	ASTM A 479-316	1
4	Union	ASTM A 479-316	1
5	Packing	Teflon	1
6	O-ring	Viton	1

Item No.	Description	Material	Qty.
7	Front Ferrule	ASTM A 479-316	3
8	Back Ferrule	ASTM A 479-316	3
9	Union Nut	ASTM A 479-316	1
10	Reducing Union / Male Connector	ASTM A 479-316	1

Technical Data

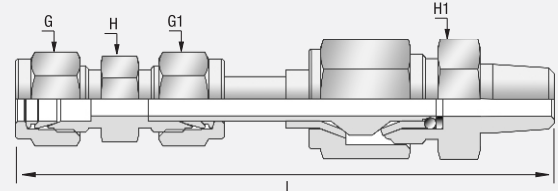
Electrical Resistance of Insulator @ 70° F (20° C)	10 X 106Ω at 30V DC
Pressure Rating	5000 psi
Temperature Rating	-40° C to 93° C (-40° F to 200° F)

Dimensions



Union Dielectric Fitting

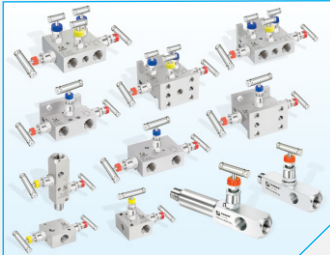
Part No	G	G1	H	H1	L
PU-04-SS-DIE	9/16	11/16	5/8	7/8	118.0
PU-06-SS-DIE	11/16	11/16	5/8	7/8	119.6
PU-08-OD-SS-DIE	7/8	11/16	7/8	7/8	126.0
PU-M12-SS-DIE	22	11/16	22	22	126.0



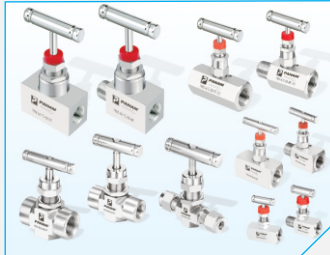
Male Connector Dielectric Fitting

Part No	G	G1	H	H1	L
PMC-06-4N-SS-DIE	11/16	11/16	5/8	5/8	114.0
PMC-08-4N-SS-DIE	7/8	11/16	7/8	7/8	118.0
PMC-M12-4N-SS-DIE	22	11/16	22	22	118.0

Other Products



Valve Manifolds & Gauge Root Valves



Needle Valves



Ball Valves & Check Valves



Relief Valves



Filters



Pipe Fittings



High Pressure Pipe Fittings



37° JIC Fittings (Flare Fittings)



Weld Fittings



Pressure, Temperature & Diaphragm Gauges



Pressure Transmitters



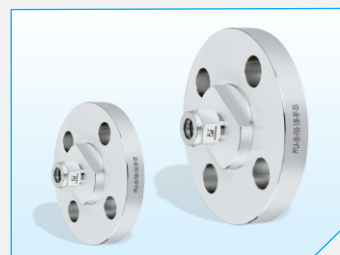
Pressure Regulators



Double Block & Bleed Valves



Air Header & Condensate Pots



Flange Adapters



PANAM ENGINEERS LTD.

An ISO 9001:2015 Company

203, Jaisingh Business Center, Parsiwada, Sahar Road, Andheri (East), Mumbai - 400 099. INDIA
Tel.: +91 22 2831 5555 / 57 / 58 • Fax: +91 22 2831 5574 • email: sales@panamengineers.com / sales@panam.in
website: www.panamengineers.com / www.panam.in