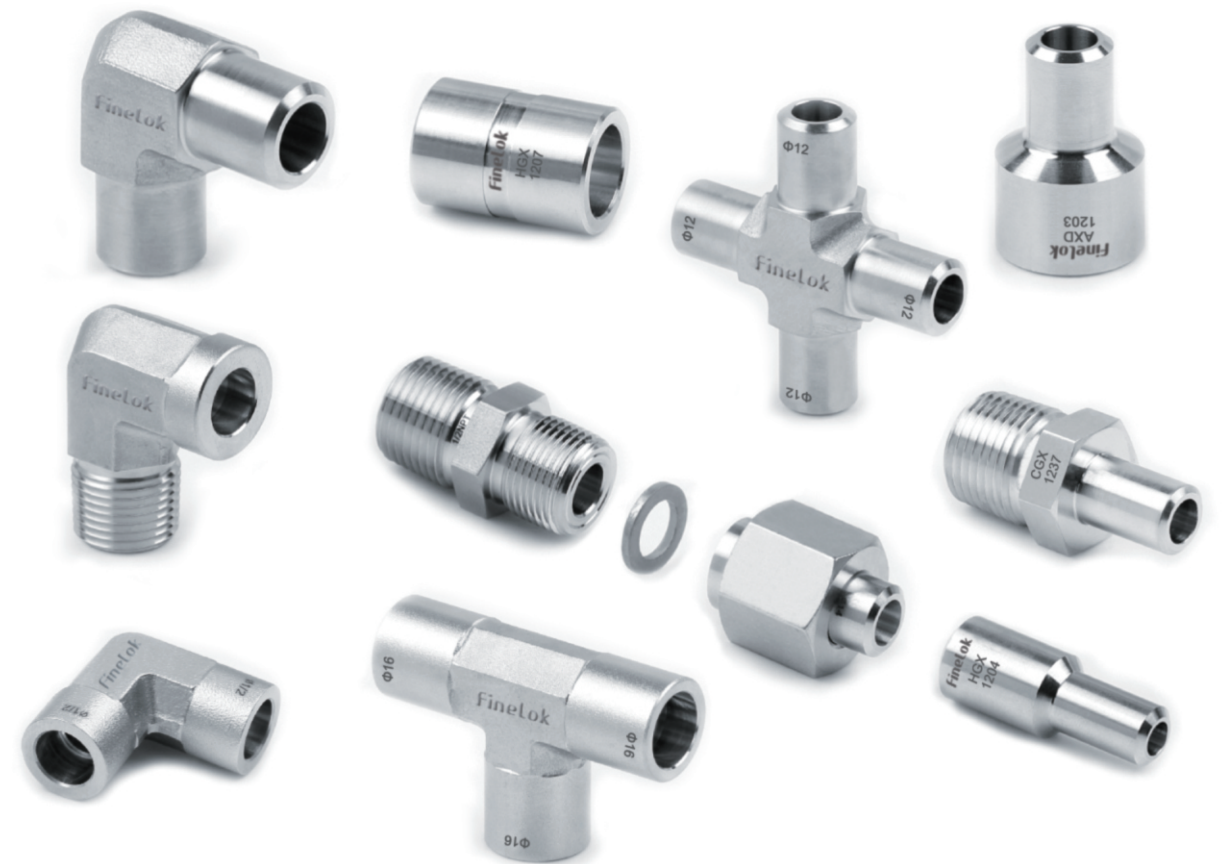


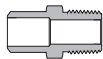
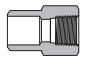
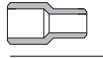


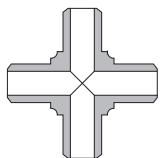
Weld Fittings

F Series

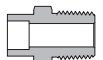
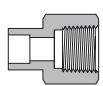
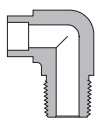
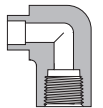






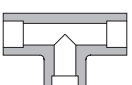
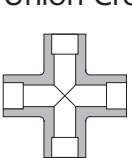
Contents

Tube Butt Weld Fittings

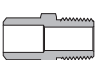
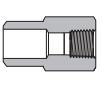
Male Connectors – MW		02
Female Connectors – FW		03
Reducing Unions – UW		03
Union Elbows – UEW		03
Union Tees – UTW		04
Union Crosses – UCW		05

Tube Socket Weld Fittings

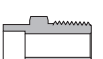
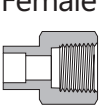
Male Connectors – MW		06
Female Connectors – FW		06
Male Elbows – LMW		07
Female Elbows – LFW		07

Unions – UW		07
Reducing Unions – UW		08
Union Elbows – UEW		08
Union 45° Elbows – VW		09
Union Tees – UTW		09
Union Crosses – UCW		10




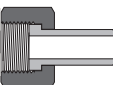
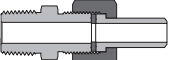
Pipe Butt Weld Fittings

Male Connectors – MW		11
Female Connectors – FW		11

Pipe Socket Weld Fittings

Male Connectors – MW		12
Female Connectors – FW		12

Contents

Unions – UW		12
Weld Adapters		
Tube Butt Weld to Tube Socket Weld – BAW		13
Pipe Butt Weld to Tube Socket Weld – BAW		13
Pipe to Weld Fittings		
Pipe to Tube Butt Weld – PBW		14
Male Pipe to Tube Butt Weld – MPW		15
Ordering Information		16

Features

- ☆ 316 stainless steel is standard material. Other materials are available upon request.
- ☆ Straight fittings are manufactured from quality bar stock. Shaped fittings are made from forging.
- ☆ Quality machining of all ports ensures consistent welding.
- ☆ Radius junction design with elbows provides smooth flow path.
- ☆ All fittings are cleaned to remove oil, grease and loose particles.
- ☆ Every fitting is stamped with size, material and heat code.

Technical Data

- ☆ Sizes range from 1/8" to 1" and 6 mm to 38 mm.
- ☆ Working Temperatures:

Material	Minimum Temperature	Maximum Temperature
316 stainless steel	-325°F (-198°C)	1000°F (538°C)
316L stainless steel	-325°F (-198°C)	850°F (454°C)
904L stainless steel	-325°F (-198°C)	700°F (371°C)

- ☆ Working Pressure:

- Catalog working pressures shown are based on ANSI/ASME B31.3 at ambient temperature, to determine working pressures in accordance with ANSI/ASME B31.1 multiply catalog working pressures shown by 0.94.
- Use the allowable working pressure at ambient temperature to multiply the elevated temperature factors to get the working pressure at elevated temperature. To know the elevated temperature factor, please refer to the related information of FINELOK F Series Tube Fittings in page 9.

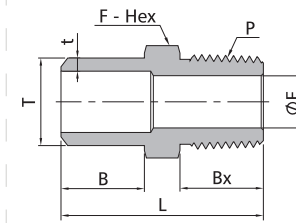
Materials

Material	Bar Stock	Forging	Designator
316 stainless steel	ASTM A276, ASME SA479	ASTM A182, ASME SA182	SS
316L stainless steel			6L
904L stainless steel	ASTM B649	ASTM A182	904L

- ☆ Using the same materials to weld will ensure the same coefficients of expansion and good welding.
- ☆ Tungsten Inert Gas Welding (TIG) is recommended.

Tube Butt Weld Fittings

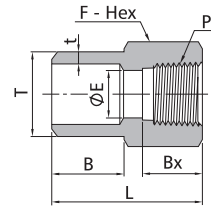
Male Connectors



Fractional Tube					NPT Thread				
T-Tube O.D. (in.)	t-Wall Thickness (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm					Working Pressure psig (bar)
				L	B	Bx	F	E	
1/4	0.065	1/4	-MW-FB4-NT4	29.7	9.7	14.2	14.3	7.1	8000 (551)
1/4	0.065	1/2	-MW-FB4-NT8	36.8	9.7	19.1	22.2	11.9	7700 (530)
3/8	0.095	1/4	-MW-FB6-NT4	29.7	9.7	14.2	14.3	7.1	8000 (551)
3/8	0.095	1/2	-MW-FB6-NT8	36.8	9.7	19.1	22.2	11.9	7700 (530)
1/2	0.095	1/4	-MW-FB8-NT4	34.3	14.2	14.2	14.3	7.1	6780 (468)
1/2	0.095	1/2	-MW-FB8-NT8	41.4	14.2	19.1	22.2	11.9	6780 (468)
5/8	0.109	1/4	-MW-FB10-NT4	34.8	14.2	14.2	17.5	7.1	5760 (397)
5/8	0.109	1/2	-MW-FB10-NT8	41.4	14.2	19.1	22.2	11.9	5760 (397)
3/4	0.120	1/4	-MW-FB12-NT4	40.1	19.1	14.2	20.6	7.1	5530 (381)
3/4	0.120	1/2	-MW-FB12-NT8	46.2	19.1	19.1	22.2	11.9	5530 (381)
1	0.134	1/4	-MW-FB16-NT4	42.9	19.1	14.2	27.0	7.1	4480 (309)
1	0.134	1/2	-MW-FB16-NT8	47.8	19.1	19.1	27.0	11.9	4480 (309)

Metric Tube					NPT Thread				
T-Tube O.D. (mm)	t-Wall Thickness (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm					Working Pressure psig (bar)
				L	B	Bx	F	E	
12	2.2	1/4	-MW-MB12-NT4	34.3	14.2	14.2	14	7.1	6470 (446)
12	2.2	1/2	-MW-MB12-NT8	41.1	14.2	19.1	22	11.9	6470 (446)
14	2.5	1/4	-MW-MB14-NT4	34.3	14.2	14.2	15	7.1	6280 (433)
14	2.5	1/2	-MW-MB14-NT8	41.4	14.2	19.1	22	11.9	6280 (433)
15	2.5	1/4	-MW-MB15-NT4	34.8	14.2	14.2	16	7.1	5770 (398)
16	2.8	1/4	-MW-MB16-NT4	35.6	14.2	14.2	18	7.1	6140 (423)
16	2.8	1/2	-MW-MB16-NT8	41.1	14.2	19.1	22	11.9	6140 (423)
20	3.0	1/2	-MW-MB20-NT8	46.2	19.1	19.1	22	11.9	5110 (352)
22	3.0	1/4	-MW-MB22-NT4	41.2	19.1	14.2	24	7.1	4620 (319)
22	3.0	1/2	-MW-MB22-NT8	46.1	19.1	19.1	24	11.9	4620 (319)
25	3.5	3/4	-MW-MB25-NT12	47.8	19.1	19.1	27	15.7	4730 (326)
25	3.5	1	-MW-MB25-NT16	54.9	19.1	23.9	35	22.4	4730 (326)
28	4.0	1/2	-MW-MB28-NT8	54.2	21.4	19.1	30	11.9	4850 (335)

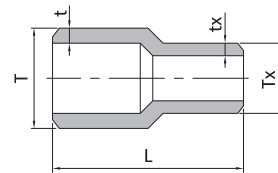
Female Connectors



Fractional Tube				NPT Thread					
T-Tube O.D. (in.)	t-Wall Thickness (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm					Working Pressure psig (bar)
				L	B	Bx	F	E	
1/4	0.065	1/4	-FW-FB4-NT4	27.9	9.7	15.0	19.1	3.0	6600 (454)
1/4	0.065	3/8	-FW-FB4-NT6	29.5	9.7	15.0	22.2	3.0	5300 (365)
3/8	0.095	1/4	-FW-FB6-NT4	27.9	9.7	15.0	19.1	4.7	6600 (454)
3/8	0.095	3/8	-FW-FB6-NT6	29.5	9.7	15.0	22.2	4.7	5300 (365)
1/2	0.095	1/4	-FW-FB8-NT4	34.0	14.2	15.0	19.1	7.9	6600 (454)
1/2	0.095	3/8	-FW-FB8-NT6	34.0	14.2	15.0	22.2	7.9	5300 (365)
1/2	0.095	1/2	-FW-FB8-NT8	38.9	14.2	19.8	27.0	7.9	4900 (337)

Metric Tube				NPT Thread					
T-Tube O.D. (mm)	t-Wall Thickness (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm					Working Pressure psig (bar)
				L	B	Bx	F	E	
14	2.5	1/4	-FW-MB14-NT4	33.0	14.2	15.0	19	9.0	6280 (433)
14	2.5	1/2	-FW-MB14-NT8	38.9	14.2	19.8	27	9.0	4900 (337)
20	3.0	1/2	-FW-MB20-NT8	43.7	19.1	19.8	27	14.0	4900 (337)
28	4.0	1/2	-FW-MB28-NT8	49.8	23.9	19.8	30	15.7	4850 (335)

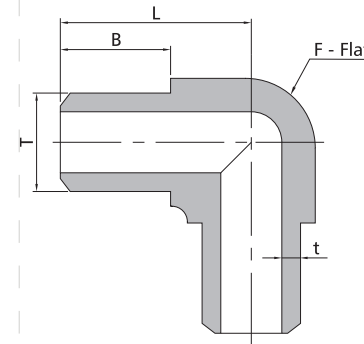
Reducing Unions



Fractional Tube				Fractional Tube		
T-Tube O.D. (in.)	t-Wall Thickness (in.)	Tx-Tube O.D. (in.)	tx-Wall Thickness (in.)	Basic Ordering Number	L (mm)	Working Pressure psig (bar)
3/8	0.095	1/4	0.065	-UW-FB6-FB4	38.1	9930 (685)
1/2	0.095	1/4	0.065	-UW-FB8-FB4	38.1	6780 (468)
1/2	0.095	3/8	0.095	-UW-FB8-FB6	38.1	6780 (468)
3/4	0.120	1/2	0.095	-UW-FB12-FB8	38.1	5530 (381)
1	0.134	3/4	0.120	-UW-FB16-FB12	38.1	4480 (309)

Metric Tube				Metric Tube		
T-Tube O.D. (mm)	t-Wall Thickness (mm)	Tx-Tube O.D. (mm)	tx-Wall Thickness (mm)	Basic Ordering Number	L (mm)	Working Pressure psig (bar)
20	3.0	14	2.5	-UW-MB20-MB14	38.1	6470 (445)
22	3.0	14	2.5	-UW-MB22-MB14	38.1	5780 (395)
22	3.0	18	2.8	-UW-MB22-MB18	38.1	5780 (395)
25	3.5	22	3.0	-UW-MB25-MB22	38.1	5780 (395)
38	5.0	25	3.5	-UW-MB38-MB25	38.1	5540 (380)

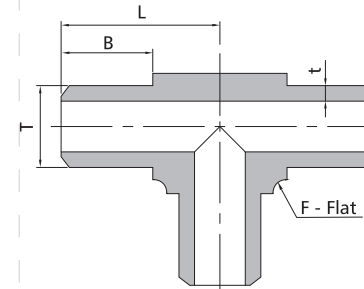
Union Elbows



Fractional Tube				Dimension, mm			Working Pressure psig (bar)
T-Tube O.D. (in.)	t-Wall Thickness (in.)	Basic Ordering Number	L	B	F		
1/4	0.065	-UEW-FB4	16.3	9.7	9.5	10320 (712)	
3/8	0.095	-UEW-FB6	18.0	9.7	11.1	9930 (685)	
1/2	0.095	-UEW-FB8	24.4	14.2	14.3	6780 (468)	
3/4	0.120	-UEW-FB12	33.3	19.1	20.6	5530 (381)	
1	0.134	-UEW-FB16	37.1	19.1	27.0	4480 (309)	

Metric Tube				Dimension, mm			Working Pressure psig (bar)
T-Tube O.D. (mm)	t-Wall Thickness (mm)	Basic Ordering Number	L	B	F		
10	2.2	-UEW-MB10	18.0	9.7	11.1	8160 (563)	
14	2.5	-UEW-MB14	25.4	14.2	15.9	6280 (433)	
16	2.8	-UEW-MB16	26.2	14.2	17.5	6140 (423)	
20	3.0	-UEW-MB20	33.3	19.1	20.6	5110 (352)	
22	3.0	-UEW-MB22	35.3	19.1	23.8	4620 (319)	
25	3.5	-UEW-MB25	37.1	19.1	27.0	4730 (326)	

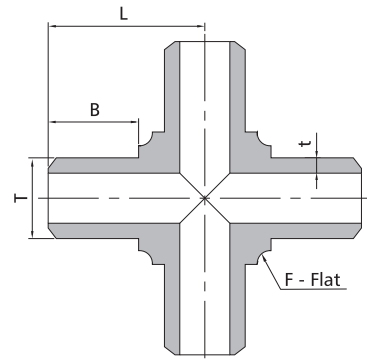
Union Tees



Fractional Tube				Dimension, mm			Working Pressure psig (bar)
T-Tube O.D. (in.)	t-Wall Thickness (in.)	Basic Ordering Number	L	B	F		
1/4	0.065	-UTW-FB4	16.3	9.7	9.5	10320 (712)	
3/8	0.095	-UTW-FB6	18.0	9.7	11.1	9930 (685)	
1/2	0.095	-UTW-FB8	24.4	14.2	14.3	6780 (468)	
3/4	0.120	-UTW-FB12	33.3	19.1	20.6	5530 (381)	
1	0.134	-UTW-FB16	37.1	19.1	27.0	4480 (309)	

Metric Tube				Dimension, mm			Working Pressure psig (bar)
T-Tube O.D. (mm)	t-Wall Thickness (mm)	Basic Ordering Number	L	B	F		
6	1.8	-UTW-MB6	16.3	9.7	9.5	12660 (873)	
8	1.8	-UTW-MB8	16.3	9.7	9.5	8320 (574)	
10	2.2	-UTW-MB10	18.0	9.7	11.1	8160 (563)	
12	2.2	-UTW-MB12	24.4	14.2	14.3	6470 (446)	
14	2.5	-UTW-MB14	25.4	14.2	15.9	6280 (433)	
16	2.8	-UTW-MB16	26.2	14.2	17.5	6140 (423)	
20	3.0	-UTW-MB20	33.3	19.1	20.6	5110 (352)	
22	3.0	-UTW-MB22	35.3	19.1	23.8	4620 (319)	
25	3.5	-UTW-MB25	37.1	19.1	27.0	4730 (326)	
32	4.5	-UTW-MB32	49.3	23.9	34.9	4730 (326)	

Union Crosses

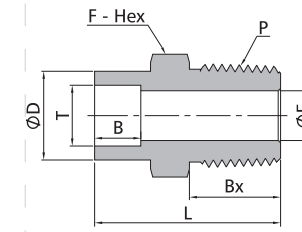


Fractional Tube						
T-Tube O.D. (in.)	t-Wall Thickness (in.)	Basic Ordering Number	Dimension, mm			Working Pressure psig (bar)
			L	B	F	
1/4	0.065	-UCW-FB4	16.3	9.7	9.5	10320 (712)
3/8	0.095	-UCW-FB6	18.0	9.7	11.1	9930 (685)
1/2	0.095	-UCW-FB8	24.4	14.2	14.3	6780 (468)
3/4	0.120	-UCW-FB12	33.3	19.1	20.6	5530 (381)
1	0.134	-UCW-FB16	37.1	19.1	27.0	4480 (309)

Metric Tube						
T-Tube O.D. (mm)	t-Wall Thickness (mm)	Basic Ordering Number	Dimension, mm			Working Pressure psig (bar)
			L	B	F	
6	1.8	-UCW-MB6	16.3	9.7	9.5	12660 (873)
8	1.8	-UCW-MB8	16.3	9.7	9.5	8320 (574)
10	2.2	-UCW-MB10	18.0	9.7	11.1	8160 (563)

Tube Socket Weld Fittings

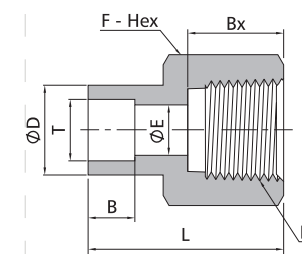
Male Connectors



Fractional Tube							NPT Thread			
T-Tube Size (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm						Working Pressure psig (bar)	
			L	D	B	Bx	F	E		
1/4	1/4	-MW-FS4-NT4	29.2	12.2	7.1	14.2	14.3	4.8	8000 (551)	
3/8	1/4	-MW-FS6-NT4	31.8	15.2	7.9	14.2	15.9	7.1	8000 (551)	
3/8	3/8	-MW-FS6-NT6	31.8	15.2	7.9	14.2	17.5	7.1	7800 (537)	
3/8	1/2	-MW-FS6-NT8	37.3	15.2	7.9	19.1	22.2	7.1	7700 (530)	
1/2	1/4	-MW-FS8-NT4	33.3	18.5	9.7	14.2	19.1	7.1	6600 (454)	
1/2	3/8	-MW-FS8-NT6	33.3	18.5	9.7	14.2	19.1	9.6	6600 (454)	
1/2	1/2	-MW-FS8-NT8	38.9	18.5	9.7	19.1	22.2	10.4	6600 (454)	
3/4	3/4	-MW-FS12-NT12	45.1	26.4	11.2	19.1	27.0	15.7	5900 (406)	
1	1	-MW-FS16-NT16	53.6	34.5	15.7	23.9	34.9	22.4	5300 (365)	

Metric Tube							NPT Thread			
T-Tube Size (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm						Working Pressure psig (bar)	
			L	D	B	Bx	F	E		
6	1/4	-MW-MW6-NT4	29.2	12.0	7.1	14.2	14	4.8	8000 (551)	
12	1/2	-MW-MW12-NT8	38.9	20.2	9.7	19.1	22	9.5	6820 (470)	
14	1/4	-MW-MW14-NT4	33.3	23.8	10.0	14.2	24	7.1	6930 (478)	
14	3/8	-MW-MW14-NT6	35.0	23.8	10.0	14.2	24	9.6	6930 (478)	
14	1/2	-MW-MW14-NT8	40.0	23.8	10.0	19.1	24	10.4	6930 (478)	
16	1/4	-MW-MW16-NT4	35.0	23.8	10.4	14.2	24	7.1	6190 (426)	
16	1/2	-MW-MW16-NT8	40.0	23.8	10.4	19.1	24	11.9	6190 (426)	
18	1/4	-MW-MW18-NT4	40.4	26.0	11.2	14.2	27	7.1	6050 (417)	
28	3/4	-MW-MW28-NT12	55.5	40.0	20.0	19.1	41	15.7	5040 (348)	
38	1 1/4	-MW-MW38-NT20	68.3	50.8	22.0	23.9	52	28.6	5000 (344)	

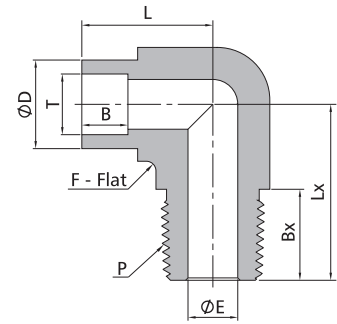
Female Connectors



Fractional Tube							NPT Thread			
T-Tube Size (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm						Working Pressure psig (bar)	
			L	D	B	Bx	F	E		
1/8	1/8	-FW-FS2-NT2	21.1	7.4	2.5	10.4	14.3	2.3	6500 (447)	
1/4	1/8	-FW-FS4-NT2	26.7	12.2	7.1	10.4	14.3	4.8	6500 (447)	
1/4	1/4	-FW-FS4-NT4	30.0	12.2	7.1	15.0	19.1	4.8	6600 (454)	
3/8	1/4	-FW-FS6-NT4	31.5	15.2	7.9	15.0	19.1	7.1	6600 (454)	
1/2	3/8	-FW-FS8-NT6	34.5	18.5	9.7	15.0	22.2	10.4	5300 (365)	
1/2	1/2	-FW-FS8-NT8	40.4	18.5	9.7	19.8	27.0	10.4	4900 (337)	
3/4	3/4	-FW-FS12-NT12	43.9	26.4	11.2	20.6	33.3	16.0	4600 (316)	
1	1	-FW-FS16-NT16	54.1	34.5	15.7	25.4	41.3	22.4	4400 (303)	

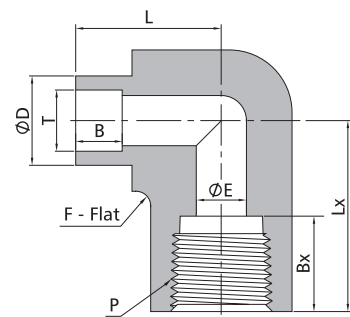
Metric Tube							NPT Thread			
T-Tube Size (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm						Working Pressure psig (bar)	
			L	D	B	Bx	F	E		
8	1/4	-FW-MW8-NT4	27.0	14.3	7.9	15.0	19	4.8	6600 (454)	
10	1/4	-FW-MW10-NT4	29.0	16.5	7.9	15.0	19	7.1	6600 (454)	
14	1/4	-FW-MW14-NT4	32.0	23.8	10.0	15.0	24	9.5	6930 (478)	
28	3/4	-FW-MW28-NT12	54.1	40.0	20.0	20.6	41	19.8	4600 (316)	

Male Elbows



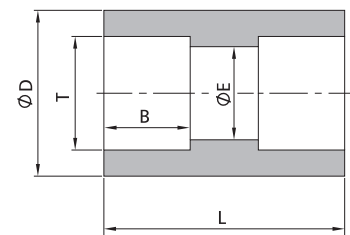
Fractional Tube			NPT Thread							
T-Tube Size (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm					Working Pressure psig (bar)		
			L	Lx	D	B	Bx		F	E
1/4	1/4	SS-LMW-FS4-NT4	20.1	26.7	14.7	7.1	14.2	12.7	4.8	8000 (551)
3/8	1/4	SS-LMW-FS6-NT4	26.4	26.7	14.7	7.9	14.2	12.7	7.1	8000 (551)
3/8	3/8	SS-LMW-FS6-NT6	24.6	29.7	20.2	7.9	14.2	17.5	7.1	7800 (537)
3/8	1/2	SS-LMW-FS6-NT8	25.9	36.8	23.8	7.9	19.1	20.6	7.1	7700 (530)
1/2	1/2	SS-LMW-FS8-NT8	27.4	36.8	23.8	9.7	19.1	20.6	10.4	6600 (454)
3/4	3/4	SS-LMW-FS12-NT12	38.9	39.6	26.4	11.2	19.1	27.0	15.7	5900 (406)

Female Elbows



Fractional Tube			NPT Thread							
T-Tube Size (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm					Working Pressure psig (bar)		
			L	Lx	D	B	Bx		F	E
1/4	1/4	SS-LFW-FS4-NT4	22.9	29.7	20.2	7.1	15.0	17.5	4.8	7400 (509)
3/8	1/4	SS-LFW-FS6-NT4	25.1	29.7	20.2	7.9	15.0	17.5	7.1	7400 (509)
3/8	1/2	SS-LFW-FS6-NT8	28.7	39.6	29.3	7.9	19.8	25.4	7.1	5700 (392)
1/2	1/2	SS-LFW-FS8-NT8	30.2	39.6	29.3	9.7	19.8	25.4	10.4	5700 (392)

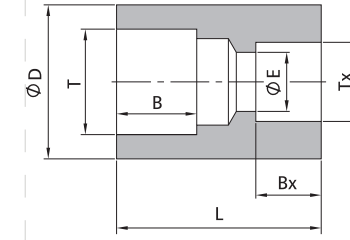
Unions



Fractional Tube		Dimension, mm				Working Pressure psig (bar)
T-Tube Size (in.)	Basic Ordering Number	L	D	B	E	
1/4	SS-UW-FS4	19.1	12.2	7.1	4.8	10700 (737)
3/8	SS-UW-FS6	22.4	15.2	7.9	7.1	8100 (558)
1/2	SS-UW-FS8	26.9	18.5	9.7	10.4	6600 (454)
5/8	SS-UW-FS10	30.2	23.4	10.4	12.7	6200 (427)
3/4	SS-UW-FS12	33.3	26.4	11.2	16.0	5900 (406)
7/8	SS-UW-FS14	35.5	31.5	12.7	18.8	5730 (395)
1	SS-UW-FS16	36.6	34.5	15.7	22.4	5600 (385)

Metric Tube		Dimension, mm				Working Pressure psig (bar)
T-Tube Size (mm)	Basic Ordering Number	L	D	B	E	
8	SS-UW-MW8	22.4	14.3	7.9	6.4	9790 (675)
10	SS-UW-MW10	23.6	16.5	7.9	7.4	8100 (558)
12	SS-UW-MW12	26.9	20.2	9.7	9.5	6820 (470)
14	SS-UW-MW14	28.0	23.8	10.0	10.4	6930 (478)
16	SS-UW-MW16	30.2	23.8	10.4	12.7	6190 (426)
20	SS-UW-MW20	28.0	27.0	11.2	17.0	5510 (380)

Reducing Unions

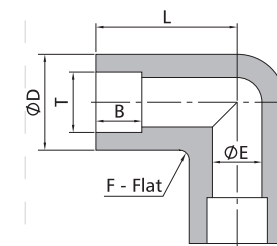


Fractional Tube			Fractional Tube					Working Pressure psig (bar)
T-Tube Size (in.)	Tx-Tube Size (in.)	Basic Ordering Number	Dimension, mm					
			L	D	B	E	Bx	
3/8	1/4	-UW-FS6-FS4	22.4	15.2	7.9	4.8	7.1	8100 (558)
1/2	1/4	-UW-FS8-FS4	24.3	18.5	9.7	4.8	7.1	6600 (454)
1/2	3/8	-UW-FS8-FS6	26.1	18.5	9.7	7.1	7.9	6600 (454)
3/4	3/8	-UW-FS12-FS6	29.8	26.4	11.2	7.1	7.9	5900 (406)
3/4	1/2	-UW-FS12-FS8	31.6	26.4	11.2	10.4	9.7	5900 (406)
1	3/4	-UW-FS16-FS12	32.1	34.5	15.7	16.0	11.2	5600 (385)

Metric Tube			Metric Tube					Working Pressure psig (bar)
T-Tube Size (mm)	Tx-Tube Size (mm)	Basic Ordering Number	Dimension, mm					
			L	D	B	E	Bx	
14	10	-UW-MW14-MW10	26.0	23.8	10.4	7.4	7.9	6930 (478)
25	14	-UW-MW25-MW14	30.0	34.5	15.7	10.4	10.0	5450 (376)
25	22	-UW-MW25-MW22	35.8	34.5	15.7	19.0	13.5	5450 (376)

Metric Tube			Fractional Tube					Working Pressure psig (bar)
T-Tube Size (mm)	Tx-Tube Size (in.)	Basic Ordering Number	Dimension, mm					
			L	D	B	E	Bx	
20	3/4	-UW-MW20-FS12	28.0	27.0	11.2	15.7	11.2	5510 (380)
28	3/4	-UW-MW28-FS12	36.8	40.0	20.0	15.7	11.2	5040 (348)

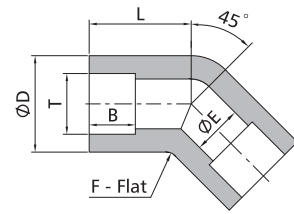
Union Elbows



Fractional Tube		Dimension, mm					Working Pressure psig (bar)
T-Tube Size (in.)	Basic Ordering Number	L	D	B	F	E	
1/8	-UEW-FS2	15.0	11.0	2.5	9.5	2.3	12600 (863)
1/4	-UEW-FS4	21.8	12.8	7.1	11.1	4.8	10700 (737)
3/8	-UEW-FS6	26.4	16.5	7.9	14.3	7.1	8100 (558)
1/2	-UEW-FS8	29.7	20.2	9.7	17.5	10.4	6600 (454)
5/8	-UEW-FS10	36.1	23.8	10.4	20.6	12.7	6200 (427)
3/4	-UEW-FS12	39.6	29.3	11.2	25.4	16.0	5900 (406)
1	-UEW-FS16	48.8	36.7	15.7	31.8	22.4	5600 (385)

Metric Tube		Dimension, mm					Working Pressure psig (bar)
T-Tube Size (mm)	Basic Ordering Number	L	D	B	F	E	
10	-UEW-MW10	24.6	16.5	7.9	14.3	7.4	8100 (558)
12	-UEW-MW12	29.7	20.2	9.7	17.5	9.5	6820 (470)
14	-UEW-MW14	31.7	23.8	10.0	20.6	10.4	6930 (478)
16	-UEW-MW16	34.7	23.8	10.4	20.6	12.7	6190 (426)

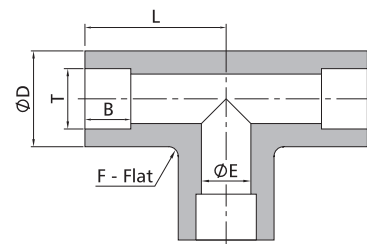
Union 45° Elbows



Fractional Tube		Dimension, mm					Working Pressure psig (bar)
T-Tube Size (in.)	Basic Ordering Number	L	D	B	F	E	
1/4	SS-VW-FS4	15.0	14.7	7.1	12.7	4.8	10700 (737)
3/8	SS-VW-FS6	19.1	16.5	7.9	14.3	7.1	8100 (558)
1/2	SS-VW-FS8	21.3	20.2	9.7	17.5	10.4	6600 (454)
3/4	SS-VW-FS12	28.7	29.3	11.2	25.4	16.0	5900 (406)
1	SS-VW-FS16	31.8	36.7	15.7	31.8	22.4	5600 (385)

Metric Tube		Dimensions, mm					Working Pressure psig (bar)
T-Tube Size (mm)	Basic Ordering Number	L	D	B	F	E	
8	SS-VW-MW8	17.3	14.7	7.9	12.7	6.4	9790 (675)
10	SS-VW-MW10	19.1	16.5	7.9	14.3	7.4	8100 (558)
12	SS-VW-MW12	21.3	20.2	9.7	17.5	9.5	6820 (470)
14	SS-VW-MW14	26.4	23.8	10.0	20.6	10.4	6930 (478)
16	SS-VW-MW16	26.4	23.8	10.4	20.6	12.7	6190 (426)
20	SS-VW-MW20	28.7	29.3	11.2	25.4	17.0	5510 (380)
22	SS-VW-MW22	29.7	31.2	13.5	27.0	19.0	6850 (472)
25	SS-VW-MW25	31.8	36.7	15.7	31.8	22.0	5450 (376)

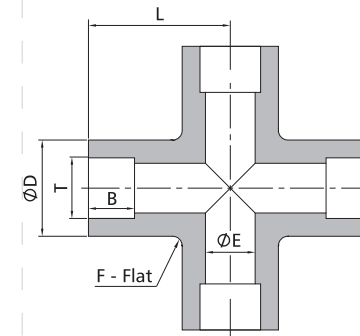
Union Tees



Fractional Tube		Dimension, mm					Working Pressure psig (bar)
T-Tube Size (in.)	Basic Ordering Number	L	D	B	F	E	
1/8	-UTW-FS2	15.0	10.0	2.5	11.1	2.3	12600 (868)
1/4	-UTW-FS4	21.8	12.8	7.1	11.1	4.8	10700 (737)
3/8	-UTW-FS6	26.4	16.5	7.9	14.3	7.1	8100 (558)
1/2	-UTW-FS8	29.7	20.2	9.7	17.5	10.4	6600 (454)
5/8	-UTW-FS10	36.1	23.8	10.4	20.6	12.7	6200 (428)
3/4	-UTW-FS12	39.6	29.3	11.2	25.4	16.0	5900 (406)
1	-UTW-FS16	48.8	36.7	15.7	31.8	22.4	5600 (385)

Metric Tube		Dimension, mm					Working Pressure psig (bar)
T-Tube Size (mm)	Basic Ordering Number	L	D	B	F	E	
8	-UTW-MW8	19.8	14.7	7.9	12.7	6.4	9790 (675)
10	-UTW-MW10	24.6	16.5	7.9	14.3	7.4	8100 (558)
12	-UTW-MW12	29.7	20.2	9.7	17.5	9.5	6820 (470)
14	-UTW-MW14	31.7	23.8	10.0	20.6	10.4	6930 (478)
16	-UTW-MW16	36.0	23.8	10.4	20.6	12.7	6190 (426)
20	-UTW-MW20	39.6	29.3	11.2	25.4	17.0	5510 (380)
22	-UTW-MW22	41.3	31.2	13.5	27.0	19.0	6850 (472)
25	-UTW-MW25	48.8	36.7	15.7	31.8	22.0	5450 (376)

Union Crosses

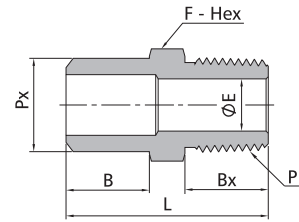


Fractional Tube		Dimension, mm					Working Pressure psig (bar)
T-Tube Size (in.)	Basic Ordering Number	L	D	B	F	E	
1/8	-UCW-FS2	15.0	11.0	2.5	11.1	2.3	12600 (863)
1/4	-UCW-FS4	21.8	12.8	7.1	11.1	4.8	10700 (737)
3/8	-UCW-FS6	26.4	14.7	7.9	12.7	7.1	8100 (558)
1/2	-UCW-FS8	29.7	20.2	9.7	17.5	10.4	6600 (454)
5/8	-UCW-FS10	36.1	23.8	10.4	20.6	12.7	6200 (428)
3/4	-UCW-FS12	39.6	29.3	11.2	25.4	16.0	5900 (406)
1	-UCW-FS16	48.8	36.7	15.7	31.8	22.4	5600 (385)

Metric Tube		Dimension, mm					Working Pressure psig (bar)
T-Tube Size (mm)	Basic Ordering Number	L	D	B	F	E	
8	-UCW-MW8	19.8	14.7	7.9	12.7	6.4	9790 (675)
10	-UCW-MW10	24.6	16.5	7.9	14.3	7.1	8100 (558)
12	-UCW-MW12	29.7	20.2	9.7	17.5	9.5	6820 (470)
14	-UCW-MW14	31.7	23.8	10.0	20.6	10.4	6930 (478)
16	-UCW-MW16	36.0	23.8	10.4	20.6	12.7	6190 (426)
20	-UCW-MW20	39.6	29.3	11.2	25.4	17.0	5510 (380)
22	-UCW-MW22	41.3	31.2	13.5	27.0	19.0	6850 (472)
25	-UCW-MW25	48.8	36.7	15.7	31.8	22.0	5450 (376)

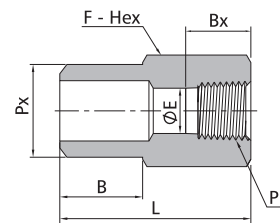
Pipe Butt Weld Fittings

Male Connectors



Pipe			NPT Thread						
Px-Sch80 Pipe Size	P-NPT Size	Basic Ordering Number	Dimension, mm					Working Pressure psig (bar)	
			L	B	Bx	F	E		
1/4	1/4	-MW-PB4-NT4	34.3	14.2	14.2	14.3	7.1	8000 (551)	
1/4	1/2	-MW-PB4-NT8	41.3	14.2	19.1	22.2	7.7	7700 (537)	
3/8	1/4	-MW-PB6-NT4	34.8	14.2	14.2	17.5	7.1	6650 (459)	
3/8	1/2	-MW-PB6-NT8	41.3	14.2	19.1	22.2	10.7	6650 (459)	
1/2	1/4	-MW-PB8-NT4	41.3	19.1	14.2	22.2	7.1	6190 (427)	
1/2	1/2	-MW-PB8-NT8	46.2	19.1	19.1	22.2	11.9	6190 (427)	
3/4	1/4	-MW-PB12-NT4	42.9	19.1	14.2	27.0	7.1	5040 (348)	
3/4	1/2	-MW-PB12-NT8	47.8	19.1	19.1	27.0	11.9	5040 (348)	
1	1/4	-MW-PB16-NT4	50.0	23.9	14.2	34.9	7.1	4640 (320)	
1	1/2	-MW-PB16-NT8	54.9	23.9	19.1	34.9	11.9	4640 (320)	

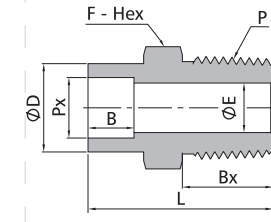
Female Connectors



Pipe			NPT Thread						
Px-Sch80 Pipe Size	P-NPT Size	Basic Ordering Number	Dimension, mm					Working Pressure psig (bar)	
			L	B	Bx	F	E		
1/4	1/2	-FW-PB4-NT8	38.9	14.2	19.8	27.0	7.6	4900 (337)	
3/8	1/2	-FW-PB6-NT8	38.9	14.2	19.8	27.0	10.7	4900 (337)	
1/2	1/4	-FW-PB8-NT4	37.3	19.1	15.0	22.2	10.4	7500 (516)	
1/2	1/2	-FW-PB8-NT8	43.7	19.1	19.8	27.0	13.9	4900 (337)	

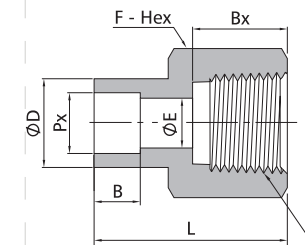
Pipe Socket Weld Fittings

Male Connectors



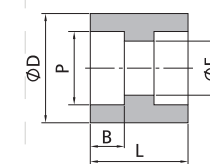
Pipe			NPT Thread						
Px-Pipe Size	P-NPT Size	Basic Ordering Number	Dimension, mm					Working Pressure psig (bar)	
			L	D	B	Bx	F		E
1/4	1/4	-MW-PS4-NT4	35.2	22.4	9.9	14.2	23.8	7.1	8000 (551)
1/4	1/2	-MW-PS4-NT8	40.0	22.4	9.9	19.1	23.8	9.1	7700 (530)
3/8	3/8	-MW-PS6-NT6	38.0	26.2	9.9	14.2	27.0	9.7	7100 (489)
3/8	1/2	-MW-PS6-NT8	42.9	26.2	9.9	19.1	27.0	11.9	7100 (489)
1/2	3/8	-MW-PS8-NT6	40.3	31.8	9.9	14.2	33.3	9.7	6800 (468)
1/2	1/2	-MW-PS8-NT8	45.2	31.8	9.9	19.1	33.3	11.9	6800 (468)
3/4	1/2	-MW-PS12-NT8	54.3	37.3	13.0	19.1	38.1	11.9	5800 (399)
3/4	3/4	-MW-PS12-NT12	54.3	37.3	13.0	19.1	38.1	15.7	5800 (399)
1	3/4	-MW-PS16-NT12	55.8	47.2	13.0	19.1	47.6	15.7	6100 (420)
1	1	-MW-PS16-NT16	60.6	47.2	13.0	23.9	47.6	22.4	5300 (365)

Female Connectors



Pipe			NPT Thread						
Px-Pipe Size	P-NPT Size	Basic Ordering Number	Dimension, mm					Working Pressure psig (bar)	
			L	D	B	Bx	F		E
1/4	1/4	-FW-PS4-NT4	33.5	22.4	9.9	15.0	23.8	9.1	8000 (551)
1/4	3/8	-FW-PS4-NT6	33.5	22.4	9.9	15.0	23.8	9.1	6790 (463)
3/8	3/8	-FW-PS6-NT6	34.1	26.2	9.9	15.0	27.0	12.4	7100 (489)
3/8	1/2	-FW-PS6-NT8	39.1	26.2	9.9	19.8	27.0	12.4	4900 (337)
1/2	1/2	-FW-PS8-NT8	40.0	31.8	9.9	19.8	33.3	15.7	6800 (468)
1/2	3/4	-FW-PS8-NT12	40.6	31.8	9.9	20.6	33.3	15.7	4600 (316)
3/4	3/4	-FW-PS12-NT12	53.2	37.3	13.0	20.6	38.1	20.8	5800 (399)
3/4	1	-FW-PS12-NT16	58.1	37.3	13.0	25.4	41.3	20.8	4400 (303)

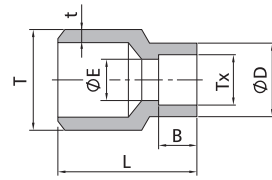
Unions



Pipe		Dimension, mm					Working Pressure psig (bar)
P-Pipe Size	Basic Ordering Number	L	D	B	E		
1/8	-UW-PS2	25.7	17.1	9.9	7.0	8230 (568)	
1/4	-UW-PS4	26.9	22.4	9.9	9.1	8000 (551)	
3/8	-UW-PS6	28.4	26.2	9.9	12.4	7100 (489)	
1/2	-UW-PS8	29.5	31.8	9.9	15.7	6800 (468)	
3/4	-UW-PS12	44.5	37.3	13.0	20.8	5800 (399)	
1	-UW-PS16	44.5	47.2	13.0	26.7	6100 (420)	

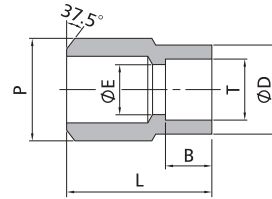
Weld Adapters

Tube Butt Weld to Tube Socket Weld



Fractional Tube									
T-Tube O.D. (in.)	t-Wall Thickness (in.)	Tx-Tube Size (in.)	Basic Ordering Number	Dimension, mm				Working Pressure psig (bar)	
				L	B	D	E		
1/4	0.083	1/8	-BAW-FB4-FS2	14.2	2.5	8.0	2.3	12600 (868)	
3/8	0.095	1/4	-BAW-FB6-FS4	19.1	7.1	12.2	4.8	8200 (564)	
1/2	0.095	1/4	-BAW-FB8-FS4	22.4	7.1	12.7	4.8	7500 (516)	
1/2	0.095	3/8	-BAW-FB8-FS6	22.4	7.9	15.2	7.1	7500 (516)	
3/4	0.120	1/2	-BAW-FB12-FS8	28.4	9.7	18.5	10.4	6300 (434)	
1	0.134	1/2	-BAW-FB16-FS8	35.1	9.7	18.5	10.4	5300 (365)	
1	0.134	3/4	-BAW-FB16-FS12	38.1	11.2	26.4	16.0	5300 (365)	

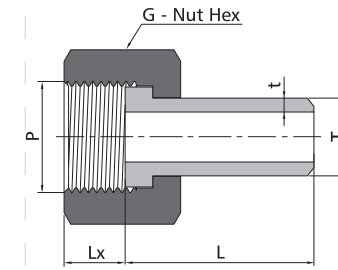
Pipe Butt Weld to Tube Socket Weld



Pipe		Fractional Tube						
P-Sch80 Pipe Size	T-Tube Size (in.)	Basic Ordering Number	Dimension, mm				Working Pressure psig (bar)	
			L	B	D	E		
1/4	1/4	-BAW-PB4-FS4	22.4	7.1	12.2	4.8	10810 (744)	
3/8	1/4	-BAW-PB6-FS4	26.2	7.9	12.2	4.8	8500 (586)	
3/8	3/8	-BAW-PB6-FS6	26.2	7.9	15.2	7.1	8500 (586)	
3/8	1/2	-BAW-PB6-FS8	25.4	9.7	18.5	10.4	6930 (476)	
1/2	1/4	-BAW-PB8-FS4	28.4	7.1	12.2	4.8	8190 (563)	
1/2	3/8	-BAW-PB8-FS6	28.4	7.9	15.2	7.1	8190 (563)	
1/2	1/2	-BAW-PB8-FS8	30.2	9.7	18.5	10.4	6930 (476)	
3/4	1/4	-BAW-PB12-FS4	38.1	7.1	12.2	4.8	6930 (476)	
3/4	3/8	-BAW-PB12-FS6	38.1	7.9	15.2	7.1	6930 (476)	
3/4	1/2	-BAW-PB12-FS8	38.1	9.7	18.5	10.4	6930 (476)	
3/4	3/4	-BAW-PB12-FS12	38.1	11.2	26.4	16.0	6190 (483)	
1	3/8	-BAW-PB16-FS6	35.1	7.9	15.2	7.1	6300 (434)	
1	1/2	-BAW-PB16-FS8	39.6	9.7	18.5	10.4	6300 (434)	

Pipe to Weld Fittings

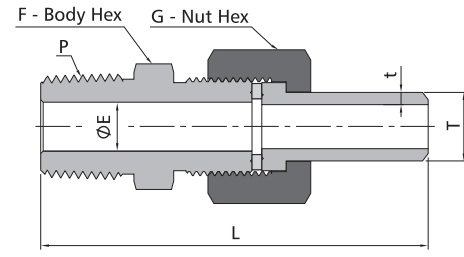
Pipe to Tube Butt Weld



ISO Parallel Thread				Metric Tube			
P-ISO Thread Size	T-Tube O.D. (mm)	t-Wall Thickness (mm)	Basic Ordering Number	Dimension, mm			Working Pressure psig (bar)
				L	G	Lx	
1/2	12	2.2	-PBW-RG8-MB12	34	27.0	11	6470 (446)
1/2	14	2.5	-PBW-RG8-MB14	34	27.0	11	6280 (433)
1/2	16	2.8	-PBW-RG8-MB16	34	27.0	11	6140 (423)

Metric Thread				Metric Tube			
P-Metric Thread Size	T-Tube O.D. (mm)	t-Wall Thickness (mm)	Basic Ordering Number	Dimension, mm			Working Pressure psig (bar)
				L	G	Lx	
M12 x 1.5	6	1.8	-PBW-MS12-MB6	25	16	9	12660 (873)
M12 x 1.5	8	1.8	-PBW-MS12-MB8	30	16	9	8320 (574)
M14 x 1.5	8	1.8	-PBW-MS14-MB8	30	18	9	8320 (574)
M14 x 1.5	10	2.2	-PBW-MS14-MB10	30	18	9	8160 (563)
M16 x 1.5	8	1.8	-PBW-MS16-MB8	30	22	9	8320 (574)
M16 x 1.5	10	2.2	-PBW-MS16-MB10	30	22	9	8160 (563)
M16 x 1.5	12	2.2	-PBW-MS16-MB12	34	22	9	6470 (446)
M18 x 1.5	10	2.2	-PBW-MS18-MB10	34	22	10	8160 (563)
M18 x 1.5	12	2.2	-PBW-MS18-MB12	34	22	10	6470 (446)
M18 x 1.5	14	2.5	-PBW-MS18-MB14	34	22	10	6280 (433)
M20 x 1.5	10	2.2	-PBW-MS20-MB10	34	25	11	8160 (563)
M20 x 1.5	12	2.2	-PBW-MS20-MB12	34	25	11	6470 (446)
M20 x 1.5	14	2.5	-PBW-MS20-MB14	34	25	11	6280 (433)
M20 x 1.5	15	2.5	-PBW-MS20-MB15	34	25	11	6160 (425)
M20 x 1.5	16	2.8	-PBW-MS20-MB16	34	25	11	6140 (423)
M22 x 1.5	14	2.5	-PBW-MS22-MB14	34	27	11	6280 (433)
M22 x 1.5	16	2.8	-PBW-MS22-MB16	34	27	11	6140 (423)
M24 x 1.5	16	2.8	-PBW-MS24-MB16	34	30	11	6140 (423)
M24 x 1.5	18	2.8	-PBW-MS24-MB18	34	30	11	5670 (392)
M24 x 1.5	20	3.0	-PBW-MS24-MB20	34	30	11	5110 (352)
M27 x 2	14	2.5	-PBW-MS27-MB14	34	32	14	6280 (433)
M27 x 2	16	2.8	-PBW-MS27-MB16	34	32	14	6140 (423)
M27 x 2	18	2.8	-PBW-MS27-MB18	34	32	14	5670 (392)
M27 x 2	20	3.0	-PBW-MS27-MB20	40	32	14	5110 (352)
M27 x 2	22	3.0	-PBW-MS27-MB22	40	32	14	4620 (319)
M30 x 2	22	3.0	-PBW-MS30-MB22	40	35	18	4620 (319)
M30 x 2	25	3.5	-PBW-MS30-MB25	45	35	18	4730 (326)
M33 x 2	28	4.0	-PBW-MS33-MB28	45	41	18	5160 (356)
M36 x 2	30	4.0	-PBW-MS36-MB30	45	41	18	4760 (328)

Male Pipe to Tube Butt Weld



P-NPT Size	NPT Thread			Metric Tube				Working Pressure psig (bar)
	T-Tube O.D. (mm)	t-Wall Thickness (mm)	Basic Ordering Number	Dimension, mm				
				L	F	G	E	
1/8	14	2.5	-MPW-NT2-MB14	69	19	22	4.8	6280 (433)
1/4	6	1.8	-MPW-NT4-MB6	60	14	14	3	8240 (566)
1/4	8	1.8	-MPW-NT4-MB8	73.2	14	16	4	8240 (566)
1/4	10	2.2	-MPW-NT4-MB10	73.2	15	18	6	8160 (563)
1/4	12	2.2	-MPW-NT4-MB12	73.2	18	22	7	6470 (446)
1/4	14	2.5	-MPW-NT4-MB14	73.2	19	22	7.1	6280 (433)
1/4	16	2.8	-MPW-NT4-MB16	73.2	22	25	7.1	6140 (423)
1/4	18	2.8	-MPW-NT4-MB18	74.2	24	27	7.1	5670 (392)
3/8	14	2.5	-MPW-NT6-MB14	73.2	19	22	9.7	6280 (433)
1/2	12	2.2	-MPW-NT8-MB12	78	18	22	7	6470 (446)
1/2	14	2.5	-MPW-NT8-MB14	78	19	22	9	6280 (433)
1/2	16	2.8	-MPW-NT8-MB16	78	22	25	10	6140 (423)
1/2	22	3.0	-MPW-NT8-MB22	82	30	32	11.9	4620 (319)
1/2	25	2.8	-MPW-NT8-MB25	86	32	35	11.9	4730 (326)
1	25	3.5	-MPW-NT16-MB25	103	35	35	17	4730 (326)

Ordering Information

