

Butt Weld Fittings

M and L Series



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FK-IC-SF-04-EN-150916

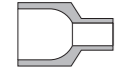
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Valves and Fittings

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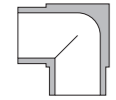
Micro Weld Fittings M Series

Reducing Unions - WU1



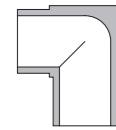
02

90° Union Elbows - WL1



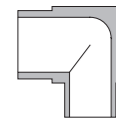
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Extended Leg 90° Union Elbow - WL1



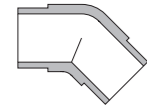
03

Reducing 90° Union Elbows - WL1



03

45° Union Elbows - WV1



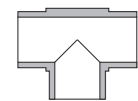
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Tribows - WB1



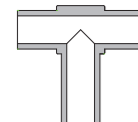
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Union Tees - WT1



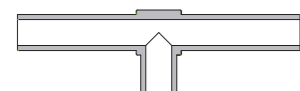
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Extended Branch Leg Union Tees - WT1



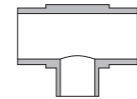
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Extended Run Leg Union Tees - WT1



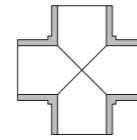
05

Reducing Tees - WT1



05

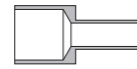
Union Crosses - WC1



06

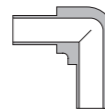
Tube Butt Weld Fittings L Series

Reducing Unions - WU2



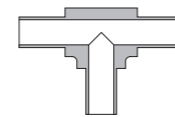
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Union Elbows - WL2



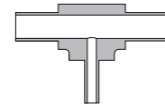
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Union Tees - WT2



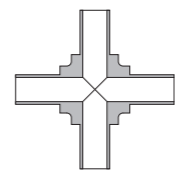
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Reducing Tees - WT2



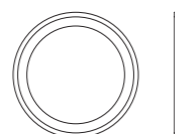
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Union Crosses - WC2



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Weld Rings

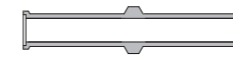


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Automatic Tube Butt Weld Fittings

Locator Unions - WU2



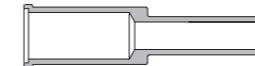
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Unions - WU2



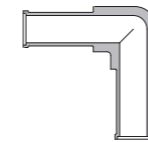
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Reducing Unions - WU2



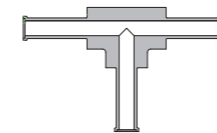
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90° Union Elbows - WL2



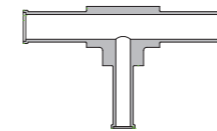
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Union Tees - WT2



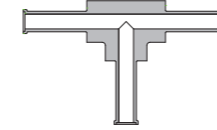
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Reducing Tees - WT2



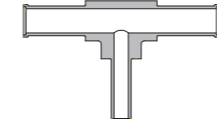
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Manifold Tees - WT2



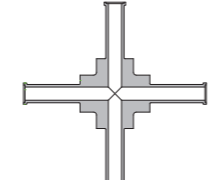
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Reducing Tees - WT2



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Union Crosses - WC2



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Micro Weld Fittings

M Series

Features

- Sizes range from 1/8" to 1/2" and 6 mm to 12 mm.
- Radius junction design with elbows provides smooth flow path.
- Compact design allows close component spacing.
- Square, sharp, burr-free tube weld ends enhance alignment, maintain tube wall uniformity, and promote weld repeatability.
- Standard surface finish is a roughness average of 10 µin. (0.25 µm) Ra. With 5 µin. (0.13 µm) Ra surface finish is available.
- Each fitting is stamped with size, material and heat code.



Materials

Material	Bar Stock	Designator
316 SS	ASTM A479/A276	SS
316L SS		6L
316L VAR SS	ASTM A479/A276 SEMI F20	6LV
316L VIM-VAR SS		6LW

Working Temperatures

Material	Minimum Temperature	Maximum Temperature
316 SS	-325°F (-198°C)	1000°F (538°C)
316L SS	-325°F (-198°C)	850°F (454°C)
316L VAR SS		
316L VIM-VAR SS		

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 find out the elevated temperature factor, please refer to the related information of FITOK Tubes and Pipe in page 11.

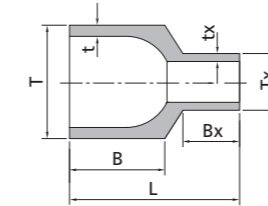
Ordering Information

- Dimensions are for reference only and are subject to change.
- Add the material designator as a prefix, Wetted Surface Finish code or Cleaning and Packaging code as a suffix to the basic ordering number to get the complete ordering number.
- Standard Process Specification
FC-01 standard cleaning and packaging, is applied to all the fittings for general industrial procedure. No suffix is required.
Example: **6L-WT1-TB4**.
- Special Cleaning and Packaging
FC-02 special cleaning and packaging, following ASTM G93 level C, add -F2 as a suffix to the basic ordering number.
Example: **6L-WT1-TB4-F2**.
- Ultrahigh-purity Process Specification
FC-03 ultrahigh-purity cleaning and packaging, Wetted surfaces are finished to 5 µin. (0.13 µm) Ra. add - F3 as a suffix to the basic ordering number.
Example: **6LW-WT1-TB4-F3**.

Cautions:

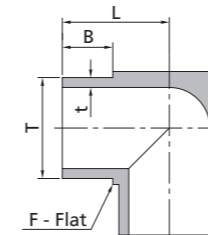
- Using the same materials to weld will ensure the same coefficients of expansion and good weld.
- Tungsten Inert Gas Welding (TIG) is recommended.

Reducing Unions



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Tx-Tube O.D. (in.)	tx-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
					L	B	Bx	
1/4	0.035	1/8	0.028	6LV-WU1-TB4-TB2	0.75 (19.1)	0.42 (10.7)	0.25 (6.4)	5100 (351)
3/8	0.035	1/4	0.035	6LV-WU1-TB6-TB4	0.75 (19.1)	0.42 (10.7)	0.25 (6.4)	3300 (227)
1/2	0.049	1/4	0.035	6LV-WU1-TB8-TB4	0.75 (19.1)	0.42 (10.7)	0.25 (6.4)	3700 (254)
1/2	0.049	3/8	0.035	6LV-WU1-TB8-TB6	0.75 (19.1)	0.42 (10.7)	0.25 (6.4)	3300 (227)

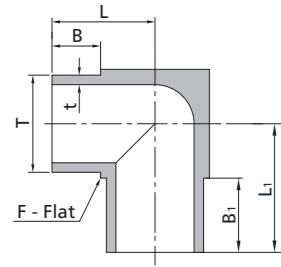
90° Union Elbows



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
			L	B	F	
1/8	0.028	6LW-WL1-TB2	0.41 (10.4)	0.25 (6.4)	5/16 (7.9)	8500 (585)
1/4	0.035	6LW-WL1-TB4	0.41 (10.4)	0.25 (6.4)	5/16 (7.9)	5100 (351)
3/8	0.035	6LW-WL1-TB6	0.47 (11.9)	0.25 (6.4)	7/16 (11.1)	3300 (227)
1/2	0.049	6LW-WL1-TB8	0.53 (13.5)	0.25 (6.4)	9/16 (14.3)	3700 (254)

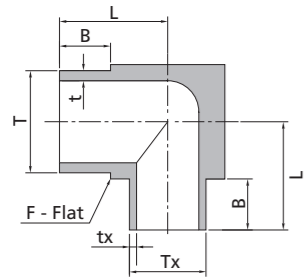
T-Tube O.D. (mm)	t-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)			Working Pressure bar (psig)
			L	B	F	
6	1.0	6LW-WL1-MTB6	10.4 (0.41)	6.4 (0.25)	7.9 (5/16)	420 (6095)
8	1.0	6LW-WL1-MTB8	11.9 (0.47)	6.4 (0.25)	11.1 (7/16)	310 (4499)
10	1.0	6LW-WL1-MTB10	11.9 (0.47)	6.4 (0.25)	11.1 (7/16)	240 (3483)
12	1.0	6LW-WL1-MTB12	13.5 (0.53)	6.4 (0.25)	14.3 (9/16)	200 (2902)

Extended Leg 90° Union Elbow



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)					Working Pressure psig (bar)
			B	B ₁	F	L	L ₁	
1/4	0.035	6LW-WL1-TB4-1	0.25 (6.4)	0.45 (11.4)	5/16 (7.9)	0.41 (10.4)	0.61 (15.5)	5100 (351)
1/4	0.035	6LW-WL1-TB4-2	0.25 (6.4)	0.50 (12.7)	5/16 (7.9)	0.41 (10.4)	0.66 (16.8)	5100 (351)
1/4	0.035	6LW-WL1-TB4-3	0.45 (11.4)	0.45 (11.4)	5/16 (7.9)	0.61 (15.5)	0.61 (15.5)	5100 (351)
1/4	0.035	6LW-WL1-TB4-4	0.50 (12.7)	0.50 (12.7)	5/16 (7.9)	0.66 (16.8)	0.66 (16.8)	5100 (351)

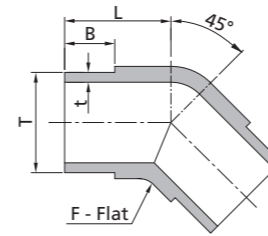
Reducing 90° Union Elbows



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Tx-Tube O.D. (in.)	tx-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
					L	B	F	
3/8	0.035	1/4	0.035	6LW-WL1-TB6-TB4	0.47 (11.9)	0.25 (6.4)	7/16 (11.1)	3300 (227)
1/2	0.049	1/4	0.035	6LW-WL1-TB8-TB4	0.53 (13.5)	0.25 (6.4)	9/16 (14.3)	3700 (254)
1/2	0.049	3/8	0.035	6LW-WL1-TB8-TB6	0.53 (13.5)	0.25 (6.4)	9/16 (14.3)	3300 (227)

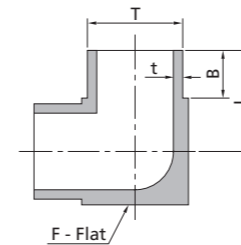
T-Tube O.D. (mm)	t-Wall Thickness (mm)	Tx-Tube O.D. (mm)	tx-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)			Working Pressure bar (psig)
					L	B	F	
8	1.0	6	1.0	6LW-WL1-MTB8-MTB6	11.9 (0.47)	6.4 (0.25)	11.1 (7/16)	310 (4499)
10	1.0	6	1.0	6LW-WL1-MTB10-MTB6	11.9 (0.47)	6.4 (0.25)	11.1 (7/16)	240 (3483)
12	1.0	6	1.0	6LW-WL1-MTB12-MTB6	13.5 (0.53)	6.4 (0.25)	14.3 (9/16)	200 (2902)
12	1.0	8	1.0	6LW-WL1-MTB12-MTB8	13.5 (0.53)	6.4 (0.25)	14.3 (9/16)	200 (2902)

45° Union Elbows

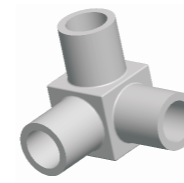


T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
			L	B	F	
1/4	0.035	6LW-WV1-TB4	0.41 (10.4)	0.25 (6.4)	5/16 (7.9)	5100 (351)
3/8	0.035	6LW-WV1-TB6	0.47 (11.9)	0.25 (6.4)	7/16 (11.1)	3300 (227)
1/2	0.049	6LW-WV1-TB8	0.53 (13.5)	0.25 (6.4)	9/16 (14.3)	3700 (254)

Tribows

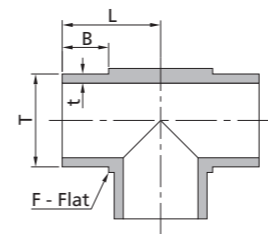


T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
			L	B	F	
1/4	0.035	6LW-WB1-TB4	0.41 (10.4)	0.25 (6.4)	5/16 (7.9)	5100 (351)
3/8	0.035	6LW-WB1-TB6	0.47 (11.9)	0.25 (6.4)	7/16 (11.1)	3300 (227)
1/2	0.049	6LW-WB1-TB8	0.53 (13.5)	0.25 (6.4)	9/16 (14.3)	3700 (254)



T-Tube O.D. (mm)	t-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)			Working Pressure bar (psig)
			L	B	F	
6	1.0	6LW-WB1-MTB6	10.4 (0.41)	6.4 (0.25)	7.9 (5/16)	420 (6095)

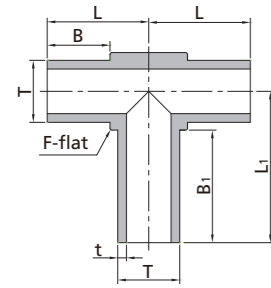
Union Tees



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working pressure psig (bar)
			L	B	F	
1/8	0.028	6LW-WT1-TB2	0.41 (10.4)	0.25 (6.4)	5/16 (7.9)	8500 (585)
1/4	0.035	6LW-WT1-TB4	0.41 (10.4)	0.25 (6.4)	5/16 (7.9)	5100 (351)
3/8	0.035	6LW-WT1-TB6	0.47 (11.9)	0.25 (6.4)	7/16 (11.1)	3300 (227)
1/2	0.049	6LW-WT1-TB8	0.53 (13.5)	0.25 (6.4)	9/16 (14.3)	3700 (254)

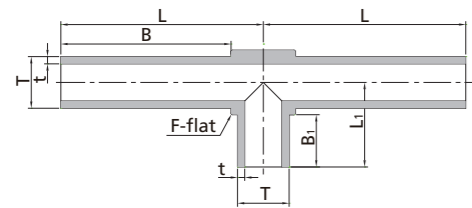
T-Tube O.D. (mm)	t-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)			Working pressure bar (psig)
			L	B	F	
6	1.0	6LW-WT1-MTB6	10.4 (0.41)	6.4 (0.25)	7.9 (5/16)	420 (6095)
8	1.0	6LW-WT1-MTB8	11.9 (0.47)	6.4 (0.25)	11.1 (7/16)	310 (4499)
10	1.0	6LW-WT1-MTB10	11.9 (0.47)	6.4 (0.25)	11.1 (7/16)	240 (3483)
12	1.0	6LW-WT1-MTB12	13.5 (0.53)	6.4 (0.25)	14.3 (9/16)	200 (2902)

Extended Branch Leg Union Tees



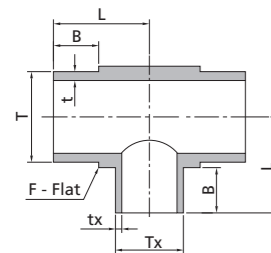
T-Tube O.D. (in.)	Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)					Working pressure psig (bar)
			L	L ₁	B	B ₁	F	
1/4	0.035	6LW-WT1-TB4-45	0.41 (10.4)	0.61 (15.5)	0.25 (6.4)	0.45 (11.4)	5/16 (7.9)	5100 (351)

Extended Run Leg Union Tees



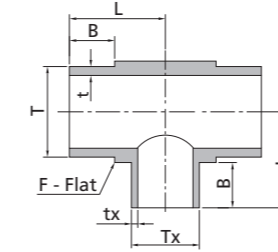
T-Tube O.D. (in.)	Wall (in.)	Ordering Number	Dimension, in. (mm)					Working pressure psig (bar)
			L	L ₁	B	B ₁	F	
1/4	0.035	6LW-WT1-TB4-98	0.98 (24.9)	0.41 (10.4)	0.83 (21.1)	0.25 (6.4)	5/16 (7.9)	5100 (351)

Reducing Tees



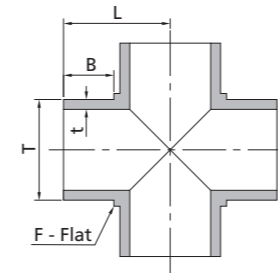
T-Tube O.D. (in.)	T-Wall Thickness (in.)	Tx-Tube O.D. (in.)	tx-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
					L	B	F	
3/8	0.035	1/4	0.035	6LW-WT1-TB6-TB6-TB4	0.47 (11.9)	0.25 (6.4)	7/16 (11.1)	3300 (227)
1/2	0.049	1/4	0.035	6LW-WT1-TB8-TB8-TB4	0.53 (13.5)	0.25 (6.4)	9/16 (14.3)	3700 (254)
1/2	0.049	3/8	0.035	6LW-WT1-TB8-TB8-TB6	0.53 (13.5)	0.25 (6.4)	9/16 (14.3)	3300 (227)

Reducing Tees



T-Tube O.D. (mm)	T-Wall Thickness (mm)	Tx-Tube O.D. (mm)	tx-Wall Thickness (mm.)	Ordering Number	Dimension, mm (in.)			Working Pressure bar (psig)
					L	B	F	
10	1.0	6	1.0	6LW-WT1-MTB10-MTB10-MTB6	11.9 (0.47)	6.4 (0.25)	11.1 (7/16)	240 (3483)
12	1.0	6	1.0	6LW-WT1-MTB12-MTB12-MTB6	0.53 (13.5)	6.4 (0.25)	14.3 (9/16)	200 (2902)
12	1.0	8	1.0	6LW-WT1-MTB12-MTB12-MTB8	0.53 (13.5)	6.4 (0.25)	14.3 (9/16)	200 (2902)

Union Crosses



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
			L	B	F	
1/8	0.028	6LW-WC1-TB2	0.41 (10.4)	0.25 (6.4)	5/16 (7.9)	8500 (585)
1/4	0.035	6LW-WC1-TB4	0.41 (10.4)	0.25 (6.4)	5/16 (7.9)	5100 (351)
3/8	0.035	6LW-WC1-TB6	0.47 (11.9)	0.25 (6.4)	7/16 (11.1)	3300 (227)
1/2	0.049	6LW-WC1-TB8	0.53 (13.5)	0.25 (6.4)	9/16 (14.3)	3700 (254)

T-Tube O.D. (mm)	t-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)			Working Pressure bar (psig)
			L	B	F	
6	1.0	6LW-WC1-MTB6	10.4 (0.41)	6.4 (0.25)	7.9 (5/16)	420 (6095)
8	1.0	6LW-WC1-MTB8	11.9 (0.47)	6.4 (0.25)	11.1 (7/16)	310 (4499)
10	1.0	6LW-WC1-MTB10	11.9 (0.47)	6.4 (0.25)	11.1 (7/16)	240 (3483)
12	1.0	6LW-WC1-MTB12	13.5 (0.53)	6.4 (0.25)	14.3 (9/16)	200 (2902)

Tube Butt Weld Fittings

L Series

Features

- Sizes range from 1/4" to 1" and 6 mm to 18 mm.
- Radius junction design with elbows provides smooth flow path.
- Precisely finished diameter matches tube diameter.
- Standard surface finish is a roughness average of 10 µin. (0.25 µm) Ra. With 5 µin. (0.13 µm) Ra surface finish is available.
- Butt weld connection ensures system unhindered.
- Each fitting is stamped with size, material and heat code.



Materials

Material	Bar Stock ^①	Forging ^②	Designator
316 SS	ASTM A479/A276	ASTM A182/A314	SS
316L SS			6L
316L VAR SS	ASTM A479/A276 SEMI F20	—	6LV
316L VIM-VAR SS			6LW

① Only for straight configurations.
 ② Includes all elbows, crosses, and tees.

Working Temperatures

Material	Minimum Temperature	Maximum Temperature
316 SS	-325°F (-198°C)	1000°F (538°C)
316L SS	-325°F (-198°C)	850°F (454°C)
316L VAR SS		
316L VIM-VAR SS		

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 find out the elevated temperature factor, please refer to the related information of FITOK Tubes and Pipe in page 11.

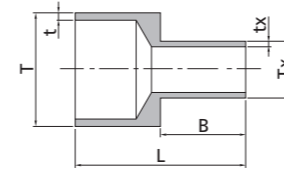
Ordering Information

- Dimensions are for reference only and are subject to change.
- Add the material designator as a prefix, Wetted Surface Finish code or Cleaning and Packaging code as a suffix to the basic ordering number to get the complete ordering number.
- Standard Process Specification
 FC-01 standard cleaning and packaging, is applied to all the fittings for general industrial procedure. No suffix is required.
 Example: **6L-WU2-TB6-TB4**.
- Special Cleaning and Packaging
 FC-02 special cleaning and packaging, following ASTM G93 level C, add -F2 as a suffix to the basic ordering number.
 Example: **6L-WU2-TB6-TB4-F2**.
- Ultrahigh-purity Process Specification
 FC-03 ultrahigh-purity cleaning and packaging, Wetted surfaces are finished to 5 µin. (0.13 µm) Ra. add - F3 as a suffix to the basic ordering number.
 Example: **6LW-WU2-TB6-TB4-F3**.

Cautions:

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

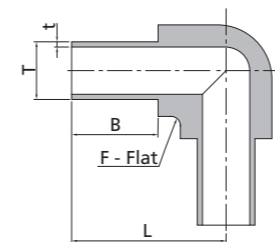
Reducing Unions



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Tx-Tube O.D. (in.)	tx-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)		Working Pressure psig (bar)
					L	B	
3/8	0.035	1/4	0.035	6L-WU2-TB6-TB4	1.50 (38.1)	0.75 (19.1)	3300 (227)
1/2	0.049	1/4	0.035	6L-WU2-TB8-TB4	1.50 (38.1)	0.75 (19.1)	3700 (254)
1/2	0.049	3/8	0.035	6L-WU2-TB8-TB6	1.50 (38.1)	0.75 (19.1)	3300 (227)
3/4	0.049	1/2	0.049	6L-WU2-TB12-TB8	1.50 (38.1)	0.75 (19.1)	2400 (165)
1	0.065	1/2	0.049	6L-WU2-TB16-TB8	1.50 (38.1)	0.75 (19.1)	2400 (165)
1	0.065	3/4	0.049	6L-WU2-TB16-TB12	1.50 (38.1)	0.75 (19.1)	2400 (165)

T-Tube O.D. (mm)	t-Wall Thickness (mm)	Tx-Tube O.D. (mm)	tx-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)		Working Pressure bar (psig)
					L	B	
10	1.0	6	1.0	6L-WU2-MTB10-MTB6	38.1 (1.50)	19.1 (0.75)	240 (3483)
10	1.0	8	1.0	6L-WU2-MTB10-MTB8	38.1 (1.50)	19.1 (0.75)	240 (3483)
12	1.0	6	1.0	6L-WU2-MTB12-MTB6	38.1 (1.50)	19.1 (0.75)	200 (2902)
12	1.0	8	1.0	6L-WU2-MTB12-MTB8	38.1 (1.50)	19.1 (0.75)	200 (2902)
12	1.0	10	1.0	6L-WU2-MTB12-MTB10	38.1 (1.50)	19.1 (0.75)	200 (2902)
18	1.5	6	1.5	6L-WU2-MTB18-MTB6	38.1 (1.50)	19.1 (0.75)	200 (2902)
18	1.5	12	1.5	6L-WU2-MTB18-MTB12	38.1 (1.50)	19.1 (0.75)	200 (2902)

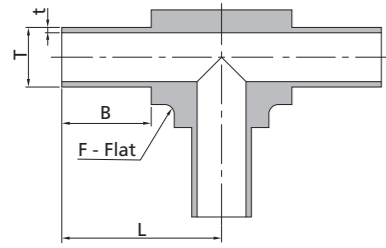
Union Elbows



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
			L	B	F	
1/4	0.035	6L-WL2-TB4	1.23 (31.2)	0.75 (19.1)	7/16 (11.1)	5100 (351)
3/8	0.035	6L-WL2-TB6	1.20 (30.5)	0.75 (19.1)	7/16 (11.1)	3300 (227)
1/2	0.049	6L-WL2-TB8	1.34 (34.0)	0.75 (19.1)	11/16 (17.5)	3700 (254)
3/4	0.049	6L-WL2-TB12	1.46 (37.1)	0.75 (19.1)	15/16 (23.8)	2400 (165)

T-Tube O.D. (mm)	t-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)			Working Pressure bar (psig)
			L	B	F	
6	1.0	6L-WL2-MTB6	31.2 (1.23)	19.1 (0.75)	11.1 (7/16)	420 (6095)
8	1.0	6L-WL2-MTB8	31.2 (1.23)	19.1 (0.75)	11.1 (7/16)	310 (4499)
10	1.0	6L-WL2-MTB10	34.0 (1.34)	19.1 (0.75)	17.5 (11/16)	240 (3483)
12	1.0	6L-WL2-MTB12	34.0 (1.34)	19.1 (0.75)	17.5 (11/16)	200 (2902)
18	1.5	6L-WL2-MTB18	37.6 (1.48)	19.1 (0.75)	23.8 (15/16)	200 (2902)

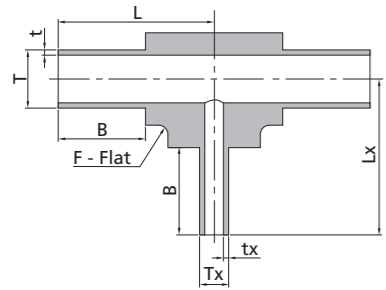
Union Tees



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
			L	B	F	
1/4	0.035	6L-WT2-TB4	1.23 (31.2)	0.75 (19.1)	7/16 (11.1)	5100 (351)
3/8	0.035	6L-WT2-TB6	1.20 (30.5)	0.75 (19.1)	7/16 (11.1)	3300 (227)
1/2	0.049	6L-WT2-TB8	1.34 (34.0)	0.75 (19.1)	11/16 (17.5)	3700 (254)
3/4	0.049	6L-WT2-TB12	1.46 (37.1)	0.75 (19.1)	15/16 (23.8)	2400 (165)

T-Tube O.D. (mm)	t-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)			Working Pressure bar (psig)
			L	B	F	
6	1.0	6L-WT2-MTB6	31.2 (1.23)	19.1 (0.75)	11.1 (7/16)	420 (6095)
8	1.0	6L-WT2-MTB8	31.2 (1.23)	19.1 (0.75)	11.1 (7/16)	310 (4499)
10	1.0	6L-WT2-MTB10	34.0 (1.34)	19.1 (0.75)	17.5 (11/16)	240 (3483)
12	1.0	6L-WT2-MTB12	34.0 (1.34)	19.1 (0.75)	17.5 (11/16)	200 (2902)
18	1.5	6L-WT2-MTB18	37.6 (1.48)	19.1 (0.75)	23.8 (15/16)	200 (2902)

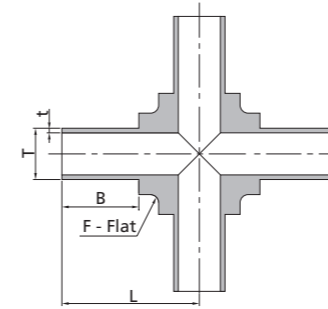
Reducing Tees



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Tx-Tube O.D. (in.)	tx-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)				Working Pressure psig (bar)
					L	Lx	B	F	
3/8	0.035	1/4	0.035	6L-WT2-TB6-TB6-TB4	1.20 (30.5)	1.23 (31.2)	0.75 (19.1)	7/16 (11.1)	3300 (227)
1/2	0.049	1/4	0.035	6L-WT2-TB8-TB8-TB4	1.34 (34.0)	1.34 (34.0)	0.75 (19.1)	11/16 (17.5)	3700 (254)
1/2	0.049	3/8	0.035	6L-WT2-TB8-TB8-TB6	1.34 (34.0)	1.35 (34.3)	0.75 (19.1)	11/16 (17.5)	3700 (254)
3/4	0.049	1/4	0.035	6L-WT2-TB12-TB12-TB4	1.46 (37.1)	1.48 (37.6)	0.75 (19.1)	15/16 (23.8)	2400 (165)
3/4	0.049	3/8	0.035	6L-WT2-TB12-TB12-TB6	1.46 (37.1)	1.35 (34.3)	0.75 (19.1)	15/16 (23.8)	2400 (165)

T-Tube O.D. (mm)	t-Wall Thickness (mm)	Tx-Tube O.D. (mm)	tx-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)				Working Pressure bar (psig)
					L	Lx	B	F	
8	1.0	6	1.0	6L-WT2-MTB8-MTB8-MTB6	31.3 (1.23)	31.3 (1.23)	19.1 (0.75)	11.1 (7/16)	310 (4499)
10	1.0	6	1.0	6L-WT2-MTB10-MTB10-MTB6	34.0 (1.34)	34.0 (1.34)	19.1 (0.75)	17.5 (11/16)	240 (3483)
10	1.0	8	1.0	6L-WT2-MTB10-MTB10-MTB8	34.0 (1.34)	34.0 (1.34)	19.1 (0.75)	17.5 (11/16)	240 (3483)
12	1.0	6	1.0	6L-WT2-MTB12-MTB12-MTB6	34.0 (1.34)	34.0 (1.34)	19.1 (0.75)	17.5 (11/16)	200 (2902)
12	1.0	8	1.0	6L-WT2-MTB12-MTB12-MTB8	34.0 (1.34)	34.0 (1.34)	19.1 (0.75)	17.5 (11/16)	200 (2902)

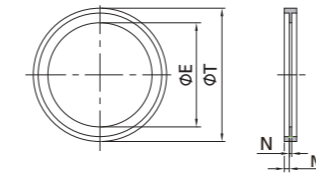
Union Crosses



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
			L	B	F	
1/4	0.035	6L-WC2-TB4	1.23 (31.2)	0.75 (19.1)	7/16 (11.1)	5100 (351)
3/8	0.035	6L-WC2-TB6	1.20 (30.5)	0.75 (19.1)	7/16 (11.1)	3300 (227)
1/2	0.049	6L-WC2-TB8	1.34 (34.0)	0.75 (19.1)	11/16 (17.5)	3700 (254)

T-Tube O.D. (mm)	t-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)			Working Pressure bar (psig)
			L	B	F	
6	1.0	6L-WC2-MTB6	31.2 (1.23)	19.1 (0.75)	11.1 (7/16)	420 (6095)
8	1.0	6L-WC2-MTB8	31.2 (1.23)	19.1 (0.75)	11.1 (7/16)	310 (4499)
10	1.0	6L-WC2-MTB10	34.0 (1.34)	19.1 (0.75)	15.9 (5/8)	240 (3483)
12	1.0	6L-WC2-MTB12	34.0 (1.34)	19.1 (0.75)	15.9 (5/8)	200 (2902)

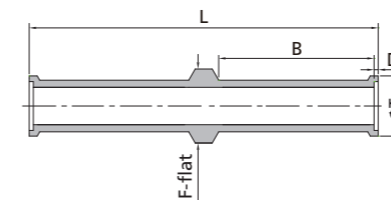
Weld Rings



T-Tube O.D. (in.)	Ordering Number	Dimension, in. (mm)			
		E	M	N	T
1/4	6L-WR-4	0.20 (5.1)	0.02 (0.51)	0.01 (0.25)	0.28 (7.1)
3/8	6L-WR-6	0.32 (8.1)	0.02 (0.51)	0.01 (0.25)	0.41 (10.4)
1/2	6L-WR-8	0.42 (10.7)	0.02 (0.51)	0.01 (0.25)	0.54 (13.7)

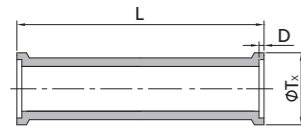
Automatic Tube Butt Weld Fittings

Locator Unions



T-Tube O.D. (in.)	Wall (in.)	Ordering Number	Dimension, in. (mm)					Working Pressure psig (bar)
			L	B	D	F	Tx	
1/4	0.035	6L-WU2-L-TB4A	1.69 (42.9)	0.75 (19.1)	0.02 (0.51)	0.36 (9.1)	0.29 (7.4)	5100 (351)
3/8	0.035	6L-WU2-L-TB6A	1.71 (43.4)	0.75 (19.1)	0.03 (0.76)	0.42 (10.7)	0.41 (10.4)	3300 (227)
1/2	0.049	6L-WU2-L-TB8A	1.73 (43.9)	0.75 (19.1)	0.04 (1.0)	0.60 (15.2)	0.55 (14.0)	3700 (254)

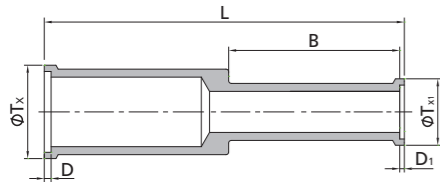
Unions



T-Tube O.D. (in.)	Wall (in.)	Ordering Number	Dimension, in. (mm)			Working Pressure psig (bar)
			L	D	T _x	
1/4	0.035	6L-WU2-TB4A	1.00 (25.4)	0.02 (0.5)	0.29 (7.4)	5100 (351)
3/8	0.035	6L-WU2-TB6A	1.00 (25.4)	0.03 (0.8)	0.41 (10.4)	3300 (227)
1/2	0.049	6L-WU2-TB8A	1.00 (25.4)	0.04 (1.0)	0.55 (14.0)	3700 (254)
3/4	0.049	6L-WU2-TB12A	1.00 (25.4)	0.04 (1.0)	0.80 (20.3)	2400 (165)
1	0.065	6L-WU2-TB16A	1.25 (31.8)	0.04 (1.0)	1.06 (26.9)	2400 (165)

T-Tube O.D. (in.)	Wall (in.)	Ordering Number	Dimension, mm (in.)			Working Pressure bar (psig)
			L	D	T _x	
6	1	6L-WU2-MTB6A	31.8 (1.25)	0.5 (0.02)	6.9 (0.27)	420 (6095)
8	1	6L-WU2-MTB8A	31.8 (1.25)	0.8 (0.03)	8.9 (0.35)	310 (4499)
10	1	6L-WU2-MTB10A	31.8 (1.25)	0.8 (0.03)	10.9 (0.43)	240 (3483)
12	1	6L-WU2-MTB12A	31.8 (1.25)	1.0 (0.04)	13.2 (0.52)	200 (2902)
18	1.5	6L-WU2-MTB18A	31.8 (1.25)	1.0 (0.04)	19.3 (0.76)	200 (2902)

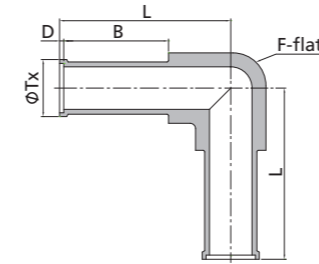
Reducing Unions



T-Tube O.D. (in.)	Wall (in.)	T-Tube O.D. (in.)	Wall (in.)	Ordering Number	Dimension, in. (mm)						Working Pressure psig (bar)
					L	B	D	D ₁	T _x	T _{x1}	
3/8	0.035	1/4	0.035	6L-WU2-TB6A-TB4A	1.58 (40.1)	0.75 (19.1)	0.03 (0.8)	0.02 (0.5)	0.41 (10.4)	0.29 (7.4)	3300 (227)
1/2	0.049	1/4	0.035	6L-WU2-TB8A-TB4A	1.58 (40.1)	0.75 (19.1)	0.04 (1.0)	0.02 (0.5)	0.55 (14.0)	0.29 (7.4)	3700 (254)
1/2	0.049	3/8	0.035	6L-WU2-TB8A-TB6A	1.58 (40.1)	0.75 (19.1)	0.04 (1.0)	0.03 (0.8)	0.55 (14.0)	0.41 (10.4)	3300 (227)

T-Tube O.D. (mm)	Wall (mm)	T-Tube O.D. (mm)	Wall (mm)	Ordering Number	Dimension, mm (in.)						Working Pressure bar (psig)
					L	B	D	D ₁	T _x	T _{x1}	
8	1	6	1	6L-WU2-MTB8A-MTB6A	39.9 (1.57)	19.1 (0.75)	0.8 (0.03)	0.5 (0.02)	8.9 (0.35)	6.8 (0.27)	310 (4499)
12	1	6	1	6L-WU2-MTB12A-MTB6A	40.1 (1.58)	19.1 (0.75)	1.0 (0.04)	0.5 (0.02)	13.2 (0.52)	6.8 (0.27)	200 (2902)
12	1	8	1	6L-WU2-MTB12A-MTB8A	40.4 (1.59)	19.1 (0.75)	1.0 (0.04)	0.8 (0.03)	13.2 (0.52)	8.9 (0.35)	200 (2902)

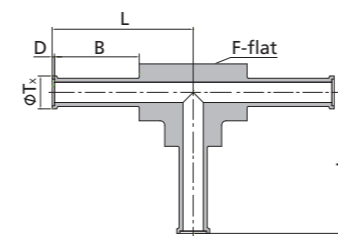
90° Union Elbows



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)					Working Pressure psig (bar)
			L	B	D	F	T _x	
1/4	0.035	6L-WL2-TB4A	1.25 (31.8)	0.75 (19.1)	0.02 (0.5)	7/16 (11.1)	0.29 (7.4)	5100 (351)
3/8	0.035	6L-WL2-TB6A	1.23 (31.2)	0.75 (19.1)	0.03 (0.8)	7/16 (11.1)	0.41 (10.4)	3300 (227)
1/2	0.049	6L-WL2-TB8A	1.38 (35.1)	0.75 (19.1)	0.04 (1.0)	11/16 (17.5)	0.55 (14.0)	3700 (254)
3/4	0.049	6L-WL2-TB12A	1.50 (38.1)	0.75 (19.1)	0.04 (1.0)	15/16 (23.8)	0.80 (20.3)	2400 (165)

T-Tube O.D. (mm)	t-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)					Working Pressure bar (psig)
			L	B	D	F	T _x	
6	1	6L-WL2-MTB6A	31.8 (1.25)	19.1 (0.75)	0.5 (0.02)	11.1 (7/16)	6.9 (0.27)	351 (5100)
8	1	6L-WL2-MTB8A	32.0 (1.26)	19.1 (0.75)	0.8 (0.03)	11.1 (7/16)	8.9 (0.35)	227 (3300)
10	1	6L-WL2-MTB10A	34.8 (1.37)	19.1 (0.75)	0.8 (0.03)	17.5 (11/16)	10.9 (0.43)	254 (3700)
12	1	6L-WL2-MTB12A	35.1 (1.38)	19.1 (0.75)	1.0 (0.04)	17.5 (11/16)	13.2 (0.52)	199 (2888)
18	1.5	6L-WL2-MTB18A	38.6 (1.52)	19.1 (0.75)	1.0 (0.04)	23.8 (15/16)	19.3 (0.76)	206 (2989)

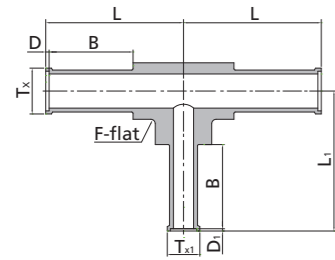
Union Tees



T-Tube O.D. (in.)	t-Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)					Working Pressure psig (bar)
			L	B	D	F	T _x	
1/4	0.035	6L-WT2-TB4A	1.25 (31.8)	0.75 (19.1)	0.02 (0.5)	7/16 (11.1)	0.29 (7.4)	5100 (351)
3/8	0.035	6L-WT2-TB6A	1.23 (31.2)	0.75 (19.1)	0.03 (0.8)	7/16 (11.1)	0.41 (10.4)	3300 (227)
1/2	0.049	6L-WT2-TB8A	1.38 (35.1)	0.75 (19.1)	0.04 (1.0)	11/16 (17.5)	0.55 (14.0)	3500 (241)
3/4	0.049	6L-WT2-TB12A	1.50 (38.1)	0.75 (19.1)	0.04 (1.0)	15/16 (23.8)	0.80 (20.3)	2400 (165)

T-Tube O.D. (mm)	t-Wall Thickness (mm)	Ordering Number	Dimension, mm (in.)					Working Pressure bar (psig)
			L	B	D	F	T _x	
6	1	6L-WT2-MTB6A	31.8 (1.25)	19.1 (0.75)	0.5 (0.02)	11.1 (7/16)	6.9 (0.27)	454 (6589)
8	1	6L-WT2-MTB8A	32.0 (1.26)	19.1 (0.75)	0.8 (0.03)	11.1 (7/16)	8.9 (0.35)	323 (4687)
10	1	6L-WT2-MTB10A	34.8 (1.37)	19.1 (0.75)	0.8 (0.03)	17.5 (11/16)	10.9 (0.43)	254 (3686)
12	1	6L-WT2-MTB12A	35.1 (1.38)	19.1 (0.75)	1.0 (0.04)	17.5 (11/16)	13.2 (0.52)	206 (2989)
18	1.5	6L-WT2-MTB18A	38.6 (1.52)	19.1 (0.75)	1.0 (0.04)	23.8 (15/16)	19.3 (0.76)	206 (2989)

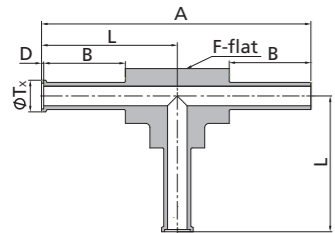
Reducing Tees



T-Tube O.D. (in.)	Wall (in.)	T-Tube O.D. (in.)	Wall (in.)	Ordering Number	Dimension, in. (mm)							Working Pressure psig (bar)	
					L	L1	B	D	D1	T _x	T _{x1}		F
3/8	0.035	1/4	0.035	6L-WT2-TB6A-TB6A-TB4A	1.23(31.2)	1.25(31.8)	0.75(19.1)	0.03(0.8)	0.02(0.5)	0.41(10.4)	0.29(7.4)	7/16(11.1)	3300 (227)
1/2	0.049	1/4	0.035	6L-WT2-TB8A-TB8A-TB4A	1.38(35.1)	1.38(35.1)	0.75(19.1)	0.04(1.0)	0.02(0.5)	0.55(14.0)	0.29(7.4)	11/16(17.5)	3700 (254)
1/2	0.049	3/8	0.035	6L-WT2-TB8A-TB8A-TB6A	1.38(35.1)	1.37(34.8)	0.75(19.1)	0.04(1.0)	0.03(0.8)	0.55(14.0)	0.41(10.4)	11/16(17.5)	3300 (227)
3/4	0.049	3/8	0.035	6L-WT2-TB12A-TB12A-TB6A	1.50(38.1)	1.50(38.1)	0.75(19.1)	0.04(1.0)	0.03(0.8)	0.80(20.3)	0.41(10.4)	15/16(23.8)	2400 (165)
3/4	0.049	1/2	0.049	6L-WT2-TB12A-TB12A-TB8A	1.50(38.1)	1.50(38.1)	0.75(19.1)	0.04(1.0)	0.04(1.0)	0.80(20.3)	0.55(14.0)	15/16(23.8)	2400 (165)

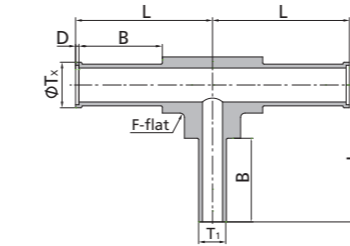
T-Tube O.D. (mm)	Wall (mm)	T-Tube O.D. (mm)	Wall (mm)	Ordering Number	Dimension, mm (in.)							Working Pressure bar (psig)	
					L	L1	B	D	D1	T _x	T _{x1}		F
12	1	6	1	6L-WT2-MTB12A-MTB12A-MTB6A	35.1(1.38)	34.5(1.36)	19.1(0.75)	0.5(0.02)	0.5(0.02)	13.2(0.52)	6.9(0.27)	17.5(11/16)	200 (2902)

Manifold Tees



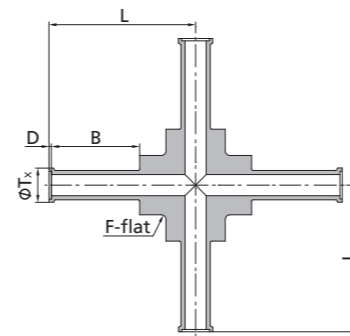
T-Tube O.D. (in.)	Wall (in.)	Ordering Number	Dimension, in. (mm)						Working Pressure psig (bar)
			A	L	B	D	F	T _x	
1/4	0.035	6L-WT2-TB4A-TB4A-TB4A	2.48 (63.0)	1.25 (31.8)	0.75 (19.1)	0.02 (0.5)	7/16 (11.1)	0.29 (7.4)	5100 (351)
3/8	0.035	6L-WT2-TB6A-TB6A-TB6A	2.43 (61.7)	1.23 (31.2)	0.75 (19.1)	0.03 (0.8)	11/16 (17.5)	0.41 (10.4)	3300 (227)
1/2	0.049	6L-WT2-TB8A-TB8A-TB8A	2.72 (69.1)	1.38 (35.1)	0.75 (19.1)	0.04 (1.0)	11/16 (17.5)	0.55 (14.0)	3700 (254)

Reducing Tees



T-Tube O.D. (in.)	Wall (in.)	T-Tube O.D. (in.)	Wall (in.)	Ordering Number	Dimension, in. (mm)						Working Pressure psig (bar)
					L	L1	B	D	T _x	F	
3/8	0.035	1/4	0.035	6L-WT2-TB6A-TB6A-TB4	1.23 (31.2)	1.23 (31.2)	0.75 (19.1)	0.03 (0.8)	0.41 (10.4)	7/16 (11.1)	3300 (227)
1/2	0.049	1/4	0.035	6L-WT2-TB8A-TB8A-TB4	1.38 (35.1)	1.36 (34.5)	0.75 (19.1)	0.04 (1.0)	0.55 (14.0)	11/16 (17.5)	3700 (254)
1/2	0.049	3/8	0.035	6L-WT2-TB8A-TB8A-TB6	1.38 (35.1)	1.35 (34.3)	0.75 (19.1)	0.04 (1.0)	0.55 (14.0)	11/16 (17.5)	3300 (227)

Union Crosses



T-Tube O.D. (in.)	Wall (in.)	Ordering Number	Dimension, in. (mm)					Working Pressure psig (bar)
			L	B	D	F	T _x	
1/4	0.035	6L-WC2-TB4A	1.25 (31.8)	0.75 (19.1)	0.02 (0.5)	7/16 (11.1)	0.29 (7.4)	5100 (351)
3/8	0.035	6L-WC2-TB6A	1.23 (31.2)	0.75 (19.1)	0.03 (0.8)	7/16 (11.1)	0.41 (10.4)	3300 (227)
1/2	0.049	6L-WC2-TB8A	1.35 (34.3)	0.75 (19.1)	0.04 (1.0)	5/8 (17.5)	0.55 (14.0)	3700 (254)

T-Tube O.D. (mm)	Wall (mm)	Ordering Number	Dimension, mm (in.)					Working Pressure bar (psig)
			L	B	D	F	T _x	
6	1	6L-WC2-MTB6A	31.8 (1.25)	19.1 (0.75)	0.5 (0.02)	11.1 (7/16)	6.9 (0.27)	420 (6095)
8	1	6L-WC2-MTB8A	31.8 (1.25)	19.1 (0.75)	0.8 (0.03)	11.1 (7/16)	8.9 (0.35)	310 (4499)