

Ultrahigh-Purity Stainless Steel Tubular Fittings

Metric Sizes



- Sizes from 6 through 18 mm outside diameter
- Imperial sizes available upon request
- 316L stainless steel construction
- Available in a variety of configurations, including coaxial
- Marked to indicate material type and heat code

Features

Traceability

Each tubular fitting is marked to identify manufacturer, material type, and heat code.

Variety of Configurations

Tubular fittings are available in elbows, tees, reducers, end caps, and coaxial configurations.



Technical Data

Product	Inside Diameter Surface Finish	Packaging	Individual Certification	Material Specification	Wall Thickness	External Finish
Ultrahigh-purity	0.25 µm (10 µin.) R_a max except for cold formed and welded areas; electropolished	Ends are faced and protected with polyamide nylon film and polyethylene caps; packed in double polyethylene bags.	Inspection Certification Mill Test Reports Surface Roughness	316L in accordance with EN 1.4404	1 mm (6 to 12 mm OD) 1.5 mm (18 mm OD)	Buffed/ brushed

Raw Materials

Swagelok UHP and chemically cleaned tubular fittings are manufactured from 316L stainless steel; controlled sulfur levels of 0.005 to 0.012 % (seamless) and 0.005 to 0.017 % (welded) promote reliable, consistent orbital welding.

Traceability

UHP and chemically cleaned tubular fittings are fully traceable to the original material supplier. Certificates of compliance are available upon request. Certified material test reports (CMTR) are kept on file.

Markings

UHP and chemically cleaned tubular fittings are marked with material type and heat code or trace identification, using a mechanical etching tool. Fittings having circumferential welds are helium leak-tested and marked with a lot number.

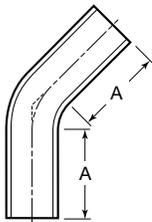
Ultrahigh-Purity

Ultrahigh-purity tubular fittings are rinsed with 18 MΩ-cm DI water and purged with filtered nitrogen. Ends are sealed in an ISO Class 4/Federal Class 10 cleanroom.

Ordering Information and Dimensions

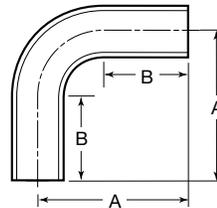
Select an ordering number. Dimensions are for reference only and are subject to change.

45° Elbow



Tube OD mm	Ordering Number	A mm (in.)
6	6L-6MTW-5-S-1.0-E2	80.0 (3.15)
8	6L-8MTW-5-S-1.0-E2	
10	6L-10MTW-5-S-1.0-E2	
12	6L-12MTW-5-S-1.0-E2	25.0 (0.98)
18	6L-18MTW-5-S-1.5-E2	

90° Elbow

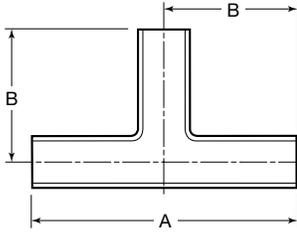


Tube OD mm	Ordering Number	Dimensions, mm (in.)	
		A	B
6	6L-6MTW-9-S-1.0-E2	103 (4.06)	80.0 (3.15)
8	6L-8MTW-9-S-1.0-E2	105 (4.13)	
10	6L-10MTW-9-S-1.0-E2		
12	6L-12MTW-9-S-1.0-E2	51.0 (2.01)	25.0 (0.98)
18	6L-18MTW-9-S-1.5-E2		

Ordering Information and Dimensions

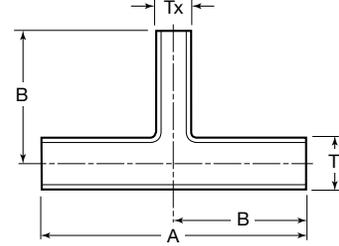
Select an ordering number. Dimensions are for reference only and are subject to change.

Tee



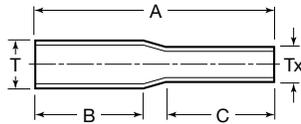
Tube OD mm	Ordering Number	Dimensions, mm (in.)	
		A	B
6	6L-6MTW-3-S-1.0-E2	70.0 (2.76)	35.0 (1.38)
8	6L-8MTW-3-S-1.0-E2	108 (4.25)	54.0 (2.13)
10	6L-10MTW-3-S-1.0-E2	110 (4.33)	55.0 (2.17)
12	6L-12MTW-3-S-1.0-E2	112 (4.41)	56.0 (2.20)
18	6L-18MTW-3-S-1.5-E2	118 (4.65)	59.0 (2.32)

Reducing Tee



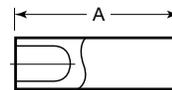
T Tube OD mm	Tx Tube OD mm	Ordering Number	Dimensions mm (in.)	
			A	B
8	6	6L-8MTW-3-6S-E2	108 (4.25)	54.0 (2.13)
10	6	6L-10MTW-3-6S-E2	110 (4.33)	55.0 (2.17)
	8	6L-10MTW-3-8S-E2		
12	6	6L-12MTW-3-6S-E2	112 (4.41)	56.0 (2.20)
	8	6L-12MTW-3-8S-E2		
	10	6L-12MTW-3-10S-E2		
18	6	6L-18MTW-3-6S-E2	118 (4.65)	59.0 (2.32)
	8	6L-18MTW-3-8S-E2		
	10	6L-18MTW-3-10S-E2		
	12	6L-18MTW-3-12S-E2		

Concentric Reducer



T Tube OD mm	Tx Tube OD mm	Ordering Number	Dimensions mm (in.)		
			A	B	C
12	6	6L-12MTW-6-6S-E2	75.0 (2.95)	30.0 (1.18)	35.0 (1.38)
	8	6L-12MTW-6-8S-E2			
18	6	6L-18MTW-6-6S-E2			
	8	6L-18MTW-6-8S-E2			
	12	6L-18MTW-6-12S-E2			

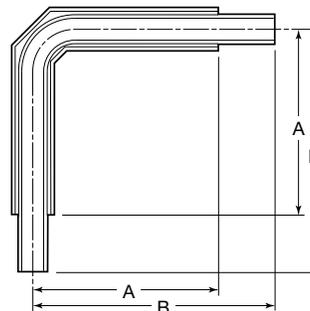
End Cap



Tube OD mm	Ordering Number	A mm (in.)
6	6L-6MTW-C-S-1.0-E2	35.0 (1.38)
8	6L-8MTW-C-S-1.0-E2	
10	6L-10MTW-C-S-1.0-E2	
12	6L-12MTW-C-S-1.0-E2	
18	6L-18MTW-C-S-1.5-E2	40.0 (1.57)

Coaxial 90° Elbow

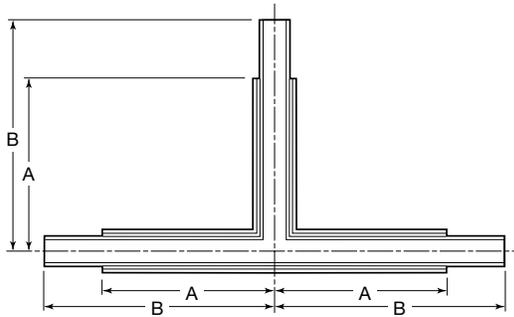
Process Tube OD mm	Containment Tube OD mm	Ordering Number	Dimensions, mm (in.)	
			A	B
6	10	6L-CX6MTW-9-10S-E2	105 (4.13)	140 (5.51)
8	12	6L-CX8MTW-9-12S-E2	116 (4.57)	151 (5.94)
12	18	6L-CX12MTW-9-18S-E2	140 (5.51)	175 (6.89)



Ordering Information and Dimensions

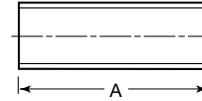
Select an ordering number. Dimensions are for reference only and are subject to change.

Coaxial Tee



Process Tube OD mm	Containment Tube OD mm	Ordering Number	Dimensions, mm (in.)	
			A	B
6	10	6L-CX6MTW-3-10S-E2	55.0 (2.17)	88 (3.46)
8	12	6L-CX8MTW-3-12S-E2	56.0 (2.20)	89 (3.50)
12	18	6L-CX12MTW-3-18S-E2	59.0 (2.32)	92 (3.62)

Coaxial Sleeve Coupling



Process Tube OD mm	Ordering Number	A mm (in.)
6	6L-CX6MTW-SC-10S	90.0 (3.54)
8	6L-CX8MTW-SC-12S	
12	6L-CX12MTW-SC-18S	

High-Purity Tubular Fittings

Chemically Cleaned and Passivated Tubular Fittings

High-purity tubular fittings with an inside diameter finish of $0.51 \mu\text{m}$ (20 $\mu\text{in.}$) R_a (-G20 process) or $0.76 \mu\text{m}$ (30 $\mu\text{in.}$) R_a (-G30 process) are available on request. These fittings comply with ASTM G93, Level A requirement for nonvolatile residue levels and also meet requirements of CGA G4.1.

Thermocouple-Cleaned Tubular Fittings

High-purity tubular fittings thermocouple cleaned (-G process) are available on request to meet the cleanliness requirements of ASTM A632-S3.

Contact your authorized Swagelok sales and service representative for availability and ordering information.

Swagelok Welding System

The Swagelok welding system is a powerful (up to 200 A peak output) gas-tungsten arc orbital welding system. This autogenous orbital welding system can reduce weld cycle time, improve weld consistency and quality, and help manage the total welding process. The Swagelok welding system is supported by a comprehensive package of equipment, training, accessories, and technical service.



For more information, see the *Swagelok Welding System—M200 Power Supply* catalog, MS-02-342.

Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit swagelok.com or contact your authorized Swagelok representative.