

Stainless Steel Fittings

For the Sanitary Industries



- Kwik-Clamp, tube butt weld, Acme threaded and plain bevel-seat, and specialty end connections
- 304 and 316L stainless steel construction
- Polished and unpolished inside- and outside-diameter surface finishes
- Many 3-A compliant configurations

Contents

Sanitary Kwik-Clamp Fittings	3	APV K-Clamp Fittings	24
■ 304 and 316L stainless steel		■ 304 and 316L stainless steel	
■ Inside and outside diameters polished to 32 µin. (0.81 µm) maximum R_a		■ Inside and outside diameters polished to 32 µin. (0.81 µm) maximum R_a	
■ 3-A compliant			
■ 1 to 4 in. sizes compatible with ISO 2852 geometrical requirements			
Sanitary and Industrial Tube Butt Weld Fittings	10	John Perry Fittings	25
■ 304 and 316L stainless steel		■ 304 and 316L stainless steel	
■ Inside and outside diameters unpolished		■ Inside and outside diameters polished to 32 µin. (0.81 µm) maximum R_a	
■ Inside and outside diameters polished to 32 µin. (0.81 µm) maximum R_a			
Sanitary Acme Threaded and Plain Bevel-Seat Fittings	15	Interlock Fittings	26
■ 304 and 316L stainless steel		■ 304 and 316L stainless steel	
■ Inside and outside diameters polished to 32 µin. (0.81 µm) maximum R_a		■ Inside and outside diameters polished to 32 µin. (0.81 µm) maximum R_a	
■ 3-A compliant			
■ Union nuts for easy assembly			
■ TIG welded with no thinning or pitting at joint			
■ Butt weld ends manufactured to exact circularity tolerances for ease of welding		Sanitary Kwik-Clamp Flange to Swagelok® Tube Fittings	27
PV Threaded Fittings	22	■ 316L stainless steel	
■ 304 and 316L stainless steel		■ Tube fitting uses consistent geometry (instead of torque) for gaugeable make-up	
■ Inside and outside diameters polished to 32 µin. (0.81 µm) maximum R_a		■ Easy to disconnect and retighten	
		■ 1 to 4 in. size Kwik-Clamp fittings compatible with ISO 2852 geometrical requirements	
		Special Alloy Fittings	27
		■ Available on special order; contact your authorized Swagelok sales and service representative.	

Features

- Vacuum annealed, cold formed tubular fittings minimize likelihood of stress corrosion cracking
- Tolerances, angularity, squareness, ovality, and polish finishes monitored with statistical quality control
- 316L materials heat traceable on request
 - Marked with heat number(s) and internal surface finish
 - Documented with material test reports

Gaskets and Clamps

Standard and high-pressure 304 stainless steel clamps and Buna N, PTFE, silicone, fluorocarbon FKM, EPDM, and other material gaskets are available. See the Swagelok *Accessories for the Sanitary Industries* catalog, MS-03-09.

End Connection Sizes

Most end connections are available in 1 to 4 or 6 in. sizes. Select components are available in sizes down to 1/2 in. or up to 12 in. Standard tube wall thicknesses are shown below. Nonstandard wall thicknesses are shown in fittings dimensions tables.

End Connection Size, in.	Tube Wall in.
1/2 to 3	0.065
4	0.083
6	0.109
8 and 10	0.120
12	0.134

Sanitary Kwik-Clamp Fittings

Typical Ordering Number

Build a sanitary Kwik-Clamp fitting ordering number by combining the designators in the sequence shown below.

Basic Ordering Number ————— **JC31** **4** **20** **15**
 See tables below.

Material —————

4 = 304 stainless steel
6 = 316L stainless steel
 Union nuts are 304 SS.

1st **2nd**
End Connection Size
 Add second designator for reducer and adapter fittings *only*.

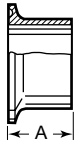
Tube OD

18 = 1/8 in. ^①	125 = 1 1/4 in. ^①	40 = 4 in.
14 = 1/4 in. ^①	15 = 1 1/2 in.	60 = 6 in.
38 = 3/8 in. ^①	20 = 2 in.	80 = 8 in.
50 = 1/2 in.	25 = 2 1/2 in.	100 = 10 in.
58 = 5/8 in. ^①	30 = 3 in.	120 = 12 in.
75 = 3/4 in.		
10 = 1 in.		

① Used for adapters only.

Ferrules and Caps

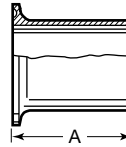
Butt Weld Ferrules



Basic Ordering Number: JC14AM7

Tube OD, in.	A, in. (mm)
1 1 1/2 2 2 1/2 3 4	1.12 (28.4)
6 8	1.50 (38.1)
10 12	1.75 (44.4)

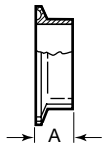
Tank Butt Weld Ferrules



Basic Ordering Number: JC14

Tube OD, in.	A, in. (mm)
1 1 1/2 2 2 1/2	3.00 (76.2)
3 4	4.00 (102)
6	6.00 (152)

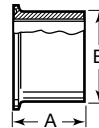
Short Butt Weld Ferrules



Basic Ordering Number: JC14X

Tube OD, in.	A, in. (mm)
1/2 3/4 1 1 1/2 2 2 1/2 3	0.50 (12.7)
4	0.62 (15.7)
6	0.75 (19.0)
8 10 12	1.00 (25.4)

Heavy-Wall Tank Weld Ferrules



Basic Ordering Number: JC14H

Tube OD in.	Tube Wall in.	Dimensions, in. (mm)	
		A	B
1 ^①	0.145	1.62 (41.1)	1.16 (29.5)
1 1/2	0.153	1.62 (41.1)	1.68 (42.7)
2	0.161	1.75 (44.4)	2.19 (55.6)
2 1/2	0.169	1.75 (44.4)	2.71 (68.8)
3	0.177	1.81 (46.0)	3.22 (81.8)
4	0.211	2.12 (53.8)	4.26 (108)
6	0.235	1.50 (38.1)	6.26 (159)

① 316L SS only.

Recessless Expansion Ferrules



Basic Ordering Number: JC14EX

Tube OD, in.	A, in. (mm)
1 ^①	0.75 (19.0)
1 1/2	1.12 (28.4)
2	1.31 (33.3)
2 1/2	1.38 (35.1)
3	1.44 (36.6)
4	1.50 (38.1)

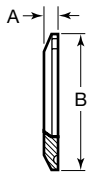
① 304 SS only.

Dimensions are for reference only and are subject to change.

Sanitary Kwik-Clamp Fittings

Ferrules and Caps

Solid End Caps



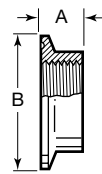
Basic Ordering Number: JC16

Tube OD in.	Dimensions, in. (mm)	
	A	B
3/4 ^①	0.19 (4.8)	0.98 (24.9)
1 1/2 ^②	0.25 (6.4)	1.98 (50.3)
2	0.25 (6.4)	2.52 (64.0)
2 1/2	0.25 (6.4)	3.05 (77.5)
3	0.25 (6.4)	3.58 (90.9)
4	0.31 (7.9)	4.68 (119)
6	0.44 (11.2)	6.57 (167)
8	0.44 (11.2)	8.57 (218)
10	0.50 (12.7)	10.6 (269)
12	0.50 (12.7)	12.6 (320)

① Used for 1/2 and 3/4 in. fittings.

② Used for 1 and 1 1/2 in. fittings.

Thermometer Caps



Basic Ordering Number: JC23B

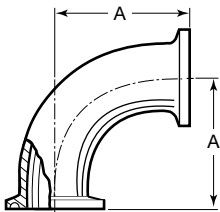
Tube OD in.	Dimensions, in. (mm)	
	A	B
1 ^①	0.62 (15.7)	1.98 (50.3)
1 1/2 ^②		
2 ^②		2.52 (64.0)
2 1/2 ^②		3.05 (77.5)
3 ^②		3.58 (90.9)
4 ^②		4.68 (119)

① Tapped 1/2 in. female NPT.

② Tapped 3/4 in. female NPT.

Elbows

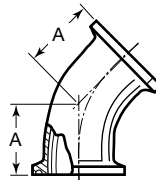
90° Elbows



Basic Ordering Number: JC2

Tube OD, in.	A, in. (mm)
1	2.00 (50.8)
1 1/2	2.75 (69.8)
2	3.50 (88.9)
2 1/2	4.25 (108)
3	5.00 (127)
4	6.62 (168)
6	10.5 (267)

45° Elbows

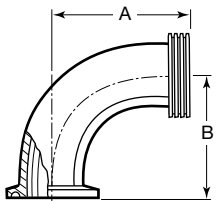


Basic Ordering Number: JC2K

Tube OD, in.	A, in. (mm)
1	1.12 (28.4)
1 1/2	1.44 (36.6)
2	1.75 (44.4)
2 1/2	2.06 (52.3)
3	2.38 (60.5)
4	3.12 (79.2)
6	4.50 (114)

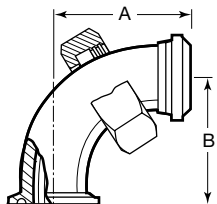
Acme Threaded and Plain Bevel-Seat 90° Elbows

Basic Ordering Number: JC215



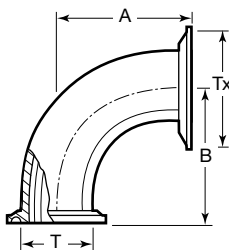
Tube OD in.	Dimensions, in. (mm)	
	A	B
1	2.19 (55.6)	2.00 (50.8)
1 1/2	2.97 (75.4)	2.75 (69.8)
2	3.72 (94.5)	3.50 (88.9)
2 1/2	4.59 (117)	4.25 (108)
3	5.41 (137)	5.00 (127)
4	7.22 (183)	6.62 (168)

Basic Ordering Number: JC214



Union nut is 304 SS.

90° Nontapered Reducing Elbows



Basic Ordering Number: JC2-J31

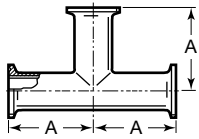
Fitting Size in.		Dimensions in. (mm)	
T Tube OD	Tx	A	B
1	2 2 1/2 3 4	2.00 (50.8)	
1 1/2	2 2 1/2 3 4	2.75 (69.8)	
2	2 1/2 3 4	3.50 (88.9)	
2 1/2	3 4	4.25 (108)	
3	4	5.12 (130)	5.00 (127)

Dimensions are for reference only and are subject to change.

Sanitary Kwik-Clamp Fittings

Tees

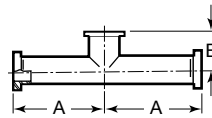
Equal Tees



Basic Ordering Number: JC7

Tube OD, in.	A, in. (mm)
1	2.38 (60.5)
1 1/2	2.75 (69.8)
2	3.50 (88.9)
2 1/2	3.75 (95.2)
3	4.50 (114)
4	5.75 (146)

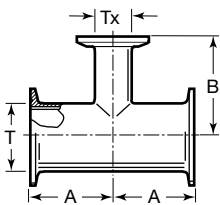
Short Outlet Tees



Basic Ordering Number: JC7S

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	2.38 (60.5)	1.12 (28.4)
1 1/2	2.75 (69.8)	1.38 (35.0)
2	3.50 (88.9)	1.62 (41.1)
2 1/2	3.50 (88.9)	1.88 (47.8)
3	3.75 (95.2)	2.12 (53.8)
4	4.50 (114)	2.75 (69.8)
6	5.75 (146)	2.88 (73.2)

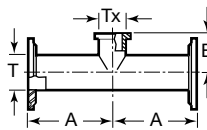
Reducing Tees



Basic Ordering Number: JC7R

Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
1 1/2	1	2.16 (54.9)	2.75 (69.8)
2	1	2.56 (65.0)	2.12 (53.8)
	1 1/2		2.41 (61.2)
2 1/2	1	2.84 (72.1)	2.38 (60.5)
	1 1/2		2.66 (67.6)
	2		2.81 (71.4)
3	1	3.09 (78.5)	2.38 (60.5)
	1 1/2		2.91 (73.9)
	2		3.06 (77.7)
	2 1/2		3.09 (78.5)
4	1	4.06 (103)	3.12 (79.2)
	1 1/2		3.41 (86.6)
	2		3.56 (90.4)
	2 1/2		3.59 (91.2)
6	1	5.75 (146)	5.50 (140)
	1 1/2		
	2		
	2 1/2		
	3		5.25 (133)
	4		5.50 (140)

Short Outlet Reducing Tees



Basic Ordering Number: JC7RS

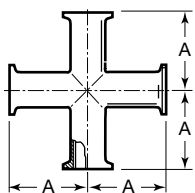
Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
1 1/2	1	2.16 (54.9)	1.38 (35.1)
2	1 1/2	2.56 (65.0)	1.62 (41.1)
2 1/2	1 1/2 2	2.84 (72.1)	1.88 (47.8)
3	1 1/2 2 2 1/2	3.09 (78.5)	2.12 (53.8)
4	1 1/2 2 2 1/2 3	4.06 (103)	2.62 (66.5)
6	1	5.75 (146)	
	1 1/2		
	2		
	2 1/2		3.62 (91.9)
	3		
	4		3.75 (95.2)

Dimensions are for reference only and are subject to change.

Sanitary Kwik-Clamp Fittings

Crosses

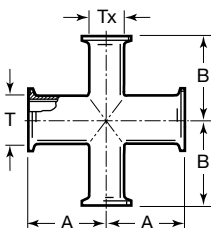
Equal Crosses



Basic Ordering Number: JC9

Tube OD, in.	A, in. (mm)
1	2.38 (60.4)
1 1/2	2.75 (69.8)
2	3.50 (88.9)
2 1/2	3.75 (95.2)
3	3.75 (95.2)
4	4.50 (114)

Reducing Crosses



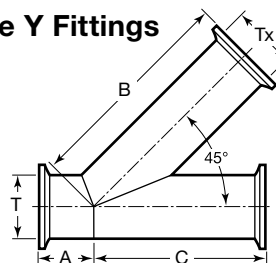
Basic Ordering Number: JC9R

Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
1 1/2	1	2.16 (54.9)	2.75 (69.8)
2	1	2.56 (65.0)	2.12 (53.8)
	1 1/2		2.41 (61.2)
2 1/2	1	2.84 (72.1)	2.38 (60.5)
	1 1/2		2.66 (67.6)
	2		2.81 (71.4)
3	1	3.09 (78.5)	2.38 (60.5)
	1 1/2		2.91 (73.9)
	2		3.06 (77.7)
	2 1/2		3.09 (78.5)
4	1	4.06 (103)	3.12 (79.2)
	1 1/2		3.41 (86.6)
	2		3.56 (90.4)
	2 1/2 3		3.59 (91.2)
6	1	5.75 (146)	5.50 (140)
	1 1/2		
	2		
	2 1/2		5.50 (140)
	3		5.25 (133)
	4		5.50 (140)

Lateral Y and True Y Fittings

Lateral Y and Reducing Lateral Y

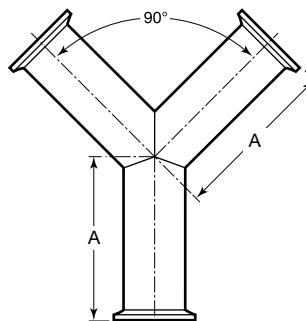
Basic Ordering Number: JC28A



Tube OD, in.		Dimensions, in. (mm)		
T	Tx	A	B	C
1/2 3/4		1.50 (38.1)	3.50 (88.9)	
1		1.25 (31.8)	4.31 (109)	3.38 (85.9)
1 1/2		1.38 (35.1)	5.06 (129)	4.00 (102)
2		1.62 (41.1)	5.50 (140)	4.50 (114)
2 1/2		2.12 (53.8)	6.88 (175)	5.50 (140)
3		2.50 (63.5)	8.25 (210)	7.00 (178)
4		3.00 (76.2)	10.0 (254)	8.75 (222)
6		4.75 (121)	13.2 (335)	
1	1/2 3/4	1.25 (31.8)	4.31 (109)	3.38 (85.9)
1 1/2	1/2 3/4 1	1.38 (35.1)	5.06 (129)	4.00 (102)
2	1/2 3/4 1 1 1/2	1.62 (41.1)	5.50 (140)	4.50 (114)
2 1/2	1/2 3/4 1 1 1/2 2	2.12 (53.8)	6.88 (175)	5.50 (140)
3	1/2 3/4 1 1 1/2 2 2 1/2	2.50 (63.5)	8.25 (210)	7.00 (178)
4	1/2 3/4 1 1 1/2 2 2 1/2 3	3.00 (76.2)	10.0 (254)	8.75 (222)

True Y

Basic Ordering Number: JC28B



Tube OD, in.	A, in. (mm)
1/2 3/4	2.50 (63.5)
1 1 1/2	3.50 (88.9)
2	4.50 (114)
2 1/2	5.50 (140)
3	6.50 (165)
4	8.62 (219)
6	8.75 (222)

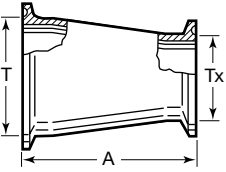
Dimensions are for reference only and are subject to change.

Sanitary Kwik-Clamp Fittings

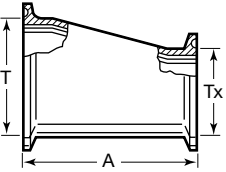
Reducers

Kwik-Clamp

Concentric Reducer
Basic Ordering
Number: JC31



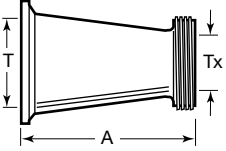
Eccentric Reducer
Basic Ordering
Number: JC32



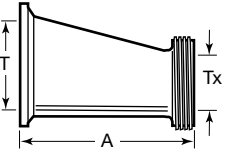
Tube OD, in.		A in. (mm)
T	Tx	
1 1/2	1	3.00 (76.2)
2	1	5.00 (127)
	1 1/2	3.00 (76.2)
2 1/2	1	7.00 (178)
	1 1/2	5.00 (127)
	2	3.00 (76.2)
3	1	9.00 (229)
	1 1/2	7.00 (178)
	2	5.00 (127)
	2 1/2	3.00 (76.2)
	3	13.1 (333)
4	1 1/2	11.1 (282)
	2	9.12 (232)
	2 1/2	7.12 (181)
	3	5.12 (130)
6	3	7.25 (184)
	4	5.38 (137)

Kwik-Clamp to Threaded Bevel-Seat

Concentric Reducer
Basic Ordering
Number: JC31-15



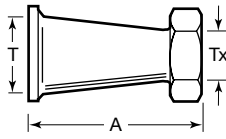
Eccentric Reducer
Basic Ordering
Number: JC32-15



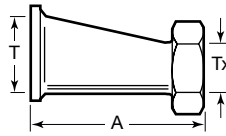
Tube OD, in.		A in. (mm)
T	Tx	
1 1/2	1	3.19 (81.0)
2	1	5.19 (132)
	1 1/2	3.22 (81.8)
2 1/2	1 1/2	5.22 (133)
	2	3.22 (81.8)
3	1 1/2	7.22 (183)
	2	5.22 (133)
	2 1/2	3.34 (84.8)
4	2	9.34 (237)
	2 1/2	7.47 (190)
	3	5.53 (140)

Kwik-Clamp to Plain Bevel-Seat

Concentric Reducer
Basic Ordering
Number: JC31-14



Eccentric Reducer
Basic Ordering
Number: JC32-14

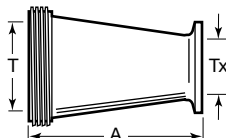


Tube OD, in.		A in. (mm)
T	Tx	
1 1/2	1	4.12 (105)
2	1	6.12 (155)
	1 1/2	4.22 (107)
2 1/2	1 1/2	6.22 (158)
	2	4.41 (112)
3	2	6.41 (163)
	2 1/2	4.66 (118)
4	2 1/2	8.78 (223)
	3	6.94 (176)

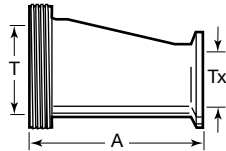
Union nut is 304 SS.

Threaded Bevel-Seat to Kwik-Clamp

Concentric Reducer
Basic Ordering
Number: J15-C31



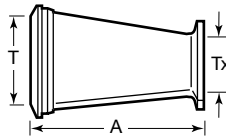
Eccentric Reducer
Basic Ordering
Number: J15-C32



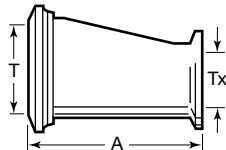
Tube OD, in.		A in. (mm)
T	Tx	
1 1/2	1	3.22 (81.8)
2	1	5.22 (133)
	1 1/2	3.22 (81.8)
2 1/2	1 1/2	5.34 (136)
	2	3.34 (84.8)
3	2	5.41 (137)
	2 1/2	3.41 (86.6)
4	2 1/2	7.72 (196)
	3	5.72 (145)

Plain Bevel-Seat to Kwik-Clamp

Concentric Reducer
Basic Ordering
Number: J14-C31



Eccentric Reducer
Basic Ordering
Number: J14-C32



Tube OD, in.		A in. (mm)
T	Tx	
1 1/2	1 ^①	3.22 (81.8)
2	1	5.22 (133)
	1 1/2	3.22 (81.8)
2 1/2	1 1/2	5.34 (136)
	2	3.34 (84.8)
3	2	5.41 (137)
	2 1/2	3.41 (86.6)
4	2 1/2	7.72 (196)
	3	5.72 (145)

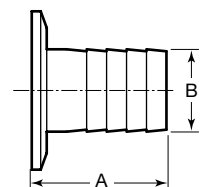
① Includes 304 SS union nut (not shown).

Dimensions are for reference only and are subject to change.

Sanitary Kwik-Clamp Fittings

Adapters

Rubber Hose

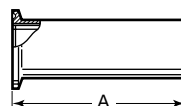


Reducing sizes and sizes under 1 in. are available in 316L SS only.

Basic Ordering Number: JC14AHR

Tube OD in.	Hose End Size in.	Dimensions, in. (mm)	
		A	B
1/2	1/8	1.50 (38.1)	0.19 (4.8)
	1/4		0.28 (7.1)
	3/8		0.41 (10.4)
	1/2		0.53 (13.5)
	5/8		0.66 (16.8)
	3/4		0.78 (19.8)
3/4	1/8	1.50 (38.1)	0.19 (4.8)
	1/4		0.28 (7.1)
	3/8		0.41 (10.4)
	1/2		0.53 (13.5)
	5/8		0.66 (16.8)
	3/4		0.78 (19.8)
1	1	1.69 (42.9)	1.03 (26.2)
1 1/2	1/8	1.50 (38.1)	0.19 (4.8)
	1/4		0.28 (7.1)
	3/8		0.41 (10.4)
	1/2		0.53 (13.5)
	5/8		0.66 (16.8)
	3/4		0.78 (19.8)
	1 1/4	1.69 (42.9)	1.28 (32.5)
	1 1/2		1.53 (38.9)
2	1/4	1.50 (38.1)	0.28 (7.1)
	3/8		0.41 (10.4)
	1/2		0.53 (13.5)
	5/8		0.66 (16.8)
	3/4		0.78 (19.8)
	1	1.69 (42.9)	1.03 (26.2)
	1 1/2		1.53 (38.9)
	2	2.31 (58.7)	2.03 (51.6)
2 1/2		2.00 (50.8)	2.53 (64.3)
3		3.09 (78.5)	3.03 (77.0)
4		3.41 (86.6)	4.03 (102)

Soft Plastic Hose

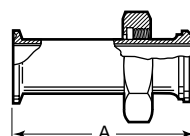


To order reducing adapters, add a second end connection size designator to the ordering number.

Basic Ordering Number: JC14AHT

Tube OD, in.	A, in. (mm)
1/2	4.50 (114)
3/4	
1	
1 1/2	
2	
2 1/2	4.62 (117)
3	
4	

Plain Bevel-Seat

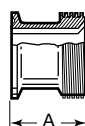


Union nut is 304 SS.

Basic Ordering Number: JC17-14

Tube OD, in.	A, in. (mm)
1	3.00 (76.2)
1 1/2	
2	3.50 (88.9)
2 1/2	
3	3.75 (95.2)
4	4.00 (102)

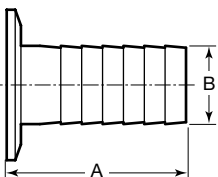
Threaded Bevel-Seat



Basic Ordering Number: JC17-15

Tube OD, in.	A, in. (mm)
1	1.69 (42.9)
1 1/2	1.72 (43.7)
2	
2 1/2	1.84 (46.7)
3	1.91 (48.5)
4	2.34 (59.4)

Brewery-Style Long Rubber Hose



Basic Ordering Number: JC14AHRB

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	3.50 (88.9)	1.03 (26.2)
1 1/2	3.50 (88.9)	1.62 (41.1)
2	4.50 (114)	2.12 (53.8)
2 1/2	4.50 (114)	2.62 (66.5)
3	4.50 (114)	3.12 (79.2)
4	6.25 (159)	4.12 (105)

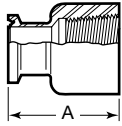
Dimensions are for reference only and are subject to change.

Sanitary Kwik-Clamp Fittings

NPT Adapters

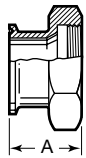
Indicate Kwik-Clamp end connection size, then NPT end connection size.

Female NPT



**Under 1 in. and
2 1/2 to 4 in. sizes**

Under 1 in. sizes
available in 316L SS
only.

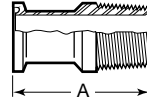


1 to 2 in. sizes

Basic Ordering Number: JC22

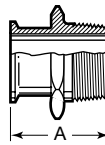
Tube OD in.	NPT Size in.	A in. (mm)
1/2	1/8	1.25 (31.8)
	1/4	1.50 (38.1)
	3/8	
	1/2	1.62 (41.1)
	3/4	
3/4	1/8	1.25 (31.8)
	1/4	1.50 (38.1)
	3/8	
	1/2	1.62 (41.1)
	3/4	
1	3/4	1.62 (41.1)
	1	
1 1/2	3/4	1.62 (41.1)
	1	
	1 1/4	2.25 (57.2)
	1 1/2	
2	1 1/2	1.69 (42.9)
	2	2.34 (59.4)
	2 1/2	
2 1/2	1 1/2	1.66 (42.2)
	2	1.72 (43.7)
	2 1/2	2.09 (53.1)
3		2.19 (55.6)
4		2.66 (67.6)

Male NPT



**Under 1 in. and
2 1/2 to 4 in. sizes**

Under 1 in. sizes
available in 316L SS
only.



1 to 2 in. sizes

Basic Ordering Number: JC21

Tube OD in.	NPT Size in.	A in. (mm)
1/2	1/8	2.00 (50.8)
	1/4	
	3/8	
	1/2	
	3/4	
3/4	1/8	2.00 (50.8)
	1/4	
	3/8	
	1/2	
	3/4	
1	3/4	2.19 (55.6)
	1	2.25 (57.2)
	2	2.62 (66.5)
1 1/2	3/4	2.19 (55.6)
	1	2.25 (57.2)
	1 1/4	2.44 (62.0)
	1 1/2	
	2	2.62 (66.5)
2	1 1/2	2.47 (62.7)
	2	2.66 (67.6)
	2 1/2	
2 1/2	2	2.78 (70.6)
	2 1/2	3.28 (83.3)
3		3.50 (88.9)
4		3.81 (96.8)

Dimensions are for reference only and are subject to change.

Sanitary and Industrial Tube Butt Weld Fittings

Typical Ordering Number

Build a tube butt weld fitting ordering number by combining the designators in the sequence shown below.

Basic Ordering Number — See tables below.

Material

- 4 = 304 stainless steel
- 6 = 316L stainless steel

Surface Finish

- 1 = Unpolished
- 7 = ID and OD polished to 32 $\mu\text{in.}$ (0.81 μm) max R_a

J7WR 4 1 15 10

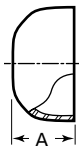
1st End Connection Size

2nd End Connection Size
Add second designator for reducers *only*.

Tube OD

50 = 1/2 in.	20 = 2 in.	60 = 6 in.
75 = 3/4 in.	25 = 2 1/2 in.	80 = 8 in.
10 = 1 in.	30 = 3 in.	100 = 10 in.
15 = 1 1/2 in.	40 = 4 in.	120 = 12 in.

Caps

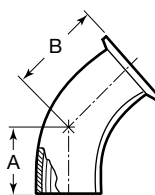


Basic Ordering Number: J16W

Tube OD, in.	A, in. (mm)
1	0.44 (11.2)
1 1/2	0.56 (14.2)
2	0.75 (19.0)
2 1/2	1.06 (26.9)
3	1.12 (28.4)
4	1.25 (31.8)
6	2.25 (57.2)

Elbows

45° Kwik-Clamp Elbows

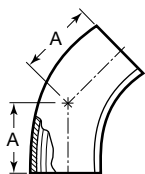


Basic Ordering Number: J2KM

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	1.19 (30.2)	1.69 (42.9)
1 1/2	1.62 (41.1)	2.12 (53.8)
2	2.31 (58.7)	2.81 (71.4)
2 1/2	3.00 (76.2)	3.50 (88.9)
3	3.69 (93.7)	4.19 (106)
4	4.81 (122)	5.44 (138)

Elbows

45° Elbows

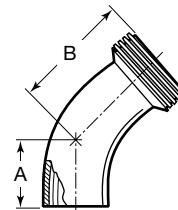


Basic Ordering Number: J2KS

Tube OD, in.	A, in. (mm)
1	1.19 (30.2)
1 1/2	1.62 (41.1)
2	2.31 (58.7)
2 1/2	3.00 (76.2)
3	3.69 (93.7)
4	4.81 (122)

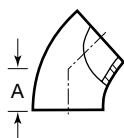
45° Threaded and Plain Bevel-Seat Elbows

Basic Ordering Number: J2K



Tube OD in.	Dimensions, in. (mm)	
	A	B
1	1.19 (30.2)	1.88 (47.8)
1 1/2	1.62 (41.1)	2.34 (59.4)
2	2.31 (58.7)	3.03 (77.0)
2 1/2	3.00 (76.2)	3.84 (97.5)
3	3.69 (93.7)	4.59 (117)
4	4.81 (122)	6.03 (153)

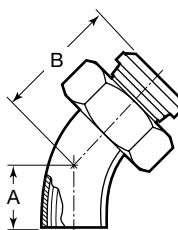
45° Short Elbows



Basic Ordering Number: J2KSX

Tube OD, in.	A, in. (mm)
1	0.62 (15.7)
1 1/2	0.94 (23.9)
2	1.25 (31.8)
2 1/2	1.56 (39.6)
3	1.88 (47.8)
4	2.50 (63.5)
6	3.75 (95.2)

Basic Ordering Number: J2P



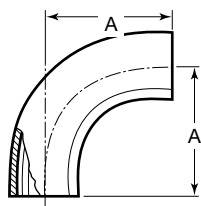
Union nut is 304 SS.

Dimensions are for reference only and are subject to change.

Sanitary and Industrial Tube Butt Weld Fittings

Elbows

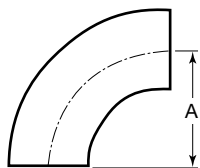
90° Elbows



Basic Ordering Number: J2S

Tube OD, in.	A, in. (mm)
1	2.06 (52.3)
1 1/2	2.94 (74.7)
2	4.06 (103)
2 1/2	5.19 (132)
3	6.31 (160)
4	8.31 (211)

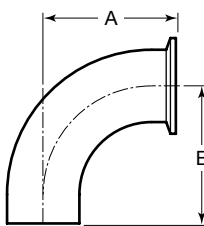
90° Short Elbows



Basic Ordering Number: J2SX

Tube OD, in.	A, in. (mm)
1	1.50 (38.1)
1 1/2	2.25 (57.2)
2	3.00 (76.2)
2 1/2	3.75 (95.2)
3	4.50 (114)
4	6.00 (152)
6	9.00 (229)

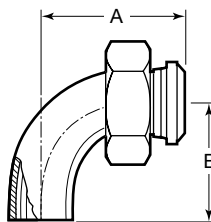
90° Kwik-Clamp Elbows



Basic Ordering Number: J2CM

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	2.56 (65.0)	2.06 (52.3)
1 1/2	3.44 (87.4)	2.94 (74.7)
2	4.56 (116)	4.06 (103)
2 1/2	5.69 (145)	5.19 (132)
3	6.81 (173)	6.31 (160)
4	8.94 (227)	8.31 (211)

90° Plain Bevel-Seat Elbows



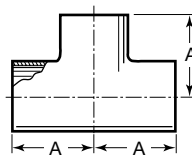
Union nut is 304 SS.

Basic Ordering Number: J2F

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	2.75 (69.8)	2.06 (52.3)
1 1/2	3.66 (93.0)	2.94 (74.7)
2	4.78 (121)	4.06 (103)
2 1/2	6.03 (153)	5.19 (132)
3	7.22 (183)	6.31 (160)
4	9.53 (242)	8.31 (211)

Tees

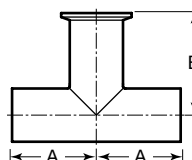
Equal Tees



Basic Ordering Number: J7W

Tube OD, in.	A, in. (mm)
1	1.88 (47.8)
1 1/2	2.25 (57.2)
2	3.00 (76.2)
3	3.25 (82.6)
4	3.88 (98.6)
6	5.00 (127)

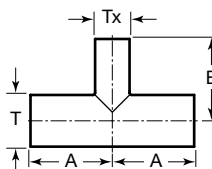
Kwik-Clamp Outlet Tees



Basic Ordering Number: J7WWM

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	1.12 (28.4)	1.62 (41.1)
1 1/2	1.66 (42.2)	2.16 (54.9)
2	2.06 (52.3)	2.56 (65.0)
2 1/2	2.34 (59.4)	2.84 (72.1)
3	2.59 (65.8)	3.09 (78.5)
4	3.44 (87.4)	4.06 (103)

Reducing Tees



Basic Ordering Number: J7WR

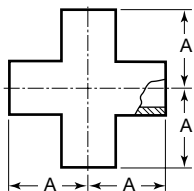
Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
1 1/2	1	2.25 (57.2)	2.12 (53.8)
2	1	3.00 (76.2)	2.38 (60.5)
	1 1/2		2.50 (63.5)
2 1/2	1	3.00 (76.2)	2.75 (69.8)
	1 1/2		3.25 (82.6)
	2		3.25 (82.6)
3	1	3.25 (82.6)	3.12 (79.2)
	1 1/2		3.00 (76.2)
	2		3.50 (88.9)
	2 1/2		3.25 (82.6)
4	1	3.88 (98.6)	3.62 (91.9)
	1 1/2		4.00 (102)
	2		3.75 (95.2)
6	3	5.00 (127)	4.75 (121)
	4		4.88 (124)

Dimensions are for reference only and are subject to change.

Sanitary and Industrial Tube Butt Weld Fittings

Crosses

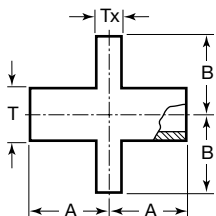
Equal Crosses



Basic Ordering Number: J9W

Tube OD, in.	A, in. (mm)
1	1.88 (47.8)
1 1/2	2.25 (57.2)
2	3.00 (76.2)
2 1/2	3.25 (82.6)
3	3.88 (98.6)
4	3.88 (98.6)
6	5.00 (127)

Reducing Crosses



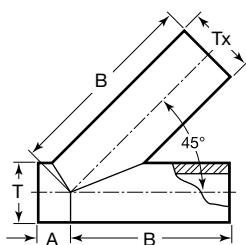
Basic Ordering Number: J9WR

Tube OD, in.	Dimensions, in. (mm)		
	T	Tx	B
1 1/2	1	2.25 (57.2)	2.12 (53.8)
2	1	3.00 (76.2)	2.38 (60.5)
	1 1/2	2.50 (63.5)	2.50 (63.5)
2 1/2	1	3.00 (76.2)	2.75 (69.8)
	1 1/2	3.00 (76.2)	3.25 (82.6)
	2	3.25 (82.6)	3.25 (82.6)
3	1	3.25 (82.6)	3.12 (79.2)
	1 1/2	3.25 (82.6)	3.00 (76.2)
	2	3.50 (88.9)	3.50 (88.9)
	2 1/2	3.25 (82.6)	3.25 (82.6)
4	1	3.62 (91.9)	3.62 (91.9)
	1 1/2	3.62 (91.9)	3.62 (91.9)
	2	4.00 (102)	4.00 (102)
	2 1/2	3.75 (95.2)	3.75 (95.2)
6	3	4.75 (121)	4.75 (121)
	4	4.88 (124)	4.88 (124)

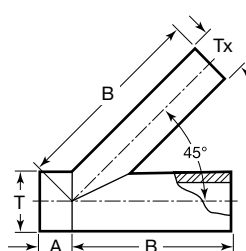
Lateral Y and True Y Fittings

Lateral Y and Reducing Lateral Y

Lateral Y
Basic Ordering
Number: J28WA

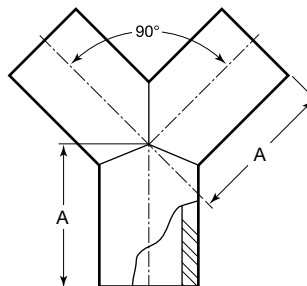


Reducing Lateral Y
Basic Ordering
Number: J28WAR



Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
1/2	3/4	1.00 (25.4)	5.00 (127)
1	1 1/2	1.19 (30.2)	6.19 (157)
2	2	1.62 (41.1)	7.12 (181)
2 1/2	3	1.50 (38.1)	8.50 (216)
3	4	1.88 (47.8)	8.88 (226)
4	6	2.06 (52.3)	10.8 (274)
6	6	4.00 (102)	12.5 (318)
1	1/2	1.00 (25.4)	5.00 (127)
1 1/2	1/2	1.19 (30.2)	6.19 (157)
2	3/4	1.62 (41.1)	7.12 (181)
2 1/2	1	1.50 (38.1)	8.50 (216)
3	1 1/2	1.88 (47.8)	8.88 (226)
4	2	2.06 (52.3)	10.8 (274)
6	2 1/2	4.00 (102)	12.5 (318)

True Y



Basic Ordering Number: J28BW

Tube OD, in.	A, in. (mm)
1/2	2.00 (50.8)
3/4	2.00 (50.8)
1	3.00 (76.2)
1 1/2	3.00 (76.2)
2	4.00 (102)
2 1/2	5.00 (127)
3	6.00 (152)
4	8.00 (203)
6	8.00 (203)

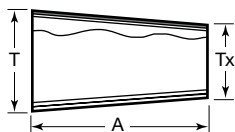
Dimensions are for reference only and are subject to change.

Sanitary and Industrial Tube Butt Weld Fittings

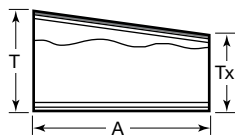
Reducers

Tube Butt Weld

Concentric Reducer
Basic Ordering
Number: J31



Eccentric Reducer
Basic Ordering
Number: J32



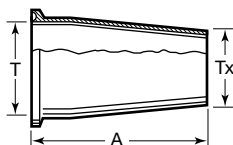
For unpolished reducers, add **W** to the basic ordering number.
Example: J31W

Tube OD, in.		A in. (mm)
T	Tx	
1 1/2	1	2.00 (50.8)
2	1	4.00 (102)
	1 1/2	2.00 (50.8)
2 1/2	1	6.00 (152)
	1 1/2	4.00 (102)
	2	2.00 (50.8)
3	1	8.00 (203)
	1 1/2	6.00 (152)
	2	4.00 (102)
	2 1/2	2.00 (50.8)
	3	4.00 (102)
4	1	12.0 (305)
	1 1/2	10.0 (254)
	2	8.00 (203)
	2 1/2	6.00 (152)
	3	4.00 (102)
6	1 ^①	14.0 (356)
	1 1/2 ^①	12.0 (305)
	2 ^①	10.0 (254)
	2 1/2 ^①	8.00 (203)
	3	6.00 (152)
	4	4.00 (102)

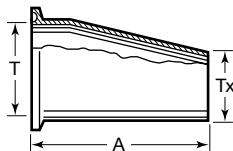
① Requires multiple stack components that may have different degrees of taper.

Kwik-Clamp to Tube Butt Weld

Concentric Reducer
Basic Ordering
Number: J31M



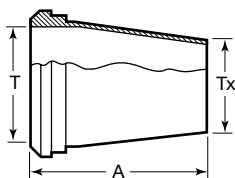
Eccentric Reducer
Basic Ordering
Number: J32M



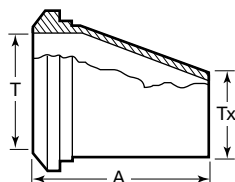
Tube OD, in.		A in. (mm)
T	Tx	
1 1/2	1	2.50 (63.5)
2	1	4.50 (114)
	1 1/2	2.50 (63.5)
2 1/2	1	6.50 (165)
	1 1/2	4.50 (114)
	2	2.50 (63.5)
3	1	8.50 (216)
	1 1/2	6.50 (165)
	2	4.50 (114)
	2 1/2	2.50 (63.5)
	3	4.62 (117)
4	1	12.6 (320)
	1 1/2	10.6 (269)
	2	8.62 (219)
	2 1/2	6.62 (168)
	3	4.62 (117)

Plain Bevel-Seal to Tube Butt Weld

Concentric Reducer
Basic Ordering
Number: J31P



Eccentric Reducer
Basic Ordering
Number: J32P



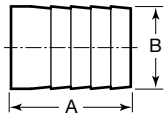
Tube OD, in.		A in. (mm)
T	Tx	
1 1/2	1	2.69 (68.3)
2	1	4.72 (120)
	1 1/2	2.72 (69.1)
2 1/2	1	6.84 (174)
	1 1/2	4.84 (123)
	2	2.84 (72.1)
3	1	8.91 (226)
	1 1/2	6.91 (176)
	2	4.91 (125)
	2 1/2	2.91 (73.9)
4	1	13.2 (335)
	1 1/2	11.2 (284)
	2	9.22 (234)
	2 1/2	7.22 (183)
	3	5.22 (133)

Dimensions are for reference only and are subject to change.

Sanitary and Industrial Tube Butt Weld Fittings

Adapters

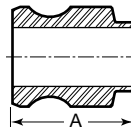
Rubber Hose



Basic Ordering Number: 14WHR

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	1.69 (42.9)	1.03 (26.2)
1 1/2	1.69 (42.9)	1.53 (38.9)
2	2.31 (58.7)	2.03 (51.6)
2 1/2	2.00 (50.8)	2.53 (64.3)
3	3.09 (78.5)	3.03 (77.0)
4	3.41 (86.6)	4.03 (102)

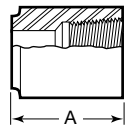
Male Kamlock



Basic Ordering Number: J181W

Tube OD, in.	A, in. (mm)
3/4	1.38 (35.1)
1	1.75 (44.4)
1 1/2	2.00 (50.8)
2	2.25 (57.2)
2 1/2	
3	
4	2.50 (63.5)

Female NPT

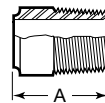


Available only with ID and OD polished to 63 $\mu\text{in.}$ (1.60 μm) R_a ; no surface finish designator required.

Basic Ordering Number: 26EF

Tube OD in.	NPT Size in.	A in. (mm)
1		1.38 (35.1)
1 1/2		1.31 (33.3)
2		1.75 (44.4)
2 1/2		1.81 (46.0)
3		2.25 (57.2)
4		2.38 (60.5)

Male NPT

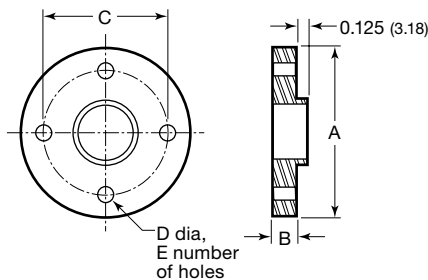


Available only with ID and OD polished to 63 $\mu\text{in.}$ (1.60 μm) R_a ; no surface finish designator required.

Basic Ordering Number: J19W

Tube OD in.	NPT Size in.	A in. (mm)
1		1.75 (44.4)
1 1/2		
2		1.81 (46.0)
2 1/2		2.31 (58.7)
3		2.50 (63.5)
4		2.56 (65.0)

Flanges



Available only with ID and OD polished to 63 $\mu\text{in.}$ (1.60 μm) R_a ; no surface finish designator required. Drilling and outside diameter meet ASME B16.5 Class 150.

Basic Ordering Number: J38W

Tube OD in.	Dimensions, in. (mm)				
	A	B	C	D	E
1/2 ^①	3.50 (88.9)	0.31 (7.9)	2.38 (60.5)	0.62 (15.7)	4
3/4 ^①	3.88 (98.6)	0.38 (9.7)	2.72 (69.1)	0.62 (15.7)	
1	4.25 (108)	0.38 (9.7)	3.12 (79.2)	0.62 (15.7)	
1 1/2	5.00 (127)	0.38 (9.7)	3.88 (98.6)	0.62 (15.7)	
2	6.00 (152)	0.44 (11.2)	4.75 (121)	0.75 (19.0)	
2 1/2	7.00 (178)	0.50 (12.7)	5.50 (140)	0.75 (19.0)	
3	7.50 (190)	0.50 (12.7)	6.00 (152)	0.75 (19.0)	
4	9.00 (229)	0.50 (12.7)	7.50 (190)	0.75 (19.0)	8
6	11.0 (279)	0.50 (12.7)	9.50 (241)	0.88 (22.4)	
8	13.5 (343)	0.62 (15.7)	11.8 (300)	0.88 (22.4)	
10	16.0 (406)	0.88 (22.4)	14.2 (361)	1.00 (25.4)	12
12	19.0 (483)	0.88 (22.4)	17.0 (432)	1.00 (25.4)	

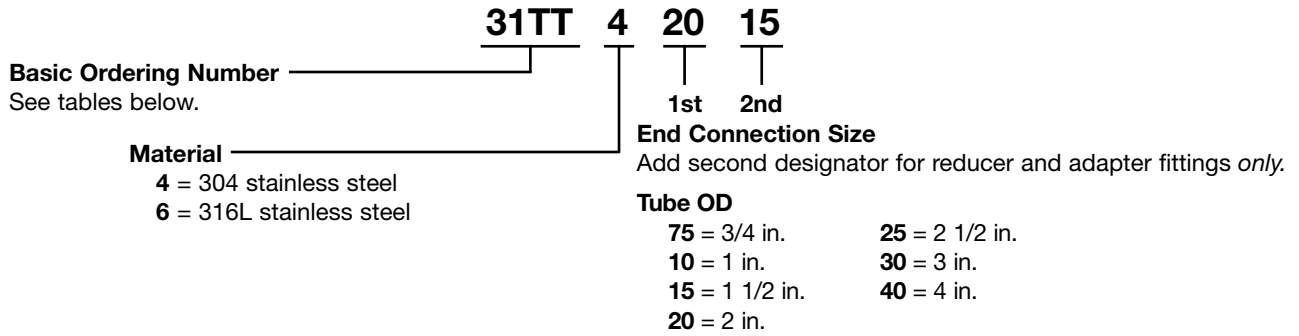
① 316L SS only.

Dimensions are for reference only and are subject to change.

Sanitary Acme Threaded and Plain Bevel-Seat Fittings

Typical Ordering Number

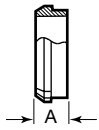
Build a fitting ordering number by combining the designators in the sequence shown below.



Ferrules, Caps, Gaskets, and Nuts

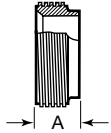
Short Butt Weld Ferrules

Basic Ordering Number: 14WF



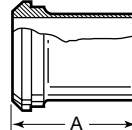
Tube OD, in.	A, in. (mm)
1	0.69 (17.5)
1 1/2	0.72 (18.3)
2	0.84 (21.3)
2 1/2	0.91 (23.1)
3	0.91 (23.1)
4	1.22 (31.0)

Basic Ordering Number: 15WF



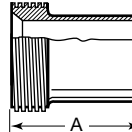
Butt Weld Ferrules

Basic Ordering Number: 14A

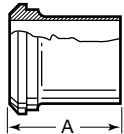


Tube OD, in.	A, in. (mm)
1	1.38 (35.1)
1 1/2	1.50 (38.1)
2	1.75 (44.4)
2 1/2	1.75 (44.4)
3	1.75 (44.4)
4	1.75 (44.4)

Basic Ordering Number: 15A



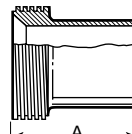
Plain Tank Butt Weld Ferrules



Basic Ordering Number: 14WL

Tube OD, in.	A, in. (mm)
1	2.00 (50.8)
1 1/2	2.25 (57.2)
2	2.50 (63.5)
2 1/2	2.75 (69.8)
3	3.00 (76.2)
4	4.00 (102)

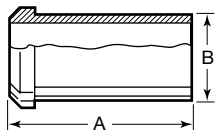
Threaded Tank Butt Weld Ferrules



Basic Ordering Number: 15WL

Tube OD, in.	A, in. (mm)
1	2.00 (50.8)
1 1/2	2.25 (57.2)
2	2.50 (63.5)
2 1/2	2.75 (69.8)
3	3.00 (76.2)
4	4.00 (102)

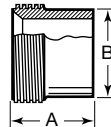
Plain Heavy-Wall Tank Weld Ferrules



Basic Ordering Number: 14W

Tube OD in.	Tube Wall in.	Dimensions, in. (mm)	
		A	B
1	0.145	2.38 (60.5)	1.16 (29.5)
1 1/2	0.153	2.53 (64.3)	1.68 (42.7)
2	0.161	2.78 (70.6)	2.19 (55.6)
2 1/2	0.169	3.06 (77.7)	2.71 (68.8)
3	0.177	3.53 (89.7)	3.22 (81.8)
4	0.211	4.31 (109)	4.26 (108)

Threaded Heavy-Wall Tank Weld Ferrules



Basic Ordering Number: 15W

Tube OD in.	Tube Wall in.	Dimensions, in. (mm)	
		A	B
1	0.190	1.50 (38.1)	1.25 (31.8)
1 1/2	0.190	1.62 (41.1)	1.75 (44.4)
2	0.221	1.75 (44.4)	2.31 (58.7)
2 1/2	0.252	1.75 (44.4)	2.88 (73.2)
3	0.252	1.81 (46.0)	3.38 (85.9)
4	0.208	2.12 (53.8)	4.25 (108)

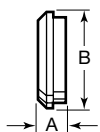
Dimensions are for reference only and are subject to change.

Sanitary Acme Threaded and Plain Bevel-Seat Fittings

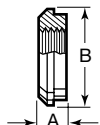
Ferrules, Caps, Gaskets, and Nuts

Caps

Solid Cap
Basic Ordering Number: 16A



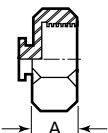
Thermometer Cap
Basic Ordering Number: 23B



1 in. size tapped 1/2 in. female NPT;
1 1/2 through 4 in. size tapped 3/4 in. female NPT.

Blind Hex Caps

Not 3-A compliant



Available in 304 SS only; includes chain (not shown).

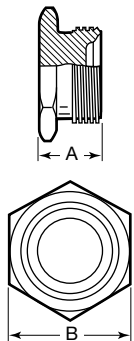
Basic Ordering Number: 151

Tube OD, in.	A, in. (mm)
1	1.00 (25.4)
1 1/2	1.06 (26.9)
2	1.12 (28.4)
2 1/2	1.25 (31.8)
3	1.25 (31.8)
4	1.50 (38.1)

Threaded Hex Caps

Not 3-A compliant

Basic Ordering Number: 16AT



Tube OD in.	Dimensions, in. (mm)	
	A	B
1	1.25 (31.8)	2.00 (50.8)
1 1/2	1.25 (31.8)	2.00 (50.8)
2	1.28 (32.5)	2.62 (66.6)
2 1/2	1.43 (36.3)	3.00 (76.2)
3	1.50 (38.1)	3.00 (76.2)
4	1.62 (41.1)	4.19 (106)

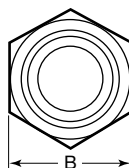
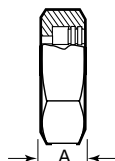
Gaskets

How to Order

Select a basic ordering number and add an end connection size designator.
Example: J40NH10

Gasket Material	Basic Ordering Number
Buna N	J40NH
White PTFE	J40T

Union Nuts



Union nut is 304 SS.

Basic Ordering Number: 13H

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	0.91 (23.1)	1.81 (46.0)
1 1/2	0.97 (24.6)	2.41 (61.2)
2	1.06 (26.9)	3.00 (76.2)
2 1/2	1.19 (30.0)	3.59 (91.2)
3	1.28 (32.5)	4.19 (106)
4	1.50 (38.1)	5.44 (138)

Aluminum Wrenches



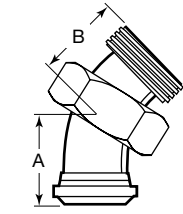
Hex Size in.	Ordering Number
1	25H-10
1 1/2	25H-15
2	25H-20
2 1/2	25H-25
3	25H-30
4	25H-40

Dimensions are for reference only and are subject to change.

Sanitary Acme Threaded and Plain Bevel-Seat Fittings

Elbows

45° Plain to Threaded Elbows



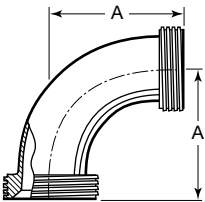
Union nut is 304 SS.

Basic Ordering Number: 2P

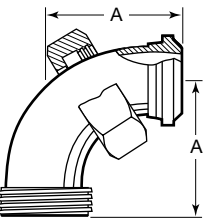
Tube OD in.	Dimensions, in. (mm)	
	A	B
1	2.12 (53.8)	1.31 (33.3)
1 1/2	2.12 (53.8)	1.72 (43.7)
2	2.31 (58.7)	2.12 (53.8)
2 1/2	2.56 (65.0)	2.62 (66.5)
3	2.91 (73.9)	3.12 (79.2)
4	3.88 (98.6)	4.25 (108)

90° Elbows

Basic Ordering
Number: 2C

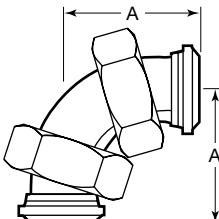


Basic Ordering
Number: 2F



Tube OD, in.	A, in. (mm)
1	2.19 (55.6)
1 1/2	2.97 (75.4)
2	3.72 (94.5)
2 1/2	4.59 (117)
3	5.41 (137)
4	7.22 (183)

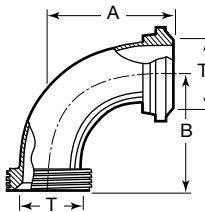
Basic Ordering
Number: 2E



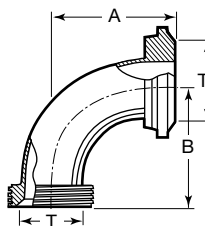
Union nut is 304 SS.

90° Nontapered Reducing Elbows

Concentric Reducer
Basic Ordering
Number: 2F-31



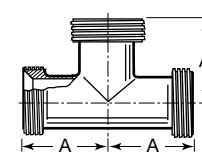
Eccentric Reducer
Basic Ordering
Number: 2F-32



Fitting Size in.		Dimensions in. (mm)	
T Tube OD	Tx	A	B
1	1 1/2	2.06 (52.3)	2.19 (55.6)
	2	2.12 (53.8)	
	2 1/2	2.16 (54.9)	
	3	2.22 (56.4)	
	4	2.31 (58.7)	
1 1/2	2	2.88 (73.2)	2.97 (75.4)
	2 1/2	2.91 (73.9)	
	3	2.97 (75.4)	
	4	3.06 (77.7)	
2	2 1/2	3.66 (93.0)	3.72 (94.5)
	3	3.72 (94.5)	
	4	3.91 (99.3)	
2 1/2	3	4.47 (114)	4.59 (117)
	4	4.56 (116)	
3	4	5.31 (135)	5.41 (137)

Tees

Threaded Equal Tees

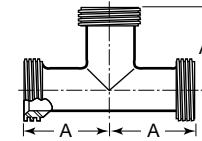


Basic Ordering Number: 7

Tube OD, in.	A, in. (mm)
1	1.81 (46.0)
1 1/2	2.38 (60.5)
2	2.78 (70.6)
2 1/2	3.19 (81.0)
3	3.50 (88.9)
4	4.66 (118)

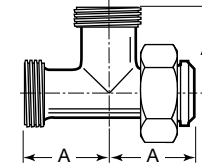
Threaded and Threaded to Plain Equal Tees

Basic Ordering
Number: 7X



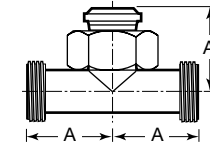
Tube OD, in.	A, in. (mm)
1	2.00 (50.8)
1 1/2	2.88 (73.2)
2	3.72 (94.5)
2 1/2	4.84 (123)
3	5.91 (150)
4	8.06 (205)

Basic Ordering
Number: 7BX



Basic Ordering
Number: 7AX

Not 3-A compliant



Union nut is 304 SS.

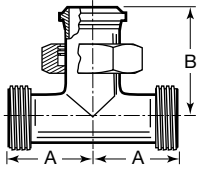
Dimensions are for reference only and are subject to change.

Sanitary Acme Threaded and Plain Bevel-Seat Fittings

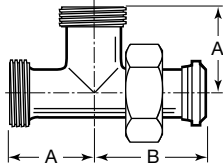
Tees

Threaded to Plain Tees

Basic Ordering
Number: 7A



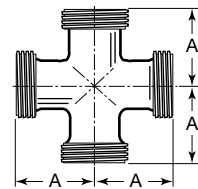
Basic Ordering
Number: 7B



Union nut is 304 SS.

Crosses

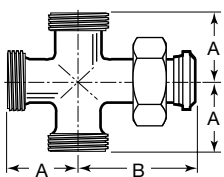
Equal Crosses



Basic Ordering Number: 9

Tube OD, in.	A, in. (mm)
1	1.81 (46.0)
1 1/2	2.38 (60.5)
2	2.78 (70.6)
2 1/2	3.19 (81.0)
3	3.50 (88.9)
4	4.66 (118)

Threaded to Plain Crosses



Union nut is 304-SS.

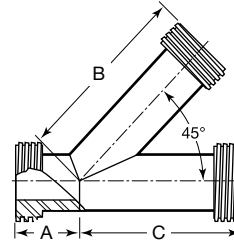
Basic Ordering Number: 9A

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	1.81 (46.0)	2.69 (68.3)
1 1/2	2.38 (60.5)	3.41 (86.6)
2	2.78 (70.6)	3.81 (96.8)
2 1/2	3.19 (81.0)	4.25 (108)
3	3.50 (88.9)	4.62 (117)
4	4.66 (118)	6.12 (155)

Lateral Y and True Y Fittings

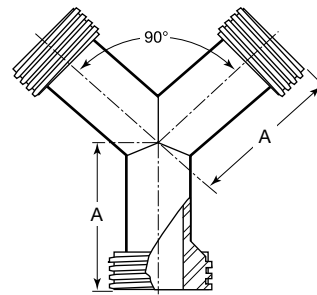
Lateral Y

Basic Ordering
Number: 28A



Tube OD in.	Dimensions, in. (mm)		
	A	B	C
1	1.25 (31.8)	4.31 (109)	3.38 (85.9)
1 1/2	1.38 (35.1)	5.06 (129)	4.00 (102)
2	1.62 (41.1)	5.50 (140)	4.50 (114)
2 1/2	2.12 (53.8)	6.88 (175)	5.50 (140)
3	2.50 (63.5)	8.25 (210)	7.00 (178)
4	3.00 (76.2)	10.0 (254)	8.75 (222)

True Y



Basic Ordering Number: 28B

Tube OD, in.	A, in. (mm)
1	3.69 (93.7)
1 1/2	3.72 (94.5)
2	4.72 (120)
2 1/2	5.84 (148)
3	6.91 (176)
4	9.22 (234)

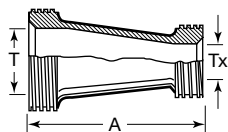
Dimensions are for reference only and are subject to change.

Sanitary Acme Threaded and Plain Bevel-Seat Fittings

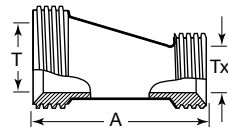
Reducers

Threaded and Plain to Threaded

Concentric Reducer
Basic Ordering
Number: 31TT

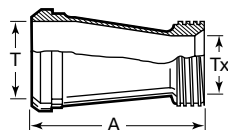


Eccentric Reducer
Basic Ordering
Number: 32TT

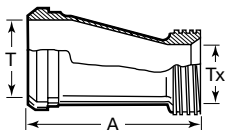


Tube OD, in.		A in. (mm)
T	Tx	
1 1/2	1	3.41 (86.6)
	1	5.41 (137)
2	1 1/2	3.44 (87.4)
	1	7.53 (191)
2 1/2	1 1/2	5.56 (141)
	2	3.56 (90.4)
3	1	9.59 (244)
	1 1/2	7.62 (194)
	2	5.62 (143)
	2 1/2	3.75 (95.2)
4	1	13.9 (353)
	1 1/2	11.9 (302)
	2	9.94 (252)
	2 1/2	8.06 (205)
	3	6.12 (155)

Concentric Reducer
Basic Ordering
Number: 31-15F

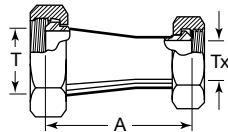


Eccentric Reducer
Basic Ordering
Number: 32-15F

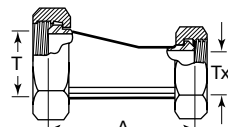


Plain and Threaded to Plain

Concentric Reducer
Basic Ordering
Number: 31-14F



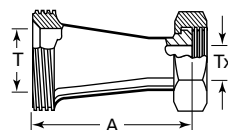
Eccentric Reducer
Basic Ordering
Number: 32-14F



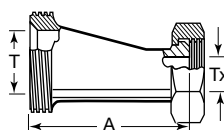
Union nut is 304 SS.

Tube OD, in.		A in. (mm)
T	Tx	
1 1/2	1	4.34 (110)
	1	6.34 (161)
2	1 1/2	4.44 (113)
	1	8.47 (215)
2 1/2	1 1/2	6.56 (167)
	2	4.75 (121)
3	1	10.5 (267)
	1 1/2	8.62 (219)
	2	6.81 (173)
	2 1/2	5.06 (129)
4	1	14.8 (376)
	1 1/2	12.9 (328)
	2	11.1 (282)
	2 1/2	9.38 (238)
	3	7.53 (191)

Concentric Reducer
Basic Ordering
Number: 31TP



Eccentric Reducer
Basic Ordering
Number: 32TP



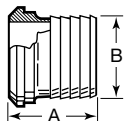
Dimensions are for reference only and are subject to change.

Sanitary Acme Threaded and Plain Bevel-Seat Fittings

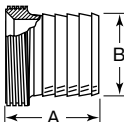
Adapters

Rubber Hose

Basic Ordering Number: 14AHR



Basic Ordering Number: 15AHR



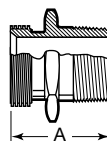
Tube OD in.	Dimensions, in. (mm)	
	A	B
1	1.69 (42.9)	1.03 (26.2)
1 1/2	1.69 (42.9)	1.53 (38.9)
2	2.31 (58.7)	2.03 (51.6)
2 1/2	2.34 (59.4)	2.53 (64.3)
3	3.50 (88.9)	3.03 (77.0)
4	4.00 (102)	4.03 (102)

To order reducing adapters, add a second end connection size designator to the ordering number.

Example: 14AHR42015

Threaded to Male NPT

Not 3-A compliant



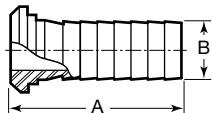
Basic Ordering Number: 21

Tube OD in.	NPT Size in.	A in. (mm)
1	3/4	2.19 (55.6)
	1	2.25 (57.2)
1 1/2	1 1/4	2.44 (62.0)
	1 1/2	2.44 (62.0)
2	1 1/2	2.47 (62.7)
	2	2.66 (67.6)
2 1/2 ^①	2	2.78 (70.6)
	2 1/2	3.28 (83.3)
3		3.50 (88.9)
4		3.81 (96.8)

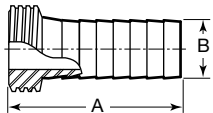
① No hex centers.

Brewery-Style Long Rubber Hose

Basic Ordering Number: 14AHRB



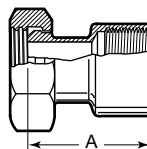
Basic Ordering Number: 15AHRB



Tube OD in.	Dimensions, in. (mm)	
	A	B
1	3.50 (88.9)	1.03 (26.2)
1 1/2	3.50 (88.9)	1.62 (41.1)
2	4.50 (114)	2.12 (53.8)
2 1/2	4.50 (114)	2.62 (66.5)
3	4.50 (114)	3.12 (79.2)
4	6.25 (159)	4.12 (105)

Plain to Female NPT

Basic Ordering Number: 14-18

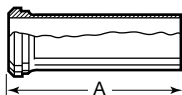


Union nut is 304 SS.

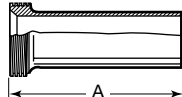
Tube OD, in.	A, in. (mm)
1	2.75 (69.8)
1 1/2	2.81 (71.4)
2	3.25 (82.6)
2 1/2	3.56 (90.4)
3	4.00 (102)
4	4.31 (109)

Soft Plastic Hose

Basic Ordering Number: 14AHT



Basic Ordering Number: 15AHT



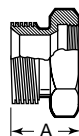
Tube OD, in.	A, in. (mm)
1	4.69 (119)
1 1/2	4.72 (120)
2	4.84 (123)
3	4.91 (125)
4	5.22 (133)

To order reducing adapters, add a second end connection size designator to the ordering number.

Example: 14AHT42015

Threaded to Female NPT

Not 3-A compliant



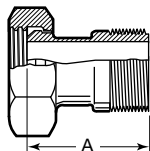
Basic Ordering Number: 22

Tube OD in.	NPT Size in.	A in. (mm)
1	3/4	1.62 (41.1)
	1	2.06 (52.3)
1 1/2	1 1/4	2.50 (63.5)
	1 1/2	2.25 (57.2)
2	1 1/2	1.66 (42.2)
	2	2.34 (59.4)
2 1/2 ^①	2	1.84 (46.7)
	2 1/2	2.09 (53.1)
3		2.19 (55.6)
4		2.62 (66.5)

① No hex centers.

Plain to Male NPT

Basic Ordering Number: 14-19



Union nut is 304 SS.

Tube OD, in.	A, in. (mm)
1	3.12 (79.2)
1 1/2	3.25 (82.6)
2	3.31 (84.1)
2 1/2	4.00 (102)
3	4.25 (108)
4	4.31 (109)

Dimensions are for reference only and are subject to change.

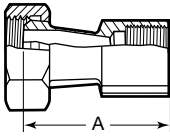
Sanitary Acme Threaded and Plain Bevel-Seat Fittings

Reducing Adapters

Plain to Female NPT

Not 3-A compliant

Basic Ordering Number: 31-18F



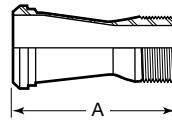
Union nut is 304 SS.

Tube OD in.	NPT Size in.	A in. (mm)
1 1/2	1	4.09 (104)
2	1	6.09 (155)
	1 1/2	4.09 (104)
2 1/2	1 1/2	6.16 (156)
	2	4.59 (117)
3	2	6.66 (169)
	2 1/2	4.72 (120)
4	2 1/2	9.03 (229)
	3	7.47 (190)

Plain to Male NPT

Not 3-A compliant

Basic Ordering Number: 31-19F

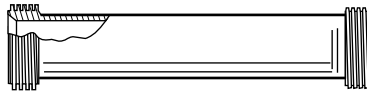
304 SS union nuts
Included with 2 1/2 to
2 in. and 3 to 2 1/2 in.
sizes.

Tube OD in.	NPT Size in.	A in. (mm)
1 1/2	1	4.47 (114)
2	1	6.47 (164)
	1 1/2	4.47 (114)
2 1/2	1 1/2	6.59 (167)
	2	4.66 (118)
3	2	6.72 (171)
	2 1/2	5.16 (131)
4	2 1/2	9.47 (241)
	3	7.72 (196)

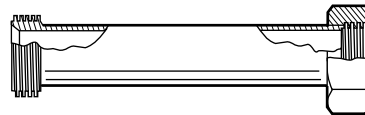
Tube Assemblies

Assemblies

Basic Ordering Number: 17C



Basic Ordering Number: 17D



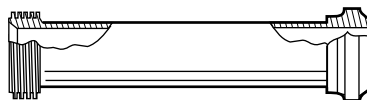
Basic Ordering Number: 17E



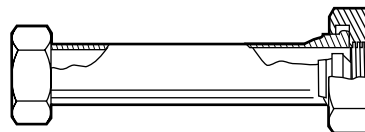
Tube OD in.	Minimum Length, in. (mm)	
	17C	17D, 17E
1	1.38 (35.1)	2.88 (73.2)
1 1/2	1.44 (36.6)	3.12 (79.2)
2	1.44 (36.6)	3.38 (85.9)
2 1/2	1.69 (42.9)	3.75 (95.2)
3	1.81 (46.0)	3.88 (98.6)
4	2.44 (62.0)	4.62 (117)

Reducing Assemblies

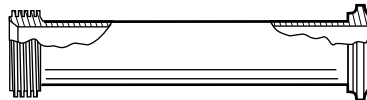
Concentric Basic Ordering Number: 17F



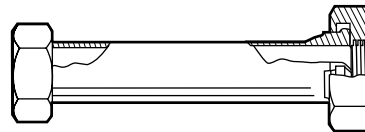
Concentric Basic Ordering Number: 17H



Eccentric Basic Ordering Number: 17G



Eccentric Basic Ordering Number: 17K



Tube OD in.		Minimum Length, in. (mm)	
		17F, 17G	17H, 17K
1 1/2	1	1.38 (35.1)	3.09 (78.5)
2	1	1.44 (36.6)	3.28 (83.3)
	1 1/2	1.47 (37.3)	3.38 (85.9)
2 1/2	1	1.47 (37.3)	3.56 (90.4)
	1 1/2	1.50 (38.1)	3.66 (93.0)
3	1	1.53 (38.9)	3.78 (96.0)
	1 1/2	1.56 (39.6)	3.88 (98.6)
	2 1/2	1.69 (42.9)	3.91 (99.3)
4	1	1.62 (41.1)	4.28 (109)
	1 1/2	1.66 (42.2)	4.38 (111)
	2 1/2	1.78 (45.2)	4.41 (112)
	3	1.84 (46.7)	4.44 (113)

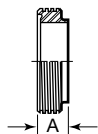
Dimensions are for reference only and are subject to change.

PV Threaded Fittings

To order, use **Typical Ordering Number** instructions on page 15. See page 16 for union nut ordering number.

Ferrules, Caps, and Gaskets

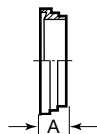
Short Threaded Butt Weld Ferrules



Basic Ordering Number: 15WXPV

Tube OD, in.	A, in. (mm)
1	0.69 (17.5)
1 1/2	0.69 (17.5)
2	0.75 (19.0)
2 1/2	0.84 (21.3)
3	0.91 (23.1)
4	1.00 (25.4)

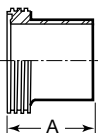
Short Plain Butt Weld Ferrules



Basic Ordering Number: 14WXPV

Tube OD, in.	A, in. (mm)
1	0.61 (15.5)
1 1/2	0.58 (14.7)
2	0.66 (16.8)
2 1/2	0.72 (18.3)
3	0.78 (19.8)
4	0.83 (21.1)

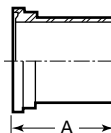
Threaded Butt Weld Ferrules



Basic Ordering Number: 15APV

Tube OD, in.	A, in. (mm)
1	1.62 (41.1)
1 1/2	1.88 (47.8)
2	2.38 (60.5)
2 1/2	2.62 (66.5)
3	2.88 (73.2)
4	2.88 (73.2)

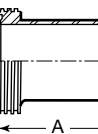
Plain Butt Weld Ferrules



Basic Ordering Number: 14APV

Tube OD, in.	A, in. (mm)
1	1.30 (33.0)
1 1/2	1.77 (45.0)
2	2.22 (56.4)
2 1/2	2.38 (60.5)
3	2.56 (65.0)
4	2.58 (65.5)

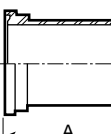
Long Threaded Butt Weld Ferrules



Basic Ordering Number: 15WLPV

Tube OD, in.	A, in. (mm)
1	2.00 (50.8)
1 1/2	2.25 (57.2)
2	2.50 (63.5)
2 1/2	2.75 (69.8)
3	3.00 (76.2)
4	4.00 (102)

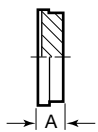
Long Plain Butt Weld Ferrules



Basic Ordering Number: 14WLPV

Tube OD, in.	A, in. (mm)
1	1.92 (48.8)
1 1/2	2.14 (54.4)
2	2.41 (61.2)
2 1/2	2.62 (66.5)
3	2.88 (73.2)
4	3.83 (97.3)

Plain Caps



Basic Ordering Number: 16APV

Tube OD, in.	A, in. (mm)
1	0.30 (7.6)
1 1/2	0.42 (10.7)
2	0.47 (11.9)
2 1/2	0.47 (11.9)
3	0.50 (12.7)
4	0.53 (13.5)

Gaskets

Gray Buna N

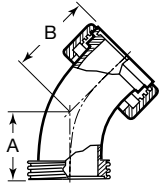
Tube OD in.	Ordering Number
1	101H-10
1 1/2	101H-15
2	101H-20
2 1/2	101H-25
3	101H-30
4	101H-40

Dimensions are for reference only and are subject to change.

PV Threaded Fittings

Elbows

45° Threaded to Plain Elbows

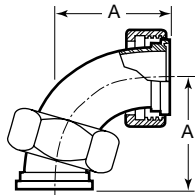


Union nut is 304 SS.

Basic Ordering Number: 2PPV

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	1.31 (33.3)	2.19 (55.6)
1 1/2	1.72 (43.7)	2.94 (74.7)
2	2.12 (53.8)	3.75 (95.2)
2 1/2	2.62 (66.5)	2.41 (61.2)
3	3.12 (79.2)	2.78 (70.6)
4	4.25 (108)	3.50 (88.9)

90° Plain Elbows

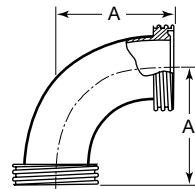


Union nut is 304 SS.

Basic Ordering Number: 2EPV

Tube OD, in.	A, in. (mm)
1	2.09 (53.1)
1 1/2	2.84 (72.1)
2	3.66 (92.9)
2 1/2	4.47 (114)
3	5.28 (134)
4	6.81 (173)

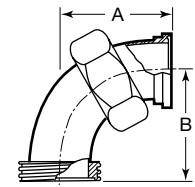
90° Threaded Elbows



Basic Ordering Number: 2CPV

Tube OD, in.	A, in. (mm)
1	2.19 (55.6)
1 1/2	2.94 (74.7)
2	3.75 (95.2)
2 1/2	4.59 (117)
3	5.41 (137)
4	7.00 (178)

90° Threaded to Plain Elbows



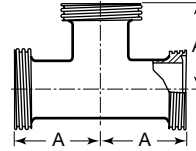
Union nut is 304 SS.

Basic Ordering Number: 2FPV

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	2.19 (55.6)	2.00 (50.8)
1 1/2	2.94 (74.7)	2.88 (73.2)
2	3.75 (95.2)	3.72 (94.5)
2 1/2	4.59 (117)	4.84 (123)
3	5.41 (137)	5.91 (150)
4	7.00 (178)	8.06 (205)

Tees

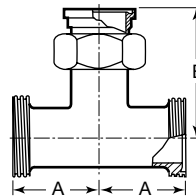
Equal Tees



Basic Ordering Number: 7PV

Tube OD, in.	A, in. (mm)
1	1.81 (46.0)
1 1/2	2.38 (60.5)
2	2.78 (70.6)
2 1/2	3.19 (81.0)
3	3.50 (88.9)
4	4.66 (118)

Threaded to Plain Tees



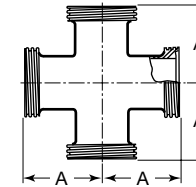
Union nut is 304 SS.

Basic Ordering Number: 7APV

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	1.81 (46.0)	2.61 (66.3)
1 1/2	2.38 (60.5)	3.30 (83.8)
2	2.78 (70.6)	3.72 (94.5)
2 1/2	3.19 (81.0)	4.12 (105)
3	3.50 (88.9)	4.50 (114)
4	4.66 (118)	5.95 (151)

Crosses

Equal Crosses



Basic Ordering Number: 9PV

Tube OD, in.	A, in. (mm)
1	1.81 (46.0)
1 1/2	2.38 (60.5)
2	2.78 (70.6)
2 1/2	3.19 (81.0)
3	3.50 (88.9)
4	4.66 (118)

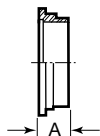
Dimensions are for reference only and are subject to change.

APV K-Clamp Fittings

To order, use **Typical Ordering Number** instructions on page 15.

Ferrules, Caps, and Gaskets

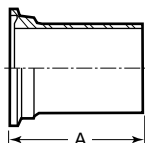
Short Butt Weld Ferrules



Basic Ordering Number: JA14X

Tube OD, in.	A, in. (mm)
1	0.69 (17.5)
1 1/2	0.69 (17.5)
2	0.75 (19.0)
2 1/2	0.84 (21.3)
3	0.91 (23.1)
4	1.00 (25.4)

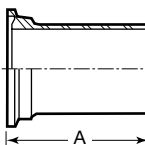
Butt Weld Ferrules



Basic Ordering Number: JA14A

Tube OD, in.	A, in. (mm)
1	1.38 (35.1)
1 1/2	1.88 (47.8)
2	2.31 (58.7)
2 1/2	2.50 (63.5)
3	2.69 (68.3)
4	2.75 (69.8)

Long Butt Weld Ferrules

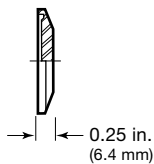


Basic Ordering Number: JA14

Tube OD, in.	A, in. (mm)
1	2.00 (50.8)
1 1/2	2.25 (57.2)
2	2.50 (63.5)
2 1/2	2.75 (69.8)
3	3.00 (76.2)
4	4.00 (102)

Solid Caps

Basic Ordering Number: JA16



Available in 1 through 4 in. sizes.

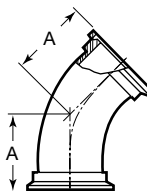
Gaskets

Gray Buna N

Tube OD in.	Ordering Number
1	101H-10
1 1/2	101H-15
2	101H-20
2 1/2	101H-25
3	101H-30
4	101H-40

Elbows

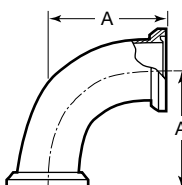
45° Elbows



Basic Ordering Number: JA2K

Tube OD, in.	A, in. (mm)
1	1.31 (33.3)
1 1/2	1.41 (35.8)
2	2.00 (50.8)
2 1/2	2.41 (61.2)
3	2.78 (70.6)
4	3.50 (88.9)

90° Elbows

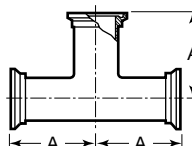


Basic Ordering Number: JA2

Tube OD, in.	A, in. (mm)
1	2.19 (55.6)
1 1/2	2.94 (74.7)
2	3.75 (95.2)
2 1/2	4.59 (117)
3	5.41 (137)
4	7.00 (178)

Tees

Equal Tees

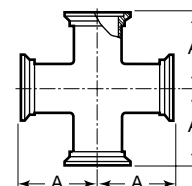


Basic Ordering Number: JA7

Tube OD, in.	A, in. (mm)
1	1.81 (46.0)
1 1/2	2.38 (60.5)
2	2.78 (70.6)
2 1/2	3.19 (81.0)
3	3.50 (88.9)
4	4.66 (118)

Crosses

Equal Crosses



Basic Ordering Number: JA9

Tube OD, in.	A, in. (mm)
1	1.81 (46.0)
1 1/2	2.38 (60.5)
2	2.78 (70.6)
2 1/2	3.19 (81.0)
3	3.50 (88.9)
4	4.66 (118)

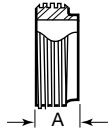
Dimensions are for reference only and are subject to change.

John Perry Fittings

To order, use **Typical Ordering Number** instructions on page 15. See page 16 for union nut ordering number.

Ferrules, Caps, and Gaskets

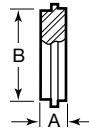
Short Threaded Butt Weld Ferrules



Basic Ordering Number: 15WFF

Tube OD, in.	A, in. (mm)
1	0.62 (15.7)
1 1/2	0.62 (15.7)
2	0.75 (19.0)
2 1/2	0.84 (21.3)
3	0.88 (22.4)
4	1.06 (26.9)

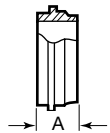
Solid Caps



Basic Ordering Number: 16AJP

Tube OD in.	Dimensions, in. (mm)	
	A	B
1	0.47 (11.9)	1.12 (28.4)
1 1/2	0.50 (12.7)	1.66 (42.2)
2	0.53 (13.5)	2.19 (55.6)
2 1/2	0.62 (15.7)	2.66 (67.6)
3	0.62 (15.7)	3.19 (81.0)
4	0.62 (15.7)	4.19 (106)

Short Plain Butt Weld Ferrules



Basic Ordering Number: 14WJP

Tube OD, in.	A, in. (mm)
1	0.69 (17.5)
1 1/2	0.72 (18.3)
2	0.81 (20.6)
2 1/2	0.84 (21.3)
3	0.84 (21.3)
4	1.22 (31.0)

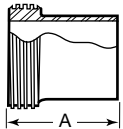
Gaskets

Buna N

Tube OD in.	Ordering Number
1	J40NJP10
1 1/2	J40NJP15
2	J40NJP20
2 1/2	J40NJP25
3	J40NJP30
4	J40NJP40

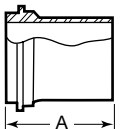
Threaded and Plain Butt Weld Ferrules

Basic Ordering
Number: 15AFF



Tube OD, in.	A, in. (mm)
1	1.38 (35.1)
1 1/2	1.50 (38.1)
2	1.50 (38.1)
2 1/2	1.75 (44.4)
3	1.75 (44.4)
4	1.75 (44.4)

Basic Ordering
Number: 14AJP



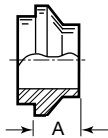
Dimensions are for reference only and are subject to change.

Interlock Fittings

To order, use **Typical Ordering Number** instructions on page 15.

Ferrules, Caps, Gaskets, and Clamps

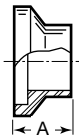
Short Male Butt Weld Ferrules



Basic Ordering Number: 14WI

Tube OD, in.	A, in. (mm)
1	0.59 (15.0)
1 1/2	0.75 (19.0)
2	0.78 (19.8)
2 1/2	0.84 (21.3)
3	0.91 (23.1)
4	1.03 (26.2)

Short Female Butt Weld Ferrules

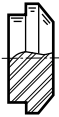


Basic Ordering Number: 15WI

Tube OD, in.	A, in. (mm)
1	0.78 (19.8)
1 1/2	0.94 (23.9)
2	1.03 (26.2)
2 1/2	1.16 (29.5)
3	1.22 (31.0)
4	1.34 (34.0)

Solid Caps

Male Cap Basic
Ordering Number:
16AI-14I



Female Cap Basic
Ordering Number:
16AI-15I



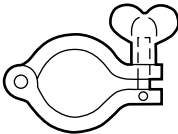
Gaskets

How to Order
Select a basic ordering number and add an end connection size designator.
Example: 40IN10

Gasket Material	Basic Ordering Number
Buna N	40IN
White PTFE	40IT

Clamps

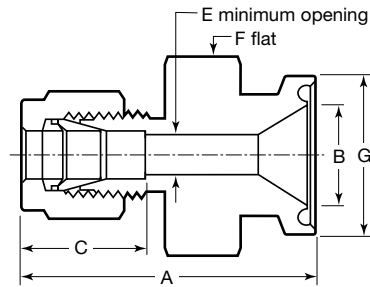
Basic Ordering
Number: 13IS



Available in 1 1/2 to 4 in. sizes; 1 1/2 in. clamp required for 1 in. fitting.

Dimensions are for reference only and are subject to change.

Sanitary Kwik-Clamp Flange To Swagelok Tube Fittings



Options

To order bored-through fittings, add **BT** to the ordering number.
Example: SS-600-SC-24**BT**

To order fittings cleaned and packaged in accordance with Swagelok *Special Cleaning and Packaging (SC-11)*, MS-06-63, to ensure compliance with product cleanliness requirements stated in ASTM G93 Level C, add **SC11** to the ordering number.
Example: SS-600-SC-24**SC11**

Tube OD in.	Flange Size in.	Ordering Number	Dimensions, in. (mm)					
			A	B	C	E	F	G
1/4	1/2	SS-400-SC-8	1.57 (39.9)	0.37 (9.4)	0.60 (15.2)	0.19 (4.8)	1	0.98 (24.9)
	3/4	SS-400-SC-12		0.62 (15.7)			1 3/8	1.98 (50.3)
	1	SS-400-SC-16		0.87 (22.1)				
	1 1/2	SS-400-SC-24		1.37 (34.8)				
3/8	1/2	SS-600-SC-8	1.63 (41.4)	0.37 (9.4)	0.66 (16.8)	0.28 (7.1)	1	0.98 (24.9)
	3/4	SS-600-SC-12		0.62 (15.7)			1 3/8	1.98 (50.3)
	1	SS-600-SC-16		0.87 (22.1)				
	1 1/2	SS-600-SC-24		1.37 (34.8)				
1/2	1/2	SS-810-SC-8	1.74 (44.2)	0.37 (9.4)	0.90 (22.9)	0.37 (9.4)	1	0.98 (24.9)
	3/4	SS-810-SC-12		0.62 (15.7)		0.41 (10.4)	1 3/8	1.98 (50.3)
	1	SS-810-SC-16		0.87 (22.1)				
	1 1/2	SS-810-SC-24		1.37 (34.8)				
1	1	SS-1610-SC-16	1.91 (48.5)	0.87 (22.1)	1.23 (31.2)	0.87 (22.1)	1 3/8	1.98 (50.3)
	2	SS-1610-SC-32	2.49 (63.2)	1.87 (47.5)		0.88 (22.4)	2 3/4	2.52 (64.0)

Caution: Do not mix or interchange Swagelok tube fitting parts with those of other manufacturers.

Special Alloy Fittings

Many Swagelok machined fittings can be provided in alloy C-276, titanium, and alloy 6-moly on special order. Contact your authorized Swagelok sales and service representative for more information.

Oxygen Service Hazards

For more information about hazards and risks of oxygen-enriched systems, see the Swagelok *Oxygen System Safety* technical report, MS-06-13.

Dimensions are for reference only and are subject to change.

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.