

Biopharm Fittings

For the Bioprocessing and Pharmaceutical Industries



BPE Series

- 316L stainless steel material in a variety of configurations
- BPE fittings inspected by independent, third-party service to verify compliance with ASME-BPE requirements
- Available with Kwik-Clamp sanitary clamp or automatic tube weld end connections in 1/2 to 6 in. sizes

Contents

Features	2	Elbows	4
Surface Finish	2	Tees	6
End Connection Sizes	2	Crosses	8
Clamps and Gaskets	2	Reducers	9
Documentation	2	Adapters	10
Ordering Information	3	Automatic Tube Weld Lap Joint Stub Ends	11
Sanitary Clamp and Automatic Tube Weld Connections	3	Slip-On Flanges	11
Ferrules and Caps	3	Point of Use	11

Features

- Inspected fittings marked with lot numbers and individually bagged with third-party inspection and test report certificate, along with material test report
- Meet 3-A sanitary standards
- Heat traceable 316L materials marked with heat number(s), BPE specification, and internal surface finish
- Comply with pressure ratings listed in Table DT-2 of ASME-BPE standard
- Drainable 88° and 92° angle fittings (pages 4, 5, and 6) meet the requirements of BPE Table DT-5, except for off-angle tolerance
- Vacuum annealed tubular fittings to minimize occurrence of stress corrosion cracking
- Tolerances, angularity, squareness, ovality, and polish finishes monitored with statistical quality control
- Variety of shapes with Kwik-Clamp, automatic tube weld, and mixed end connections

Surface Finish

BPE Code	Surface Finish Roughness Average (R_a)	Designator
SFF0	Unpolished ID and OD, not third-party inspected	1
SFF1	20 μ in. (0.51 μ m) max polished ID, unpolished OD	3PC
SFF1	20 μ in. (0.51 μ m) max polished ID, 32 μ in. (0.81 μ m) max polished OD	7PL
SFF4	15 μ in. (0.38 μ m) max electropolished ID, unpolished OD	3PD
SFF4	15 μ in. (0.38 μ m) max electropolished ID, 32 μ in. (0.81 μ m) max polished OD	7PM

End Connection Sizes

Most end connections are available in 1/2 to 6 in. sizes with wall thicknesses shown below.

End Connection Size, in.	Tube Wall in.
1/2 to 3	0.065
4	0.083
6	0.109

Clamps and Gaskets

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

Documentation

The following are included with all third-party-inspected BPE biopharm fittings.

- Inspection and test report certificate verifying:
 - 100 % visual inspection of inside and outside component surfaces
 - Dimensional inspection on at least 20 % of lot, depending on lot size
 - Chemical composition meets ASME-BPE Table DT-3
 - 100 % component marking in accordance with ASME-BPE
- Material test report

The following can be provided on request.

- Certification of gasket material compliance with FDA 21CFR Part 177 and applicable 3-A standards
- Certification of gasket material compliance with USP 23 Class VI where applicable
- Quality assurance manual
- ISO 9002 certification

Ordering Information

Typical Ordering Number

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

Basic Ordering Number ——— **JTL7RW** **6** **7PL** **30** **15**
See tables below.

Material ——— 316L stainless steel

Surface Finish ———
See table on page 2.
1^① = BPE Code SFF0
3PC = BPE Code SFF1
7PL = BPE Code SFF1
3PD = BPE Code SFF4
7PM = BPE Code SFF4

End Connection Size
Add second designator for reducing fittings *only*.

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

① Used for adapters only.

① Available for automatic tube weld 45° and 90° elbows (JTL2KS and JTL2S), straight and reducing tees (JTL7W and JTL7RW), and crosses (JTL9W). Fittings with surface finish 1 are not third-party inspected.

Sanitary Clamp and Automatic Tube Weld Connections

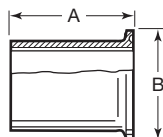
Dimensions are for reference only and are subject to change.

Ferrules and Caps

Automatic Tube Weld Ferrules

BPE Table DT-22

Basic Ordering Number: JTL14AM7



How to Order

Use basic ordering numbers
JTL14AM76PL or
JTL14AM76PM
and add an end connection size designator.

Examples:

JTL14AM76PL15 for a 316L ferrule with a 7PL (BPE-SFF1) surface finish;

JTL14AM76PM15 for a 316L ferrule with a 7PM (BPE-SFF4) surface finish

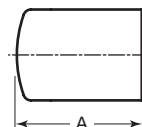
Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2 3/4	1.75 (44.4)	0.98 (24.9)
1 1 1/2	1.75 (44.4)	1.98 (50.3)
2	2.25 (57.2)	2.52 (64.0)
2 1/2	2.25 (57.2)	3.05 (77.5)
3	2.25 (57.2)	3.58 (90.9)
4	2.25 (57.2)	4.68 (119)
6	3.00 (76.2)	6.57 (167)

Available in 7PL and 7PM finishes only.

Automatic Tube Weld Caps

BPE Table DT-30

Basic Ordering Number: JTL16W



Tube OD, in.	A, in. (mm)
1/2 3/4 1	1.50 (38.1)
1 1/2	2.06 (52.3)
2	2.50 (63.5)
2 1/2	2.81 (71.4)
3	2.87 (72.9)
4	3.25 (82.6)

Solid End Caps



Basic Ordering Number: JC16

Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2 3/4	0.19 (4.8)	0.98 (24.9)
1 1 1/2	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)

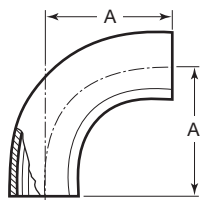
Available in 7PL and 7PM finishes only.

Elbows

Automatic Tube Weld 90° Elbows

BPE Table DT-7

Basic Ordering Number: JTL2S

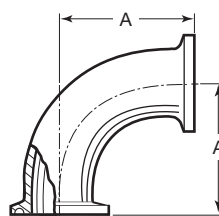


Tube OD, in.	A, in. (mm)
1/2	3.00 (76.2)
3/4	
1	
1 1/2	3.75 (95.2)
2	4.75 (121)
2 1/2	5.50 (140)
3	6.25 (159)
4	8.00 (203)
6	11.5 (292)

Kwik-Clamp 90° Elbows

BPE Table DT-16

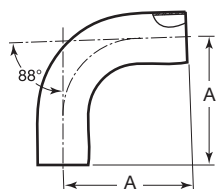
Basic Ordering Number: JC2



Tube OD, in.	A, in. (mm)
1/2	1.62 (41.1)
3/4	
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)

Automatic Tube Weld 88° Elbows

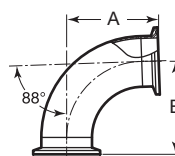
Basic Ordering Number: JTL2S88



Tube OD, in.	A, in. (mm)
1/2	3.08 (78.2)
3/4	3.06 (77.7)
1	3.05 (77.4)
1 1/2	3.80 (96.5)
2	4.81 (122)
2 1/2	5.56 (141)
3	6.31 (160)
4	8.06 (205)

Kwik-Clamp 88° Elbows

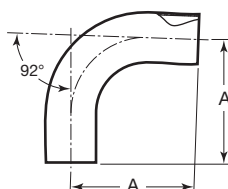
Basic Ordering Number: JC288



Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	1.60 (40.6)	1.66 (42.2)
3/4	1.58 (40.1)	1.64 (41.7)
1	1.95 (49.5)	2.02 (51.3)
1 1/2	2.70 (68.6)	2.79 (70.9)
2	3.43 (87.1)	3.55 (90.2)
2 1/2	4.16 (106)	4.31 (109)
3	4.90 (124)	5.07 (129)
4	6.48 (165)	6.72 (171)

Automatic Tube Weld 92° Elbows

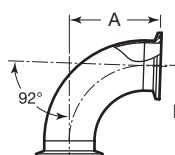
Basic Ordering Number: JTL2S92



Tube OD, in.	A, in. (mm)
1/2	2.92 (74.2)
3/4	2.93 (74.4)
1	2.95 (74.9)
1 1/2	2.70 (94.0)
2	4.69 (119)
2 1/2	5.43 (138)
3	6.18 (157)
4	7.92 (201)

Kwik-Clamp 92° Elbows

Basic Ordering Number: JC292



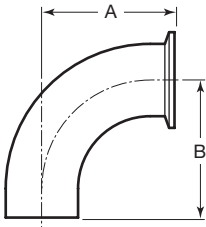
Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	1.65 (41.9)	1.59 (40.4)
3/4	1.66 (42.2)	1.61 (40.9)
1	1.98 (50.3)	
1 1/2	2.68 (68.1)	2.78 (70.6)
2	3.53 (89.7)	3.41 (86.6)
2 1/2	4.29 (109)	4.14 (105)
3	5.05 (128)	4.88 (124)
4	6.69 (170)	6.46 (164)

Elbows

Automatic Tube Weld to Kwik-Clamp 90° Elbows

BPE Table DT-12

Basic Ordering Number: JTL2CM

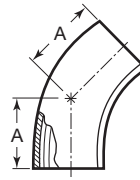


Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	1.62 (41.1)	3.00 (76.2)
3/4		
1	2.00 (50.8)	3.00 (76.2)
1 1/2	2.75 (69.8)	3.75 (95.2)
2	3.50 (88.9)	4.75 (121)
2 1/2	4.25 (108)	5.50 (140)
3	5.00 (127)	6.25 (159)
4	6.62 (168)	8.00 (203)
6	10.5 (267)	11.5 (292)

Automatic Tube Weld 45° Elbows

BPE Table DT-8

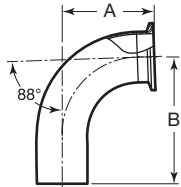
Basic Ordering Number: JTL2KS



Tube OD, in.	A, in. (mm)
1/2	2.25 (57.2)
3/4	
1	
1 1/2	2.50 (63.5)
2	3.00 (76.2)
2 1/2	3.37 (85.6)
3	3.62 (91.9)
4	4.50 (114)
6	6.25 (159)

Automatic Tube Weld to Kwik-Clamp 88° Elbows

Basic Ordering Number: JTL2CM88

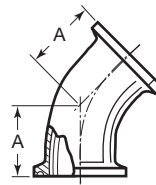


Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	1.60 (40.6)	3.03 (77.0)
3/4	1.60 (40.6)	3.02 (76.7)
1	1.95 (49.5)	3.02 (76.7)
1 1/2	2.72 (69.1)	3.77 (95.8)
2	3.63 (92.2)	4.77 (122)
2 1/2	4.21 (107)	5.52 (140)
3	4.95 (126)	6.27 (159)
4	6.83 (173)	8.02 (204)

Kwik-Clamp 45° Elbows

BPE Table DT-17

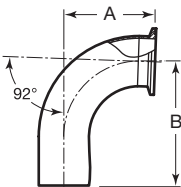
Basic Ordering Number: JC2K



Tube OD, in.	A, in. (mm)
1/2	1.00 (25.4)
3/4	
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	5.25 (133)

Automatic Tube Weld to Kwik-Clamp 92° Elbows

Basic Ordering Number: JTL2CM92

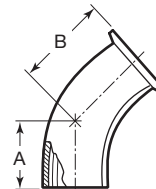


Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	1.65 (41.9)	2.97 (75.4)
3/4	1.66 (42.2)	2.98 (75.7)
1	2.05 (52.1)	2.98 (75.7)
1 1/2	2.72 (69.1)	3.73 (94.7)
2	3.46 (87.9)	4.73 (120)
2 1/2	4.21 (107)	5.48 (139)
3	4.95 (126)	6.23 (158)
4	6.56 (167)	7.98 (203)

Automatic Tube Weld to Kwik-Clamp 45° Elbows

BPE Table DT-13

Basic Ordering Number: JTL2KM



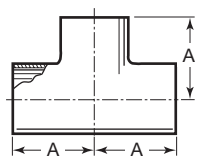
Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	2.25 (57.2)	1.00 (25.4)
3/4		
1	2.25 (57.2)	1.12 (28.4)
1 1/2	2.50 (63.5)	1.44 (36.6)
2	3.00 (76.2)	1.75 (44.4)
2 1/2	3.37 (85.6)	2.06 (52.3)
3	3.62 (91.9)	2.38 (60.5)
4	4.50 (114)	3.12 (79.2)
6	6.25 (159)	5.25 (133)

Tees

Automatic Tube Weld Straight Tees

BPE Table DT-9

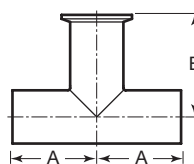
Basic Ordering Number: JTL7W



Tube OD, in.	A, in. (mm)
1/2	1.87 (47.5)
3/4	2.00 (50.8)
1	2.12 (53.8)
1 1/2	2.37 (60.2)
2	2.87 (72.9)
2 1/2	3.12 (79.2)
3	3.37 (85.6)
4	4.12 (105)
6	5.62 (143)

Automatic Tube Weld to Kwik-Clamp Tees

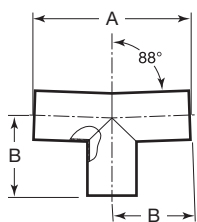
Basic Ordering Number: JTL7WWM



Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	1.87 (47.5)	2.25 (57.2)
3/4	2.00 (50.8)	2.37 (60.2)
1	2.12 (53.8)	2.62 (66.5)
1 1/2	2.37 (60.2)	2.87 (72.9)
2	2.87 (72.9)	3.37 (85.6)
2 1/2	3.12 (79.2)	3.62 (91.9)
3	3.37 (85.6)	3.87 (98.3)
4	4.12 (105)	4.75 (121)

Automatic Tube Weld 88° Tees

Basic Ordering Number: JTL7W88

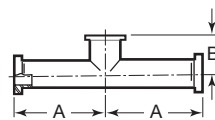


Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	3.75 (95.2)	1.94 (49.3)
3/4	4.00 (102)	2.07 (52.6)
1	4.25 (108)	2.20 (55.9)
1 1/2	4.75 (121)	2.46 (62.5)
2	5.75 (146)	2.98 (75.7)
2 1/2	6.25 (159)	3.23 (82.0)
3	6.75 (171)	3.49 (88.6)
4	8.24 (209)	4.27 (108)

Kwik-Clamp Short Outlet Tees

BPE Table DT-27

Basic Ordering Number: JC7S

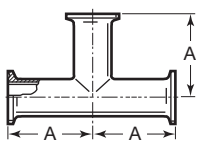


Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	2.25 (57.2)	1.00 (25.4)
3/4	2.37 (60.2)	1.12 (28.4)
1	2.62 (66.5)	1.12 (28.4)
1 1/2	2.87 (72.9)	1.37 (34.8)
2	3.37 (85.6)	1.62 (41.1)
2 1/2	3.62 (91.9)	1.87 (47.5)
3	3.87 (98.3)	2.12 (53.8)
4	4.75 (121)	2.75 (69.8)
6	7.13 (181)	4.62 (117)

Kwik-Clamp Straight Tees

BPE Table DT-18

Basic Ordering Number: JC7

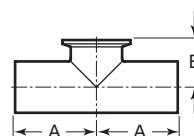


Tube OD, in.	A, in. (mm)
1/2	2.25 (57.2)
3/4	2.37 (60.2)
1	2.62 (66.5)
1 1/2	2.87 (72.9)
2	3.37 (85.6)
2 1/2	3.62 (91.9)
3	3.87 (98.3)
4	4.75 (121)
6	7.13 (181)

Automatic Tube Weld to Kwik-Clamp Short Outlet Tees

BPE Table DT-15

Basic Ordering Number: JTL7WMS

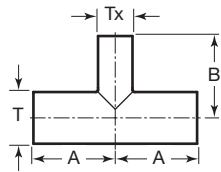


Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	1.87 (47.5)	1.00 (25.4)
3/4	2.00 (50.8)	1.12 (28.4)
1	2.12 (53.8)	1.12 (28.4)
1 1/2	2.37 (60.2)	1.37 (34.8)
2	2.87 (72.9)	1.62 (41.1)
2 1/2	3.12 (79.2)	1.87 (47.5)
3	3.37 (85.6)	2.12 (53.8)
4	4.12 (105)	2.75 (69.8)
6	5.62 (143)	4.62 (117)

Tees

Automatic Tube Weld Reducing Tees

BPE Table DT-10

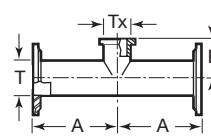


Basic Ordering Number: JTL7RW

Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
3/4	1/2	2.00 (50.8)	
1	1/2 3/4	2.12 (53.8)	
1 1/2	1/2 3/4 1	2.37 (60.2)	
2	1/2 3/4 1 1 1/2	2.87 (72.9)	2.62 (66.5)
2 1/2	1/2 3/4 1 1 1/2 2	3.12 (79.2)	2.87 (72.9)
3	1/2 3/4 1 1 1/2 2 2 1/2	3.37 (85.6)	3.12 (79.2)
4	1/2 3/4 1 1 1/2	4.12 (105)	3.62 (91.9)
	2 2 1/2 3		3.87 (98.3)
6	4	5.62 (143)	5.12 (130)

Kwik-Clamp Short Outlet Reducing Tees

BPE Table DT-20

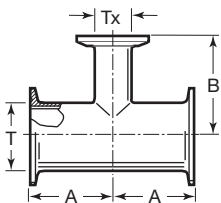


Basic Ordering Number: JC7RS

Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
3/4	1/2	2.50 (63.5)	1.00 (25.4)
1	1/2 3/4	2.62 (66.5)	1.12 (28.4)
1 1/2	1/2 3/4 1	2.87 (72.9)	1.37 (34.8)
2	1/2 3/4 1 1 1/2	3.37 (85.6)	1.62 (41.1)
2 1/2	1/2 3/4 1 1 1/2 2	3.63 (92.2)	1.87 (47.5)
3	1/2 3/4 1 1 1/2 2 2 1/2	3.87 (98.3)	2.12 (53.8)
4	1/2 3/4 1 1 1/2 2 2 1/2 3	4.75 (121)	2.62 (66.5)
6	4	7.13 (181)	3.75 (95.2)

Kwik-Clamp Reducing Tees

BPE Table DT-19

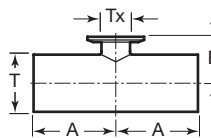


Basic Ordering Number: JC7R

Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
3/4	1/2	2.50 (63.5)	
1	1/2 3/4	2.62 (66.5)	
1 1/2	1/2 3/4 1	2.87 (72.9)	
2	1/2 3/4 1 1 1/2	3.37 (85.6)	3.13 (79.5)
2 1/2	1/2 3/4 1 1 1/2 2	3.63 (92.2)	3.38 (85.9)
3	1/2 3/4 1 1 1/2 2 2 1/2	3.87 (98.3)	3.63 (92.2)
4	1/2 3/4 1 1 1/2	4.75 (121)	4.13 (105)
	2 2 1/2 3		4.38 (111)
6	4	7.13 (181)	5.75 (146)

Automatic Tube Weld to Kwik-Clamp Short Outlet Reducing Tees

BPE Table DT-14

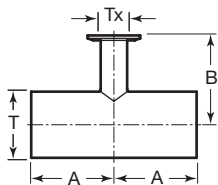


Basic Ordering Number: JTL7RWMS

Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
3/4	1/2	2.00 (50.8)	1.00 (25.4)
1	1/2 3/4	2.12 (53.8)	1.12 (28.4)
1 1/2	1/2 3/4 1	2.37 (60.2)	1.37 (34.8)
2	1/2 3/4 1 1 1/2	2.87 (72.9)	1.62 (41.1)
2 1/2	1/2 3/4 1 1 1/2 2	3.12 (79.2)	1.87 (47.5)
3	1/2 3/4 1 1 1/2 2 2 1/2	3.37 (85.6)	2.12 (53.8)
4	1/2 3/4 1 1 1/2 2 2 1/2 3	4.12 (105)	2.62 (66.5)
6	4	5.63 (143)	3.75 (95.2)

Tees

Automatic Tube Weld to Kwik-Clamp Long Outlet Reducing Tees

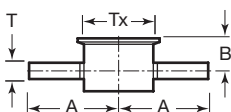


Basic Ordering Number: JTL7RWWM

Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
3/4	1/2	2.00 (50.8)	2.50 (63.5)
1	1/2 3/4	2.12 (53.8)	2.62 (66.5)
1 1/2	1/2 3/4 1	2.37 (60.2)	2.87 (72.9)
2	1/2 3/4 1 1 1/2	2.87 (72.9)	3.12 (79.2)
2 1/2	1 1 1/2 2	3.12 (79.2)	3.37 (85.6)
3	1 1 1/2 2 2 1/2	3.37 (85.6)	3.62 (91.9)
4	1 1 1/2	4.12 (105)	4.12 (105)
	2		4.37 (111)
	2 1/2 3		

Automatic Tube Weld and Kwik-Clamp Instrument Tees

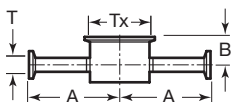
BPE Table DT-28



Basic Ordering Number: JTL7IWMS

Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
1/2	1 1/2	2.50 (63.5)	0.88 (22.4)
3/4			1.00 (25.4)
1			1.13 (28.7)
1/2	2	2.75 (69.8)	1.00 (25.4)
3/4			1.13 (28.7)
1			1.25 (31.8)
1 1/2			1.50 (38.1)

BPE Table DT-29



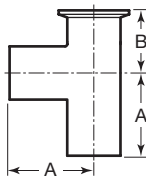
Basic Ordering Number: JC7IS

Tube OD, in.		Dimensions, in. (mm)	
T	Tx	A	B
1/2	1 1/2	3.00 (76.2)	0.88 (22.4)
3/4			1.00 (25.4)
1			1.13 (28.7)
1/2	2	3.25 (82.6)	1.00 (25.4)
3/4			1.13 (28.7)
1			1.25 (31.8)
1 1/2			1.50 (38.1)

Available in 7PL and 7PM finishes only.

Automatic Tube Weld to Kwik-Clamp Short-Outlet Run Tees

BPE Table DT-25



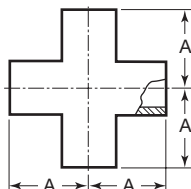
Basic Ordering Number: JTL7WMSW

Tube OD in.	Dimensions, in. (mm)	
	A	B
1/2	1.87 (47.5)	0.88 (22.4)
3/4	2.00 (50.8)	1.00 (25.4)
1	2.12 (53.8)	1.12 (28.4)
1 1/2	2.37 (60.2)	1.37 (34.8)
2	2.87 (72.9)	1.62 (41.1)
2 1/2	3.12 (79.2)	1.87 (47.5)
3	3.37 (85.6)	2.12 (53.8)
4	4.12 (105)	2.75 (69.8)
6	5.62 (143)	4.62 (117)

Crosses

Automatic Tube Weld Crosses

BPE Table DT-9

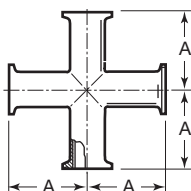


Basic Ordering Number: JTL9W

Tube OD, in.	A, in. (mm)
1/2	1.87 (47.5)
3/4	2.00 (50.8)
1	2.12 (53.8)
1 1/2	2.37 (60.2)
2	2.87 (72.9)
2 1/2	3.12 (79.2)
3	3.37 (85.6)
4	4.12 (105)
6	5.62 (143)

Kwik-Clamp Crosses

BPE Table DT-18



Basic Ordering Number: JC9

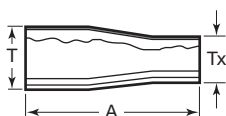
Tube OD, in.	A, in. (mm)
1/2	2.25 (57.2)
3/4	2.37 (60.2)
1	2.62 (66.5)
1 1/2	2.87 (72.9)
2	3.37 (85.6)
2 1/2	3.62 (91.9)
3	3.87 (98.3)
4	4.75 (121)
6	7.13 (181)

Reducers

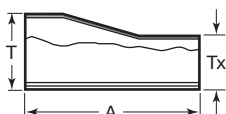
Automatic Tube Weld Reducers

BPE Table DT-11

Concentric Reducer
Basic Ordering
Number: JTL31



Eccentric Reducer
Basic Ordering
Number: JTL32

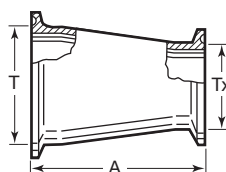


Tube OD, in.		A in. (mm)
T	Tx	
3/4	1/2	4.00 (102)
1	1/2	4.50 (114)
	3/4	4.00 (102)
1 1/2	1/2	5.50 (140)
	3/4	5.00 (127)
2	1/2	7.75 (197)
	3/4	7.25 (184)
	1 1/2	5.25 (133)
2 1/2	1/2	9.75 (248)
	3/4	9.25 (235)
	1 1/2	7.25 (184)
	2	5.50 (140)
3	1	11.2 (284)
	1 1/2	9.25 (235)
	2	7.50 (190)
	2 1/2	5.50 (140)
4	1	15.5 (394)
	1 1/2	13.5 (343)
	2	11.8 (300)
	2 1/2	9.75 (248)
6	3	7.75 (197)
	4	10.0 (254)

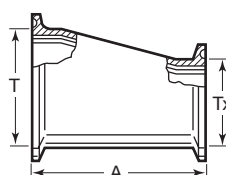
Kwik-Clamp Reducers

BPE Table DT-21

Concentric Reducer
Basic Ordering
Number: JC31



Eccentric Reducer
Basic Ordering
Number: JC32

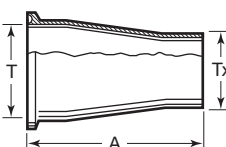


Tube OD, in.		A in. (mm)
T	Tx	
3/4	1/2	2.00 (50.8)
1	1/2	2.50 (63.5)
	3/4	2.00 (50.8)
1 1/2	1/2	3.50 (88.9)
	3/4	3.00 (76.2)
2	1/2	5.50 (140)
	3/4	5.00 (127)
	1 1/2	3.00 (76.2)
2 1/2	1/2	7.50 (190)
	3/4	7.00 (178)
	1 1/2	5.00 (127)
	2	3.00 (76.2)
3	1	9.00 (229)
	1 1/2	7.00 (178)
	2	5.00 (127)
	2 1/2	3.00 (76.2)
4	1	13.1 (333)
	1 1/2	11.1 (282)
	2	9.12 (232)
	2 1/2	7.12 (181)
6	3	5.12 (130)
	4	7.63 (194)

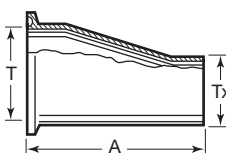
Kwik-Clamp to Automatic Tube Weld Reducers

BPE Table DT-26

Concentric Reducer
Basic Ordering
Number: JTL31M



Eccentric Reducer
Basic Ordering
Number: JTL32M



Tube OD, in.		A in. (mm)
T	Tx	
3/4	1/2	3.00 (76.2)
1	1/2	3.50 (88.9)
	3/4	3.00 (76.2)
1 1/2	1/2	4.50 (114)
	3/4	4.00 (102)
2	1/2	6.50 (165)
	3/4	6.00 (152)
	1 1/2	4.00 (102)
2 1/2	1/2	8.50 (216)
	3/4	8.00 (203)
	1 1/2	6.00 (152)
	2	4.25 (108)

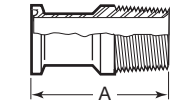
Tube OD, in.		A in. (mm)
T	Tx	
3	1	10.0 (254)
	1 1/2	8.00 (203)
	2	6.25 (159)
	2 1/2	4.25 (108)
4	1	14.1 (358)
	1 1/2	12.1 (307)
	2	10.4 (264)
	2 1/2	8.37 (213)
6	3	6.37 (162)
	4	9.00 (229)

Adapters

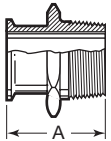
Adapters are available in 7PL and 7PM finishes, are marked with material grade and heat numbers only, and are not available with third-party inspection.

Kwik-Clamp to Male NPT Adapters

Basic Ordering Number: JC21



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

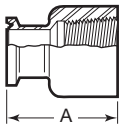


1 to 2 in. sizes

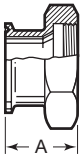
Tube OD in.	NPT Size in.	A in. (mm)
1/2	1/8	2.00 (50.8)
	1/4	
	3/8	
	1/2	
3/4	1/8	2.00 (50.8)
	1/4	
	3/8	
	1/2	
1		2.25 (57.2)
1 1/2		2.44 (62.0)
2		2.66 (67.6)
2 1/2		3.28 (83.3)
3		3.50 (88.9)
4		3.81 (96.8)

Kwik-Clamp to Female NPT Adapters

Basic Ordering Number: JC22



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

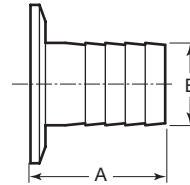


1 to 2 in. sizes

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		1.62 (41.1)
1 1/2		2.25 (57.2)
2		2.34 (59.4)
2 1/2		2.09 (53.1)
3		2.19 (55.6)
4		2.66 (67.6)

Rubber Hose Adapters

Basic Ordering Number: JC14AHR

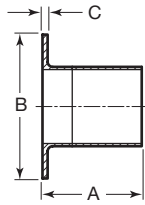


Tube OD in.	Hose End Size in.	Dimensions in. (mm)	
		A	B
1/2	1/8	1.50 (38.1)	0.19 (4.8)
	1/4		0.28 (7.1)
	3/8		0.41 (10.4)
	1/2		0.53 (13.5)
	5/8		0.66 (16.8)
	3/4		0.78 (19.8)
3/4	1/8	1.50 (38.1)	0.19 (4.8)
	1/4		0.28 (7.1)
	3/8		0.41 (10.4)
	1/2		0.53 (13.5)
	5/8		0.66 (16.8)
	3/4		0.78 (19.8)
1	1	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	1.69 (42.9)	0.78 (19.8)
	1		1.03 (26.2)
	1 1/2		1.53 (38.9)
	2		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)

Automatic Tube Weld Lap Joint Stub Ends

**Basic Ordering
Number: JTL14VB**

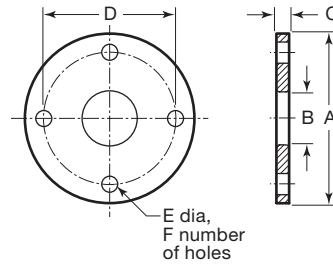
Third-party
inspection not
available.



Slip-On Flanges

**Basic Ordering
Number: 38SL**

Available in
304 SS only.
Third-party
inspection
not available.



Tube OD in.	Dimensions, in. (mm)		
	A	B	C
1/2	2.00 (50.8)	1.69 (42.9)	0.13 (3.3)
3/4		2.00 (50.8)	
1			
1 1/2		2.88 (73.1)	
2	2.50 (63.5)	3.63 (92.2)	0.13 (3.3)
2 1/2		4.13 (105)	
3	2.50 (63.5)	5.00 (127)	0.17 (4.3)
4		6.19 (157)	0.19 (4.8)
6	3.00 (76.2)	8.56 (217)	0.22 (5.6)

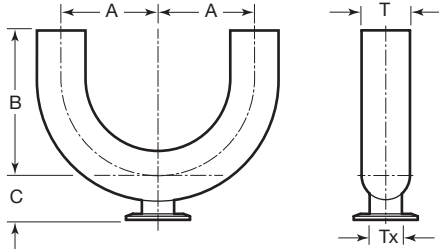
Tube OD in.	Dimensions, in. (mm)					
	A	B	C	D	E	F
1/2	3.50 (88.9)	0.56 (14.2)	0.31 (7.9)	2.38 (60.5)	0.62 (15.7)	4
3/4	3.88 (98.6)	0.81 (20.6)	0.38 (9.7)	2.75 (69.8)		
1	4.25 (108)	1.06 (26.9)		3.12 (79.2)		
1 1/2	5.00 (127)	1.56 (39.6)		3.88 (98.6)		
2	6.00 (152)	2.06 (52.3)	0.44 (11.2)	4.75 (121)	0.75 (19.0)	4
2 1/2	7.00 (178)	2.56 (65.0)		5.50 (140)		
3	7.50 (190)	3.06 (77.7)	0.50 (12.7)	6.00 (152)	0.75 (19.0)	4
4	9.00 (229)	4.06 (103)		7.50 (190)		8
6	11.0 (279)	6.06 (154)	0.81 (20.6)	9.50 (241)	0.88 (22.4)	8

Point of Use

**Automatic Tube Weld 180° Return Bends,
Kwik-Clamp Inlet**

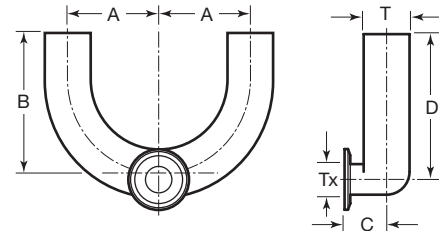
**Basic Ordering
Number:
JTL2UBO**

Third-party
inspection not
available.



**Basic Ordering
Number:
JTL2USO**

Third-party
inspection not
available.



Tube OD, in.		Dimensions, in. (mm)			
T	Tx	A	B	C	D
3/4	1/2	2.25 (57.2)	3.00 (76.2)	1.00 (25.4)	3.13 (79.5)
1	1/2	1.50 (38.1)	3.00 (76.2)	1.13 (28.7)	3.25 (82.6)
	3/4				3.13 (79.5)
1 1/2	1/2	2.25 (57.2)	4.50 (114)	1.38 (35.1)	5.00 (127)
	3/4				4.88 (124)
	1				4.75 (121)
2	1/2	3.00 (76.2)	5.00 (127)	1.63 (41.4)	5.75 (146)
	3/4				5.63 (143)
	1				5.50 (140)
	1 1/2				5.25 (133)
2 1/2	1/2	3.75 (95.2)	5.75 (146)	1.88 (47.8)	6.75 (171)
	3/4				6.63 (168)
	1				6.50 (165)
	1 1/2				6.25 (159)
	2				6.00 (152)
3	1/2	4.50 (114)	6.50 (165)	2.13 (54.1)	7.75 (197)
	3/4				7.63 (194)
	1				7.50 (190)
	1 1/2				7.25 (184)
	2				7.00 (178)
	2 1/2				6.75 (171)
4	1/2	6.00 (152)	8.50 (216)	2.63 (66.8)	10.3 (262)
	3/4				10.1 (257)
	1				10.0 (254)
	1 1/2				9.75 (248)
	2				9.50 (241)
	2 1/2				9.25 (235)
	3				9.00 (229)

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.