

ASME BPE 2014 – DT Range of Bioprocessing Fittings



Alchem Process Ltd offer the full range of ASME BPE Bioprocessing Fittings in both SF1 and SF4 surface finishes. The standard provides a good manufacturing guide to the common installation problems and offers solutions and examples of what is considered to be acceptable and unacceptable for the design of modern Bio-Pharmaceutical installations.

The standard also covers process vessel design, pump and valve selection and installation.

The DT fittings are designed for orbital and automatic welding procedures and include, clamp ferrules, bends, tees, reducers, instrument tees and end caps. The DT fittings are offered in accordance with the range listed in the current 2014 standard, although for continuity we have chosen to keep to the original DT references specified in the original BPE standard, namely DT-7 to DT-30 as the industry is already familiar with these items.

Standard DT fittings are offered to SF-1 surface finish at $0.51\mu\text{M}$ Ra Max for both tube and fittings, with SF-4 ($0.38\mu\text{M}$ Ra Max) being available on special order.

The welding tangents of all DT the fittings have a controlled sulphur content of between 0.005 and 0.017%. This range is meant to balance with the sulphur content usually found in tube and should leads to a more even welding process. Material certification is offered to EN10204 3.1 for all fittings and tube supplied to ASME BPE.

Valves:

A range of Diaphragm Valve, Sample Valves, Radial Seat Tank Bottom valves, Butterfly Valves, Non-Return Valves, Ball Valves and Piston Valves are also available to match the surface finishes offered in the standard.

Features & options:

Surface finish	-	SF-1 ($0.5\mu\text{M}$ Ra Max) & SF-4 ($0.25\mu\text{M}$ Ra Max)
Sizes	-	$\frac{1}{4}$ " to 6" with specials sizes made to order
Fittings	-	Bends, Tees, Reducers and End Caps
Sulphur	-	Controlled sulphur range between 0.005 to 0.017%
Adaptors	-	Adaptors available for special instrument pump applications
Gaskets	-	FDA 177.2600 & 177.1550, USP Class V1, 3A and CE 1935/2004
Metric	-	Orbital weld fittings available to DIN32676 & DIN11865

Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

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Related Standards:

DIN32676 Table A, B and C, Clamp Ferrules
DIN11866 and DIN11865, Tube and Orbital Weld Fittings
DIN11864 and DIN11853
FDA 177.2600 and 177.1550 Clamp Gaskets
3A standard 18-03 class 111 Clamp Gaskets
USP Class V1 section 88 with section 87 available to order
EN102043.1 Material Certification

Materials:

316L SS 1.4404 and 1.44435 low sulphur BN-2
Alloy400, C22 & C276
Duplex alloys UNS32750 & SAF 2205 and 2507
6Mo products and 904L, 254SMO and AL6-XN
Titanium and plastics such as ABS, Polypropylene and Nylon
Aluminium

Compatibility:

Where the environment is deemed aggressive to either the seal or the pipework system, please provide details of the product media and operating conditions the pressure and temperature conditions. Our technical staff will assist you with the selection of the most appropriate material for your particular application.

Related Products:

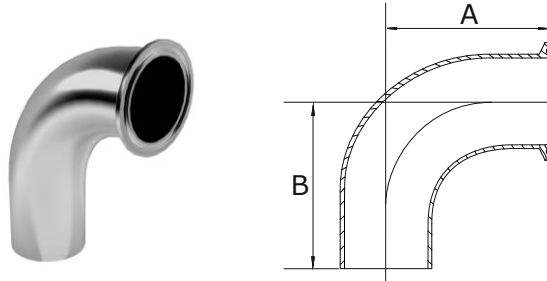
Clamp Ferrules, Blanks and Adaptors
Diaphragm Valves
Aseptic Sample Valves
Radial Seat Tank Bottom Valves
Non-Return Valves
Butterfly Valves
Ball Valves

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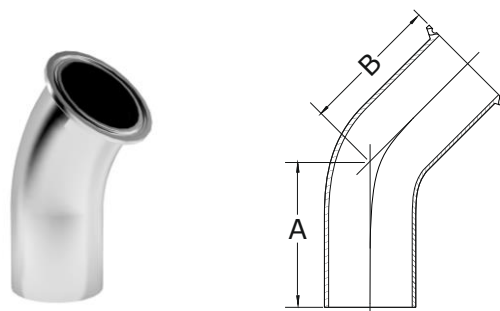
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**Automatic Weld Clamp Bend 90° - DT-12 (BPE 2009)
DT-4.1.1-2 (BPE 2014)**



Nominal Size (inches)	A	B	Part No
1/4"	41.3	66.7	3167-A0064
3/8"	41.3	66.7	3167-A0095
1/2"	41.3	76.2	3167-A013
3/4"	41.3	76.2	3167-A019
1"	50.8	76.2	3167-A026
1. 1/2"	69.9	95.3	3167-A038
2"	88.9	120.7	3167-A051
2. 1/2"	108.0	139.7	3167-A064
3"	127.0	158.8	3167-A076
4"	168.3	203.2	3167-A102
6"	266.7	292.1	3167-A152

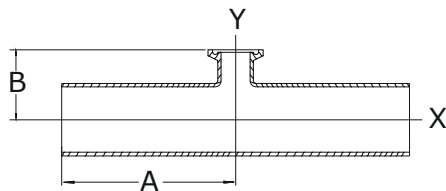
**Automatic Weld Clamp Bend 45° - DT-13 (BPE 2009)
DT-4.1.1-5 (BPE 2014)**



Nominal Size (inches)	A	B	Part No
1/4"	50.8	25.4	3168-A0064
3/8"	50.8	25.4	3168-A0095
1/2"	57.2	25.4	3168-A013
3/4"	57.2	25.4	3168-A019
1"	57.2	28.6	3168-A026
1. 1/2"	63.5	36.5	3168-A038
2"	76.2	44.5	3168-A051
2. 1/2"	85.7	52.4	3168-A064
3"	92.1	60.3	3168-A076
4"	114.3	79.4	3168-A102
6"	158.8	133.4	3168-A152

Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

**Automatic Weld – Short Red. Tee Clamp - DT-14 (BPE 2009)
DT-4.1.2-7 (BPE 2014)**



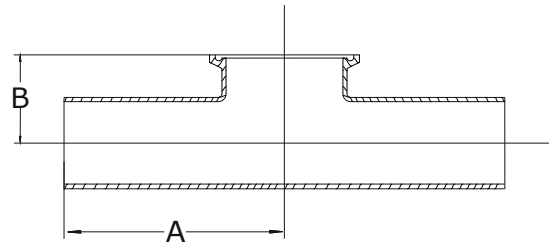
Nominal Size (inches)		A	B	Part No
X	Y			
3/8"	1/4"	44.5	25.4	3169-0095-0064
1/2"	1/4"	47.6	25.4	3169-A013-0064
1/2"	3/8"	47.6	25.4	3169-A013-0095
3/4"	1/4"	50.8	25.4	3169-A019-0064
3/4"	3/8"	50.8	25.4	3169-A019-0095
3/4"	1/2"	50.8	25.4	3169-A019-013
1"	1/4"	54.0	28.6	3169-A026-0064
1"	3/8"	54.0	28.6	3169-A026-0095
1"	1/2"	54.0	28.6	3169-A026-013
1"	3/4"	54.0	28.6	3169-A026-019
1.1/2"	1/2"	60.3	34.9	3169-A038-013
1.1/2"	3/4"	60.3	34.9	3169-A038-019
1.1/2"	1"	60.3	34.9	3169-A038-026
2"	1/2"	73.0	41.3	3169-A051-013
2"	3/4"	73.0	41.3	3169-A051-019
2"	1"	73.0	41.3	3169-A051-026
2"	1.1/2"	73.0	41.3	3169-A051-038
2.1/2"	1/2"	79.4	47.6	3169-A064-013
2.1/2"	3/4"	79.4	47.6	3169-A064-019
2.1/2"	1"	79.4	47.6	3169-A064-026
2.1/2"	1.1/2"	79.4	47.6	3169-A064-038
2.1/2"	2"	79.4	47.6	3169-A064-051
3"	1/2"	85.7	54.0	3169-A076-013
3"	3/4"	85.7	54.0	3169-A076-019
3"	1"	85.7	54.0	3169-A076-026
3"	1.1/2"	85.7	54.0	3169-A076-038
3"	2"	85.7	54.0	3169-A076-051
3"	2.1/2"	85.7	54.0	3169-A076-064
4"	1/2"	104.8	66.7	3169-A102-013
4"	3/4"	104.8	66.7	3169-A102-019
4"	1"	104.8	66.7	3169-A102-026
4"	1.1/2"	104.8	66.7	3169-A102-038
4"	2"	104.8	66.7	3169-A102-051
4"	2.1/2"	104.8	66.7	3169-A102-064
4"	3"	104.8	66.7	3169-A102-076
6"	4"	142.9	95.3	3169-A152-102

Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

DS ASME BPE Clamp Weld End

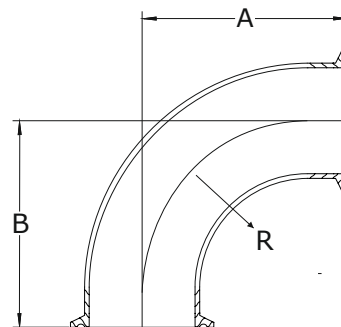
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**Automatic Weld - Short Tee Clamp - DT-15 (BPE 2009)
DT-4.1.2-2 (BPE 2014)**



Nominal Size (inches)	A	B	Part No
1/4"	44.5	25.4	316A-0064
3/8"	44.5	25.4	316A-0095
1/2"	47.6	25.4	316A-A013
3/4"	50.8	28.6	316A-A019
1"	54.0	28.6	316A-A026
1. 1/2"	60.3	34.9	316A-A038
2"	73.0	41.3	316A-A051
2. 1/2"	79.4	47.6	316A-A064
3"	85.7	54.0	316A-A076
4"	104.8	69.9	316A-A102
6"	142.9	117.5	316A-A152

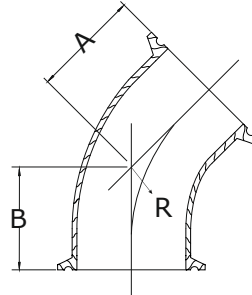
**Clamp Bend 90° - DT-16 (BPE 2009)
DT-4.1.1-3 (BPE 2014)**



Nominal Size (inches)	A	B	R	Part No
1/4"	41.3	41.3	-	316B-A0064
3/8"	41.3	41.3	-	316B-A0095
1/2"	41.3	41.3	-	316B-A013
3/4"	41.3	41.3	-	316B-A019
1"	50.8	50.8	-	316B-A026
1. 1/2"	69.9	69.9	-	316B-A038
2"	88.9	88.9	-	316B-A051
2. 1/2"	108.0	108.0	-	316B-A064
3"	127.0	127.0	-	316B-A076
4"	168.3	168.3	-	316B-A102
6"	266.7	266.7	-	316B-A152

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**Clamp Bend 45° - DT-17 (BPE 2009)
DT-4.1.1-6 (BPE 2014)**



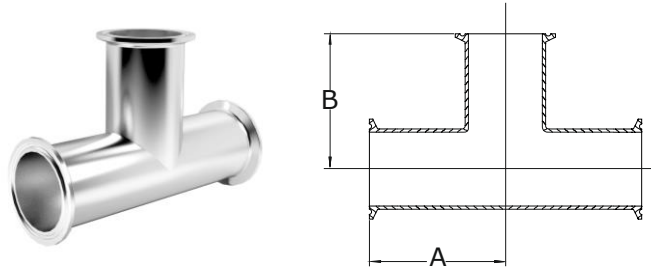
Nominal Size (inches)	A	B	R	Part No
1/4"	25.4	25.4	-	316C-A0064
3/8"	25.4	25.4	-	316C-A0095
1/2"	25.4	25.4	-	316C-A013
3/4"	25.4	25.4	-	316C-A019
1"	28.6	28.6	-	316C-A026
1. 1/2"	36.5	36.5	-	316C-A038
2"	44.5	44.5	-	316C-A051
2. 1/2"	52.4	52.4	-	316C-A064
3"	60.3	60.3	-	316C-A076
4"	79.4	79.4	-	316C-A102
6"	133.4	133.4	-	316C-A152

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[DS ASME BPE Clamp Weld End](#)

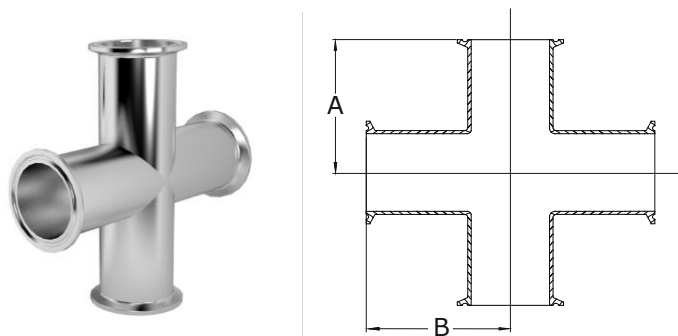
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**Clamp Equal Tee - DT-18 (BPE 2009)
DT-4.1.2-4 (BPE 2014)**



Nominal Size (inches)	A	B	Part No
1/4"	57.2	57.2	316E-A0064
3/8"	57.2	57.2	316E-A0095
1/2"	57.2	57.2	316E-A013
3/4"	60.3	60.3	316E-A019
1"	66.7	66.7	316E-A026
1. 1/2"	73.0	73.0	316E-A038
2"	85.7	85.7	316E-A051
2. 1/2"	92.1	92.1	316E-A064
3"	98.4	98.4	316E-A076
4"	120.7	120.7	316E-A102
6"	181.0	181.0	316E-A152

**Clamp Equal Cross - DT-18 (BPE 2009)
DT-4.1.2-4 (BPE 2014)**

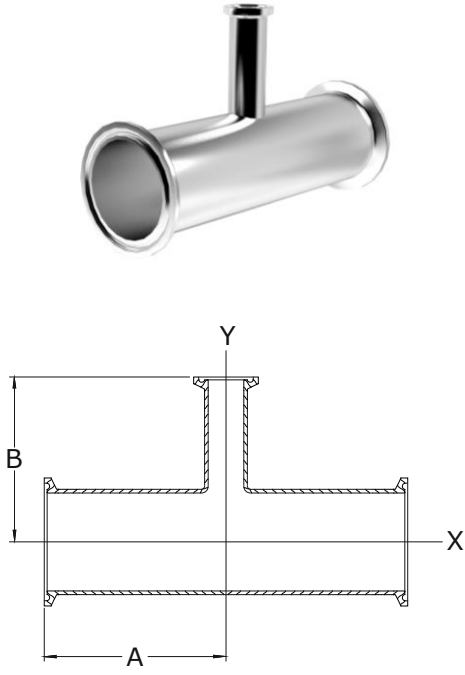


Nominal Size (inches)	A	B	Part No
1/4"	57.2	57.2	316D-A0064
3/8"	57.2	57.2	316D-A0095
1/2"	57.2	57.2	316D-A013
3/4"	60.3	60.3	316D-A019
1"	66.7	66.7	316D-A026
1. 1/2"	73.0	73.0	316D-A038
2"	85.7	85.7	316D-A051
2. 1/2"	92.1	92.1	316D-A064
3"	98.4	98.4	316D-A076
4"	120.7	120.7	316D-A102
6"	181.0	181.0	316D-A152

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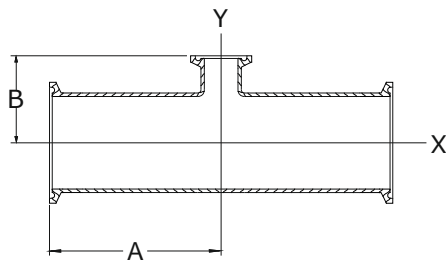
**Clamp Reducing Tee - DT-19 (BPE 2009)
DT-4.1.2-8 (BPE 2014)**

Nominal Size (inches)	A	B	Part No	
				X
3/8"	1/4"	57.2	57.2	316F-A0095-0064
1/2"	1/4"	60.3	60.3	316F-A013-0064
1/2"	3/8"	60.3	60.3	316F-A013-0095
3/4"	1/4"	63.5	63.5	316F-A019-0064
3/4"	3/8"	63.5	63.5	316F-A019-0095
3/4"	1/2"	63.5	63.5	316F-A019-013
1"	1/4"	66.7	66.7	316F-A026-0064
1"	3/8"	66.7	66.7	316F-A026-0095
1"	1/2"	66.7	66.7	316F-A026-013
1"	3/4"	66.7	66.7	316F-A026-019
1.1/2"	1/2"	73.0	73.0	316F-A038-013
1.1/2"	3/4"	73.0	73.0	316F-A038-019
1.1/2"	1"	73.0	73.0	316F-A038-026
2"	1/2"	85.7	79.4	316F-A051-013
2"	3/4"	85.7	79.4	316F-A051-019
2"	1"	85.7	79.4	316F-A051-026
2"	1.1/2"	85.7	79.4	316F-A051-038
2.1/2"	1/2"	92.1	85.7	316F-A064-013
2.1/2"	3/4"	92.1	85.7	316F-A064-019
2.1/2"	1"	92.1	85.7	316F-A064-026
2.1/2"	1.1/2"	92.1	85.7	316F-A064-038
2.1/2"	2"	92.1	85.7	316F-A064-051
3"	1/2"	98.4	92.1	316F-A076-013
3"	3/4"	98.4	92.1	316F-A076-019
3"	1"	98.4	92.1	316F-A076-026
3"	1.1/2"	98.4	92.1	316F-A076-038
3"	2"	98.4	98.4	316F-A076-051
3"	2.1/2"	98.4	98.4	316F-A076-064
4"	1"	120.7	104.8	316F-A102-026
4"	1.1/2"	120.7	104.8	316F-A102-038
4"	2"	120.7	111.1	316F-A102-051
4"	2.1/2"	120.7	111.1	316F-A102-064
4"	3"	120.7	111.1	316F-A102-076
6"	3"	181.0	136.5	316F-A152-076
6"	4"	181.0	146.1	316F-A152-102



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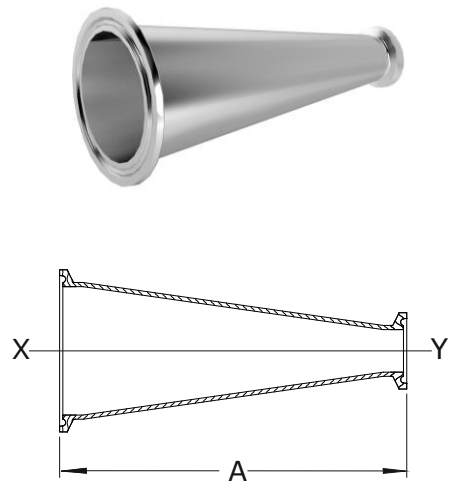
**Clamp Short Reducing Tee - DT-20 (BPE 2009)
DT-4.1.2-9 (BPE 2014)**



Nominal Size (inches)		A	B	Part No
X	Y			
3/8"	1/4"	57.2	25.4	316G-A0095-0064
1/2"	1/4"	60.3	25.4	316G-A013-0064
1/2"	3/8"	60.3	25.4	316G-A013-0095
3/4"	1/4"	63.5	25.4	316G-A019-0064
3/4"	3/8"	63.5	25.4	316G-A019-0095
3/4"	1/2"	63.5	25.4	316G-A019-013
1"	1/4"	66.7	28.6	316G-A026-0064
1"	3/8"	66.7	28.6	316G-A026-0095
1"	1/2"	66.7	28.6	316G-A026-013
1"	3/4"	66.7	28.6	316G-A026-019
1 1/2"	1/2"	73.0	34.9	316G-A038-013
1 1/2"	3/4"	73.0	34.9	316G-A038-019
1 1/2"	1"	73.0	34.9	316G-A038-026
2"	1/2"	85.7	41.3	316G-A051-013
2"	3/4"	85.7	41.3	316G-A051-019
2"	1"	85.7	41.3	316G-A051-026
2"	1 1/2"	85.7	41.3	316G-A051-038
2 1/2"	1/2"	92.1	47.6	316G-A064-013
2 1/2"	3/4"	92.1	47.6	316G-A064-019
2 1/2"	1"	92.1	47.6	316G-A064-026
2 1/2"	1 1/2"	92.1	47.6	316G-A064-038
2 1/2"	2"	92.1	47.6	316G-A064-051
3"	1/2"	98.4	54.0	316G-A076-013
3"	3/4"	98.4	54.0	316G-A076-019
3"	1"	98.4	54.0	316G-A076-026
3"	1 1/2"	98.4	54.0	316G-A076-038
3"	2"	98.4	54.0	316G-A076-051
3"	2 1/2"	98.4	54.0	316G-A076-064
4"	1"	120.7	66.7	316G-A102-026
4"	1 1/2"	120.7	66.7	316G-A102-038
4"	2"	120.7	66.7	316G-A102-051
4"	2 1/2"	120.7	66.7	316G-A102-064
4"	3"	120.7	66.7	316G-A102-076
6"	3"	181.0	92.1	316G-A152-076
6"	4"	181.0	95.3	316G-A152-102

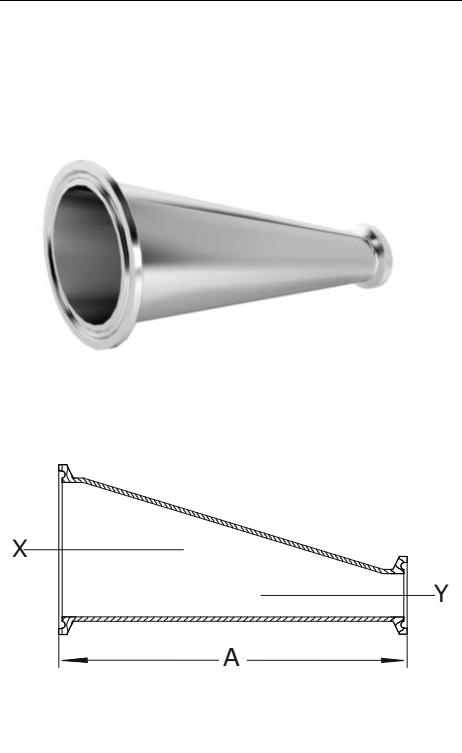
Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

**Clamp Concentric Reducer - DT-21 (BPE 2009)
DT-4.1.3-3 (BPE 2014)**

	Nominal Size (inches)		A	Part No
	X	Y		
	3/8"	1/4"	66.7	316H-A0095-0064
	1/2"	1/4"	73.0	316H-A013-0064
	1/2"	3/8"	73.0	316H-A013-0095
	3/4"	3/8"	76.2	316H-A019-0095
	3/4"	1/2"	79.4	316H-A019-013
	1"	1/2"	88.9	316H-A026-013
	1"	3/4"	79.4	316H-A026-019
	1.1/2"	3/4"	101.6	316H-A038-019
	1.1/2"	1"	88.9	316H-A038-026
	2"	1"	111.1	316H-A051-026
	2"	1.1/2"	88.9	316H-A051-038
	2.1/2"	1.1/2"	111.1	316H-A064-038
	2.1/2"	2"	88.9	316H-A064-051
	3"	1.1/2"	133.4	316H-A076-038
	3"	2"	111.1	316H-A076-051
	3"	2.1/2"	92.1	316H-A076-064
	4"	2"	158.8	316H-A102-051
4"	2.1/2"	136.5	316H-A102-064	
4"	3"	127.0	316H-A102-076	
6"	3"	215.9	316H-A152-076	
6"	4"	177.8	316H-A152-102	

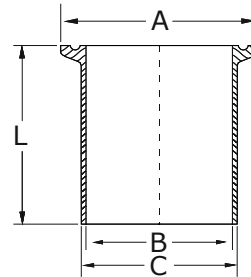
Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

**Clamp Eccentric Reducer - DT-21 (BPE 2009)
DT-4.1.3-3 (BPE 2014)**

	Nominal Size (inches)		A	Part No
	X	Y		
	3/8"	1/4"	66.7	316J-A0095-0064
	1/2"	1/4"	73.0	316J-A013-0064
	1/2"	3/8"	73.0	316J-A013-0095
	3/4"	3/8"	76.2	316J-A019-0095
	3/4"	1/2"	79.4	316J-A019-013
	1"	1/2"	88.9	316J-A026-013
	1"	3/4"	79.4	316J-A026-019
	1.1/2"	3/4"	101.6	316J-A038-019
	1.1/2"	1"	88.9	316J-A038-026
	2"	1"	111.1	316J-A051-026
	2"	1.1/2"	88.9	316J-A051-038
	2.1/2"	1.1/2"	111.1	316J-A064-038
	2.1/2"	2"	88.9	316J-A064-051
	3"	1.1/2"	133.4	316J-A076-038
	3"	2"	111.1	316J-A076-051
	3"	2.1/2"	92.1	316J-A076-064
	4"	2"	158.8	316J-A102-051
	4"	2.1/2"	136.5	316J-A102-064
4"	3"	127.0	316J-A102-076	
6"	3"	215.9	316J-A152-076	
6"	4"	177.8	316J-A152-102	

Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

**Clamp Ferrule Automatic Weld - DT-22
DT-4.1.4-1 (BPE 2014)**



Nominal Size (inches)	A (mm)	B (mm)	C (mm)	L1	L2	L3	Part No L1	Part No L2	Part No L3
¼"	25.0	4.57	6.35	44.50	28.70	12.70	316K-A0064	316L-A0064	316M-A0064
⅜"	25.0	7.74	9.52	44.50	28.70	12.70	316K-A0095	316L-A0095	316M-A0095
½"	25.0	9.40	12.70	44.50	28.70	12.70	316K-A013	316L-A013	316M-A013
¾"	25.0	15.75	19.05	44.50	28.70	12.70	316K-A019	316L-A019	316M-A019
1"	50.5	22.10	25.40	44.50	28.70	12.70	316K-A026	316L-A026	316M-A026
1.½"	50.5	34.80	38.10	44.50	28.70	12.70	316K-A038	316L-A038	316M-A038
2"	64.0	47.50	50.80	57.20	28.70	12.70	316K-A051	316L-A051	316M-A051
2.½"	77.5	60.20	63.50	57.20	28.70	12.70	316K-A064	316L-A064	316M-A064
3"	91.0	72.90	76.20	57.20	28.70	12.70	316K-A076	316L-A076	316M-A076
4"	119.0	97.38	101.60	57.20	28.70	15.90	316K-A102	316L-A102	316M-A102
6"	167.0	146.86	152.40	76.20	38.10	19.05	316K-A152	316L-A152	316M-A152

Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

[DS ASME BPE Clamp Weld End](#)

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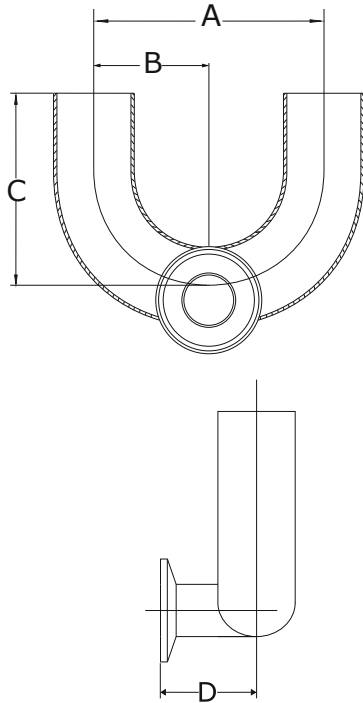
**Automatic Weld – 180° Bend Bottom Outlet Clamp - DT-23.3 (BPE 09)
DT-4.1.1-7 (BPE 2014)**

	Nominal Size (inches)		A	B	C	D	Part No
	X	Y					
	3/4"	1/2"	114.30	57.15	95.25	25.40	317C-A019-013
	1"	1/2"	114.30	57.15	95.25	28.58	317C-A026-013
	1"	3/4"	114.30	57.15	95.25	28.58	317C-A026-019
	1. 1/2"	1/2"	152.40	76.20	114.30	34.93	317C-A038-013
	1. 1/2"	3/4"	152.40	76.20	114.30	34.93	317C-A038-019
	1. 1/2"	1"	152.40	76.20	114.30	34.93	317C-A038-026
	2"	1/2"	152.40	76.20	127.00	41.28	317C-A051-013
	2"	3/4"	152.40	76.20	127.00	41.28	317C-A051-019
	2"	1"	152.40	76.20	127.00	41.28	317C-A051-026
	2"	1. 1/2"	152.40	76.20	127.00	41.28	317C-A051-038
	2. 1/2"	1/2"	190.50	95.25	146.05	47.63	317C-A064-013
	2. 1/2"	3/4"	190.50	95.25	146.05	47.63	317C-A064-019
	2. 1/2"	1"	190.50	95.25	146.05	47.63	317C-A064-026
	2. 1/2"	1. 1/2"	190.50	95.25	146.05	47.63	317C-A064-038
	2. 1/2"	2"	190.50	95.25	146.05	47.63	317C-A064-051
	3"	1/2"	228.60	114.30	165.10	53.98	317C-A076-013
	3"	3/4"	228.60	114.30	165.10	53.98	317C-A076-019
	3"	1"	228.60	114.30	165.10	53.98	317C-A076-026
	3"	1. 1/2"	228.60	114.30	165.10	53.98	317C-A076-038
	3"	2"	228.60	114.30	165.10	53.98	317C-A076-051
3"	2. 1/2"	228.60	114.30	165.10	53.98	317C-A076-064	
4"	1/2"	304.80	152.40	215.90	66.68	317C-A102-013	
4"	3/4"	304.80	152.40	215.90	66.68	317C-A102-019	
4"	1"	304.80	152.40	215.90	66.68	317C-A102-026	
4"	1. 1/2"	304.80	152.40	215.90	66.68	317C-A102-038	
4"	2"	304.80	152.40	215.90	66.68	317C-A102-051	
4"	2. 1/2"	304.80	152.40	215.90	66.68	317C-A102-064	
4"	3"	304.80	152.40	215.90	66.68	317C-A102-076	

Please Note: Special DT-23's are usually made to order and are **NON** stock item – Dimensions are guidelines and may be subject to change, please enquire to discuss your requirements before ordering.

Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

**Automatic Weld – 180° Bend Side Outlet Clamp - DT-23.4 (BPE 09)
DT-4.1.1-7 (BPE 2014)**

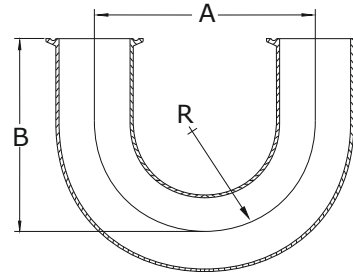


Nominal Size (inches)		A	B	C	D	Part No
X	Y					
¾"	½"	114.30	57.15	95.25	25.40	317D-A019-013
1"	½"	114.30	57.15	95.25	28.58	317D-A026-013
1"	¾"	114.30	57.15	95.25	28.58	317D-A026-019
1.½"	½"	152.40	76.20	114.30	34.93	317D-A038-013
1.½"	¾"	152.40	76.20	114.30	34.93	317D-A038-019
1.½"	1"	152.40	76.20	114.30	34.93	317D-A038-026
2"	½"	152.40	76.20	127.00	41.28	317D-A051-013
2"	¾"	152.40	76.20	127.00	41.28	317D-A051-019
2"	1"	152.40	76.20	127.00	41.28	317D-A051-026
2"	1.½"	152.40	76.20	127.00	41.28	317D-A051-038
2.½"	½"	190.50	95.25	146.05	47.63	317D-A064-013
2.½"	¾"	190.50	95.25	146.05	47.63	317D-A064-019
2.½"	1"	190.50	95.25	146.05	47.63	317D-A064-026
2.½"	1.½"	190.50	95.25	146.05	47.63	317D-A064-038
2.½"	2"	190.50	95.25	146.05	47.63	317D-A064-051
3"	½"	228.60	114.30	165.10	53.98	317D-A076-013
3"	¾"	228.60	114.30	165.10	53.98	317D-A076-019
3"	1"	228.60	114.30	165.10	53.98	317D-A076-026
3"	1.½"	228.60	114.30	165.10	53.98	317D-A076-038
3"	2"	228.60	114.30	165.10	53.98	317D-A076-051
3"	2.½"	228.60	114.30	165.10	53.98	317D-A076-064
4"	½"	304.80	152.40	215.90	66.68	317D-A102-013
4"	¾"	304.80	152.40	215.90	66.68	317D-A102-019
4"	1"	304.80	152.40	215.90	66.68	317D-A102-026
4"	1.½"	304.80	152.40	215.90	66.68	317D-A102-038
4"	2"	304.80	152.40	215.90	66.68	317D-A102-051
4"	2.½"	304.80	152.40	215.90	66.68	317D-A102-064
4"	3"	304.80	152.40	215.90	66.68	317D-A102-076

Please Note: Special DT-23's are usually made to order and are a **NON** stock item –
Dimensions are guidelines and may be subject to change, please enquire to discuss your requirements before ordering.

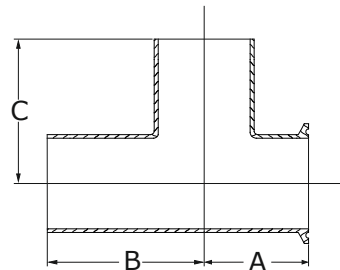
Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

**Clamp Return Bend 180° - DT-24 (BPE 2009)
DT-4.1.1-8 (BPE 2014)**



Nominal Size (inches)	A	B	R	Part No
1/4"	114.30	79.40	57.2	316P-A0064
1/2"	114.30	88.90	57.2	316P-A013
3/4"	114.30	88.90	57.2	316P-A019
1"	76.20	88.90	57.2	316P-A026
1.1/2"	114.30	127.00	76.2	316P-A038
2"	152.40	139.70	76.2	316P-A051
2.1/2"	190.50	158.80	95.3	316P-A064
3"	228.60	177.80	114.3	316P-A076
4"	304.80	231.80	152.4	316P-A102
6"	457.20	330.20	228.6	316P-A152

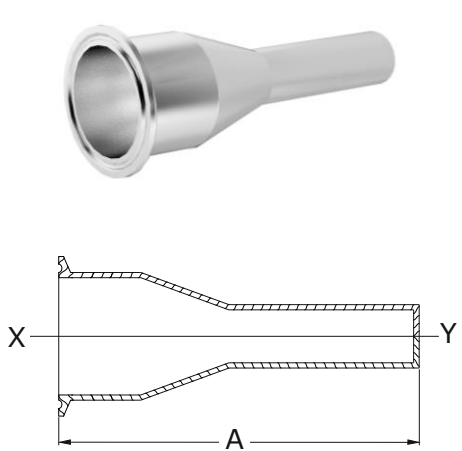
**Clamp Short Outlet Tee - DT-25 (BPE 2009)
DT-4.1.2-3 (BPE 2014)**



Nominal Size (inches)	A	B	C	Part No
1/4"	22.2	44.5	44.5	316Q-A0064
3/8"	22.2	44.5	44.5	316Q-A0095
1/2"	22.2	47.5	47.6	316Q-A013
3/4"	25.4	50.8	50.8	316Q-A019
1"	28.6	54.0	54.0	316Q-A026
1.1/2"	34.9	60.3	60.3	316Q-A038
2"	41.3	73.0	73.0	316Q-A051
2.1/2"	47.6	79.4	79.4	316Q-A064
3"	54.0	85.7	85.7	316Q-A076
4"	69.9	104.8	104.8	316Q-A102
6"	117.5	142.9	142.9	316Q-A152

Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

**Clamp Weld Concentric Reducer - DT-26 (BPE 2009)
DT-4.1.3-2 (BPE 2014)**

	Nominal Size (inches)		A L1	A L2	Part No
	X	Y			
	¾"	½"	66.7	76.2	316R-A019-013
	1"	½"	76.2	88.9	316R-A026-013
	1"	¾"	66.7	76.2	316R-A026-019
	1.½"	½"	-	114.3	316R-A038-013
	1.½"	¾"	88.9	101.6	316R-A038-019
	1.½"	1"	76.2	101.6	316R-A038-026
	2"	½"	-	165.1	316R-A051-013
	2"	¾"	-	152.4	316R-A051-019
	2"	1"	98.4	152.4	316R-A051-026
	2"	1.½"	76.2	101.6	316R-A051-038
	2.½"	1"	-	203.2	316R-A064-026
	2.½"	1.½"	98.4	152.4	316R-A064-038
	2.½"	2"	76.2	108.0	316R-A064-051
	3"	1"	-	254.0	316R-A076-026
	3"	1.½"	120.7	203.2	316R-A076-038
	3"	2"	98.4	158.8	316R-A076-051
	3"	2.½"	79.4	108.0	316R-A076-064
	4"	1"	-	358.8	316R-A102-026
	4"	1.½"	-	308.0	316R-A102-038
	4"	2"	146.0	263.5	316R-A102-051
4"	2.½"	123.8	212.7	316R-A102-064	
4"	3"	114.3	161.9	316R-A102-076	
6"	3"	203.2	222.3	316R-A152-076	
6"	4"	161.9	228.6	316R-A152-102	

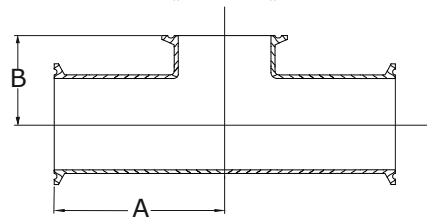
Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

**Clamp Weld Eccentric Reducer - DT-26 (BPE 2009)
DT-4.1.3-2 (BPE 2014)**

	Nominal Size (inches)		A L1	A L2	Part No
	X	Y			
	¾"	½"	66.7	76.2	316S-A019-013
	1"	½"	76.2	88.9	316S-A026-013
	1"	¾"	66.7	76.2	316S-A026-019
	1.½"	½"		114.3	316S-A038-013
	1.½"	¾"	88.9	101.6	316S-A038-019
	1.½"	1"	76.2	101.6	316S-A038-026
	2"	½"		165.1	316S-A051-013
	2"	¾"		152.4	316S-A051-019
	2"	1"	98.4	152.4	316S-A051-026
	2"	1.½"	76.2	101.6	316S-A051-038
	2.½"	1"		203.2	316S-A064-026
	2.½"	1.½"	98.4	152.4	316S-A064-038
	2.½"	2"	76.2	108.0	316S-A064-051
	3"	1"		254.0	316S-A076-026
	3"	1.½"	120.7	203.2	316S-A076-038
	3"	2"	98.4	158.8	316S-A076-051
	3"	2.½"	79.4	108.0	316S-A076-064
	4"	1"		358.8	316S-A102-026
	4"	1.½"		308.0	316S-A102-038
	4"	2"	146.0	263.5	316S-A102-051
4"	2.½"	123.8	212.7	316S-A102-064	
4"	3"	114.3	161.9	316S-A102-076	
6"	3"	203.2	222.3	316S-A152-076	
6"	4"	161.9	228.6	316S-A152-102	

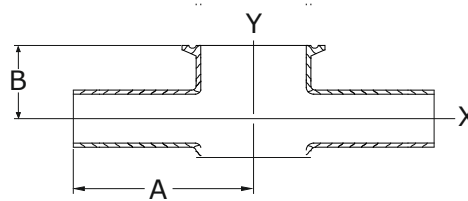
Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

**Clamp Tee Short - DT-27 (BPE 2009)
DT-4.1.2-5 (BPE 2014)**



Nominal Size (inches)	A	B	Part No
1/4"	57.2	25.4	316T-A0064
1/2"	57.2	25.4	316T-A013
3/4"	60.3	28.6	316T-A019
1"	66.7	28.6	316T-A026
1.1/2"	73.0	34.9	316T-A038
2"	85.7	41.3	316T-A051
2.1/2"	92.1	47.6	316T-A064
3"	98.4	54.0	316T-A076
4"	120.7	69.9	316T-A102
6"	181.0	117.5	316T-A152

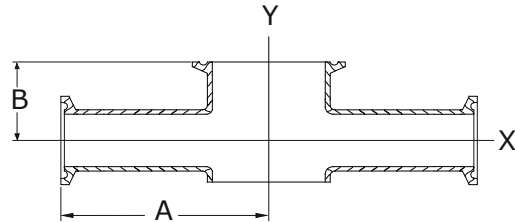
**Automatic Instrument Tee - DT-28 (BPE 2009)
DT-4.1.2-10 (BPE 2014)**



Nominal Size (inches)		A	B	Part No
X	Y			
1/2"	1.1/2"	63.5	22.2	316V-A013-038
3/4"	1.1/2"	63.5	25.4	316V-A019-038
1"	1.1/2"	63.5	28.6	316V-A026-038
1/2"	2"	69.9	25.4	316V-A013-051
3/4"	2"	69.9	28.6	316V-A019-051
1"	2"	69.9	31.6	316V-A026-051
1.1/2"	2"	69.9	38.1	316V-A038-051

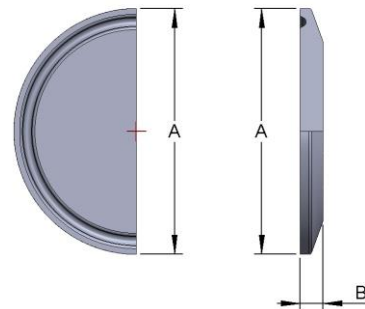
Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.

**Clamp Instrument Tee – DT-29 (BPE 2009)
DT-4.1.2-11 (BPE 2014)**



Nominal Size (inches)		A	B	Part No
X	Y			
1/2"	1. 1/2"	76.2	22.2	316W-A013-038
3/4"	1. 1/2"	76.2	25.4	316W-A019-038
1"	1. 1/2"	76.2	28.6	316W-A026-038
1/2"	2"	82.6	25.4	316W-A013-051
3/4"	2"	82.6	28.6	316W-A019-051
1"	2"	82.6	31.8	316W-A026-051
1. 1/2"	2"	82.6	38.1	316W-A038-051

**Clamp Blank End Cap - DT-31 (BPE 2009)
DT-4.1.5-2 (BPE 2014)**



Nominal Size (inches)	A	B	Part No
1/2"	25.40	4.71	316Y-A013
3/4"	25.40	4.72	316Y-A019
1"	50.50	6.40	316Y-A026
1. 1/2"	50.50	6.40	316Y-A038
2"	64.00	6.40	316Y-A051
2. 1/2"	77.50	6.40	316Y-A064
3"	91.00	6.40	316Y-A076
4"	119.00	7.90	316Y-A102
6"	167.00	11.10	316Y-A152

Dimensions are provided in good faith but may be subject to change; if dimensions are critical please call the office to confirm all sizes before placing an order.