



BPE Standard Stainless Steel
High Purity Tubing and Fittings

BPE

1.BPE STANDARD & TUBING

1.1 BioProcessing Equipment Fittings ----- 202

1.2 High Purity Bpe Stainless Steel Tubing ----- 203

2.FITTINGS

2.1 Clamp Fittings ----- 204

2.2 Welded Fittings ----- 220



BIOPROCESSING EQUIPMENT FITTINGS

Product

Stainless Steel fittings comply with ASME BPE standards.

Gaskets are made of FDA specified compounds.

Material

Fittings are fabricated in AISI 316L Stainless Steel with sulfur content of 0.005-0.017% achieving superior repeatability for automatic orbital welding process.

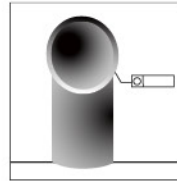
Sizes

Stainless Steel fittings are available in sizes 1/4" - 6" O.D. tube size.

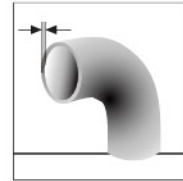
Dimensions & Tolerances:

Dimensions as specified in ASME BPE Part DT-3-1

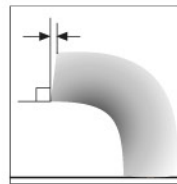
Roundness



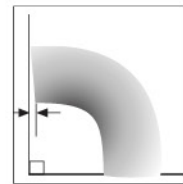
Wall Thickness



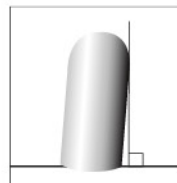
Squareness Face to Tangent



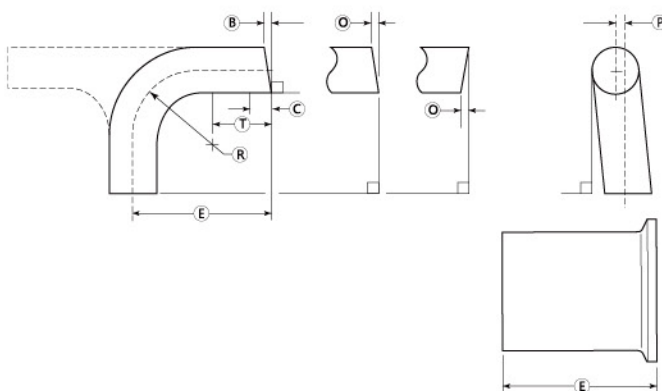
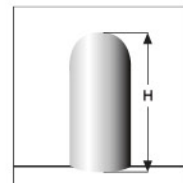
Off Angle



Off Plane



Height



General Notes

- Tolerance on E end-to-end and center-to-end: 0.050 in.(1.27 mm)
- Tolerance for centerline radius (CLR) is $\pm 10\%$ of the nominal dimension

HIGH PURITY BPE STAINLESS STEEL TUBING

Tube Specifications

Standards

- ASTM A-269 / A270-S2
- ASME BPE



Surface Finish

Surface finish specifications are the same for as fittings & tubes.

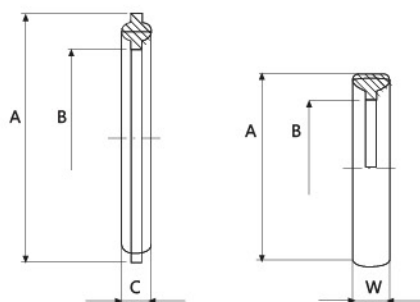
Tubing Dimensional Tolerances: Tubing specifications, ASTM A-269/A270-S2

Tubing Diameter		Wall thickness		OD Tolerance Length(ASTM Spec.)		Length (ASTM Spec.)		Wall Thickness Tolerance
in.	mm	in.	mm	in.	mm	in.	mm	ASTM Spec.
1/4"	6.35	0.035	0.89	+/- 0.005	+/- 0.127	0.125	3.175	+/- 10%
3/8"	9.53	0.035	0.89	+/- 0.005	+/- 0.128	0.125	3.175	+/- 10%
1/2"	12.70	0.065	1.65	+/- 0.005	+/- 0.129	0.125	3.175	+/- 10%
3/4"	19.05	0.065	1.65	+/- 0.005	+/- 0.130	0.125	3.175	+/- 10%
1"	25.40	0.065	1.65	+/- 0.005	+/- 0.131	0.125	3.175	+/- 10%
1 1/2"	38.10	0.065	1.65	+/- 0.008	+/- 0.203	0.125	3.175	+/- 10%
2"	50.80	0.065	1.65	+/- 0.008	+/- 0.204	0.125	3.175	+/- 10%
2 1/2"	63.50	0.065	1.65	+/- 0.010	+/- 0.254	0.125	3.175	+/- 10%
3"	76.20	0.065	1.65	+/- 0.015	+/- 0.381	0.125	3.175	+/- 10%
4"	101.60	0.083	2.11	+/- 0.015	+/- 0.381	0.188	4.763	+/- 10%
6"	152.40	0.109	2.77	+/- 0.030	+/- 0.762	0.188	4.763	+/- 10%



CLAMP TYPE

Gasket



Gasket Materials

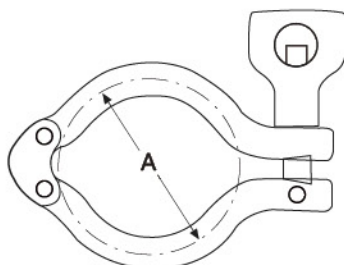
- PTFE®
- VITON®
- Envelope type - TEFLON with EPDM Filler
- TEFLON with VITON Filler
- SILICON
- BUNA
- EPDM and TEF-STEEL®

Size	Dimensions							
	A in.	A mm	B in.	B mm	C in.	C mm	W in.	W mm
1/2	1.000	25.40	0.370	9.40	-	-	0.22	5.50
3/4	1.000	25.40	0.618	15.70	-	-	0.22	5.50
1 Type A	1.340	34.00	0.900	22.86	0.20	5.08	-	-
1	1.975	50.16	0.900	22.86	0.20	5.08	-	-
1 1/2	1.975	50.16	1.400	35.56	0.20	5.08	-	-
2	2.500	63.50	1.900	48.26	0.20	5.08	-	-
2 1/2	3.000	76.20	2.400	60.96	0.20	5.08	-	-
3	3.575	90.80	2.900	73.66	0.20	5.08	-	-
4	4.690	119.12	3.875	98.42	0.20	5.08	-	-
6	6.600	167.64	5.840	148.33	0.20	5.08	-	-

* Please specify the gasket material

F

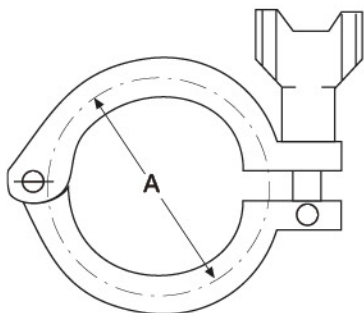
13MHMD -Double Hinged Heavy Duty Clamp



Size	Dimensions	
	A in.	A mm
1 1/2	2.122	53.9
2	2.654	67.4
2 1/2	3.185	80.8
3	3.717	94.4
4	4.820	108.7

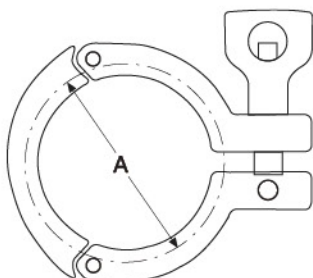
CLAMP TYPE

13MHM - Heavy Duty Clamp



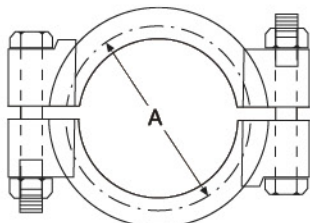
Size	Dimensions	
	A in.	A mm
1/2 & 3/4	1.125	28.5
1 Type A	1.472	37.4
1 & 1 1/2	2.122	53.9
2	2.654	64.5
2 1/2	3.185	80.8
3	3.717	94.4
4	4.820	122.42
6	6.695	170.05

13MHHS - Three-Piece Heavy Duty Clamp



Size	Dimensions	
	A in.	A mm
1 1/2	2.122	53.9
2	2.654	67.4
2 1/2	3.185	80.8
3	3.717	94.4
4	4.820	108.7

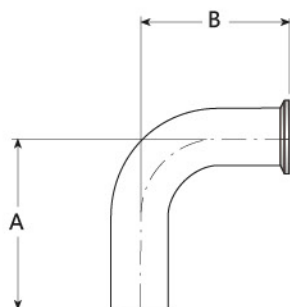
13MHP - High Pressure Clamp



Size	Dimensions	
	A in.	A mm
1/2 & 3/4	1.062	26.97
1 1/2	2.046	51.97
2	2.578	65.48
2 1/2	3.110	78.99
3	3.640	92.46
4	4.744	120.50
6	6.632	168.45

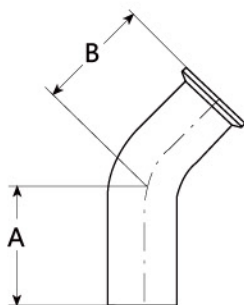
CLAMP TYPE

DT-12 90°Clamp/Weld Elbow



Size	Dimensions			
	A in.	A mm	B in.	B mm
1/4	2.625	66.7	1.625	41.3
3/8	2.625	66.7	1.625	41.3
1/2	3.000	76.2	1.625	41.3
3/4	3.000	76.2	1.625	41.3
1	3.000	76.2	2.000	50.8
1 1/2	3.750	95.3	2.750	69.9
2	4.750	120.7	3.500	88.9
2 1/2	5.500	139.7	4.250	108.0
3	6.250	158.8	5.000	127.0
4	8.000	203.2	6.625	168.3
6	11.500	292.1	10.500	266.7

DT-13 Clamp/Weld Elbow

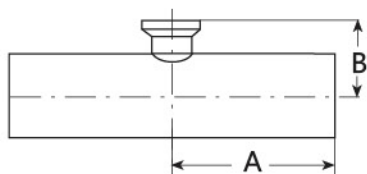


Size	Dimensions			
	A in.	A mm	B in.	B mm
1/4	2.000	50.8	1.000	25.4
3/8	2.000	50.8	1.000	25.4
1/2	2.250	57.2	1.000	25.4
3/4	2.250	57.2	1.000	25.4
*1	2.250	57.2	1.125	28.6
1 1/2	2.500	63.5	1.438	36.5
2	3.000	76.2	1.750	44.5
2 1/2	3.375	85.7	2.063	52.4
3	3.625	92.1	2.375	60.3
4	4.500	114.3	3.125	79.4
6	6.250	158.8	5.250	133.4

F

CLAMP TYPE

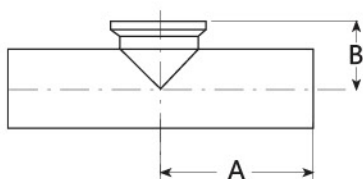
DT-14 Short Outlet W/C Reducing Tee



Size	Dimensions			
	A in.	A mm	B in.	B mm
3/8 x 1/4	1.750	44.5	1.000	25.4
1/2 x 1/4	1.875	47.6	1.000	25.4
1/2 x 3/8	1.875	47.6	1.000	25.4
3/4 x 1/4	2.000	50.8	1.000	25.4
3/4 x 3/8	2.000	50.8	1.000	25.4
3/4 x 1/2	2.000	50.8	1.000	25.4
1 x 1/4	2.125	54.0	1.125	28.6
1 x 3/8	2.125	54.0	1.125	28.6
1 x 1/2	2.125	54.0	1.125	28.6
1 x 3/4	2.125	54.0	1.125	28.6
1 1/2 x 1/2	2.375	60.3	1.375	34.9
1 1/2 x 3/4	2.375	60.3	1.375	34.9
1 1/2 x 1*	2.375	60.3	1.375	34.9
2 x 1/2	2.875	73.0	1.625	41.3
2 x 3/4	2.875	73.0	1.625	41.3
2 x 1*	2.875	73.0	1.625	41.3
2 x 1 1/2	2.875	73.0	1.625	41.3
2 1/2 x 1/2	3.125	79.4	1.875	47.6
2 1/2 x 3/4	3.125	79.4	1.875	47.6
2 1/2 x 1*	3.125	79.4	1.875	47.6
2 1/2 x 1 1/2	3.125	79.4	1.875	47.6
2 1/2 x 2	3.125	79.4	1.875	47.6
3 x 1/2	3.375	85.7	2.125	54.0
3 x 3/4	3.375	85.7	2.125	54.0
3 x 1*	3.375	85.7	2.125	54.0
3 x 1 1/2	3.375	85.7	2.125	54.0
3 x 2	3.375	85.7	2.125	54.0
3 x 2 1/2	3.375	85.7	2.125	54.0
4 x 1/2	4.125	104.8	2.625	66.7
4 x 3/4	4.125	104.8	2.625	66.7
4 x 1*	4.125	104.8	2.625	66.7
4 x 1 1/2	4.125	104.8	2.625	66.7
4 x 2	4.125	104.8	2.625	66.7
4 x 2 1/2	4.125	104.8	2.625	66.7
4 x 3	4.125	104.8	2.625	66.7
6 x 1/2	5.625	142.9	3.625	92.1
6 x 3/4	5.625	142.9	3.625	92.1
6 x 1*	5.625	142.9	3.625	92.1
6 x 1 1/2	5.625	142.9	3.625	92.1
6 x 2	5.625	142.9	3.625	92.1
6 x 2 1/2	5.625	142.9	3.625	92.1
6 x 3	5.625	142.9	3.625	92.1
6 x 4	5.625	142.9	3.750	95.3

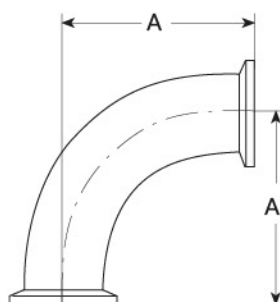
CLAMP TYPE

DT-15 Equal Outlet Weld/Clamp Tee



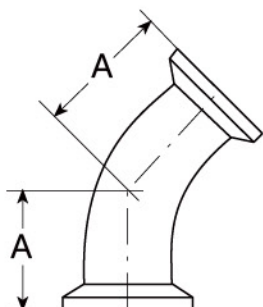
Size	Dimensions			
	A in.	A mm	B in.	B mm
1/4	1.750	44.5	1.000	25.4
3/8	1.750	44.5	1.000	25.4
1/2	1.875	47.6	1.000	25.4
3/4	2.000	50.8	1.125	28.6
*1	2.125	54.0	1.125	28.6
1 1/2	2.375	60.3	1.375	34.9
2	2.875	73.0	1.625	41.3
2 1/2	3.125	79.4	1.875	47.6
3	3.375	85.7	2.125	54.0
4	4.125	104.8	2.750	69.9
6	5.625	142.9	4.625	117.5

DT-16 90° Clamp Elbow



Size	Dimensions	
	A in.	A mm
1/4	1.625	41.3
3/8	1.625	41.3
1/2	1.625	41.3
3/4	1.625	41.3
*1	2.000	50.8
1 1/2	2.750	69.9
2	3.500	88.9
2 1/2	4.250	108.0
3	5.000	127.0
4	6.625	168.3
6	10.500	266.7

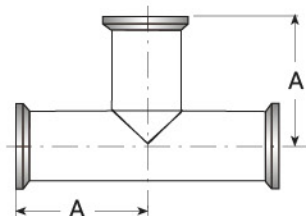
DT-17 45° Clamp Elbow



Size	Dimensions	
	A in.	A mm
1/4	1.000	25.4
3/8	1.000	25.4
1/2	1.000	25.4
3/4	1.000	25.4
*1	1.125	28.6
1 1/2	1.438	36.5
2	1.750	44.5
2 1/2	2.063	52.4
3	2.375	60.3
4	3.125	79.4
6	5.250	133.4

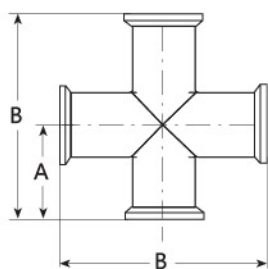
CLAMP TYPE

DT-18 Clamp Tee



Size	Dimensions	
	inch	mm
1/4	2.250	57.2
3/8	2.250	57.2
1/2	2.250	57.2
3/4	2.375	60.3
*1	2.625	66.7
1 1/2	2.875	73.0
2	3.375	85.7
2 1/2	3.625	92.1
3	3.875	98.4
4	4.750	120.7
6	7.125	181.0

DT-18 Clamp Cross

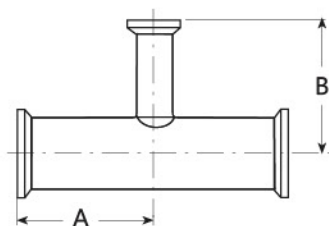


BPE TABLE# DT-4.1.2-4

Size	Dimensions			
	A in.	A mm	B in.	B mm
1/4	2.250	57.2	4.500	114.4
3/8	2.250	57.2	4.500	114.4
1/2	2.250	57.2	4.500	114.4
3/4	2.375	60.3	4.750	120.6
*1	2.625	66.7	5.250	133.4
1 1/2	2.875	73.0	5.750	146.0
2	3.375	85.7	6.750	171.4
2 1/2	3.625	92.1	7.250	184.2
3	3.875	98.4	7.750	196.8
4	4.750	120.7	9.500	241.4
6	7.125	181.0	14.250	362.0

CLAMP TYPE

DT-19 Reducing Tee Clamp End

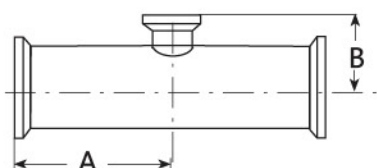


Size	Dimensions			
	A in.	A mm	B in.	B mm
3/8 x 1/4	2.250	57.2	2.250	57.2
1/2 x 1/4	2.375	60.3	2.375	60.3
1/2 x 3/8	2.375	60.3	2.375	60.3
3/4 x 1/4	2.500	63.5	2.500	63.5
3/4 x 3/8	2.500	63.5	2.500	63.5
3/4 x 1/2	2.500	63.5	2.500	63.5
* 1 x 1/4	2.625	66.7	2.625	66.7
* 1 x 3/8	2.625	66.7	2.625	66.7
* 1 x 1/2	2.625	66.7	2.625	66.7
* 1 x 3/4	2.625	66.7	2.625	66.7
1 1/2 x 1/2	2.875	73.0	2.875	73.0
1 1/2 x 3/4	2.875	73.0	2.875	73.0
1 1/2 x 1*	2.875	73.0	2.875	73.0
2 x 1/2	3.375	85.7	3.125	79.4
2 x 3/4	3.375	85.7	3.125	79.4
2 x 1*	3.375	85.7	3.125	79.4
2 x 1 1/2	3.375	85.7	3.125	79.4
2 1/2 x 1/2	3.625	92.1	3.375	85.7
2 1/2 x 3/4	3.625	92.1	3.375	85.7
2 1/2 x 1*	3.625	92.1	3.375	85.7
2 1/2 x 1 1/2	3.625	92.1	3.375	85.7
2 1/2 x 2	3.625	92.1	3.375	85.7
3 x 1/2	3.875	98.4	3.625	92.1
3 x 3/4	3.875	98.4	3.625	92.1
3 x 1*	3.875	98.4	3.625	92.1
3 x 1 1/2	3.875	98.4	3.625	92.1
3 x 2	3.875	98.4	3.625	92.1
3 x 2 1/2	3.875	98.4	3.625	92.1
4 x 1/2	4.750	120.7	4.125	104.8
4 x 3/4	4.750	120.7	4.125	104.8
4 x 1*	4.750	120.7	4.125	104.8
4 x 1 1/2	4.750	120.7	4.125	104.8
4 x 2	4.750	120.7	4.375	111.1
4 x 2 1/2	4.750	120.7	4.375	111.1
4 x 3	4.750	120.7	4.375	111.1
6 x 3	7.125	181.0	5.375	136.5
6 x 4	7.125	181.0	5.750	146.1

F

CLAMP TYPE

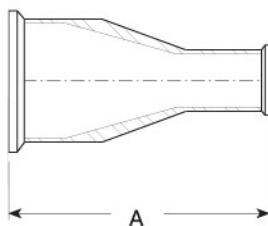
DT-20 Reducing Tee Clamp End



Size	Dimensions			
	A in.	A mm	B in.	B mm
3/8 x 1/4	2.250	57.2	1.000	25.4
1/2 x 1/4	2.375	60.3	1.000	25.4
1/2 x 3/8	2.375	60.3	1.000	25.4
3/4 x 1/4	2.500	63.5	1.000	25.4
3/4 x 3/8	2.500	63.5	1.000	25.4
3/4 x 1/2	2.500	63.5	1.000	25.4
* 1 x 1/4	2.625	66.7	1.125	28.6
* 1 x 3/8	2.625	66.7	1.125	28.6
* 1 x 1/2	2.625	66.7	1.125	28.6
* 1 x 3/4	2.625	66.7	1.125	28.6
1 1/2 x 1/2	2.875	73.0	1.375	34.9
1 1/2 x 3/4	2.875	73.0	1.375	34.9
1 1/2 x 1*	2.875	73.0	1.375	34.9
2 x 1/2	3.375	85.7	1.625	41.3
2 x 3/4	3.375	85.7	1.625	41.3
2 x 1*	3.375	85.7	1.625	41.3
2 x 1 1/2	3.375	85.7	1.625	41.3
2 1/2 x 1/2	3.625	92.1	1.875	47.6
2 1/2 x 3/4	3.625	92.1	1.875	47.6
2 1/2 x 1*	3.625	92.1	1.875	47.6
2 1/2 x 1 1/2	3.625	92.1	1.875	47.6
2 1/2 x 2	3.625	92.1	1.875	47.6
3 x 1/2	3.875	98.4	2.125	54.0
3 x 3/4	3.875	98.4	2.125	54.0
3 x 1*	3.875	98.4	2.125	54.0
3 x 1 1/2	3.875	98.4	2.125	54.0
3 x 2	3.875	98.4	2.125	54.0
3 x 2 1/2	3.875	98.4	2.125	54.0
4 x 1/2	4.750	120.7	2.625	66.7
4 x 3/4	4.750	120.7	2.625	66.7
4 x 1*	4.750	120.7	2.625	66.7
4 x 1 1/2	4.750	120.7	2.625	66.7
4 x 2	4.750	120.7	2.625	66.7
4 x 2 1/2	4.750	120.7	2.625	66.7
4 x 3	4.750	120.7	2.625	66.7
6 x 1/2	7.125	181.0	3.625	92.1
6 x 3/4	7.125	181.0	3.625	92.1
6 x 1 *	7.125	181.0	3.625	92.1
6 x 1 1/2	7.125	181.0	3.625	92.1
6 x 2	7.125	181.0	3.625	92.1
6 x 2 1/2	7.125	181.0	3.625	92.1
6 x 3	7.125	181.0	3.625	92.1
6 x 4	7.125	181.0	3.750	95.3

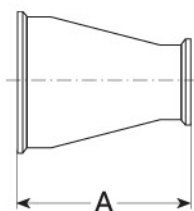
CLAMP TYPE

DT-21 Long Concentric Reducer



Size	Dimensions	
	Overall Length, A, in	Overall Length, A, mm
* 3/8x1/4	2.625	66.675
* 1/2x1/4	2.875	73.025
* 1/2x3/8	2.875	73.025
* 3/4x3/8	3.000	76.2
3/4x1/2	3.125	79.375
1x1/2	3.500	88.9
1x3/4	3.125	79.375
1 1/2x3/4	4.000	101.6
1 1/2x1	3.500	88.9
2x1	4.375	111.125
2x1 1/2	3.500	88.9
2 1/2x1 1/2	4.375	111.125
2 1/2x2	3.500	88.9
3x1 1/2	5.250	133.35
3x2	4.375	111.125
3x2 1/2	3.625	92.075
4x2	6.250	158.75
4x2 1/2	5.375	136.525
4x3	5.000	127
6x3	8.500	215.9
6x4	7.000	177.8

DT-21 Short Concentric Reducer



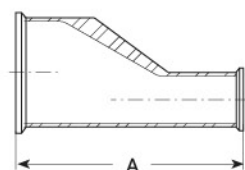
BPE TABLE # DT-4.1.3-3(a)

Size	Dimensions	
	A in.	A mm
3/4x1/2	2.000	50.8
*1x1/2	2.500	63.5
*1x3/4	2.000	50.8
1 1/2x3/4	3.000	76.2
1 1/2x1	3.000	76.2
2x1	5.000	127.0
2x1 1/2	3.000	76.2
2 1/2x1 1/2	5.000	127.0
2 1/2x2	3.000	76.2
3x1 1/2	7.000	177.8
3x2	5.000	127.0
3x2 1/2	3.000	76.2
4x2	9.125	231.8
4x2 1/2	7.125	181.0
4x3	5.125	130.2
6x3	7.500	190.5
6x4	7.625	193.7

F

CLAMP TYPE

DT-21 Short Eccentric Reducer



BPE TABLE # DT-4.1.3-3(b)

Size	Dimensions	
	Overall Length, A, in	Overall Length, A, mm
* 3/8 x 1/4	2.625	66.675
* 1/2 x 1/4	2.875	73.025
* 1/2 x 3/8	2.875	73.025
* 3/4 x 3/8	3.000	76.2
3/4 x 1/2	3.125	79.375
1 x 1/2	3.500	88.9
1 x 3/4	3.125	79.375
1 1/2 x 3/4	4.000	101.6
1 1/2 x 1	3.500	88.9
2 x 1	4.375	111.125
2 x 1 1/2	3.500	88.9
2 1/2 x 1 1/2	4.375	111.125
2 1/2 x 2	3.500	88.9
3 x 1 1/2	5.250	133.35
3 x 2	4.375	111.125
3 x 2 1/2	3.625	92.075
4 x 2	6.250	158.75
4 x 2 1/2	5.375	136.525
4 x 3	5.000	127
6 x 3	8.500	215.9
6 x 4	7.000	177.8

F

DT-21 Long Eccentric Reducer

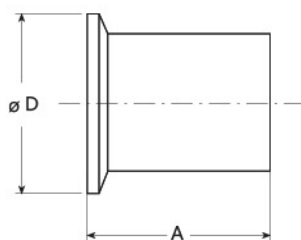


BPE TABLE # DT-4.1.3-3(a)

Size	Dimensions	
	A in.	A mm
3/4 x 1/2	2.000	50.8
*1 x 1/2	2.500	63.5
*1 x 3/4	2.000	50.8
1 1/2 x 3/4	3.000	76.2
1 1/2 x 1	3.000	76.2
2 x 1	5.000	127.0
2 x 1 1/2	3.000	76.2
2 1/2 x 1 1/2	5.000	127.0
2 1/2 x 2	3.000	76.2
3 x 1 1/2	7.000	177.8
3 x 2	5.000	127.0
3 x 2 1/2	3.000	76.2
4 x 2	9.125	231.8
4 x 2 1/2	7.125	181.0
4 x 3	5.125	130.2
6 x 3	7.625	193.7
6 x 4	7.625	193.7

CLAMP TYPE

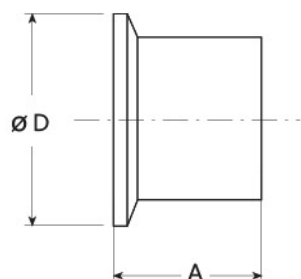
DT-22 Clamp Ferrule



BPE TABLE # DT-4.1.4-1(A)

Size	Dimensions				
	Type	A in.	A mm	D in.	D mm
1/4	A	1.750	44.5	0.984	24.9
3/8	A	1.750	44.5	0.984	24.9
1/2	A	1.750	44.5	0.984	24.9
3/4	A	1.750	44.5	0.984	24.9
1	A	1.750	44.5	1.339	34.0
1	B	1.750	44.5	1.984	50.3
1 1/2	B	1.750	44.5	1.984	50.3
2	B	2.250	57.2	2.516	63.9
2 1/2	B	2.250	57.2	3.047	77.3
3	B	2.250	57.2	3.579	90.9
4	B	2.250	57.2	4.682	118.9
6	B	3.000	76.2	6.570	166.8

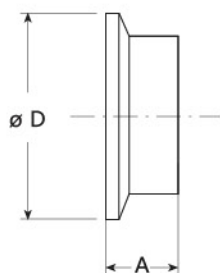
DT-22 Clamp Ferrule Medium



BPE TABLE # DT-4.1.4-1(B)

Size	Dimensions				
	Type	A in.	A mm	D in.	D mm
1/4	A	1.130	28.7	0.984	24.9
3/8	A	1.130	28.7	0.984	24.9
1/2	A	1.130	28.7	0.984	24.9
3/4	A	1.130	28.7	0.984	24.9
1	A	1.130	28.7	1.339	34.0
1	B	1.130	28.7	1.984	50.3
1 1/2	B	1.130	28.7	1.984	50.3
2	B	1.130	28.7	2.516	63.9
2 1/2	B	1.130	28.7	3.047	77.3
3	B	1.130	28.7	3.579	90.9
4	B	1.130	28.7	4.682	118.9
6	B	1.500	38.1	6.570	166.8

DT-22 Clamp Ferrule Short

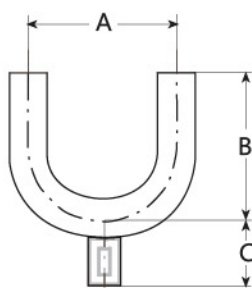


BPE TABLE # DT-4.1.4-1(C)

Size	Dimensions				
	Type	A in.	A mm	D in.	D mm
1/4	A	0.500	12.7	0.984	24.9
3/8	A	0.500	12.7	0.984	24.9
1/2	A	0.500	12.7	0.984	24.9
3/4	A	0.500	12.7	0.984	24.9
1	A	0.500	12.7	1.339	34.0
1	B	0.500	12.7	1.984	50.3
1 1/2	B	0.500	12.7	1.984	50.3
2	B	0.500	12.7	2.516	63.9
2 1/2	B	0.500	12.7	3.047	77.3
3	B	0.500	12.7	3.579	90.9
4	B	0.625	15.9	4.682	118.9
6	B	0.750	19.1	6.570	166.8

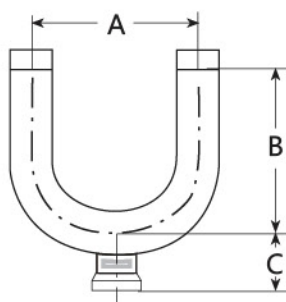
CLAMP TYPE

DT23 180° Bottom Outlet Weld Use Point



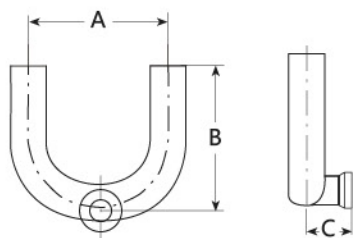
Size	Dimensions					
	A in.	A mm	B in.	B mm	C in.	C mm
3/4 x 1/2	4.500	114.3	3.000	76.2	1.875	47.6
3/4 x 3/4	4.500	114.3	3.000	76.2	1.875	47.6
1 x 1/2	3.000	76.2	3.000	76.2	2.062	52.4
1 1/2 x 1/2	4.500	114.3	4.500	114.3	2.312	58.7
2 x 1/2	6.000	152.4	5.000	127.0	2.562	65.1
2 1/2 x 1/2	7.500	190.5	5.750	146.1	2.812	71.4
3 x 1/2	9.000	228.6	6.500	165.1	3.062	77.8
4 x 1/2	12.000	304.8	8.500	215.9	3.562	90.5

DT-24 180° Bottom Outlet Clamp Use Point



Size	Dimensions					
	A in.	A mm	B in.	B mm	C in.	C mm
3/4 x 1/2	4.500	114.3	3.000	76.2	0.875	22.2
3/4 x 3/4	4.500	114.3	3.000	76.2	0.875	22.2
1 x 1/2	3.000	76.2	3.000	76.2	1.062	27
1 1/2 x 1/2	4.500	114.3	4.500	114.3	1.312	33.3
2 x 1/2	6.000	152.4	5.000	127.0	1.562	39.7
2 1/2 x 1/2	7.500	190.5	5.750	146.1	1.812	46
3 x 1/2	9.000	228.6	6.500	165.1	2.062	52.4
4 x 1/2	12.000	304.8	8.500	215.9	2.562	65.1

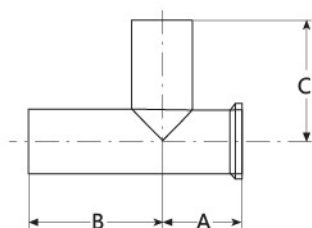
DT-24 180° Bottom Outlet Clamp Use Point



Size	Dimensions					
	A in.	A mm	B in.	B mm	C in.	C mm
3/4 x 1/2	4.500	114.3	3.000	76.2	0.875	22.2
3/4 x 3/4	4.500	114.3	3.000	76.2	0.875	22.2
1 x 1/2	3.000	76.2	3.000	76.2	1.062	26.9
1 1/2 x 1/2	4.500	114.3	4.500	114.3	1.312	33.3
2 x 1/2	6.000	152.4	5.000	127.0	1.562	39.7
2 1/2 x 1/2	7.500	190.5	5.750	146.1	1.812	46
3 x 1/2	9.000	228.6	6.500	165.1	2.062	52.4
4 x 1/2	12.000	304.8	8.500	215.9	2.562	65

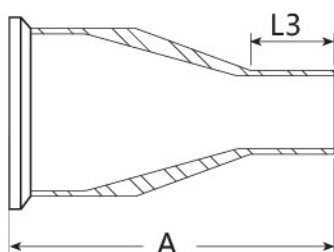
CLAMP TYPE

DT-25 Short Outlet Run Weld/Clamp Tee



Size	Dimensions					
	A in.	A mm	B in.	B mm	C in.	C mm
1/4	0.875	22.2	1.750	44.5	1.750	44.5
3/8	0.875	22.2	1.750	44.5	1.750	44.5
1/2	0.875	22.2	1.875	47.6	1.875	47.6
3/4	1.000	25.4	2.000	50.8	2.000	50.8
*1	1.125	28.6	2.125	54.0	2.125	54.0
1 1/2	1.375	34.9	2.375	60.3	2.375	60.3
2	1.625	41.3	2.875	73.0	2.875	73.0
2 1/2	1.875	47.6	3.125	79.4	3.125	79.4
3	2.125	54.0	3.375	85.7	3.375	85.7
4	2.750	69.9	4.125	104.8	4.125	104.8
6	4.625	117.5	5.625	142.9	5.625	142.9

DT-26 Short Concentric Reducer



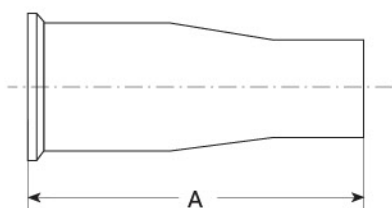
BPE TABLE # DT-4.1.3-2(b)

Size	Dimensions			
	Overall Length, A, in	Overall Length, A, mm	Minimum O.D. Tangent, Small End, L3, in.	Minimum O.D. Tangent, Small End, L3, mm
*3/8 x 1/4	2.125	53.975	0.750	19.05
*1/2 x 1/4	2.375	60.325	0.750	19.05
*1/2 x 3/8	2.375	60.325	0.750	19.05
*3/4 x 3/8	2.500	63.5	0.750	19.05
3/4 x 1/2	2.625	66.675	1.000	25.4
1 x 1/2	3.000	76.2	1.000	25.4
1 x 3/4	2.625	66.675	1.000	25.4
1 1/2 x 3/4	3.500	88.9	1.000	25.4
1 1/2 x 1	3.000	76.2	1.000	25.4
2 x 1	3.875	98.425	1.000	25.4
2 x 1 1/2	3.000	76.2	1.000	25.4
2 1/2 x 1 1/2	3.875	98.425	1.000	25.4
2 1/2 x 2	3.000	76.2	1.000	25.4
3 x 1 1/2	4.750	120.65	1.000	25.4
3 x 2	3.875	98.425	1.000	25.4
3 x 2 1/2	3.125	79.375	1.000	25.4
4 x 2	5.750	146.05	1.000	25.4
4 x 2 1/2	4.875	123.825	1.000	25.4
4 x 3	4.500	114.3	1.500	38.1
6 x 3	8.000	203.2	1.500	38.1
6 x 4	6.375	161.925	1.500	38.1

F

CLAMP TYPE

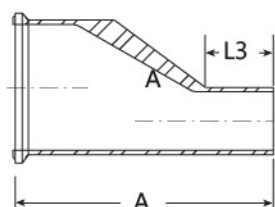
DT-26 Long Concentric Reducer



BPE TABLE # DT-4.1.3-2(a)

Size	Dimensions	
	A in.	A mm
3/4 x 1/2	3.000	76.2
*1 x 1/2	3.500	88.9
*1 x 3/4	3.000	76.2
1 1/2 x 3/4	4.000	101.6
1 1/2 x 1	4.000	101.6
2 x 1	6.000	152.4
2 x 1 1/2	4.000	101.6
2 1/2 x 1 1/2	6.000	152.4
2 1/2 x 2	4.250	107.9
3 x 1 1/2	8.000	203.2
3 x 2	6.250	158.8
3 x 2 1/2	4.250	108.0
4 x 2	10.375	263.5
4 x 2 1/2	8.375	212.7
4 x 3	6.375	161.9
6 x 3	9.000	228.6
6 x 4	9.000	228.6

DT-26 Short Eccentric Reducer



BPE TABLE # DT-4.1.3-2(b)

Size	Dimensions			
	Overall Length, A, in	Overall Length, A, mm	Minimum O.D. Tangent, Small End, L3, in.	Minimum O.D. Tangent, Small End, L3, mm
* 3/8 x 1/4	2.125	53.975	0.750	19.05
* 1/2 x 1/4	2.375	60.325	0.750	19.05
* 1/2 x 3/8	2.375	60.325	0.750	19.05
* 3/4 x 3/8	2.500	63.5	0.750	19.05
3/4 x 1/2	2.625	66.675	1.000	25.4
1 x 1/2	3.000	76.2	1.000	25.4
1 x 3/4	2.625	66.675	1.000	25.4
1 1/2 x 3/4	3.500	88.9	1.000	25.4
1 1/2 x 1	3.000	76.2	1.000	25.4
2 x 1	3.875	98.425	1.000	25.4
2 x 1 1/2	3.000	76.2	1.000	25.4
2 1/2 x 1 1/2	3.875	98.425	1.000	25.4
2 1/2 x 2	3.000	76.2	1.000	25.4
3 x 1 1/2	4.750	120.65	1.000	25.4
3 x 2	3.875	98.425	1.000	25.4
3 x 2 1/2	3.125	79.375	1.000	25.4
4 x 2	5.750	146.05	1.000	25.4
4 x 2 1/2	4.875	123.825	1.000	25.4
4 x 3	4.500	114.3	1.500	38.1
6 x 3	8.000	203.2	1.500	38.1
6 x 4	6.375	161.925	1.500	38.1

CLAMP TYPE

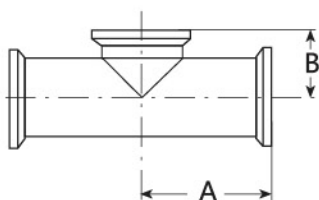
DT-26 Long Eccentric Reducer



BPE TABLE # DT-4.1.3-2(a)

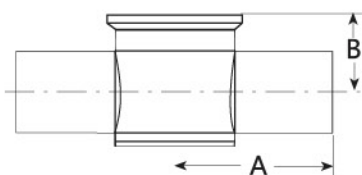
Size	Dimensions	
	A in.	A mm
3/4 x 1/2	3.000	76.2
*1 x 1/2	3.500	88.9
*1 x 3/4	3.000	76.2
1 1/2 x 3/4	4.000	101.6
1 1/2 x 1	4.000	101.6
2 x 1	6.000	152.4
2 x 1 1/2	4.000	101.6
2 1/2 x 1 1/2	6.000	152.4
2 1/2 x 2	4.250	108.0
3 x 1 1/2	8.000	203.2
3 x 2	6.250	158.8
3 x 2 1/2	4.250	108.0
4 x 2	10.375	263.5
4 x 2 1/2	8.375	212.7
4 x 3	6.375	161.9
6 x 3	8.750	222.3
6 x 4	9.000	228.6

DT-27 Short Outlet Tee Clamp End



Size	Dimensions			
	A in.	A mm	B in.	B mm
1/2	2.250	57.2	1.000	25.4
3/4	2.375	60.3	1.125	28.6
*1	2.625	66.7	1.125	28.6
1 1/2	2.875	73.0	1.375	34.9
2	3.375	85.7	1.625	41.3
2 1/2	3.625	92.1	1.875	47.6
3	3.875	98.4	2.125	54.0
4	4.750	120.7	2.750	69.9
6	7.125	181.0	4.625	117.5

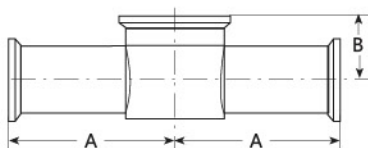
DT-28 Instrument Tee Weld / Clamp End



Size	Dimensions			
	A in.	A mm	B in.	B mm
1/2 x 1	2.250	57.15	1.000	25.40
3/4 x 1	2.250	57.15	1.000	25.40
1/2 x 1 1/2	2.500	63.5	0.875	22.2
3/4 x 1 1/2	2.500	63.5	1.000	25.4
1 x 1 1/2	2.500	63.5	1.125	28.6
1/2 x 2	2.750	69.9	1.000	25.4
3/4 x 2	2.750	69.9	1.125	28.6
1 x 2	2.750	69.9	1.250	31.8
1 1/2 x 2	2.750	69.9	1.500	38.1

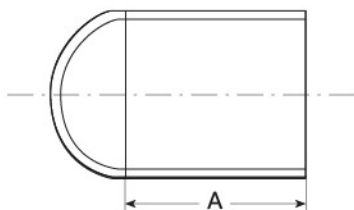
CLAMP TYPE

DT-29 Instrument Tee Weld / Clamp



Size	Dimensions			
	A in.	A mm	B in.	B mm
1/2 x 1 1/2	3.000	76.2	0.875	22.2
3/4 x 1 1/2	3.000	76.2	1.000	25.4
* 1 x 1 1/2	3.000	76.2	1.125	28.6
1/2 x 2	3.250	82.6	1.000	25.4
3/4 x 2	3.250	82.6	1.125	28.6
* 1 x 2	3.250	82.6	1.250	31.8
1 1/2 x 2	3.250	82.6	1.500	38.1

DT-30 Automatic Tube Weld Cap



BPE TABLE # DT-4.1.5-1

Size	Dimensions	
	A in.	A mm
1/2	1.500	38.1
3/4	1.500	38.1
1	1.500	38.1
1 1/2	1.500	38.1
2	1.500	38.1
2 1/2	1.500	38.1
3	1.750	44.5
4	2.000	50.8
6	2.500	63.5

DT-31 Solid End Cap

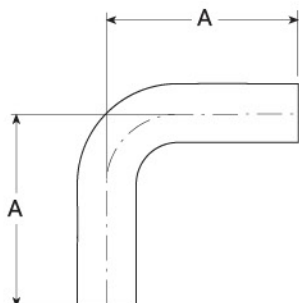


BPE TABLE # DT-4.1.5-2

Size	Dimensions			
	A in.	A mm	D in.	D mm
1/4	0.187	4.7	0.984	24.9
3/8	0.187	4.7	0.984	24.9
1/2	0.187	4.7	0.984	24.9
3/4	0.187	4.7	0.984	24.9
1 (Type A)	0.250	6.4	1.339	34.0
1	0.250	6.4	1.984	50.3
1 1/2	0.250	6.4	1.984	50.3
2	0.250	6.4	2.516	63.9
2 1/2	0.250	6.4	3.047	77.3
3	0.250	6.4	3.579	90.9
4	0.312	7.9	4.682	118.9
6	0.437	11.1	6.570	166.8

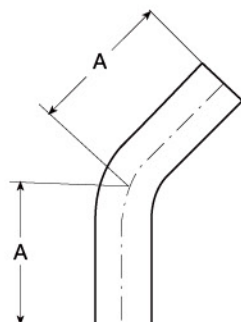
WELDED TYPE

DT-7 Long Weld 90° Elbow



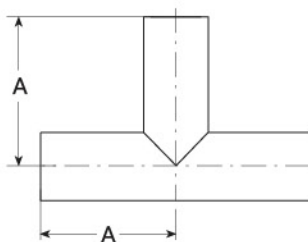
Size	Dimensions	
	inch	mm
1/4	2.625	66.7
3/8	2.625	66.7
1/2	3.000	76.2
3/4	3.000	76.2
1	3.000	76.2
1 1/2	3.750	95.3
2	4.750	120.7
2 1/2	5.500	139.7
3	6.250	158.8
4	8.000	203.2
6	11.500	292.1

DT-8 Long 45° Elbow



Size	Dimensions	
	A in.	A mm
1/4	2.TEG2K - 45° ELBOW000	50.8
3/8	2.000	50.8
1/2	2.250	57.2
3/4	2.250	57.2
1	2.250	57.2
1 1/2	2.500	63.5
2	3.000	76.2
2 1/2	3.375	85.7
3	3.625	92.1
4	4.500	114.3
6	6.250	158.8

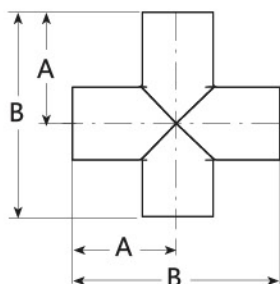
DT-9 Tee



Size	Dimensions	
	A in.	A mm
1/4	1.750	44.5
3/8	1.750	44.5
1/2	1.875	47.6
3/4	2.000	50.8
1	2.125	54.0
1 1/2	2.375	60.3
2	2.875	73.0
2 1/2	3.125	79.4
3	3.375	85.7
4	4.125	104.8
6	5.625	142.9

WELDED TYPE

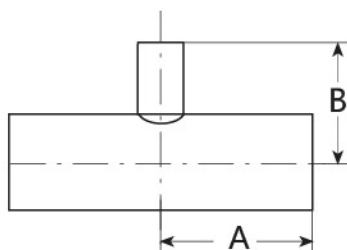
DT-9 Cross



BPE TABLE# DT-4.1.2-1

Size	Dimensions			
	A in.	A mm	B in.	B mm
1/4	1.750	44.5	3.500	89.0
3/8	1.750	44.5	3.500	89.0
1/2	1.875	47.6	3.750	95.2
3/4	2.000	50.8	4.000	101.6
1	2.125	54	4.250	108.0
1 1/2	2.375	60.3	4.750	120.6
2	2.875	73	5.750	146.0
2 1/2	3.125	79.4	6.250	158.8
3	3.375	85.7	6.750	171.4
4	4.125	104.8	8.250	209.6
6	5.625	142.9	11.250	285.8

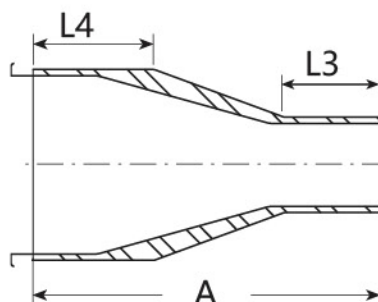
DT-10 Reducing Tee



Size	Dimensions			
	A in.	A mm	B in.	B mm
3/8 x 1/4	1.750	44.5	1.750	44.5
1/2 x 1/4	1.875	47.6	1.875	47.6
1/2 x 3/8	1.875	47.6	1.875	47.6
3/4 x 1/4	2.000	50.8	2.000	50.8
3/4 x 3/8	2.000	50.8	2.000	50.8
3/4 x 1/2	2.000	50.8	2.000	50.8
1 x 1/4	2.125	54.0	2.125	54.0
1 x 3/8	2.125	54.0	2.125	54.0
1 x 1/2	2.125	54.0	2.125	54.0
1 x 3/4	2.125	54.0	2.125	54.0
1 1/2 x 1/2	2.375	60.3	2.375	60.3
1 1/2 x 3/4	2.375	60.3	2.375	60.3
1 1/2 x 1	2.375	60.3	2.375	60.3
2 x 1/2	2.875	73.0	2.625	66.7
2 x 3/4	2.875	73.0	2.625	66.7
2 x 1	2.875	73.0	2.625	66.7
2 x 1 1/2	2.875	73.0	2.625	66.7
2 1/2 x 1/2	3.125	79.4	2.875	73.0
2 1/2 x 3/4	3.125	79.4	2.875	73.0
2 1/2 x 1	3.125	79.4	2.875	73.0
2 1/2 x 1 1/2	3.125	79.4	2.875	73.0
2 1/2 x 2	3.125	79.4	2.875	73.0
3 x 1/2	3.375	85.7	3.125	79.4
3 x 3/4	3.375	85.7	3.125	79.4
3 x 1	3.375	85.7	3.125	79.4
3 x 1 1/2	3.375	85.7	3.125	79.4
3 x 2	3.375	85.7	3.125	79.4
3 x 2 1/2	3.375	85.7	3.125	79.4
4 x 1/2	4.125	104.8	3.625	92.1
4 x 3/4	4.125	104.8	3.625	92.1
4 x 1	4.125	104.8	3.625	92.1
4 x 1 1/2	4.125	104.8	3.625	92.1
4 x 2	4.125	104.8	3.875	98.4
4 x 2 1/2	4.125	104.8	3.875	98.4
4 x 3	4.125	104.8	3.875	98.4
6 x 3	5.625	142.9	4.875	123.8
6 x 4	5.625	142.9	5.125	130.2

WELDED TYPE

DT-11 Short Concentric Reducer

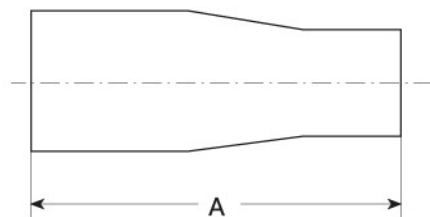


Size	Dimensions					
	Overall Length, A, in	Overall Length, A, mm	Minimum O.D. Tangent, Small End, L3, in.	Minimum O.D. Tangent, Small End, L3, mm	Minimum O.D. Tangent, Large End, L4, in.	Minimum O.D. Tangent, Large End, L4, mm.
*3/8 x 1/4	1.625	41.275	0.750	19.05	0.750	19.05
*1/2 x 1/4	1.875	47.625	0.750	19.05	1.000	25.4
*1/2 x 3/8	1.875	47.625	0.750	19.05	1.000	25.4
*3/4 x 3/8	2.000	50.8	0.750	19.05	1.000	25.4
3/4 x 1/2	2.125	53.975	1.000	25.4	1.000	25.4
1 x 1/2	2.500	63.5	1.000	25.4	1.000	25.4
1 x 3/4	2.125	53.975	1.000	25.4	1.000	25.4
1 1/2 x 3/4	3.000	76.2	1.000	25.4	1.000	25.4
1 1/2 x 1	2.500	63.5	1.000	25.4	1.000	25.4
2 x 1	3.375	85.725	1.000	25.4	1.000	25.4
2 x 1 1/2	2.500	63.5	1.000	25.4	1.000	25.4
2 1/2 x 1 1/2	3.375	85.725	1.000	25.4	1.000	25.4
2 1/2 x 2	2.500	63.5	1.000	25.4	1.000	25.4
3 x 1 1/2	4.250	107.95	1.000	25.4	1.500	38.1
3 x 2	3.375	85.725	1.000	25.4	1.500	38.1
3 x 2 1/2	2.625	66.675	1.000	25.4	1.500	38.1
4 x 2	5.125	130.175	1.000	25.4	1.500	38.1
4 x 2 1/2	4.250	107.95	1.000	25.4	1.500	38.1
4 x 3	3.875	98.425	1.500	38.1	1.500	38.1
6 x 3	7.250	184.15	1.500	38.1	2.000	50.8
6 x 4	5.625	142.875	1.500	38.1	2.000	50.8

F

WELDED TYPE

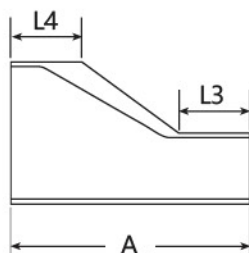
DT-11 Long Eccentric Reducer



Size	Dimensions	
	A in.	A mm
3/8 x 1/4	3.250	82.6
1/2 x 1/4	3.250	82.6
1/2 x 3/8	3.250	82.6
3/4 x 3/8	3.250	82.6
3/4 x 1/2	4.000	101.6
1 x 1/2	4.500	114.3
1 x 3/4	4.000	101.6
1 1/2 x 3/4	5.000	127.0
1 1/2 x 1	5.000	127.0
2 x 1	7.250	184.2
2 x 1 1/2	5.250	133.4
2 1/2 x 1 1/2	7.250	184.2
2 1/2 x 2	5.500	139.7
3 x 1 1/2	9.250	235.0
3 x 2	7.500	190.5
3 x 2 1/2	5.500	139.7
4 x 2	11.750	298.5
4 x 2 1/2	9.750	247.7
4 x 3	7.750	196.9
6 x 3	10.000	254.0
6 x 4	10.000	254.0

WELDED TYPE

DT-11 Short Eccentric Reducer



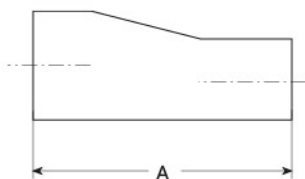
BPE TABLE # DT-4.1.3-1(b)

Size	Dimensions					
	Overall Length, A, in	Overall Length, A, mm	Minimum O.D. Tangent, Small End, L3, in.	Minimum O.D. Tangent, Small End, L3, mm	Minimum O.D. Tangent, Large End, L4, in.	Minimum O.D. Tangent, Large End, L4, mm
* 3/8x1/4	1.625	41.275	0.750	19.05	0.750	19.05
* 1/2x1/4	1.875	47.625	0.750	19.05	1.000	25.4
* 1/2x3/8	1.875	47.625	0.750	19.05	1.000	25.4
* 3/4x3/8	2.000	50.8	0.750	19.05	1.000	25.4
3/4x1/2	2.125	53.975	1.000	25.4	1.000	25.4
1x1/2	2.500	63.5	1.000	25.4	1.000	25.4
1x3/4	2.125	53.975	1.000	25.4	1.000	25.4
1 1/2x3/4	3.000	76.2	1.000	25.4	1.000	25.4
1 1/2x1	2.500	63.5	1.000	25.4	1.000	25.4
2x1	3.375	85.725	1.000	25.4	1.000	25.4
2x1 1/2	2.500	63.5	1.000	25.4	1.000	25.4
2 1/2x1 1/2	3.375	85.725	1.000	25.4	1.000	25.4
2 1/2x2	2.500	63.5	1.000	25.4	1.000	25.4
3x1 1/2	4.250	107.95	1.000	25.4	1.500	38.1
3x2	3.375	85.725	1.000	25.4	1.500	38.1
3x2 1/2	2.625	66.675	1.000	25.4	1.500	38.1
4x2	5.125	130.175	1.000	25.4	1.500	38.1
4x2 1/2	4.250	107.95	1.000	25.4	1.500	38.1
4x3	3.875	98.425	1.500	38.1	1.500	38.1
6x3	7.250	184.15	1.500	38.1	2.000	50.8
6x4	5.625	142.875	1.500	38.1	2.000	50.8

F

WELDED TYPE

DT-11 Long Eccentric Reducer



BPE TABLE # DT-4.1.3-1(a)

Size	Dimensions	
	A in.	A mm
3/8 × 1/4	4.000	101.6
1/2 × 1/4	4.000	101.6
1/2 × 3/8	4.000	101.6
3/4 × 3/8	4.000	101.6
3/4 × 1/2	4.000	101.6
*1 × 1/2	4.500	114.3
*1 × 3/4	4.000	101.6
1 1/2 × 3/4	5.000	127.0
1 1/2 × 1	5.000	127.0
2 × 1	7.250	184.2
2 × 1 1/2	5.250	133.4
2 1/2 × 1 1/2	7.250	184.2
2 1/2 × 2	5.500	139.7
3 × 1 1/2	9.250	235.0
3 × 2	7.500	190.5
3 × 2 1/2	5.500	139.7
4 × 2	11.750	298.5
4 × 2 1/2	9.750	247.7
4 × 3	7.750	196.9
6 × 3	9.750	247.7
6 × 4	10.000	254.0