

CSE HIGH PURITY TUBE & FITTING VALVE (ASME BPE STANDARD)

Pharmaceutical/Biotechnology fitting. CSE have over 15 years hygienic fitting experiences for developing out the ASME bioprocessing equipment (BPE) standard tube, fitting, valve components for high purity application such as water for injection, pharmaceutical, Cosmetics use. Material: low sulphur ASTM SS316L, S: ≤ 0.005%~0.017%,



MTR certificate will be offered.
Surface options:

Ra Reading for Tubing					
As drawing and / or mechanically polished			Mechanically Polished and Electropolished or Electropolished		
Surface Designation	Ra Average		Surface Designation	Ra Average	
	μ-in	μ-m		μ-in	μ-m
SF1	20	0.5	SF4	15	0.38
SF2	25	0.63	SF5	20	0.5
SF3	30	0.76	SF6	25	0.63

Ra Reading for Fitting					
Mechanically polished			Mechanically Polished and Electropolished		
Surface Designation	Ra Average		Surface Designation	Ra Average	
	μ-in	μ-m		μ-in	μ-m
SF1	20	0.5	SF4	15	0.38
SF2	25	0.63	SF5	20	0.5
SF3	30	0.76	SF6	25	0.63

Outer surface: Tubes and fittings Ra ≤ 32μin (0.8μm)

CSE SEMI-CONDUCTOR/MICRO-ELECTRONICS

CSE developed our semiconductor, vacuum pipe fitting and components step by step by means of good produce techniques experience of sanitary pipe fitting and valve.

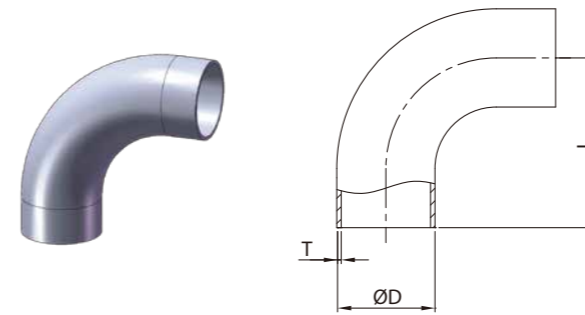


Our Vacuum and semiconductor fitting include: Clamp-Aluminum and Stainless steel and claw clamp are available. Flange-KF, ISO specification. Reducer-Blank flange and all of Elbow, Tee, Reducer. Ra ≤ 0.4μm by machine and polished can be provided on request.

We also can offer Electro-polished and blasted surfaces.

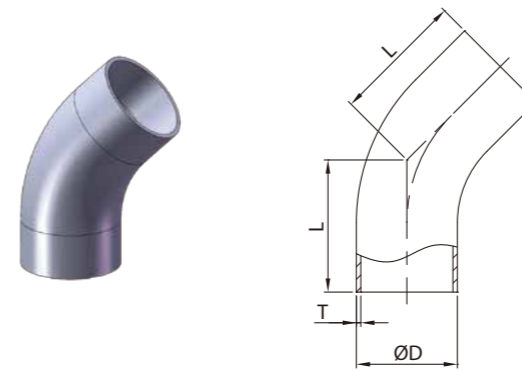
So far our products have been successfully promoted to Germany, U.K, Japan and local building projects based on our flexible production ability and strict quality control.

BPE Fittings



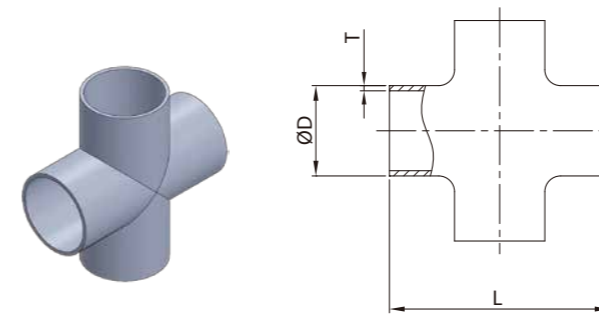
DT-4.1.1-1 LONG WELD 90° ELBOW (DT-7)

SIZE	ØD	L	T
1/2"	12.7	76.2	1.65
3/4"	19.05	76.2	1.65
1"	25.4	76.2	1.65
1.5"	38.1	95.25	1.65
2"	50.8	120.65	1.65
2.5"	63.5	139.7	1.65
3"	76.2	158.75	1.65
4"	101.6	203.2	2.1



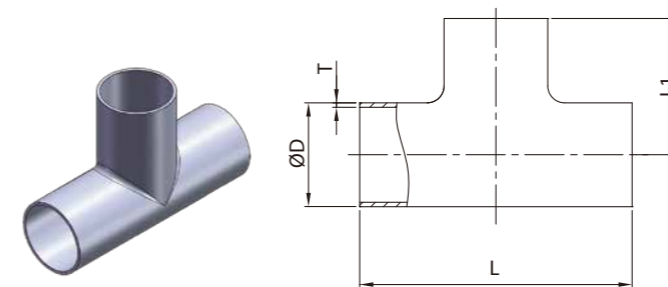
DT-4.1.1-4 LONG 45° ELBOW (DT-8)

SIZE	ØD	L	T
1/2"	12.7	57.15	1.65
3/4"	19.05	57.15	1.65
1"	25.4	57.15	1.65
1.5"	38.1	63.5	1.65
2"	50.8	76.2	1.65
2.5"	63.5	85.6	1.65
3"	76.2	91.95	1.65
4"	101.6	114.3	2.1



DT-4.1.2-1C CROSS (DT-9)

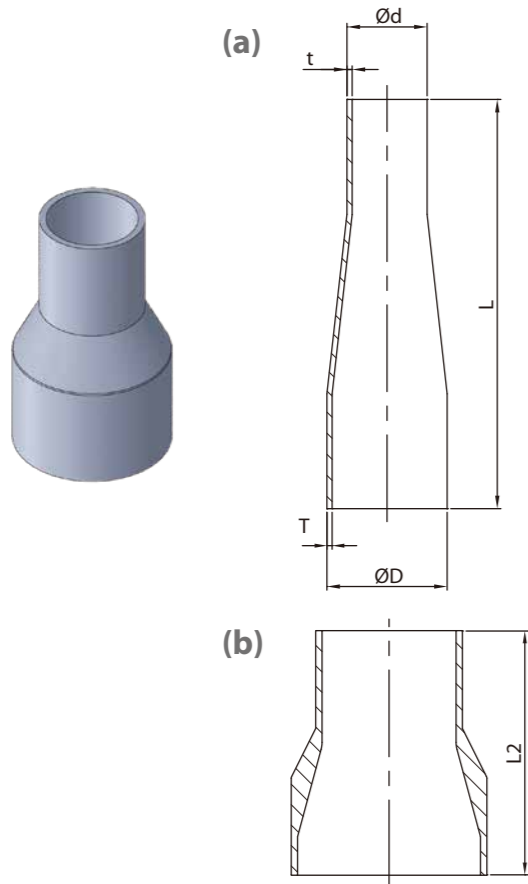
SIZE	ØD	L	T
1/2"	12.7	95.2	1.65
3/4"	19.05	101.6	1.65
1"	25.4	108	1.65
1.5"	38.1	120.6	1.65
2"	50.8	146	1.65
2.5"	63.5	158.8	1.65
3"	76.2	171.4	1.65
4"	101.6	209.6	2.1



DT-4.1.2-1T TEE (DT-9)

SIZE	ØD	L	L1	T
1/2"	12.7	95.2	47.5	1.65
3/4"	19.05	101.6	50.8	1.65
1"	25.4	108	53.85	1.65
1.5"	38.1	120.6	60.2	1.65
2"	50.8	146	73	1.65
2.5"	63.5	158.8	79.25	1.65
3"	76.2	171.4	85.6	1.65
4"	101.6	209.6	104.65	2.1

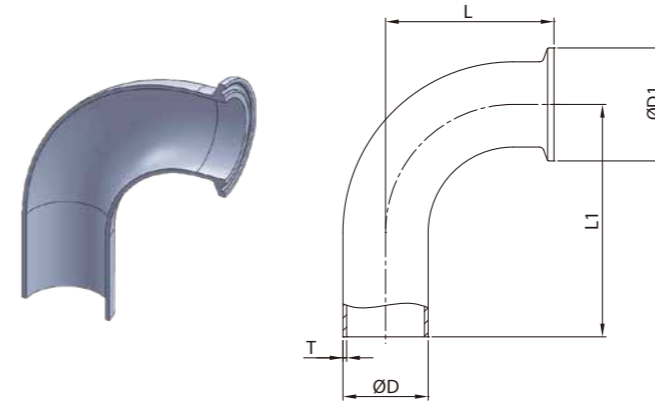
BPE Fittings



DT-4.1.3-1 CONCENTRIC REDUCER (DT-11)

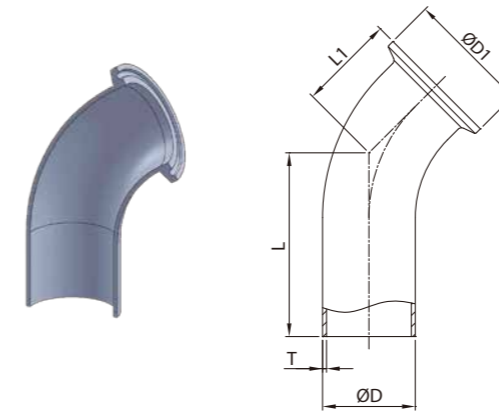
SIZE	ØD	Ød	L	T	t	L2
3/4"×1/2"	19.05	12.7	101.6	1.65	1.65	54
1"×1/2"	25.4	12.7	114.3	1.65	1.65	63.5
1"×3/4"	25.4	19.05	101.6	1.65	1.65	54
1.5"×1/2"	38.1	12.7	139.7	1.65	1.65	—
1.5"×3/4"	38.1	19.05	127	1.65	1.65	76.2
1.5"×1"	38.1	25.4	127	1.65	1.65	63.5
2"×1/2"	50.8	12.7	196.9	1.65	1.65	—
2"×3/4"	50.8	19.05	184.2	1.65	1.65	—
2"×1"	50.8	25.4	184.2	1.65	1.65	85.7
2"×1.5"	50.8	38.1	133.4	1.65	1.65	63.5
2.5"×1.5"	63.5	38.1	184.2	1.65	1.65	85.7
2.5"×2"	63.5	50.8	139.7	1.65	1.65	63.5
3"×1.5"	76.2	38.1	235	1.65	1.65	108
3"×2"	76.2	50.8	190.5	1.65	1.65	85.7
3"×2.5"	76.2	63.5	139.7	1.65	1.65	66.7
4"×1.5"	101.6	38.1	342.9	2.1	1.65	—
4"×2"	101.6	50.8	298.5	2.1	1.65	130.2
4"×2.5"	101.6	63.5	247.7	2.1	1.65	108
4"×3"	101.6	76.2	196.9	2.1	2.1	98.4

BPE Fittings



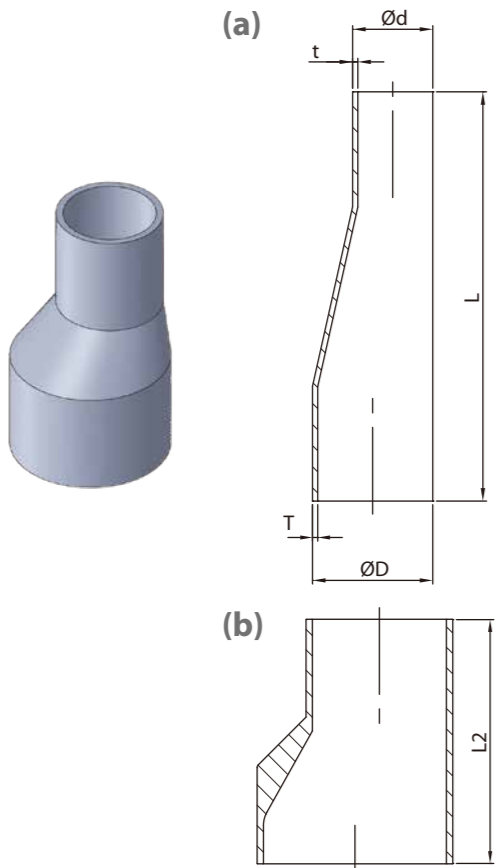
DT-4.1.1-2 90° CLAMP/WELD ELBOW (DT-12)

SIZE	ØD	ØD1	L	L1	T
1/2"	12.7	25	41.3	76.2	1.65
3/4"	19.05	25	41.3	76.2	1.65
1"	25.4	50.4	50.8	76.2	1.65
1.5"	38.1	50.4	69.9	95.3	1.65
2"	50.8	63.9	88.9	120.7	1.65
2.5"	63.5	77.4	108	139.7	1.65
3"	76.2	90.9	127	158.8	1.65
4"	101.6	118.9	168.3	203.2	2.1
6"	152.4	166.9	266.7	292.1	2.77



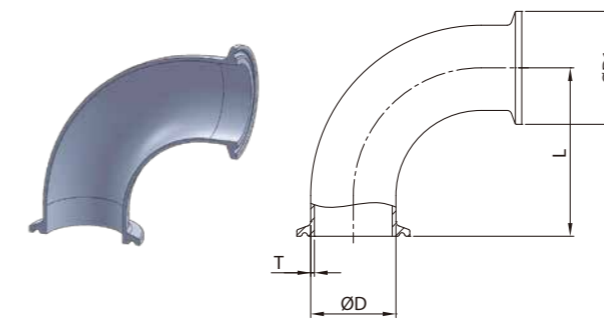
DT-4.1.1-5 45° CLAMP/WELD ELBOW (DT-13)

SIZE	ØD	ØD1	L	L1	T
1/2"	12.7	25	57.2	25.4	1.65
3/4"	19.05	25	57.2	25.4	1.65
1"	25.4	50.4	57.2	28.6	1.65
1.5"	38.1	50.4	63.5	36.5	1.65
2"	50.8	63.9	76.2	44.5	1.65
2.5"	63.5	77.4	85.7	52.4	1.65
3"	76.2	90.9	92.1	60.3	1.65
4"	101.6	118.9	114.3	79.4	2.1
6"	152.4	166.9	158.8	133.4	2.77



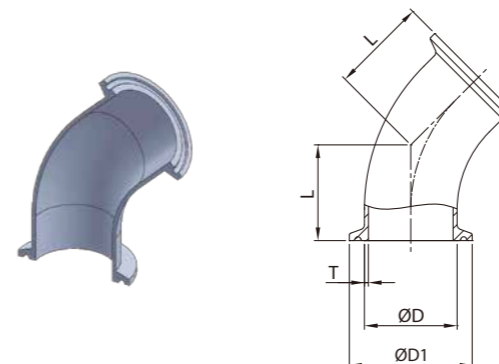
DT-4.1.3-1 ECCENTRIC REDUCER (DT-11)

SIZE	ØD	Ød	L	T	t	L2
3/4"×1/2"	19.05	12.7	101.6	1.65	1.65	54
1"×1/2"	25.4	12.7	114.3	1.65	1.65	63.5
1"×3/4"	25.4	19.05	101.6	1.65	1.65	54
1.5"×1/2"	38.1	12.7	139.7	1.65	1.65	—
1.5"×3/4"	38.1	19.05	127	1.65	1.65	76.2
1.5"×1"	38.1	25.4	127	1.65	1.65	63.5
2"×1/2"	50.8	12.7	196.9	1.65	1.65	—
2"×3/4"	50.8	19.05	184.2	1.65	1.65	—
2"×1"	50.8	25.4	184.2	1.65	1.65	85.7
2"×1.5"	50.8	38.1	133.4	1.65	1.65	63.5
2.5"×1.5"	63.5	38.1	184.2	1.65	1.65	85.7
2.5"×2"	63.5	50.8	139.7	1.65	1.65	63.5
3"×1.5"	76.2	38.1	235	1.65	1.65	108
3"×2"	76.2	50.8	190.5	1.65	1.65	85.7
3"×2.5"	76.2	63.5	139.7	1.65	1.65	66.7
4"×1.5"	101.6	38.1	342.9	2.1	1.65	—
4"×2"	101.6	50.8	298.5	2.1	1.65	130.2
4"×2.5"	101.6	63.5	247.7	2.1	1.65	108
4"×3"	101.6	76.2	196.9	2.1	2.1	98.4



DT-4.1.1-3 90° CLAMP ELBOW (DT-16)

SIZE	ØD	ØD1	L	T
1/2"	12.7	25	41.3	1.65
3/4"	19.05	25	41.3	1.65
1"	25.4	50.4	50.8	1.65
1.5"	38.1	50.4	69.9	1.65
2"	50.8	63.9	88.9	1.65
2.5"	63.5	77.4	108	1.65
3"	76.2	90.9	127	1.65
4"	101.6	118.9	168.3	2.1
6"	152.4	166.9	266.7	2.77



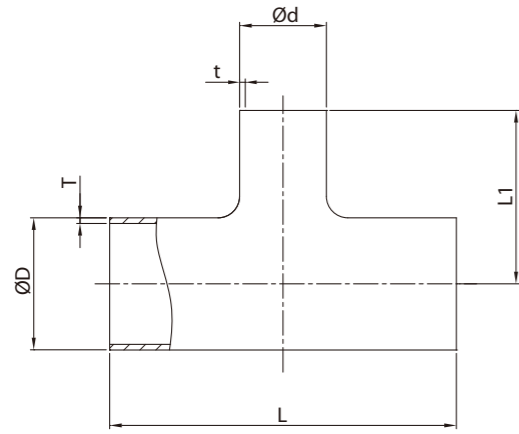
DT-4.1.1-6 45° CLAMP ELBOW (DT-17)

SIZE	ØD	ØD1	L	T
1/2"	12.7	25	25.4	1.65
3/4"	19.05	25	25.4	1.65
1"	25.4	50.4	28.6	1.65
1.5"	38.1	50.4	36.5	1.65
2"	50.8	63.9	44.5	1.65
2.5"	63.5	77.4	52.4	1.65
3"	76.2	90.9	60.3	1.65
4"	101.6	118.9	79.4	2.1
6"	152.4	146.86	133.4	2.77

BPE Fittings

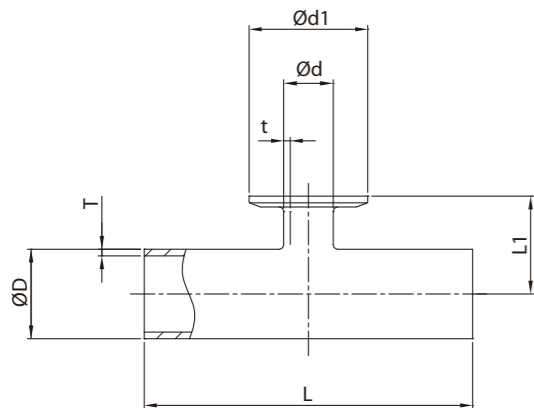
DT-4.1.2-6 REDUCING TEE (DT-10)

SIZE	ØD	Ød	L	L1	T	t
3/4"×1/2"	19.05	12.7	101.6	50.8	1.65	1.65
1"×1/2"	25.4	12.7	108	54	1.65	1.65
1"×3/4"	25.4	19.05	108	54	1.65	1.65
1.5"×1/2"	38.1	12.7	120.6	60.3	1.65	1.65
1.5"×3/4"	38.1	19.05	120.6	60.3	1.65	1.65
1.5"×1"	38.1	25.4	120.6	60.3	1.65	1.65
2"×1/2"	50.8	12.7	145.8	66.7	1.65	1.65
2"×3/4"	50.8	19.05	145.8	66.7	1.65	1.65
2"×1"	50.8	25.4	145.8	66.7	1.65	1.65
2"×1.5"	50.8	38.1	158.8	73	1.65	1.65
2.5"×1/2"	63.5	12.7	158.8	73	1.65	1.65
2.5"×3/4"	63.5	19.05	158.8	73	1.65	1.65
2.5"×1"	63.5	25.4	158.8	73	1.65	1.65
2.5"×1.5"	63.5	38.1	158.8	73	1.65	1.65
2.5"×2"	63.5	50.8	158.8	73	1.65	1.65
3"×1/2"	76.2	12.7	171.2	79.4	1.65	1.65
3"×3/4"	76.2	19.05	171.2	79.4	1.65	1.65
3"×1"	76.2	25.4	171.2	79.4	1.65	1.65
3"×1.5"	76.2	38.1	171.2	79.4	1.65	1.65
3"×2"	76.2	50.8	171.2	79.4	1.65	1.65
3"×2.5"	76.2	63.5	171.2	79.4	1.65	1.65
4"×1"	101.6	25.4	209.3	92.1	2.1	1.65
4"×1.5"	101.6	38.1	209.3	92.1	2.1	1.65
4"×2"	101.6	50.8	209.3	98.4	2.1	1.65
4"×2.5"	101.6	63.5	209.3	98.4	2.1	1.65
4"×3"	101.6	76.2	209.3	98.4	2.1	1.65



DT-4.1.2-7 SHORT OUTLET W/C REDUCING TEE (DT-14)

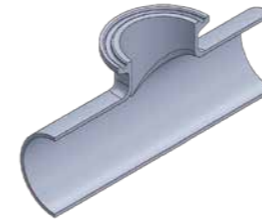
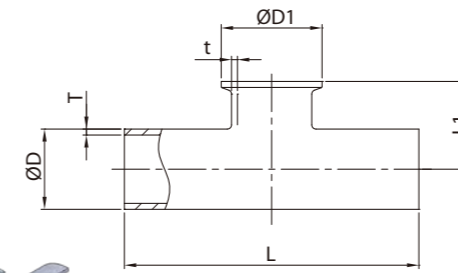
SIZE	ØD	Ød	Ød1	L	L1	T	t
3/4"×1/2"	19.05	12.7	25	101.6	25.4	1.65	1.65
1"×1/2"	25.4	12.7	25	108	28.6	1.65	1.65
1"×3/4"	25.4	19.05	25	108	28.6	1.65	1.65
1.5"×1/2"	38.1	12.7	25	120.6	34.9	1.65	1.65
1.5"×3/4"	38.1	19.05	25	120.6	34.9	1.65	1.65
1.5"×1"	38.1	25.4	50.4	120.6	34.9	1.65	1.65
2"×1/2"	50.8	12.7	25	146	41.3	1.65	1.65
2"×3/4"	50.8	19.05	25	146	41.3	1.65	1.65
2"×1"	50.8	25.4	50.4	146	41.3	1.65	1.65
2"×1.5"	50.8	38.1	50.4	146	41.3	1.65	1.65
2.5"×1/2"	63.5	12.7	25	158.8	47.6	1.65	1.65
2.5"×3/4"	63.5	19.05	25	158.8	47.6	1.65	1.65
2.5"×1"	63.5	25.4	50.4	158.8	47.6	1.65	1.65
2.5"×1.5"	63.5	38.1	50.4	158.8	47.6	1.65	1.65
2.5"×2"	63.5	50.8	63.9	158.8	47.6	1.65	1.65
3"×1/2"	76.2	12.7	25	171.4	54	1.65	1.65
3"×3/4"	76.2	19.05	25	171.4	54	1.65	1.65
3"×1"	76.2	25.4	50.4	171.4	54	1.65	1.65
3"×1.5"	76.2	38.1	50.4	171.4	54	1.65	1.65
3"×2"	76.2	50.8	63.9	171.4	54	1.65	1.65
3"×2.5"	76.2	63.5	77.4	171.4	54	1.65	1.65
4"×1"	101.6	25.4	50.4	209.6	66.7	2.1	1.65
4"×1.5"	101.6	38.1	50.4	209.6	66.7	2.1	1.65
4"×2"	101.6	50.8	63.9	209.6	66.7	2.1	1.65
4"×2.5"	101.6	63.5	77.4	209.6	66.7	2.1	1.65
4"×3"	101.6	76.2	90.9	209.6	66.7	2.1	1.65



BPE Fittings

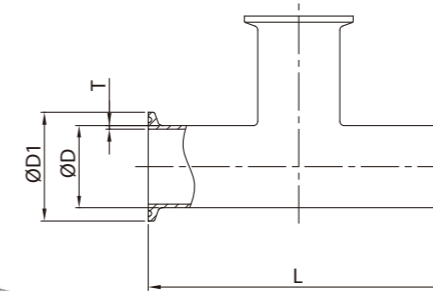
DT-4.1.2-2 EQUAL OUTLET WELD/CLAMP TEE (DT-15)

SIZE	ØD	ØD1	L	L1	T
1/2"	12.7	25	95.2	25.4	1.65
3/4"	19.05	25	101.6	28.6	1.65
1"	25.4	50.4	108	28.6	1.65
1.5"	38.1	50.4	120.6	34.9	1.65
2"	50.8	63.9	146	41.3	1.65
2.5"	63.5	77.4	158.8	47.6	1.65
3"	76.2	90.9	171.4	54	1.65
4"	101.6	118.9	209.6	69.9	2.1



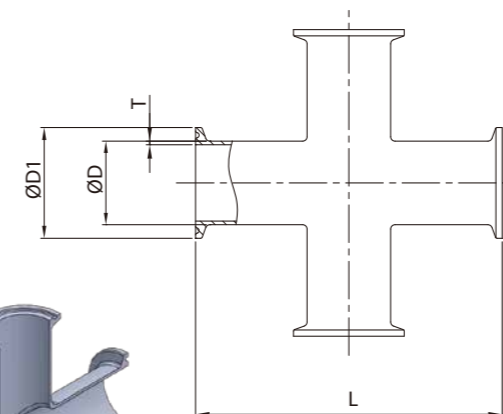
DT-4.1.2-4T CLAMP TEE (DT-18)

SIZE	ØD	ØD1	L	T
1/2"	12.7	25	114.4	1.65
3/4"	19.05	25	120.6	1.65
1"	25.4	50.4	133.4	1.65
1.5"	38.1	50.4	146	1.65
2"	50.8	63.9	171.4	1.65
2.5"	63.5	77.4	182.2	1.65
3"	76.2	90.9	196.8	1.65
4"	101.6	118.9	241.4	2.1

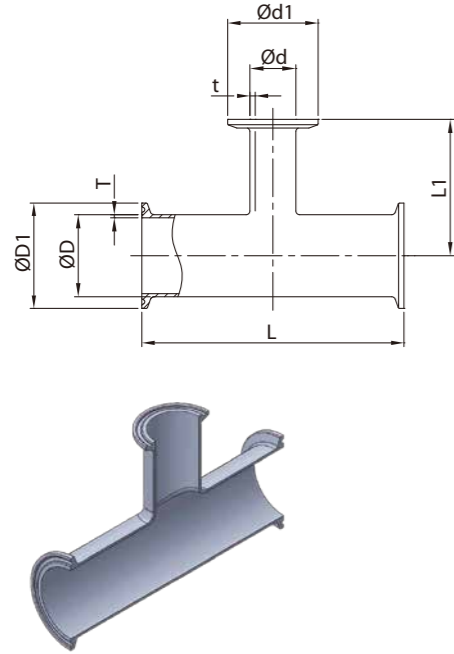


DT-4.1.2-4C CLAMP CROSS (DT-18)

SIZE	ØD	ØD1	L	T
1/2"	12.7	25	114.4	1.65
3/4"	19.05	25	120.6	1.65
1"	25.4	50.4	133.4	1.65
1.5"	38.1	50.4	146	1.65
2"	50.8	63.9	171.4	1.65
2.5"	63.5	77.4	182.2	1.65
3"	76.2	90.9	196.8	1.65
4"	101.6	118.9	241.4	2.1



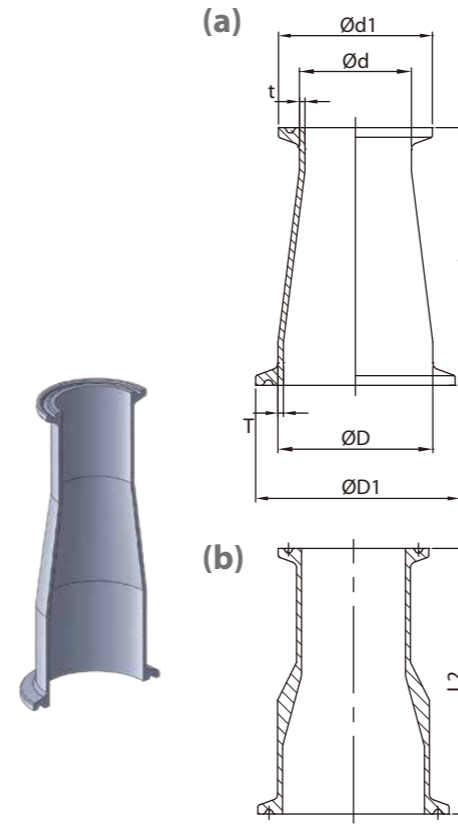
BPE Fittings



DT-4.1.2-8 REDUCING TEE CLAMP END (DT-19)

SIZE	ØD	ØD1	Ød	Ød1	L	L1	T	t
3/4"×1/2"	19.05	25	12.7	25	127	63.5	1.65	1.65
1"×1/2"	25.4	50.4	12.7	25	133.4	66.7	1.65	1.65
1"×3/4"	25.4	50.4	19.05	25	133.4	66.7	1.65	1.65
1.5"×1/2"	38.1	50.4	12.7	25	146	73	1.65	1.65
1.5"×3/4"	38.1	50.4	19.05	25	146	73	1.65	1.65
1.5"×1"	38.1	50.4	25.4	50.4	146	73	1.65	1.65
2"×1"	50.8	63.9	25.4	50.4	171.4	79.4	1.65	1.65
2"×1.5"	50.8	63.9	38.1	50.4	171.4	79.4	1.65	1.65
2.5"×1"	63.5	77.4	25.4	50.4	184.2	85.7	1.65	1.65
2.5"×1.5"	63.5	77.4	38.1	50.4	184.2	85.7	1.65	1.65
2.5"×2"	63.5	77.4	50.8	63.9	184.2	85.7	1.65	1.65
3"×1"	76.2	90.9	25.4	50.4	196.8	92.1	1.65	1.65
3"×1.5"	76.2	90.9	38.1	50.4	196.8	92.1	1.65	1.65
3"×2"	76.2	90.9	50.8	63.9	196.8	92.1	1.65	1.65
3"×2.5"	76.2	90.9	63.5	77.4	196.8	92.1	1.65	1.65
4"×1"	101.6	118.9	25.4	50.4	241.4	104.8	2.1	1.65
4"×1.5"	101.6	118.9	38.1	50.4	241.4	104.8	2.1	1.65
4"×2"	101.6	118.9	50.8	63.9	241.4	111.1	2.1	1.65
4"×2.5"	101.6	118.9	63.5	77.4	241.4	111.1	2.1	1.65
4"×3"	101.6	118.9	76.2	90.9	241.4	111.1	2.1	1.65

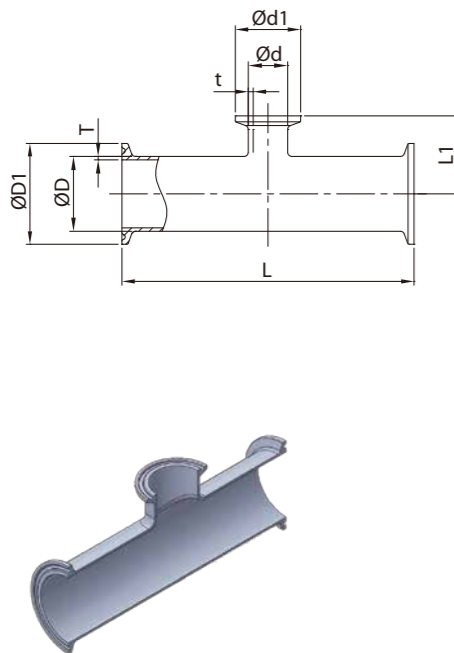
BPE Fittings



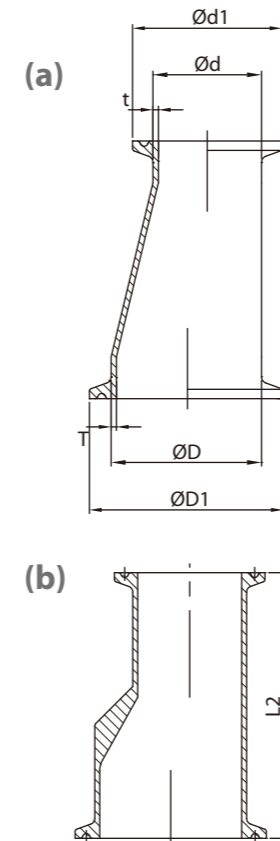
DT-4.1.3-3 CLAMP CONCENTRIC REDUCER (DT-21)

SIZE	ØD	ØD1	Ød	Ød1	L	T	t	L2
3/4"×1/2"	19.05	25	12.7	25	50.8	1.65	1.65	79.4
1"×1/2"	25.4	50.4	12.7	25	63.5	1.65	1.65	88.9
1"×3/4"	25.4	50.4	19.05	25	50.8	1.65	1.65	79.4
1.5"×1/2"	38.1	50.4	12.7	25	88.9	1.65	1.65	
1.5"×3/4"	38.1	50.4	19.05	25	76.2	1.65	1.65	101.6
1.5"×1"	38.1	50.4	25.4	50.4	76.2	1.65	1.65	88.9
2"×1/2"	50.8	63.9	12.7	25	139.7	1.65	1.65	
2"×3/4"	50.8	63.9	19.05	25	127	1.65	1.65	
2"×1"	50.8	63.9	25.4	50.4	127	1.65	1.65	111.1
2"×1.5"	50.8	63.9	38.1	50.4	76.2	1.65	1.65	88.9
2.5"×1.5"	63.5	77.4	38.1	50.4	127	1.65	1.65	111.1
2.5"×2"	63.5	77.4	50.8	63.9	76.2	1.65	1.65	88.9
3"×1.5"	76.2	90.9	38.1	50.4	117.8	1.65	1.65	133.4
3"×2"	76.2	90.9	50.8	63.9	127	1.65	1.65	111.1
3"×2.5"	76.2	90.9	63.5	77.4	76.2	1.65	1.65	92.1
4"×1.5"	101.6	118.9	38.1	50.4	282.6	2.1	1.65	
4"×2"	101.6	118.9	50.8	63.9	231.8	2.1	1.65	158.8
4"×2.5"	101.6	118.9	63.5	77.4	181	2.1	1.65	136.5
4"×3"	101.6	118.9	76.2	90.9	130.2	2.1	2.1	127

DT-4.1.2-9 7RMP REDUCING TEE CLAMP END (DT-20)



SIZE	ØD	ØD1	Ød	Ød1	L	L1	T	t
3/4"×1/2"	19.05	25	12.7	25	127	25.4	1.65	1.65
1"×1/2"	25.4	50.4	12.7	25	133.4	28.6	1.65	1.65
1"×3/4"	25.4	50.4	19.05	25	133.4	28.6	1.65	1.65
1.5"×1/2"	38.1	50.4	12.7	25	146	34.9	1.65	1.65
1.5"×3/4"	38.1	50.4	19.05	25	146	34.9	1.65	1.65
1.5"×1"	38.1	50.4	25.4	50.4	146	34.9	1.65	1.65
2"×1"	50.8	63.9	25.4	50.4	171.4	41.3	1.65	1.65
2"×1.5"	50.8	63.9	38.1	50.4	171.4	41.3	1.65	1.65
2.5"×1"	63.5	77.4	25.4	50.4	184.2	47.6	1.65	1.65
2.5"×1.5"	63.5	77.4	38.1	50.4	184.2	47.6	1.65	1.65
2.5"×2"	63.5	77.4	50.8	63.9	184.2	47.6	1.65	1.65
3"×1"	76.2	90.9	25.4	50.4	196.8	54	1.65	1.65
3"×1.5"	76.2	90.9	38.1	50.4	196.8	54	1.65	1.65
3"×2"	76.2	90.9	50.8	63.9	196.8	54	1.65	1.65
3"×2.5"	76.2	90.9	63.5	77.4	196.8	54	1.65	1.65
4"×1"	101.6	118.9	25.4	50.4	241.4	66.7	2.1	1.65
4"×1.5"	101.6	118.9	38.1	50.4	241.4	66.7	2.1	1.65
4"×2"	101.6	118.9	50.8	63.9	241.4	66.7	2.1	1.65
4"×2.5"	101.6	118.9	63.5	77.4	241.4	66.7	2.1	1.65
4"×3"	101.6	118.9	76.2	90.9	241.4	66.7	2.1	1.65



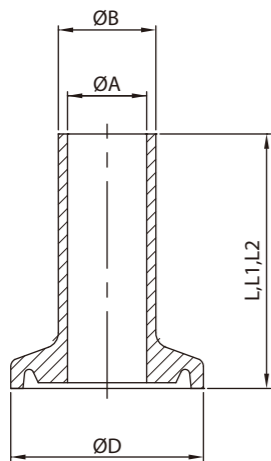
DT-4.1.3-3 CLAMP ECCENTRIC REDUCER (DT-21)

SIZE	ØD	ØD1	Ød	Ød1	L	T	t	L2
3/4"×1/2"	19.05	25	12.7	25	50.8	1.65	1.65	79.4
1"×1/2"	25.4	50.4	12.7	25	63.5	1.65	1.65	88.9
1"×3/4"	25.4	50.4	19.05	25	50.8	1.65	1.65	79.4
1.5"×1/2"	38.1	50.4	12.7	25	88.9	1.65	1.65	
1.5"×3/4"	38.1	50.4	19.05	25	76.2	1.65	1.65	101.6
1.5"×1"	38.1	50.4	25.4	50.4	76.2	1.65	1.65	88.9
2"×1/2"	50.8	63.9	12.7	25	139.7	1.65	1.65	
2"×3/4"	50.8	63.9	19.05	25	127	1.65	1.65	
2"×1"	50.8	63.9	25.4	50.4	127	1.65	1.65	111.1
2"×1.5"	50.8	63.9	38.1	50.4	76.2	1.65	1.65	88.9
2.5"×1.5"	63.5	77.4	38.1	50.4	127	1.65	1.65	111.1
2.5"×2"	63.5	77.4	50.8	63.9	76.2	1.65	1.65	88.9
3"×1.5"	76.2	90.9	38.1	50.4	117.8	1.65	1.65	133.4
3"×2"	76.2	90.9	50.8	63.9	127	1.65	1.65	111.1
3"×2.5"	76.2	90.9	63.5	77.4	76.2	1.65	1.65	92.1
4"×1.5"	101.6	118.9	38.1	50.4	282.6	2.1	1.65	
4"×2"	101.6	118.9	50.8	63.9	231.8	2.1	1.65	158.8
4"×2.5"	101.6	118.9	63.5	77.4	181	2.1	1.65	136.5
4"×3"	101.6	118.9	76.2	90.9	130.2	2.1	2.1	127

BPE Fittings

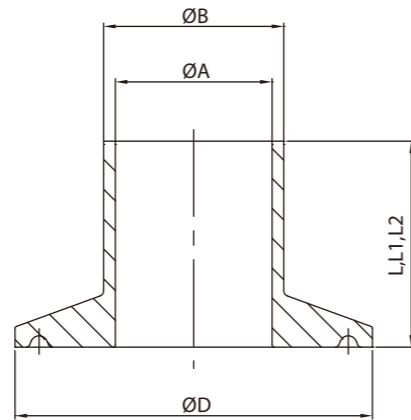
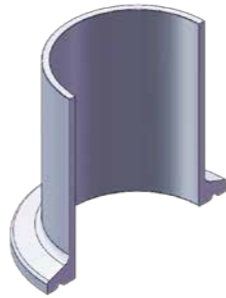
(Type A)

1/2"~1"



(Type B)

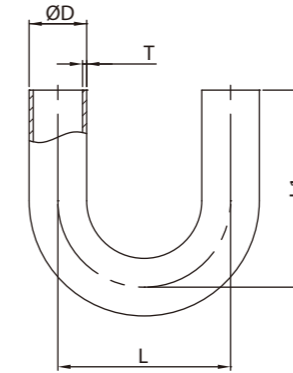
1"~6"



DT-4.1.4-1 WELD FERRULE (DT-22)

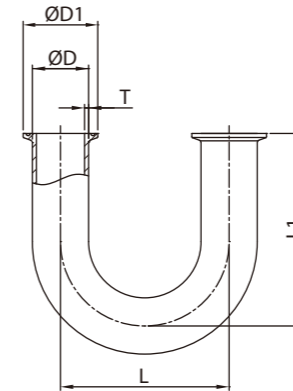
TYPE	SIZE	ØA	ØB	ØD	L	L1	L2
A	1/4"	4.6	6.35	25	12.7	28.7	44.5
	3/8"	7.75	9.53	25	12.7	28.7	44.5
	1/2"	9.4	12.7	25	12.7	28.7	44.5
	3/4"	15.75	19.05	25	12.7	28.7	44.5
	1.0"	22.1	25.4	34	12.7	28.7	44.5
B	1.0"	22.1	25.4	50.4	12.7	28.7	44.5
	1.5"	34.8	38.1	50.4	12.7	28.7	44.5
	2.0"	47.5	50.8	63.9	12.7	28.7	57.2
	2.5"	60.2	63.5	77.4	12.7	28.7	57.2
	3.0"	72.9	76.2	90.9	12.7	28.7	57.2
	4.0"	97.4	101.6	118.9	15.9	28.7	57.2
6.0"	146.9	152.4	166.9	19.1	38.1	76.2	

BPE Fittings



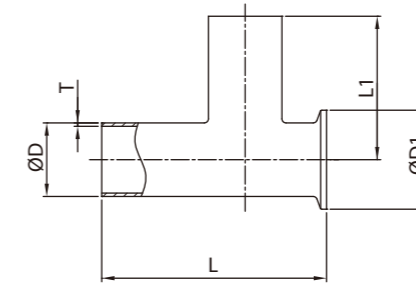
DT-4.1.1-7 180° WELD ELBOW (DT-23)

SIZE	ØD	L	L1	T
1/2"	12.7	114.3	76.2	1.65
3/4"	19.05	144.3	76.2	1.65
1"	25.4	76.2	76.2	1.65
1.5"	38.1	76.2	114.3	1.65
2"	50.8	152.4	127	1.65
2.5"	63.5	190.5	146.1	1.65
3"	76.2	228.6	165.1	1.65
4"	101.6	304.8	215.9	2.1
6"	152.4	457.2	292.1	2.77



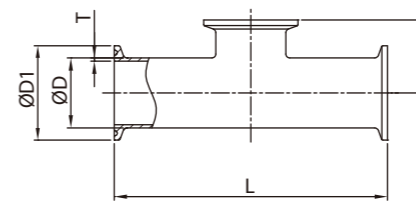
DT-4.1.1-8 180° CLAMP ELBOW (DT-24)

SIZE	ØD	ØD1	L	L1	T
1/2"	12.7	25	114.3	88.9	1.65
3/4"	19.05	25	144.3	88.9	1.65
1"	25.4	50.4	76.2	88.9	1.65
1.5"	38.1	50.4	76.2	127	1.65
2"	50.8	63.9	152.4	139.7	1.65
2.5"	63.5	77.4	190.5	158.8	1.65
3"	76.2	90.9	228.6	177.8	1.65
4"	101.6	118.9	304.8	231.8	2.1
6"	152.4	166.9	457.2	330.2	2.77



DT-4.1.1-3 SHORT OUTLET RUN WELD/CLAMP TEE (DT-25)

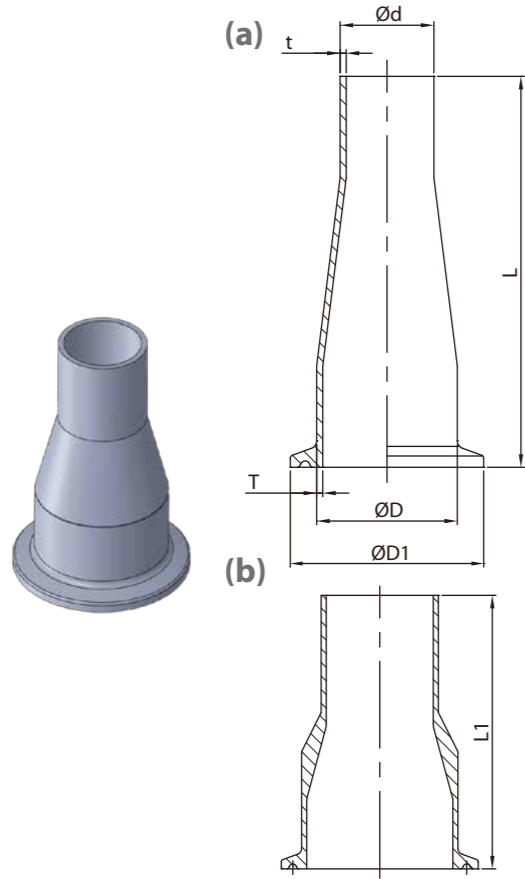
SIZE	ØD	ØD1	L	L1	T
1/2"	12.7	25	47.6	22.2	1.65
3/4"	19.05	25	50.8	25.4	1.65
1"	25.4	50.4	54	28.6	1.65
1.5"	38.1	50.4	60.3	34.9	1.65
2"	50.8	63.9	73	41.3	1.65
2.5"	63.5	77.4	79.4	47.6	1.65
3"	76.2	90.9	85.7	54	1.65
4"	101.6	118.9	104.8	69.9	2.1
6"	152.4	166.9	142.9	117.5	2.77



DT-4.1.2-5 SHORT OUTLET TEE CLAMP END (DT-27)

SIZE	ØD	ØD1	L	L1	T
1/2"	12.7	25	114.4	25.4	1.65
3/4"	19.05	25	120.6	28.6	1.65
1"	25.4	50.4	133.4	28.6	1.65
1.5"	38.1	50.4	146	34.9	1.65
2"	50.8	63.9	171.4	41.3	1.65
2.5"	63.5	77.4	184.2	47.6	1.65
3"	76.2	90.9	196.8	54	1.65
4"	101.6	118.9	241.4	69.9	2.1
6"	152.4	166.87	362	117.5	2.77

BPE Fittings

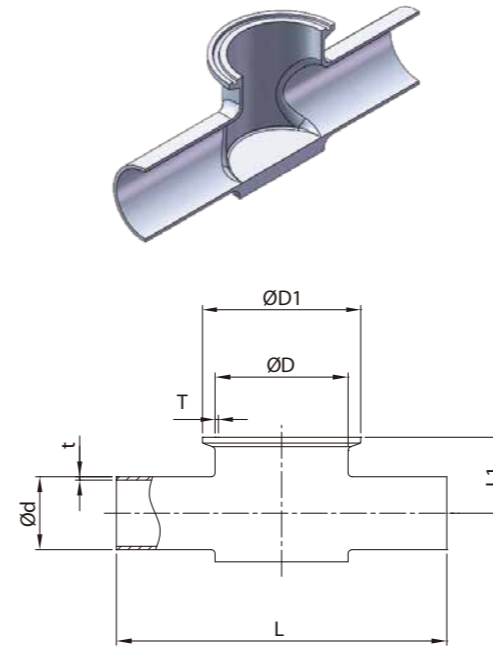


DT-4.1.3-2AC CONCENTRIC REDUCER (DT-26)

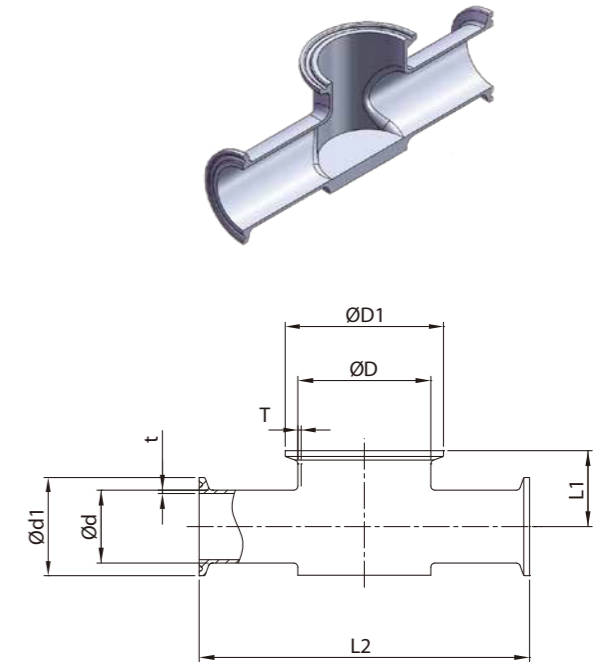
SIZE	ØD	ØD1	Ød	T	t	L	L1
3/4"×1/2"	19.05	25	12.7	1.65	1.65	76.2	66.7
1"×1/2"	25.4	50.4	12.7	1.65	1.65	88.9	76.2
1"×3/4"	25.4	50.4	19.05	1.65	1.65	76.2	66.7
1.5"×1/2"	38.1	50.4	12.7	1.65	1.65	114.3	
1.5"×3/4"	38.1	50.4	19.05	1.65	1.65	101.6	88.9
1.5"×1"	38.1	50.4	25.4	1.65	1.65	101.6	76.2
2"×1/2"	50.8	63.9	12.7	1.65	1.65	165.1	
2"×3/4"	50.8	63.9	19.05	1.65	1.65	152.4	
2"×1"	50.8	63.9	25.4	1.65	1.65	152.4	98.4
2"×1.5"	50.8	63.9	38.1	1.65	1.65	101.6	76.2
2.5"×1.5"	63.5	77.4	38.1	1.65	1.65	152.4	98.4
2.5"×2"	63.5	77.4	50.8	1.65	1.65	107.9	76.2
3"×1.5"	76.2	90.9	38.1	1.65	1.65	203.2	120.7
3"×2"	76.2	90.9	50.8	1.65	1.65	158.8	98.4
3"×2.5"	76.2	90.9	63.5	1.65	1.65	108	79.4
4"×1.5"	101.6	118.9	38.1	2.1	1.65	308	
4"×2"	101.6	118.9	50.8	2.1	1.65	263.5	146.1
4"×2.5"	101.6	118.9	63.5	2.1	1.65	212.7	123.8
4"×3"	101.6	118.9	76.2	2.1	2.1	161.9	114.3

BPE Fittings

DT-4.1.2-10 (DT-28)



DT-4.1.2-11 (DT-29)

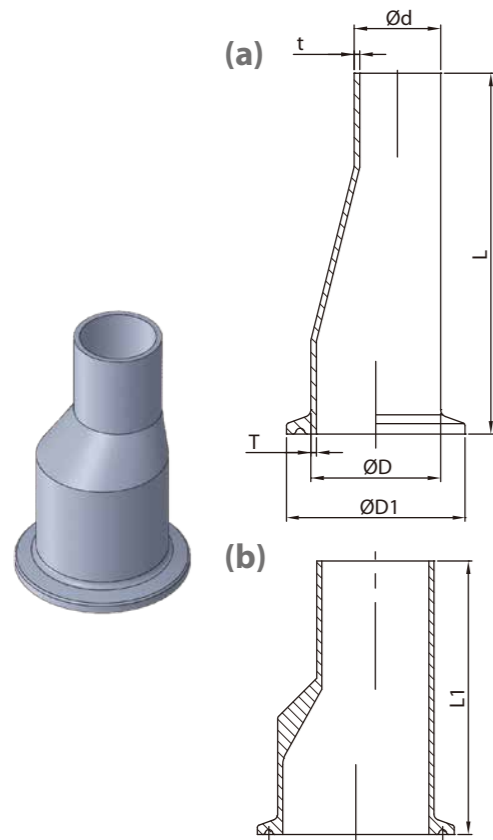


INSTRUMENT TEE WELD/CLAMP END

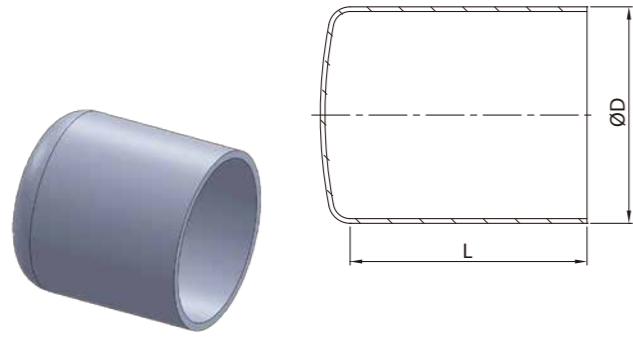
SIZE	ØD	ØD1	Ød	Ød1	L	L1	T	t
1"×1/2"	25.4	50.4	12.7	25	127	22.2	1.65	1.65
1"×3/4"	25.4	50.4	19.05	25	127	25.4	1.65	1.65
1.5"×1/2"	38.1	50.4	12.7	25	127	22.2	1.65	1.65
1.5"×3/4"	38.1	50.4	19.05	25	127	25.4	1.65	1.65
1.5"×1"	38.1	50.4	25.4	50.4	127	28.6	1.65	1.65
2"×1/2"	50.8	63.9	12.7	25	139.8	25.4	1.65	1.65
2"×3/4"	50.8	63.9	19.05	25	139.8	28.6	1.65	1.65
2"×1"	50.8	63.9	25.4	50.4	139.8	31.8	1.65	1.65
2"×1.5"	50.8	63.9	38.1	50.4	139.8	38.1	1.65	1.65
2.5"×1/2"	63.5	77.4	12.7	25	170	35	1.65	1.65
2.5"×3/4"	63.5	77.4	19.05	25	170	38.1	1.65	1.65
2.5"×1"	63.5	77.4	25.4	50.4	170	41.3	1.65	1.65
2.5"×1.5"	63.5	77.4	38.1	50.4	170	44.5	1.65	1.65
2.5"×2"	63.5	77.4	50.8	63.9	170	48	1.65	1.65
3"×1/2"	76.2	90.9	12.7	25	180	38.1	1.65	1.65
3"×3/4"	76.2	90.9	19.05	25	180	41.3	1.65	1.65
3"×1"	76.2	90.9	25.4	50.4	180	44.5	1.65	1.65
3"×1.5"	76.2	90.9	38.1	50.4	180	48	1.65	1.65
3"×2"	76.2	90.9	50.8	63.9	180	50.8	1.65	1.65
3"×2.5"	76.2	90.9	63.5	77.4	180	54	1.65	1.65
4"×1/2"	101.6	118.9	12.7	25	220	79.4	1.65	1.65
4"×3/4"	101.6	118.9	19.05	25	220	82.6	1.65	1.65
4"×1"	101.6	118.9	25.4	50.4	220	85.7	2.1	1.65
4"×1.5"	101.6	118.9	38.1	50.4	220	88.9	2.1	1.65
4"×2"	101.6	118.9	50.8	63.9	220	95.2	2.1	1.65
4"×2.5"	101.6	118.9	63.5	77.4	220	98.4	2.1	1.65
4"×3"	101.6	118.9	76.2	90.9	220	101.6	2.1	1.65

DT-4.1.3-2AE ECCENTRIC REDUCER (DT-26)

SIZE	ØD	ØD1	Ød	T	t	L	L1
3/4"×1/2"	19.05	25	12.7	1.65	1.65	76.2	66.7
1"×1/2"	25.4	50.4	12.7	1.65	1.65	88.9	76.2
1"×3/4"	25.4	50.4	19.05	1.65	1.65	76.2	66.7
1.5"×1/2"	38.1	50.4	12.7	1.65	1.65	114.3	
1.5"×3/4"	38.1	50.4	19.05	1.65	1.65	101.6	88.9
1.5"×1"	38.1	50.4	25.4	1.65	1.65	101.6	76.2
2"×1/2"	50.8	63.9	12.7	1.65	1.65	165.1	
2"×3/4"	50.8	63.9	19.05	1.65	1.65	152.4	
2"×1"	50.8	63.9	25.4	1.65	1.65	152.4	98.4
2"×1.5"	50.8	63.9	38.1	1.65	1.65	101.6	76.2
2.5"×1.5"	63.5	77.4	38.1	1.65	1.65	152.4	98.4
2.5"×2"	63.5	77.4	50.8	1.65	1.65	107.9	76.2
3"×1.5"	76.2	90.9	38.1	1.65	1.65	203.2	120.7
3"×2"	76.2	90.9	50.8	1.65	1.65	158.8	98.4
3"×2.5"	76.2	90.9	63.5	1.65	1.65	108	79.4
4"×1.5"	101.6	118.9	38.1	2.1	1.65	308	
4"×2"	101.6	118.9	50.8	2.1	1.65	263.5	146.1
4"×2.5"	101.6	118.9	63.5	2.1	1.65	212.7	123.8
4"×3"	101.6	118.9	76.2	2.1	2.1	161.9	114.3

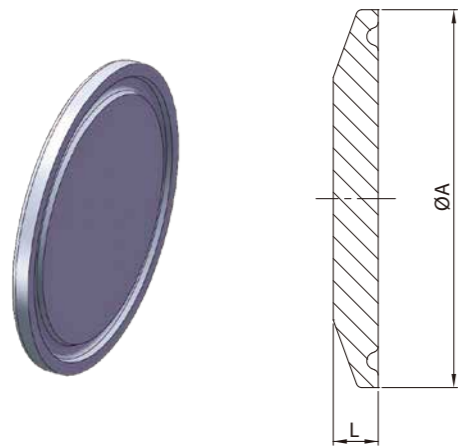


BPE Fittings



DT-4.1.5-1 AUTOMATIC TUBE WELD CAP (DT-30)

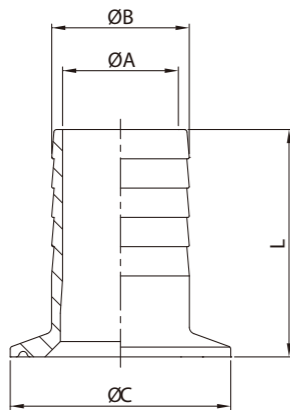
SIZE	ØD	L
1/2"	12.7	38.1
3/4"	19.05	38.1
1"	25.4	38.1
1.5"	38.1	38.1
2"	50.8	38.1
2.5"	63.5	38.1
3"	76.2	44.5
4"	101.6	50.8
6"	152.4	63.5



DT-4.1.5-2 SOLID END CAP HYGIENIC CLAMP JOINE (DT-31)

SIZE	ØD	L
1/2"	25	4.7
3/4"	25	4.7
1"	50.4	6.4
1.5"	50.4	6.4
2"	63.9	6.4
2.5"	77.4	6.4
3"	90.9	6.4
4"	118.9	7.9
6"	166.9	11.1

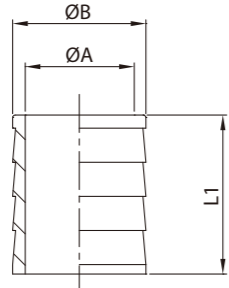
14MPHR



14MPHR/14WHR HOSE ADAPTER

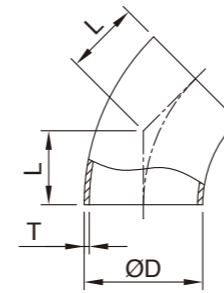
SIZE	ØA	ØB	ØC	L	L1
1/2"×1/2"	9.5	13.7	25.2	38	25.3
3/4"×3/4"	15.8	21.4	25.2	38	25.3
1"×1/2"	9.5	13.7	50.5	38	25.3
1"×3/4"	15.8	21.4	50.5	38	25.3
1"×1"	20.6	25.4	50.5	43	30.3
1.5"×1/2"	9.5	13.7	50.5	38	25.3
1.5"×3/4"	15.8	21.4	50.5	38	25.3
1.5"×1.5"	20.6	25.4	50.5	43	25.3
1.5"×1.5"	33.2	38.1	50.5	43	30.3
2"×1.5"	33.2	38.1	64	43	30.3
2"×2"	46	50.8	64	58.7	46
2.5"×2.5"	58.7	63.5	77.5	59.5	46.8
3"×3"	72	76.2	91	78.6	65.9
4"×4"	97.6	101.6	119	85.5	72.8

14WHR



Vacuum Components

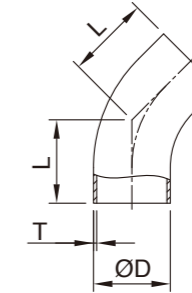
45° Short Elbow



45° Elbow

SIZE	ØD	L	T
1.0"	25.4	15.8	1.65
1.5"	38.1	23.8	1.65
2.0"	50.8	31.75	1.65
2.5"	63.5	39.6	1.65
3.0"	76.2	47.6	1.65
4.0"	101.6	63.5	2.1

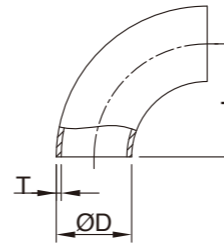
45° Long Elbow



45° Elbow

SIZE	ØD	L	T
1.0"	25.4	30.2	1.65
1.5"	38.1	41.3	1.65
2.0"	50.8	58.7	1.65
2.5"	63.5	76.2	1.65
3.0"	76.2	93.7	1.65
4.0"	101.6	122.2	2.1

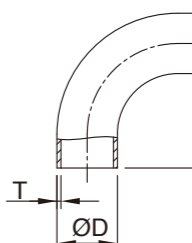
90° Short Elbow



90° Bend

SIZE	ØD	L	T
1.0"	25.4	38.1	1.65
1.5"	38.1	57.2	1.65
2.0"	50.8	76.2	1.65
2.5"	63.5	95.25	1.65
3.0"	76.2	114.3	1.65
4.0"	101.6	152.4	2.1

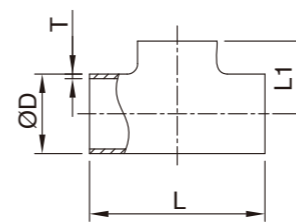
90° Long Elbow



90° Bend

SIZE	ØD	L	T
1.0"	25.4	52.4	1.65
1.5"	38.1	74.6	1.65
2.0"	50.8	103.2	1.65
2.5"	63.5	131.8	1.65
3.0"	76.2	160.3	1.65
4.0"	101.6	211.1	2.1

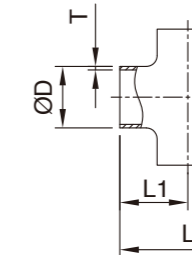
Welding Tee



Tee

SIZE	ØD	L	L1	T
1.0"	25.4	95.2	47.6	1.65
1.5"	38.1	114.4	57.2	1.65
2.0"	50.8	152.4	76.2	1.65
2.5"	63.5	152.4	76.2	1.65
3.0"	76.2	165.2	82.6	1.65
4.0"	101.6	196.8	98.4	2.1

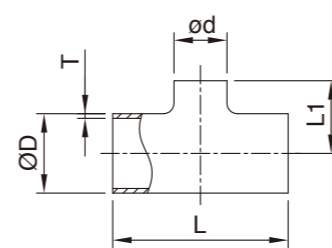
Cross



Cross

SIZE	ØD	L	L1	T
1.0"	25.4	95.2	47.6	1.65
1.5"	38.1	114.4	57.2	1.65
2.0"	50.8	152.4	76.2	1.65
2.5"	63.5	152.4	76.2	1.65
3.0"	76.2	165.2	82.6	1.65
4.0"	101.6	196.8	98.4	2.1

Reducing Tee



Reducing Tee

SIZE	ØD	ød	L	L1	T
1.5"×1.0"	38.1	25.4	114.3	53.98	1.65
2.0"×1.0"	50.8	25.4	152.4	60.3	1.65
2.0"×1.5"	50.8	38.1	152.4	63.5	1.65
2.5"×1.5"	63.5	38.1	152.4	69.85	1.65
2.5"×2.0"	63.5	50.8	152.4	82.55	1.65
3.0"×1.5"	76.2	38.1	165.1	76.2	1.65
3.0"×2.0"	76.2	50.8	165.1	88.90	1.65
3.0"×2.5"	76.2	63.5	165.1	82.55	1.65
4.0"×2.0"	101.6	50.8	196.8	101.6	2.1
4.0"×2.5"	101.6	63.5	196.8	95.25	2.1
4.0"×3.0"	101.6	76.2	196.8	95.25	2.1