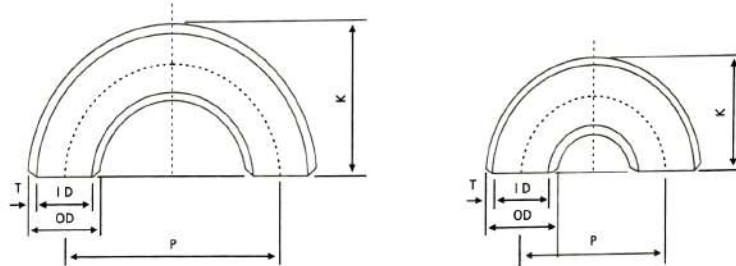


## Long and Short Radius Return Bend

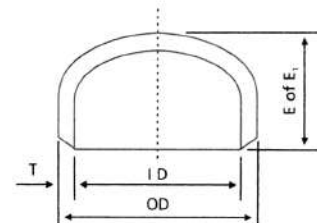


ASME B16.9 B16.28 in (mm)

Nominal Pipe Size (NPS)	Outside Diameter at Bevel OD	Long Radius		Short Radius	
		Center-to-Center O	Back-to-Face K	Center-to-Center O	Back-to-Face K
1/2"	21.3	76.2	47.8	-	-
3/4"	26.7	76.2	50.8	-	-
1"	33.4	76.2	55.6	50.8	41.1
1-1/4"	42.2	95.2	69.8	63.5	52.3
1-1/2"	48.3	114.3	82.6	76.2	62
2"	60.3	152.4	106.4	101.6	81
2-1/2"	73	109.5	131.8	127	100.1
3"	88.9	228.6	158.8	152.4	120.7
3-1/2"	101.6	266.7	184.2	177.8	139.7
4"	114.3	304.8	209.6	203.2	158.8
5"	141.3	381	261.9	254	196.9
6"	168.3	457.2	312.7	304.8	236.5
8"	219.1	609.6	414.3	406.4	312.7
10"	273.1	762.0	517.6	508	390.7

Nominal Pipe Size (NPS)	Outside Diameter at Bevel OD	Length <sup>(2)</sup> E	Limiting Wall Thickness for Length E	Length <sup>(2)</sup> E <sub>1</sub>
1/2"	21.3	25.4	4.5	25.4
3/4"	26.7	25.4	3.8	25.4
1"	33.4	38.1	4.5	38.1
1-1/4"	42.2	38.1	4.8	38.1
1-1/2"	48.3	38.1	5	38.1
2"	60.3	38.1	5.5	44.4
2-1/2"	73	38.1	7.1	50.8
3"	88.9	50.8	7.6	63.5
3-1/2"	101.6	63.5	8.1	76.2
4"	114.3	63.5	8.6	76.2
5"	141.3	76.2	9.6	88.9
6"	168.3	88.9	10.9	101.6
8"	219.1	101.6	12.7	127
10"	273.1	127	12.7	152.4
12"	323.9	152.4	12.7	177.8
14"	355.6	165.1	12.7	190.5
16"	406.4	177.8	12.7	203.2
18"	457.2	203.2	12.7	228.6
20"	508	228.6	12.7	254
22"	558.8	254	12.7	254
24"	609.6	266.7	12.7	304.8

## Caps ASME B16.9 (mm)



1. The Shape of these caps shall be Ellipsoidal and shall conform to the Shape requirements as given in the ASME Boiler Pressure Vessel Code.
2. Length E applies for the thickness not exceeding that given in column "Limiting wall Thickness for Length E"
3. Length E<sub>1</sub> applies for the thickness greater than given in column "Limiting wall thickness"