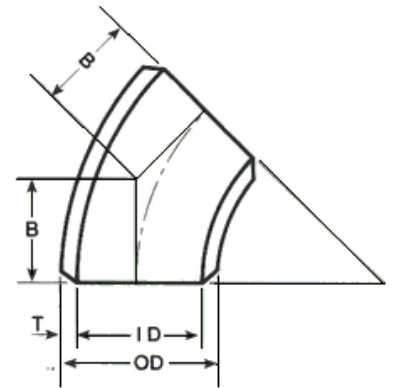
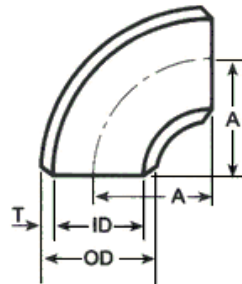
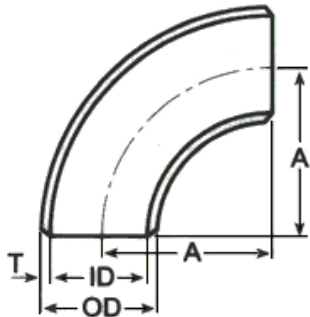


90° / 45° Elbow Long and Short Radius



ANSI B16.9 / B16.28 (in mm)

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (OD)	Center to End		
		Long Radius Elbow		Short Radius Elbow
		90-degree A	45-degree B	90-degree A
1/2	21.3	38.1	15.7	-
3/4	26.7	38.1	19.1	-
1	33.4	38.1	22.4	25.4
1-1/4	42.2	47.8	25.4	31.8
1-1/2	48.3	57.2	28.4	38.1
2	60.3	76.2	35.1	50.8
2-1/2	73.0	95.2	44.4	63.5
3	88.9	114.3	50.8	76.2
3-1/2	101.6	133.4	57.2	88.9
4	114.3	152.4	63.5	101.6
5	141.3	190.5	79.2	127.0
6	168.3	228.6	95.2	152.4
8	219.1	304.8	127.0	203.2
10	273.1	381.0	158.8	254.0
12	323.9	457.2	190.5	304.8
14	355.6	533.4	222.2	355.6
16	406.4	609.6	254.0	406.4
18	457.2	685.8	285.8	457.2
20	508.0	762.0	317.5	508.0
22	558.8	838.2	342.9	558.8
24	609.6	914.4	381.0	609.6
26	660.4	990.6	406.4	660.4
28	711.2	1066.8	438.2	711.2
30	762.0	1143.0	469.9	762.0
32	812.8	1219.2	501.6	812.8
34	863.6	1295.4	533.4	863.6
36	914.4	1371.6	565.2	914.4
38	965.2	1447.8	599.9	-
40	1016.0	1524.0	632.0	1016.0
42	1066.8	1600.2	660.4	1066.8
44	1117.6	1676.4	695.5	1117.6
46	1168.4	1752.6	726.9	-
48	1219.2	1828.8	759.0	1219.2