

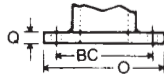


# TECH TIP #43

## PIPE FLANGE DIMENSIONS

### CLASS 125 CAST IRON FLANGES

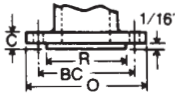
ANSI STANDARD B16.1



Nominal Pipe Size	Diameter of Flange O	Thickness of Flange (Min.) Q	Diameter of Bolt Circle BC	Number of Bolts	Diameter of Bolts	Diameter of Bolt Holes	Length of Bolts
1	4.25	0.44	3.12	4	0.50	0.62	1.75
1 1/4	4.62	0.50	3.50	4	0.50	0.62	2.00
1 1/2	5.00	0.56	3.88	4	0.50	0.62	2.00
2	6.00	0.62	4.75	4	0.62	0.75	2.25
2 1/2	7.00	0.69	5.50	4	0.62	0.75	2.50
3	7.50	0.75	6.00	4	0.62	0.75	2.50
3 1/2	8.50	0.81	7.00	8	0.62	0.75	2.75
4	9.00	0.94	7.50	8	0.62	0.75	3.00
5	10.00	0.94	8.50	8	0.75	0.88	3.00
6	11.00	1.00	9.50	8	0.75	0.88	3.25
8	13.50	1.12	11.75	8	0.75	0.88	3.50
10	16.00	1.19	14.25	12	0.88	1.00	3.75
12	19.00	1.25	17.00	12	0.88	1.00	3.75
14	21.00	1.38	18.75	12	1.00	1.12	4.25
16	23.50	1.44	21.25	16	1.00	1.12	4.50
18	25.00	1.56	22.75	16	1.12	1.25	4.75
20	27.50	1.69	25.00	20	1.12	1.25	5.00
24	32.00	1.88	29.50	20	1.25	1.38	5.50
30	38.75	2.12	36.00	28	1.25	1.38	6.25
36	46.00	2.38	42.75	32	1.50	1.62	7.00

### CLASS 150 STEEL FLANGES

ANSI STANDARD B16.5

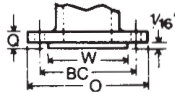


Nominal Pipe Size	Outside Diameter of Flange O	Thickness of Flange (Min.) C	Diameter of Raised Face R	Diameter of Bolt Circle BC	Number of Bolt-Studs	Diameter of Bolt-Studs	Diameter of Bolt Holes	Length Bolt-Studs with 2 Nuts
2	6.00	0.62	3.62	4.75	4	5/8	0.75	3.25
2 1/2	7.00	0.69	4.12	5.50	4	5/8	0.75	3.50
3	7.50	0.75	5.00	6.00	4	5/8	0.75	3.50
4	9.00	0.94	6.19	7.50	8	5/8	0.75	3.50
5	10.00	0.94	7.31	8.50	8	3/4	0.88	3.75
6	11.00	1.00	8.50	9.50	8	3/4	0.88	4.00
8	13.50	1.12	10.62	11.75	8	3/4	0.88	4.25
10	16.00	1.19	12.75	14.25	12	7/8	1.00	4.50
12	19.00	1.25	15.00	17.00	12	7/8	1.00	4.75
14	21.00	1.38	16.25	18.75	12	1	1.12	5.25
16	23.50	1.44	18.50	21.25	16	1	1.12	5.25
18	25.00	1.56	21.00	22.75	16	1 1/8	1.25	5.75
20	27.50	1.69	23.00	25.00	20	1 1/8	1.25	6.25
24	32.00	1.88	27.25	29.50	20	1 1/4	1.38	6.75

**BOLT HOLES:** Drilling templates are in multiples of four with bolt holes straddling the center lines. The 1/16" raised face is included in the minimum thickness of Class 150 steel flanges.

### CLASS 250 CAST IRON FLANGES

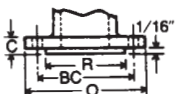
ANSI STANDARD B16.1



Nominal Pipe Size	Diameter of Flange O	Thickness of Flange (Min.) Q	Diameter of Raised Face W	Diameter of Bolt Circle BC	Number of Bolts	Diameter of Bolts	Diameter of Bolt Holes	Length of Bolts
2	6.50	0.88	4.19	5.00	8	0.62	0.75	2.75
2 1/2	7.50	1.00	4.94	5.88	8	0.75	0.88	3.25
3	8.25	1.12	5.69	6.62	8	0.75	0.88	3.50
3 1/2	9.00	1.19	6.31	7.25	8	0.75	0.88	3.50
4	10.00	1.25	6.94	7.88	8	0.75	0.88	3.75
5	11.00	1.38	8.31	9.25	8	0.75	0.88	4.00
6	12.50	1.44	9.69	10.62	12	0.75	0.88	4.00
8	15.00	1.62	11.94	13.00	12	0.88	1.00	4.50
10	17.50	1.88	14.06	15.25	16	1.00	1.12	5.25
12	20.50	2.00	16.44	17.75	16	1.12	1.25	5.50

### CLASS 300 STEEL FLANGES

ANSI STANDARD B16.5



Nominal Pipe Size	Outside Diameter of Flange O	Thickness of Flange (Min.) C	Diameter of Raised Face R	Diameter of Bolt Circle BC	Number of Bolt-Studs	Diameter of Bolt-Studs	Diameter of Bolt Holes	Length Bolt-Studs with 2 Nuts
1 1/2	6.12	0.81	2.88	4.50	4	3/4	0.88	3.75
2	6.50	0.88	3.62	5.00	8	5/8	0.75	3.50
2 1/2	7.50	1.00	4.12	5.88	8	3/4	0.88	4.00
3	8.25	1.12	5.00	6.62	8	3/4	0.88	4.25
4	10.00	1.25	6.19	7.88	8	3/4	0.88	4.50
5	11.00	1.38	7.31	9.25	8	3/4	0.88	4.75
6	12.50	1.44	8.50	10.62	12	3/4	0.88	4.75
8	15.00	1.62	10.62	13.00	12	7/8	1.00	5.50
10	17.50	1.88	12.75	15.25	16	1	1.12	6.25
12	20.50	2.00	15.00	17.75	16	1 1/8	1.25	6.75
14	23.00	2.12	16.25	20.25	20	1 1/8	1.25	7.00
16	25.50	2.25	18.50	22.50	20	1 1/4	1.38	7.50
18	28.00	2.38	21.00	24.75	24	1 1/4	1.38	7.75
20	30.50	2.50	23.00	27.00	24	1 1/4	1.38	8.00
24	36.00	2.75	27.25	32.00	24	1 1/2	1.62	9.00

The 1/16" raised face is included in the minimum thickness of Class 300 steel flanges.

Courtesy of Stockham Valves & Fittings