

## Engineering Data (ANSI Pipe/Flange Dimensions)

### Cast Iron Flanges - ASME/ANSI Class 125

**ASME/ANSI B16.1 - 1998 - Cast Iron Pipe Flanges and Flanged Fittings - Class 125 Flanges - outside and inside diameters, bolt circles, numbers and diameters of bolts**

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Cast Iron Flanges - ASME/ANSI 125 lb				
Pipe Size (inches)	Outside Diameter (inches)	Number of Bolt Holes	Bolt Hole Diameter (inches)	Bolt Circle (inches)
1	4-1/4	4	5/8	3-1/8
1-1/4	4-5/8	4	5/8	3-1/2
1-1/2	5	4	5/8	3-7/8
2	6	4	3/4	4-3/4
2-1/2	7	4	3/4	5-1/2
3	7-1/2	4	3/4	6
3-1/2	8-1/2	8	3/4	7
4	9	8	3/4	7-1/2
5	10	8	7/8	8-1/2
6	11	8	7/8	9-1/2
8	13-1/2	8	7/8	11-3/4
10	16	12	1	14-1/4
12	19	12	1	17
14	21	12	1-1/8	18-3/4
16	23-1/2	16	1-1/8	21-1/4
18	25	16	1-1/4	22-3/4
20	27-1/2	20	1-1/4	25
24	32	20	1-3/8	29-1/2
30	38-3/4	28	1-3/8	36
36	46	32	1-5/8	42-3/4
42	53	36	1-5/8	49-1/2
48	59-1/2	44	1-5/8	56
54	66-1/4	44	2	62-3/4
60	73	52	2	69-1/4
72	86-1/2	60	2	82-1/2
84	99-3/4	64	2-1/4	95-1/2
96	113-1/4	68	2-1/2	108-1/2

## Engineering Data (ANSI Pipe/Flange Dimensions)

### Flanges and Bolt Dimensions - 150 lb to 600 lb - ASME/ANSI B16.5

#### Diameters and bolt circles for standard ASME B16.5 flanges - 1/4 to 24 inches - 150 psi to 600 psi

Flange dimensions are determined by pipe size and pressure class required for the application. Most of these dimensions have been standardized and published as ASME, MSS, API or other standardization organization specifications.

ASME/ANSI B16.5 provides dimensions and tolerances for flanges in pipe sizes from 1/2" through 24" and in pressure classes from 150 lb through 600 lb.

Nominal Pipe Size NPS (inches)	150 psi			
	Diameter of Flange (inches)	No. of Bolts	Diameter of Bolts (inches)	Bolt Circle (inches)
1/4	3-3/8	4	1/2	2-1/4
1/2	3-1/2	4	1/2	2-3/8
3/4	3-7/8	4	1/2	2-3/4
1	4-1/4	4	1/2	3-1/8
1-1/4	4-5/8	4	1/2	3-1/2
1-1/2	5	4	1/2	3-7/8
2	6	4	5/8	4-3/4
2-1/2	7	4	5/8	5-1/2
3	7-1/2	4	5/8	6
3-1/2	8-1/2	8	5/8	7
4	9	8	5/8	7-1/2
5	10	8	3/4	8-1/2
6	11	8	3/4	9-1/2
8	13-1/2	8	3/4	11-3/4
10	16	12	7/8	14-1/4
12	19	12	7/8	17
14	21	12	1	18-3/4
16	23-1/2	16	1	21-1/4
18	25	16	1-1/8	22-3/4
20	27-1/2	20	1-1/8	25
24	32	20	1-1/4	29-1/2

## Engineering Data (ANSI Pipe/Flange Dimensions)

Nominal Pipe Size NPS (inches)	300 psi			
	Diameter of Flange (inches)	No. of Bolts	Diameter of Bolts (inches)	Bolt Circle (inches)
1/4	3-3/8	4	1/2	2-1/4
1/2	3-3/4	4	1/2	2-5/8
3/4	4-5/8	4	5/8	3-1/4
1	4-7/8	4	5/8	3-1/2
1-1/4	5-1/4	4	5/8	3-7/8
1-1/2	6-1/8	4	3/4	4-1/2
2	6-1/2	8	5/8	5
2-1/2	7-1/2	8	3/4	5-7/8
3	8-1/4	8	3/4	6-5/8
3-1/2	9	8	3/4	7-1/4
4	10	8	3/4	7-7/8
5	11	8	3/4	9-1/4
6	12-1/2	12	3/4	10-5/8
8	15	12	7/8	13
10	17-1/2	16	1	15-1/4
12	20-1/2	16	1-1/8	17-3/4
14	23	20	1-1/8	20-1/4
16	25-1/2	20	1-1/4	22-1/2
18	28	24	1-1/4	24-3/4
20	30-1/2	24	1-1/4	27
24	36	24	1-1/2	32

Nominal Pipe Size NPS (inches)	600 psi			
	Diameter of Flange (inches)	No. of Bolts	Diameter of Bolts (inches)	Bolt Circle (inches)
1/4	3-3/8	4	1/2	2-1/4
1/2	3-3/4	4	1/2	2-5/8
3/4	4-5/8	4	5/8	3-1/4
1	4-7/8	4	5/8	3-1/2
1-1/4	5-1/4	4	5/8	3-7/8
1-1/2	6-1/8	4	3/4	4-1/2
2	6-1/2	8	5/8	5
2-1/2	7-1/2	8	3/4	5-7/8
3	8-1/4	8	3/4	6-5/8
3-1/2	9	8	7/8	7-1/4
4	10-3/4	8	7/8	8-1/2
5	13	8	1	10-1/2
6	14	12	1	11-1/2
8	16-1/2	12	1-1/8	13-3/4
10	20	16	1-1/4	17
12	22	20	1-1/4	19-1/4
14	23-3/4	20	1-3/8	20-3/4
16	27	20	1-1/2	23-3/4
18	29-1/4	20	1-5/8	25-3/4
20	32	24	1-5/8	28-1/2
24	37	24	1-7/8	33