

ASME/ANSI B16.5 FLANGES AND BOLT DIMENSIONS CLASS 150 TO 2500

Diameters and bolt circles for standard ASME B16.5 flanges - 1/4 to 24 inches - Class 150 to 2500.

Nominal Pipe Size - NPS (Inches)	Class 150				
	Diameter of Flange (Inches)	No. of Bolts	Diameter of Bolts (Inches)	Diameter of Bolt Holes (Inches)	Bolt Circle (Inches)
1/4	3-3/8	4	1/2	0.62	2-1/4
1/2	3-1/2	4	1/2	0.62	2-3/8
3/4	3-7/8	4	1/2	0.62	2-3/4
1	4-1/4	4	1/2	0.62	3-1/8
1-1/4	4-5/8	4	1/2	0.62	3-1/2
1-1/2	5	4	1/2	0.62	3-7/8
2	6	4	5/8	0.75	4-3/4
2-1/2	7	4	5/8	0.75	5-1/2
3	7-1/2	4	5/8	0.75	6
3-1/2	8-1/2	8	5/8	0.75	7
4	9	8	5/8	0.75	7-1/2
5	10	8	3/4	0.88	8-1/2
6	11	8	3/4	0.88	9-1/2
8	13-1/2	8	3/4	0.88	11-3/4
10	16	12	7/8	1	14-1/4
12	19	12	7/8	1	17
14	21	12	1	1.12	18-3/4
16	23-1/2	16	1	1.12	21-1/4
18	25	16	1-1/8	1.25	22-3/4
20	27-1/2	20	1-1/8	1.25	25
24	32	20	1-1/4	1.38	29-1/2

Nominal Pipe Size - NPS (Inches)	Class 300				
	Diameter of Flange (Inches)	No. of Bolts	Diameter of Bolts (Inches)	Diameter of Bolt Holes (Inches)	Bolt Circle (Inches)
1/4	3-3/8	4	1/2	0.62	2-1/4
1/2	3-3/4	4	1/2	0.62	2-5/8
3/4	4-5/8	4	5/8	0.75	3-1/4
1	4-7/8	4	5/8	0.75	3-1/2
1-1/4	5-1/4	4	5/8	0.75	3-7/8
1-1/2	6-1/8	4	3/4	0.88	4-1/2
2	6-1/2	8	5/8	0.75	5
2-1/2	7-1/2	8	3/4	0.88	5-7/8
3	8-1/4	8	3/4	0.88	6-5/8
3-1/2	9	8	3/4	0.88	7-1/4
4	10	8	3/4	0.88	7-7/8
5	11	8	3/4	0.88	9-1/4
6	12-1/2	12	3/4	0.88	10-5/8
8	15	12	7/8	1	13
10	17-1/2	16	1	1.12	15-1/4
12	20-1/2	16	1-1/8	1.25	17-3/4
14	23	20	1-1/8	1.25	20-1/4
16	25-1/2	20	1-1/4	1.38	22-1/2
18	28	24	1-1/4	1.38	24-3/4
20	30-1/2	24	1-1/4	1.38	27
24	36	24	1-1/2	1.62	32

Nominal Pipe Size - NPS (Inches)	Class 400				
	Diameter of Flange (Inches)	No. of Bolts	Diameter of Bolts (Inches)	Diameter of Bolt Holes (Inches)	Bolt Circle (Inches)
1/4	3-3/8	4	1/2	0.62	2-1/4
1/2	3-3/4	4	1/2	0.62	2-5/8
3/4	4-5/8	4	5/8	0.75	3-1/4
1	4-7/8	4	5/8	0.75	3-1/2
1-1/4	5-1/4	4	5/8	0.75	3-7/8
1-1/2	6-1/8	4	3/4	0.88	4-1/2
2	6-1/2	8	5/8	0.75	5
2-1/2	7-1/2	8	3/4	0.88	5-7/8
3	8-1/4	8	3/4	0.88	6-5/8
3-1/2	9	8	7/8	1	7-1/4
4	10	8	7/8	1	7-7/8
5	11	8	7/8	1	9-1/4
6	12-1/2	12	7/8	1	10-5/8
8	15	12	1	1.12	13
10	17-1/2	16	1-1/8	1.25	15-1/4
12	20-1/2	16	1-1/4	1.38	17-3/4
14	23	20	1-1/4	1.38	20-1/4
16	25-1/2	20	1-3/8	1.5	22-1/2
18	28	24	1-3/8	1.5	24-3/4
20	30-1/2	24	1-1/2	1.62	27
24	36	24	1-3/4	1.88	32

Nominal Pipe Size - NPS (Inches)	Class 600				
	Diameter of Flange (Inches)	No. of Bolts	Diameter of Bolts (Inches)	Diameter of Bolt Holes (Inches)	Bolt Circle (Inches)
1/4	3-3/8	4	1/2	0.62	2-1/4
1/2	3-3/4	4	1/2	0.62	2-5/8
3/4	4-5/8	4	5/8	0.75	3-1/4
1	4-7/8	4	5/8	0.75	3-1/2
1-1/4	5-1/4	4	5/8	0.75	3-7/8
1-1/2	6-1/8	4	3/4	0.88	4-1/2
2	6-1/2	8	5/8	0.75	5
2-1/2	7-1/2	8	3/4	0.88	5-7/8
3	8-1/4	8	3/4	0.88	6-5/8
3-1/2	9	8	7/8	1	7-1/4
4	10-3/4	8	7/8	1	8-1/2
5	13	8	1	1.12	10-1/2
6	14	12	1	1.12	11-1/2
8	16-1/2	12	1-1/8	1.25	13-3/4
10	20	16	1-1/4	1.38	17
12	22	20	1-1/4	1.38	19-1/4
14	23-3/4	20	1-3/8	1.5	20-3/4
16	27	20	1-1/2	1.62	23-3/4
18	29-1/4	20	1-5/8	1.75	25-3/4
20	32	24	1-5/8	1.75	28-1/2
24	37	24	1-7/8	2	33

Nominal Pipe Size - NPS (Inches)	Class 900				
	Diameter of Flange (Inches)	No. of Bolts	Diameter of Bolts (Inches)	Diameter of Bolt Holes (Inches)	Bolt Circle (Inches)
1/2	4-3/4	4	3/4	0.88	3-1/4
3/4	5-1/8	4	3/4	0.88	3-1/2
1	5-7/8	4	7/8	1	4
1-1/4	6-1/4	4	7/8	1	4-3/8
1-1/2	7	4	1	1.12	4-7/8
2	8-1/2	8	7/8	1	6-1/2
2-1/2	9-5/8	8	1	1.12	7-1/2
3	9-1/2	8	7/8	1	7-1/2
4	11-1/2	8	1-1/8	1.25	9-1/4
5	13-3/4	8	1-1/4	1.38	11
6	15	12	1-1/8	1.25	12-1/2
8	18-1/2	12	1-3/8	1.5	15-1/2
10	21-1/2	16	1-3/8	1.5	18-1/2
12	24	20	1-3/8	1.5	21
14	25-1/4	20	1-1/2	1.62	22
16	27-3/4	20	1-5/8	1.75	24-1/2
18	31	20	1-7/8	2	27
20	33-3/4	20	2	2.12	29-1/2
24	41	20	2-1/2	2.62	35-1/2

Nominal Pipe Size - NPS (Inches)	Class 1500				
	Diameter of Flange (Inches)	No. of Bolts	Diameter of Bolts (Inches)	Diameter of Bolt Holes (Inches)	Bolt Circle (Inches)
1/2	4-3/4	4	3/4	0.88	3-1/4
3/4	5-1/8	4	3/4	0.88	3-1/2
1	5-7/8	4	7/8	1	4
1-1/4	6-1/4	4	7/8	1	4-3/8
1-1/2	7	4	1	1.12	4-7/8
2	8-1/2	8	7/8	1	6-1/2
2-1/2	9-5/8	8	1	1.12	7-1/2
3	10-1/2	8	1-1/8	1.25	8
4	12-1/4	8	1-1/4	1.38	9-1/2
5	14-3/4	8	1-1/2	1.62	11-1/2
6	15-1/2	12	1-3/8	1.5	12-1/2
8	19	12	1-5/8	1.75	15-1/2
10	23	12	1-7/8	2	19
12	26-1/2	16	2	2.12	22-1/2
14	29-1/2	16	2-1/4	2.38	25
16	32-1/2	16	2-1/2	2.62	27-3/4
18	36	16	2-3/4	2.88	30-1/2
20	38-3/4	16	3	3.12	32-3/4
24	46	16	3-1/2	3.62	39

Nominal Pipe Size - NPS (Inches)	Class 2500				
	Diameter of Flange (Inches)	No. of Bolts	Diameter of Bolts (Inches)	Diameter of Bolt Holes (Inches)	Bolt Circle (Inches)
1/2	5-1/4	4	3/4	0.88	3-1/2
3/4	5-1/2	4	3/4	0.88	3-3/4
1	6-1/4	4	7/8	1	4-1/4
1-1/4	7-1/4	4	1	1.12	5-1/8
1-1/2	8	4	1-1/8	1.25	5-3/4
2	9-1/4	8	1	1.12	6-3/4
2-1/2	10-1/2	8	1-1/8	1.25	7-3/4
3	12	8	1-1/4	1.38	9
4	14	8	1-1/2	1.62	10-3/4
5	16-1/2	8	1-3/4	1.88	12-3/4
6	19	8	2	2.12	14-1/2
8	21-3/4	12	2	2.12	17-1/4
10	26-1/2	12	2-1/2	2.62	21-1/4
12	30	12	2-3/4	2.88	24-3/8