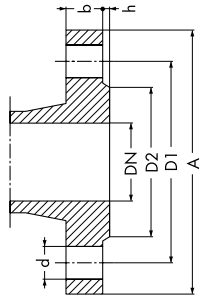


flange dimensions and drilling to ANSI B 16.5



DN = diameter nominal (size)
A = flange $\varnothing$
b = thickness of flange
D₂ = diameter of raised face $\varnothing$
D₁ = diameter of bolt circle $\varnothing$
n = number of bolts
d = diameter of bolt holes $\varnothing$
h = height of raised face (RF)

h* = 1/16" = 1.6 mm for ANSI Class 150 - 300
h* = 1/4" = 6.4 mm for ANSI Class 400 - 2500
* for steel flanges only

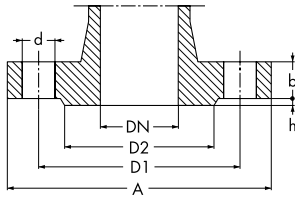
b = raised face included for ANSI Class 150 - 300
b = raised face not included for ANSI Class 400 - 2500

DN		125/150 lbs		300 lbs		400 lbs		600 lbs		900 lbs		1500 lbs		2500 lbs	
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/2"	A	3 1/2	88.9	3 3/4	95.2	3 3/4	95.2	3 3/4	95.2	4 3/4	121	4 3/4	121	5 1/4	133.4
	b	7/16	11.1	9/16	14.3	9/16	14.3	9/16	14.3	7/8	22.2	7/8	22.2	1 3/16	30.2
	D ₂	1 3/8	34.9	1 3/8	34.9	1 3/8	34.9	1 3/8	34.9	1 3/8	34.9	1 3/8	34.9	1 3/8	34.9
	D ₁	2 3/8	60.3	2 5/8	66.7	2 5/8	66.7	2 5/8	66.7	3 1/4	82.6	3 1/4	82.6	3 1/2	88.9
	n	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	d	5/8	15.9	5/8	15.9	5/8	15.9	5/8	15.9	7/8	22.2	7/8	22.2	7/8	22.2
3/4"	A	3 7/8	98.4	4 5/8	117.5	4 5/8	117.5	4 5/8	117.5	5 1/8	130	5 1/8	130	5 1/2	139.7
	b	1/2	12.7	5/8	15.9	5/8	15.9	5/8	15.9	1	25.4	1	25.4	1 1/4	31.8
	D ₂	1 11/16	42.9	1 11/16	42.9	1 11/16	42.9	1 11/16	42.9	1 11/16	42.9	1 11/16	42.9	1 11/16	42.9
	D ₁	2 3/4	69.8	3 1/4	82.5	3 1/4	82.5	3 1/4	82.5	3 1/2	88.9	3 1/2	88.9	3 3/4	95.2
	n	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	d	5/8	15.9	3/4	19	3/4	19	3/4	19	7/8	22.2	7/8	22.2	7/8	22.2
1"	A	4 1/4	108	4 7/8	123.8	4 7/8	123.8	4 7/8	123.8	5 7/8	149.2	5 7/8	149.2	6 1/4	159
	b	9/16	14.3	1 1/16	17.5	1 1/16	17.5	1 1/16	17.5	1 1/8	28.6	1 1/8	28.6	1 3/8	34.9
	D ₂	2	50.8	2	50.8	2	50.8	2	50.8	2	50.8	2	50.8	2	50.8
	D ₁	3 1/8	79.4	3 1/2	88.9	3 1/2	88.9	3 1/2	88.9	4	102	4	102	4 1/4	108
	n	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	d	5/8	15.9	3/4	19	3/4	19	3/4	19	1	25.4	1	25.4	1	25.4
1 1/4"	A	4 5/8	117.5	5 1/4	133.4	5 1/4	133.4	5 1/4	133.4	6 1/4	159	6 1/4	159	7 1/4	184.2
	b	5/8	15.9	3/4	19	13/16	20.6	13/16	20.6	1 1/8	28.6	1 1/8	28.6	1 1/2	38.1
	D ₂	2 1/2	63.5	2 1/2	63.5	2 1/2	63.5	2 1/2	63.5	2 1/2	63.5	2 1/2	63.5	2 1/2	63.5
	D ₁	3 1/2	88.9	3 7/8	98.4	3 7/8	98.4	3 7/8	98.4	4 3/8	111	4 3/8	111	5 1/8	130
	n	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	d	5/8	15.9	3/4	19	3/4	19	3/4	19	1	25.4	1	25.4	1 1/8	28.6
1 1/2"	A	5	127	6 1/8	155.6	6 1/8	155.6	6 1/8	155.6	7	177.8	7	177.8	8	203
	b	1 1/16	17.5	13/16	20.6	7/8	22.2	7/8	22.2	1 1/4	31.8	1 1/4	31.8	1 3/4	44.5
	D ₂	2 7/8	73	2 7/8	73	2 7/8	73	2 7/8	73	2 7/8	73	2 7/8	73	2 7/8	73
	D ₁	3 7/8	98.4	4 1/2	114	4 1/2	114	4 1/2	114	4 7/8	124	4 7/8	124	5 3/4	146
	n	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	d	5/8	15.9	7/8	22.2	7/8	22.2	7/8	22.2	1 1/8	28.6	1 1/8	28.6	1 1/4	31.8
2"	A	6	152.4	6 1/2	165.1	6 1/2	165.1	6 1/2	165.1	8 1/2	215.9	8 1/2	215.9	9 1/4	234.9
	b	3/4	19	7/8	22.2	1	25.4	1	25.4	1 1/2	38.1	1 1/2	38.1	2	50.8
	D ₂	3 5/8	92.1	3 5/8	92.1	3 5/8	92.1	3 5/8	92.1	3 5/8	92.1	3 5/8	92.1	3 5/8	92.1
	D ₁	4 3/4	121	5	127	5	127	5	127	6 1/2	165.1	6 1/2	165.1	6 3/4	171
	n	4	4	8	8	8	8	8	8	8	8	8	8	8	8
	d	3/4	19	3/4	19	3/4	19	3/4	19	1	25.4	1	25.4	1 1/8	28.6
2 1/2"	A	7	177.8	7 1/2	190.5	7 1/2	190.5	7 1/2	190.5	9 5/8	244	9 5/8	244	10 1/2	266.7
	b	7/8	22.2	1	25.4	1 1/8	28.6	1 1/8	28.6	1 5/8	41.3	1 5/8	41.3	2 1/4	57.2
	D ₂	4 1/8	104.8	4 1/8	104.8	4 1/8	104.8	4 1/8	104.8	4 1/8	105	4 1/8	105	4 1/8	105
	D ₁	5 1/2	139.7	5 7/8	149.2	5 7/8	149.2	5 7/8	149.2	7 1/2	190.5	7 1/2	190.5	7 3/4	197
	n	4	4	8	8	8	8	8	8	8	8	8	8	8	8
	d	3/4	19	7/8	22.2	7/8	22.2	7/8	22.2	1 1/8	28.6	1 1/8	28.6	1 1/4	31.8

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flange dimensions and drilling to ANSI B 16.5

(continued)



DN = diameter nominal (size)
A = flange $\varnothing$
b = thickness of flange
D₂ = diameter of raised face $\varnothing$
D₁ = diameter of bolt circle $\varnothing$
n = number of bolts
d = diameter of bolt holes $\varnothing$
h = height of raised face (RF)

h* = $\frac{1}{16}$ " = 1.6 mm for ANSI Class 150 - 300
h* = $\frac{1}{4}$ " = 6.4 mm for ANSI Class 400 - 2500
* for steel flanges only

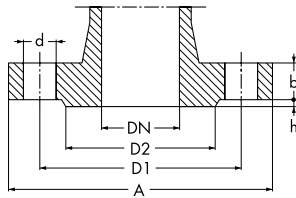
b = raised face included for ANSI Class 150 - 300
b = raised face not included for ANSI Class 400 - 2500

DN		125/150 lbs		300 lbs		400 lbs		600 lbs		900 lbs		1500 lbs		2500 lbs	
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
3"	A	7½	190.5	8¼	209.6	8¼	209.6	8¼	209.6	9½	241	10½	267	12	305
	b	$\frac{15}{16}$	23.8	$1\frac{1}{8}$	28.6	$1\frac{1}{4}$	31.8	$1\frac{1}{4}$	31.8	$1\frac{1}{2}$	38.1	$1\frac{7}{8}$	47.6	$2\frac{5}{8}$	66.7
	D ₂	5	127	5	127	5	127	5	127	5	127	5	127	5	127
	D ₁	6	152.4	$6\frac{5}{8}$	168.3	$6\frac{5}{8}$	168.3	$6\frac{5}{8}$	168.3	$7\frac{1}{2}$	190.5	8	203	9	228.6
	n	4	4	8	8	8	8	8	8	8	8	8	8	8	8
	d	$\frac{3}{4}$	19	$\frac{7}{8}$	22.2	$\frac{7}{8}$	22.2	$\frac{7}{8}$	22.2	1	25.4	$1\frac{1}{4}$	31.8	$1\frac{3}{8}$	34.9
	h														
3½"	A	8½	215.9	9	228.6	9	228.6	9	228.6						
	b	$\frac{15}{16}$	23.8	$1\frac{3}{16}$	30.2	$1\frac{3}{8}$	34.9	$1\frac{3}{8}$	34.9						
	D ₂	5½	139.7	5½	139.7	5½	139.7	5½	139.7						
	D ₁	7	177.8	$7\frac{1}{4}$	184.2	$7\frac{1}{4}$	184.2	$7\frac{1}{4}$	184.2						
	n	8	8	8	8	8	8	8	8						
	d	$\frac{3}{4}$	19	$\frac{7}{8}$	22.2	1	25.4	1	25.4						
	h														
4"	A	9	228.6	10	254	10	254	$10\frac{3}{4}$	273	$11\frac{1}{2}$	292	$12\frac{1}{4}$	311	14	356
	b	$\frac{15}{16}$	23.8	$1\frac{1}{4}$	31.7	$1\frac{3}{8}$	34.9	$1\frac{1}{2}$	38.1	$1\frac{3}{4}$	44.4	$2\frac{1}{8}$	54	3	76.2
	D ₂	$6\frac{3}{16}$	157.2	$6\frac{3}{16}$	157.2	$6\frac{3}{16}$	157.2	$6\frac{3}{16}$	157.2	$6\frac{5}{16}$	157.2	$6\frac{3}{16}$	157.2	$6\frac{3}{16}$	157.2
	D ₁	$7\frac{1}{2}$	190	$7\frac{7}{8}$	200	$7\frac{7}{8}$	200	$8\frac{1}{2}$	215.9	$9\frac{1}{4}$	235	$9\frac{1}{2}$	241	$10\frac{3}{4}$	273
	n	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	d	$\frac{3}{4}$	19	$\frac{7}{8}$	22.2	1	25.4	1	25.4	$1\frac{1}{4}$	31.8	$1\frac{3}{8}$	34.9	$1\frac{5}{8}$	41.3
	h														
5"	A	10	254	11	279.4	11	279.4	13	330.2	$13\frac{3}{4}$	349	$14\frac{3}{4}$	375	$16\frac{1}{2}$	419
	b	$\frac{15}{16}$	23.8	$1\frac{3}{8}$	34.9	$1\frac{1}{2}$	38.1	$1\frac{3}{4}$	44.4	2	50.8	$2\frac{7}{8}$	73	$3\frac{5}{8}$	92.1
	D ₂	$7\frac{5}{16}$	185.7	$7\frac{5}{16}$	185.7	$7\frac{5}{16}$	185.7	$7\frac{9}{16}$	185.7	$7\frac{5}{16}$	185.7	$7\frac{5}{16}$	185.7	$7\frac{5}{16}$	185.7
	D ₁	$8\frac{1}{2}$	215.9	$9\frac{1}{4}$	234.9	$9\frac{1}{4}$	234.9	$10\frac{1}{2}$	266.7	11	279	$11\frac{1}{2}$	292	$12\frac{3}{4}$	324
	n	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	d	$\frac{7}{8}$	22.2	$\frac{7}{8}$	22.2	1	25.4	$1\frac{1}{8}$	28.6	$1\frac{3}{8}$	34.9	$1\frac{5}{8}$	41.3	$1\frac{7}{8}$	47.6
	h														
6"	A	11	279	$12\frac{1}{2}$	317.5	$12\frac{1}{2}$	317.5	14	355.6	15	381	$15\frac{1}{2}$	394	19	483
	b	1	25.4	$1\frac{7}{16}$	36.5	$1\frac{5}{8}$	41.3	$1\frac{7}{8}$	47.6	$2\frac{3}{16}$	55.6	$3\frac{1}{4}$	82.6	$4\frac{1}{4}$	108
	D ₂	$8\frac{1}{2}$	216	$8\frac{1}{2}$	215.9	$8\frac{1}{2}$	215.9	$8\frac{1}{2}$	215.9	$8\frac{1}{2}$	215.9	$8\frac{1}{2}$	215.9	$8\frac{1}{2}$	216
	D ₁	$9\frac{1}{2}$	241	$10\frac{5}{8}$	269.9	$10\frac{5}{8}$	269.9	$11\frac{1}{2}$	292.1	$12\frac{1}{2}$	318	$12\frac{1}{2}$	318	$14\frac{1}{2}$	368
	n	8	8	12	12	12	12	12	12	12	12	12	12	8	8
	d	$\frac{7}{8}$	22.2	$\frac{7}{8}$	22.2	1	25.4	$1\frac{1}{8}$	28.6	$1\frac{1}{4}$	31.8	$1\frac{1}{2}$	38.1	$2\frac{1}{8}$	54
	h														
8"	A	$13\frac{1}{2}$	342.9	15	381	15	381	$16\frac{1}{2}$	419	$18\frac{1}{2}$	470	19	482.6	$21\frac{3}{4}$	552
	b	$1\frac{1}{8}$	28.6	$1\frac{5}{8}$	41.3	$1\frac{7}{8}$	47.6	$2\frac{3}{16}$	55.6	$2\frac{1}{2}$	63.5	$3\frac{5}{8}$	92.1	5	127
	D ₂	$10\frac{5}{8}$	269.9	$10\frac{5}{8}$	269.9	$10\frac{5}{8}$	269.9	$10\frac{5}{8}$	269.9	$10\frac{5}{8}$	269.9	$10\frac{5}{8}$	269.9	$10\frac{5}{8}$	269.9
	D ₁	$11\frac{3}{4}$	298.4	13	330.2	13	330.2	$13\frac{3}{4}$	349.2	$15\frac{1}{2}$	394.2	$15\frac{1}{2}$	394.2	$17\frac{1}{4}$	438
	n	8	8	12	12	12	12	12	12	12	12	12	12	12	12
	d	$\frac{7}{8}$	22.2	1	25.4	$1\frac{1}{8}$	28.6	$1\frac{1}{4}$	31.8	$1\frac{1}{2}$	38.1	$1\frac{3}{4}$	44.5	$2\frac{1}{8}$	54
	h														
10"	A	16	406.4	$17\frac{1}{2}$	444.5	$17\frac{1}{2}$	444.5	20	508	$21\frac{1}{2}$	546	23	584	$26\frac{1}{2}$	673
	b	$1\frac{3}{16}$	30.2	$1\frac{7}{8}$	47.6	$2\frac{1}{8}$	54	$2\frac{1}{2}$	63.5	$2\frac{3}{4}$	69.8	$4\frac{1}{4}$	108	$6\frac{1}{2}$	165
	D ₂	$12\frac{3}{4}$	323.8	$12\frac{3}{4}$	323.8	$12\frac{3}{4}$	323.8	$12\frac{3}{4}$	323.8	$12\frac{3}{4}$	323.8	$12\frac{3}{4}$	323.8	$12\frac{3}{4}$	323.8
	D ₁	$14\frac{1}{4}$	361.9	$15\frac{1}{4}$	387.4	$15\frac{1}{4}$	387.4	17	431.8	$18\frac{1}{2}$	470	19	482.6	$21\frac{1}{4}$	540
	n	12	12	16	16	16	16	16	16	16	16	12	12	12	12
	d	1	25.4	$1\frac{1}{8}$	28.6	$1\frac{1}{4}$	31.8	$1\frac{3}{8}$	34.9	$1\frac{1}{2}$	38.1	2	50.8	$2\frac{5}{8}$	66.7
	h														

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flange dimensions and drilling to ANSI B 16.5

(continued)



DN = diameter nominal (size)
A = flange $\varnothing$
b = thickness of flange
D₂ = diameter of raised face $\varnothing$
D₁ = diameter of bolt circle $\varnothing$
n = number of bolts
d = diameter of bolt holes $\varnothing$
h = height of raised face (RF)

h* = 1/16" = 1.6 mm for ANSI Class 150 - 300
h* = 1/4" = 6.4 mm for ANSI Class 400 - 2500
* for steel flanges only

b = raised face included for ANSI Class 150 - 300
b = raised face not included for ANSI Class 400 - 2500

DN		125/150 lbs		300 lbs		400 lbs		600 lbs		900 lbs		1500 lbs		2500 lbs	
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
12"	A	19	482.6	20 ^{1/2}	520.7	20 ^{1/2}	520.7	22	558.8	24	610	26 ^{1/2}	673	30	762
	b	1 ^{1/4}	31.7	2	50.8	2 ^{1/4}	57.2	2 ^{5/8}	66.7	3 ^{1/8}	79.4	4 ^{7/8}	124	7 ^{1/4}	184
	D ₂	15	381	15	381	15	381	15	381	15	381	15	381	15	381
	D ₁	17	431.8	17 ^{3/4}	450.9	17 ^{3/4}	450.9	19 ^{1/4}	488.9	21	533.4	22 ^{1/2}	571.5	24 ^{3/8}	619
	n	12	12	16	16	16	16	20	20	20	20	16	16	12	12
	d	1	25.4	1 ^{1/4}	31.8	1 ^{3/8}	34.9	1 ^{3/8}	34.9	1 ^{1/2}	38.1	2 ^{1/8}	54	2 ^{7/8}	73
14"	A	21	533.4	23	584	23	584	23 ^{3/4}	603	25 ^{1/4}	641	29 ^{1/2}	749		
	b	1 ^{3/8}	34.9	2 ^{1/8}	54	2 ^{3/8}	60.3	2 ^{3/4}	69.8	3 ^{3/8}	85.7	5 ^{1/4}	133		
	D ₂	16 ^{1/4}	412.7	16 ^{1/4}	412.7	16 ^{1/4}	412.7	16 ^{1/4}	412.7	16 ^{1/4}	412.7	16 ^{1/4}	412.7		
	D ₁	18 ^{3/4}	476.2	20 ^{1/4}	514.4	20 ^{1/4}	514.4	20 ^{3/4}	527	22	558.8	25	635		
	n	12	12	20	20	20	20	20	20	20	20	16	16		
	d	1 ^{1/8}	28.6	1 ^{1/4}	31.8	1 ^{3/8}	34.9	1 ^{1/2}	38.1	1 ^{5/8}	41.3	2 ^{3/8}	60.3		
16"	A	23 ^{1/2}	596.9	25 ^{1/2}	647.7	25 ^{1/2}	648	27	686	27 ^{3/4}	705	32 ^{1/2}	826		
	b	1 ^{7/16}	36.5	2 ^{1/4}	57.2	2 ^{1/2}	63.5	3	76.2	3 ^{1/2}	88.9	5 ^{3/4}	146		
	D ₂	18 ^{1/2}	470	18 ^{1/2}	470	18 ^{1/2}	470	18 ^{1/2}	470	18 ^{1/2}	470	18 ^{1/2}	470		
	D ₁	21 ^{1/4}	539.8	22 ^{1/2}	571.5	22 ^{1/2}	571.5	23 ^{3/4}	603.3	24 ^{1/4}	616	27 ^{3/4}	705		
	n	16	16	20	20	20	20	20	20	20	20	16	16		
	d	1 ^{1/8}	28.6	1 ^{3/8}	34.9	1 ^{1/2}	38.1	1 ^{5/8}	41.3	1 ^{3/4}	44.4	2 ^{5/8}	66.7		
18"	A	25	635	28	711	28	711	29 ^{1/4}	743	31	787	36	914		
	b	1 ^{9/16}	39.7	2 ^{3/8}	60.3	2 ^{5/8}	66.7	3 ^{1/4}	82.6	4	102	6 ^{3/8}	162		
	D ₂	21	533.4	21	533.4	21	533.4	21	533.4	21	533.4	21	533.4		
	D ₁	22 ^{3/4}	577.9	24 ^{3/4}	628.7	24 ^{3/4}	628.7	25 ^{3/4}	654.1	27	685.8	30 ^{1/2}	775		
	n	16	16	24	24	24	24	20	20	20	20	16	16		
	d	1 ^{1/4}	31.8	1 ^{3/8}	34.9	1 ^{1/2}	38.1	1 ^{3/4}	44.5	2	50.8	2 ^{7/8}	73		
20"	A	27 ^{1/2}	698.5	30 ^{1/2}	774.7	30 ^{1/2}	774.7	32	813	33 ^{3/4}	857	38 ^{3/4}	984		
	b	1 ^{11/16}	42.9	2 ^{1/2}	63.5	2 ^{3/4}	69.8	3 ^{1/2}	88.9	4 ^{1/4}	108	7	178		
	D ₂	23	584.2	23	584.2	23	584.2	23	584.2	23	584.2	23	584.2		
	D ₁	25	635	27	685.8	27	685.8	28 ^{1/2}	724	29 ^{1/2}	749.3	32 ^{3/4}	832		
	n	20	20	24	24	24	24	24	24	20	20	16	16		
	d	1 ^{1/4}	31.8	1 ^{3/8}	34.9	1 ^{5/8}	41.3	1 ^{3/4}	44.5	2 ^{1/8}	54	3 ^{1/8}	79.4		
24"	A	32	812.8	36	914	36	914	37	940	41	1041	46	1168		
	b	1 ^{7/8}	47.6	2 ^{3/4}	69.8	3	76.2	4	102	5 ^{1/2}	140	8	203		
	D ₂	24 ^{1/4}	692.2	27 ^{1/4}	692.2	27 ^{1/4}	692.2	27 ^{1/4}	692.2	27 ^{1/4}	692.2	27 ^{1/4}	692.2		
	D ₁	29 ^{1/2}	749.3	32	812.8	32	812.8	33	838.2	35 ^{1/2}	902	39	991		
	n	20	20	24	24	24	24	24	24	20	20	16	16		
	d	1 ^{3/8}	34.9	1 ^{5/8}	41.3	1 ^{7/8}	47.6	2	50.8	2 ^{5/8}	66.7	3 ^{5/8}	92.1		