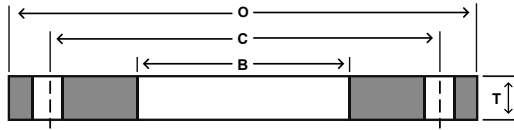


AWWA Standard Steel—Ring Flange (86psi*)

TABLE 2 CLASS B (BLINDS FROM TABLE 7)



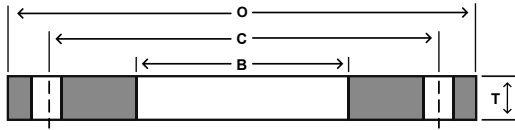
Nom Size	Thickness			Bore	Drilling			Weight	
	OD	Slip-On	Blind		Bolt Circle	Hole Dia	# of Holes	Slip-on	Blind
	O	T	T		C				
4	9.00	0.625	0.625	4.57	7.50	0.750	8	8	11
5	10.00	0.625	0.625	5.66	8.50	0.875	8	9	14
6	11.00	0.688	0.688	6.72	9.50	0.875	8	11	19
8	13.50	0.688	0.688	8.72	11.75	0.875	8	15	28
10	16.00	0.688	0.688	10.88	14.25	1.000	12	19	39
12	19.00	0.688	0.719	12.88	17.00	1.000	12	28	58
14	21.00	0.688	0.791	14.19	18.75	1.125	12	34	78
16	23.50	0.688	0.892	16.19	21.25	1.125	16	41	110
18	25.00	0.688	0.950	18.19	22.75	1.250	16	41	132
20	27.50	0.688	1.040	20.19	25.00	1.250	20	49	175
22	29.50	0.750	1.132	22.19	27.25	1.375	20	57	219
24	32.00	0.750	1.216	24.19	29.50	1.375	20	67	277
26	34.25	0.812	1.307	26.19	31.75	1.375	24	80	341
28	36.50	0.875	1.398	28.19	34.00	1.375	28	94	414
30	38.75	0.875	1.477	30.19	36.00	1.375	28	105	493
32	41.75	0.936	1.581	32.19	38.50	1.625	28	132	613
34	43.75	0.938	1.661	34.19	40.50	1.625	32	137	707
36	46.00	1.000	1.751	36.19	42.75	1.625	32	161	824
38	48.75	1.000	1.853	38.19	45.25	1.625	32	185	980
40	50.75	1.000	1.933	40.19	47.25	1.625	36	193	1108
42	53.00	1.125	2.023	42.19	49.50	1.625	36	234	1264
44	55.25	1.125	2.114	44.19	51.75	1.625	40	249	1436
46	57.25	1.125	2.194	46.19	53.75	1.625	40	260	1600
48	59.50	1.250	2.285	48.19	56.00	1.625	44	306	1800
50	61.75	1.250	2.377	50.19	58.25	1.875	44	317	2017
52	64.00	1.250	2.468	52.19	60.50	1.875	44	339	2249
54	66.25	1.375	2.559	54.19	62.75	1.875	44	397	2499
60	73.00	1.500	2.820	60.19	69.25	1.875	52	508	3344
66	80.00	1.625	3.092	66.19	76.00	1.875	52	664	4403
72	86.50	1.750	3.353	72.19	82.50	1.875	60	802	5582
78	93.00	2.000	.....	78.19	89.00	2.125	64	1000	.....
84	99.75	2.000	.....	84.19	95.50	2.125	64	1145	.....
90	106.50	2.250	.....	90.19	102.00	2.438	68	1404	.....
96	113.25	2.250	.....	96.19	108.50	2.438	68	1586	.....
102	120.00	2.500	.....	102.19	114.50	2.688	72	1912	.....
108	126.75	2.500	.....	108.19	120.75	2.688	72	2136	.....
114	133.50	2.750	.....	114.19	126.75	2.938	76	2525	.....
120	140.25	2.750	.....	120.19	132.75	2.938	76	2795	.....
126	147.00	3.000	.....	126.19	139.25	3.188	80	3252	.....
132	153.75	3.000	.....	132.19	145.75	3.188	80	3572	.....
138	160.50	3.250	.....	138.19	152.00	3.438	84	4101	.....
144	167.25	3.250	.....	144.19	158.25	3.438	84	4475	.....

DIMENSIONS ARE IN INCHES | WEIGHTS ARE IN POUNDS

NOTES: *PRESSURE RATING AT ATMOSPHERIC TEMPERATURE IS 86 PSI. THESE FLANGES HAVE THE SAME OD AND DRILLING AS ANSI/ASME B16.1 CLASS 125 CAST IRON FLANGES. IN SIZES 24" AND SMALLER, THEY ALSO MATCH ANSI/ASME B16.5 150-PSI STANDARD FOR STEEL FLANGES.

AWWA Standard Steel—Ring Flange (175–150psi*)

TABLE 2 CLASS D (BLINDS FROM TABLE 7)



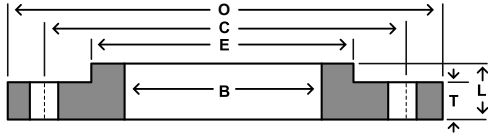
Nom Size	Thickness			Bore	Drilling			Weight	
	OD	Slip-On	Blind		Bolt Circle	Hole Dia	# of Holes	Slip-on	Blind
	O	T	T		B	C			
4	9.00	0.625	0.625	4.57	7.50	0.750	8	8	11
5	10.00	0.625	0.650	5.66	8.50	0.875	8	9	14
6	11.00	0.688	0.693	6.72	9.50	0.875	8	11	19
8	13.50	0.688	0.812	8.72	11.75	0.875	8	15	33
10	16.00	0.688	0.953	10.88	14.25	1.000	12	19	54
12	19.00	0.812	1.117	12.88	17.00	1.000	12	33	90
14	21.00	0.938	1.133	14.19	18.75	1.125	12	47	111
16	23.50	1.000	1.265	16.19	21.25	1.125	16	60	155
18	25.00	1.062	1.331	18.19	22.75	1.250	16	64	185
20	27.50	1.125	1.448	20.19	25.00	1.250	20	79	244
22	29.50	1.188	1.568	22.19	27.25	1.375	20	90	304
24	32.00	1.250	1.661	24.19	29.50	1.375	20	112	378
26	34.25	1.312	1.786	26.19	31.75	1.375	24	129	466
28	36.50	1.312	1.906	28.19	34.00	1.375	28	141	565
30	38.75	1.375	2.008	30.19	36.00	1.375	28	164	671
32	41.75	1.500	2.150	32.19	38.50	1.625	28	211	834
34	43.75	1.500	2.252	34.19	40.50	1.625	32	220	959
36	46.00	1.625	2.370	36.19	42.75	1.625	32	261	1116
38	48.75	1.625	2.506	38.19	45.25	1.625	32	301	1325
40	50.75	1.625	2.609	40.19	47.25	1.625	36	313	1438
42	53.00	1.750	2.729	42.19	49.50	1.625	36	364	1706
44	55.25	1.750	2.849	44.19	51.75	1.625	40	387	1935
46	57.25	1.750	2.952	46.19	53.75	1.625	40	404	2153
48	59.50	1.875	3.072	48.19	56.00	1.625	44	460	2420
50	61.75	2.000	3.196	50.19	58.25	1.875	44	507	2712
52	64.00	2.000	3.315	52.19	60.50	1.875	44	542	3021
54	66.25	2.125	3.435	54.19	62.75	1.875	44	614	3355
60	73.00	2.250	3.779	60.19	69.25	1.875	52	763	4481
66	80.00	2.500	4.136	66.19	76.00	1.875	52	1021	5890
72	86.50	2.625	4.480	72.19	82.50	1.875	60	1203	7458
78	93.00	2.750	.....	78.19	89.00	2.125	64	1374	.....
84	99.75	2.875	.....	84.19	95.50	2.125	64	1646	.....
90	106.50	3.000	.....	90.19	102.00	2.438	68	1872	.....
96	113.25	3.250	.....	96.19	108.50	2.438	68	2291	.....
102	120.00	3.250	.....	102.19	114.50	2.688	72	2485	.....
108	126.75	3.375	.....	108.19	120.75	2.688	72	2884	.....
114	133.50	3.500	.....	114.19	126.75	2.938	76	3214	.....
120	140.25	3.500	.....	120.19	132.75	2.938	76	3558	.....
126	147.00	3.750	.....	126.19	139.25	3.188	80	4065	.....
132	153.75	3.875	.....	132.19	145.75	3.188	80	4614	.....
138	160.50	4.000	.....	138.19	152.00	3.438	84	5047	.....
144	167.25	4.125	.....	144.19	158.25	3.438	84	5680	.....

DIMENSIONS ARE IN INCHES | WEIGHTS ARE IN POUNDS

NOTES: *PRESSURE RATING AT ATMOSPHERIC TEMPERATURE: SIZES 4-12" INCLUSIVE, 175 PSI; SIZES LARGER THAN 12", 150 PSI. THESE FLANGES HAVE THE SAME OD AND DRILLING AS ANSI/ASME B16.1 CLASS 125 CAST-IRON FLANGES. IN SIZES 24" AND SMALLER, THEY ALSO MATCH ANSI/ASME B16.5 150-PSI STANDARD FOR STEEL FLANGES.

AWWA Standard Steel—Hub Flange (175–150psi*)

TABLE 3 CLASS D



Nom Size	Drilling								
	OD	Thickness	Overall Thickness	Dia at Base	Bore	Bolt Circle	Hole Dia	# of Holes	Weight
	O	T	L	E	B	C			
4	9.00	0.500	0.875	5.312	4.57	7.50	0.750	8	7
5	10.00	0.562	1.250	6.312	5.66	8.50	0.875	8	9
6	11.00	0.562	1.250	7.562	6.72	9.50	0.875	8	11
8	13.50	0.562	1.250	9.688	8.72	11.75	0.875	8	15
10	16.00	0.688	1.250	12.000	10.88	14.25	1.000	12	22
12	19.00	0.688	1.250	14.375	12.88	17.00	1.000	12	33
14	21.00	0.750	1.250	15.750	14.19	18.75	1.125	12	43
16	23.50	0.750	1.250	18.000	16.19	21.25	1.125	16	52
18	25.00	0.750	1.250	19.875	18.19	22.75	1.250	16	52
20	27.50	0.750	1.250	22.000	20.19	25.00	1.250	20	61
22	29.50	1.000	1.750	24.250	22.19	27.25	1.375	20	92
24	32.00	1.000	1.750	26.125	24.19	29.50	1.375	20	105
26	34.25	1.000	1.750	28.500	26.19	31.75	1.375	24	119
28	36.50	1.000	1.750	30.500	28.19	34.00	1.375	28	130
30	38.75	1.000	1.750	32.500	30.19	36.00	1.375	28	144
32	41.75	1.125	1.750	34.750	32.19	38.50	1.625	28	182
34	43.75	1.125	1.750	36.750	34.19	40.50	1.625	32	191
36	46.00	1.125	1.750	38.750	36.19	42.75	1.625	32	207
38	48.75	1.125	1.750	40.750	38.19	45.25	1.625	32	237
40	50.75	1.125	1.750	43.000	40.19	47.25	1.625	36	249
42	53.00	1.250	1.750	45.000	42.19	49.50	1.625	36	287
44	55.25	1.250	2.250	47.000	44.19	51.75	1.625	40	334
46	57.25	1.250	2.250	49.000	46.19	53.75	1.625	40	348
48	59.50	1.375	2.500	51.000	48.19	56.00	1.625	44	407
50	61.75	1.375	2.500	53.000	50.19	58.25	1.875	44	421
52	64.00	1.375	2.500	55.000	52.19	60.50	1.875	44	448
54	66.25	1.375	2.500	57.000	54.19	62.75	1.875	44	475
60	73.00	1.500	2.750	63.000	60.19	69.25	1.875	52	605
66	80.00	1.500	2.750	69.000	66.19	76.00	1.875	52	718
72	86.50	1.500	2.750	75.000	72.19	82.50	1.875	60	803
78	93.00	1.750	3.000	81.250	78.19	89.00	2.125	64	1010
84	99.75	1.750	3.000	87.500	84.19	95.50	2.125	64	1160
90	106.50	2.000	3.250	93.750	90.19	102.00	2.438	68	1430
96	113.25	2.000	3.250	100.000	96.19	108.50	2.438	68	1618

DIMENSIONS ARE IN INCHES | WEIGHTS ARE IN POUNDS

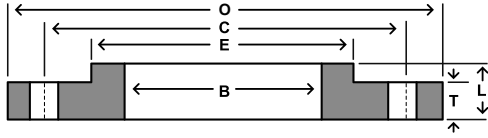
NOTES: HUB FLANGES ARE TO BE USED ON PIPE THAT HAS AN OD EQUAL TO THE NOMINAL PIPE SIZE IN THE FIRST COLUMN.

*PRESSURE RATING AT ATMOSPHERIC TEMPERATURE: SIZES 4-12" INCLUSIVE, 175 PSI; SIZES LARGER THAN 12", 150 PSI. THESE

FLANGES HAVE THE SAME OD AND DRILLING AS ANSI/ASME B16.1 CLASS 125 CAST-IRON FLANGES. IN SIZES 24" AND SMALLER, THEY ALSO MATCH ANSI/ASME B16.5 150-PSI STANDARD FOR STEEL FLANGES.

AWWA Standard Steel—Hub Flange (275psi*)

TABLE 4 CLASS E



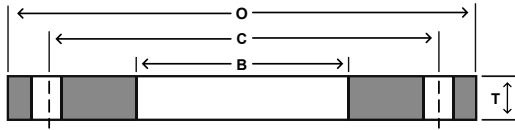
Nom Size	Drilling								
	OD	Thickness	Overall Thickness	Dia at Base	Bore	Bolt Circle	Hole Dia	# of Holes	Weight
	O	T	L	E	B	C			
4	9.00	0.938	1.312	5.312	4.57	7.50	0.750	8	13
5	10.00	0.938	1.438	6.438	5.66	8.50	0.875	8	14
6	11.00	1.000	1.562	7.562	6.72	9.50	0.875	8	17
8	13.50	1.125	1.750	9.688	8.72	11.75	0.875	8	28
10	16.00	1.188	1.938	12.000	10.88	14.25	1.000	12	37
12	19.00	1.250	2.188	14.375	12.88	17.00	1.000	12	59
14	21.00	1.375	2.250	15.750	14.19	18.75	1.125	12	78
16	23.50	1.438	2.500	18.000	16.19	21.25	1.125	16	101
18	25.00	1.562	2.688	19.875	18.19	22.75	1.250	16	110
20	27.50	1.688	2.875	22.000	20.19	25.00	1.250	20	139
22	29.50	1.812	3.125	24.000	22.19	27.25	1.375	20	162
24	32.00	1.875	3.250	26.125	24.19	29.50	1.375	20	197
26	34.25	2.000	3.375	28.500	26.19	31.75	1.375	24	235
28	36.50	2.062	3.438	30.750	28.19	34.00	1.375	28	269
30	38.75	2.125	3.500	32.750	30.19	36.00	1.375	28	303
32	41.75	2.250	3.625	35.000	32.19	38.50	1.625	28	375
34	43.75	2.312	3.688	37.000	34.19	40.50	1.625	32	401
36	46.00	2.375	3.750	39.250	36.19	42.75	1.625	32	452
38	48.75	2.375	3.750	41.750	38.19	45.25	1.625	32	528
40	50.75	2.500	3.875	43.750	40.19	47.25	1.625	36	573
42	53.00	2.625	4.000	46.000	42.19	49.50	1.625	36	648
44	55.25	2.625	4.000	48.000	44.19	51.75	1.625	40	688
46	57.25	2.688	4.062	50.000	46.19	53.75	1.625	40	733
48	59.50	2.750	4.125	52.250	48.19	56.00	1.625	44	799
50	61.75	2.750	4.125	54.250	50.19	58.25	1.875	44	827
52	64.00	2.875	4.250	56.500	52.19	60.50	1.875	44	922
54	66.25	3.000	4.375	58.750	54.19	62.75	1.875	44	1024
60	73.00	3.125	4.500	65.250	60.19	69.25	1.875	52	1253
66	80.00	3.375	4.875	71.500	66.19	76.00	1.875	52	1623
72	86.50	3.500	5.000	78.500	72.19	82.50	1.875	60	1922
78	93.00	3.875	5.375	84.500	78.19	89.00	2.125	64	2279
84	99.75	3.875	5.375	90.500	84.19	95.50	2.125	64	2586
90	106.50	4.250	5.750	96.750	90.19	102.00	2.438	68	3061
96	113.25	4.250	5.750	102.750	96.19	108.50	2.438	68	3432

DIMENSIONS ARE IN INCHES | WEIGHTS ARE IN POUNDS

NOTES: HUB FLANGES ARE TO BE USED ON PIPE THAT HAS AN OD EQUAL TO THE NOMINAL PIPE SIZE IN THE FIRST COLUMN. *PRESSURE RATING AT ATMOSPHERIC TEMPERATURE IS 275 PSI. THESE FLANGES HAVE THE SAME OD AND DRILLING AS ANSI/ASME B16.1 CLASS 125 CAST-IRON FLANGES. IN SIZES 24" AND SMALLER, THEY ALSO MATCH ANSI/ASME B16.5 CLASS 150 STANDARD FOR STEEL FLANGES. THE THICKNESS OF A CLASS 150 FLANGE FROM WHICH THE RAISED FACE HAS BEEN REMOVED SHALL BE NO LESS THAN DIMENSION T MINUS 0.06"

AWWA Standard Steel—Ring Flange (275psi*)

TABLE 5 CLASS E (BLINDS FROM TABLE 7)



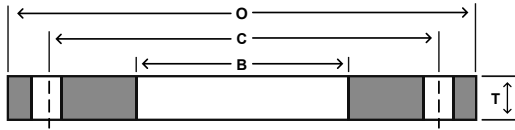
Nom Size	Thickness				Drilling			Weight	
	OD	Slip-On	Blind	Bore	Bolt Circle	Hole Dia	# of Holes	Slip-on	Blind
	O	T	T	B	C				
4	9.00	1.125	1.125	4.57	7.50	0.750	8	14	20
5	10.00	1.188	1.188	5.66	8.50	0.875	8	16	26
6	11.00	1.313	1.313	6.72	9.50	0.875	8	20	35
8	13.50	1.500	1.500	8.72	11.75	0.875	8	33	61
10	16.00	1.563	1.563	10.88	14.25	1.000	12	44	89
12	19.00	1.750	1.750	12.88	17.00	1.000	12	71	141
14	21.00	1.875	1.875	14.19	18.75	1.125	12	94	184
16	23.50	2.000	2.000	16.19	21.25	1.125	16	120	246
18	25.00	2.125	2.125	18.19	22.75	1.250	16	127	296
20	27.50	2.375	2.375	20.19	25.00	1.250	20	168	400
22	29.50	2.500	2.500	22.19	27.25	1.375	20	189	484
24	32.00	2.625	2.625	24.19	29.50	1.375	20	234	598
26	34.25	2.750	2.750	26.19	31.75	1.375	24	270	718
28	36.50	2.750	2.750	28.19	34.00	1.375	28	297	815
30	38.75	2.875	2.875	30.19	36.00	1.375	28	344	961
32	41.75	3.000	3.000	32.19	38.50	1.625	28	422	1163
34	43.75	3.000	3.050	34.19	40.50	1.625	32	441	1299
36	46.00	3.125	3.209	36.19	42.75	1.625	32	502	1511
38	48.75	3.125	3.394	38.19	45.25	1.625	32	580	1795
40	50.75	3.250	3.533	40.19	47.25	1.625	36	626	2025
42	53.00	3.375	3.695	42.19	49.50	1.625	36	701	2309
44	55.25	3.375	3.857	44.19	51.75	1.625	40	747	2715
46	57.25	3.438	3.997	46.19	53.75	1.625	40	794	2813
48	59.50	3.500	4.159	48.19	56.00	1.625	44	858	3276
50	61.75	3.500	4.327	50.19	58.25	1.875	44	887	3671
52	64.00	3.625	4.489	52.19	60.50	1.875	44	982	4091
54	66.25	3.750	4.651	54.19	62.75	1.875	44	1083	4542
60	73.00	3.875	5.116	60.19	69.25	1.875	52	1313	6066
66	80.00	4.250	5.601	66.19	76.00	1.875	52	1736	7976
72	86.50	4.375	6.066	72.19	82.50	1.875	60	2005	10099
78	93.00	4.750	.....	78.19	89.00	2.125	64	2374	.....
84	99.75	4.750	.....	84.19	95.50	2.125	64	2719	.....
90	106.50	5.125	.....	90.19	102.00	2.438	68	3197	.....
96	113.25	5.125	.....	96.19	108.50	2.438	68	3613	.....
102	120.00	5.500	.....	102.19	114.50	2.688	72	4206	.....
108	126.75	5.500	.....	108.19	120.75	2.688	72	4700	.....
114	133.50	5.875	.....	114.19	126.75	2.938	76	5395	.....
120	140.25	5.875	.....	120.19	132.75	2.938	76	5972	.....
126	147.00	6.250	.....	126.19	139.25	3.188	80	6775	.....
132	153.75	6.250	.....	132.19	145.75	3.188	80	7442	.....
138	160.50	6.750	.....	138.19	152.00	3.438	84	8517	.....
144	167.25	6.750	.....	144.19	158.25	3.438	84	9295	.....

DIMENSIONS ARE IN INCHES | WEIGHTS ARE IN POUNDS

NOTES: *PRESSURE RATING AT ATMOSPHERIC TEMPERATURE IS 275 PSI. THESE FLANGES HAVE THE SAME OD AND DRILLING AS ANSI/ASME B16.1 CLASS 125 CAST-IRON FLANGES. IN SIZES 24" AND SMALLER, THEY ALSO MATCH ANSI/ASME B16.5 150-PSI STANDARD FOR STEEL FLANGES.

AWWA Standard Steel—Ring Flange (300psi*)

TABLE 6 CLASS F (BLINDS FROM TABLE 7)



Nom Size	Thickness			Bore	Drilling			Weight	
	OD	Slip-On	Blind		Bolt Circle	Hole Dia	# of Holes	Slip-on	Blind
	O	T	T		C				
4	10.00	1.130	1.130	4.57	7.88	0.875	8	18	25
5	11.00	1.210	1.210	5.66	9.25	0.875	8	22	33
6	12.50	1.310	1.310	6.73	10.62	0.875	12	30	46
8	15.00	1.310	1.310	8.73	13.00	1.000	12	40	66
10	17.50	1.500	1.500	10.88	15.25	1.125	16	56	102
12	20.50	1.630	1.630	12.88	17.75	1.250	16	83	152
14	23.00	1.940	1.940	14.19	20.25	1.250	20	128	228
16	25.50	2.140	2.140	16.19	22.50	1.375	20	167	310
18	28.00	2.250	2.250	18.19	24.75	1.375	24	204	392
20	30.50	2.330	2.330	20.19	27.00	1.375	24	247	482
22	33.00	2.500	2.500	22.19	29.25	1.375	24	307	606
24	36.00	2.690	2.690	24.19	32.00	1.625	24	388	776
26	38.25	3.000	3.000	26.19	34.50	1.875	28	451	977
28	40.75	3.130	3.130	28.19	37.00	1.875	28	532	1156
30	43.00	3.150	3.166	30.19	39.25	1.875	28	586	1303
32	45.25	3.250	3.332	32.19	41.50	1.875	28	657	1518
34	47.50	3.380	3.475	34.19	43.50	1.875	28	741	1745
36	50.00	3.460	3.671	36.19	46.00	2.125	32	802	2042
38	52.25	3.500	3.815	38.19	48.00	2.125	32	874	2317
40	54.25	3.630	3.982	40.19	50.25	2.125	36	937	2608
42	57.00	3.810	4.171	42.19	52.75	2.125	36	1103	3015
44	59.25	4.000	4.338	44.19	55.00	2.125	36	1237	3388
46	61.50	4.130	4.505	46.19	57.25	2.125	40	1344	3791
48	65.00	4.500	4.781	48.19	60.75	2.125	40	1718	4494

DIMENSIONS ARE IN INCHES | WEIGHTS ARE IN POUNDS

NOTES: *PRESSURE RATING AT ATMOSPHERIC TEMPERATURE IS 300 PSI. THESE FLANGES HAVE THE SAME OD AND DRILLING AS ANSI/ASME B16.1 CLASS 250 CAST-IRON PIPE AND FLANGED FITTINGS.