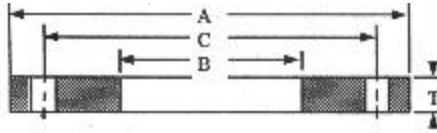


Formally Table 1 Class B

Table 2 Class B (Blinds from table 7)



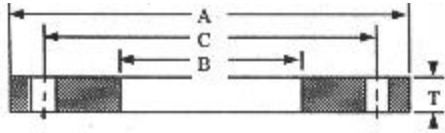
AWWA standard steel-ring flanges, Class B* (86 psi)

Nominal Pipe Size	OD of Flange (A)	ID of Flange (B)	Thickness of Flange (T)		Drilling Template			Weights	
			Slip-On	Blind	Number of Bolt Holes	Diam. of Bolt Holes	Diam. of Bolt Circle (C)	Slip-on	Blind
4	9.00	4.57	0.625	0.625	8	0.750	7.50	8	11
5	10.00	5.66	0.625	0.625	8	0.875	8.50	9	14
6	11.00	6.72	0.688	0.688	8	0.875	9.50	11	19
8	13.50	8.72	0.688	0.688	8	0.875	11.75	15	28
10	16.00	10.88	0.688	0.688	12	1.000	14.25	19	39
12	19.00	12.88	0.688	0.719	12	1.000	17.00	28	58
14	21.00	14.19	0.688	0.791	12	1.125	18.75	34	78
16	23.50	16.19	0.688	0.892	16	1.125	21.25	41	110
18	25.00	18.19	0.688	0.950	16	1.250	22.75	41	132
20	27.50	20.19	0.688	1.040	20	1.250	25.00	49	175
22	29.50	22.19	0.750	1.132	20	1.375	27.25	57	219
24	32.00	24.19	0.750	1.216	20	1.375	29.50	67	277
26	34.25	26.19	0.812	1.307	24	1.375	31.75	80	341
28	36.50	28.19	0.875	1.398	28	1.375	34.00	94	414
30	38.75	30.19	0.875	1.477	28	1.375	36.00	105	493
32	41.75	32.19	0.935	1.581	28	1.625	38.50	132	613
34	43.75	34.19	0.935	1.661	32	1.625	40.50	137	707
36	46.00	36.19	1.000	1.751	32	1.625	42.75	161	824
38	48.75	38.19	1.000	1.853	32	1.625	45.25	185	980
40	50.75	40.19	1.000	1.933	36	1.625	47.25	193	1108
42	53.00	42.19	1.125	2.023	36	1.625	49.50	234	1264
44	55.25	44.19	1.125	2.114	40	1.625	51.75	249	1436
46	57.25	46.19	1.125	2.194	40	1.625	53.75	260	1600
48	59.50	48.19	1.250	2.285	44	1.625	56.00	306	1800
50	61.75	50.19	1.250	2.377	44	1.875	58.25	317	2017
52	64.00	52.19	1.250	2.468	44	1.875	60.50	339	2249
54	66.25	54.19	1.375	2.559	44	1.875	62.75	397	2499
60	73.00	60.19	1.500	2.820	52	1.875	69.25	508	3344
66	80.00	66.19	1.625	3.092	52	1.875	76.00	664	4403
72	86.50	72.19	1.750	3.353	60	1.875	82.50	802	5582
78	93.00	78.19	2.000		64	2.125	89.00	1000	
84	99.75	84.19	2.000		64	2.125	95.50	1145	
90	106.50	90.19	2.250		68	2.438	102.00	1404	
96	113.25	96.19	2.250		68	2.438	108.50	1586	
102	120.00	102.19	2.500		72	2.688	114.50	1912	
108	126.75	108.19	2.500		72	2.688	120.75	2136	
114	133.50	114.19	2.750		76	2.938	126.75	2525	
120	140.25	120.19	2.750		76	2.938	132.75	2795	
126	147.00	126.19	3.000		80	3.188	139.25	3252	
132	153.75	132.19	3.000		80	3.188	145.75	3572	
138	160.50	138.19	3.250		84	3.438	152.00	4101	
144	167.25	144.19	3.250		84	3.438	158.25	4475	

Notes: All dimensions measured in inches. All weights in pounds and are approximate. *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 24in. and smaller they also match ANSI/ASME B16.5 150-psi standard for steel flanges.

Formally Table 1 Class D

Table 2 Class D (Blinds from table 7)



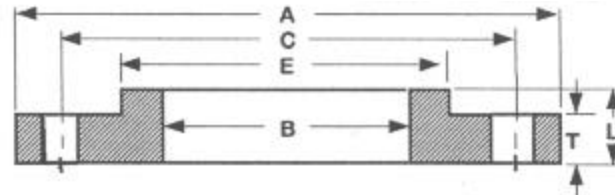
AWWA standard steel-ring flanges, Class D* (175-150psi)

Nominal Pipe Size	OD of Flange (A)	ID of Flange (B)	Thickness of Flange (T)		Drilling Template			Weights	
			Slip-On	Blind	Number of Bolt Holes	Diam. of Bolt Holes	Diam. of Bolt Circle (C)	Slip-on	Blind
4	9.00	4.57	0.625	0.625	8	0.750	7.50	8	11
5	10.00	5.66	0.625	0.650	8	0.875	8.50	9	14
6	11.00	6.72	0.688	0.693	8	0.875	9.50	11	19
8	13.50	8.72	0.688	0.812	8	0.875	11.75	15	33
10	16.00	10.88	0.688	0.953	12	1.000	14.25	19	54
12	19.00	12.88	0.812	1.117	12	1.000	17.00	33	90
14	21.00	14.19	0.933	1.133	12	1.125	18.75	47	111
16	23.50	16.19	1.000	1.265	16	1.125	21.25	60	155
18	25.00	18.19	1.062	1.331	16	1.250	22.75	64	185
20	27.50	20.19	1.125	1.448	20	1.250	25.00	79	244
22	29.50	22.19	1.188	1.568	20	1.375	27.25	90	304
24	32.00	24.19	1.250	1.661	20	1.375	29.50	112	378
26	34.25	26.19	1.312	1.786	24	1.375	31.75	129	466
28	36.50	28.19	1.312	1.906	28	1.375	34.00	141	565
30	38.75	30.19	1.375	2.008	28	1.375	36.00	164	671
32	41.75	32.19	1.500	2.150	28	1.625	38.50	211	834
34	43.75	34.19	1.500	2.252	32	1.625	40.50	220	959
36	46.00	36.19	1.625	2.370	32	1.625	42.75	261	1116
38	48.75	38.19	1.625	2.506	32	1.625	45.25	301	1325
40	50.75	40.19	1.625	2.509	36	1.625	47.25	313	1438
42	53.00	42.19	1.750	2.729	36	1.625	49.50	364	1706
44	55.25	44.19	1.750	2.849	40	1.625	51.75	387	1935
46	57.25	46.19	1.750	2.952	40	1.625	53.75	404	2153
48	59.50	48.19	1.875	3.072	44	1.625	56.00	460	2420
50	61.75	50.19	2.000	3.196	44	1.875	58.25	507	2712
52	64.00	52.19	2.000	3.315	44	1.875	60.50	542	3021
54	66.25	54.19	2.125	3.435	44	1.875	62.75	614	3355
60	73.00	60.19	2.250	3.779	52	1.875	69.25	763	4481
66	80.00	66.19	2.500	4.136	52	1.875	76.00	1021	5890
72	86.50	72.19	2.625	4.480	60	1.875	82.50	1203	7458
78	93.00	78.19	2.750		64	2.125	89.00	1374	
84	99.75	84.19	2.875		64	2.125	95.50	1646	
90	106.50	90.19	3.000		68	2.438	102.00	1872	
96	113.25	96.19	3.250		68	2.438	108.50	2291	
102	120.00	102.19	3.250		72	2.688	114.50	2485	
108	126.75	108.19	3.375		72	2.688	120.75	2884	
114	133.50	114.19	3.500		76	2.938	126.75	3214	
120	140.25	120.19	3.500		76	2.938	132.75	3558	
126	147.00	126.19	3.750		80	3.188	139.25	4065	
132	153.75	132.19	3.875		80	3.188	145.75	4614	
138	160.50	138.19	4.000		84	3.438	152.00	5047	
144	167.25	144.19	4.125		84	3.438	158.25	5680	

Notes: All dimensions measured in inches. All weights are in pounds and are approximate. *Pressure rating at atmospheric temperature: sizes 4-12 in. inclusive, 175 psi; sizes larger than 12 in., 150 psi. These flanges have the same OD and drilling as ANSI/ASME B16.1 class 125 cast-iron flanges. In sizes 24in. and smaller they also match ANSI/ASME B16.5 150-psi standard for steel flanges.

Formally Table 2 Class 3

Table 3 Class D (C-207-94)



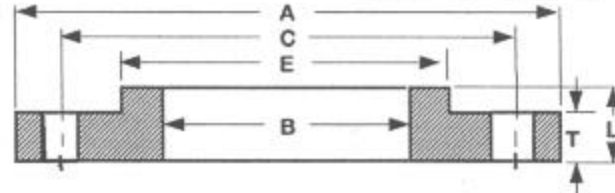
AWWA standard steel-hub flanges, Class D* (175-150 psi)

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

Notes: All dimensions measured in inches. All weights in pounds and are approximate. 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 in. inclusive, 175 psi; sizes larger than 12 in., 150 psi. These flanges have the same diameter and drilling as ANSI/ASME B16.1 class 125 cast-iron flanges. In sizes 24in. and smaller they also match ANSI/ASME B16.5 150-psi standard for steel flanges.

Formally Table 3 Class E

Table 4 Class E (C-207-94)

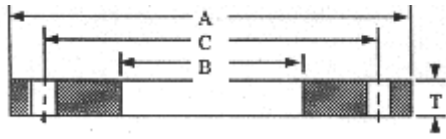


AWWA standard steel-hub flanges, Class E* (275psi)

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

Notes: All dimensions measured in inches. All weights in pounds and are approximate. 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 diameter and drilling as ANSI/ASME B16.1 class 125 cast-iron flanges. In sizes 24in. and smaller they also match ANSI/ASME B16.5 150-psi standard for steel flanges. The thickness of a 150-psi flange from which the raised face has been removed shall be no less than dimension T minus 0.06 in.

Formally Table 4 Class E



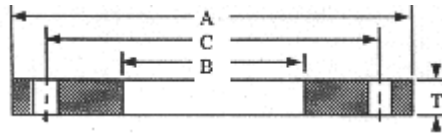
AWWA standard steel-ring flanges, Class E* (275psi)

Table 5 Class E (Blinds from table 7) (C-207-94)

Nominal Pipe Size	OD of Flange	ID of Flange	Thickness of Flange (T)		Drilling Template			Weights	
			Slip-On	Blind	Number of Bolt Holes	Diam. of Bolt Holes	Diam. of Bolt Circle	Slip-on	Blind
4	9.00	4.57	1.125	1.125	8	0.750	7.50	14	20
5	10.00	5.66	1.188	1.188	8	0.875	8.50	16	26
6	11.00	6.72	1.313	1.313	8	0.875	9.50	20	35
8	13.50	8.72	1.500	1.500	8	0.875	11.75	33	61
10	16.00	10.88	1.563	1.563	12	1.000	14.25	44	89
12	19.00	12.88	1.750	1.750	12	1.000	17.00	71	141
14	21.00	14.19	1.875	1.875	12	1.125	18.75	94	184
16	23.50	16.19	2.000	2.000	16	1.125	21.25	120	246
18	25.00	18.19	2.125	2.125	16	1.250	22.75	127	296
20	27.50	20.19	2.375	2.375	20	1.250	25.00	168	400
22	29.50	22.19	2.500	2.500	20	1.375	27.25	189	484
24	32.00	24.19	2.625	2.625	20	1.375	29.50	234	598
26	34.25	26.19	2.750	2.750	24	1.375	31.75	270	718
28	36.50	28.19	2.750	2.750	28	1.375	34.00	297	815
30	38.75	30.19	2.875	2.875	28	1.375	36.00	344	961
32	41.75	32.19	3.000	3.00	28	1.625	38.50	422	1163
34	43.75	34.19	3.000	3.050	32	1.625	40.50	441	1299
36	46.00	36.19	3.125	3.209	32	1.625	42.75	502	1511
38	48.75	38.19	3.125	3.394	32	1.625	45.25	580	1795
40	50.75	40.19	3.250	3.533	36	1.625	47.25	626	2025
42	53.00	42.19	3.375	3.695	36	1.625	49.50	701	2309
44	55.25	44.19	3.375	3.997	40	1.625	51.75	747	2715
46	57.25	46.19	3.438	3.857	40	1.625	53.75	794	2813
48	59.50	48.19	3.500	4.159	44	1.625	56.00	858	3276
50	61.75	50.19	3.500	4.327	44	1.875	58.25	887	3671
52	64.00	52.19	3.625	4.489	44	1.875	60.50	982	4091
54	66.25	54.19	3.750	4.651	44	1.875	62.75	1083	4542
60	73.00	60.19	3.875	5.116	52	1.875	69.25	1313	6066
66	80.00	66.19	4.250	5.601	52	1.875	76.00	1736	7976
72	86.50	72.19	4.375	6.066	60	1.875	82.50	2005	10099
78	93.00	78.19	4.750		64	2.125	89.00	2374	
84	99.75	84.19	4.750		64	2.125	95.50	2719	
90	106.50	90.19	5.125		68	2.438	102.00	3197	
96	113.25	96.19	5.125		68	2.438	108.50	3613	
102	120.00	102.19	5.500		72	2.688	114.50	4206	
108	126.75	108.19	5.500		72	2.688	120.75	4700	
114	133.50	114.19	5.875		76	2.938	126.75	5395	
120	140.25	120.19	5.875		76	2.938	132.75	5972	
126	147.00	126.19	6.250		80	3.188	139.25	6775	
132	153.75	132.19	6.250		80	3.188	145.75	7442	
138	160.50	138.19	6.750		84	3.438	152.00	8517	
144	167.25	144.19	6.750		84	3.438	158.25	9295	

Notes: All dimensions measured in inches. All weights in pounds and are approximate. *Pressure rating at atmospheric temperature is 275 psi. These flanges have the same diameter and drilling as ANSI/ASME B16.1 class 125 cast-iron flanges. In sizes 24in. and smaller they also match ANSI/ASME B16.5 150-psi standard for steel flanges.

Formally Table 5 Class F



AWWA standard steel-ring flanges, Class F* (300psi)

Table 6 Class F (Blinds from table 7) (C-207-94)

Nominal Pipe Size	OD of Flange	ID of Flange	Thickness of Flange (T)		Drilling Template			Weights	
			Slip-On	Blind	Number of Bolt Holes	Diam. of Bolt Holes	Diam. of Bolt Circle	Slip-on	Blind
	(A)	(B)					(C)		
4	10.00	4.57	1.13	1.130	8	0.875	7.88	18	25
5	11.00	5.66	1.21	1.210	8	0.875	9.25	22	33
6	12.50	6.73	1.31	1.310	12	0.875	10.62	30	46
8	15.00	8.73	1.31	1.310	12	1.000	13.00	40	66
10	17.50	10.88	1.50	1.500	16	1.125	15.25	56	102
12	20.50	12.88	1.63	1.630	16	1.250	17.75	83	152
14	23.00	14.19	1.94	1.940	20	1.250	20.25	128	228
16	25.50	16.19	2.14	2.140	20	1.375	22.50	167	310
18	28.00	18.19	2.25	2.250	24	1.375	24.75	204	392
20	30.50	20.19	2.33	2.330	24	1.375	27.00	247	482
22	33.00	22.19	2.50	2.500	24	1.375	29.25	307	606
24	36.00	24.19	2.69	2.690	24	1.625	32.00	388	776
26	38.25	26.25	3.00	3.000	28	1.875	34.50	451	977
28	40.75	28.25	3.13	3.130	28	1.875	37.00	532	1156
30	43.00	30.25	3.15	3.166	28	1.875	39.25	586	1303
32	45.25	32.25	3.25	3.332	28	1.875	41.50	657	1518
34	47.50	34.25	3.38	3.475	28	1.875	43.50	741	1745
36	50.00	36.25	3.46	3.671	32	2.125	46.00	802	2042
38	52.25	38.25	3.50	3.815	32	2.125	48.00	874	2317
40	54.25	40.25	3.63	3.982	36	2.125	50.25	937	2608
42	57.00	42.25	3.81	4.171	36	2.125	52.75	1103	3015
44	59.25	44.25	4.00	4.338	36	2.125	55.00	1237	3388
46	61.50	46.25	4.13	4.505	40	2.125	57.25	1344	3791
48	65.00	48.25	4.50	4.781	40	2.125	60.75	1718	4494

Notes: All dimensions measured in inches. All weights in pounds and are approximate.

*Pressure rating at atmospheric temperature is 300 psi. These flanges have the same diameter and drilling as ANSI/ASME B16.1 class 250 cast iron pipe and flanged fittings.

Texas Flange 877-610-8924