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AWWA C228 Flange Catalog

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All Dimensions in Inches

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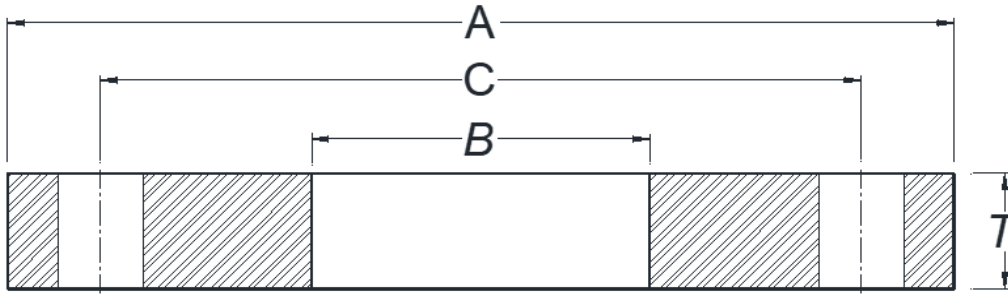
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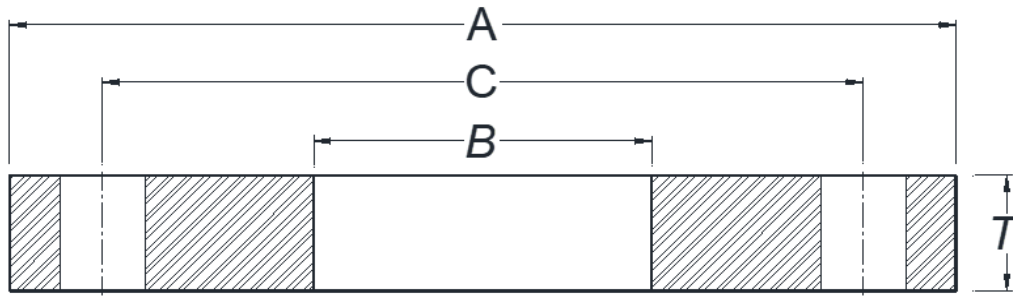
301 Brown Avenue
Sanford, FL 32771
Phone 407-323-0940
Fax 321-257-1005

AWWA C228 Stainless Steel Ring Flanges Class SA (50psi)



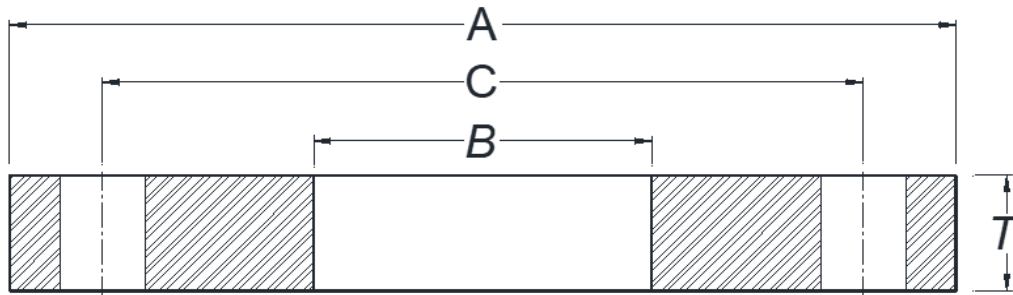
Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, A <i>in.</i>	Inside Diameter of Flange, B <i>in.</i> Pipe	Inside Diameter of Flange, B <i>in.</i> Tube	Number of Bolts	Drilling		Thickness of Flange
					Diameter of Bolt Circle C <i>in.</i>	Diameter of Bolt Holes <i>in.</i>	Class SA (T) <i>in.</i>
2	6.00	2.44	2.03	4	4.75	0.750	0.500
2 1/2	7.00	2.94	2.53	4	5.50	0.750	0.500
3	7.50	3.57	3.03	4	6.00	0.750	0.500
4	9.00	4.57	4.03	8	7.50	0.750	0.500
5	10.00	5.66	5.03	8	8.50	0.875	0.500
6	11.00	6.72	6.03	8	9.50	0.875	0.500
8	13.50	8.72	8.03	8	11.75	0.875	0.500
10	16.00	10.88	10.03	12	14.25	1.000	0.625
12	19.00	12.88	12.06	12	17.00	1.000	0.625
14	21.00	14.19	14.19	12	18.75	1.125	0.625
16	23.50	16.19	16.19	16	21.25	1.125	USE CLASS SB
18	25.00	18.19	18.19	16	22.75	1.250	
20	27.50	20.19	20.19	20	25.00	1.250	
22	29.50	22.19		20	27.25	1.375	
24	32.00	24.19	24.16	20	29.50	1.375	
26	34.25	26.25		24	31.75	1.375	
28	36.50	28.25		28	34.00	1.375	
30	38.75	30.25	30.25	28	36.00	1.375	
32	41.75	32.25		28	38.50	1.625	
34	43.75	34.25		32	40.50	1.625	
36	46.00	36.25	36.25	32	42.75	1.625	
38	48.75	38.25		32	45.25	1.625	
40	50.75	40.25		36	47.25	1.625	
42	53.00	42.25		36	49.50	1.625	
44	55.25	44.25		40	51.75	1.625	

AWWA C228 Stainless Steel Ring Flanges Class SA (50psi)



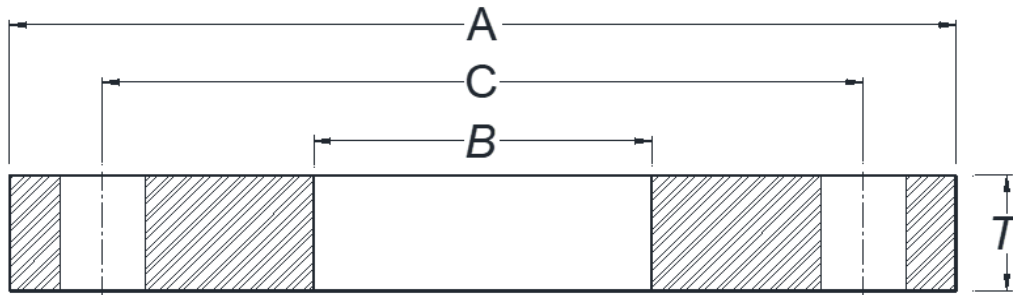
Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, A <i>in.</i>	Inside Diameter of Flange, B <i>in.</i> Pipe	Inside Diameter of Flange, B <i>in.</i> Tube	Number of Bolts	Drilling		Thickness of Flange
					Diameter of Bolt Circle C <i>in.</i>	Diameter of Bolt Holes <i>in.</i>	Class SA (T) <i>in.</i>
46	57.25	46.25		40	53.75	1.625	USE CLASS SB
48	59.50	48.25		44	56.00	1.625	
50	61.75	50.25		44	58.25	1.875	
52	64.00	52.25		44	60.50	1.875	
54	66.25	54.25		44	62.75	1.875	
60	73.00	60.25		52	69.25	1.875	
66	80.00	66.25		52	76.00	1.875	
72	86.50	72.25		60	82.50	1.875	

AWWA C228 Stainless Steel Ring Flanges Class SB (86psi)



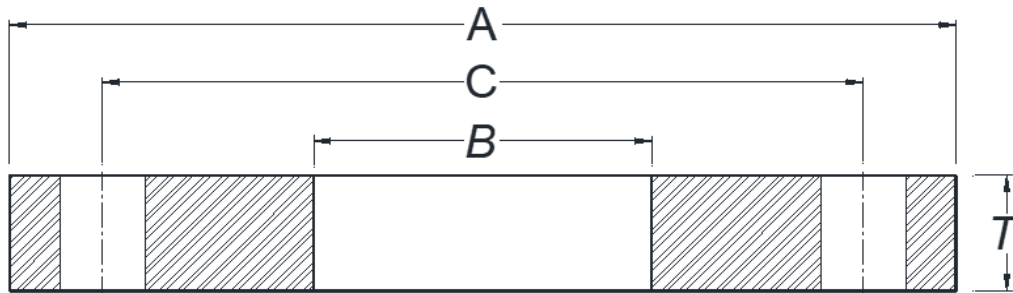
Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, A <i>in.</i>	Inside Diameter of Flange, B <i>in.</i> Pipe	Inside Diameter of Flange, B <i>in.</i> Tube	Number of Bolts	Drilling		Thickness of Flange
					Diameter of Bolt Circle C <i>in.</i>	Diameter of Bolt Holes <i>in.</i>	Class SB (T) <i>in.</i>
2	6.00	2.44	2.03	4	4.75	0.750	0.625
2 1/2	7.00	2.94	2.53	4	5.50	0.750	0.625
3	7.50	3.57	3.03	4	6.00	0.750	0.625
4	9.00	4.57	4.03	8	7.50	0.750	0.625
5	10.00	5.66	5.03	8	8.50	0.875	0.625
6	11.00	6.72	6.03	8	9.50	0.875	0.688
8	13.50	8.72	8.03	8	11.75	0.875	0.688
10	16.00	10.88	10.03	12	14.25	1.000	0.688
12	19.00	12.88	12.06	12	17.00	1.000	0.812
14	21.00	14.19	14.19	12	18.75	1.125	0.938
16	23.50	16.19	16.19	16	21.25	1.125	1.000
18	25.00	18.19	18.19	16	22.75	1.250	1.062
20	27.50	20.19	20.19	20	25.00	1.250	1.125
22	29.50	22.19		20	27.25	1.375	1.188
24	32.00	24.19	24.16	20	29.50	1.375	1.250
26	34.25	26.25		24	31.75	1.375	1.312
28	36.50	28.25		28	34.00	1.375	1.312
30	38.75	30.25	30.25	28	36.00	1.375	1.375
32	41.75	32.25		28	38.50	1.625	1.500
34	43.75	34.25		32	40.50	1.625	1.500
36	46.00	36.25	36.25	32	42.75	1.625	1.625
38	48.75	38.25		32	45.25	1.625	1.625
40	50.75	40.25		36	47.25	1.625	1.625
42	53.00	42.25		36	49.50	1.625	1.750
44	55.25	44.25		40	51.75	1.625	1.750

AWWA C228 Stainless Steel Ring Flanges Class SB (86psi)



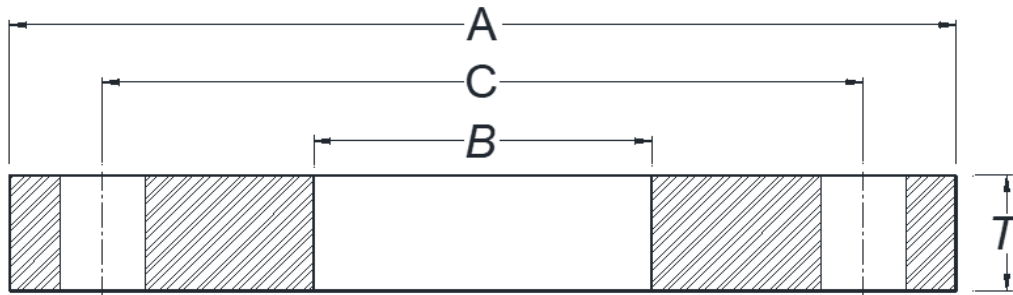
Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, A <i>in.</i>	Inside Diameter of Flange, B <i>in.</i> Pipe	Inside Diameter of Flange, B <i>in.</i> Tube	Number of Bolts	Drilling		Thickness of Flange
					Diameter of Bolt Circle C <i>in.</i>	Diameter of Bolt Holes <i>in.</i>	Class SB (T) <i>in.</i>
46	57.25	46.25		40	53.75	1.625	1.750
48	59.50	48.25		44	56.00	1.625	1.875
50	61.75	50.25		44	58.25	1.875	2.000
52	64.00	52.25		44	60.50	1.875	2.000
54	66.25	54.25		44	62.75	1.875	2.125
60	73.00	60.25		52	69.25	1.875	2.250
66	80.00	66.25		52	76.00	1.875	2.500
72	86.50	72.25		60	82.50	1.875	2.625

AWWA C228 Stainless Steel Ring Flanges Class SD (175 psi ≤ 12 in. - 150 psi > 12 in.)



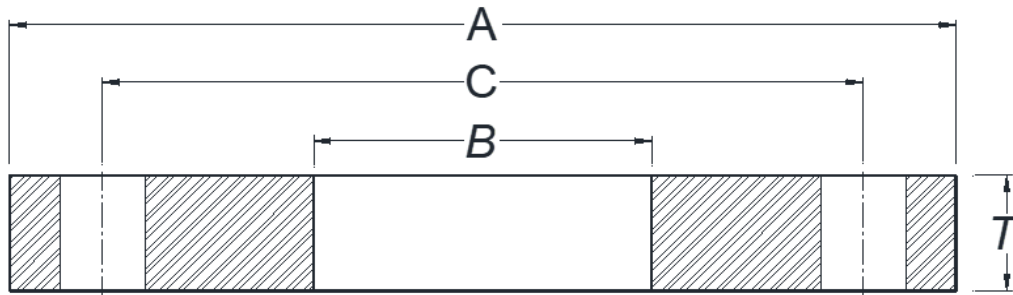
Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, A <i>in.</i>	Inside Diameter of Flange, B <i>in.</i> Pipe	Inside Diameter of Flange, B <i>in.</i> Tube	Number of Bolts	Drilling		Thickness of Flange
					Diameter of Bolt Circle C <i>in.</i>	Diameter of Bolt Holes <i>in.</i>	Class SD (T) <i>in.</i>
2	6.00	2.44	2.03	4	4.75	0.750	0.625
2 1/2	7.00	2.94	2.53	4	5.50	0.750	0.625
3	7.50	3.57	3.03	4	6.00	0.750	0.625
4	9.00	4.57	4.03	8	7.50	0.750	0.625
5	10.00	5.66	5.03	8	8.50	0.875	0.625
6	11.00	6.72	6.03	8	9.50	0.875	0.688
8	13.50	8.72	8.03	8	11.75	0.875	0.688
10	16.00	10.88	10.03	12	14.25	1.000	0.688
12	19.00	12.88	12.06	12	17.00	1.000	0.812
14	21.00	14.19	14.19	12	18.75	1.125	0.938
16	23.50	16.19	16.19	16	21.25	1.125	1.000
18	25.00	18.19	18.19	16	22.75	1.250	1.062
20	27.50	20.19	20.19	20	25.00	1.250	1.125
22	29.50	22.19		20	27.25	1.375	1.188
24	32.00	24.19	24.16	20	29.50	1.375	1.250
26	34.25	26.25		24	31.75	1.375	1.312
28	36.50	28.25		28	34.00	1.375	1.312
30	38.75	30.25	30.25	28	36.00	1.375	1.375
32	41.75	32.25		28	38.50	1.625	1.500
34	43.75	34.25		32	40.50	1.625	1.500
36	46.00	36.25	36.25	32	42.75	1.625	1.625
38	48.75	38.25		32	45.25	1.625	1.625
40	50.75	40.25		36	47.25	1.625	1.625
42	53.00	42.25		36	49.50	1.625	1.750
44	55.25	44.25		40	51.75	1.625	1.750

AWWA C228 Stainless Steel Ring Flanges Class SD (175 psi ≤ 12 in. - 150 psi > 12 in.)



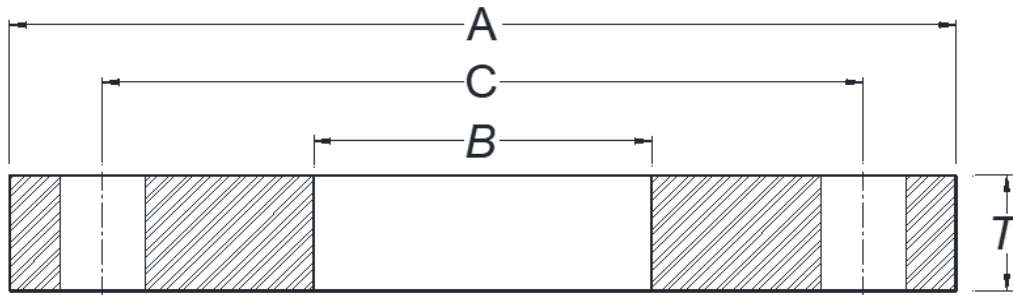
Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, A <i>in.</i>	Inside Diameter of Flange, B <i>in.</i> Pipe	Inside Diameter of Flange, B <i>in.</i> Tube	Number of Bolts	Drilling		Thickness of Flange
					Diameter of Bolt Circle C <i>in.</i>	Diameter of Bolt Holes <i>in.</i>	Class SD (T) <i>in.</i>
46	57.25	46.25		40	53.75	1.625	1.750
48	59.50	48.25		44	56.00	1.625	1.875
50	61.75	50.25		44	58.25	1.875	2.000
52	64.00	52.25		44	60.50	1.875	2.000
54	66.25	54.25		44	62.75	1.875	2.125
60	73.00	60.25		52	69.25	1.875	2.250
66	80.00	66.25		52	76.00	1.875	2.500
72	86.50	72.25		60	82.50	1.875	2.625

AWWA C228 Stainless Steel Ring Flanges Class SE (275psi)



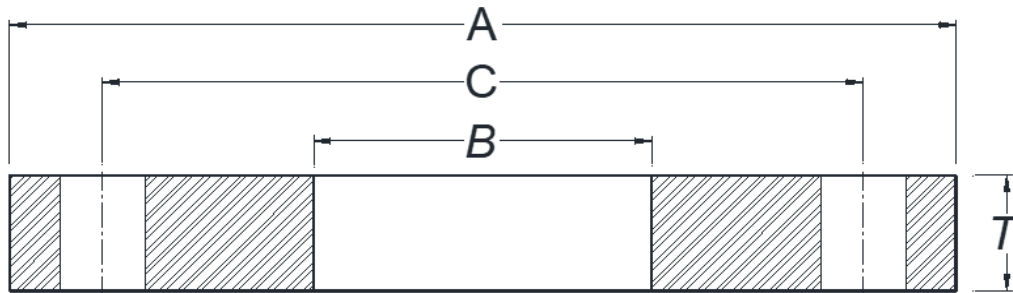
Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, A <i>in.</i>	Inside Diameter of Flange, B <i>in.</i> Pipe	Inside Diameter of Flange, B <i>in.</i> Tube	Number of Bolts	Drilling		Thickness of Flange
					Diameter of Bolt Circle C <i>in.</i>	Diameter of Bolt Holes <i>in.</i>	Class SE (T) <i>in.</i>
2	6.00	2.44	2.03	4	4.75	0.750	1.125
2 1/2	7.00	2.94	2.53	4	5.50	0.750	1.125
3	7.50	3.57	3.03	4	6.00	0.750	1.125
4	9.00	4.57	4.03	8	7.50	0.750	1.125
5	10.00	5.66	5.03	8	8.50	0.875	1.188
6	11.00	6.72	6.03	8	9.50	0.875	1.313
8	13.50	8.72	8.03	8	11.75	0.875	1.500
10	16.00	10.88	10.03	12	14.25	1.000	1.563
12	19.00	12.88	12.06	12	17.00	1.000	1.750
14	21.00	14.19	14.19	12	18.75	1.125	1.875
16	23.50	16.19	16.19	16	21.25	1.125	2.000
18	25.00	18.19	18.19	16	22.75	1.250	2.125
20	27.50	20.19	20.19	20	25.00	1.250	2.375
22	29.50	22.19		20	27.25	1.375	2.500
24	32.00	24.19	24.16	20	29.50	1.375	2.625
26	34.25	26.25		24	31.75	1.375	2.750
28	36.50	28.25		28	34.00	1.375	2.750
30	38.75	30.25	30.25	28	36.00	1.375	2.875
32	41.75	32.25		28	38.50	1.625	3.000
34	43.75	34.25		32	40.50	1.625	3.000
36	46.00	36.25	36.25	32	42.75	1.625	3.125
38	48.75	38.25		32	45.25	1.625	3.125
40	50.75	40.25		36	47.25	1.625	3.250
42	53.00	42.25		36	49.50	1.625	3.375
44	55.25	44.25		40	51.75	1.625	3.375

AWWA C228 Stainless Steel Ring Flanges Class SE (275psi)



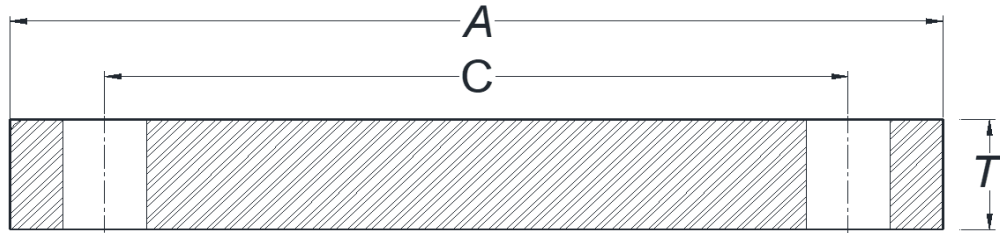
Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, <i>A in.</i>	Inside Diameter of Flange, <i>B in.</i>	Inside Diameter of Flange, <i>B in.</i>	Number of Bolts	Drilling		Thickness of Flange
					Diameter of Bolt Circle <i>C in.</i>	Diameter of Bolt Holes <i>in.</i>	Class SE (T) <i>in.</i>
46	57.25	46.25		40	53.75	1.625	3.438
48	59.50	48.25		44	56.00	1.625	3.500
50	61.75	50.25		44	58.25	1.875	3.500
52	64.00	52.25		44	60.50	1.875	3.625
54	66.25	54.25		44	62.75	1.875	3.750
60	73.00	60.25		52	69.25	1.875	3.875
66	80.00	66.25		52	76.00	1.875	4.250
72	86.50	72.25		60	82.50	1.875	4.375

AWWA C228 Stainless Steel Ring Flanges Class SF (300psi)



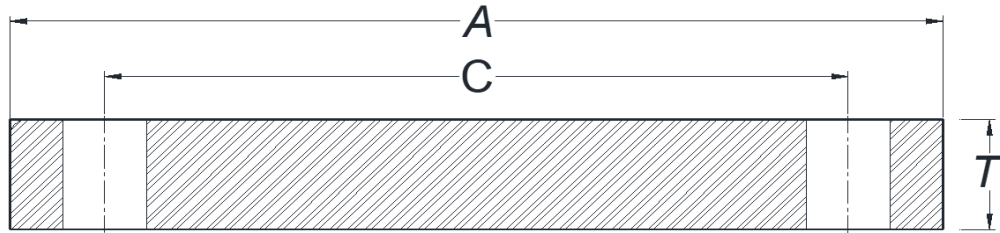
Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, A <i>in.</i>	Inside Diameter of Flange, B <i>in.</i> Pipe	Inside Diameter of Flange, B <i>in.</i> Tube	Number of Bolts	Drilling		Thickness of Flange
					Diameter of Bolt Circle C <i>in.</i>	Diameter of Bolt Holes <i>in.</i>	Class SF (T) <i>in.</i>
4	10.00	4.57	4.03	8	7.88	0.875	1.13
5	11.00	5.66	5.03	8	9.25	0.875	1.21
6	12.50	6.73	6.03	12	10.62	0.875	1.31
8	15.00	8.73	8.03	12	13.00	1.000	1.31
10	17.50	10.88	10.03	16	15.25	1.125	1.50
12	20.50	12.88	12.06	16	17.75	1.250	1.63
14	23.00	14.19	14.19	20	20.25	1.250	1.94
16	25.50	16.19	16.19	20	22.50	1.375	2.14
18	28.00	18.19	18.19	24	24.75	1.375	2.25
20	30.50	20.19	20.19	24	27.00	1.375	2.33
22	33.00	22.19		24	29.25	1.375	2.50
24	36.00	24.19	24.19	24	32.00	1.625	2.69
26	38.25	26.25		28	34.50	1.875	3.00
28	40.75	28.25		28	37.00	1.875	3.13
30	43.00	30.25	30.25	28	39.25	1.875	3.15
32	45.25	32.25		28	41.50	1.875	3.25
34	47.50	34.25		28	43.50	1.875	3.38
36	50.00	36.25	36.25	32	46.00	2.125	3.46
38	52.25	38.25		32	48.00	2.125	3.50
40	54.25	40.25		36	50.25	2.125	3.63
42	57.00	42.25		36	52.75	2.125	3.81
44	59.25	44.25		36	55.00	2.125	4.00
46	61.50	46.25		40	57.25	2.125	4.13
48	65.00	48.25		40	60.75	2.125	4.50

AWWA C228 Stainless Blind Thickness Class SA (50psi), Class SB (86 psi), Class SD (175 psi ≤ 12 in. - 150 psi > 12 in.), Class SE (275 psi) and Class SF (300 psi)



Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, A <i>in.</i>	Diameter of Bolt Circle C <i>in.</i>	Class SA 50 psi T <i>in.</i>	Class SB 86 psi T <i>in.</i>	Class SD 150 psi T <i>in.</i>	Class SE 275 psi T <i>in.</i>	Class SF 300 psi T <i>in.</i>
2	6.00	4.75	0.50	N/A	N/A	N/A	N/A
2 1/2	7.00	5.50	0.50	N/A	N/A	N/A	N/A
3	7.50	6.00	0.50	N/A	N/A	N/A	N/A
4	9.00	7.50	0.50	0.625	0.625	1.125	1.13
5	10.00	8.50	0.50	0.625	0.650	1.188	1.210
6	11.00	9.50	0.50	0.688	0.693	1.313	1.310
8	13.50	11.75	0.50	0.688	0.813	1.500	1.310
10	16.00	14.25	USE CLASS SB	0.688	0.953	1.563	1.500
12	19.00	17.00		0.719	1.117	1.750	1.630
14	21.00	18.75		0.791	1.133	1.875	1.940
16	23.50	21.25		0.892	1.265	2.000	2.140
18	25.00	22.75		0.950	1.331	2.125	2.250
20	27.50	25.00		1.040	1.448	2.375	2.330
22	29.50	27.25		1.132	1.568	2.500	2.500
24	32.00	29.50		1.216	1.661	2.625	2.690
26	34.25	31.75		1.307	1.786	2.750	3.000
28	36.50	34.00		1.398	1.906	2.750	3.130
30	38.75	36.00		1.477	2.008	2.875	3.166
32	41.75	38.50		1.581	2.150	3.000	3.332
34	43.75	40.50		1.661	2.252	3.050	3.475
36	46.00	42.75		1.751	2.370	3.209	3.671
38	48.75	45.25		1.853	2.506	3.394	3.815
40	50.75	47.25		1.933	2.609	3.533	3.982
42	53.00	49.50		2.023	2.729	3.695	0.171
44	55.25	51.75		2.114	2.849	3.857	4.338
46	57.25	53.75	2.194	2.952	3.997	4.505	
48	59.50	56.00	2.285	3.072	4.159	4.781	
50	61.75	58.25	2.377	3.196	4.327		

AWWA C228 Stainless Blind Thickness Class SA (50psi), Class SB (86 psi), Class SD (175 psi ≤ 12 in. - 150 psi > 12 in.), Class SE (275 psi) and Class SF (300 psi)



Nominal Pipe Size <i>in.</i>	Outside Diameter of Flange, A <i>in.</i>	Diameter of Bolt Circle C <i>in.</i>	Class SA 50 psi T <i>in.</i>	Class SB 86 psi T <i>in.</i>	Class SD 150 psi T <i>in.</i>	Class SE 275 psi T <i>in.</i>	Class SF 300 psi T <i>in.</i>
52	64.00	60.50	USE CLASS SB	2.468	3.315	4.489	
54	66.25	62.75		2.559	3.435	4.651	
60	73.00	69.25		2.820	3.779	5.116	
66	80.00	76.00		3.092	4.136	5.601	
72	86.50	82.50		3.353	4.480	6.066	

AWWA C228 Stainless Steel Ring Flange Tolerances

		Tolerance
Outside Diameter	NPS 2" - 72"	± 0.12"
Inside Diameter	NPS 2" - 72"	+ .060" / -0.00"
Overall Length	NPS 2" - 72"	+0.12" / - 0.19"
Flange Thickness	NPS ≤ 18"	+ 0.12" / -0.00"
	NPS ≥ 20"	+ 0.19" / -0.00"
Bolt Circle Diameter	NPS 2" - 72"	± 0.06"
Center to Center of Adjacent Bolt Holes	NPS 2" - 72"	± 0.03"
Concentricity Between Bolt Circle Diameter and Machined Face Diameter	NPS 2" - 72"	± 0.06"