

AWWA Flange

AWWA Flange Standards differ from ANSI (American National Standards Institute) and ASME (American Society of Mechanical Engineers) certifications in a variety of ways, the most important being their specificity: AWWA standards evaluate properties that particularly affect potable water use, as opposed to broader industrial flange applications.

American Water Works Association (AWWA) is an international non-profit, scientific and educational association founded to improve water quality and supply. Established in 1881, it has a membership (as of 2012) of around 50,000 members worldwide.



AWWA Standards

With over 150 Standards, AWWA supports a full range of water supply practices, equipment, and components. In addition to AWWA Flange Standards, waterworks specialists will find AWWA support covering:

- Water treatment chemicals
- Filtration materials
- Meters and measures
- Disinfection practices
- Valves
- Storage tanks of all sizes
- Utility management practices
- Pumps
- Pipe and Fittings



Material Grades and Performance

The AWWA Standards program covers pipes, flanges, and fittings in all manner of materials, including:

- Plastic
- Ductile iron
- Steel and stainless steel
- Concrete
- Asbestos-cement



AWWA C207 does not require a specific grade of steel, so long as the flange meets minimum standards for physical and chemical properties. These properties include:

- .05% Sulfur (maximum)
- .04% Phosphorus (maximum)
- .29% Carbon (maximum)
- 50,000 psi Tensile (minimum)
- 32,000 psi Yield (minimum)





AWWA Vs. ANSI Flange Standards

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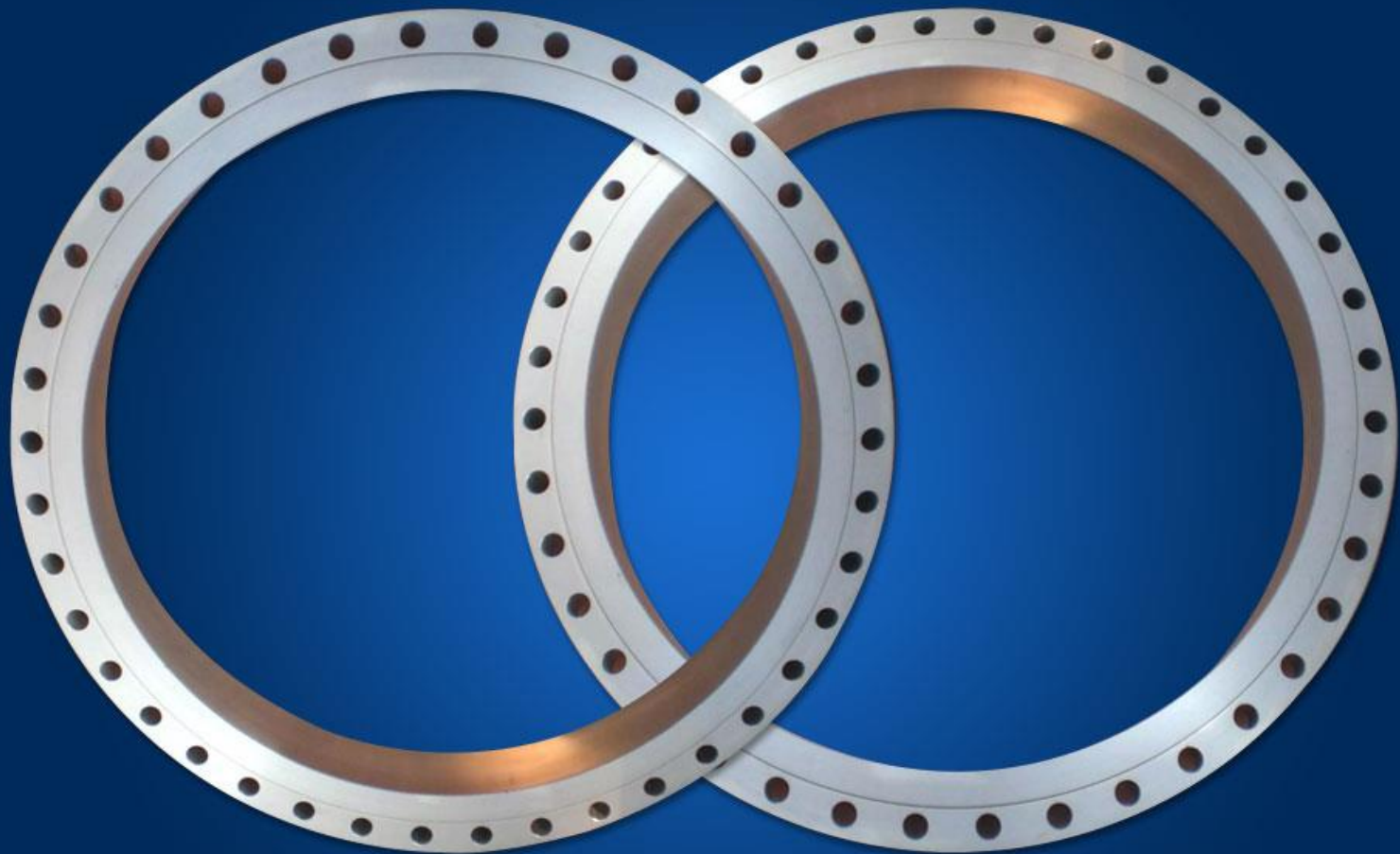


ANSI covers numbered class flanges from 150 to 2500, and AWWA standards encompass lettered flange classes B, E, F, and the commonly used class D connection. AWWA provides ratings for a much broader range of nominal pipe sizes (3" -144") than ANSI provides (1/2" -24").

Finally, ANSI and AWWA flange standards differ in the breadth of applications discussed. ANSI includes information for welded auxiliary connections and tapping, while AWWA does not address those installations. Also, the AWWA standard only encompasses ring, hub type, blind flanges, and threaded iron flanges while the ANSI standard includes all flange types.

This discussion on AWWA flange standards and ANSI flange standards is based on information from ANSI/AWWA C115/A21.15-99: "American National Standard for Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges", ANSI/AWWA C207-94: "AWWA Standard for Steel Pipe Flanges for Waterworks Service-Sizes 4 In. Through 144 In.", and ANSI B16.5-1981: "Pipe Flanges and Flanged Fittings". Waterworks Service-Sizes 4 In. Through 144 In.", and ANSI B16.5-1981: "Pipe Flanges and Flanged Fittings".





AWWA C207 Flanges

AWWA C207 steel flanges are usually of a mild carbon steel or stainless variant and are most often either of the ring slip on or blind disc style. Due to their intended design, they do not have ring joint or raised faces, and are typically sealed with rubber gaskets. Due to their cost and weight compared to other flange types, they are also becoming more popular with project work for structural steel types which require mating or filling a gap between existing flanges.

More Specifically, the American Water Works Association has published specification C207 to provide a standard for carbon steel rings and blinds (and formerly, also hubs). The OD and bolt pattern matches that of B16.1 class 125 flanges. They will also match B16.5 class 150 flanges up to 24" nominal pipe



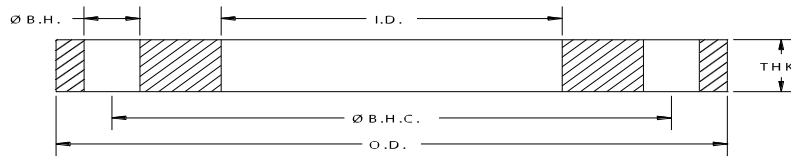
size and B16.47 Series A up to 60" NPS. The main dimensional difference is thickness and the lack of a raised face or hub (except in legacy systems).

AWWA is slightly more lenient in what kind of steel can be used as well. C207 limits Carbon, Phosphorus, and Sulfur contents to 0.35%, 0.04%, and 0.05%, respectively. The lower minimum yield and tensile strength requirements (32ksi and 50ksi, respectively) allows several commercially abundant grades of carbon steel such as A36, A516-70, A181-60, A105. All AWWA flanges that Texas Flange supplies will have MTRs showing actual physical and chemical properties for each heat lot. When you do not have to meet ASME code, but need a large flange, send us your requirement for AWWA Ring or Blind flanges!

The AWWA C207 is an American National Standard for steel pipe flanges for waterworks service, sizes 4" through 144" (100 mm through 3600 mm). The AWWA is the abbreviation of "American Water Works Association". The origin of AWWA C207 can be dated back to year 1942 when a paper proposing standards for slip-on steel-ring flanges for welding to steel water pipes. This standard was necessary because the lowest pressure ratings for steel flanges at that time were those having cold-water pressure ratings of 275 psi (1896 KPa). The ratings are far higher than those ordinarily needed for water service (150 psi / 1034 KPa) primary pressure rating.



AWWA Class "B" C207 Steel-Ring Flanges (86 psi)



API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	Weight Lbs
PF0400-B	4	9.00	4.57	7.50	0.750	8	0.625	7.7
PF0500-B	5	10.00	5.66	8.50	0.875	8	0.625	8.6
PF0600-B	6	11.00	6.72	9.50	0.875	8	0.688	10.7
PF0800-B	8	13.50	8.72	11.75	0.875	8	0.688	15.3
PF1000-B	10	16.00	10.88	14.25	1.000	12	0.688	19.2
PF1200-B	12	19.00	12.88	17.00	1.000	12	0.688	28.1
PF1400-B	14	21.00	14.19	18.75	1.125	12	0.688	34.4
PF1600-B	16	23.50	16.19	21.25	1.125	16	0.688	41.3
PF1800-B	18	25.00	18.19	22.75	1.250	16	0.688	41.2
PF2000-B	20	27.50	20.19	25.00	1.250	20	0.688	48.6
PF2200-B	22	29.50	22.19	27.25	1.375	20	0.750	56.8
PF2400-B	24	32.00	24.19	29.50	1.375	20	0.750	67.0
PF2600-B	26	34.25	26.19	31.75	1.375	24	0.812	79.3
PF2800-B	28	36.50	28.19	34.00	1.375	28	0.875	93.7
PF3000-B	30	38.75	30.19	36.00	1.375	28	0.875	103.9
PF3200-B	32	41.75	32.19	38.50	1.625	28	0.938	131.3
PF3400-B	34	43.75	34.19	40.50	1.625	32	0.938	137.0
PF3600-B	36	46.00	36.19	42.75	1.625	32	1.000	159.7
PF3800-B	38	48.75	38.19	45.25	1.625	32	1.000	184.5
PF4000-B	40	50.75	40.19	47.25	1.625	36	1.000	191.5
PF4200-B	42	53.00	42.19	49.50	1.625	36	1.125	232.5
PF4400-B	44	55.25	44.19	51.75	1.625	40	1.125	247.6
PF4600-B	46	57.25	46.19	53.75	1.625	40	1.125	258.6
PF4800-B	48	59.50	48.19	56.00	1.625	44	1.250	304.9
PF5000-B	50	61.75	50.19	58.25	1.875	44	1.250	315.2
PF5200-B	52	64.00	52.19	60.50	1.875	44	1.250	336.9
PF5400-B	54	66.25	54.19	62.75	1.875	44	1.375	395.1
PF6000-B	60	73.00	60.19	69.25	1.875	52	1.500	506.1
PF6600-B	66	80.00	66.19	76.00	1.875	52	1.625	661.1
PF7200-B	72	86.50	72.19	82.50	1.875	60	1.750	798.8
PF7800-B	78	93.00	78.19	89.00	2.125	64	2.000	995.6
PF8400-B	84	99.75	84.19	95.50	2.125	64	2.000	1140.7
PF9000-B	90	106.50	90.19	102.00	2.438	68	2.250	1408.8
PF9600-B	96	113.25	96.19	108.50	2.438	68	2.250	1591.2
PF10200-B	102	120.00	102.19	114.50	2.688	72	2.500	1918.7
PF10800-B	108	126.75	108.19	120.75	2.688	72	2.500	2142.6
PF11400-B	114	133.50	114.19	126.75	2.938	76	2.750	2534.1
PF12000-B	120	140.25	120.19	132.75	2.938	76	2.750	2803.9
PF12600-B	126	147.00	126.19	139.25	3.188	80	3.000	3263.6
PF13200-B	132	153.75	132.19	145.75	3.188	80	3.000	3583.5
PF14400-B	144	167.25	144.19	158.25	3.438	84	3.250	4489.5

Notes:

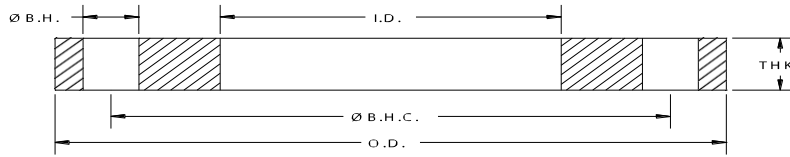
- Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- Meets ANSI class 150 pattern.
- For flanges in smaller sizes see page 4.2.

Pressure Ratings: 86psi at atmospheric temperature.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.



AWWA Class "D" C207 Steel-Ring Flanges (150-175 psi)



API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	Weight Lbs
PF0400-D	4	9.00	4.57	7.50	0.750	8	0.625	7.7
PF0500-D	5	10.00	5.66	8.50	0.875	8	0.625	8.6
PF0600-D	6	11.00	6.72	9.50	0.875	8	0.688	10.7
PF0800-D	8	13.50	8.72	11.75	0.875	8	0.688	15.3
PF1000-D	10	16.00	10.88	14.25	1.000	12	0.688	19.2
PF1200-D	12	19.00	12.88	17.00	1.000	12	0.812	33.1
PF1400-D	14	21.00	14.19	18.75	1.125	12	0.938	46.8
PF1600-D	16	23.50	16.19	21.25	1.125	16	1.000	60.1
PF1800-D	18	25.00	18.19	22.75	1.250	16	1.062	63.7
PF2000-D	20	27.50	20.19	25.00	1.250	20	1.125	79.5
PF2200-D	22	29.50	22.19	27.25	1.375	20	1.188	89.9
PF2400-D	24	32.00	24.19	29.50	1.375	20	1.250	111.6
PF2600-D	26	34.25	26.19	31.75	1.375	24	1.312	128.1
PF2800-D	28	36.50	28.19	34.00	1.375	28	1.312	140.6
PF3000-D	30	38.75	30.19	36.00	1.375	28	1.375	163.3
PF3200-D	32	41.75	32.19	38.50	1.625	28	1.500	210.0
PF3400-D	34	43.75	34.19	40.50	1.625	32	1.500	219.1
PF3600-D	36	46.00	36.19	42.75	1.625	32	1.625	259.4
PF3800-D	38	48.75	38.19	45.25	1.625	32	1.625	299.8
PF4000-D	40	50.75	40.19	47.25	1.625	36	1.625	311.1
PF4200-D	42	53.00	42.19	49.50	1.625	36	1.750	361.7
PF4400-D	44	55.25	44.19	51.75	1.625	40	1.750	385.1
PF4600-D	46	57.25	46.19	53.75	1.625	40	1.750	402.2
PF4800-D	48	59.50	48.19	56.00	1.625	44	1.875	457.3
PF5000-D	50	61.75	50.19	58.25	1.875	44	2.000	504.4
PF5200-D	52	64.00	52.19	60.50	1.875	44	2.000	539.1
PF5400-D	54	66.25	54.19	62.75	1.875	44	2.125	610.6
PF6000-D	60	73.00	60.19	69.25	1.875	52	2.250	759.1
PF6600-D	66	80.00	66.19	76.00	1.875	52	2.500	1017.0
PF7200-D	72	86.50	72.19	82.50	1.875	60	2.625	1198.2
PF7800-D	78	93.00	78.19	89.00	2.125	64	2.750	1368.9
PF8400-D	84	99.75	84.19	95.50	2.125	64	2.875	1639.7
PF9000-D	90	106.50	90.19	102.00	2.438	68	3.000	1878.2
PF9600-D	96	113.25	96.19	108.50	2.438	68	3.250	2298.4
PF10200-D	102	120.00	102.19	114.50	2.688	72	3.250	2494.3
PF10800-D	108	126.75	108.19	120.75	2.688	72	3.375	2892.5
PF11400-D	114	133.50	114.19	126.75	2.938	76	3.500	3225.2
PF12000-D	120	140.25	120.19	132.75	2.938	76	3.500	3568.6
PF12600-D	126	147.00	126.19	139.25	3.188	80	3.750	4079.5
PF13200-D	132	153.75	132.19	145.75	3.188	80	3.875	4628.6
PF14400-D	144	167.25	144.19	158.25	3.438	84	4.125	5698.3

Notes:

- Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- Meets ANSI class 150 pattern
- For flanges in smaller sizes see page 4.2.

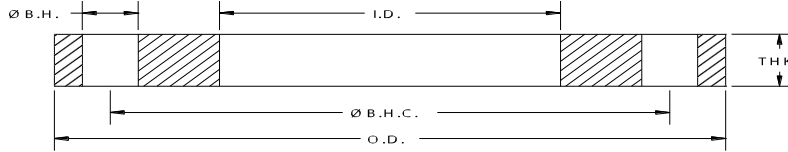
Pressure Ratings: 175psi (4" – 12") and 150psi (14" and larger) at atmospheric temperature. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.

www.sunnysteel.com

Tel: +8621-3378 0199 sales@sunnysteel.com



AWWA Class "D" C207 Steel-Ring Flanges for O.D. Tubing (150-175 psi)



API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	Weight Lbs
PF0400-D-16	4	9.00	4.06	7.50	0.750	8	0.625	8.5
PF0500-D-16	5	10.00	5.06	8.50	0.875	8	0.625	9.6
PF0600-D-16	6	11.00	6.09	9.50	0.875	8	0.688	12.0
PF0800-D-16	8	13.50	8.09	11.75	0.875	8	0.688	17.1
PF1000-D-16	10	16.00	10.12	14.25	1.000	12	0.688	22.0
PF1200-D-16	12	19.00	12.12	17.00	1.000	12	0.812	37.9

Notes:

- Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- Meets ANSI class 150 pattern.

Pressure Ratings: 175psi (4" – 12") 150psi (14" and larger) at atmospheric temperature. ALL

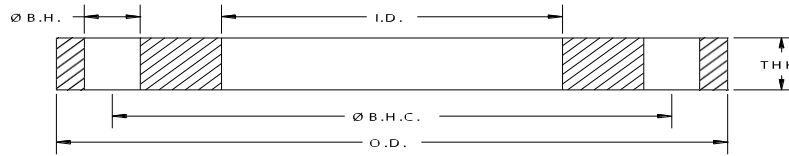
DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.



AWWA C207 Flange Class B Class D Class E AWWA Pipe Ring Flanges



AWWA Class "E" C207 Steel-Ring Flanges (275psi)



API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	Weight Lbs
PF0400-E	4	9.00	4.57	7.50	0.750	8	1.125	13.9
PF0500-E	5	10.00	5.66	8.50	0.875	8	1.188	16.3
PF0600-E	6	11.00	6.72	9.50	0.875	8	1.313	20.4
PF0800-E	8	13.50	8.72	11.75	0.875	8	1.500	33.4
PF1000-E	10	16.00	10.88	14.25	1.000	12	1.563	43.7
PF1200-E	12	19.00	12.88	17.00	1.000	12	1.750	71.4
PF1400-E	14	21.00	14.19	18.75	1.125	12	1.875	93.7
PF1600-E	16	23.50	16.19	21.25	1.125	16	2.000	120.2
PF1800-E	18	25.00	18.19	22.75	1.250	16	2.125	127.3
PF2000-E	20	27.50	20.19	25.00	1.250	20	2.375	167.8
PF2200-E	22	29.50	22.19	27.25	1.375	20	2.500	189.2
PF2400-E	24	32.00	24.19	29.50	1.375	20	2.625	234.3
PF2600-E	26	34.25	26.19	31.75	1.375	24	2.750	268.4
PF2800-E	28	36.50	28.19	34.00	1.375	28	2.750	294.5
PF3000-E	30	38.75	30.19	36.00	1.375	28	2.875	341.4
PF3200-E	32	41.75	32.19	38.50	1.625	28	3.000	420.0
PF3400-E	34	43.75	34.19	40.50	1.625	32	3.000	438.3
PF3600-E	36	46.00	36.19	42.75	1.625	32	3.125	498.9
PF3800-E	38	48.75	38.19	45.25	1.625	32	3.125	576.5
PF4000-E	40	50.75	40.19	47.25	1.625	36	3.250	622.3
PF4200-E	42	53.00	42.19	49.50	1.625	36	3.375	697.6
PF4400-E	44	55.25	44.19	51.75	1.625	40	3.375	742.7
PF4600-E	46	57.25	46.19	53.75	1.625	40	3.438	790.2
PF4800-E	48	59.50	48.19	56.00	1.625	44	3.500	853.6
PF5000-E	50	61.75	50.19	58.25	1.875	44	3.500	882.7
PF5200-E	52	64.00	52.19	60.50	1.875	44	3.625	977.1
PF5400-E	54	66.25	54.19	62.75	1.875	44	3.750	1077.6
PF6000-E	60	73.00	60.19	69.25	1.875	52	3.875	1307.4
PF6600-E	66	80.00	66.19	76.00	1.875	52	4.250	1729.0
PF7200-E	72	86.50	72.19	82.50	1.875	60	4.375	1997.0
PF7800-E	78	93.00	78.19	89.00	2.125	64	4.750	2364.5
PF8400-E	84	99.75	84.19	95.50	2.125	64	4.750	2709.1
PF9000-E	90	106.50	90.19	102.00	2.438	68	5.125	3208.8
PF9600-E	96	113.25	96.19	108.50	2.438	68	5.125	3624.3
PF10200-E	102	120.00	102.19	114.50	2.688	72	5.500	4221.1
PF10800-E	108	126.75	108.19	120.75	2.688	72	5.500	4713.8
PF11400-E	114	133.50	114.19	126.75	2.938	76	5.875	5413.8
PF12000-E	120	140.25	120.19	132.75	2.938	76	5.875	5990.1
PF12600-E	126	147.00	126.19	139.25	3.188	80	6.250	6799.2
PF13200-E	132	153.75	132.19	145.75	3.188	80	6.250	8062.8
PF14400-E	144	167.25	144.19	158.25	3.438	84	6.750	9346.0

Notes:

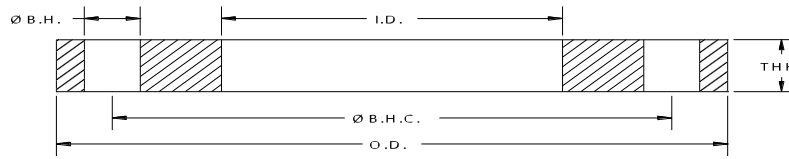
- Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- Meets ANSI class 150 pattern.
- For flanges in smaller sizes see page 4.2.

Pressure Ratings: 275psi at atmospheric temperature.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.



AWWA Class "F" C207 Steel-Ring Flanges (300 psi)



API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	Weight Lbs
PF0400-F	4	10.00	4.57	7.88	0.875	8	1.130	18.4
PF0500-F	5	11.00	5.66	9.25	0.875	8	1.210	22.3
PF0600-F	6	12.50	6.73	10.62	0.875	12	1.310	29.7
PF0800-F	8	15.00	8.73	13.00	1.000	12	1.310	39.9
PF1000-F	10	17.50	10.88	15.25	1.125	16	1.500	56.0
PF1200-F	12	20.50	12.88	17.75	1.250	16	1.630	83.2
PF1400-F	14	23.00	14.19	20.25	1.250	20	1.940	128.0
PF1600-F	16	25.50	16.19	22.50	1.375	20	2.140	166.8
PF1800-F	18	28.00	18.19	24.75	1.375	24	2.250	204.2
PF2000-F	20	30.50	20.19	27.00	1.375	24	2.330	247.4
PF2200-F	22	33.00	22.19	29.25	1.375	24	2.500	306.7
PF2400-F	24	36.00	24.19	32.00	1.625	24	2.690	387.6
PF2600-F	26	38.25	26.19	34.50	1.875	28	3.000	451.0
PF2800-F	28	40.75	28.19	37.00	1.875	28	3.130	532.2
PF3000-F	30	43.00	30.19	39.25	1.875	28	3.150	585.7
PF3200-F	32	45.25	32.19	41.50	1.875	28	3.250	657.5
PF3400-F	34	47.50	34.19	43.50	1.875	28	3.380	743.0
PF3600-F	36	50.00	36.19	46.00	2.125	32	3.460	801.9
PF3800-F	38	52.25	38.19	48.00	2.125	32	3.500	874.3
PF4000-F	40	54.25	40.19	50.25	2.125	36	3.630	937.4
PF4200-F	42	57.00	42.19	52.75	2.125	36	3.810	1103.4
PF4400-F	44	59.25	44.19	55.00	2.125	36	4.000	1237.2
PF4600-F	46	61.50	46.19	57.25	2.125	40	4.130	1360.8
PF4800-F	48	65.00	48.19	60.75	2.125	40	4.500	1736.8

Notes:

a. Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.

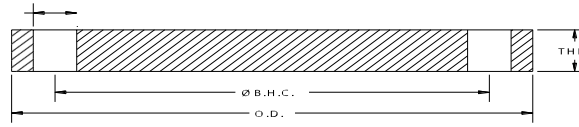
b. Meets ANSI class 300 pattern.

Pressure Ratings: 300psi at atmospheric temperature.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.



AWWA Class “B” Steel Blind Flanges - 2013 Specs (86 psi)



API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	Weight Lbs
PFBL0400-B	4	9.00	BLIND	7.50	0.750	8	0.625	10.6
PFBL0500-B	5	10.00	BLIND	8.50	0.875	8	0.625	13.0
PFBL0600-B	6	11.00	BLIND	9.50	0.875	8	0.688	17.6
PFBL0800-B	8	13.50	BLIND	11.75	0.875	8	0.688	27.0
PFBL1000-B	10	16.00	BLIND	14.25	1.000	12	0.688	38.5
PFBL1200-B	12	19.00	BLIND	17.00	1.000	12	0.719	67.0
PFBL1400-B	14	21.00	BLIND	18.75	1.125	12	0.791	80.0
PFBL1600-B	16	23.50	BLIND	21.25	1.125	16	0.892	105.0
PFBL1800-B	18	25.00	BLIND	22.75	1.250	16	0.950	132.0
PFBL2000-B	20	27.50	BLIND	25.00	1.250	20	1.040	186.0
PFBL2200-B	22	29.50	BLIND	27.25	1.375	20	1.132	209.0
PFBL2400-B	24	32.00	BLIND	29.50	1.375	20	1.216	268.0
PFBL2600-B	26	34.25	BLIND	31.75	1.375	24	1.307	328.0
PFBL2800-B	28	36.50	BLIND	34.00	1.375	28	1.398	397.0
PFBL3000-B	30	38.75	BLIND	36.00	1.375	28	1.477	488.0
PFBL3200-B	32	41.75	BLIND	38.50	1.625	28	1.581	586.0
PFBL3400-B	34	43.75	BLIND	40.50	1.625	32	1.661	675.0
PFBL3600-B	36	46.00	BLIND	42.75	1.625	32	1.751	790.0
PFBL3800-B	38	48.75	BLIND	45.25	1.625	32	1.853	944.0
PFBL4000-B	40	50.75	BLIND	47.25	1.625	36	1.933	1066.0
PFBL4200-B	42	53.00	BLIND	49.50	1.625	36	2.023	1220.0
PFBL4400-B	44	55.25	BLIND	51.75	1.625	40	2.114	1385.0
PFBL4600-B	46	57.25	BLIND	53.75	1.625	40	2.194	1547.0
PFBL4800-B	48	59.50	BLIND	56.00	1.625	44	2.285	1739.0
PFBL5000-B	50	61.75	BLIND	58.25	1.875	44	2.377	1934.0
PFBL5200-B	52	64.00	BLIND	60.50	1.875	44	2.468	2163.0
PFBL5400-B	54	66.25	BLIND	62.75	1.875	44	2.559	2408.0
PFBL6000-B	60	73.00	BLIND	69.25	1.875	52	2.820	3225.0
PFBL6600-B	66	80.00	BLIND	76.00	1.875	52	3.092	4272.0
PFBL7200-B	72	86.50	BLIND	82.50	1.875	60	3.353	5418.0

Notes:

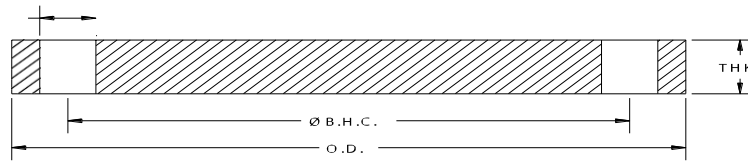
- a. Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- b. Meets ANSI class 150 pattern.
- c. AWWA recommends the use of Dish Assemblies for sizes above 72". Call API customer service for additional information.

Pressure Ratings: 86psi at atmospheric temperature.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.



AWWA Class "D" Steel Blind Flanges (150 - 175 psi)



API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	Weight Lbs
PFBL0400-D	4	9.00	BLIND	7.50	0.750	8	0.625	10.6
PFBL0500-D	5	10.00	BLIND	8.50	0.875	8	0.650	13.6
PFBL0600-D	6	11.00	BLIND	9.50	0.875	8	0.693	17.7
PFBL0800-D	8	13.50	BLIND	11.75	0.875	8	0.812	31.8
PFBL1000-D	10	16.00	BLIND	14.25	1.000	12	0.953	51.7
PFBL1200-D	12	19.00	BLIND	17.00	1.000	12	1.117	86.7
PFBL1400-D	14	21.00	BLIND	18.75	1.125	12	1.133	107.4
PFBL1600-D	16	23.50	BLIND	21.25	1.125	16	1.265	149.8
PFBL1800-D	18	25.00	BLIND	22.75	1.250	16	1.331	177.7
PFBL2000-D	20	27.50	BLIND	25.00	1.250	20	1.448	233.6
PFBL2200-D	22	29.50	BLIND	27.25	1.375	20	1.568	290.5
PFBL2400-D	24	32.00	BLIND	29.50	1.375	20	1.661	364.5
PFBL2600-D	26	34.25	BLIND	31.75	1.375	24	1.786	448.2
PFBL2800-D	28	36.50	BLIND	34.00	1.375	28	1.906	542.6
PFBL3000-D	30	38.75	BLIND	36.00	1.375	28	2.008	647.3
PFBL3200-D	32	41.75	BLIND	38.50	1.625	28	2.150	798.6
PFBL3400-D	34	43.75	BLIND	40.50	1.625	32	2.252	916.9
PFBL3600-D	36	46.00	BLIND	42.75	1.625	32	2.370	1071.4
PFBL3800-D	38	48.75	BLIND	45.25	1.625	32	2.506	1278.2
PFBL4000-D	40	50.75	BLIND	47.25	1.625	36	2.609	1440.1
PFBL4200-D	42	53.00	BLIND	49.50	1.625	36	2.729	1648.1
PFBL4400-D	44	55.25	BLIND	51.75	1.625	40	2.849	1868.2
PFBL4600-D	46	57.25	BLIND	53.75	1.625	40	2.952	2083.7
PFBL4800-D	48	59.50	BLIND	56.00	1.625	44	3.072	2340.7
PFBL5000-D	50	61.75	BLIND	58.25	1.875	44	3.196	2601.9
PFBL5200-D	52	64.00	BLIND	60.50	1.875	44	3.315	2907.5
PFBL5400-D	54	66.25	BLIND	62.75	1.875	44	3.435	3236.7
PFBL6000-D	60	73.00	BLIND	69.25	1.875	52	3.779	4327.6
PFBL6600-D	66	80.00	BLIND	76.00	1.875	52	4.136	5722.2
PFBL7200-D	72	86.50	BLIND	82.50	1.875	60	4.480	7249.0

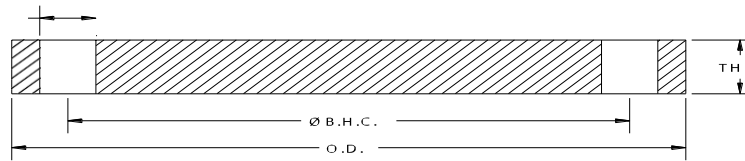
Notes:

- Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- Meets ANSI class 150 pattern.
- AWWA recommends the use of Dish Assemblies for sizes above 72". Call API customer service for additional information.

Pressure Ratings: 175psi (4" - 12") and 150psi (14" and larger) at atmospheric temperature.



AWWA Steel Blind Flanges - 1986 Spec's (for low pressure)



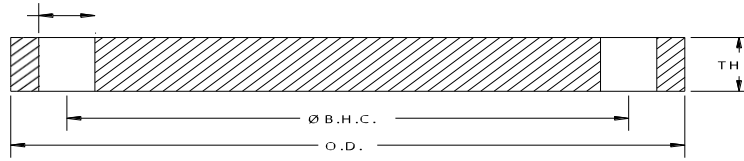
API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	Weight Lbs
PFBL0400-86	4	9.00	BLIND	7.50	0.750	8	0.625	11.0
PFBL0500-86	5	10.00	BLIND	8.50	0.875	8	0.625	13.0
PFBL0600-86	6	11.00	BLIND	9.50	0.875	8	0.688	18.0
PFBL0800-86	8	13.50	BLIND	11.75	0.875	8	0.688	27.0
PFBL1000-86	10	16.00	BLIND	14.25	1.000	12	0.688	38.0
PFBL1200-86	12	19.00	BLIND	17.00	1.000	12	0.813	64.0
PFBL1400-86	14	21.00	BLIND	18.75	1.125	12	0.938	88.0
PFBL1600-86	16	23.50	BLIND	21.25	1.125	16	1.000	118.0
PFBL1800-86	18	25.00	BLIND	22.75	1.250	16	1.063	141.0
PFBL2000-86	20	27.50	BLIND	25.00	1.250	20	1.125	181.0
PFBL2400-86	24	32.00	BLIND	29.50	1.375	20	1.250	273.0
PFBL3000-86	30	38.75	BLIND	36.00	1.375	28	1.375	436.0
PFBL3600-86	36	46.00	BLIND	42.75	1.625	32	1.625	735.0
PFBL4200-86	42	53.00	BLIND	49.50	1.625	36	1.750	1057.0
PFBL4800-86	48	59.50	BLIND	56.00	1.625	44	1.875	1428.0
PFBL6000-86	60	73.00	BLIND	69.25	1.875	52	2.250	2574.0

Notes:

- Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- Meets ANSI class 150 pattern.
- Manufactured to AWWA C207-1986 specifications.
- AWWA recommends the use of Dish Assemblies for sizes above 72". Call API customer service for additional information.



AWWA Class "E" Steel Blind Flanges (275 psi)



API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	Weight Lbs
PFBL0400-E	4	9.00	BLIND	7.50	0.750	8	1.125	19.2
PFBL0500-E	5	10.00	BLIND	8.50	0.875	8	1.188	24.8
PFBL0600-E	6	11.00	BLIND	9.50	0.875	8	1.313	33.6
PFBL0800-E	8	13.50	BLIND	11.75	0.875	8	1.500	58.8
PFBL1000-E	10	16.00	BLIND	14.25	1.000	12	1.563	84.9
PFBL1200-E	12	19.00	BLIND	17.00	1.000	12	1.750	135.9
PFBL1400-E	14	21.00	BLIND	18.75	1.125	12	1.875	177.7
PFBL1600-E	16	23.50	BLIND	21.25	1.125	16	2.000	236.8
PFBL1800-E	18	25.00	BLIND	22.75	1.250	16	2.125	283.7
PFBL2000-E	20	27.50	BLIND	25.00	1.250	20	2.375	383.2
PFBL2200-E	22	29.50	BLIND	27.25	1.375	20	2.500	463.1
PFBL2400-E	24	32.00	BLIND	29.50	1.375	20	2.625	576.1
PFBL2600-E	26	34.25	BLIND	31.75	1.375	24	2.750	690.1
PFBL2800-E	28	36.50	BLIND	34.00	1.375	28	2.750	782.9
PFBL3000-E	30	38.75	BLIND	36.00	1.375	28	2.875	926.8
PFBL3200-E	32	41.75	BLIND	38.50	1.625	28	3.000	1114.3
PFBL3400-E	34	43.75	BLIND	40.50	1.625	32	3.050	1241.8
PFBL3600-E	36	46.00	BLIND	42.75	1.625	32	3.209	1450.7
PFBL3800-E	38	48.75	BLIND	45.25	1.625	32	3.394	1731.1
PFBL4000-E	40	50.75	BLIND	47.25	1.625	36	3.533	1950.2
PFBL4200-E	42	53.00	BLIND	49.50	1.625	36	3.695	2231.5
PFBL4400-E	44	55.25	BLIND	51.75	1.625	40	3.857	2529.4
PFBL4600-E	46	57.25	BLIND	53.75	1.625	40	3.997	2821.3
PFBL4800-E	48	59.50	BLIND	56.00	1.625	44	4.159	3169.0
PFBL5000-E	50	61.75	BLIND	58.25	1.875	44	4.327	3522.6
PFBL5200-E	52	64.00	BLIND	60.50	1.875	44	4.489	3937.1
PFBL5400-E	54	66.25	BLIND	62.75	1.875	44	4.651	4382.5
PFBL6000-E	60	73.00	BLIND	69.25	1.875	52	5.116	5858.7
PFBL6600-E	66	80.00	BLIND	76.00	1.875	52	5.601	7749.0
PFBL7200-E	72	86.50	BLIND	82.50	1.875	60	6.066	9815.3

Notes:

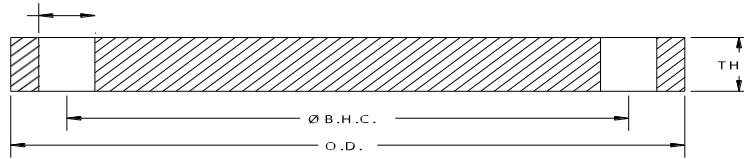
- Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- Meets ANSI class 150 pattern.
- AWWA recommends the use of Dish Assemblies for sizes above 72". Call API customer service for additional information.

Pressure Ratings: 275psi at atmospheric temperature.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.



AWWA Class "F" Steel Blind Flanges (300 psi)



API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	Weight Lbs
PFBL0400-F	4	10.00	BLIND	7.88	0.875	8	1.130	23.6
PFBL0500-F	5	11.00	BLIND	9.25	0.875	8	1.210	30.9
PFBL0600-F	6	12.50	BLIND	10.62	0.875	12	1.310	42.9
PFBL0800-F	8	15.00	BLIND	13.00	1.000	12	1.310	62.1
PFBL1000-F	10	17.50	BLIND	15.25	1.125	16	1.500	95.5
PFBL1200-F	12	20.50	BLIND	17.75	1.250	16	1.630	143.4
PFBL1400-F	14	23.00	BLIND	20.25	1.250	20	1.940	214.9
PFBL1600-F	16	25.50	BLIND	22.50	1.375	20	2.140	291.7
PFBL1800-F	18	28.00	BLIND	24.75	1.375	24	2.250	369.8
PFBL2000-F	20	30.50	BLIND	27.00	1.375	24	2.330	458.8
PFBL2200-F	22	33.00	BLIND	29.25	1.375	24	2.500	580.6
PFBL2400-F	24	36.00	BLIND	32.00	1.625	24	2.690	737.9
PFBL2600-F	26	38.25	BLIND	34.50	1.875	28	3.000	911.0
PFBL2800-F	28	40.75	BLIND	37.00	1.875	28	3.130	1088.0
PFBL3000-F	30	43.00	BLIND	39.25	1.875	28	3.166	1233.3
PFBL3200-F	32	45.25	BLIND	41.50	1.875	28	3.332	1445.2
PFBL3400-F	34	47.50	BLIND	43.50	1.875	28	3.475	1668.6
PFBL3600-F	36	50.00	BLIND	46.00	2.125	32	3.671	1924.2
PFBL3800-F	38	52.25	BLIND	48.00	2.125	32	3.815	2195.0
PFBL4000-F	40	54.25	BLIND	50.25	2.125	36	3.982	2463.8
PFBL4200-F	42	57.00	BLIND	52.75	2.125	36	4.171	2864.7
PFBL4400-F	44	59.25	BLIND	55.00	2.125	36	4.338	3231.9
PFBL4600-F	46	61.50	BLIND	57.25	2.125	40	4.505	3628.7
PFBL4800-F	48	65.00	BLIND	60.75	2.125	40	4.781	4322.1

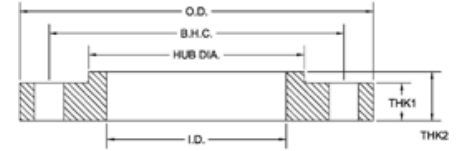
Notes:

- a. Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- b. Meets ANSI class 300 pattern.

Pressure Ratings: 300psi at atmospheric temperature.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.





AWWA Class "D" Steel Hub Ring Flange (150-175 psi)

API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	L	H.D.	Weight Lbs
PF0400-D-H	4	9.00	4.57	7.50	0.750	8	0.500	0.875	5.312	6.8
PF0500-D-H	5	10.00	5.66	8.50	0.875	8	0.562	1.250	6.312	8.9
PF0600-D-H	6	11.00	6.72	9.50	0.875	8	0.562	1.250	7.562	10.5
PF0800-D-H	8	13.50	8.72	11.75	0.875	8	0.562	1.250	9.688	15.2
PF1000-D-H	10	16.00	10.88	14.25	1.000	12	0.688	1.250	12.000	22.4
PF1200-D-H	12	19.00	12.88	17.00	1.000	12	0.688	1.250	14.375	33.1
PF1400-D-H	14	21.00	14.19	18.75	1.125	12	0.750	1.250	15.750	42.6
PF1600-D-H	16	23.50	16.19	21.25	1.125	16	0.750	1.250	18.000	51.9
PF1800-D-H	18	25.00	18.19	22.75	1.250	16	0.750	1.250	19.875	52.0
PF2000-D-H	20	27.50	20.19	25.00	1.250	20	0.750	1.250	22.000	61.4
PF2200-D-H	22	29.50	22.19	27.25	1.375	20	1.000	1.750	24.250	91.5
PF2400-D-H	24	32.00	24.19	29.50	1.375	20	1.000	1.750	26.125	105.0
PF2600-D-H	26	34.25	26.19	31.75	1.375	24	1.000	1.750	28.500	119.0
PF2800-D-H	28	36.50	28.19	34.00	1.375	28	1.000	1.750	30.500	129.0
PF3000-D-H	30	38.75	30.19	36.00	1.375	28	1.000	1.750	32.500	143.0
PF3200-D-H	32	41.75	32.19	38.50	1.625	28	1.125	1.750	34.750	180.0
PF3400-D-H	34	43.75	34.19	40.50	1.625	32	1.125	1.750	36.750	189.0
PF3600-D-H	36	46.00	36.19	42.75	1.625	32	1.125	1.750	38.750	206.0
PF3800-D-H	38	48.75	38.19	45.25	1.625	32	1.125	1.750	40.750	236.0
PF4000-D-H	40	50.75	40.19	47.25	1.625	36	1.125	1.750	43.000	247.0
PF4200-D-H	42	53.00	42.19	49.50	1.625	36	1.250	1.750	45.000	285.0
PF4400-D-H	44	55.25	44.19	51.75	1.625	40	1.250	2.250	47.000	333.0
PF4600-D-H	46	57.25	46.19	53.75	1.625	40	1.250	2.250	49.000	348.0
PF4800-D-H	48	59.50	48.19	56.00	1.625	44	1.375	2.500	51.000	404.0
PF5000-D-H	50	61.75	50.19	58.25	1.875	44	1.375	2.500	53.000	420.0
PF5200-D-H	52	64.00	52.19	60.50	1.875	44	1.375	2.500	55.000	447.0
PF5400-D-H	54	66.25	54.19	62.75	1.875	44	1.375	2.500	57.000	472.0
PF6000-D-H	60	73.00	60.19	69.25	1.875	52	1.500	2.750	63.000	604.0
PF6600-D-H	66	80.00	66.19	76.00	1.875	52	1.500	2.750	69.000	717.0
PF7200-D-H	72	86.50	72.19	82.50	1.875	60	1.500	2.750	75.000	801.0
PF7800-D-H	78	93.00	78.19	89.00	2.125	64	1.750	3.000	81.250	1009.0
PF8400-D-H	84	99.75	84.19	95.50	2.125	64	1.750	3.000	87.500	1158.0
PF9000-D-H	90	106.50	90.19	102.00	2.438	68	2.000	3.200	93.750	1430.0
PF9600-D-H	96	113.25	96.19	108.50	2.438	68	2.000	3.250	100.000	1625.0

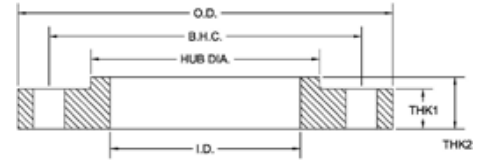
Notes:

- Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- Meets ANSI class 150 pattern.

Pressure Ratings: 175psi (4" – 12") 150psi (14" and larger) at atmospheric temperature. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.



AWWA Class "E" Steel Hub Ring Flange (275 psi)



API Part Number	Size	O.D.	I.D.	Ø B.H.C.	Ø B.H.	# B.H.	THK	L	H.D.	Weight Lbs
PF0400-E-H	4	9.00	4.57	7.50	0.750	8	1.001	1.375	5.312	12.2
PF0500-E-H	5	10.00	5.66	8.50	0.875	8	1.001	1.501	6.438	13.9
PF0600-E-H	6	11.00	6.72	9.50	0.875	8	1.063	1.625	7.562	17.0
PF0800-E-H	8	13.50	8.72	11.75	0.875	8	1.188	1.813	9.688	27.5
PF1000-E-H	10	16.00	10.88	14.25	1.000	12	1.251	2.001	12.000	37.4
PF1200-E-H	12	19.00	12.88	17.00	1.000	12	1.313	2.251	14.375	59.4
PF1400-E-H	14	21.00	14.19	18.75	1.125	12	1.438	2.313	15.750	77.7
PF1600-E-H	16	23.50	16.19	21.25	1.125	16	1.501	2.563	18.000	100.0
PF1800-E-H	18	25.00	18.19	22.75	1.250	16	1.625	2.751	19.875	109.0
PF2000-E-H	20	27.50	20.19	25.00	1.250	20	1.751	2.938	22.000	139.0
PF2200-E-H	22	29.50	22.19	27.25	1.375	20	1.875	3.188	24.000	161.0
PF2400-E-H	24	32.00	24.19	29.50	1.375	20	1.938	3.313	26.125	198.0
PF2600-E-H	26	34.25	26.19	31.75	1.375	24	2.063	3.438	28.500	235.0
PF2800-E-H	28	36.50	28.19	34.00	1.375	28	2.125	3.501	30.750	168.0
PF3000-E-H	30	38.75	30.19	36.00	1.375	28	2.188	3.563	32.750	303.0
PF3200-E-H	32	41.75	32.19	38.50	1.625	28	2.313	3.688	35.000	375.0
PF3400-E-H	34	43.75	34.19	40.50	1.625	32	2.375	3.751	37.000	400.0
PF3600-E-H	36	46.00	36.19	42.75	1.625	32	2.438	3.813	39.250	450.0
PF3800-E-H	38	48.75	38.19	45.25	1.625	32	2.438	3.813	41.750	527.0
PF4000-E-H	40	50.75	40.19	47.25	1.625	36	2.563	3.938	43.750	570.0
PF4200-E-H	42	53.00	42.19	49.50	1.625	36	2.688	4.063	46.000	650.0
PF4400-E-H	44	55.25	44.19	51.75	1.625	40	2.688	4.063	48.000	687.0
PF4600-E-H	46	57.25	46.19	53.75	1.625	40	2.751	4.125	50.000	732.0
PF4800-E-H	48	59.50	48.19	56.00	1.625	44	2.813	4.188	52.250	800.0
PF5000-E-H	50	61.75	50.19	58.25	1.875	44	2.813	4.188	54.250	826.0
PF5200-E-H	52	64.00	52.19	60.50	1.875	44	2.938	4.313	56.500	921.0
PF5400-E-H	54	66.25	54.19	62.75	1.875	44	3.063	4.438	58.750	1022.0
PF6000-E-H	60	73.00	60.19	69.25	1.875	52	3.188	4.563	65.250	1252.0
PF6600-E-H	66	80.00	66.19	76.00	1.875	52	3.438	4.938	71.500	1621.0
PF7200-E-H	72	86.50	72.19	82.50	1.875	60	3.563	5.063	78.500	1919.0
PF7800-E-H	78	93.00	78.19	89.00	2.125	64	3.938	5.438	84.500	2277.0
PF8400-E-H	84	99.75	84.19	95.50	2.125	64	3.938	5.438	90.500	2583.0
PF9000-E-H	90	106.50	90.19	102.00	2.438	68	4.313	5.813	96.750	3076.0
PF9600-E-H	96	113.25	96.19	108.50	2.438	68	4.313	5.813	102.750	3448.0

Notes:

- Steel material conforms to the requirements of AWWA C207 specifications. Other material is available upon request.
- Meets ANSI class 150 pattern.

Pressure Ratings: 275psi at atmospheric temperature.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE STATED.





List of Core values

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