



PRODUCT SOLUTION

CAST GATE VALVES

Heavy-duty, bidirectional isolation valves designed for high-pressure and high-temperature industrial environments.

Premium technical presentation for industrial valve supply, procurement and project coordination across Latin American energy markets.



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GATE VALVE

INTRODUCTION

VALPRO Cast Gate Valves are supplied as standard with a flexible wedge, renewable seat rings, rising stem, and non-rising handwheel. The valve provides reliable on/off isolation by converting the rotational movement of the handwheel into linear stem travel, raising or lowering the gate to open or shut off the pipeline.

To meet a wide range of service conditions, VALPRO Gate Valves are available with various bonnet configurations, including bolted bonnet, pressure seal bonnet, bellows seal bonnet, and extended bonnet designs for high- or low-temperature applications. Designs compliant with ISO 15848 fugitive emission requirements are also available for services requiring enhanced stem sealing and emission control.

For applications demanding higher mechanical strength, pressure capability, or specific material requirements, forged-body construction can also be supplied upon request.

Design of Body -Bonnet Connection

Bolted bonnet is normally applied on CL150~CL900, body seal is defaulted by gasket and RTJ ring. Pressure seal bonnet is applied on CL1500~CL2500 with pressure seal ring for body seal.

Design of Packing

Gate Valves are provided with FBV API 622 Low Emission Packing, by default, to meet API 600 design standards. FBV Inc. has developed low fugitive emission graphite packing that meets API 622 2nd Edition. FBV Gate Valves have been tested per API 624 2014 and meets requirements of <100 ppm.

Design of Backseat

Renewable back seat is applied on all carbon steel and low alloy steel valve, however, body back seat is only applied for stainless steel valve.

Design of Actuation

Hand wheel and gear box are normally designed for cast gate valve based on different size and pressure rating; Electric, pneumatic or Chain wheel operation can be provided upon request.



GATE VALVE

SCOPE OF PRODUCTS

Gate Valve

Legends: **A** –Available in Bolt Bonnet
B–Available in
 Pressure Seal Bonnet

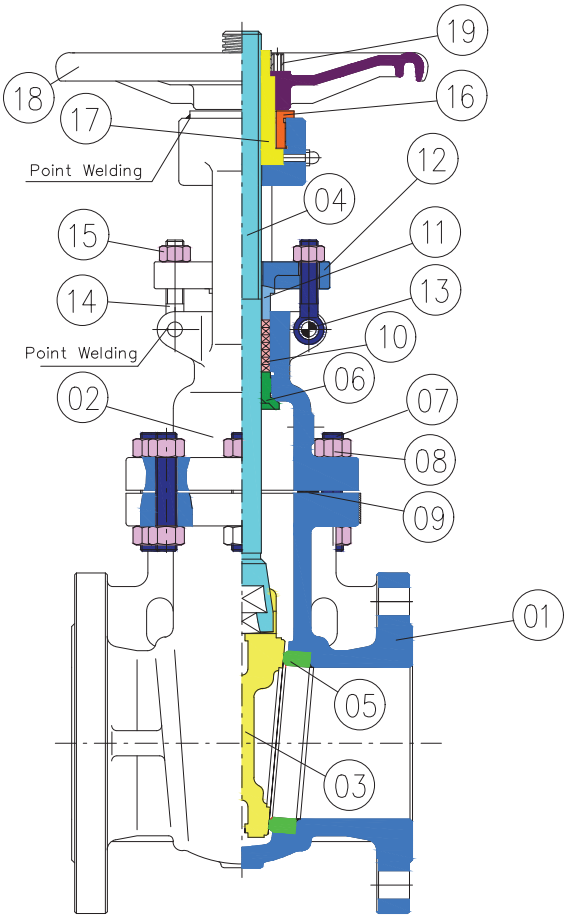
Size in/m m	Class 150 PN 20	Class 300 PN 50	Class 600 PN 100	Class 900 PN 150	Class 1500 PN 250	Class 2500 PN 420
2 50	A	A	A	A, B	A, B	A, B
2 1/2 65	A	A	A	A, B	A, B	A, B
3 80	A	A	A	A, B	A, B	A, B
4 100	A	A	A	A, B	A, B	A, B
6 150	A	A	A	A, B	A, B	A, B
8 200	A	A	A	A, B	A, B	A, B
10 250	A	A	A	A, B	A, B	A, B
12 300	A	A	A	A, B	A, B	A, B
14 350	A	A	A	A, B	A, B	
16 400	A	A	A	A, B	A, B	
18 450	A	A	A	A, B	A, B	
20 500	A	A	A	A, B	A, B	
22 550	A	A	A	A, B	A, B	
24 600	A	A	A	A, B	A, B	
26 650	A	A	A	A, B	A, B	
28 700	A	A	A	A, B	A, B	
30 750	A	A	A	A, B	A, B	
32 800	A	A	A	A, B		
34 850	A	A	A	A,	B	
36 900	A	A	A	A, B		
38 950	A	A	A	A,	B	
40 1000	A	A	A	A, B		
42 1050	A	A	A	A,	B	
48 1200	A	A	A	A, B		

1. The sizes listed above are normal diameters. Contact our sales representative if any other dimensions are requested.

GATE VALVE

OVERVIEW (Bolted Bonnet)

ITEM	PART
01	BODY
02	BONNET
03	WEDGE
04	STEM
05	SEAT
06	BACKSEAT
07	BONNET BOLT
08	BONNET NUT
09	BONNET GASKET
10	STEM PACKING
11	GLAND
12	GLAND FLANGE
13	EYEBOLT PIN
14	EYEBOLT
15	EYEBOLT NUT
16	YOKESLEEVE NUT
17	YOKESLEEVE
18	HAND WHEEL
19	HAND WHEEL NUT



Design &
Manufacture Standards

API 600, ASME B16.34, MSS
SP-144

Face-to-face
End Dimension

ASME B16.10
ASME B16.5 (RF, RTJ),
ASME B16.47 (RF,RTJ) ASME
B16.25 (BW)

Test & Inspection

API 598

Typical Materials

Body,
Bonnet,Disc

(Casting): A216 WCB, A351 CF3, CF8, CF3M, CF8M, A995 4A, 5A, A352
LCB, LCC, LC2
(Forging): A105, A350 LF2, LF3, LF5, A182 F304, F304L, F316, F316L,
F51, F53, F5, F11, F22, F91, Monel, Inconel, Hastelloy

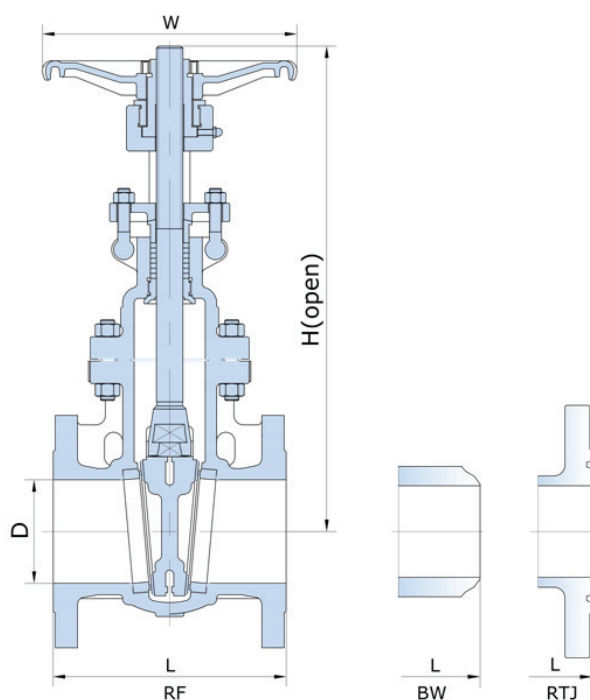
Stem

A182 F6a, F304, F304L, F316, F316L, F51, F53, F55 Monel, Inconel,
Hastelloy

GATE VALVE

DIMENSIONS AND WEIGHTS (Bolted Bonnet)

ASME CLASS 150 (PN 20)



ASME CLASS 150 (PN20)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/BW (lb/kg)
2	2	7	7.5	8.5	15.87	7.87	40/33
50	51	178	191	216	403	200	18/15
2 1/2	2.5	7.5	8	9.5	18.9	7.87	55/40
65	64	190	203	241	480	200	25/18
3	3	8	8.5	11.12	20.12	9.84	70/57
80	76	203	216	283	511	250	32/26
4	4	9	9.5	12	23.7	11	110/90
100	100	229	242	305	602	280	50/41
5	5	10	10.5	15	30.91	11.81	143/130
125	125	254	267	381	785	300	65/59
6	6	10.5	11	15.88	34.84	11.81	170/152
150	150	267	280	403	885	300	77/69
8	8	11.5	12	16.5	38.5	13.78	267/238
200	203	292	305	419	978	350	121/108
10	10	13	13.5	18	46.93	15.75	392/344
250	250	330	343	457	1192	400	178/156
12	12	14	14.5	19.75	55	17.72	584/546
300	305	356	369	502	1397	450	265/248
14	14	15	15.5	22.5	62.32	19.69	800/727
350	337	381	394	572	1583	500	363/330
16	15.24	16	16.5	24	67.76	23.62	1020/934
400	387	406	419	610	1721	600	463/424
18	17.24	17	17.5	26	76.77	26.77	1368/1293
450	438	432	445	660	1950	680	621/587
20	19.25	18	18.5	28	85.35	28.35	1744/1656
500	489	457	470	711	2168	720	792/752
22	21.26	20	20.5	30	92.52	29.53	2313/2093
550	540	508	521	762	2350	750	1050/950
24	23.27	20	20.5	32	105	29.53	2621/2520
600	591	508	521	813	2668	750	1190/1144
26	25.24	22	-	34	-	-	3350/3458
650	641	559	-	864	-	-	1521/1570
28	27.24	24	-	36	-	-	4048/4185
700	692	610	-	914	-	-	1838/1900
30	29.25	24	-	36	-	-	24980/6608
750	743	610	-	914	-	-	261/3000

The dimension and weights are for reference only and subject to change without notice.

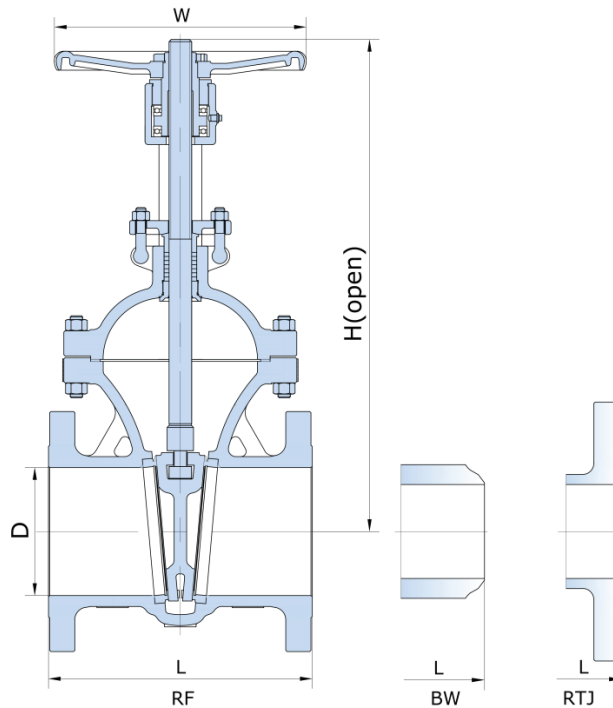
1. For more dimensional information, please contact our sales representative.

2. "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

GATE VALVE

DIMENSIONS AND WEIGHTS (Bolted Bonnet)

ASME CLASS 300 (PN 50)



ASME CLASS 300 (PN 50)

Size in/mm	D	L			H	W	Weight RF/BW (lb/kg)
		RF	RTJ	BW			
2	2	8.5	9.13	8.5	17.05	7.87	51/37
50	51	216	232	216	433	200	23/17
2 1/2	2.5	9.5	10.12	9.5	18.54	7.87	77/57
65	64	241	257	241	471	200	35/26
3	3	11.1	11.73	11.1	21.06	9.84	110/86
80	76	282	298	282	535	250	50/39
4	4	12	12.64	12	24.7	11	156/117
100	100	305	321	305	627	280	71/53
5	5	15	15.63	15	28.15	11.81	256/200
125	125	381	397	381	715	300	116/91
6	6	15.87	16.5	15.87	32.44	13.78	317/249
150	150	403	419	403	824	350	144/113
8	8	16.5	17.13	16.5	39.53	15.75	460/361
200	203	419	435	419	1004	400	209/164
10	10	18	18.62	18	49.61	17.72	709/564
250	250	457	473	457	1260	450	322/256
12	12	19.76	20.39	19.76	58.27	19.7	1062/859
300	305	502	518	502	1480	500	482/390
14	14	30	30.63	30	63.19	-	1504/1244
350	337	762	778	762	1605	-	683/565
16	15.24	33	33.62	33	71.06	-	2093/1773
400	387	838	854	838	1805	-	950/805
18	17	36	36.61	36	78.54	-	2522/2126
450	432	914	930	914	1995	-	1145/965
20	19	39	39.76	39	94.69	-	3601/3106
500	483	991	1010	991	2405	-	1635/1410
22	21.8	43	43.86	43	100.4	-	5176/4626
550	553	1092	1114	1092	2550	-	2350/2100
24	23	45	45.87	45	104.33	-	5859/5077
600	584	1143	1165	1143	2650	-	2660/2305
26	25	49	50	49	116.14	-	6806/5595
650	635	1245	1270	1245	2950	-	3090/2540
28	27	53	54	53	122.05	-	7291/6002
700	686	1346	1371	1346	3100	-	3310/2725
30	29	55	56	55	126	-	7919/6729
750	736	1397	1422	1397	3200	-	3595/3055

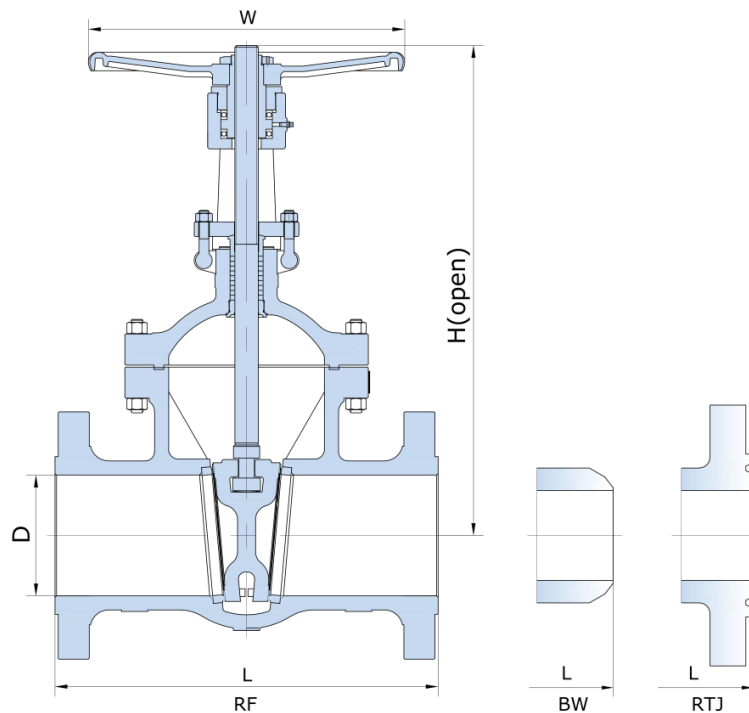
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GATE VALVE

DIMENSIONS AND WEIGHTS (Bolted Bonnet)

ASME CLASS 600 (PN 100)



ASME CLASS 600 (PN 100)

Size in/mm	D	L			H	W	Weight RF/BW (lb/kg)
		RF	RTJ	BW			
2	2	11.5	11.63	11.5	16.5	441	79/64
50	51	292	295	292	418	200	36/29
2 ½	2.5	13	13.13	13	18.75	551	115/93
65	64	330	333	330	476	250	52/42
3	3	14	14.13	14	20.38	617	148/117
80	76	356	359	356	518	280	67/53
4	4	17	17.13	17	25.5	661	247/183
100	100	432	435	432	646	300	112/83
5	5	20	20.12	20	29.5	881	330/267
125	125	508	511	508	750	400	150/121
6	6	22	22.13	22	33	991	374/275
150	150	559	562	559	840	450	170/125
8	7.87	26	26.13	26	40.38	1100	866/683
200	200	660	663	660	1025	500	393/310
10	9.76	31	31.13	31	48.38	23.62	1344/1040
250	248	787	790	787	1230	600	610/472
12	11.73	33	33.13	33	57	23.62	1960/1608
300	298	838	841	635	1450	600	890/730
14	12.87	35	35.12	35	62	-	2742/2324
350	327	889	891	889	1575	-	1245/1055
16	14.76	39	39.13	39	70.62	-	3370/2731
400	375	991	994	991	1795	-	1530/1240
18	16.5	43	43.13	430	76	-	4317/2786
450	419	1092	1095	1092	1930	-	1960/1625
20	18.27	47	47.25	47	87	-	5396/4471
500	464	1194	1200	1194	2210	-	2450/2030
22	20.12	51	51.38	51	97.24	-	6123/4956
550	511	1295	1305	1295	2470	-	2780/2250
24	22	55	55.38	55	101.5	-	6597/5705
600	559	1397	1407	1397	2580	-	2995/2590
26	23.74	57	57.5	57	105	-	7654/6289
650	603	1448	1461	1448	2665	-	3475/2855
28	25.51	61	61.5	61	109.5	-	8205/6751
700	648	1549	1562	1594	2780	-	3725/3065
30	27.36	65	65.5	65	114	-	8910/7489
750	695	1651	1664	1651	2895	-	4045/3400

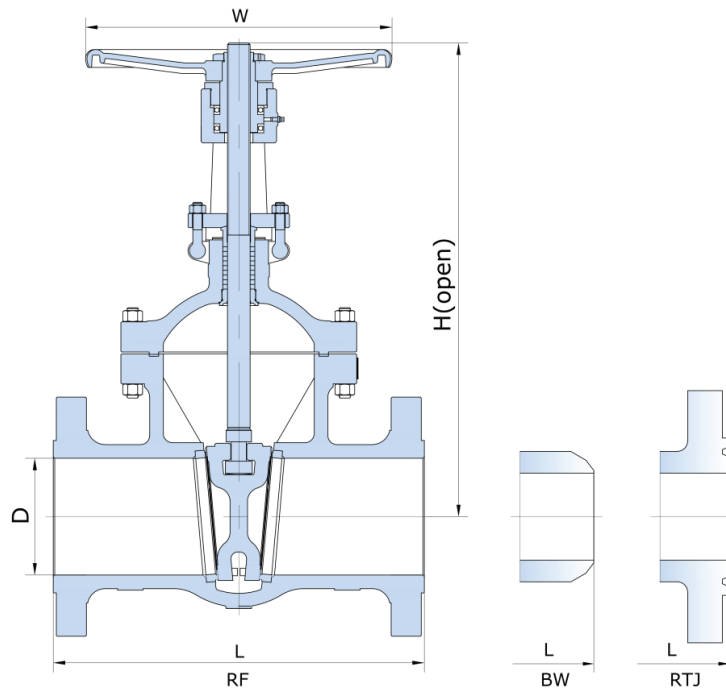
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GATE VALVE

DIMENSIONS AND WEIGHTS (Bolt Bonnet)

ASME CLASS 900 (PN 150)



ASME CLASS 900 (PN 150)

Size in/mm	D	L			H	W	Weight RF/BW (lb/kg)
		RF	RTJ	BW			
2	1.87	14.5	14.63	14.5	19.62	7.87	163/119
50	47.5	368	371	368	498	200	74/54
2 ½	2.24	16.5	16.62	16.5	21.5	9.84	222/172
65	57	419	422	419	547	250	101/78
3	2.87	15	15.13	15	22.5	11.81	289/231
80	73	381	384	381	573	300	131/105
4	3.86	18	18.13	18	26.62	17.72	379/297
100	98	457	460	457	678	450	172/135
5	4.76	22	22.13	22	35.5	19.7	615/463
125	121	559	562	559	900	500	276/210
6	5.75	24	24.13	24	38.2	19.7	378/573
150	146	610	613	610	970	500	335/260
8	7.48	29	29.13	29	43.5	23.62	1410/1134
200	190	737	740	737	1103	600	640/515
10	9.37	33	33.13	33	53	-	2423/2026
250	238	838	841	838	1345	-	1100/920
12	11.1	38	38.13	38	60	-	3546/3040
300	282	965	968	965	1525	-	1600/1380
14	12.24	40.5	40.88	40.5	74.5	-	4956/4427
350	311	1029	1039	1029	1900	-	2250/2010
16	14	44.5	44.88	44.5	81	-	6278/5650
400	356	1130	1140	1130	2055	-	2850/2565
18	15.75	48	48.5	48	87	-	6740/5474
450	400	1219	1232	1219	2215	-	3060/2485
20	17.52	52	52.5	52	101	-	8447/7159
500	445	1321	1334	1321	2565	-	3835/3250
24	21	61	61.75	61	104	-	10793/8954
600	533	1549	1568	1549	2640	-	4900/4065

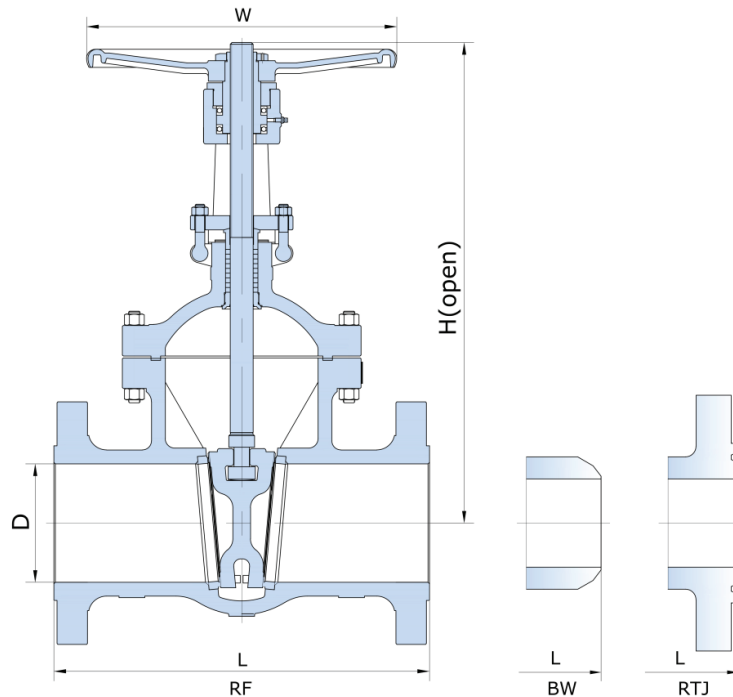
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GATE VALVE

DIMENSIONS AND WEIGHTS (Bolted Bonnet)

ASME CLASS 1500 (PN 250)



ASME CLASS 1500 (PN 250)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/BW (lb/kg)
2	1.87	14.5	14.61	14.5	24.25	10	256/231
50	47.5	368	371	368	615	250	116/105
2 1/2	2.24	16.5	16.61	16.5	26	12	366/330
65	57	419	422	419	658	300	166/150
3	2.76	18.5	18.62	18.5	30	18	460/414
80	70	470	473	470	760	450	209/188
4	3.58	21.5	21.61	21.5	34.12	20	652/584
100	91	546	549	546	868	500	296/265
5	4.73	26.5	26.61	26.5	38.4	24	958/826
125	111	673	676	673	975	600	435/375
6	5.35	27.75	28	27.75	39.5	24	1123/907
150	136	705	711	705	1005	600	510/412
8	7	32.75	33.15	32.75	45	-	2026/1586
200	178	832	842	832	1145	-	920/760
10	8.74	39	39.41	39	54	-	4207/3610
250	222	991	1001	991	1370	-	1910/1640
12	10.35	44.5	45.12	44.5	61	-	6947/6068
300	263	1130	1146	1130	1650	-	3154/2755
14	11.38	49.5	50.24	49.5	74.88	-	9031/7048
350	289	1259	1276	1259	1900	-	4100/3200
16	13	54.5	55.35	54.5	80.5	-	13656/11674
400	330	1384	1406	1384	2050	-	6200/5300
18	14.61	60.5	61.38	60.5	93.75	-	19747/17775
450	371	1537	1559	1537	2350	-	8965/8070
20	16.38	65.5	66.38	65.5	101.5	-	28855/25969
500	416	1664	1686	1664	2580	-	13100/11790
24	19.61	76.5	77.6	76.5	114.75	-	34934/31443
600	498	1943	1971	1943	2915	-	15860/14275

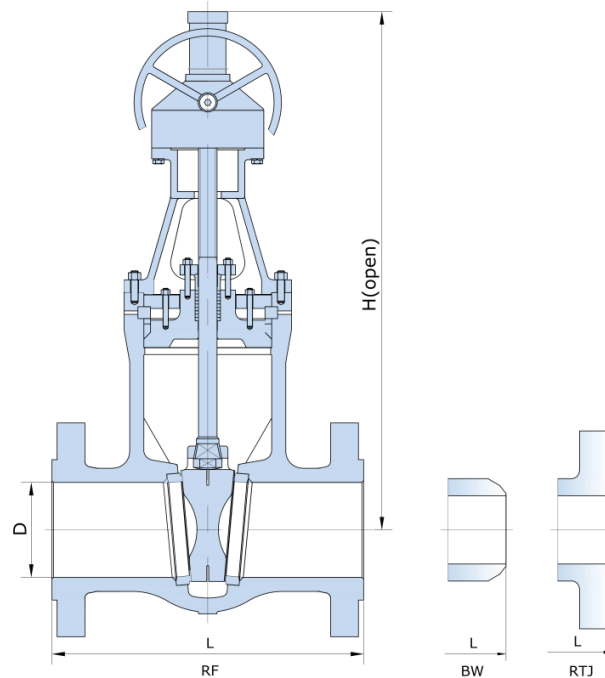
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GATE VALVE

DIMENSIONS AND WEIGHTS (Pressure Seal Bonnet)

ASME CLASS 900 (PN 150)



ASME CLASS 900 (PN 150)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/BW (lb/kg)
2	1.87	14.5	14.63	8.5	19.62	7.87	163/119
50	47.5	368	371	216	498	200	74/54
2 1/2	2.24	16.5	16.62	10	21.5	9.84	222/172
65	57	419	422	254	547	250	101/78
3	2.87	15	15.13	12	22.5	11.81	289/231
80	73	381	384	305	573	300	131/105
4	3.86	18	18.13	14	26.62	17.72	379/297
100	98	457	460	356	678	450	172/135
5	4.76	22	22.13	17	35.5	19.7	615/463
125	121	559	562	432	900	500	276/210
6	5.75	24	24.13	20	38.2	19.7	378/573
150	146	610	613	508	970	500	335/260
8	7.48	29	29.13	26	43.5	23.62	1410/1134
200	190	737	740	660	1103	600	640/515
10	9.37	33	33.13	31	53	-	2423/2026
250	238	838	841	787	1345	-	1100/920
12	11.1	38	38.13	36	60	-	3546/3040
300	282	965	968	914	1525	-	1600/1380
14	12.24	40.5	40.88	39	74.5	-	4956/4427
350	311	1029	1038	991	1900	-	2250/2010
16	14	44.5	44.88	43	81	-	6278/5650
400	356	1130	1140	1092	2055	-	2850/2565
18	15.75	48	48.5	-	87	-	6740/5474
450	400	1219	1232	-	2215	-	3060/2485
20	17.52	52	52.5	-	101	-	8447/7159
500	445	1321	1334	-	2565	-	3835/3250
24	21	61	61.75	-	104	-	10793/8954
600	533	1549	1568	-	2640	-	4900/4065

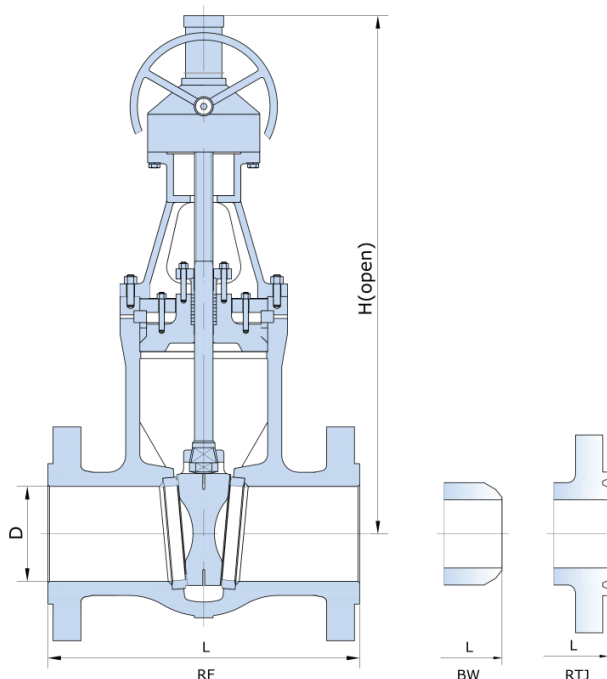
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GATE VALVE

DIMENSIONS AND WEIGHTS (Pressure Seal Bonnet)

ASME CLASS 1500 (PN 250)



ASME CLASS 1500 (PN 250)

Size in/mm	D	L			H	W	Weight RF/RTJ (lb/kg)
		RF	RTJ	BW			
2	1.87	14.5	14.61	8.5	24.25	10	256/231
50	47.5	368	371	216	615	250	116/105
2 1/2	2.24	16.5	16.61	10	26	12	366/330
65	57	419	422	254	658	300	166/150
3	2.76	18.5	18.62	12	30	18	460/414
80	70	470	473	305	760	450	209/188
4	3.58	21.5	21.61	16	34.12	20	652/584
100	91	546	549	406	868	500	296/265
5	4.73	26.5	26.61	19	38.4	24	958/826
125	111	673	676	483	975	600	435/375
6	5.35	27.75	28	22	39.5	24	1123/907
150	136	705	711	559	1005	600	510/412
8	7	32.75	33.15	28	45	-	2026/1586
200	178	832	842	711	1145	-	920/760
10	8.74	39	39.41	34	54	-	4207/3610
250	222	991	1001	864	1370	-	1910/1640
12	10.35	44.5	45.12	39	61	-	6947/6068
300	263	1130	1146	991	1650	-	3154/2755
14	11.38	49.5	50.24	42	74.88	-	9031/7048
350	289	1259	1276	1067	1900	-	4100/3200
16	13	54.5	55.35	47	80.5	-	13656/11674
400	330	1384	1406	1194	2050	-	6200/5300
18	14.61	60.5	61.38	53	93.75	-	19747/17775
450	371	1537	1559	1346	2350	-	8965/8070
20	16.38	65.5	66.38	58	101.5	-	28855/25969
500	416	1664	1686	1473	2580	-	13100/11790
24	19.61	76.5	77.6	-	114.75	-	34934/31443
600	498	1943	1971	-	2915	-	15860/14275

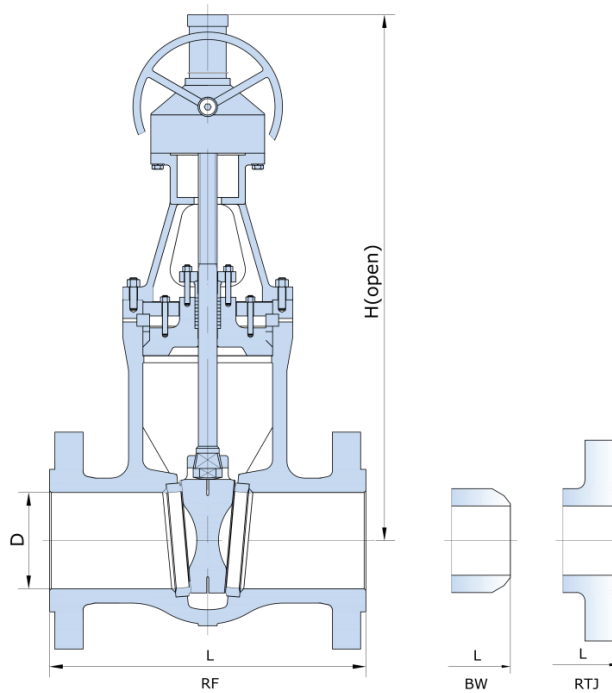
The dimension and weights are for reference only and subject to change without notice.

1. For more dimensional information, please contact our sales representative.
2. "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

GATE VALVE

DIMENSIONS AND WEIGHTS (Pressure Seal Bonnet)

ASME CLASS 2500 (PN 420)



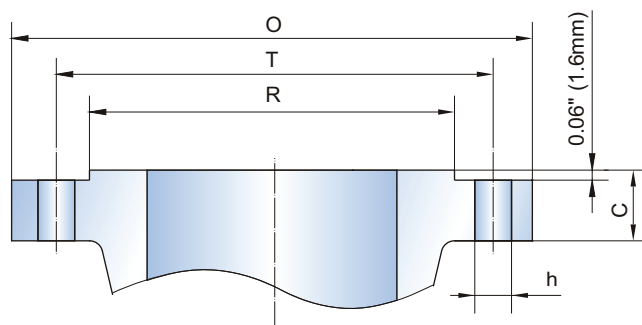
ASME CLASS 2500 (PN 420)

Size in/mm	D	L			H	W	Weight
		RF	RTJ	BW			RF/RTJ (lb/kg)
2	1.5	17.75	17.88	11	23.38	13.78	253/143
50	38	451	454	279	595	350	115/65
2 ½	1.89	20.32	20.56	13	25.6	17.72	300/172
65	48	508	514	330	650	450	136/78
3	2.24	22.75	23	14.5	28	17.72	540/385
80	57	578	584	368	710	450	245/175
4	2.87	26.5	26.88	18	32.25	19.69	1079/826
100	73	673	683	457	820	500	490/375
5	3.62	31.26	31.77	521	43.3	23.62	1476/974
125	92	794	807	33	1100	600	670/430
6	4.37	36	36.5	24	49.62	23.62	1894/1278
150	111	914	927	610	1260	600	860/580
8	5.75	40.25	40.88	30	63.4	-	5396/4405
200	146	1022	1038	762	1610	-	2450/2010
10	7.27	50	50.88	36	81.7	-	10066/8370
250	184	1270	1292	914	2076	-	4570/3800
12	8.62	56	56.88	41	89.8	-	13436/11454
300	219	1422	1444	1041	2281	-	6100/5200
14	9.49	-	-	44	74.88	-	-
350	241	-	-	1118	1900	-	-
16	10.87	-	-	49	80.5	-	-
400	276	-	-	1245	2050	-	-
18	12.24	-	-	55	93.75	-	-
450	311	-	-	1397	2350	-	-

The dimension and weights are for reference only and subject to change without notice.

1. For more dimensional information, please contact our sales representative.
2. "W" on above schematic is the diameter for hand wheel, the one without dimension on the table above is defaulted by gear operation.

CLASS 150 300 RF



CLASS	SIZE		O		R		C		T		h		Bolt	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY.	Diameter
150	2	50	6.00	152	3.62	92	0.62	16	4.75	120.5	0.75	19	4	5/8
	2 1/2	65	7.00	178	4.12	105	0.69	18	5.50	139.5	0.75	19	4	5/8
	3	80	7.50	190	5.00	127	0.75	19	6.00	152.5	0.75	19	4	5/8
	4	100	9.00	229	6.19	157	0.94	24	7.50	190.5	0.75	19	8	5/8
	6	150	11.00	279	8.50	216	1.00	26	9.50	241.5	0.88	22	8	3/4
	8	200	13.50	343	10.62	270	1.12	29	11.75	298.5	0.88	22	8	3/4
	10	250	16.00	406	12.75	324	1.19	31	14.25	362	1.00	25	12	7/8
	12	300	19.00	483	15.00	381	1.25	32	17.00	432	1.00	25	12	7/8
	14	350	21.00	533	16.25	413	1.38	35	18.75	476	1.12	29	12	1
	16	400	23.50	597	18.50	470	1.44	37	21.25	540	1.12	29	16	1
	18	450	25.00	635	21.00	533	1.56	40	22.75	578	1.25	32	16	1 1/8
	20	500	27.50	699	23.00	584	1.69	43	25.00	635	1.25	32	20	1 1/8
	24	600	32.00	813	27.25	692	1.88	48	29.50	749.5	1.38	35	20	1 1/4
	26	650	34.25	870	29.50	749	2.69	69	31.75	806.5	1.38	35	24	1 1/4
	28	700	36.50	927	31.50	800	2.81	72	34.00	863.5	1.38	35	28	1 1/4
	30	750	38.75	984	33.75	857	2.94	75	36.00	914.5	1.38	35	28	1 1/4
	32	800	41.75	1060	36.00	914	3.19	81	38.50	978	1.62	41	28	1 1/2
	36	900	46.00	1168	40.25	1022	3.56	91	42.75	1086	1.62	41	32	1 1/2
300	40	1000	50.75	1289	44.25	1124	3.56	91	47.25	1200	1.62	41	36	1 1/2
	42	1050	53.00	1346	47.00	1194	3.81	97	49.50	1257.5	1.62	41	36	1 1/2
	48	1200	59.50	1511	53.50	1359	4.25	108	56.00	1422.5	1.62	41	44	1 1/2
	2	50	6.50	165	3.62	92	0.88	23	5.00	127	0.75	19	8	5/8
	2 1/2	65	7.50	190	4.12	105	1.00	26	5.88	149	0.88	22	8	3/4
	3	80	8.25	210	5.00	127	1.12	29	6.62	168.5	0.88	22	8	3/4
	4	100	10.00	254	6.19	157	1.25	32	7.88	200	0.88	22	8	3/4
	6	150	12.50	318	8.50	216	1.44	37	10.62	270	0.88	22	12	3/4
	8	200	15.00	381	10.62	270	1.62	42	13.00	330	1.00	25	12	7/8
	10	250	17.50	445	12.75	324	1.88	48	15.25	387.5	1.12	29	16	1
	12	300	20.50	521	15.00	381	2.00	51	17.75	451	1.25	32	16	1 1/8
	14	350	23.00	584	16.25	413	2.12	54	20.25	514.5	1.25	32	20	1 1/8
	16	400	25.50	648	18.50	470	2.25	58	22.50	571.5	1.38	35	20	1 1/4
	18	450	28.00	711	21.00	533	2.38	61	24.75	628.5	1.38	35	24	1 1/4
	20	500	30.50	775	23.00	584	2.50	64	27.00	686	1.38	35	24	1 1/4
	24	600	36.00	914	27.25	692	2.75	70	32.00	813	1.62	41	24	1 1/2
	26	650	38.25	972	29.50	749	3.12	80	34.50	876.5	1.75	45	28	1 5/8
	28	700	40.75	1035	31.50	800	3.38	86	37.00	940	1.75	45	28	1 5/8
	30	750	43.00	1092	33.75	857	3.62	92	39.25	997	1.88	48	28	1 3/4
	32	800	45.25	1149	36.00	914	3.88	98	41.50	1054	2.00	51	28	17/8
	36	900	50.00	1270	40.25	1022	4.12	105	46.00	1168.5	2.12	54	32	2

End Flange Dimensions:

Tolerances: Unit inch

Thickness C:

NPS ≤ 18" +0.12, -0

NPS ≥ 20" +0.19, -0

Drilling and Facing:

Bolt Circle Diameter h: ± 0.06

Center to Center of Adjacent Bolt Holes: ± 0.03

Eccentricity Between Bolt Circle Diameter and Machined Facing Diameters:

NPS ≤ 2 1/2" ± 0.03

NPS ≥ 3" ± 0.06

Outside Diameter R:

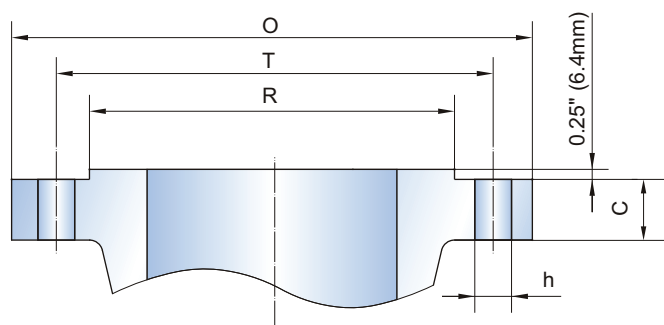
0.06 Raised Face: NPS 2"-24" ± 0.03

0.25 Raised Face: NPS 2"-24" ± 0.02

NPS ≥ 26" ± 0.08

NPS ≥ 26" ± 0.04

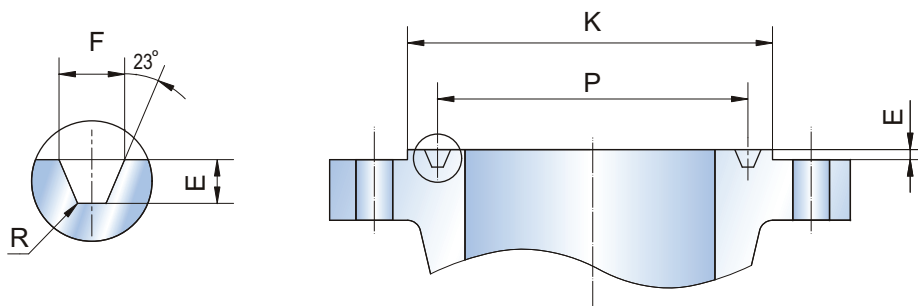
CLASS 600-2500 RF



CLASS	SIZE		O		R		C		T		h		Bolt	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY.	Diameter
600	2	50	6.50	165	3.62	92	1.00	26	5.00	127	0.75	19	8	5/8
	2 1/2	65	7.50	190	4.12	105	1.12	29	5.88	149	0.88	22	8	3/4
	3	80	8.25	210	5.00	127	1.25	32	6.62	168	0.88	22	8	3/4
	4	100	10.75	273	6.19	157	1.50	38	8.50	216	1.00	25	8	7/8
	6	150	14.00	356	8.50	216	1.88	48	11.50	292	1.12	29	12	1
	8	200	16.50	419	10.62	270	2.19	56	13.75	349	1.25	32	12	1 1/8
	10	250	20.00	508	12.75	324	2.50	64	17.00	432	1.38	35	16	1 1/4
	12	300	22.00	559	15.00	381	2.62	67	19.25	489	1.38	35	20	1 1/4
	14	350	23.75	603	16.25	413	2.75	70	20.75	527	1.50	38	20	1 3/8
	16	400	27.00	686	18.50	470	3.00	77	23.75	603	1.62	41	20	1 1/2
	18	450	29.25	743	21.00	533	3.25	83	25.75	654	1.75	44	20	1 5/8
	20	500	32.00	813	23.00	584	3.50	89	28.50	724	1.75	44	24	1 5/8
	24	600	37.00	940	27.25	692	4.00	102	33.00	838	2.00	51	24	1 7/8
900	2	50	8.50	216	3.62	92	1.50	38.5	6.50	165.1	1.00	26	8	7/8
	2 1/2	65	9.62	244	4.12	105	1.62	41.5	7.50	190.5	1.12	29	8	1
	3	80	9.50	241	5.00	127	1.50	38.5	7.50	190.5	1.00	26	8	7/8
	4	100	11.50	292	6.19	157	1.75	44.5	9.25	234.9	1.25	32	8	1 1/8
	6	150	15.00	381	8.50	216	2.19	56.0	12.50	317.5	1.25	32	12	1 1/8
	8	200	18.50	470	10.62	270	2.50	63.5	15.50	393.7	1.50	39	12	1 3/8
	10	250	21.50	545	12.75	324	2.75	70.0	18.50	469.9	1.50	39	16	1 3/8
	12	300	24.00	610	15.00	381	3.12	79.5	21.00	533.4	1.50	39	20	1 3/8
	14	350	25.25	640	16.25	413	3.38	86.0	22.00	558.8	1.62	42	20	1 1/2
	16	400	27.75	705	18.50	470	3.50	89.0	24.25	615.9	1.75	45	20	1 5/8
	18	450	31.00	785	21.00	533	4.00	102.0	27.00	685.8	2.00	51	20	1 7/8
	20	500	33.75	855	23.00	584	4.25	108.0	29.50	749.3	2.12	54	20	2
	24	600	41.00	1040	27.25	692	5.50	140.0	35.50	901.7	2.62	67	20	2 1/2
1500	2	50	8.50	216	3.62	92	1.50	38.5	6.50	165.1	1.00	26	8	7/8
	2 1/2	65	9.62	244	4.12	105	1.62	41.5	7.50	190.5	1.12	29	8	1
	3	80	10.50	267	5.00	127	1.88	48.0	8.00	203.2	1.25	32	8	1 1/8
	4	100	12.25	311	6.19	157	2.12	54.0	9.50	241.3	1.38	35	8	1 1/4
	6	150	15.50	394	8.50	216	3.25	83.0	12.50	317.5	1.50	39	12	1 3/8
	8	200	19.00	483	10.62	270	3.62	92.9	15.50	393.7	1.75	45	12	1 5/8
	10	250	23.00	585	12.75	324	4.25	108.0	19.00	482.6	2.00	51	12	1 7/8
	12	300	26.50	675	15.00	381	4.88	124.0	22.50	571.5	2.12	54	16	2
	14	350	29.50	750	16.25	413	5.25	133.5	25.00	635.0	2.38	61	16	2 1/4
	16	400	32.50	825	18.50	470	5.75	146.5	27.75	704.8	2.62	67	16	2 1/2
	18	450	36.00	915	21.00	533	6.38	162.0	30.50	774.7	2.88	74	16	2 3/4
	20	500	38.75	985	23.00	584	7.00	178.0	32.75	831.8	3.12	80	16	3
	24	600	46.00	1170	27.25	692	8.00	203.5	39.00	990.6	3.62	93	16	3 1/2
2500	2	50	9.25	235	3.62	92	2.00	51.0	6.75	171.4	1.12	29	8	1
	2 1/2	65	10.50	267	4.12	105	2.25	57.5	7.75	196.8	1.25	32	8	1 1/8
	3	80	12.00	305	5.00	127	2.62	67.0	9.00	228.6	1.38	35	8	1 1/4
	4	100	14.00	356	6.19	157	3.00	76.5	10.75	273.0	1.62	42	8	1 1/2
	6	150	19.00	483	8.50	216	4.25	108.0	14.50	368.3	2.12	54	8	2
	8	200	21.75	550	10.62	270	5.00	127.0	17.25	438.1	2.12	54	12	2
	10	250	26.50	675	12.75	324	6.50	165.5	21.25	539.7	2.62	67	12	2 1/2
	12	300	30.00	760	15.00	381	7.25	184.5	24.38	619.1	2.88	74	12	2 3/4

End Flange Dimensions: ASME B16.5
Tolerances: the Same as Class 150 300

CLASS 150-2500 RTJ



CLASS	SIZE		Ring No.	P		E		F		R		K	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm
150	2	50	R22	3.250	82.55	0.250	6.35	0.344	8.74	0.03	0.8	4.00	102
	2 1/2	65	R25	4.000	101.60	0.250	6.35	0.344	8.74	0.03	0.8	4.75	121
	3	80	R29	4.500	114.30	0.250	6.35	0.344	8.74	0.03	0.8	5.25	133
	4	100	R36	5.875	149.22	0.250	6.35	0.344	8.74	0.03	0.8	6.75	171
	6	150	R43	7.625	193.68	0.250	6.35	0.344	8.74	0.03	0.8	8.62	219
	8	200	R48	9.750	247.65	0.250	6.35	0.344	8.74	0.03	0.8	10.75	273
	10	250	R52	12.000	304.80	0.250	6.35	0.344	8.74	0.03	0.8	13.00	330
	12	300	R56	15.000	381.00	0.250	6.35	0.344	8.74	0.03	0.8	16.00	406
	14	350	R59	15.625	396.88	0.250	6.35	0.344	8.74	0.03	0.8	16.75	425
	16	400	R64	17.875	454.02	0.250	6.35	0.344	8.74	0.03	0.8	19.00	483
	18	450	R68	20.375	517.52	0.250	6.35	0.344	8.74	0.03	0.8	21.50	546
	20	500	R72	22.000	558.80	0.250	6.35	0.344	8.74	0.03	0.8	23.50	597
	24	600	R76	26.500	673.10	0.250	6.35	0.344	8.74	0.03	0.8	28.00	711
	2	50	R23	3.250	82.55	0.312	7.92	0.469	11.91	0.03	0.8	4.25	108
300 600	2 1/2	65	R26	4.000	101.60	0.312	7.92	0.469	11.91	0.03	0.8	5.00	127
	3	80	R31	4.875	123.82	0.312	7.92	0.469	11.91	0.03	0.8	5.75	146
	4	100	R37	5.875	149.22	0.312	7.92	0.469	11.91	0.03	0.8	6.88	175
	6	150	R45	8.312	211.13	0.312	7.92	0.469	11.91	0.03	0.8	9.50	241
	8	200	R49	10.625	269.88	0.312	7.92	0.469	11.91	0.03	0.8	11.88	302
	10	250	R53	12.750	323.85	0.312	7.92	0.469	11.91	0.03	0.8	14.00	356
	12	300	R57	15.000	381.00	0.312	7.92	0.469	11.91	0.03	0.8	16.25	413
	14	350	R61	16.500	419.10	0.312	7.92	0.469	11.91	0.03	0.8	18.00	457
	16	400	R65	18.500	469.90	0.312	7.92	0.469	11.91	0.03	0.8	20.00	508
	18	450	R69	21.000	533.40	0.312	7.92	0.469	11.91	0.03	0.8	22.62	575
	20	500	R73	23.000	584.20	0.375	9.52	0.531	13.49	0.06	1.5	25.00	635
	24	600	R77	27.250	692.15	0.438	11.13	0.656	16.66	0.06	1.5	29.50	749
	26	650	R93	29.500	749.30	0.500	12.7	0.781	19.84	0.06	1.5	31.88	861
	28	700	R94	31.500	800.10	0.500	12.7	0.781	19.84	0.06	1.5	33.88	861
	30	750	R95	33.750	857.25	0.500	12.7	0.781	19.84	0.06	1.5	36.12	917
	32	800	R96	36.000	914.40	0.562	14.27	0.906	23.01	0.06	1.5	38.75	984
	36	900	R98	40.250	1022.35	0.562	14.27	0.906	23.01	0.06	1.5	43.00	1092

CLASS	SIZE		Ring No.	P		E		F		R		K	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm
900	2	50	R24	3.750	95.25	0.312	7.92	0.469	11.91	0.03	0.8	4.88	124
	2 1/2	65	R27	4.250	107.95	0.312	7.92	0.469	11.91	0.03	0.8	5.38	137
	3	80	R31	4.875	123.82	0.312	7.92	0.469	11.91	0.03	0.8	6.12	156
	4	100	R37	5.875	149.22	0.312	7.92	0.469	11.91	0.03	0.8	7.12	181
	6	150	R45	8.312	211.12	0.312	7.92	0.469	11.91	0.03	0.8	9.50	241
	8	200	R49	10.625	269.88	0.312	7.92	0.469	11.91	0.03	0.8	12.12	308
	10	250	R53	12.750	323.85	0.312	7.92	0.469	11.91	0.03	0.8	14.25	362
	12	300	R57	15.000	381.00	0.312	7.92	0.469	11.91	0.03	0.8	16.50	419
	14	350	R62	16.500	419.10	0.438	11.13	0.656	16.66	0.06	1.5	18.38	467
	16	400	R66	18.500	469.90	0.438	11.13	0.656	16.66	0.06	1.5	20.62	524
	18	450	R70	21.000	533.40	0.500	12.7	0.781	19.84	0.06	1.5	23.38	594
	20	500	R74	23.000	584.20	0.500	12.7	0.781	19.84	0.06	1.5	25.50	648
	24	600	R78	27.250	692.15	0.625	15.88	1.062	26.97	0.09	2.3	30.38	772
	2	50	R24	3.750	95.25	0.312	7.92	0.469	11.91	0.03	0.8	4.88	124
1500	2 1/2	65	R27	4.250	107.95	0.312	7.92	0.469	11.91	0.03	0.8	5.38	137
	3	80	R35	5.375	136.52	0.312	7.92	0.469	11.91	0.03	0.8	6.62	168
	4	100	R39	6.375	161.92	0.312	7.92	0.469	11.91	0.03	0.8	7.62	194
	6	150	R46	8.312	211.12	0.375	9.52	0.531	13.49	0.06	1.5	9.75	248
	8	200	R50	10.625	269.88	0.438	11.13	0.656	16.66	0.06	1.5	12.50	318
	10	250	R54	12.750	323.85	0.438	11.13	0.656	16.66	0.06	1.5	14.62	371
	12	300	R58	15.000	381.00	0.562	14.27	0.906	23.01	0.06	1.5	17.25	438
	14	350	R63	16.500	419.10	0.625	15.88	1.062	26.97	0.09	2.3	19.25	489
	16	400	R67	18.500	469.90	0.688	17.48	1.188	30.18	0.09	2.3	21.50	546
	18	450	R71	21.000	533.40	0.688	17.48	1.188	30.18	0.09	2.3	24.12	613
	20	500	R75	23.000	584.20	0.688	17.48	1.312	33.32	0.09	2.3	26.50	673
	24	600	R79	27.250	692.15	0.812	20.62	1.438	36.53	0.09	2.3	31.25	794
	2	50	R26	4.000	101.60	0.312	7.92	0.469	11.91	0.03	0.8	5.25	133
	2 1/2	65	R28	4.375	111.12	0.375	9.52	0.531	13.49	0.03	0.8	5.88	149
2500	3	80	R32	5.000	127.00	0.375	9.52	0.531	13.49	0.06	1.5	6.62	168
	4	100	R38	6.188	157.18	0.438	11.13	0.656	16.66	0.06	1.5	8.00	203
	6	150	R47	9.000	228.60	0.500	12.70	0.781	19.84	0.06	1.5	11.00	279
	8	200	R51	11.000	279.40	0.562	14.27	0.906	23.01	0.06	1.5	13.38	340
	10	250	R55	13.500	342.90	0.688	17.48	1.188	30.18	0.09	2.3	16.75	425
	12	300	R60	16.000	406.40	0.688	17.48	1.312	33.32	0.09	2.3	19.50	495

End Flange Dimensions:

Size 2"-24" to ASME B16.5, Size 26"-36" to ASME B16.47 A.

Tolerances: Unit inch

Depth E: + 0.016, -0

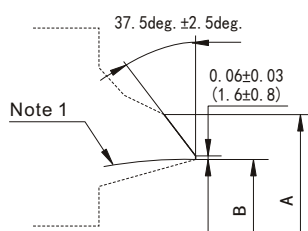
Width F: ± 0.008

Pith Diameter P: ± 0.005

Radius at Bottom R: R ≤ 0.06 +0.03, -0

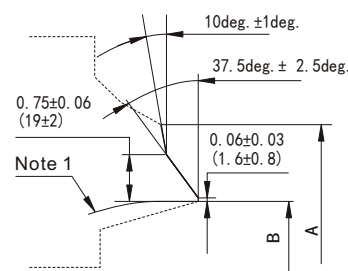
R > 0.06 ± 0.03

Angle 23 Deg.: ± 0.5 Deg.



Note 1 Internal surface may be as formed or machined for dimension B at root face. Contour within the envelope shall be in accordance with section.

Wall Thickness not Over 0.88in (22mm)
Welding End Detail for Joint Without Backing Ring



Wall Thickness Over 0.88in (22mm)
Welding End Detail for Joint Without Backing Ring

Nominal Pipe Size		Schedule No. [Note(1)]	O.D. at Welding Ends				B		C [Note(3)]		t	
			Wrought or Fabricated Components,A [Note(1)]		Cast Steel Valves, A [Note(2)]							
DN	NPS		mm	in	mm	in	mm	in	mm	in	mm	in
65	2 1/2	40	73.0	2.88	75	2.96	62.5	2.469	62.93	2.479	5.16	0.203
		80					59	2.323	59.69	2.351	7.01	0.276
		160					54	2.125	55.28	2.178	9.53	0.375
		XXS					45	1.771	47.43	1.868	14.02	0.552
80	3	40	88.9	3.50	91	3.59	78	3.068	78.25	3.081	5.49	0.216
		80					73.5	2.900	74.53	2.934	7.62	0.300
		160					66.5	2.624	68.38	2.692	11.13	0.438
		XXS					58.5	2.300	61.19	2.409	15.24	0.600
90	3 1/2	40	101.6	4.00	105	4.12	90	3.548	90.52	3.564	5.74	0.226
		80					85.5	3.364	86.42	3.402	8.08	0.318
100	4	40	114.3	4.50	117	4.62	102	4.026	102.73	4.044	6.02	0.237
		80					97	3.826	98.28	3.869	8.56	0.337
		120					92	3.624	93.78	3.692	11.13	0.438
		160					87.5	3.438	89.65	3.530	13.49	0.531
		XXS					80	3.152	83.30	3.279	17.12	0.674
125	5	40	141.3	5.56	144	5.69	128	5.047	128.80	5.070	6.55	0.258
		80					122	4.813	123.58	4.866	9.53	0.375
		120					116	4.563	118.04	4.647	12.70	0.500
		160					109.5	4.313	112.47	4.428	15.88	0.625
		XXS					103	4.063	106.92	4.209	19.05	0.750
150	6	40	168.3	6.62	172	6.78	154	6.065	154.82	6.094	7.11	0.280
		80					146.5	5.761	148.06	5.828	10.97	0.432
		120					140	5.501	142.29	5.600	14.27	0.562
		160					132	5.187	135.31	5.326	18.26	0.719
		XXS					124.5	4.897	128.85	5.072	21.95	0.864
200	8	40	219.1	8.62	223	8.78	203	7.981	203.75	8.020	8.18	0.322
		60					198.5	7.813	200.02	7.873	10.31	0.406
		80					193.5	7.625	195.84	7.709	12.70	0.500
		100					189	7.437	191.65	7.544	15.09	0.594
		120					182.5	7.187	186.11	7.326	18.26	0.719
		140					178	7.001	181.98	7.163	20.62	0.812
		XXS					174.5	6.875	179.16	7.053	22.23	0.875
		160					173	6.813	177.79	6.998	23.01	0.906
250	10	40	273.0	10.75	278	10.94	254.5	10.020	255.74	10.070	9.27	0.365
		60					247.5	9.750	249.74	9.834	12.70	0.500
		80					243	9.562	245.55	9.670	15.09	0.594
		100					236.5	9.312	240.01	9.451	18.26	0.719
		120					230	9.062	234.44	9.232	21.44	0.844
		140					222	8.750	227.51	8.959	25.40	1.000
		160					216	8.500	221.95	8.740	28.58	1.125
300	12	STD	323.8	12.75	329	12.97	305	12.000	306.08	12.053	9.53	0.375
		40					303	11.938	304.72	11.999	10.31	0.406
		XS					298.5	11.750	300.54	11.834	12.70	0.500
		60					295	11.626	297.79	11.725	14.27	0.562
		80					289	11.374	292.17	11.505	17.48	0.688
		100					281	11.062	285.24	11.232	21.44	0.844
		120					273	10.750	278.31	10.959	25.40	1.000
		140					266.5	10.500	272.75	10.740	28.58	1.125
		160					257	10.126	264.45	10.413	33.32	1.312
350	14	STD	355.6	14.00	362	14.25	336.5	13.250	337.88	13.303	9.53	0.375
		40					333.5	13.124	335.08	13.192	11.13	0.438
		XS					330	13.000	332.34	13.084	12.70	0.500
		60					325.5	12.812	328.15	12.920	15.09	0.594
		80					317.5	12.500	321.22	12.646	19.05	0.750
		100					308	12.124	312.86	12.318	23.83	0.938
		120					300	11.812	305.93	12.044	27.79	1.094
		140					292	11.500	299.00	11.771	31.75	1.250
		160					284	11.188	292.07	11.498	35.71	1.406

Nominal Pipe Size		Schedule No. [Note(1)]	O.D. at Welding Ends				B		C [Note(3)]		t	
			Wrought or Fabricated Components, A [Note(1)]		Cast Steel Valves, A [Note(2)]							
DN	NPS		mm	in	mm	in	mm	in	mm	in	mm	in
400	16	STD	406.4	16.00	413	16.25	387.5	15.250	388.68	15.303	9.53	0.375
		40					381	15.000	383.14	15.084	12.70	0.500
		60					373	14.688	376.21	14.811	16.66	0.656
		80					363.5	14.312	367.84	14.482	21.44	0.844
		100					354	13.938	359.53	14.155	26.19	1.031
		120					344.5	13.562	351.18	13.826	30.96	1.219
		140					333.5	13.124	341.43	13.422	36.53	1.438
		160					325.5	12.812	334.50	13.170	40.49	1.594
450	18	STD	457.2	18.00	464	18.28	438	17.250	439.48	17.303	9.53	0.375
		XS					432	17.000	433.94	17.084	12.70	0.500
		40					428.5	16.876	431.19	16.975	14.27	0.562
		60					419	16.500	422.82	16.646	19.05	0.750
		80					409.5	16.124	414.46	16.318	23.83	0.938
		100					398.5	15.688	404.78	15.936	29.36	1.156
		120					387.5	15.250	395.03	15.553	34.93	1.375
		140					378	14.876	386.77	15.225	39.67	1.562
500	20	STD	508.0	20.00	516	20.31	489	19.250	490.28	19.303	9.53	0.375
		XS					482.5	19.000	484.74	19.084	12.70	0.500
		40					478	18.812	480.55	18.920	15.09	0.594
		60					467	18.376	470.88	18.538	20.62	0.812
		80					455.5	17.938	461.13	18.155	26.19	1.031
		100					443	17.438	450.02	17.717	32.54	1.281
		120					432	17.000	440.29	17.334	38.10	1.500
		140					419	16.500	429.17	16.896	44.45	1.750
550	22	STD	558.8	22.00	567	22.34	539	21.250	541.08	21.303	9.53	0.375
		XS					533	21.000	535.54	21.084	12.70	0.500
		60					514	20.250	518.86	20.428	22.23	0.875
		80					501	19.750	507.75	19.990	28.58	1.125
		100					488.5	19.250	496.63	19.553	34.93	1.375
		120					476	18.750	485.52	19.115	41.28	1.625
		140					463	18.250	474.41	18.678	47.63	1.875
		160					450.5	17.750	463.30	18.240	53.98	2.125
600	24	STD	609.6	24.00	619	24.38	590.5	23.250	591.88	23.303	9.53	0.375
		XS					584	23.000	586.34	23.084	12.70	0.500
		30					581	22.876	583.59	22.975	14.27	0.562
		40					574.5	22.624	577.97	22.755	17.48	0.688
		60					560.5	22.062	565.49	22.263	24.61	0.969
		80					547.5	21.562	554.38	21.826	30.96	1.219
		100					532	20.938	540.49	21.280	38.89	1.531
		120					517.5	20.376	528.03	20.788	46.02	1.812
650	26	10	660.4	26.00	670	26.38	645.5	25.376	645.50	25.413	7.92	0.312
		20					635	25.000	637.14	25.084	12.70	0.500
		30					619	24.376	623.77	24.562	15.88	0.625
700	28	10	711.2	28.00	721	28.38	695.5	27.376	696.30	27.413	7.92	0.312
		20					686	27.000	687.94	27.084	12.70	0.500
		30					679.5	26.750	682.37	26.865	15.88	0.625
750	30	10	762.0	30.00	772	30.38	746	29.376	747.10	29.413	7.92	0.312
		20					736.5	29.000	738.74	29.084	12.70	0.500
		30					730	28.750	733.17	28.865	15.88	0.625
800	32	10	812.8	32.00	825	32.50	797	31.376	797.90	31.413	7.92	0.312
		20					787.5	31.000	789.54	31.084	12.70	0.500
		30					781	30.750	783.97	30.865	15.88	0.625
		40					778	30.624	781.17	30.755	17.48	0.688
850	34	10	863.6	34.00	876	34.50	848	33.376	848.70	33.413	7.92	0.312
		20					838	33.000	840.34	33.084	12.70	0.500
		30					832	32.750	834.77	32.865	15.88	0.625
		40					828.5	32.624	831.97	32.755	17.48	0.688
900	36	10	914.4	36.00	927	36.50	898.5	35.376	899.50	35.413	7.92	0.312
		20					889	35.000	891.14	35.084	12.70	0.500
		30					882.5	34.750	885.57	34.865	15.88	0.625
		40					876.5	34.500	880.02	34.646	19.05	0.750

NOTES:

- (1) Letter designations signify
 - (a) STD = standard wall thickness
 - (b) XS = extra-strong wall thickness
 - (c) XXS = double extra-strong wall thickness
- (2) The diameters listed are not requirements. They are provided for the convenience of the user.
- (3) Internal machining for continuous backing rings for sizes DN 50 (NPS 2) and smaller is not contemplated.



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of



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