



ANSI/ASME Cast Steel Gate Valves



Bolted Bonnet

Flanged Ends

Class 150-600
2"-36"

Application

- Refineries, power stations, process and general industry
- For water, steam, gas, oil, and other media
- Other applications on request

Operating Data

- Maximum allowable pressure 1500 psi (106 bar)
- Maximum allowable temperature 1500 °F (816 °C)
- Pressure/Temperature ratings per ASME B16.34
- Temperature below 0°C on request

Materials

- | | |
|------------------|------------------------|
| • ASTM A216 WCB | up to 800 °F (427 °C) |
| • ASTM A217 WC6 | up to 1100 °F (593 °C) |
| • ASTM A217 WC9 | up to 1100 °F (593 °C) |
| • ASTM A217 C5 | up to 1200 °F (649 °C) |
| • ASTM A217 C12 | up to 1200 °F (649 °C) |
| • ASTM A352 LCB | up to 650 °F (343 °C) |
| • ASTM A352 LCC | up to 650 °F (343 °C) |
| • ASTM A351 CF8 | up to 1500 °F (816 °C) |
| • ASTM A351 CF8M | up to 1500 °F (816 °C) |

Trim Materials

- | | |
|-----------|-------------------|
| • Trim 1 | 13Cr/13Cr |
| • Trim 2 | 304/304 |
| • Trim 5 | Stellite/Stellite |
| • Trim 8 | Stellite/13Cr |
| • Trim 10 | 316/316 |

Design

- Gate valve design per API 600
- Pressure/temperature rating per ASME B16.34
- End-end dimension per ASME B16.10
- Flange dimensions per ASME B16.5 and MSS SP44
- Testing per API 598
- Bolted bonnet
- Outside screw and yoke
- Non-rotating stem
- Flexible wedge
- Graphite packing
- Stainless steel/graphite gaskets

The valves meet the safety requirements of the Pressure Equipment Directive 97/23/EC (PED) of annex I for fluids of the groups 1 and 2.

Variants on request

- Gear operators
- Electric actuators
- Bypass execution
- Radiography
- Buttweld ends per ASME B16.25
- Other variants

Remarks

- EcoLine globe valve type series booklet no. 7247.12
- EcoLine check valve type series booklet no. 7247.13
- Operating instructions no: 7427.8000.831

On all enquiries / orders please specify

1. Valve Type
2. ANSI Pressure Class
3. Size
4. Design pressure
5. Design temperature
6. Differential Pressure-shut off
7. Flow Medium
8. Material of Construction
9. Trim Material (API Trim Number)
10. Type of End Connection
11. Pipe Schedule (for Buttweld Ends)
12. Variants
13. Type Series Booklet Number
14. Valve Data Sheet if Applicable

When ordering spare parts, indicate valve product code (shown on nameplate) and serial number.



Pressure/Temperature ratings (ASME B16.34 Standard Class)

ASTM A216 WCB

Temperature		Class 150		Class 300		Class 600	
°F	°C	psi	bar	psi	bar	psi	bar
32 to 100	0 to 38	285	19.7	740	51.0	1480	102.0
200	93	260	17.9	675	46.5	1350	93.1
300	149	230	15.9	655	45.2	1315	90.7
400	204	200	13.8	635	43.8	1270	87.6
500	260	170	11.7	600	41.4	1200	82.7
600	316	140	9.7	550	37.9	1095	75.5
650	343	125	8.6	535	36.9	1075	74.1
700	371	110	7.6	535	36.9	1065	73.4
750	399	95	6.6	505	34.8	1010	69.6
800	427	80	5.5	410	28.3	825	56.9
850 (1)	454	65	4.5	270	18.6	535	36.9
900 (1)	482	50	3.4	170	11.7	345	23.8
950 (1)	510	35	2.4	105	7.2	205	14.1
1000 (1)	538	20	1.4	50	3.4	105	7.2

Note 1. Permissible but not recommended for prolonged usage Above 800 °F (427 °C).

ASTM A217 WC6

Temperature		Class 150		Class 300		Class 600	
°F	°C	psi	bar	psi	bar	psi	bar
32 to 100	0 to 38	290	20.0	750	51.7	1500	103.4
200	93	260	17.9	750	51.7	1500	103.4
300	149	230	15.9	720	49.6	1445	99.6
400	204	200	13.8	695	47.9	1385	95.5
500	260	170	11.7	665	45.9	1330	91.7
600	316	140	9.7	605	41.7	1210	83.4
650	343	125	8.6	590	40.7	1175	81.0
700	371	110	7.6	570	39.3	1135	78.3
750	399	95	6.6	530	36.5	1065	73.4
800	427	80	5.5	510	35.2	1015	70.0
850	454	65	4.5	485	33.4	975	67.2
900	482	50	3.4	450	31.0	900	62.1
950	510	35	2.4	320	22.1	640	44.1
1000	538	20	1.4	215	14.8	430	29.6
1050	566	20 (1)	1.4 (1)	145	10.0	290	20.0
1100	593	20 (1)	1.4 (1)	95	6.6	190	13.1

Note 1. For welded end valves only. Flanged end ratings terminate at 1000 °F (593 °C).

Note 2. Not to be used over 1100 °F (593 °C).

ASTM A217 WC9

Temperature		Class 150		Class 300		Class 600	
°F	°C	psi	bar	psi	bar	psi	Bar
32 to 100	0 to 38	290	20.0	750	51.7	1500	103.4
200	93	260	17.9	750	51.7	1500	103.4
300	149	230	15.9	730	50.3	1455	100.3
400	204	200	13.8	705	48.6	1410	97.2
500	260	170	11.7	665	45.9	1330	91.7
600	316	140	9.7	605	41.7	1210	83.4
650	343	125	8.6	590	40.7	1175	81.0
700	371	110	7.6	570	39.3	1135	78.3
750	399	95	6.6	530	36.5	1065	73.4
800	427	80	5.5	510	35.2	1015	70.0
850	454	65	4.5	485	33.4	975	67.2
900	482	50	3.4	450	31.0	900	62.1
950	510	35	2.4	375	25.9	755	52.1
1000	538	20	1.4	260	17.9	520	35.9
1050	566	20 (1)	1.4 (1)	175	12.1	350	24.1
1100	593	20 (1)	1.4 (1)	110	7.6	220	15.2

ASTM A217 C5

Temperature		Class 150		Class 300		Class 600	
°F	°C	psi	bar	psi	bar	psi	bar
32 to 100	0 to 38	290	20.0	750	51.7	1500	103.4
200	93	260	17.9	745	51.4	1490	102.7
300	149	230	15.9	715	49.3	1430	98.6
400	204	200	13.8	705	48.6	1410	97.2
500	260	170	11.7	665	45.9	1330	91.7
600	316	140	9.7	605	41.7	1210	83.4
650	343	125	8.6	590	40.7	1175	81.0
700	371	110	7.6	570	39.3	1135	78.3
750	399	95	6.6	530	36.5	1055	72.7
800	427	80	5.5	510	35.2	1015	70.0
850	454	65	4.5	485	33.4	965	66.5
900	482	50	3.4	370	25.5	740	51.0
950	510	35	2.4	275	19.0	550	37.9
1000	538	20	1.4	200	13.8	400	27.6
1050	566	20 (1)	1.4 (1)	145	10.0	290	20.0
1100	593	20 (1)	1.4 (1)	100	6.9	200	13.8
1150	621	20 (1)	1.4 (1)	60	4.1	125	8.6
1200	649	15 (1)	1.0 (1)	35	2.4	70	4.8

Note 1. For welded end valves only. Flanged end ratings terminate at 1000 °F (593 °C).

ASTM A217 C12

Temperature		Class 150		Class 300		Class 600	
°F	°C	psi	bar	psi	bar	psi	Bar
32 to 100	0 to 38	290	20.0	750	51.7	1500	103.4
200	93	260	17.9	750	51.7	1500	103.4
300	149	230	15.9	730	50.3	1455	100.3
400	204	200	13.8	705	48.6	1410	97.2
500	260	170	11.7	665	45.9	1330	91.7
600	316	140	9.7	605	41.7	1210	83.4
650	343	125	8.6	590	40.7	1175	81.0
700	371	110	7.6	570	39.3	1135	78.3
750	399	95	6.6	530	36.5	1065	73.4
800	427	80	5.5	510	35.2	1015	70.0
850	454	65	4.5	485	33.4	975	67.2
900	482	50	3.4	450	31.0	900	62.1
950	510	35	2.4	375	25.9	755	52.1
1000	538	20	1.4	255	17.6	505	34.8
1050	566	20 (1)	1.4 (1)	170	11.7	345	23.8
1100	593	20 (1)	1.4 (1)	115	7.9	225	15.5
1150	621	20 (1)	1.4 (1)	75	5.2	150	10.3
1200	649	20 (1)	1.4 (1)	50	3.4	105	7.2

ASTM A352 LCB

Temperature		Class 150		Class 300		Class 600	
°F	°C	psi	bar	psi	bar	psi	bar
32 to 100	0 to 38	265	18.3	695	47.9	1390	95.8
200	93	250	17.2	655	45.2	1315	90.7
300	149	230	15.9	640	44.1	1275	87.9
400	204	200	13.8	620	42.7	1235	85.2
500	260	170	11.7	585	40.3	1165	80.3
600	316	140	9.7	535	36.9	1065	73.4
650	343	125	8.6	525	36.2	1045	72.1

Note 1. Not to be used above 650 °F (343 °C).

ASTM A352 LCC

Temperature		Class 150		Class 300		Class 600	
°F	°C	psi	bar	psi	bar	psi	Bar
32 to 100	0 to 38	290	20.0	750	51.7	1500	103.4
200	93	260	17.9	750	51.7	1500	103.4
300	149	230	15.9	730	50.3	1465	101.0
400	204	200	13.8	705	48.6	1410	97.2
500	260	170	11.7	665	45.9	1330	91.7
600	316	140	9.7	605	41.7	1210	83.4
650	343	125	8.6	590	40.7	1175	81.0

ASTM A351 CF8

Temperature		Class 150		Class 300		Class 600	
°F	°C	psi	bar	psi	bar	psi	bar
32 to 100	0 to 38	275	19.0	720	49.6	1440	99.3
200	93	230	15.9	600	41.4	1200	82.7
300	149	205	14.1	540	37.2	1080	74.5
400	204	190	13.1	495	34.1	995	68.6
500	260	170	11.7	465	32.1	930	64.1
600	316	140	9.7	435	30.0	875	60.3
650	343	125	8.6	430	29.6	860	59.3
700	371	110	7.6	425	29.3	850	58.6
750	399	95	6.6	415	28.6	830	57.2
800	427	80	5.5	405	27.9	805	55.5
850	454	65	4.5	395	27.2	790	54.5
900	482	50	3.4	390	26.9	780	53.8
950	510	35	2.4	380	26.2	765	52.7
1000(2)	538	20	1.4	320	22.1	640	44.1
1050(2)	566	20 (1)	1.4 (1)	310	21.4	615	42.4
1100(2)	593	20 (1)	1.4 (1)	255	17.6	515	35.5
1150(2)	621	20 (1)	1.4 (1)	200	13.8	400	27.6
1200(2)	649	20 (1)	1.4 (1)	155	10.7	310	21.4
1250(2)	677	20 (1)	1.4 (1)	115	7.9	225	15.5
1300(2)	704	20 (1)	1.4 (1)	85	5.9	170	11.7
1350(2)	732	20 (1)	1.4 (1)	60	4.1	125	8.6
1400(2)	760	20 (1)	1.4 (1)	50	3.4	95	6.6
1450(2)	788	15 (1)	1.0 (1)	35	2.4	70	4.8
1500(2)	816	10 (1)	0.7 (1)	25	1.7	44	3.0

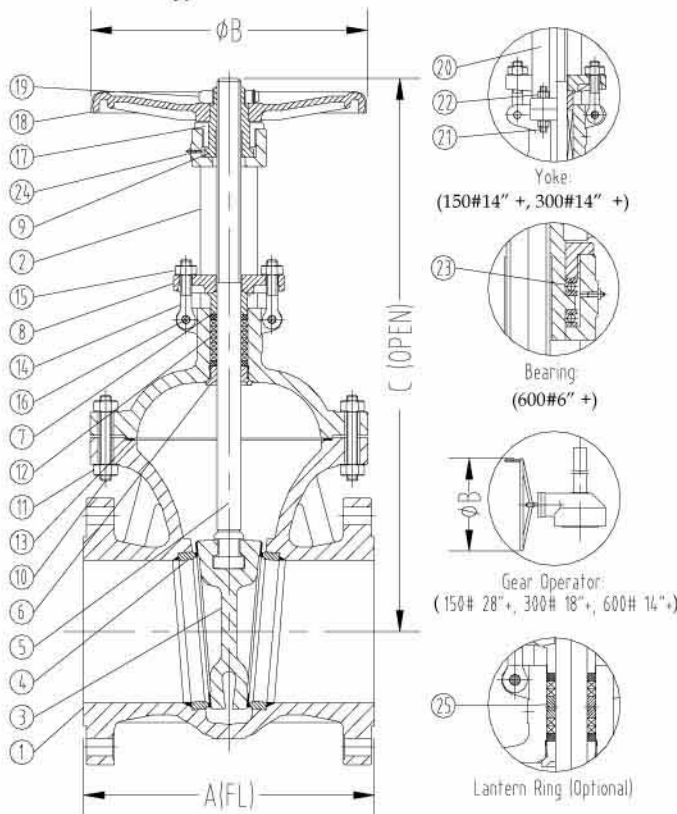
Note 1. For welded end valves only. Flanged end ratings terminate at 1000 °F (593 °C).

Note 2. At temperatures over 1000 °F (593 °C), use only when carbon content is 0.04% or higher.

ASTM A351 CF8M

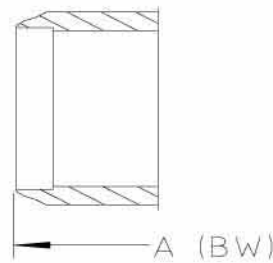
Temperature		Class 150		Class 300		Class 600	
°F	°C	psi	bar	psi	bar	psi	Bar
32 to 100	0 to 38	275	19.0	720	49.6	1440	99.3
200	93	235	16.2	620	42.7	1240	85.5
300	149	215	14.8	560	38.6	1120	77.2
400	204	195	13.4	515	35.5	1025	70.7
500	260	170	11.7	480	33.1	955	65.8
600	316	140	9.7	450	31.0	900	62.1
650	343	125	8.6	445	30.7	890	61.4
700	371	110	7.6	430	29.6	870	60.0
750	399	95	6.6	425	29.3	855	59.0
800	427	80	5.5	420	29.0	845	58.3
850	454	65	4.5	420	29.0	835	57.6
900	482	50	3.4	415	28.6	830	57.2
950	510	35	2.4	385	26.5	775	53.4
1000	538	20	1.4	350	24.1	700	48.3
1050 (2)	566	20 (1)	1.4 (1)	345	23.8	685	47.2
1100 (2)	593	20 (1)	1.4 (1)	305	21.0	610	42.1
1150 (2)	621	20 (1)	1.4 (1)	235	16.2	475	32.8
1200 (2)	649	20 (1)	1.4 (1)	185	12.8	370	25.5
1250 (2)	677	20 (1)	1.4 (1)	145	10.0	295	20.3
1300 (2)	704	20 (1)	1.4 (1)	115	7.9	235	16.2
1350 (2)	732	20 (1)	1.4 (1)	95	6.6	190	13.1
1400 (2)	760	20 (1)	1.4 (1)	75	5.2	150	10.3
1450 (2)	788	20 (1)	1.4 (1)	60	4.1	115	7.9
1500 (2)	816	20 (1)	1.4 (1)	40	2.8	85	5.9

Gate Valves – Type GT



Design Specifications

General Valve Design	: API 600
Pressure/Temperature Rating	: ASME B16.34
Flange Dimensions (2" – 24")	: ASME B16.5
Flange Dimensions (>24")	: MSS SP44
Butt Weld Ends	: ASME B16.25
End-to-End	: ASME B16.10
Testing	: API 598



Dimensions

CLASS 150		2	2.5	3	4	6	8	10	12	14	16	18	20	24	30	36
A (FL)	inch	7.00	7.50	8.00	9.00	10.50	11.50	13.00	14.00	15.00	16.00	17.00	18.00	20.00	24.00	28.00
	mm	178	190	203	229	267	292	330	356	381	406	432	457	508	610	711
A (BW)	inch	8.50	9.50	11.12	12.00	15.88	16.50	18.00	19.75	22.50	24.00	26.00	28.00	32.00	36.00	40.00
	mm	216	241	282	305	403	419	457	502	572	610	660	711	813	914	1016
B	inch	8	8	10	10	14	14	18	20	20	24	27.5	31.5	31.5	24	24
	mm	200	200	250	250	350	350	450	500	500	610	700	800	800	610	610
C	inch	14.6	17.3	17.0	20.1	28.7	36.7	45.6	54.9	65.2	75.1	80.7	89.0	105.1	142	154
	mm	372	439	433	510	730	933	1158	1395	1657	1908	2051	2260	2669	3606	3924
Wt.	lbs	33	51	55	88	154	276	441	617	948	1290	1565	1896	2778	5236	7920
	kg	15	23	25	40	70	125	200	280	430	585	710	860	1260	2380	3600

CLASS 300		2	2.5	3	4	6	8	10	12	14	16	18	20	24	30
A (FL)	inch	8.50	9.50	11.12	12.00	15.88	16.50	18.00	19.75	30.00	33.00	36.00	39.00	45.00	55.00
	mm	216	241	282	305	403	419	457	502	762	838	914	991	1143	1397
A (BW)	inch	8.50	9.50	11.12	12.00	15.88	16.50	18.00	19.75	30.00	33.00	36.00	39.00	45.00	55.00
	mm	216	241	282	305	403	419	457	502	762	838	914	991	1143	1397
B	inch	8	10	10	10	14	18	20	20	24	27.5	24	24	24	24
	mm	200	250	250	250	350	450	500	500	610	700	610	610	610	610
C	inch	15.5	19.9	19.5	24.3	32.7	40.2	48.7	56.2	68.4	75.6	77.1	86.4	102	131
	mm	394	505	496	618	831	1022	1237	1427	1738	1920	1959	2194	2598	3320
Wt.	lbs	62	99	99	143	298	485	827	1036	1885	2447	2717	3641	5104	10846
	kg	28	45	45	65	135	220	375	470	855	1110	1235	1655	2320	4930

CLASS 600		2	2.5	3	4	6	8	10	12	14	16	18	20	24
A (FL)	inch	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00
	mm	292	330	356	432	559	660	787	838	889	991	1092	1194	1397
A (BW)	inch	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00
	mm	292	330	356	432	559	660	787	838	889	991	1092	1194	1397
B	inch	10	10	10	14	20	20	20	24	24	24	24	24	24
	mm	250	250	250	350	500	500	500	610	610	610	610	610	610
C	inch	16.9	23.1	20.7	27.2	34.8	41.9	49.1	60.9	63.9	71.5	89.0	107	11
	mm	428	588	526	641	884	1060	1246	1546	1623	1816	2260	2705	2810
Wt.	lbs	71	121	132	231	463	805	1323	1808	2896	3678	4554	5291	10010
	kg	32	55	60	105	210	365	600	820	1316	1672	2070	2405	4550

Materials

Part No.	Part Name	WCB	WC6	WC9	C5	C12	LCB	LCC	CF8	CF8M
1	Body	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A352 LCB	A352 LCC	A351 CF8	A351 CF8M
2	Bonnet	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A352 LCB	A352 LCC	A351 CF8	A351 CF8M
3	Wedge Base	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A352 LCB	A352 LCC	A351 CF8	A351 CF8M
4	Seat Ring Base	A105	A182 F11	A182 F22	A182 F5	A182 F9	A350 LF2	A350 LF2	Integral	
5	Stem	See Trim Material Table								
6	Backseat Bushing	See Trim Material Table								
7	Gland	13Cr	13Cr	13Cr	13Cr	13Cr	304	304	304	316
8	Gland Flange	A216 WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A352 LCB	A352 LCC	A351 CF8	A351 CF8M
9	Stem Nut	A439 Gr. D2C								
10	Bonnet Studs	A193 B7	A193 B16	A193 B16	A193 B16	A193 B16	A320 L7	A320 L7	A193 B8	A193 B8
11	Bonnet Nuts	A194 2H	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 8	A194 Gr. 8
12	Packing	Graphite								
13	Gasket	Graphite + Stainless Steel								
14	Eyebolts	A307 Gr. B	A193 B16	A193 B16	A193 B16	A193 B16	A320 L7	A320 L7	A193 B8	A193 B8
15	Eyebolt Nuts	A194 2H	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 8	A194 Gr. 8
16	Eyebolt Pins	Carbon Steel							Stainless Steel	
17	Retaining Nut	Carbon Steel							Stainless Steel	
18	Handwheel	Ductile or Malleable Iron								
19	Handwheel Nut	Carbon Steel							Stainless Steel	
20	Yoke	A216WCB	A217 WC6	A217 WC9	A217 C5	A217 C12	A352 LCB	A352 LCC	A351 CF8	A351 CF8M
21	Yoke Bolts	A193 B7	A193 B16	A193 B16	A193 B16	A193 B16	A320 L7	A320 L7	A193 B8	A193 B8
22	Yoke Nuts	A194 2H	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 4	A194 Gr. 8	A194 Gr. 8
23	Bearing	Steel								
24	Grease Fitting	Steel							Stainless Steel	
25	Lantern Ring	13Cr	13Cr	13Cr	13Cr	13Cr	304	304	304	316

Trim Materials

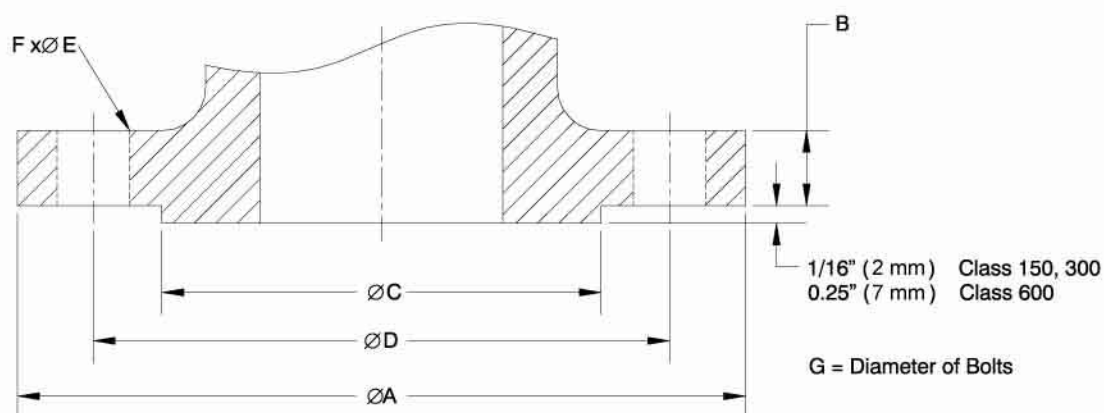
Part No.	Part Name	Trim 1 13Cr/13Cr	Trim 2 304/304	Trim 5 Stellite/Stellite	Trim 8 Stellite/13Cr	Trim 10 316/316
3	Wedge Face	13Cr	304 Stainless Steel	Stellite	13Cr	316 Stainless Steel
4	Seat Ring Face	13Cr	304 Stainless Steel	Stellite	Stellite	316 Stainless Steel
5	Stem	13Cr	304 Stainless Steel	13Cr	13Cr	316 Stainless Steel
6	Backseat Bushing	13Cr	304 Stainless Steel	13Cr	13Cr	316 Stainless Steel

Test Requirements

Test	Medium	Class 150		Class 300		Class 600	
		psi	bar	psi	bar	psi	bar
Shell	Water	450	32	1125	78	2225	153
Backseat	Water	315	23	815	56	1630	112
Seat	Air	60-100	4-7	60-100	4-7	60-100	4-7

Note: A216 WCB test pressures

Flange Dimensions (ASME B16.5 and ASME B16.47 Series A/MSS SP-44)



Class 150

Inches							
Size	A	B	C	D	E	F	G
2	6.00	0.56	3.62	4.75	0.75	4	5/8
2.5	7.00	0.62	4.12	5.50	0.75	4	5/8
3	7.50	0.69	5.00	6.00	0.75	4	5/8
4	9.00	0.88	6.19	7.50	0.75	8	5/8
6	11.00	0.94	8.50	9.50	0.88	8	3/4
8	13.50	1.06	10.62	11.75	0.88	8	3/4
10	16.00	1.12	12.75	14.25	1.00	12	7/8
12	19.00	1.19	15.00	17.00	1.00	12	7/8
14	21.00	1.31	16.25	18.75	1.12	12	1
16	23.50	1.38	18.50	21.25	1.12	16	1
18	25.00	1.50	21.00	22.75	1.25	16	1-1/8
20	27.50	1.62	23.00	25.00	1.25	20	1-1/8
24	32.00	1.81	27.25	29.50	1.38	20	1-1/4
30	38.75	2.94	33.75	36.00	1.38	28	1-1/4
36	46.00	3.56	40.25	42.75	1.62	32	1-1/2

Millimeters							
DN	A	B	C	D	E	F	G
50	150	14.3	92.1	120.7	19.1	4	15.9
65	180	15.9	104.8	139.7	19.1	4	15.9
80	190	17.5	127.0	152.4	19.1	4	15.9
100	230	22.3	157.2	190.5	19.1	8	15.9
150	280	23.9	215.9	241.3	22.4	8	19.1
200	345	27.0	269.9	298.5	22.4	8	19.1
250	405	28.6	323.8	362.0	25.4	12	22.2
300	485	30.2	381.0	431.8	25.4	12	22.2
350	535	33.4	412.8	476.3	28.4	12	25.4
400	595	35.0	469.9	539.8	28.4	16	25.4
450	635	38.1	533.4	577.9	31.8	16	28.6
500	700	41.3	584.2	635.0	31.8	20	28.6
600	815	46.1	692.2	749.3	35.1	20	31.8
750	984	74.7	857.3	914.4	35.1	28	31.8
900	1168	90.4	1022	1086	41.1	32	38.1

Class 300

Inches							
Size	A	B	C	D	E	F	G
2	6.50	0.81	3.62	5.00	0.75	8	5/8
2.5	7.50	0.94	4.12	5.88	0.88	8	3/4
3	8.25	1.06	5.00	6.62	0.88	8	3/4
4	10.00	1.19	6.19	7.88	0.88	8	3/4
6	12.50	1.38	8.50	10.62	0.88	12	3/4
8	15.00	1.56	10.62	13.00	1.00	12	7/8
10	17.50	1.81	12.75	15.25	1.12	16	1
12	20.50	1.94	15.00	17.75	1.25	16	1-1/8
14	23.00	2.06	16.25	20.25	1.25	20	1-1/8
16	25.50	2.19	18.50	22.50	1.38	20	1-1/4
18	28.00	2.31	21.00	24.75	1.38	24	1-1/4
20	30.50	2.44	23.00	27.00	1.38	24	1-1/4
24	36.00	2.69	27.25	32.00	1.62	24	1-1/2
30	43.00	3.62	33.75	39.25	1.88	28	1-3/4

Millimeters							
DN	A	B	C	D	E	F	G
50	165	20.7	92.1	127.0	19.1	8	15.9
65	190	23.9	104.8	149.2	22.4	8	19.1
80	210	27.0	127.0	168.3	22.4	8	19.1
100	255	30.2	157.2	200.0	22.4	8	19.1
150	320	35.0	215.9	269.9	22.4	12	19.1
200	380	39.7	269.9	330.2	25.4	12	22.2
250	445	46.1	323.8	387.4	28.4	16	25.4
300	520	49.3	381.0	450.8	31.8	16	28.6
350	585	52.4	412.8	514.4	31.8	20	28.6
400	650	55.6	469.9	571.5	35.1	20	31.8
450	710	58.8	533.4	628.6	35.1	24	31.8
500	775	62.0	584.2	685.8	35.1	24	31.8
600	915	68.3	692.2	812.8	41.1	24	38.1
750	1092	91.9	857.3	997.0	47.8	28	44.5

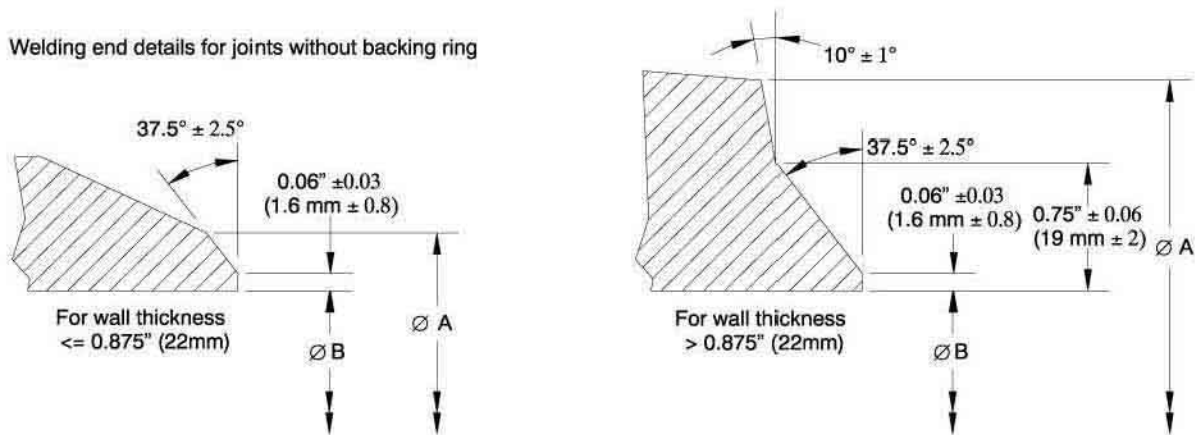
Class 600

Inches							
Size	A	B	C	D	E	F	G
2	6.50	1.00	3.62	5.00	0.75	8	5/8
2.5	7.50	1.12	4.12	5.88	0.88	8	3/4
3	8.25	1.25	5.00	6.62	0.88	8	3/4
4	10.75	1.50	6.19	8.50	1.00	8	7/8
6	14.00	1.88	8.50	11.50	1.12	12	1
8	16.50	2.19	10.62	13.75	1.25	12	1-1/8
10	20.00	2.50	12.75	17.00	1.38	16	1-1/4
12	22.00	2.62	15.00	19.25	1.38	20	1-1/4
14	23.75	2.75	16.25	20.75	1.50	20	1-3/8
16	27.00	3.00	18.50	23.75	1.62	20	1-1/2
18	29.25	3.25	21.00	25.75	1.75	20	1-7/8
20	32.00	3.50	23.00	28.50	1.75	24	1-7/8
24	37.00	4.00	27.25	33.00	2.00	24	1-7/8

Millimeters							
DN	A	B	C	D	E	F	G
50	165	25.4	92.1	127.0	19.1	8	15.9
65	190	28.6	104.8	149.4	22.4	8	19.1
80	210	31.8	127.0	168.3	22.4	8	19.1
100	275	38.1	157.2	215.9	25.4	8	22.2
150	355	47.7	215.9	292.1	28.4	12	25.4
200	420	55.6	269.9	349.2	31.8	12	28.6
250	510	63.5	323.8	431.8	35.1	16	31.8
300	560	66.7	381.0	489.0	35.1	20	31.8
350	605	69.9	412.8	527.1	38.1	20	34.9
400	685	76.2	469.9	603.3	41.1	20	38.1
450	745	82.6	533.4	654.1	44.5	20	41.3
500	815	88.9	584.2	723.9	44.5	24	41.3
600	940	101.6	692.2	838.2	50.8	24	47.6

Butt Weld Dimensions (ASME B16.25)

Welding end details for joints without backing ring



inches															
Size	Pipe OD	ØA	ØB for Various Pipe Schedules												
			10	20	30	40	60	80	100	120	140	160	STD	XS	XXS
2.5	2.875	2.96	2.635			2.469		2.323				2.125	Sch 40	Sch 80	1.771
3	3.500	3.59	3.260			3.068		2.900				2.624	Sch 40	Sch 80	2.300
4	4.500	4.62	4.260			4.026		3.826		3.624		3.428	Sch 40	Sch 80	3.152
6	6.625	6.78	6.357			6.065		5.761		5.501		5.187			
8	8.625	8.78	8.329	8.125		7.981	7.813	7.625	7.437	7.187	7.001	6.813	Sch 40	Sch 80	6.875
10	10.750	10.94	10.420	10.250		10.020	9.750	9.562	9.312	9.062	8.750	8.500	Sch 40	Sch 60	Sch 140
12	12.750	12.97	12.390	12.250		11.938	11.626	11.374	11.062	10.750	10.500	10.126	12.000	11.750	Sch 120
14	14.000	14.25	13.500	13.376	13.250	13.124	12.812	12.500	12.124	11.812	11.500	11.188	Sch 30	13.000	
16	16.000	16.25	15.500	15.376	15.250	15.000	14.688	14.312	13.938	13.562	13.124	12.812	Sch 30	Sch 40	
18	18.000	18.28	17.500	17.376		16.876	16.500	16.124	15.688	15.250	14.876	14.438	17.250	17.000	
20	20.000	20.31	19.500	19.250	19.000	18.812	18.376	17.938	17.438	17.000	16.500	16.062	Sch 20	Sch 30	
24	24.000	24.38	23.500	23.250	22.876	22.624	22.062	21.562	20.938	20.376	19.876	19.312	Sch 20	23.000	
30	30.000	30.38	29.376	29.000	28.750								29.250	Sch 20	
36	36.000	36.50	35.376	35.000	34.750	34.500							35.250	Sch 20	

millimeters															
DN	Pipe OD	ØA	ØB for Various Pipe Schedules												
			10	20	30	40	60	80	100	120	140	160	STD	XS	XXS
65	73.03	75.2	66.93			62.71		59.00				53.98	Sch 40	Sch 80	44.98
80	88.90	91.2	82.80			77.93		73.66				66.65	Sch 40	Sch 80	58.42
100	114.30	117.3	108.20			102.26		97.18		92.05		87.07	Sch 40	Sch 80	80.06
150	168.28	172.2	161.47			154.05		146.33		139.73		131.75			
200	219.08	223.0	211.56	206.38		202.72	198.45	193.68	188.90	182.55	177.83	173.05	Sch 40	Sch 80	174.63
250	273.05	277.9	264.67	260.35		254.51	247.65	242.87	236.52	230.17	222.25	215.90	Sch 40	Sch 60	Sch 140
300	323.85	329.4	314.71	311.15		303.23	295.30	288.90	280.97	273.05	266.70	257.20	304.80	298.45	Sch 120
350	355.60	362.0	342.90	339.75	336.55	333.35	325.42	317.50	307.95	300.02	292.10	284.18	Sch 30	330.20	
400	406.40	412.8	393.70	390.55	387.35	381.00	373.08	363.52	354.03	344.47	333.35	325.42	Sch 30	Sch 40	
450	457.20	464.3	444.50	441.35		428.65	419.10	409.55	398.48	387.35	377.85	366.73	438.15	431.80	
500	508.00	515.9	495.30	488.95	482.60	477.82	466.75	455.63	442.93	431.80	419.10	407.97	Sch 20	Sch 30	
600	609.60	619.3	596.90	590.55	581.05	574.65	560.37	547.67	531.83	517.55	504.85	490.52	Sch 20	584.20	
750	762.00	771.7	746.15	736.60	730.25								742.95	Sch 20	
900	914.40	927.1	898.55	889.00	882.65	876.30							895.35	Sch 20	

Product features - to our customers' benefit



Two piece self aligning gland

Your benefit

- Even compression of packing rings
- No distortion on stem surface due to improper assembly

Die-moulded graphite rings, top and bottom rings braided

Your benefit

- Prevents extrusion of graphite

Ni-steel Stem Nut

Your benefit

- corrosion resistant in ammonia atmosphere

Stem with burnished shank

Your benefit

- Long gland life
- Improved fugitive emissions performance
- Burnished stem 0.2um



Hardened backseat bushing

Your benefit

- Additional stem seal in full open position
- Blow-out protection

High wear travel allowance

Your benefit

- Extended maintenance-free operating life time
 - Seal facing
- (Long service required)**



Seal faces made of wear and corrosion-resistant materials

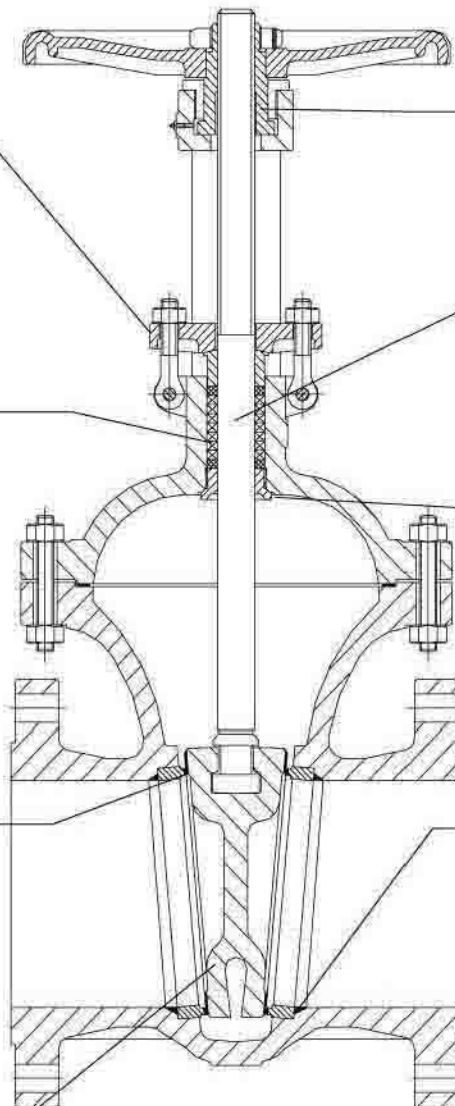
Your benefit

- Long reliability
- Long life

Flexible wedge

Your benefit

- Prevents wedge from galling
- Allows thermal expansion without wedge sticking



Subject to technical modification with out prior notice.

01.01.2011

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