



Gate Valves Type Bolted Bonnet

Class 1500 DN 50-400 (2" – 16")

Carbon, Alloy and Stainless Steel



Fig. VC1500BB

Design:

API 600 & ISO 10434

ASME B16.34 and BS 1414

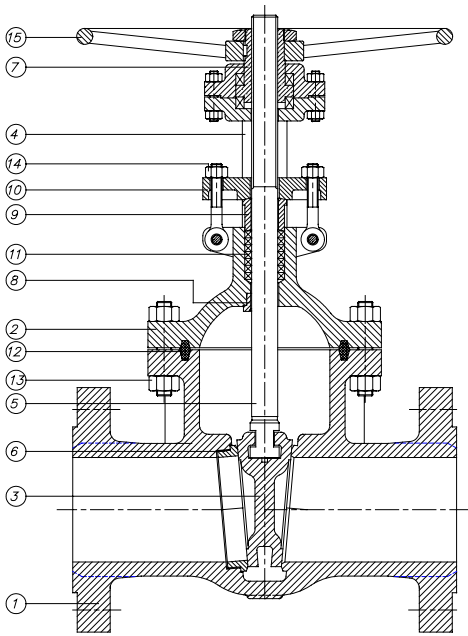




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Parts and materials



Trim Material

API 600 Trim No.	Stem / Backseat	Seating Surface Body / Wedge
1	13% Cr	13% Cr
2	SS 304	SS 304
3	SS310	SS310
4	13% Cr	13% Cr (Hard)
5 or 5A	13% Cr	HF
6	13% Cr	13% Cr / Cu Ni
7	13% Cr	13% Cr / 13% Cr (Hard)
8 or 8A	13% Cr	HF / 13% Cr
9	Monel	Monel
10	SS 316	SS 316
11 or 11A	Monel	HF / Monel
12 or 12A	SS 316	HF / SS 316
13	Alloy 20	Alloy 20
14 or 14A	Alloy 20	HF / Alloy 20

HF: Hard Facing using Co Cr welding alloy (Stellite)

Item	Description	Material			
		Carbon Steel	Carbon Steel (Low Temp.)	Alloy Steel	Stainless Steel
1	Body	A 216 Gr.WCB	A 352 Gr.LCB	A 217 Gr.C5	A 351 Gr.CF8M
2	Bonnet	A 216 Gr.WCB	A 352 Gr.LCB	A 217 Gr.C5	A 351 Gr.CF8M
3	Gate	A 216 Gr.WCB + ER410	A 352 Gr.LCB + ER308	A 217 Gr.C5 + ER410	A 351 Gr.CF8M
4	Yoke	A 216 Gr.WCB	A 352 Gr.LCB	A 217 Gr.C5	A 351 Gr.CF8M
5	Stem	A 182 Gr.F6a	A 182 Gr.F304	A 182 Gr.F6a	A 182 Gr.F316
6	Seat Ring	A 105 + Stellite	A 182 Gr.F304	A 182 Gr.F6a + Stellite	----
7	Stem Nut	B 148 / A 439 Gr.D2	B 148 / A 439 Gr.D2	B 148 / A 439 Gr.D2	B 148 / A 439 Gr.D2
8	Backseat	A182 Gr.F6a	A182 Gr.F304	A 182 Gr.F6a	----
9	Gland	A 105	A 105	A 182 Gr.F6a	A 182 Gr.F316
10	Gland Flanged	A 105	A 105	A 105	A 182 Gr.F304
11	Stem Packing	Graphited	Graphited	Graphited	Graphited
12	Gasket	Soft Iron	SS 304	SS 304	SS 316
13	Bonnet Bolt & Nut	A 193 Gr.B7 / A 194 Gr.2H	A 193 Gr.B7 / A 194 Gr.2H	A 193 Gr.B7 / A 194 Gr.2H	A 193 Gr.B7 / A 194 Gr.2H
14	Eye Bolt & Nut	A 193 Gr.B7 / A 194 Gr.2H	A 193 Gr.B7 / A 194 Gr.2H	A 193 Gr.B7 / A 194 Gr.2H	A 193 Gr.B7 / A 194 Gr.2H
15	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel

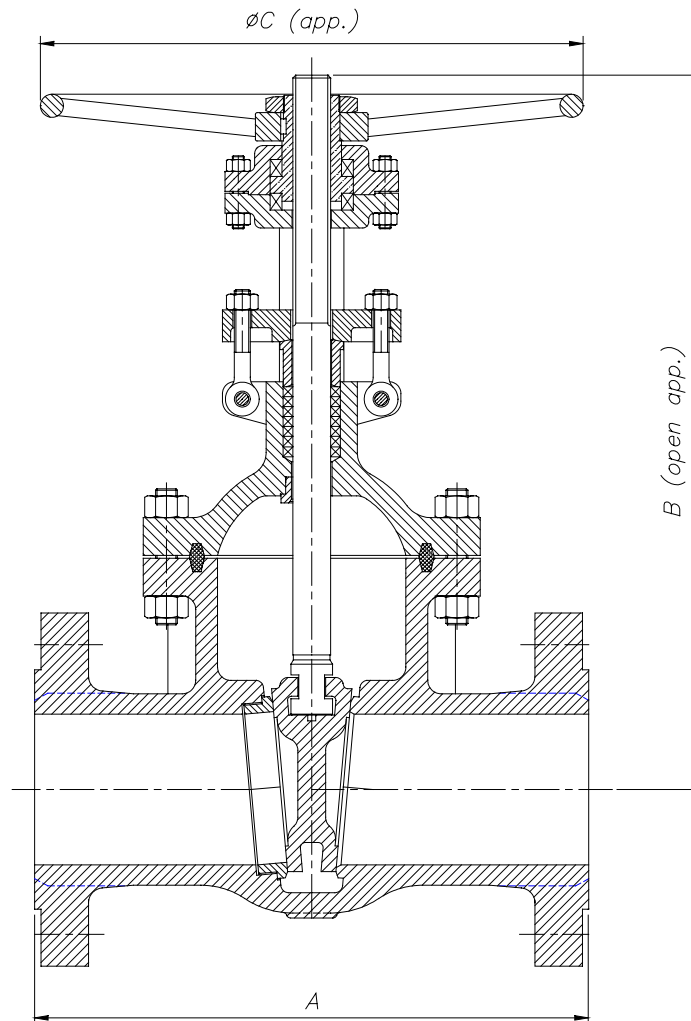
Item 6 and 8 only in Carbon Steel and Alloy Steel construction



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Dimensions



DN	A (RF/BW)	B	ØC	WEIGHT
50 (2")	368	500	250	80
65 (2½")	419	570	310	120
80 (3")	470	633	350	150
100 (4")	546	725	400	225
125 (5")	673	900	500	440
150 (6")	705	1045	600	625
200 (8")	832	1310	680	1115
250 (10")	991	1410	910	1430
300 (12")	1130	1550	965	1955
350 (14")	1257	2100	1015	2690
400 (16")	1384	2475	1065	3830

(*) Dimensions in mm and weight in kg.



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General Characteristics, Cv, P&T Rating

GENERAL CHARACTERISTICS		Fig. VC1500BB		
DESIGN STANDARDS				
Valves design	API 600 & ISO 10434	ASME B16.34	BS 1414	
End to End Dimensions	ASME B16.10 & ISO 5752			
Flanged Dimensions	ASME B16.5 & ISO 7005-1 Part. 1	ASME B16.47	BS 3293	MSS SP-44
Buttweld Dimensions	ASME B16.25			
Visual Inspection	MSS SP- 55			
Marking	MSS SP-25 & ISO 5209			
TESTS AND CERTIFICATES				
Pressure testing	API 598 & ISO 5208	BS 6755 Part. 1	MSS SP-61	

Cv Values in U.S. Gallons/min.

DN	Cv	DN	Cv
50 (2")	230	200 (8")	3800
65 (2½")	380	250 (10")	6050
80 (3")	520	300 (12")	9100
100 (4")	930	350 (14")	11500
125 (5")	1600	400 (16")	15100
150 (6")	2250		

Pressure-Temperature (STANDARD CLASS According to ASME B16.34)

Temp °C	MATERIAL			
	A216 WCB Bar	A352 LCB Bar	A217 C5 Bar	A351 CF8M Bar
-29 to 38	255,3	239,1	258,4	248,0
95	232,5	226,0	256,7	213,2
150	226,0	219,8	246,7	192,6
205	218,4	212,6	243,2	177,1
260	206,4	200,5	229,1	164,7
315	188,4	183,6	208,4	155,4
345	185,0	180,2	202,6	153,0
375	183,6		195,7	149,5
400	173,6		181,9	147,1
425	141,9		175,0	145,4
450	92,3		166,4	144,0
485	59,3		127,5	143,0
510	35,5		94,4	133,0
540	17,9		68,6	120,6
565			49,6 *	118,5 *
595			34,1 *	105,1 *
620			21,4 *	81,6 *
650			11,7 *	63,7 *
675				50,6 *
705				40,3 *
735				33,1 *
760				26,2 *
790				20,0 *
815				14,1 *

* FOR WELD END VALVES ONLY. FLANGED END RATINGS TERMINATE AT 540°C