



Gate Valves Type Bolted Bonnet

Class 900 DN 50-500 (2" – 20")

Carbon, Alloy and Stainless Steel



Fig. VC900BB

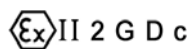
Design:

API 600 & ISO 10434

ASME B16.34 and BS 1414



600-0016

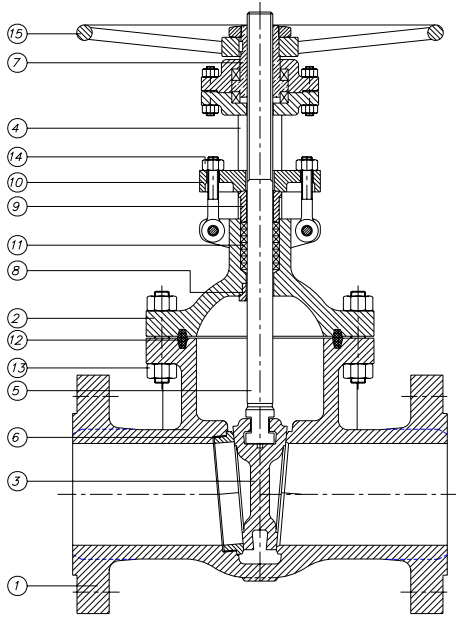




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Parts and materials



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 CoCr 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	Wedge	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	A 182 Gr.F6a	A 182 Gr.F304	A 182 Gr.F6a	----
9	Gland	A 105	A 105	A 182 Gr.F6a	A 182 Gr.F316
10	Gland Flange	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	A320 Gr. L7 / A194 Gr. 7	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	Handw heel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel

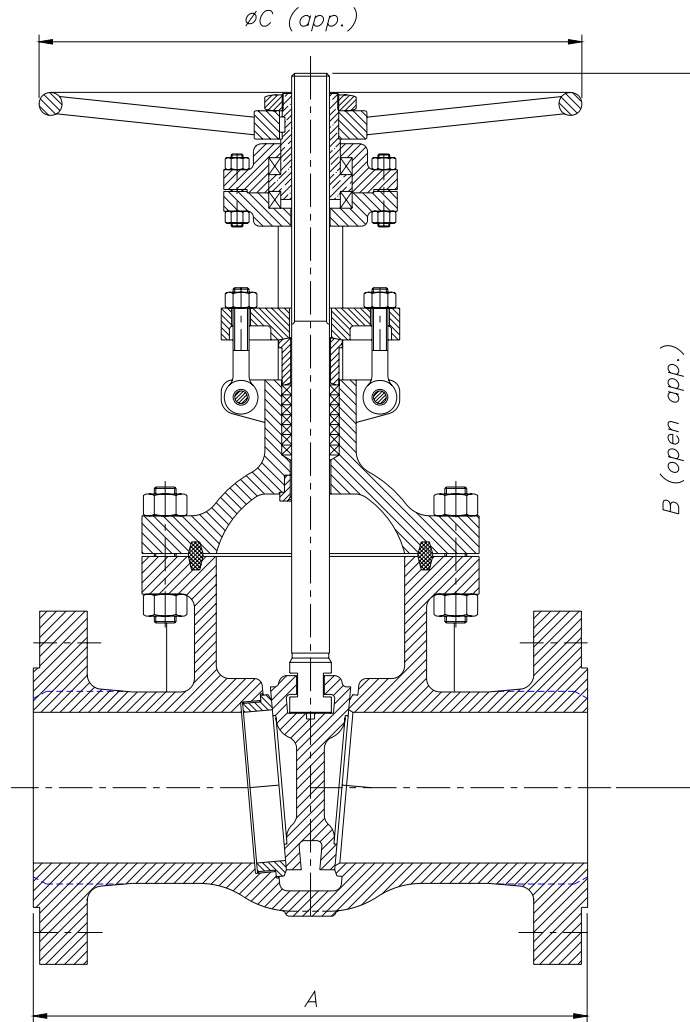
Item 6 and 8 only in Carbon Steel and Alloy Steel construction



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Dimensions



DN	A (RF/BW)	B	ØC	WEIGHT
50 (2")	368	440	250	70
65 (2½")	419	515	300	90
80 (3")	381	584	300	105
100 (4")	457	712	400	190
125 (5")	559	830	500	290
150 (6")	610	927	500	380
200 (8")	737	1220	600	595
250 (10")	838	1600	680	975
300 (12")	965	1752	760	1275
350 (14")	1029	2286	760	1665
400 (16")	1130	2362	910	2310
450 (18")	1219	2450	910	2880
500 (20")	1321	2600	950	3505

(*) Dimensions in mm and weight in kg.



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General Characteristics, Cv, P&T Rating

GENERAL CHARACTERISTICS		Fig. VC900BB		
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	
Other	ATEX, CE			

Cv Values in U.S. Gallons/min.

DN	Cv	DN	Cv
50 (2")	230	250 (10")	7050
65 (2½")	410	300 (12")	10000
80 (3")	580	350 (14")	13100
100 (4")	1050	400 (16")	18200
125 (5")	1820	450 (18")	21500
150 (6")	2550	500 (20")	26500
200 (8")	4400		

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	153,0	143,7	155,0	148,8
95	139,5	135,7	154,0	128,2
150	135,7	131,9	148,1	115,8
205	130,9	127,5	145,7	106,1
260	123,7	120,2	137,5	98,9
315	113,0	110,2	125,1	93,4
345	110,9	108,2	121,6	91,6
375	110,2		117,5	89,9
400	104,0		109,2	88,2
425	85,1		105,1	87,2
450	55,5		99,9	86,5
485	35,5		76,5	85,8
510	21,4		56,8	79,9
540	10,7		41,0	72,3
565			29,6 *	71,0 *
595			20,7 *	63,0 *
620			12,7 *	48,9 *
650			7,2 *	38,2 *
675				30,3 *
705				24,1 *
735				20,0 *
760				15,5 *
790				12,1 *
815				8,6 *

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

** A351 CF8M at temperatures over 538°C (1000°F) to be used only if Carbon contents is 0,04% or higher.