



Gate Valves Type Bolted Bonnet

Class 600 DN 50-600 (2" – 24")

Carbon, Alloy and Stainless Steel



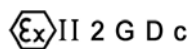
Fig. VC600BB

Design:

API 600, API 603 & ISO 10434
ASME B16.34 and BS 1414



600-0016

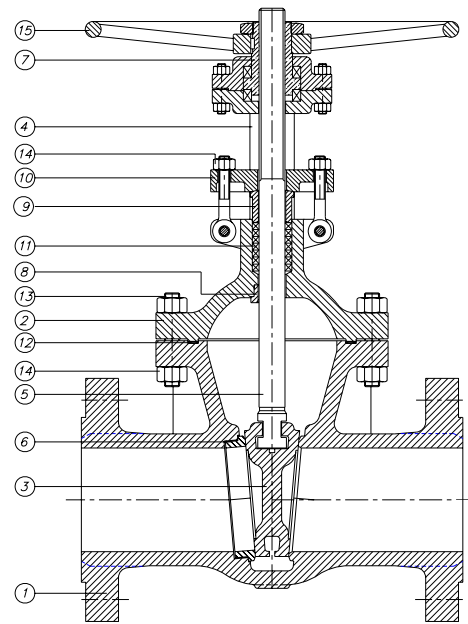




Gate Valves Class 600

Type Bolted Bonnet

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	SPW SS304 / Graphited	SPW SS304 / Graphited	SPW SS304 / Graphited	SPW SS316 / Graphited
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

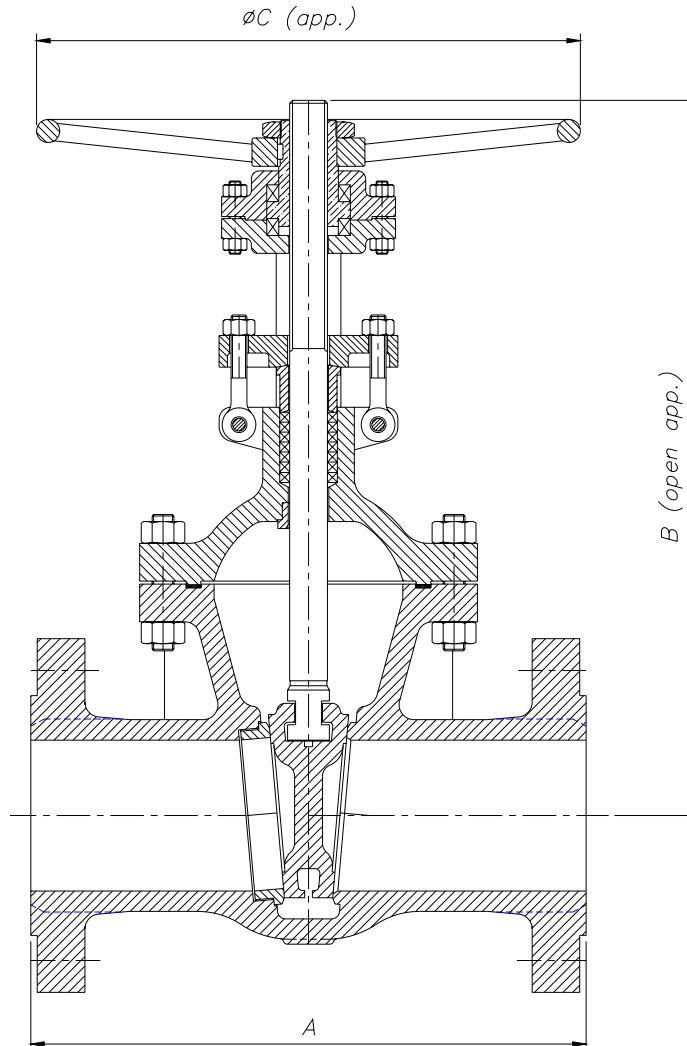
Item 6 and 8 only in Carbon Steel and Alloy Steel construction



Gate Valves Class 600

Type Bolted Bonnet

Dimensions



DN	A (RF/BW)	B	ØC	WEIGHT
50 (2")	292	410	250	38
65 (2½")	330	485	250	56
80 (3")	356	560	350	72
100 (4")	432	705	450	136
125 (5")	508	800	500	170
150 (6")	559	895	500	245
200 (8")	660	1125	600	432
250 (10")	787	1400	680	780
300 (12")	838	1535	760	835
350 (14")	889	1825	760	1190
400 (16")	991	1955	760	1690
450 (18")	1092	2140	760	2010
500 (20")	1194	2310	813	2400
550 (22")	1295	2680	889	2650
600 (24")	1397	2680	1065	3700

(*) Dimensions in mm and weight in kg.



Gate Valves Class 600

Type Bolted Bonnet

General Characteristics, Cv, P&T Rating

GENERAL CHARACTERISTICS		Fig. VC600BB		
DESIGN STANDARDS				
Valves design	API 600, API 603 & 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	
Others	ATEX, CE			

Cv Values in U.S. Gallons/min.

DN	Cv	DN	Cv
50 (2")	250	300 (12")	11500
65 (2½")	450	350 (14")	14000
80 (3")	620	400 (16")	18500
100 (4")	1160	450 (18")	23000
125 (5")	1900	500 (20")	28500
150 (6")	2700	550 (22")	35000
200 (8")	5100	600 (24")	43000
250 (10")	7800		

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	102,0	95,8	103,4	99,2
95	93,0	90,6	102,7	85,4
150	90,6	87,8	98,5	77,2
205	87,5	85,1	87,1	70,6
260	82,7	80,3	91,6	65,8
315	75,4	73,4	83,4	62,0
345	74,1	72,0	81,0	61,3
375	73,4		78,2	59,9
400	69,6		72,7	58,9
425	56,8		69,9	58,2
450	36,9		66,5	57,5
485	23,8		51,0	57,2
510	14,1		37,9	53,4
540	7,2		27,6	48,2
565			20,0 *	47,2 *
595			13,8 *	42,0 *
620			8,6 *	32,7 *
650			4,8 *	25,5 *
675				20,3 *
705				16,2 *
735				13,1 *
760				10,3 *
790				7,9 *
815				5,9 *

* FOR WELD END VALVES ONLY. FLANGE 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.