

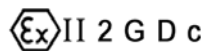


Gate Valves Type Bolted Bonnet Class 900 DN 50-500 (2" – 20") Carbon, Alloy and Stainless Steel



Fig. VC900BB

**Design:
API 600,
ASME B16.34 and BS 1414**



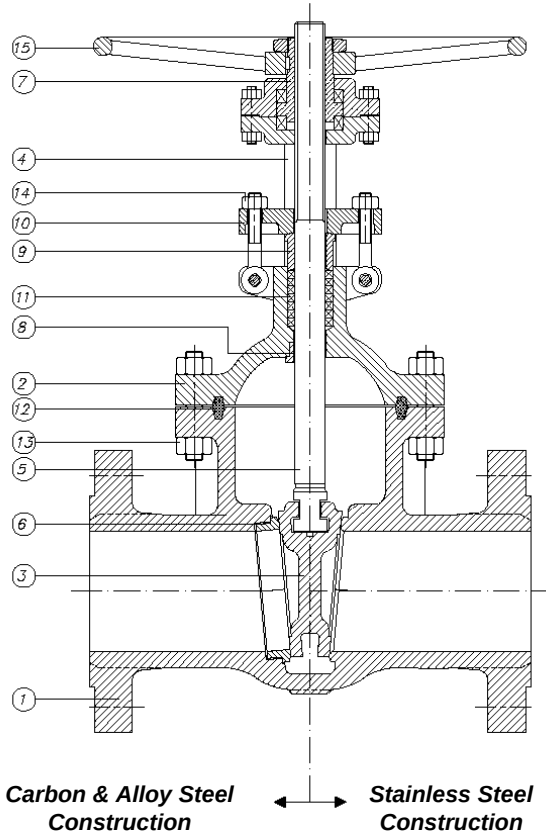


Gate Valves Class 900

Type Bolted Bonnet

Parts and materials

Trim Material



API 600 Trim No.	Nominal Trim	Stem / Backseat (1)	Seating Surface Body / Wedge
1	F6	13Cr	13Cr
2	304	18Cr-8Ni	18Cr-8Ni
3	F310	25Cr-20Ni	25Cr-20Ni
4	Hard F6	13Cr	Hard 13Cr
5	Hardfaced	13Cr	Co-Cr A (2)
5A	Hardfaced	13Cr	Ni-Cr
6	F6 and Cu-Ni	13Cr	13Cr and Cu-Ni
7	F6 and Hard F6	13Cr	13Cr and Hard 13Cr
8	F6 and Hardfaced	13Cr	13Cr and Co-Cr A (2)
8A	F6 and Hardfaced	13Cr	13Cr and Ni-Cr
9	Monel	Ni-Cu Alloy	Ni-Cu Alloy
10	316	18Cr-8Ni-Mo	18Cr-8Ni-Mo
11	Monel and Hardfaced	Ni-Cu Alloy	Ni-Cu Alloy and Trim 5 or 5A
12	316 and Hardfaced	18Cr-8Ni-Mo	18Cr-8Ni-Mo and Trim 5 or 5A
13	Alloy 20	19Cr-29Ni	19Cr-29Ni
14	Alloy 20 and Hardfaced	19Cr-29Ni	19Cr-29Ni and Trim 5 or 5A
15	Hardfaced	18Cr-8Ni	Co-Cr A (2)
16	Hardfaced	18Cr-8Ni-Mo	Co-Cr A (2)
17	Hardfaced	18Cr-10Ni-Cb	Co-Cr A (2)
18	Hardfaced	19Cr-29Ni	Co-Cr A (2)

(1) ...and small internal parts that normally contact the service fluid

(2) Trademark material Stellite 6

Item	Description	Material of construction*			
		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	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 Flange	A 105	A 105	A 105	A 182 Gr.F304
11	Stem Packing	Graphite	Graphite	Graphite	Graphite
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 (3)
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

(3) Zinc coating

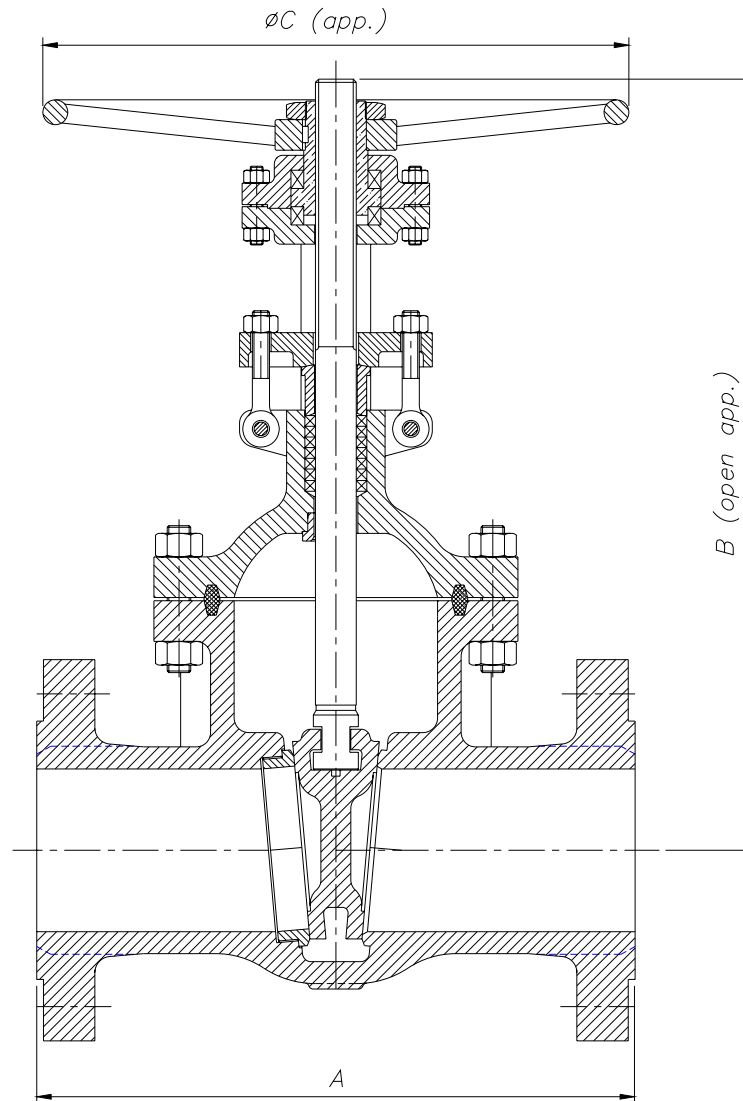
* Standard constructions with Trim 8, 2 and 10, other options are available



Gate Valves Class 900

Type Bolted Bonnet

Dimensions



DN	A (RF/BW)	B	ØC	WEIGHT
50 (2")	368	547	300	90
65 (2½")	419	700	350	110
80 (3")	381	648	400	123
100 (4")	457	729	450	148
125 (5")	559	890	500	280
150 (6")	610	1041	560	420
200 (8")	737	1260	460	650
250 (10")	838	1590	610	1160
300 (12")	965	1795	610	1700
350 (14")	1029	2025	760	2300
400 (16")	1130	2170	760	2750
450 (18")	1219	2345	760	3120
500 (20")	1321	2610	760	3550

(*) Dimensions in mm and weight in kg
For other sizes consult to the technical department.



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Type Bolted Bonnet

General Characteristics, Cv, P&T Rating

GENERAL CHARACTERISTICS	Fig. VC900BB		
DESIGN STANDARDS			
Valves design	API 600	ASME B16.34	EN ISO 10434
End to End Dimensions	ASME B16.10 & ISO 5752		
Flanged Dimensions	ASME B16.5 & ISO 7005-1 Part. 1	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	EN 12266-1	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.