



**Gate Valves Type Bolted Bonnet**  
**Class 300 DN 50-600 (2" – 24")**  
 Carbon, Alloy and Stainless Steel



## **Fig. VC300BB**

**Design:**

**API 600, API 603**

**ASME B16.34 and BS1414**



600-0016



**SERIES**  
**VC**

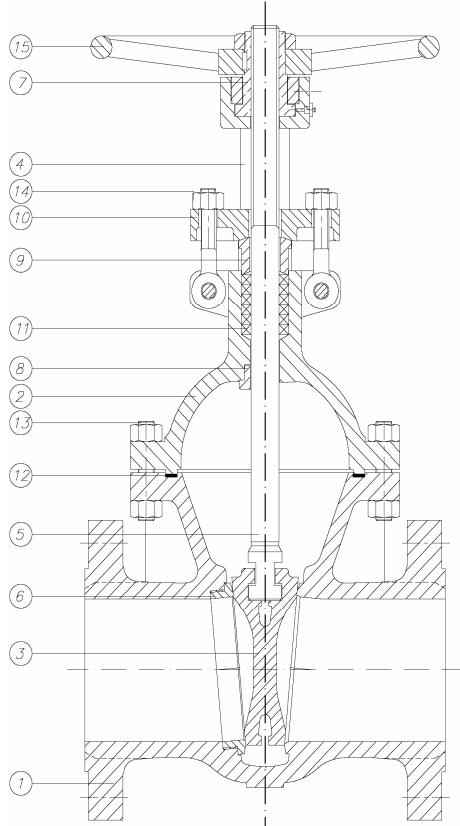


# Gate Valves Class 300

## 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)

Carbon & Alloy Steel Construction

Stainless Steel Construction

(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	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	Graphite	Graphite	Graphite	Graphite
12	Gasket	SPW SS304 / Graphite	SPW SS304 / Graphite	SPW SS304 / Graphite	SPW SS316 / Graphite
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

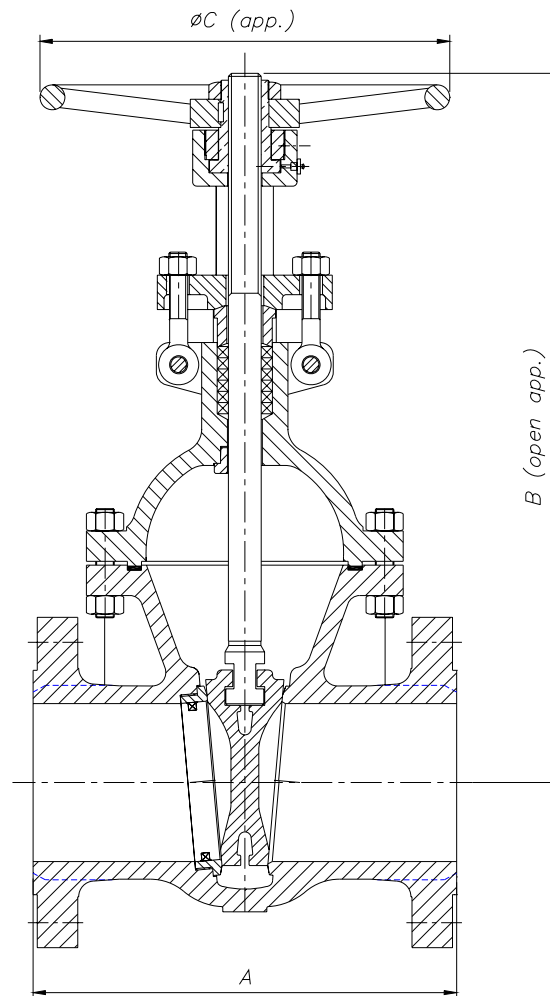




# Gate Valves Class 300

## Type Bolted Bonnet

### Dimensions



DN	A (RF/BW)	B	ØC	WEIGHT
50 (2")	216	417	200	24
65 (2½")	241	460	250	35
80 (3")	282,5	526	250	49
100 (4")	305	650	250	69
125 (5")	381	694	300	92
150 (6")	403	824	350	130
200 (8")	419	987	450	208
250 (10")	457	1192	500	333
300 (12")	502	1431	560	536
350 (14")	762	1559	460	699
400 (16")	838	1758	460	1010
450 (18")	914	1942	610	1205
500 (20")	991	2145	610	1720
550 (22")	1092	2340	610	1920
600 (24")	1143	2526	610	2580

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



# Gate Valves Class 300

## Type Bolted Bonnet

### General Characteristics, Cv, P&T Rating

GENERAL CHARACTERISTICS	Fig. VC300BB		
<b>DESIGN STANDARDS</b>			
Valves design	API 600, API 603, 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		
<b>TESTS AND CERTIFICATES</b>			
Pressure testing	API 598 & ISO 5208	EN 12266-1	MSS SP-61
Others	ATEX, CE		

#### Cv Values in U.S. Gallons/min.

DN	Cv	DN	Cv
50 (2")	250	300 (12")	12050
65 (2½")	450	350 (14")	15100
80 (3")	620	400 (16")	20300
100 (4")	1160	450 (18")	25000
125 (5")	1900	500 (20")	32500
150 (6")	2700	550 (22")	40000
200 (8")	5100	600 (24")	48500
250 (10")	8050		

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

Temp °C	MATERIAL			
	A216 WCB Bar	A352 LCB Bar	A217 C5 Bar	A351 CF8M (**) Bar
-29 to 38	51,0	47,9	51,7	49,6
95	46,5	45,1	51,3	42,7
150	45,1	44,1	49,3	38,6
205	43,8	42,7	48,6	35,5
260	41,3	40,3	45,8	33,1
315	37,9	36,9	41,7	31,0
345	36,9	36,2	40,7	30,7
375	36,9		39,3	29,6
400	34,8		36,5	29,3
425	28,2		35,1	28,9
450	18,6		33,4	28,9
485	11,7		25,5	28,6
510	7,2		18,9	26,5
540	3,4		13,8	24,1
565			10,0 *	23,8 *
595			6,9 *	21,0 *
620			4,1 *	16,2 *
650			2,4 *	12,7 *
675				10,0 *
705				7,9 *
735				6,5 *
760				5,2 *
790				4,1 *
815				2,8 *

\* 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.