



**Globe Valves Type Bolted Bonnet**  
**Class 150 DN 50-400 (2" – 16")**  
**Carbon, Alloy and Stainless Steel**



## **Fig. VG150BB**

**Design:**  
**BS 1873,**  
**ASME B16.34 and MSS SP- 42**

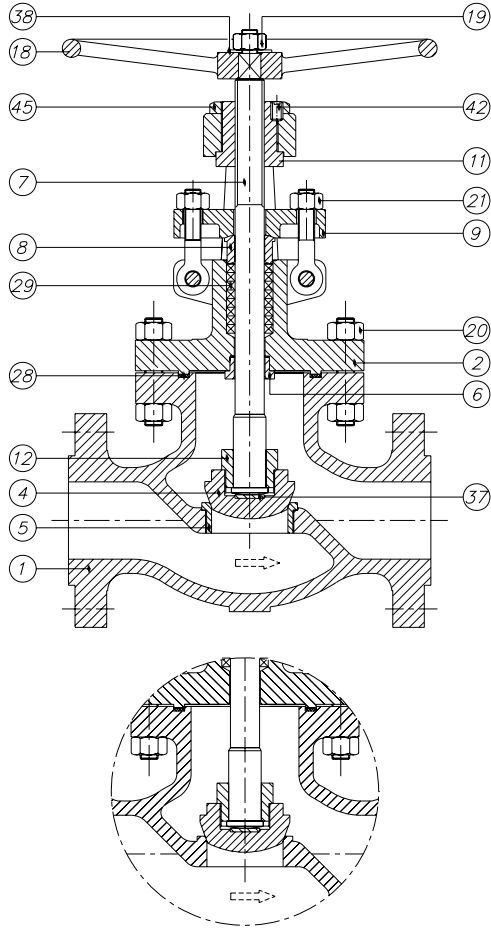




# Globe Valves Class 150

## 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

#### Stainless Steel Construction

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
4	Disc	A105 + ER 410	A 182 Gr.F304	A 217 Gr.C5 + ER 410	A 351 Gr.CF8M
5	Seat Ring	A 105 + Stellite	A 182 Gr.F304	A182 Gr.F6a + Stellite	-----
6	Backseat	A182 Gr.F6a	A 182 Gr.F304	A182 Gr.F6a	-----
7	Stem	A182 Gr.F6a	A 182 Gr.F304	A182 Gr.F6a	A 182 Gr.F316
8	Gland	A 105	A 105	A182 Gr. F6a	A 182 Gr.F316
9	Gland Flange	A 105	A 105	A 105	A 182 Gr.F304
11	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
12	Disc Nut	A 182 Gr.F6a	A 182 Gr.F304	A 182 Gr.F6a	A 182 Gr.F316
18	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
19	Handwheel Nut	Steel	Steel	Steel	Steel
20	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)
21	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
28	Gasket	S.S. 304 / Graphite	S.S. 304 / Graphite	S.S. 304 / Graphite	S.S. 316 / Graphite
29	Stem Packing	Graphite	Graphite	Graphite	Graphite
37	Thrust Washer	A 182 Gr.F6a	A 182 Gr.F304	A 182 Gr.F6a	A 182 Gr.F316
38	Washer	Steel	Steel	Steel	Steel
42	Grub Screw	A 193 Gr.B7	A 193 Gr.B7	A 193 Gr.B7	A 193 Gr.B7
45	Lock Nut	Steel	Steel	A 182 Gr.F6a	A 182 Gr.F316

(3) Zinc coating

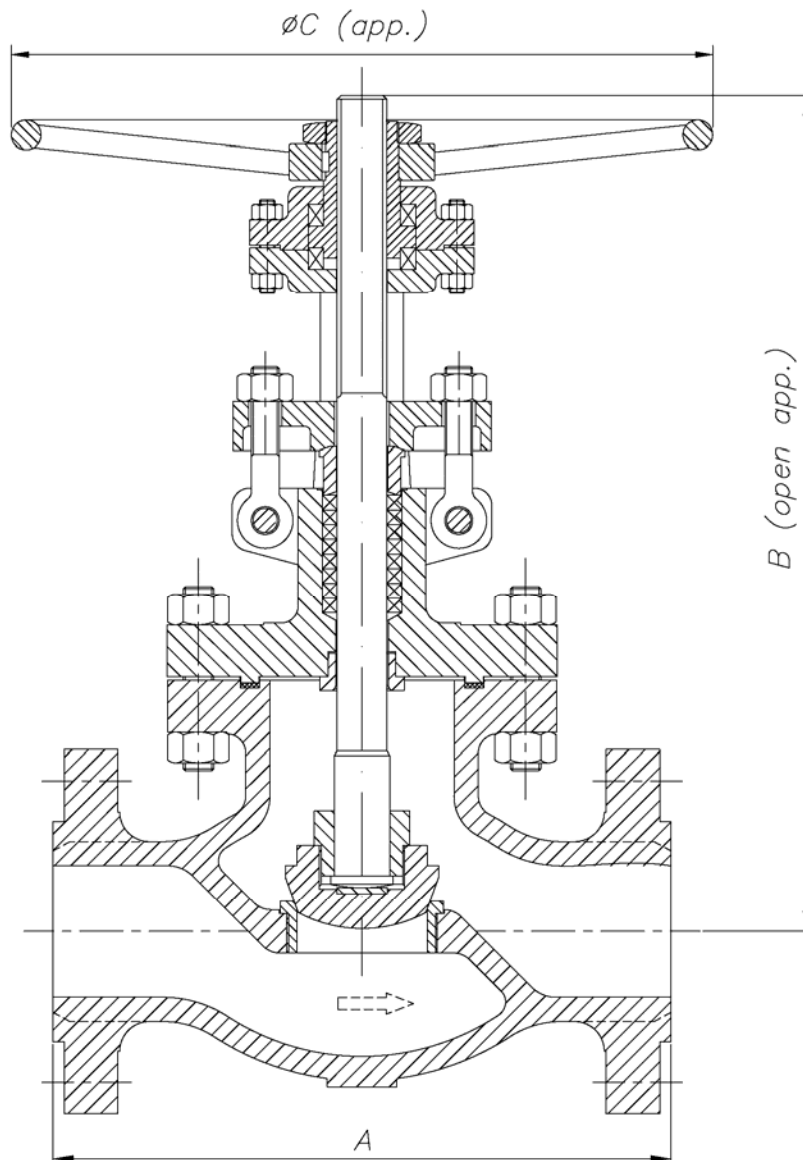
\* Standard constructions with Trim 8, 2 and 10, other options are available



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### Dimensions



DN	A (RF/BW)	B	ØC	WEIGHT
50 (2")	203	341	200	22
65 (2½")	216	367	250	29
80 (3")	241	375	250	40
100 (4")	292	483	300	64
125 (5")	356	537	300	77
150 (6")	406	517	350	105
200 (8")	495	590	400	154
250 (10")	622	754	450	288
300 (12")	698	941	640	507
350 (14")	787	1085	640	520
400 (16")	914	1250	460	810

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



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

GENERAL CHARACTERISTICS	Fig. VG150BB		
<b>DESIGN STANDARDS</b>			
Valves design	BS 1873	ASME B16.34	MSS SP- 42
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
Other	ATEX, CE		

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

DN	Cv	DN	Cv
50 (2")	55	200 (8")	790
65 (2½")	80	250 (10")	1250
80 (3")	105	300 (12")	1900
100 (4")	190	350 (14")	2350
125 (5")	305	400 (16")	3300
150 (6")	425		

#### 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	19,6	18,3	20,0	18,9
95	17,9	17,2	17,9	16,2
150	15,8	15,8	15,8	14,8
205	13,8	13,8	13,8	13,4
260	11,7	11,7	11,7	11,7
315	9,6	9,6	9,6	9,6
345	8,6	8,6	8,6	8,6
375	7,6		7,6	7,6
400	6,5		6,5	6,5
425	5,5		5,5	5,5
450	4,5		4,5	4,5
485	3,4		3,4	3,4
510	2,4		2,4	2,4
540	1,4		1,4	1,4
565			1,4 *	1,4 *
595			1,4 *	1,4 *
620			1,4 *	1,4 *
650			1,4 *	1,4 *
675				1,4 *
705				1,4 *
735				1,4 *
760				1,4 *
790				1,4 *
815				1,4 *

\* 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.