



CORPORATE STANDARD

AA7521408

Rev. No. 03

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GATE VALVE, CARBON STEEL, PRESSURE CLASS 150

1.0 GENERAL

1.1 SCOPE

This standard specifies the requirements of gate valves, hand operated, outside screw and yoke type, carbon steel body material, pressure class ASME 150 with flanged and butt welded end connections for size range 50 mm to 900 mm.

1.2 This standard shall be supplemented by AA0851403 for Technical delivery conditions.

1.3 APPLICATION

These valves are suitable for fluids like steam, water, oil, air and other process gases like N₂, H₂, CO₂, Syngas etc.

2.0 DESIGNATION

e.g.: GATE VLV CS NB100 CL150 RF

3.0 TECHNICAL REQUIREMENTS

CL	REQUIREMENTS	COMPLIANCE
3.1	Pressure temperature ratings	ASME B16.34
3.2	Materials	As specified in Table – 1
3.3	Construction	Generally in line with API 600
3.4	End Connections	
3.4.1	Flanged	ASME B16.5
3.4.2	Butt welded	ASME B16.25
3.5	Face to Face /End to End dimensions	ASME B16.10
3.6	Hydraulic test pressure	
3.6.1	Body	30 kg/cm ²
3.6.2	Seat	22 kg/cm ²
3.6.3	Back Seat	22 kg/cm ²
3.6.4	Air leak test	6 kg/cm ²
3.6.5	Additional Testing requirement for H ₂ , N ₂ and other gas services	Test to be done as per mutual agreed procedure

Revisions: Clause 3.6.1, 3.6.2, 3.6.3 and 4

APPROVED:
INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC (Valves)

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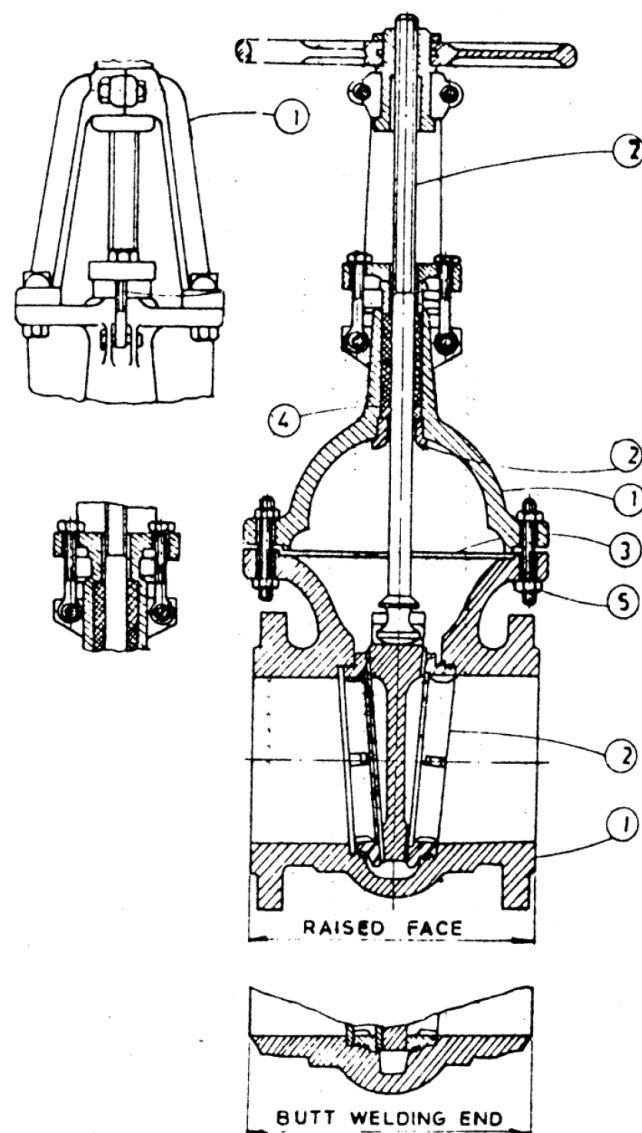


TABLE - 1

Sl. No.	Part	Material
1	Valve body, bonnet / yoke	ASTM A216 Gr. WCB
2	Trim (Stem, body seat rings, surface, wedge seating surface, back seat bushing)	13% Cr SS
3	Gasket	Spiral wound stainless steel GRAFOIL filler
4	Gland Packing	GRAFOIL
5	Bolts, nuts for body & bonnet	ASTM A193 Gr.B7, ASTM A194 Gr.2H
6	Other Parts	As per relevant standards

Note: For gas service, wherever specified in enquiry, Cu & Cu alloys shall not be used for any component.

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TABLE – 2

NOMINAL SIZE (NB)		Face to Face & End to End distance (L)			Approximate Weight per Piece (kg)		End connections		
							Flanged	Butt welded	
mm	INCH	FL	BW	RJ	FL	BW	RF Sub Code	Pipe OD X t*	Sub Code
50	2	178	216	216	24	20	063	60.3 X	640
(65)	(2½)	190	241	241	31	26	071	73.0 X	659
80	3	203	282	283	40	34	080	88.9 X	667
100	4	229	305	305	56	48	101	114.3 X	683
(125)	(5)	254	381	381	84	78	—	—	—
150	6	267	403	403	90	84	128	168.3 X	705
200	8	292	419	419	146	132	136	219.1 X	713
250	10	330	457	457	225	210	144	273.1 X	721
300	12	356	502	502	302	290	152	323.9 X	730
350	14	381	572	572	425	400	160	355.6 X	—
400	16	406	610	610	557	515	179	406.4 X	—
450	18	432	660	660	700	810	—	457.2 X	—
500	20	457	711	711	860	880	—	508.0 X	—
(550)	(22)	—	762	762	1050	1090	—	558.8 X	—
600	24	508	813	813	1300	1330	—	609.6 X	—
650	26	559	864	902	1510	1550	—	—	—
700	28	610	914	991	1850	1800	—	—	—
750	30	610	914	991	2200	2050	—	—	—
(800)	(32)	—	965	965	2600	2220	—	—	—
(850)	(34)	—	1016	1016	3040	2790			
900	36	711	1016	1219	3500	3200			

FL – Flanged, BW – Butt Welded, RF – Raised Face, RJ – Ring Joint

NOTE:

- 1) 12 Digit Material Code shall be obtained by suffixing sub code to this Standard No.
- 2) Specific requirements of the Plants shall be covered by Plant Annexure to this Standard.
- 3) Sizes given in brackets are non-preferred.
- 4) All Dimensions are in mm unless otherwise specified.
- 5) * Thickness of pipe varies according to the actual working pressure. Figs given are for general information only. User units to choose pipe thickness according to working pressure.

4.0 REFERRED STANDARDS (Latest Publications Including Amendments)

- 1) AA0851403
- 2) API 600
- 3) ASME B16.10
- 4) ASME B16.25
- 5) ASME B16.34
- 6) ASME B16.5
- 7) ASTM A193
- 8) ASTM A194
- 9) ASTM A216