



# CORPORATE STANDARD

AA7521168

Rev. No. 02

PAGE 1 of 4

## GATE VALVE, CARBON STEEL, NOMINAL PRESSURE 1.6 MPa (16 kg/cm<sup>2</sup>)

### 1.0 GENERAL:

- 1.1. **Scope** – This standard specifies the requirements of gate valves, carbon steel body material, nominal pressure 1.6 MPa, outside screw and yoke type, hand operated with flanged end connections, up to nominal bores 600 mm.
- 1.2. **Application** – These valves are used for non-corrosive media like water, oil, gas and steam.

### 2.0 DESIGNATION:

A carbon steel gate valve, nominal pressure 1.6 MPa, nominal bore 50mm with flanged raised face end connection to this standard shall be designated as follows:

#### 2.1. On drawings & Indents:

- a) Material specification column : AA 75 21 168
- b) Description column : GAV CS FLRF NP 1.6 NB 50
- c) Material code column : AA 75 21 168 062

#### 2.2. On enquiries & purchase orders:

In addition to incorporating the above details a copy of this standard and corporate standard No. AA 0851403 shall be enclosed along with the enquiry and purchase order.

### 3.0 COMPLIANCE WITH STANDARDS:

Presently there is no National Standard covering this item.

### 4.0 TECHNICAL REQUIREMENTS:

#### 4.1. Component materials & General Construction:

4.1.1. Materials of the important parts of the valve shall be as follows

Item No.	Part Name	Material Description	Specification
1	Body	Cast Carbon Steel	ASTM A216 WCB
2	Yoke	Cast Carbon Steel	ASTM A216 WCB
3	Stem	13% Chromium S. S.	ASTM A182F6a
4	Wedge	Carbon Steel hard faced with 13% Cr. S.S.	ASTM A105 or ASTM A216 WCB
5	Body Seating	Hard faced with 13% Cr. S.S.	---
6	Gland Packing	Grafoil	---

Revisions: As per clause 19.01 of MOM of WG-Valves and HW mail dated 19-03-2013 & TP mail dated 20-03-2013

**APPROVED:**  
INTER PLANT STANDARDISATION  
COMMITTEE – WG (V)

Rev. No. 02

Amd. No.

Reaffirmed

Prepared

Issued

Dt. of 1<sup>st</sup> Issue

COPYRIGHT AND CONFIDENTIAL  
The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.  
It must not be used directly or indirectly in any way detrimental to the interest of the company.

**CORPORATE STANDARD**

4.1.2. Materials mentioned above are of minimum requirements.

Equivalent/better materials can be accepted at the discretion of indenter.

4.1.3. General construction of the valve shall be as shown in fig.1.

**4.2. End connections:**

4.2.1. Flanged end connections shall be as per DIN EN 1092 - 1

**4.3. Back seat:**

All the valves shall be provided with back seat arrangement.

4.4. By Pass: Shall be provided wherever necessary by the supplier to facilitate easy operation of the valve.

**5.0 INSPECTION:**

5.1. **Inspection agency:** The valve shall be inspected at the supplier's works by boiler inspector or any other inspection agency approved by I. B. R.

**5.2. Scope of inspection:**

As per Form III C of Indian Boiler regulations, Test Certificates shall be duly attested by C. I. B. or the authorised Inspector as per IBR.

**6.0 TESTS**

6.1. **Assembly Test:** The valves shall be subjected to hydraulic test pressure of 2.4 MPa with both the ends blanked and valve kept open. No leakage is permitted.

6.2. **Seat Test:** The valve shall be subjected to hydraulic test pressure of 1.6 MPa on one side of the gate and the other end is open for inspection. No leakage is permitted. The test shall be repeated for the other side also.

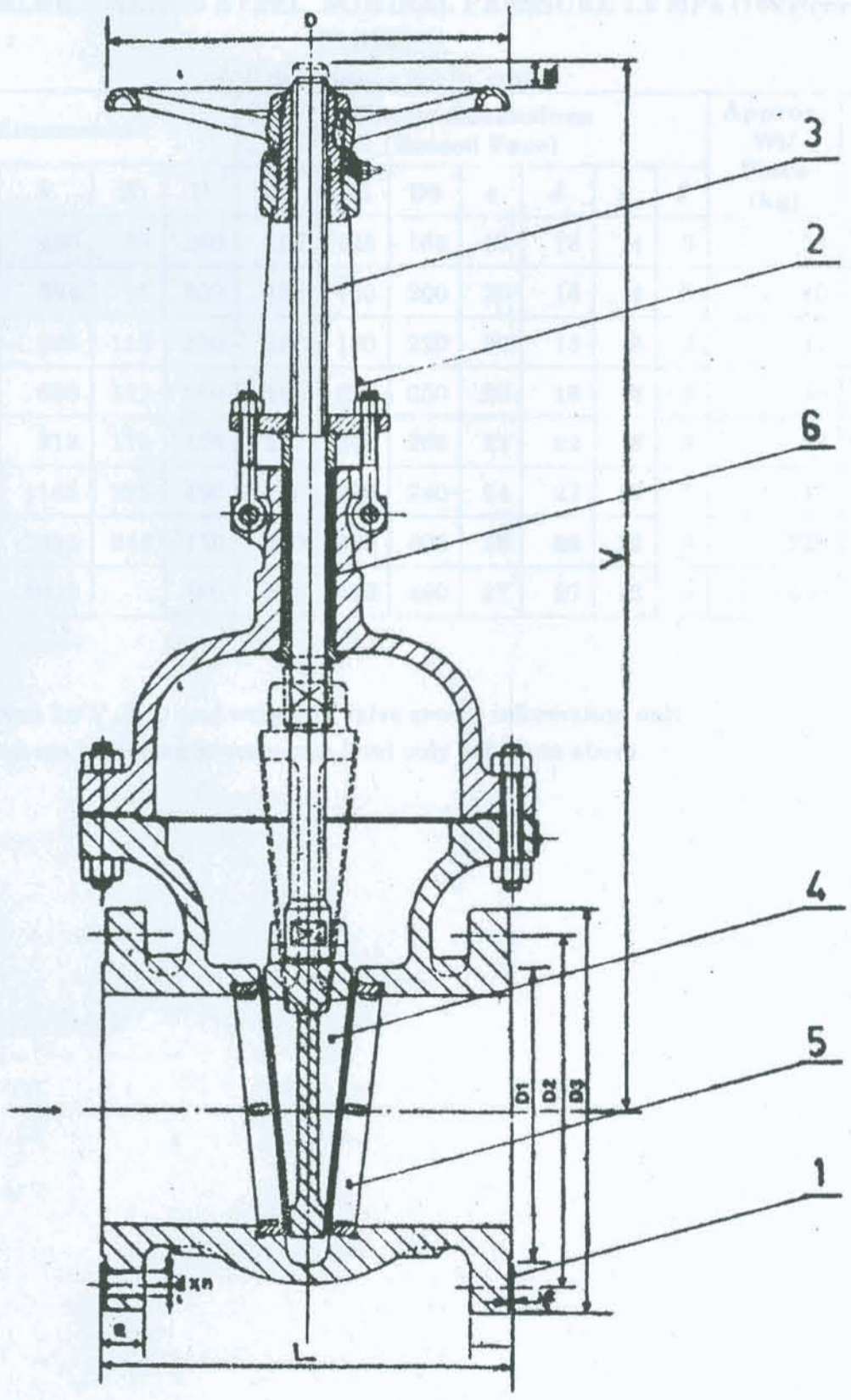
6.3. **Back seat test:** The valve shall not show any leakage through gland when subjected to hydraulic pressure of 1.6 MPa with one end closed and valve fully open with a back seat engaged.

**7.0 TECHNICAL DELIVERY CONDITIONS:**

For test duration, test certificates, guarantee certificates, documents, painting, marking, packing etc. refer Corporate Standard No. AA 0851403.

FIG. 1. GATE VALVE, CARBON STEEL, 100 L & 150 L

COPYRIGHT AND CONFIDENTIAL  
 The Information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.  
 It must not be used directly or indirectly in any way detrimental to the Interest of the company.



**FIG:1 GATE VALVE, CARBON STEEL, NP 1, 6 MPa**

## CORPORATE STANDARD

GATE VALVE, CARBON STEEL. NOMINAL PRESSURE 1.6 MPa (16kg/cm<sup>2</sup>)

TABLE - 1

(All dimensions are in 'mm')

Valve dimensions					Flange dimensions (Raised Face)							Approx. Wt/ Piece (kg)	Sub- code
NB	L	V	Z	D	D1	D2	D3	a	d	n	f		
50	180	450	56	250	102	125	165	18	18	4	3	24	062
80	210	594	95	250	138	160	200	20	18	4	3	40	089
100	230	673	115	250	158	180	220	20	18	8	3	41	097
125	325	690	142	250	188	210	250	22	18	8	3	55	100
150	280	913	175	400	212	240	285	22	22	8	3	87	119
200	330	1185	225	450	268	295	340	24	22	12	3	143	127
250	450	1431	248	450	320	355	405	26	26	12	3	228	135
300	500	1010	-	560	378	410	460	27	27	12	4	350	143

## Notes:

1. Dimensions given for V, Z, D and weight of valve are for information only.
2. Details of valves standardized at corporate level only are given above.