



# ANSI 150# CAST STEEL GLOBE VALVES

## Literature



### Introduction:



Figure 1 ANSI 150# Cast Steel  
Globe Valve

Globe valve is a valve that is used to permit, stop and regulate the flow in a pipeline system. The disc can be lifted up or lifted down vertically by turning the wheel handle to open position or close position. It is designed and manufactured according to ASME B16.10/ASME B16.34/BS 1873/API 602 standard due to different kinds of materials. Inspection and testing had been carried out according to API 598 standard. Globe valve is widely installed on systems that require flow regulating such as fuel oil system and cooling water system.

### Material and Design:

ANSI 150# flange end globe valve is available in stainless steel SS316, cast iron A126B, cast steel WCB, and forged steel A105. For ANSI flange end globe valves, the cover is available in bolted cover type where the cover is tightened with the valve body with screws and nuts to hold the internal parts.

There are two designs for the stem element, namely rising stem design and non-rising stem design. Rising stem design globe valve is a type of globe valve where the stem will rise and be exposed when the valve is turned to open position and lower when the valve is turned to close position. This design allows the user to check if the valve is in open position or close position by looking at the amount of stem that is exposed.

For non-rising stem design globe valves, the valve is in open position when the handle is turning to open position and in close position when the handle is turning to close position. However it is unable to check the position of the non-rising stem globe valve compared to rising stem globe valve. This design globe valve is suitable to install on systems that have limited space, for example, underground pipeline systems.

### Size and Pressure Rating:

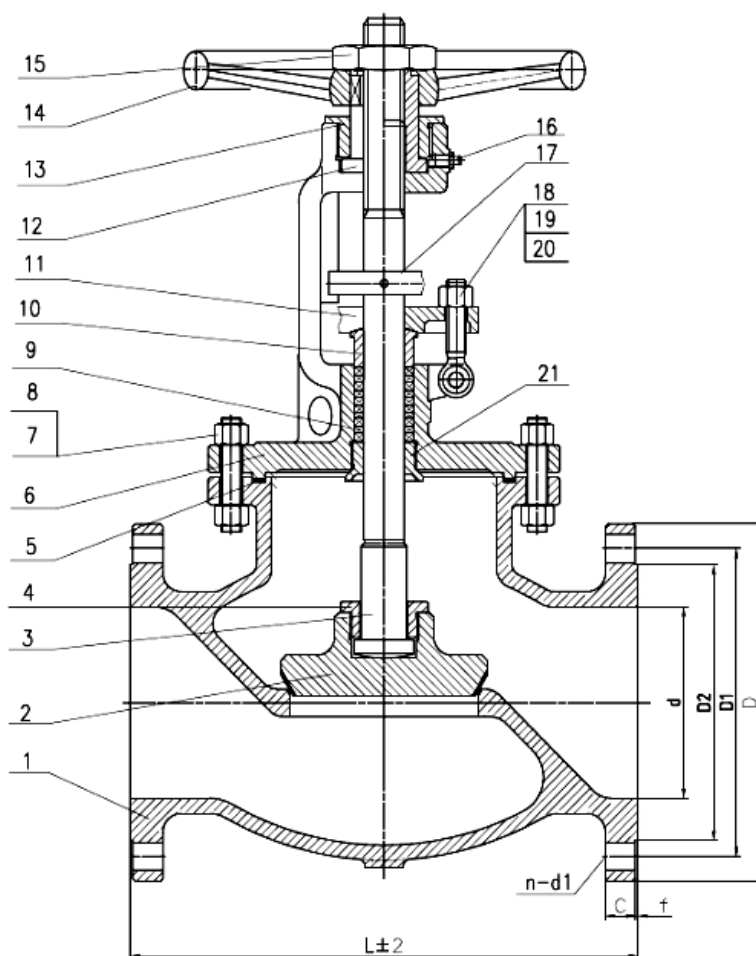
The size for the globe valve is available from 1" to 6", subject to material type. ANSI 150# flange end globe valve can withstand up to 150 PSI working pressure.



Figure 2 ANSI 150#  
Cast Steel Globe Valve

### Connection Type:

The both end of ANSI globe valve is come with ANSI 150# flange connection. The pipe end has to be in the same flange end connection to connect between pipe and globe valve. Some accessories like gasket, bolts and nuts are needed to connect both flanges together. The number of bolt holes is dependent on globe valve size, for example, 4 bolt hole design for valve size below 4" and 8 bolt hole design for valve size above 4".

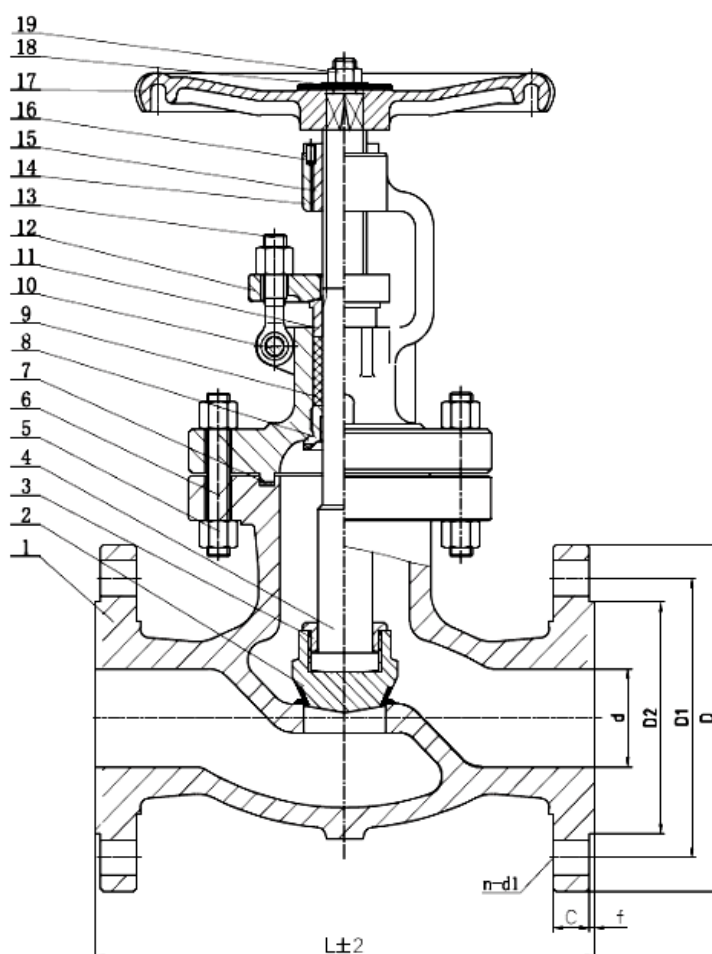
**ANSI 150# Cast Steel Globe Valve 2" – 4" (DN50 - 100) Drawing:**


No	Part Name	Material
1	Body	ASTM A216 WCB
2	Disc	ASTM A105 + 13%Cr
3	Stem	ASTM A182 F6a
4	Gland	AISI 1035
5	Gasket	304 + Graphite
6	Bonnet	ASTM A216 WCB
7	Bolt	ASTM A193 B7
8	Nut	ASTM A194 2H
9	Packing	Flexible Graphite
10	Gland	ASTM A276 410

11	Gland Flange	ASTM A216 WCB
12	Stem Nut	D2
13	Retaining Nut	AISI 1035
14	Handwheel	ASTM A216 WCB
15	Lock Nut	AISI 1020
16	Nipple	Assembly
17	Plate	ASTM A216 WCB
18	Eye Bolt	AISI 1035
19	Pin	Carbon Steel
20	Nut	ASTM A194 2H
21	Back Seat	ASTM A276 410

**Main Technical Parameter:**

<b>Nominal Pressure</b>	150#
<b>Shell Test Pressure</b>	3.0 MPa
<b>Back Seal Test</b>	2.2 Mpa
<b>Seal Test</b>	2.2 MPa
<b>Gas Test</b>	0.6 MPa
<b>Max Working Pressure</b>	≤ 425°C

**ANSI 150# Cast Steel Globe Valve 2 1/2" (DN65) Drawing:**


No	Part Name	Material
1	Body	ASTM A216 WCB +13%Cr
2	Disc	ASTM A105 + 13%Cr
3	Grand	AISI 1035
4	Stem	ASTM A182 F6a
5	Bolt	ASTM A193 B7
6	Nut	ASTM A194 2H
7	Gasket	304 + Graphite
8	Back Seat	ASTM A276 410
9	Packing	Graphite
10	Pin	Carbon Steel

11	Grand	ASTM A276 410
12	Packing Grand	ASTM A216 WCB
13	Eye Bolt	AISI 1035
14	Bonnet	ASTM A216 WCB
15	Stem Nut	D2
16	Screw	AISI 1025
17	Handwheel	ASTM A216 WCB
18	Gasket	Carbon Steel
19	Nut	ASTM A194 2H

**Main Technical Parameter:**

<b>Normal Pressure</b>	150#
<b>Shell Test Pressure</b>	3.0 MPa
<b>Back Seal Test</b>	2.2 MPa
<b>Seal Test</b>	2.2 MPa
<b>Gas Pressure</b>	0.6 MPa
<b>Max Working Pressure</b>	≤ 429°C

**Technical Specifications:**

1. Basic design and manufacture according to ASME B16.4 & BS 1873
2. Face to face dimension: ASME B16.10
3. Flange End: ASME B16.5
4. Inspection and test: API 598

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