



ANSI 150# SS316 GATE VALVES

Literature





Figure 1 ANSI 150# SS316 Gate Valve

Introduction:

Gate valve is a valve that is installed on hydraulic systems to allow or cut off the fluids flow through the valve passage. The wedge can be lifted up or lifted down by rotating the wheel handle according to the direction of "open" and "close" which mark on the handle. It is designed and manufactured according to various standards such as ASME B16.10, API 600, and API 602. It will be inspected and tested according to API 598.

Material and Design:

ANSI 150# flange end gate valve is available in several materials such as forged steel A105, stainless steel SS316, cast iron A126B, and cast steel WCB. The materials can be selected accordingly by referring to the system requirement. For ANSI 150# gate valve, the cover is designed in bolted bonnet type where bolts and nuts are used to tighten the cover with the valve body.

The stem, which is one component part of the gate valve, is available in rising stem design and non-rising stem design. For rising stem design, it means that the stem will rise when the handle is rotated to open position and descend when the handle is rotated to close position. This design tells us if the valve is in an open position or closed position by looking at the amount of stem exposed. Alternatively for non-rising stem design, the valve is fully open when the handle is rotated to open position as far as possible and fully closed when the handle is rotated to close position as far as possible. Non-rising stem design gate valves are suitable to install on tight places where there is not enough space for the stem to raise, for example, underground pipe systems.

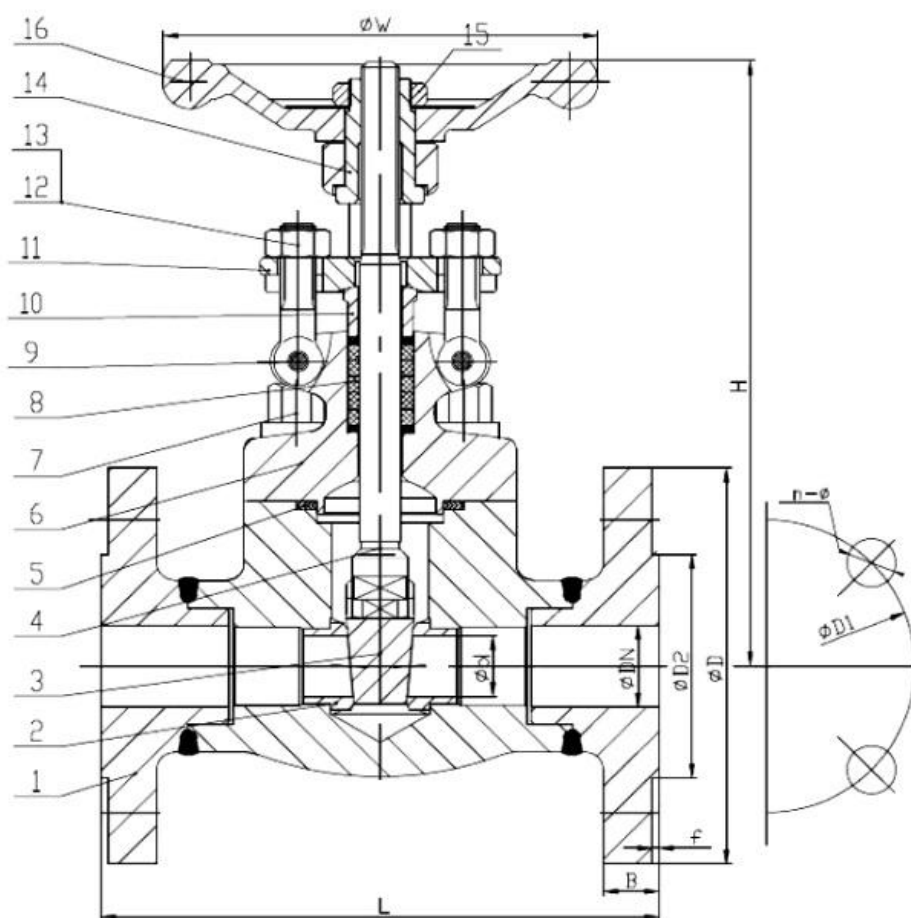
Size and Pressure Rating:

The available size for ANSI 150# gate valve is ranged from 1" to 6", subject to type of material. ANSI 150# gate valve can withstand up to 150 PSI working pressure.

Connection Type:

For ANSI 150# series flange end gate valve, the another connection end need to be in ANSI 150# flange connection as well. The number of bolt holes is dependent on the valve size. For example, for valve sizes that are below 4", there are only 4 bolt holes on the flange. While for valves that are above 4", there are 8 bolt holes on the flange. Bolts, nuts, and gaskets are required whenever there are any flange to flange connections.

ANSI 150# SS316 Gate Valve (1"-1 1/2") Drawing:



No	Part Name	Material
1	Body	ASTM A182 F316
2	Seat	ASTM A182 F316
3	Wedge	ASTM A182 F316
4	Stem	ASTM A182 F316
5	Gasket	SS316 + Graphite
6	Bonnet	ASTM A182 F316
7	Bonnet Bolt	ASTM A193 B8M
8	Packing	Graphite
9	Pin	ASTM A182 F316

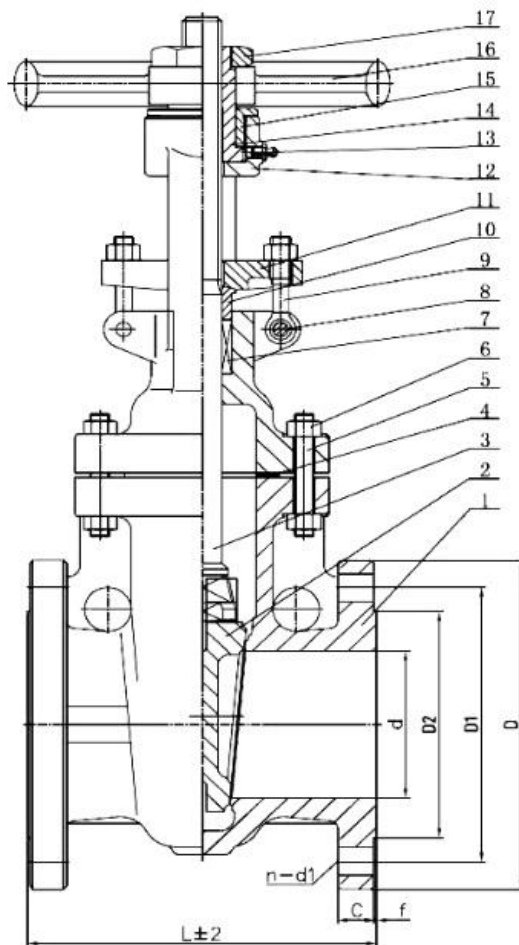
10	Gland	ASTM A182 F316
11	Gland Flange	ASTM A182 F316
12	Gland Bolt	ASTM A193 B8M
13	Gland Nut	ASTM A194 8M
14	Yoke Sleeve	ASTM A276 410
15	Lock Nut	Carbon Steel
16	Handwheel	ASTM A197

Main Technical Parameter:

Normal Pressure	150 PSI
Shell Test Pressure	3.0 MPa
Seal Test	2.2 Mpa
Gas-Tightness Test	0.6 MPa
Max Working Pressure	-29°C to 425°C

Technical Specifications:

1. Basic design and manufacture according to API602/BS5352
2. Face to face dimension: ASME B16.10
3. Flange End: ASME B16.5 RF
4. Inspection and test: API 598

ANSI SS316 150# Gate Valve (2"-4") Drawing:


No	Part Name	Material
1	Body	A351 CF8M
2	Wedge	A351 CF8M
3	Stem	SS316
4	Gasket	SS316 + Graphite
5	Bolt	A193 B8M
6	Nut	A193 B8M
7	Packing	Graphite
8	Pin	SS304
9	Eye Bolt	A193 B8M
10	Gland Nut	SS316

11	Gland Flange	A351 CF8M
12	Bonnet	A351 CF8M
13	Nipple	Assembly
14	Stem Nut	A439 D2
15	Nut	AISI 1035
16	Handwheel	WCB
17	Lock Nut	AISI 1035

Main Technical Parameter:

Normal Pressure	150#
Shell Test Pressure	3.0 MPa
Seal Test	2.2 Mpa
Gas-Tightness Test	0.6 MPa
Max Working Pressure	≤ 425°C

Technical Specifications:

1. Basic design and manufacture according to API 600
2. Face to face dimension: ASME B16.10
3. Flange End: ASME B16.5 RF
4. Inspection and test: API 598

Chuan Kok Hardware & Machinery Pte Ltd

Address : 1783 Geylang Bahru, #01-02, Singapore 339708
Telephone Number : +65 6294 2566
Email Address : info@chuankok.com
Website : www.chuankok.com
Business Registration Number : 198201577Z
Country of Registration : Singapore

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