



ANSI 150# CAST IRON GATE VALVES Literature







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.

Figure 1 ANSI 150# Cast Iron Gate Valve

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.



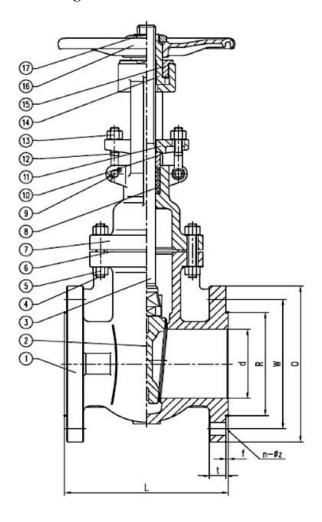
Figure 2 ANSI 150# Cast Iron Gate Valve

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# Cast Iron Gate Valve Drawing:



| No | Part Name | Material |
|----|---------------|-------------------|
| 1 | Body | A126 B Cast Iron |
| 2 | Wedge | A126 B Cast Iron |
| 3 | Stem | A276 SS304 |
| 4 | Bolts | A29 1035 |
| 5 | Nuts | A29 1025 |
| 6 | Gasket | SS304 + Graphite |
| 7 | Bonnet | A126 B Cast Iron |
| 8 | Packing | Flexible Graphite |
| 9 | Pin | A29 1045 |
| 10 | Packing Gland | A276 SS304 |



| 11 | Gland Flange | A126 B Cast Iron |
|----|--------------|--------------------------|
| 12 | Eye Bolts | A29 1035 |
| 13 | Nuts | A29 1025 |
| 14 | Stem Nut | A276 SUS410 |
| 15 | Cover | A29 1025 |
| 16 | Handwheel | A47 32510 Malleable Iron |
| 17 | Nut | A29 1025 |

Main Technical Parameter:

| Normal Pressure | 150# |
|----------------------|----------|
| Hydraulic Body Test | 2.06 MPa |
| Seal Test | 1.57 MPa |
| Hermetical Seal Test | 0.6 MPa |
| | |



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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