



THREADED END SS316 GATE VALVES (200 PSI)

Literature





Introduction:

Gate valve is a valve that is used to allow fluids to flow through or stop the fluids from flowing through the valve. This can be operated by lift up or lift down the disc. It is designed and manufactured according to ASME B16.34/API 602 standard. It also went through the inspection and testing according to API 598.

Material and Design:

Gate valve is available in forged steel A105 or stainless steel SS316 material. For stainless steel SS316 material, there are 2 available designs which are screw-in bonnet type and bolted bonnet type.

Figure 1 Threaded End SS316 Gate Valve (200 PSI) While for forged steel A105 material, the design is available in bolted bonnet type only. For screw-in bonnet type design, a bonnet is screwed into the valve body to hold the internal parts that are put into the valve body, thus offering a pressure tight seal between the bonnet and valve body. Bolted bonnet design comes with a thicker cover that requires bolts and nuts to tighten with the valve body. This design is normally used for high pressure applications. The handle of both designs is designed to be wheel shaped.

Gate valve also can be available in 2 designs, rising stem design and non-rising stem design. For rising stem design, the stem will rise when the wheel handle is rotated to open position and lower when the wheel handle is rotated to close position. By looking at the amount of stem exposed, we can easily tell if the valve is in an open position or close position. However for non-rising stem design, the valve is in open position when the handle is rotated to the open position as far as possible and in closed position when the handle is rotated to close position as far as possible. Non-rising stem design gate valves are suitable to install on hydraulic systems that have limited space for the stem to raise in full, for example, underground pipe systems.

Size and Pressure Rating:

The size of the gate valve ranges from 1/2" to 2". For SS316 material, the working pressure is available in 200 PSI or 800 PSI. While for A105 material, the working pressure is only available in 800 PSI.

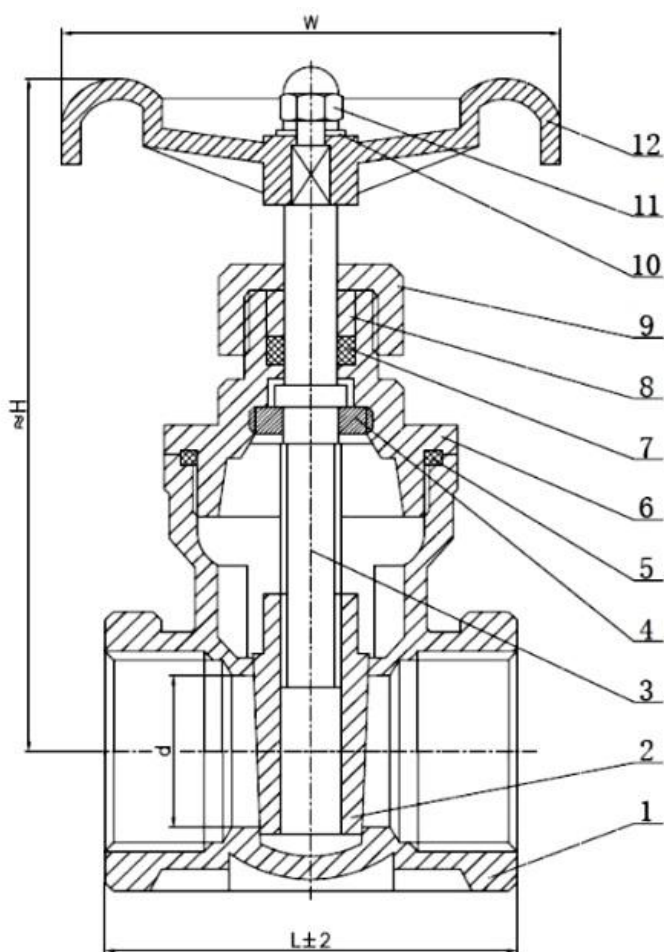


Figure 2 BSPP SS316 Gate Valve (200 PSI)

Connection Type:

For SS316 gate valve, it is only available in NPT (National Pipe Thread) female thread or BSPP (British Standard Pipe Parallel) female thread. For A105 gate valve, it is available in NPT female thread or Socket Weld connection. For the female thread gate valve, it needs a male thread of the same connection end to screw in to the gate valve. For socket weld connection, it needs a plain end pipe to connect.

Threaded End SS316 Gate Valve (200 PSI) Drawing:



| No | Part Name | Material |
|----|-------------|---------------|
| 1 | Body | A351 CF8/CF8M |
| 2 | Wedge | A351 CF8/CF8M |
| 3 | Stem | SS316 |
| 4 | Stem Holder | SS316 |
| 5 | Gasket | PTFE |
| 6 | Bonnet | A351 CF8/CF8M |
| 7 | Packing | PTFE |
| 8 | Ring | SS316 |
| 9 | Cap | A351 CF8/CF8M |
| 10 | Gasket | SS304 |

| | | |
|----|-----------|-------|
| 11 | Nut | SS304 |
| 12 | Handwheel | ZL101 |

Main Technical Parameter:

| | |
|-----------------------------|----------------|
| Nominal Pressure | 200 PSI |
| Shell Test Pressure | 2.1 MPa |
| Seal Test | 1.6 MPa |
| Back Seal Test | 1.6 MPa |
| Gas-Tightness Test | 0.6 MPa |
| Max Working Pressure | -29°C to 150°C |

Technical Specifications:

1. Basic design and manufacture according to ASME B16.34
2. Inspection and test for according to API 598
3. Connection screw for the valve according to ANSI B1.20.1, ISO 7-1, ISO 228-1, DIN 259/2999

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