



# JIS10K SS316 GATE VALVES

## Literature





**Figure 1 JIS 10K SS316 Gate Valve**

### **Material and Design:**

JIS10K flange end gate valve is available in stainless steel SS316 material or cast iron material. It all comes with bolted bonnets, however they are different in shape due to different design standards. Bolted bonnet type is where a bonnet is attached on the valve body to hold the internal parts into it with screw and nut.

The stem, one of the important components in gate valves, is available in two types: rising stem or non-rising stem. For the rising stem gate valve, the stem will go up when we rotate the handle to open position and go down when we rotate the handle to close position. It can be easily told if the valve is in an open or close position when we look at the amount of stem exposed. For non-rising stem gate valves, the valve is in open position when the handle is rotated as far as possible to "open" direction that mark on handle and in close position when the handle is rotated as far as possible to "close" direction that mark on handle. Non-rising stem gate valves are usually used on tight places where there is not enough space for the stem to raise, such as underground hydraulic systems.

### **Size and Pressure Rating:**

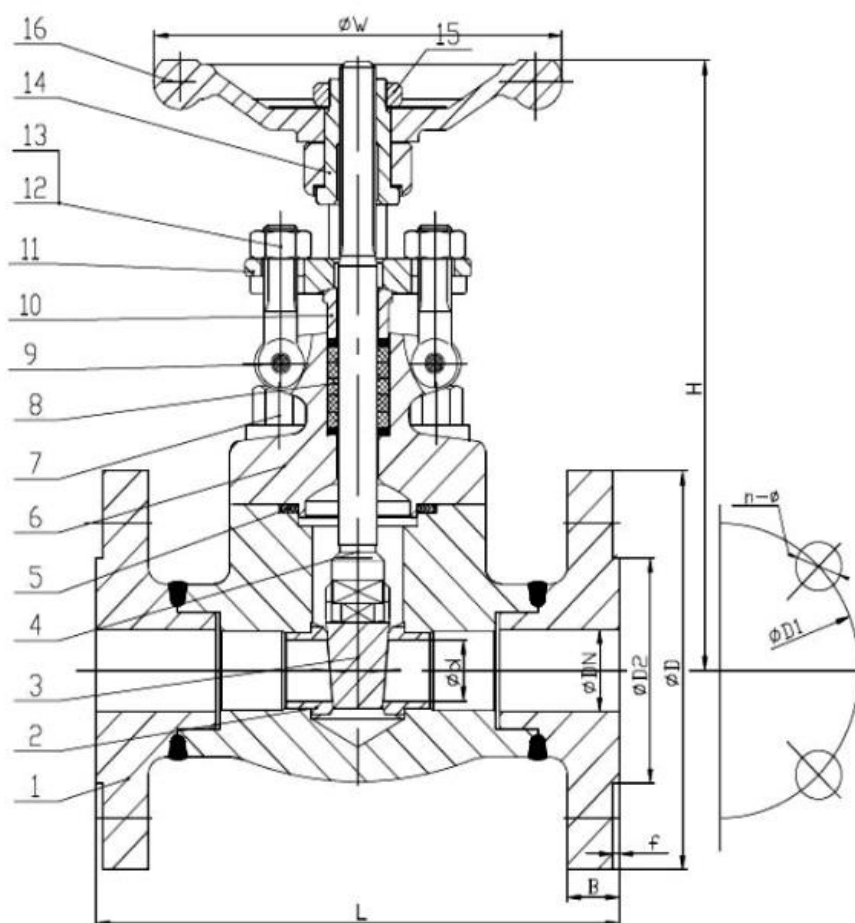
The size for JIS10K gate valve is ranged from 1" to 6", subject to material. JIS10K series flange end gate valves can withstand up to 10 kg/cm<sup>2</sup> which is equivalent to 150 PSI working pressure.

### **Connection Type:**

For flange end gate valve, the other connection end must be the flange end too. The number of bolt holes depends on the valve size too. There will be 4 bolt holes for size below 4", 8 bolt holes for size above 4". Gasket, bolts and nuts are required to connect the valve body flange to another flange end.



**Figure 2 JIS 10K SS316 Gate Valve**

**JIS 10K SS316 Gate Valve (1"-1 1/2") Drawing:**


No	Part Name	Material
1	Body + Seat	ASTM A182 F316
2	Disc	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

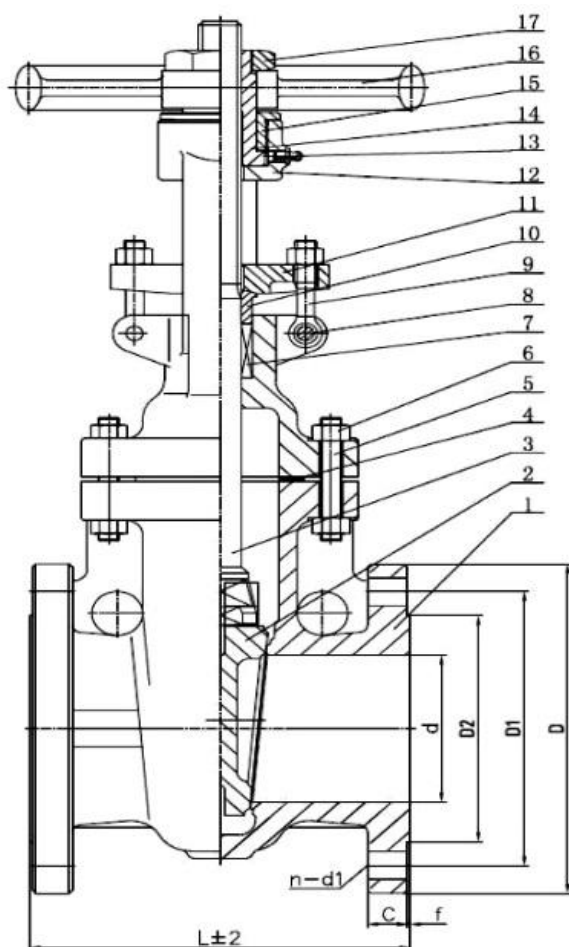
12	Gland Bolt	ASTM A193 B8M
13	Gland Nut	ASTM A194 8M
14	Yoke Sleeve	ASTM A276 410
15	Lock Nut	Carbon Steel
16	Handwheel	ASTM A197

**Main Technical Parameter:**

<b>Normal Pressure</b>	10K
<b>Shell Test Pressure</b>	3.0 MPa
<b>Seal Test</b>	2.2 Mpa
<b>Gas-Tightness Test</b>	0.6 MPa
<b>Max Working Pressure</b>	-29°C to 425°C

**Technical Specifications:**

1. Basic design and manufacture according to API 602/BS5352
2. Face to face dimension: ASME B16.10
3. Flange End: JIS B2220;2012 RF
4. Inspection and test: API 598

**JIS 10K SS316 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:**

<b>Normal Pressure</b>	10K
<b>Shell Test Pressure</b>	3.0 MPa
<b>Seal Test</b>	2.2 MPa
<b>Gas-Tightness Test</b>	0.6 MPa
<b>Max Working Pressure</b>	≤ 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](mailto:info@chuankok.com)  
Website : [www.chuankok.com](http://www.chuankok.com)  
Business Registration Number : 198201577Z  
Country of Registration : Singapore

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