



1. General

The serials ball valve are used in the pipe system to close or open the pipeline to keep system running normally.

2. Product descriptions

2.1 These serials valve are hand-driven, through handle. The valve closes when turning the hand wheel clockwise, and the valve opens when turning counter clockwise, These serials valves also can be driven using automatic machinery control devices.

2.2 These serials valve are designed and manufacture in according with ASME B16.34 and API6D specification ect.

2.3 In order to keep relieving the inside bore pressure, the valve's seat has automatic cavity relief funtion, but this valve without any special relased device.

2.4 The brief drawing, the suitable working pressure and temperature and material of the main parts are indicated in attached drawing and tables.

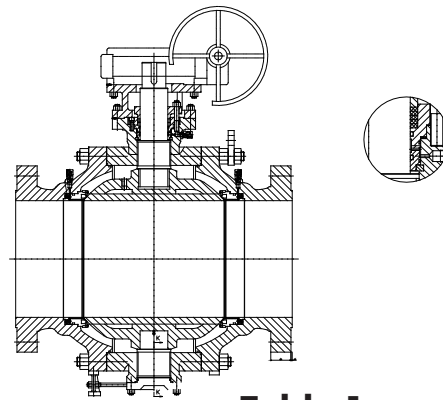


Table 1

Stem	Soft Sealing	
Suitable temperature (°C)	-29°C~+120°C	

2.5 Valve maximum allowable working pressure rate value(Unit:Bar)

T (°C)	-29~38	50	100	150
20 bar	19.6	19.2	17.7	15.8
50 bar	51.1	50.1	46.6	45.1
100 bar	102.1	100.2	93.2	90.2
150 bar	153.2	150.4	139.8	135.2
250 bar	255.3	250.6	233	255.4

The temperature in table is the pipe fluid temperature under working condition, the pressure in table is continuous and no impact pressure.

3.Storage, maintenance, installation and operation

3.1 storage maintenance

3.1.1 Valve shall be stored indoor with dry and well-ventilated environment. The ends of the passage shall be plugged with covers.

3.1.2 Valve stored for a long-term shall be Checked periodically and cleaned to be free from stain.Especially clean the seat ring to protect sealing surface against damage, and coat corrosion-resistant oil the machined surface.

3.1.3 If the stored times exceed 12 month, valve should be tested to ensure structural and functional integrity, and make a record

3.1.4 Valve should be Checked and repaired periodically after installation. The maintenance points includes:

- (1) The sealing surface
- (2) Stem and stem-nut
- (3) Packing, gasket
- (4) The stain on the inside surface of body and bonnet

3.2 Installation

3.2.1 Be sure valve mark (e.g. type, nominal size, nominal pressure, material ect.) is in according with the requirements of pipe system before installation.

3.2.2 Butterfly the passage and sealing surface carefully before installation. Clean it with bleached cloth if there is any dirt.

3.2.3 Before installation, be sure the packing are compacted tightly. But the movement of stem shall not be hampered.

3.2.4 Valve can be installed wherever it is convenient for examination and operation.The best location is horizontal and stem is vertical.

3.2.5 Install natural to avoid large stress resulted from the supports, attachments, piping ect.

3.2.6 Valve must be full opening during pressure testing of pipe system after installation.

3.2.7 Supporting: if the pipe has enough strength to resist the valve weight and the operation torque, the support point isn't need. Otherwise, the valve should have support point.

3.3 Operation and usage

3.3.1 The ball must be full-opening or full-closing during using to prevent sealing surface of seat and ball from damage due to high-speed medium, Partial-open to adjust flow is not permitted.

3.3.2 Use handle instead of other tools when operating or closing valve.

3.3.3 Working pressure should not exceed maximum allowable working pressure under working temperature.

3.3.4 Assure the momentary pressure is lower than 1.1 times of maximum allowable working pressure under working temperature.

- 3.3.5 The safety device shall be installed in the pipeline to prevent working pressure from exceeding maximum allowance pressure under working temperature.
- 3.3.6 Hit and beat of valve during transportation, installation, operation and maintenance is banned.
- 3.3.7 Decomposition of unstable fluids(e.g. decomposition of some fluids) will create expansion of volume and lead to rise of working pressure will lead to failure or leakage, The user should make suitable measures to eliminate or limit the factors leading to decomposition of fluids.
- 3.3.8 If fluids is condensate enough to affect performance of valve, The user should make suitable measure to reduce the degree of condensation of fluids(e.g. ensure suitable temperature of fluids ect.)or replace other valve.
- 3.3.9 For self-ignition fluids, The user shall ensure environment and working temperature don't exceed it's self-ignition point.(Special attention to external fire).
- 3.3.10 In any case, replace packing under pressure is not permitted.
- 3.3.11 Be sure the fluids is not dirty to affect performance of valve and no dirty and hard solid particles or replace other type valve, or apply strainer.
- 3.3.13 Checking the sealing performance periodically during using as follows:

Check points	Leakage
Body-bonnet connection	Zero
Packing sealing, gasket	Zero
Seat sealing	Zero

- 3.3.14 Addition prevent thermo measure on valve body surface during the system running temperature above 60.
- 3.3.15 Regularly check the wear of sealing surface, aging and failure of packing, gasket.If that's the case, repair or replace it in time.
- 3.3.16 After repairing, valve shall be reassemble and adjusted. Then test the sealing performance and make a record.The operator should have relative knowledge and experience of valve.
- 3.3.17 Addition the prevent measure of static and fire in according with requirement of client.
- 3.3.18 Addition relieving device in according with requirement of client. Assembly of valve must be certificated by moody.

4.Guarantee

Guarantee period of valve is 12 months after using, but not exceed 18 months after delivery. Manufacturer will repair or provide spare parts free of charge on the occurrence of damage due to material, manufacturing o the damager under correct operation condition during the guarantee period.

5. Usually faults and solutions

Fault description	Cause	Solution
Leakage of Sealing Face	Damage of sealing face	Replace seat of valve
	Exist dirty between seat and ball	Clean the inside body
Leakage of Stuffing Box	Stuffing loose or stuffing wear	Add stuffing
	Stuffing gland is not tight	Screw the nuts of gland

Fault description	Cause	Solution
Leakage of Middle Flange	Bolt of middle flange is loose	Screw the nuts of middle flange
	Gasket failure	Replace the middle gasket
Leakage of Two End Flange	The compressed force of pipe flange is not adequated	Screw the bolts of flange
	Gasket failure	Replace gasket

6 User notice:

6.1. Not be suitable for significant corrosion and wear fluid and cannot exceed the scope in the table 1.

6.2. Not be suitable for fire environment.

6.3. This valve is designed to consider body cavity relief (the inside body cavity pressure not exceed the inlet pressure 1.33 times while it under closed), if some of remaining fluid in the body cavity, the user can open valve partly from the following system or release it by other ways.

6.4. The product design did not consider conditions of earthquake, traffic wind load and snow load.

6.5. The manufacture shall not be responsible for any damage resulted in above operating conditions.

6.6. The set pressure of safety valve have been set and tested before delivery.

6.7. It shall be adjusted by authorized personnel in accordance with local regulation requirements of setting and testing. The manufacture will not be responsible for any damage or failure due to be setting by no authorized personnel.