



Installation, Operation & Maintenance Manual

-Y52 series diaphragm valve





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A、 Introduction

A1、 Symbols used

Three symbols in the manual each indicate are as follows:

	Forbidden: ...must be strictly adhered to.
	Warning: ...important safety information. If no followed, could endanger personal safety and/or mechanical damage.
	Attention: ...important operating tips

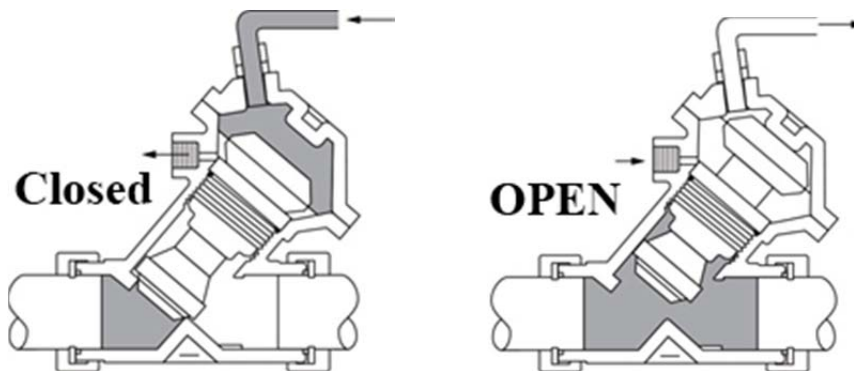
A2、 Functionality

Y52 series valves are installed on the pipes through the bonding, clamp, thread, flange and other forms, to achieve a rapid path switching under the allowable pressure and temperature.

Warning	<ol style="list-style-type: none"> 1. Avoid installations where containing HF solutions. 2. This product can be used in a small amount of organic liquid containing grease and ethanol. For specific instruction, please negotiate with the agent before making any decision. 3. This product can provide certain resistance to corrosion caused by acid and alkali. The final result is determined by sample testing. 4. Do not use control valve to start or close the product in case of a large amount of solid contaminants in medium, as the product is controlled by differential pressure,. Using a clean media to control the valve is highly recommended.
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Our company assumes no responsibility for any loss and damage caused by objectives inconsistent with intended use.

Technical principles:



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Closed position: the pressure control source (water or gas pressure equal to or greater than the water pressure) leads the diaphragm on the control chamber. The diaphragm push the valve seat through the valve stem, thus cut off the valve.

Open position: When the pressure is relieved from the top of the valve stem, the fluid pressure lifts up the valve stem to open the valve.

A3、Marks

Our company's' Logo is casted onto each product and used to identify our company product. Keep it clear and clean.



Logo

A4、Transport and storage

Transport rules can be explained as follows:

- Keep the valve in the original packaging before use.
- The valve must be stored in dry, dust-proof and avoiding meeting-up conditions.

	<ol style="list-style-type: none">1. When transporting and storing the valve, make sure that there is no heavy load on the valve body.2. Avoid shipping condition where valve may be exposed to vibration, or high traffic areas with potential for mechanical damage.
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B、Installation/Pressure test

B1、Before you begin

	<ol style="list-style-type: none">1. Professionals, who have full capability of the correct completion of the installation and operation work and to detect and resolve any risks based on their own training, expertise and experience, must be on-site when operating, and responsible for any operation to the valve.2. The function of the valve must match the intended use of the system.3. Make sure no pressure on both sides of pipe prior to the completion of installation.4. Blind pipe flanges are used to seal the end of a piping system to prevent leakage accidents.
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B2、Installation requirements

Many precautions can be taken to prevent the malfunctioning of the valve before installation.



	<ol style="list-style-type: none">1. Avoid installations where valve may be exposed to vibration, or high traffic areas with potential for mechanical damage.2. Install the valve correctly so that the water or steam flows from inlet at an obtuse angle to outlet with acute angle. Please refer to A2 for part references in the manual.3. The valve assembly will require heat shielding, thermal isolation, or cooling.4. Note that: the connection port of black control tube is next to the top of the valve cover.5. Recommend for vertical supporting heavy load (valves) if necessary.6. Poor water treatment or filtration, corrosion, scale, other particulate can result in damage to trim components or water leakage. A water treatment specialist should be consulted.7. Dirty conditions lead to malfunctions, so fit strainer upstream of valve inlet if necessary.8. A common and efficient method of installing control valves in pipelines is by means of bolted gasketed flanges.9. Tighten flange bolts evenly to torque appropriate for the gasket and bolt materials. In an ideal world there should be no visual gap (no more than a 1mm gap) between gasket and the edge of the flange.
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B3、Installation steps

- Inspect shipping package, valve for physical damage. If damage has occurred notify appropriate carrier and manufacturer. Do not install.
- Note That: Valve mounting direction (Irreversible): the intake angle to the head of the valve is normally obtuse angle, while the outlet angle is an acute angle.
- Align the valve with the pipe ends until both are centered, when installing the flange bolts.
- Ensure that all flange gaskets and valves in close proximity to the weld have been removed. The heat from the weld will damage these components if they are left in place. Finish welding the valve to the pipe. Allow the connection to cool completely.
- The product pack is not equipped with flange gasket, customers need to choose the appropriate specifications of the gasket, to avoid flange leakage.
- Tighten evenly and gradually in a diagonal pattern until the end plate has metal-to-metal contact with the body. Do not over tighten, as this will shorten the life span of the product.
- All pipes and valves should be cleaned thoroughly after installation.
- Remove any sludge, gravel or metal particles. Make sure the system is clean and free of dirt before closing the system.
- Start functional testing as soon as possible. If the valve fails to perform in default, require timely replacement to avoid any loss in debugging.

B4、Pressure test

All valves are factory tested for pressure test. Check the pressure supplied to the valve and ensure that pressure applied over a specified range.



	Slowly open the valve to prevent water hammer(a pressure surge) from damaging pipes and valves when initiate pressure test.
	As the water pressure increases, firstly detect water leakage. If necessary, stopping the test can help prevent human injuries and damage to the system.

B5、 Valve dismantling

For detailed explosive view, Please go to our website to download:

www.kangjiezc.com

C Operation instruction

The system designer must fully evaluate and check system security before starting installation.

C1、 Safety instructions

	<ol style="list-style-type: none"> 1. The function of the valve must match the intended use of the system. 2. Working temperature and working pressure can only be used within the range specified by the valve. 3. Professionals, who have full capability of the correct completion of the installation and operation work and to detect and resolve any risks based on their own training, expertise and experience, must be on-site when operating and responsible for any operation to the valve. 4. Make sure no pressure on both sides of pipe before installation. 5. When the pipe is pressurised for the first time, if leakage is suspected, tightly and alternative tighten bolts, to avoid over-tightening a coupling and excessive damage to valves.
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C2、 Manual/Automatic Operation

The valve is in an open position when the diaphragm bulge outwardly. When recessed, the valve is closed.

For regular diaphragm valve, detecting water sound in pipeline outlets helps determine the location of valve, or observe top or side vent holes to ensure proper valve capacity and flow response.

C3、 Troubleshooting

Joint leakage	<ol style="list-style-type: none"> 1) For a valve with hot melt adhesives, molten hot melt near the joints and re-bond again. 2) For valves with clamp joints, always inspect the gasket. 3) For bolted valves, wipe the threads tightly around the circumference of the screw thread. 4) To obtain a leak-free flange connection, cross tighten the bolts.
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Interior water leakage	To start with, check whether the valve is closed, or shut down by hand; secondly, remove foreign matter stuck in the end of the valve stem and clean pipes and valve. If the problem persists, please contact the manufacturer.
Malfunction	Fully open the valve to check the inside, if the problem persists, including solenoid diaphragm valve, please contact the manufacturer (except for the solenoid valve).

D Technical annex/Documents

D1、 Technical specifications

- Working pressure: 0.1-0.8MPa
- Working temperature: 4-50℃
- 3-way solenoid valve specifications:
 - AC220V 50HZ 8W
 - AC110V 50HZ 8W
 - AC24V 50HZ 8W
 - DC220V 50HZ 8W
 - DC110V 50HZ 8W
 - DC24V 50HZ 8W

D2、 Flow curve

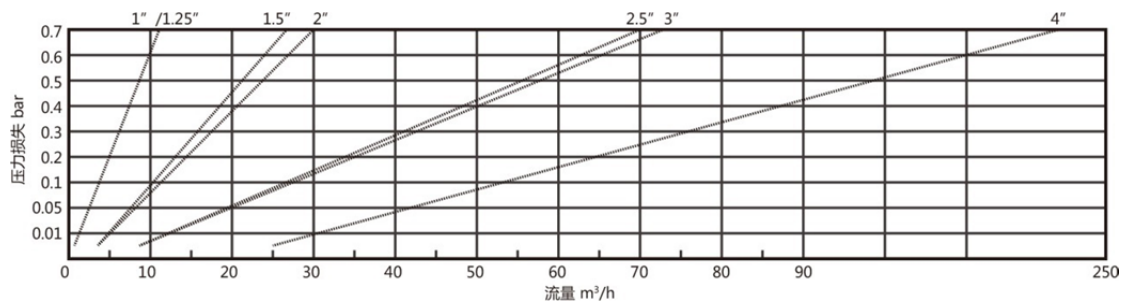


Fig. 1 Flow curve

D3、 Drawing/material lists

Please visit below website for downloading:

www.kangjiezc.com

D4、 Standard flange bolts

For flange connection bolt specification and related operating instruction, please visit below website:

www.kangjiezc.com