SHANGHAI SHINJO PUMP & VALVE CO.,LTD.
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HYDRAULIC CONTROL VALVE GENERAL INTRODUCTION

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PRODUCT INTRODUCTION

Hydraulic control valve is introduced from Taiwan in late 1990s, which is applicable to the water irrigation system in some agricultural countries firstly, produced largely in European countries like Israel, Holland, Demark, and then America, Canada and Asian countries, and even it is applicable widely to many other fields except introduced from Taiwan in late 1990s, which is applicable to the water irrigation system. Our hydraulic control valve has outstanding achievement in many domestic & abroad building, fire fighting, municipal, electrical power, pipe networks system etc.

The hydraulic control valve working principle is controling the valve plate moving by using the up and down valve cavity pressure difference, and achieve different application by bypass pipeline and different connections of various pilot valves. Presently, the hydraulic control valve has deriven up to one hundred applications abroads, while at home, we only develop ten more applications, but even applicable to normal temperature, low pressure, and water similar mediums. If selecting different materials, the hydraulic control valve can be also applicable to medium temperature, medium temperature and corrosive pipeline.

Since producing the hydraulic control valve, we continuously listen to our customer's comments and suhhestions, and learn from the foreign products advantages, and then develop our products from valve structure, materials and processing technic. Presently, our hydraulic control valve has been applicable widely to all over the country in all big and medium cities and won high reputation form the masses consumers! As a result, we we have got a lot of honors as follows

a. In 2001, the hydraulic control valves made in this Co. were entitled as the most advanced products nationwide approved by both Scientific Commission and Construction Commission of Shanghai. The appraisal number: 2001-6133.

b. In 2002, our company was entrusted by the office of Shanghai Engineering Construction Standardization to draw out SJ series hydraulic control valves' installation figure collection of the recommended application figure collection of Shanghai buildings' products, the figure collection number: 2002 HU S/T-104.

c. In 2002, our company is entrusted by the Association of China Engineering Construction Standardization to draw out the standards for the application and design rules of hydraulic control valves. The standard number: CECS144: 2002.

d. In 2004, our company is entrusted by the office of China Engineering Construction Standardization to draw out the industrial standards for the hydraulic control valves (coming soon).

According to year's professional experiences, we suggest adopt diaphragm type hydraulic control valve for size smaller than 450mm, while piston type hydraulic control valve for size bigger than 500mm.

PRODUCT FEATURES

a. The body is full bore and streamlines pattern design, which makes it have small fluid resistance and big flow.

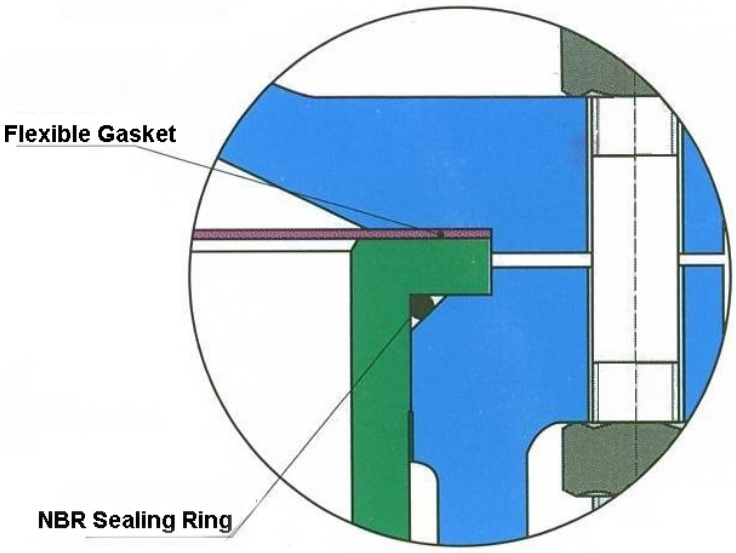
b. The joint between body, bonnet and piston cylinder adopts double sealing of sealing gasket and sealing ring, which makes it has no leakage.

c. The body, piston cylinder and piston are two guide directions, which makes it move smoothly and reliably.

d. The entire stainless steel piston cylinder, inblock casting piston and NBR sealing ring are combined completely, which increases the service life.

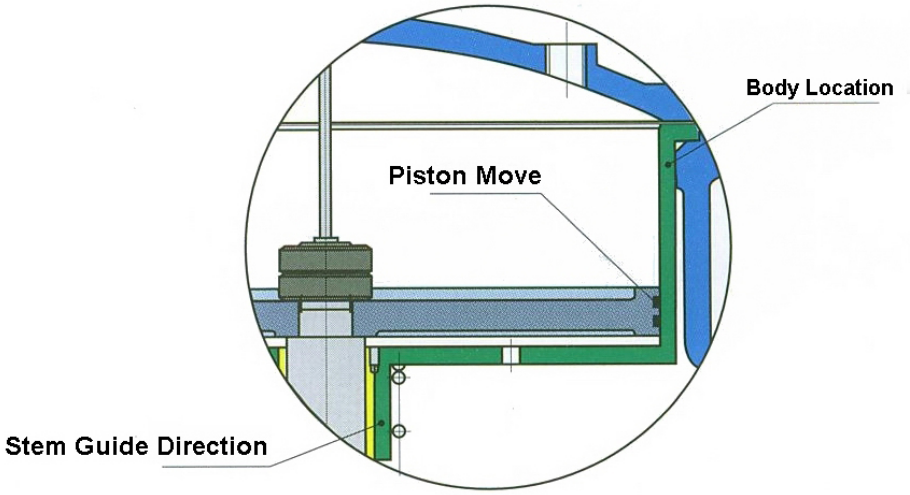
e. Introducing foreign advanced removable seat technology, which makes it repair or replace conveniently.

f. The piston cylinder has guide hole, increase damping properly, making the piston move more soomthly.



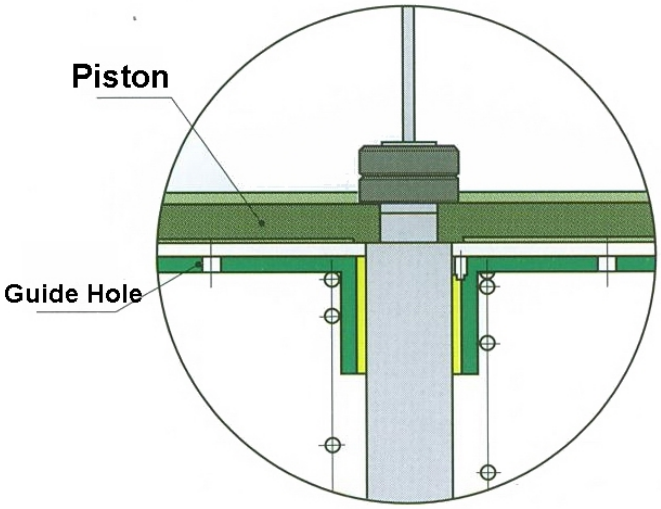
Flexible Gasket and NBR Sealing Ring

The bonnet and body inside groove is located by piston cylinder excircle, making sure the bonnet, body and indicator stem are concentric, and the disc move freely. Thereby, it increase the main valve sensitivity, which makes the piston type hydraulic control valve can work reliably even though the flow and pressure vary a little. In order to achieve the joint between body, bonnet and piston cylinder has no leakage, the joint between piston and bonnet adopts flexible gasket, while the joint between piston and body adopts NBR sealing ring.



Two Guide Directions, Moving Smoothly

The body neck has certain width finish surface which matches with piston cylinder excircle, making the piston cylinder is fixed steady in the body. The piston with two sealing rings move up and down on the piston cylinder inside, meantime that the piston cylinder lower end is designed with the guide hole. In this case, the body, piston cylinder and piston have two guide directions, making sure the piston moves freely and steady, thereby increase its cervice life, safety and reliability.



Guide Hole Makes it Move More Smoothly

In order to make the hydraulic control vavle up and down valve cavity have pressure difference, the piston must be bigger than disc, in this case that the piston of large sized valve will be very big, as a result that its moving will be not stable. In order to solve this problem, we design the guide hole at the end of piston cylinder in order to increase the disc damping properly, and then makes the disc move more smoothly, increase the valve reliability, as a result that reduce the breakdown happened. The guide hole is evenly distributed at the end of the piston cylinder, their quantity and size will depend on the valve size.

APPLICATION STANDARDS

Quality Assurance: ISO 90001
Design: Q/YYF-2000
Face to Face: Q/BYL-2002
Flanged Ends: GB/T 17241.6, GB/T 9113, ASME B16.1 / B16.5, DIN2532-2534, DIN2542-2544
Inspection and Test: GB/T 13927, API 598

SPECIFICATIONS

Nominal Pressure (MPa)		1.0	1.6	2.5
Test Pressure (MPa)	Shell Test	1.5	2.4	3.75
	Seat Test	1.1	1.76	2.75
	Air Test	0.6	0.6	0.6
Applicable Medium		Water, Water Similar Fliuds		
Working Temperature		≤80℃		

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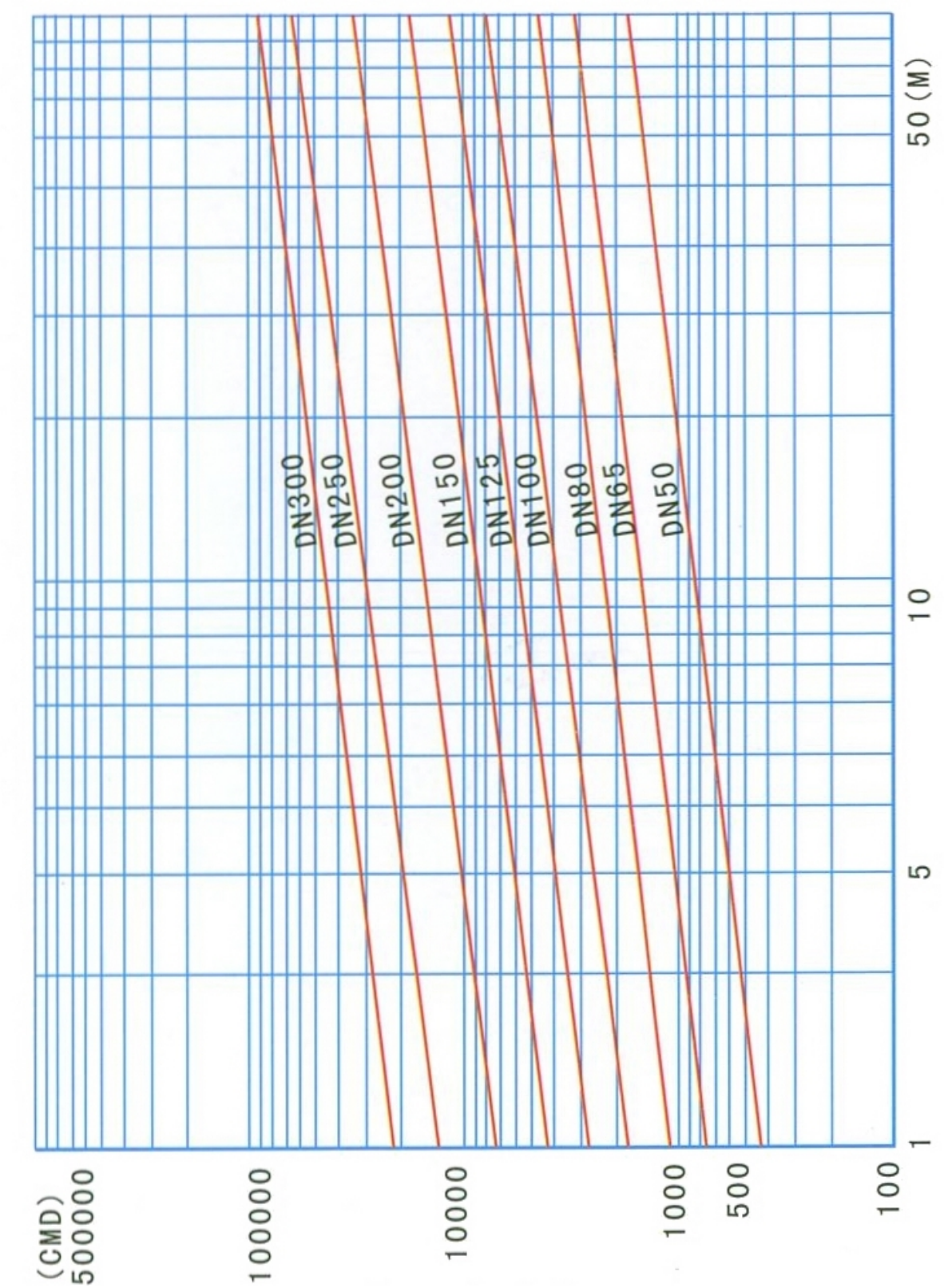
MAIN VALVE FLOW CURVE



Note:

1. CMD=m3/Day
2. M=meter
3. Test condition is on basis of valve full open

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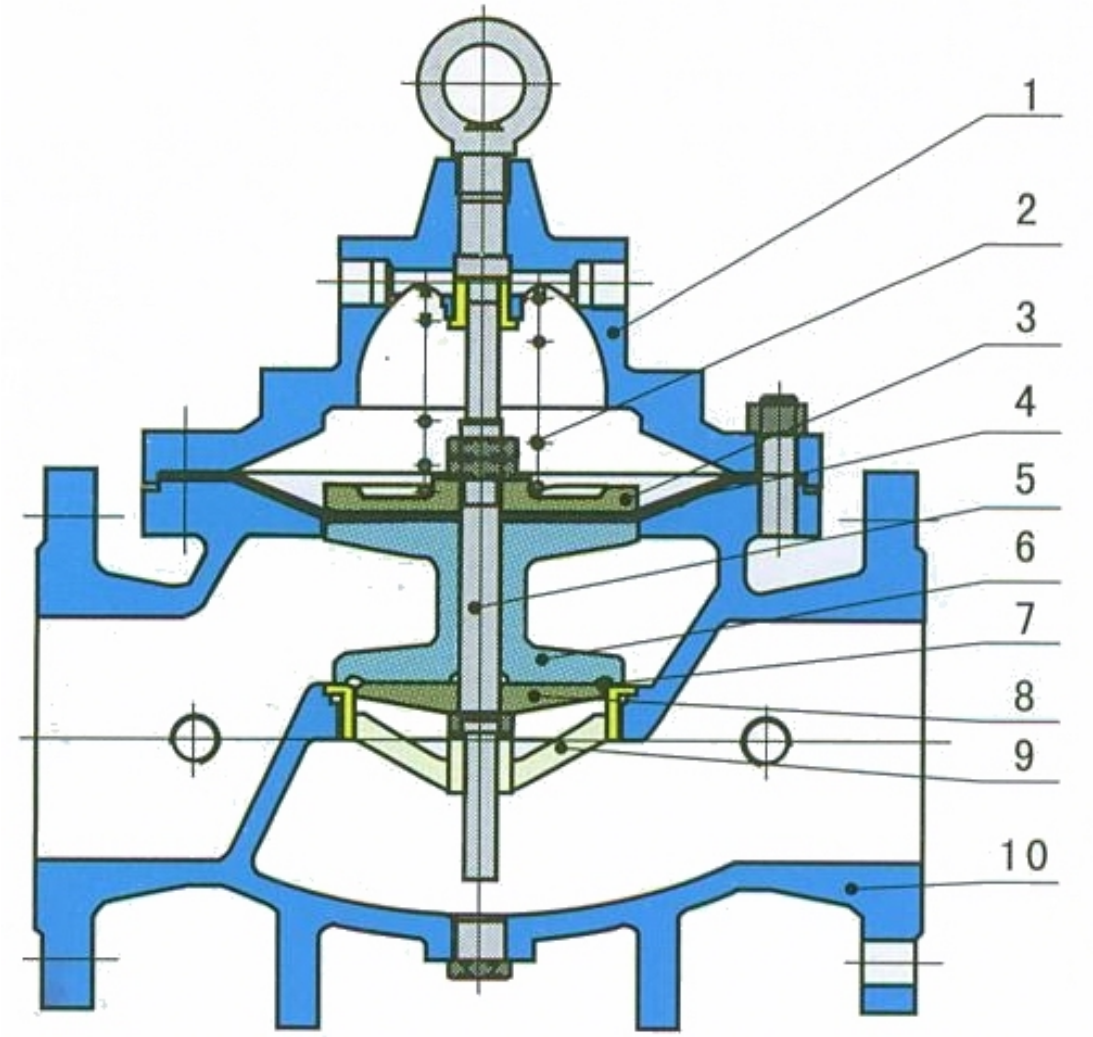
PRODUCT STRUCTURE



DIAPHRAGM TYPE HYDRAULIC CONTROL VALVE

MAIN PARTS AND MATERIALS

Item	Part	Material
1	Bonnet	Cast Iron., Ductile Iron, Carbon Steel, Stainless Steel
2	Spring	Spring Steel, Stainless Steel
3	Diaphragm Pressure Pad	Cast Iron., Ductile Iron, Carbon Steel, Stainless Steel
4	Diaphragm	NBR+Nylon, EPDM+Nylon
5	Stem	A182-F6a, A276 420
6	Disc	Cast Iron., Ductile Iron, Carbon Steel, Stainless Steel, Brass
7	O-ring	NBR, EPDM
8	O-ring Pressure Pad	Cast Iron., Ductile Iron, Carbon Steel, Stainless Steel
9	Seat	Copper Alloy, Stainless Steel
10	Body	Cast Iron., Ductile Iron, Carbon Steel, Stainless Steel

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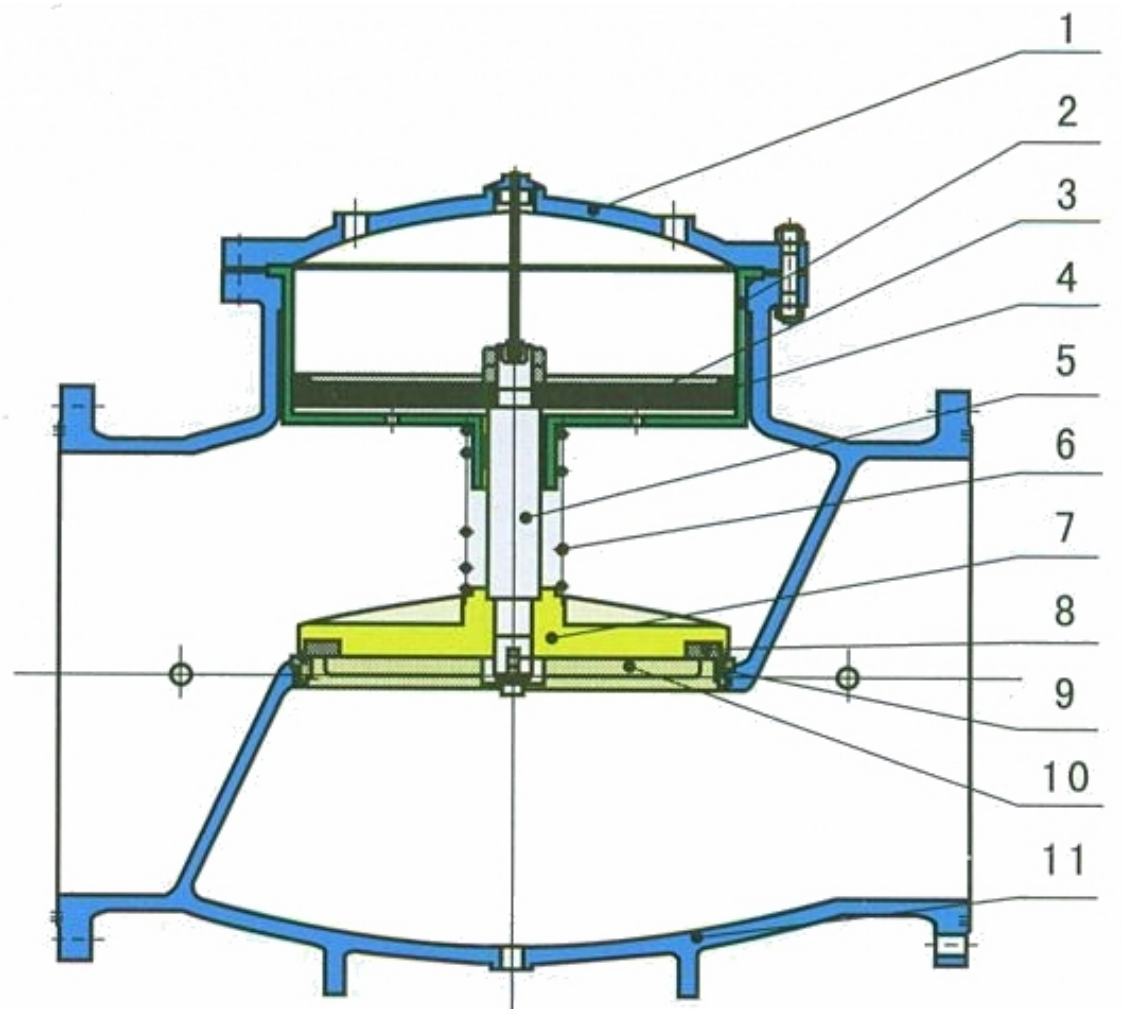

PISTON TYPE HYDRAULIC CONTROL VALVE

Item	Part	Material
1	Bonnet	Cast Iron., Ductile Iron, Carbon Steel, Stainless Steel
2	Cylinder Sleeve	Stainless Steel
3	Piston	Ductile Iron
4	Sealing Ring	NBR, EPDM
5	Stem	A182-F6a, A276 420
6	Spring	Spring Steel, Stainless Steel
7	Disc	Ductile Iron
8	Sealing Gasket	NBR, EPDM
9	Seat	Copper Alloy, Stainless Steel
10	O-ring Pressure Pad	Ductile Iron

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