水力控制阀
Water Power Controlled Valve

一、产品介绍 About the product

水力控制阀是一系列控制阀的总称，它较早生产于以色列、荷兰、丹麦、美国、加拿大等国，九十年代进入中国，本公司生产的水力控制阀系列，分别为遥控浮球阀、可调试减压阀、缓闭止回阀、流量控制阀、泄压/持压阀、电动阀、水泵控制阀、压差平衡阀、紧急关闭阀、定水位阀等产品。并广泛用于建筑、消防、水厂、暖通、市政、钢铁、电力、石油、化工等系统的管网。

水力控制阀它是利用水力控制原理，利用上、下阀腔的压力差控制阀盘的动力，再通过旁通管路和各种不同构造的导阀起不同功能产生系列阀。

Hydraulic control valve is a general title of one series control valve, was earlier made in Israel, Holland Demark, UAS, Canade etc. cuntries and let into China in 1900s. The hydraulic control valve series made in this Co.cover remote floating valve, adjustable pressure reducing valve, slowly closed check valve, pressuer discharge/sustaining valve, elctric valve, water pump control valve, pressuerdiffererntial balancing valve, emergent close valve, raing valve, water level fixing valve etc. products and are used for the pipe network of building, file–fighting, water works, warming, steel&iron, elctric power, petroleum, chemical industry ect. Systens.

This valve makes a series valve formed by such a way as utilizing the hydaulic control principle and the pressure differential between both upper and lower valve cavities tp control the disc's movement and acting as different functions via the by –pass pipe lines and the pilotvalves of various different struc–tures.

二、产品特点 product features

- 阀体采用全通道、流线型设计，流体阻力小、流量大；
- 阀体、阀盖内外采用环氧树脂粉体涂装，可防止阀体、阀盖的腐蚀；
- 采用国外可拆卸阀座的先进技术，结构巧妙，维修更换方便（无须整台阀门拆除）；
- 在管路中可任意立式或卧式安装，其可靠性不变；
- 阀体、阀盖、活塞缸连接处采用密封垫和密封环双重保护；
- 活塞缸采用导流孔，适当增加阻尼，使活塞动力更加平稳、灵活；
- 全不锈钢活塞缸、整体活塞、丁腈橡胶密封环，完全组合大大延长使用寿命。
- The body is full–channel and streamline designed,leaving small fluid resistance and a big flow;
- Both outside and inside of body and bonnet are coated with epoxy resin powder and can prevent them from corrosin;
- Use the advanced foreign know–how of removable seat ring, exquisite structure, easy repair and replacement(no need to remove the whole valve);
- Vertically or horizontally mountable in the pipeline with the reliability kept unchanged;
- A dual protection of sealing pad and sealing ring is used on the connections between body, bonnet and piston cylinder;
- For the piston cylinder, a flow–guide hole is set and approriate damp is addad with it so as to have the piston movement more stable and flexible;
- The complete combination of full stainless steel piston cylinder, ocerall piston and NBR seal ring gets the duration greatly estended.

三、主要零件材料Materials of main parts

序号 Type	隔膜式Diaphragm type		活塞式pition type	
	部件名称Part	选用材料Materials	部件名称Part	选用材料Materials
1	阀盖Bonnet	灰铸铁、球墨铸铁、碳钢、不锈钢、铜 Gray cast iron, ductile iron, carbon steel, stainless steel, brass	阀盖Bonnet	灰铸铁、球墨铸铁、碳钢、不锈钢、铜 Gray cast iron, ductile iron, carbon steel, stainless steel, brass
2	弹簧Spring	弹簧钢、不锈钢 Spring steel, stainless	缸套 Cylinder sleeve	不锈钢 Stainless
3	膜片压板 Pressboard of diaphragm	灰铸铁、球墨铸铁、碳钢、不锈钢、黄铜 Casting pig, Ductiloy, carbon steel, SS	活塞Piston	球墨铸铁Ductalloy
4	膜片Diaphragm	丁晴尼龙强化橡胶、三元乙丙尼龙强化橡胶 Acrylonitrile nylon reinforced rubber,ternary ethylenpropylene ropylene reinforced rubber	密封圈Seal ring	丁晴橡胶、三元乙丙橡胶 NBR,ternary ethylenpropylene rubber
5	阀杆Stem	不锈铁、不锈钢 Stainless iron, stainless	阀杆Stem	不锈铁、不锈钢 Stainless iron, stainless
6	阀瓣Disc	灰铸铁、球墨铸铁、碳钢、不锈钢、铜 Gray cast iron, ductile iron, carbon steel, stainless steel, brass	弹簧Spring	弹簧钢、不锈钢 Spring steel, stainless
7	O型密封圈O–ring	丁晴橡胶、三元乙丙橡胶 NBR,ternary ethylenpropylene rubber	阀瓣Disc	灰铸铁、球墨铸铁、碳钢、不锈钢、铜 Gray cast iron, ductile iron, carbon steel, stainless steel, brass
8	O型圈压板 Pressboard of O–ring	灰铸铁、球墨铸铁、碳钢、不锈钢、铜 Casting pig, Ductiloy, carbon steel, SS	密封垫Sealing pad	丁晴橡胶、三元乙丙橡胶 NBR,ternary ethylenpropylene rubber
9	阀座Seatring	铜合金、不锈钢CU–alloy, SS	阀座Seatring	铜合金、不锈钢CU–alloy, SS
10	阀体Body	灰铸铁、球墨铸铁、碳钢、不锈钢、铜 Gray cast iron, ductile iron, carbon steel, stainless steel, brass	密封压板 Seal pressboard	球墨铸铁、碳钢、铜、不锈钢 Casting pig, Ductiloy, carbon steel, SS
11			阀体Body	灰铸铁、球墨铸铁、碳钢、不锈钢、铜 Gray cast iron, ductile iron, carbon steel, stainless steel, brass

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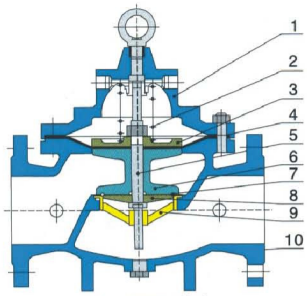
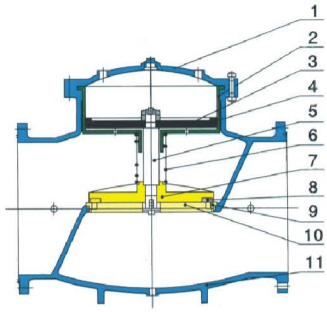
四、主要结构简图Brief figure of main structure



≤DN450隔膜式
≤DN450 Diaphragm type

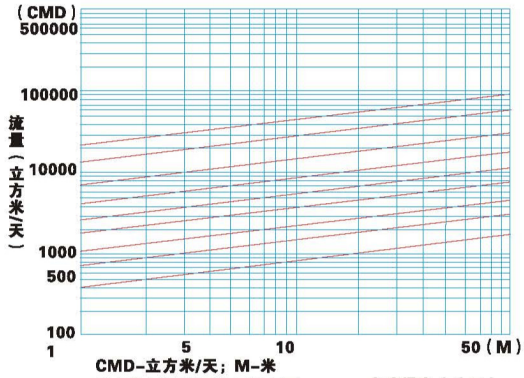


≥DN500活塞式
≥DN500 Piton type

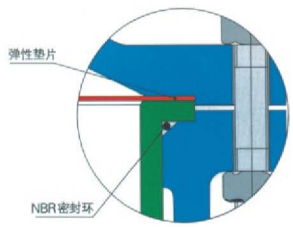
五、主要技术参数 Main technique number

公称压力PN(MPa) Nominal pressure		1.0	1.6	2.5
试验压力 Test pressure (Mpa)	壳体强度 Shell strength	1.5	2.4	3.75
	密封性能	1.1	1.76	2.75
公称通径DN（mm） NPSnominal diameter		隔膜式Diaphragm type:20–450 活塞式Piston type:500–800		
适用介质 Available media		水或类似于水的介质 Water or water–like media		
工作温度（℃） Working temperature		≤80		

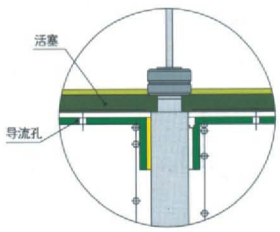
六、主阀流量曲线图Main valve's flow curve



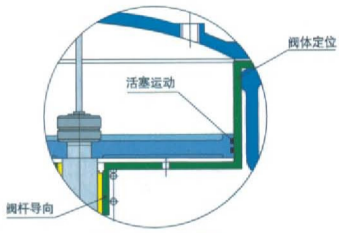
七、活塞式结构说明Structure of piston



密封垫和密封环双重密封



导流孔使运作更趋平稳



双重导向 运动平稳

阀盖与阀体的内凹槽通过活塞缸的外圆定位，确保阀盘、活塞、指示灯杆同心，使阀盘运动自如，从而提高主阀的灵敏度，即使在流量或压力波动不大的情况下，活塞式水力控制阀亦能可靠的工作。为了达到阀体、阀盖、活塞缸连接处无外漏，在活塞缸上面与阀盖连接面和活塞缸下面与阀体连接处分别采用弹性垫片和NBR密封环密封。

The internal beard on both bonnet and body is positioned via the outer circle of the piston to make sure of lisc piston and indicating rodoon–centricandthe discfreely moving so as to raise the sensibility of the main valve such thatthe pis–tontype hydraulic control valve can also raliably workeven if in the condition of a smail flow or pressure fluctuation. To get no out ward leak on the connections between the body bonnet and piston cylinder anelastic pad and NBR seal ring are used separately on the conection between the lower part of the piston and the body and between the upper part of the piston and the bonnet.

为了使阀盘上下产生压差，活塞的面积必须大于阀盘的面积，这样在大口径的阀门中活塞面积很大，运作平稳性较差。我们的活塞缸底部设计了导流孔结构，适当地增加阀盘运动的阻力，使阀盘的动力更趋于平稳，从而提高阀门的可靠性，减少故障的发生。导流孔均匀分部在活塞缸的底平面上，并视阀门口径的大小决定导流孔的数量和尺寸。

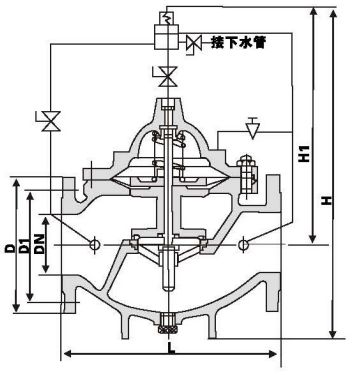
To produce a pressure differential between both upper and lower parts of the disc the piston's area must be bigger than that of the disc, however this makes the piston area of a big–aperture valve very big leaving a poor opera –tion stability, for this valveaflow–guide hole structure is designed on the piston bottom and an appropriate damp is added for the disc movement to have the disc more reliably move thus raising the reliability of it and reducefailure occurrence. The flow–guidenoles are evenly distribted onthe plant of the piston cylinder bottom and the hole quantity and size are depended on the size of the valve sperture.

阀体颈部有一定宽度的加工面，与不锈钢活塞缸外的外圆配合，使得活塞缸在阀体内平稳固定；带有两道密封圈的活塞在经过行磨的活塞缸内壁作上下运动，同时活塞缸下端设计成带铜衬套的导向孔，形成双重导向。即使口径再大的阀门也能确保其运动自如、平稳，从而提高使用寿命和安全可靠性。

A processed face of a certain width on the body s neck is matched with the outer circle of the stainless steel piston cylinder to make the cylinder stably fixed inside of the bodythe piston with dual seal rings moves up and down along with the ground internal wall of the cylinder and the lower part of the piston is design to guide hole with a steel bush forming a dual direction guifance and making sure of the valve moving freely and stably even if it is of a much more aperture thus raisingthe duration safety an relia–bility.

500X泄压/持压阀
500X Pressure Discharge/sustain Valve

一、结构简图 Brief figure of structure

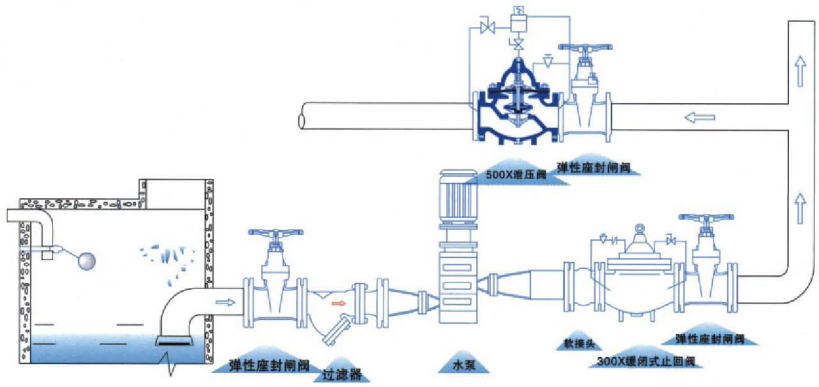


二、结构及用途Structure and purpose

该阀主要用于管路系统中，以防止管路系统超压或维持管路的压力，当泵关闭后还可以减少水锤冲击，也可用于大型供水系统的水锤装置，并且阀门控制系统有进口处装有一个自清洗滤网，利用流体特性，使比重较大、直径较大的悬浮颗粒不会进入控制系统，确保主阀的上游供水压力在某一设定值上使系统循环畅通无阻，该阀起闭灵敏、安全可靠、动作平稳，使用寿命长。

Using a pipeline system to prevent it from suripassing pressure or keep the presure of it, to reduce the water hammer's shock after the pump is closed and also used as a water hammer remover for a large water supply system. On the inlet of the valve's control system a self cleaning filter screen is placed, which, by means of the bigger specific gravity of the fluid, stops the suspension grains of a bigger specific gravity and diameter going into the system to ensure the main valve's water supply pressure at the upstream at a set value to get the system smoothly circulated without any resistance. This valve features sensitive open-close,safety, reliability, stable motion and long duration.

三、安装示意图Out-form and connection dimensions



四、主要外形及连接尺寸Schematic diagram of installation

公称通径 Dn (mm)		20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500
L		180	180	180	203	205	230	245	295	325	375	410	470	519	585	635	675	715
PN10	D	105	115	135	145	160	180	195	215	245	280	335	390	440	500	565	615	670
	D1	75	85	100	110	125	145	160	180	210	240	295	350	400	460	515	565	620
PN16	D	105	115	135	145	160	180	195	215	245	280	335	405	460	520	580	640	705
	D1	75	85	100	110	125	145	160	180	210	240	295	355	410	470	525	585	650
PN25	D	105	110	135	145	160	180	195	230	270	300	360	425	485	550	610	660	730
	D1	75	85	100	110	125	145	160	190	220	250	310	370	430	490	550	600	660
H		550	550	550	610	610	625	645	750	808	865	1135	1185	1325	1385	1445	1490	1550
H1		460	460	460	516	516	520	538	596	655	710	805	855	955	990	1030	1100	1160

注：安装示意图中弹性座封闸阀或蝶阀任选，建议≥DN350蝶阀
Note:Either elastic seat ring sealed gate valve or butterfly valve can be selected in the schematic diagram of installation. Recomended to select the butterfly valve in case of≥ DN350