



河南泉舜流体控制科技有限公司
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管力阀

TUBE FORCE CONTROL VALVE



中国·郑州
ZHENGZHOU, CHINA

泉舜流控 用心智造
Quanshun Flow Control Wise manufacturing with mind



企业官网
Official Web



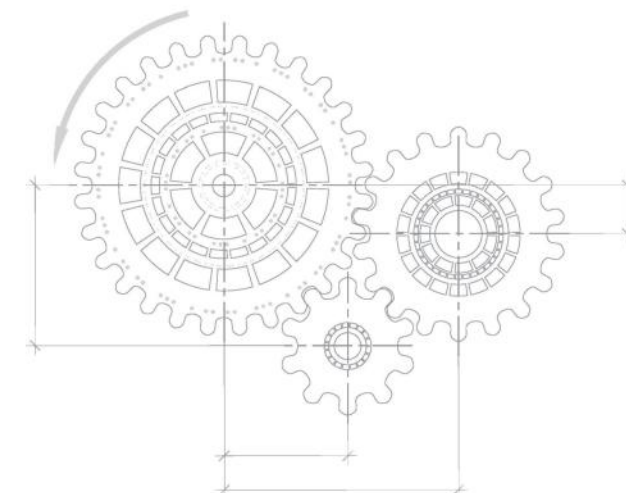
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Directory 目录

- 01 / 关于泉舜流控
About us
- 03 / 产品概述
Product description
- 04 / 型号意义说明
How to order
- 05 / 工作原理
Working principle
- 07 / 技术特点
Benefits
- 09 / 主要结构及零部件材料
Main structure and parts material
- 11 / 设计制造标准
Design standard
- 12 / 技术性能规范
Technical performance specification
- 13 / 阀门结构原理与外形尺寸
Valve structure principle and dimensions
- 17 / 售后服务及质量保证
After-sales service and quality assurance
- 19 / 阀门应用
Valve application
- 21 / 防伪查询
Anti-counterfeiting



DIRECTORY

About us 关于泉舜流控

泉心无限 实业无疆

The wider our mindset is, the further our product goes

Quanshun flow Control Wise manufacturing with mind

泉舜流控
用心智造

“

河南泉舜流体控制科技有限公司隶属泉舜集团，是一家集智能工业阀门研发、设计、铸造、制造、销售及服务于一体的全产业链高新技术企业。省级企业技术中心、郑州高新区固定资产投资先进企业、经济突出贡献和高成长型国家高新技术企业，《偏心半球阀》、《城镇供热用双向金属硬密封蝶阀》、《保温夹套阀门》、《氧化铝专用料浆阀》、《V型球阀》等五项国家及行业标准核心编制单位，获得国家实用新型专利50余项，“泉舜”牌阀门荣获省优质名牌产品、节能产品、重点工业产品称号。

公司拥有A1级特种设备制造许可证（压力管道元件）、ISO质保体系认证、ISO15848低泄漏认证、CE、SIL安全认证、API 607、API 6FA防火认证、两化融合管理体系评定、知识产权管理体系认证、AAA级信用资质等多项国内外通行标准认证。拥有先进的三维建模分析、研发设计中心，加工中心、多功能阀门性能试验装置等大批精良机械加工和阀门工艺质量保障检测设备。

公司在阀门以国代进和节能减排方面进行重点投入，相继研发了双向金属密封旋球阀、双向全金属硬密封蝶阀、快切盲板、抗结疤半球阀、针型调节阀、熔盐阀、水煤浆放料阀、管力阀等一大批具有自主知识产权的阀门新品，受到了近二百家国内外知名企业和重点工程项目的青睐。自主研发的第五代减温减压装置荣获国家级“节能减排”重点资金扶持推广项目，“双向金属密封旋球阀”获河南省科学技术成果，先后有5个系列产品被河南省科技厅认定为高新技术产品。

公司与多家国内知名设计院、高等院校和特大型企业联姻，为客户提供流控设备非标产品研发及制造等技术方案。会拼敢赢的泉舜人正在全力铸就百年企业品牌，以卓越的产品质量和完美的服务来回馈社会各界对泉舜流控的厚爱和支持！

Henan Quanshun flow Control Science & Technology Co., Ltd. is affiliated to Quanshun Group. It is a full-industry chain high-tech enterprise at nation level, which integrates R&D, design, casting, manufacturing, sales and service of smart industrial valves into the whole. It works as Provincial Enterprises Technical Center, Zhengzhou High-tech Zone Fixed Assets Investment Advanced Enterprise, National High-tech Technology Enterprise with outstanding economic contribution and high-growth, and National and Industrial Standard Core Compiling and Developing Company for 5 product items named as ‘Eccentric Semi-ball Valve’, ‘Town Heating Bi-directional Metal Rigidly Sealed Butterfly Valve’, ‘Heat Preservation Jacketed Valve’, ‘Aluminium Oxide Dedicated Material Slurry Valve’, ‘V-type Ball Valve’, and has obtained over 40 Nation Patents for New Utility Models, and has ‘Quanshun’ brand valves entitled as provincial premium brand products, energy-saving products, and key industrial products.

Company has established comprehensive quality assurance system and after-sales service system and achieved five-star after-sales service system accreditation with qualification listed as follows: Special-type Equipment Manufacturing Permit (Pressure Piping Components) Grade A1 Qualification, ISO9001, ISO14001, ISO45001, ISO15848, CE, AAA Grade Credit Qualification, and other various standard accreditation recognized domestically and internationally. It also owns a large quantity of excellent machining equipment and specification assurance testing equipment, such as advanced three-dimensional modeling analysis, R&D design center, processing center, digital control machine, large-scale vertical vehicle, large-scale boring machine, grinding machine, multifunctional valve performance test devices.

As company puts great emphasis on areas in imported products replacement, energy conservation and emission reduction, it has successively developed Bi-directional Metal Sealed Rotary Ball Valve, Bi-directional all-metal hard seal butterfly valve, Quick-switch Blind Flange Valve, Scab-resistant Half Ball Valve, Needle-style Control Valve, Fused Salt Valve, Coal Water Slurry (CWS) Dump Valve, and other new valve products holding independent intellectual properties, which are favoured by around two hundred of national and international enterprises and key engineering projects as well. Independently developed No. 5 generation Temperature and Pressure Reduced Devices have obtained national level ‘Energy Conservation and Emission Reduction’ funded and promoted key project, and Bi-directional Metal Sealed Rotary Ball Valve has won an achievement of Science and Technology of Henan Province, and also there are 5 series of products respectively recognized as High-tech Products by Department of Science and Technology of Henan Province.

Company has united many universities and colleges of famous domestic Design Institution and extra-large enterprises so as to be able to develop R&D and manufacturing related technical proposals of non-standard flow control equipment for customers. Hard-working and daring to win Quanshun people are now striving to cast century-old enterprise brand and heavily return all sectors of society with excellent product quality and delicate service for your great love and strong support.

Product description

产品概述

管力阀是一种新式水泵控制阀，是微阻缓闭止回阀、液控止回蝶阀、多功能水力控制阀的换代产品，它兼具电动闸阀、电动蝶阀以及止回阀的功能，通过两段式关闭的方式，能更好地消除水锤危害，保护水泵及管网系统安全。

其可通过辅助部件，实时反馈阀门在线运行情况，对远距离输送工程，实现自动控制与远程检测功能。管力阀主要用于自动化给排水泵站的离心泵、混流泵和轴流泵出水管道，设计有活塞式与膜片式两种控制装置，其在产品类型上，有普通型、回水低压型、污水型等多种规格。

适用于清水、原水类介质和污水、渣浆水类介质，其结构紧凑、体积小、重量轻，特别适用于大口径的管路系统，可广泛应用于电力、环保、冶金、石化、水处理、市政、食品等行业供排水系统、污水泵房、化工流体等输送系统，是当前国内外结构最新颖、性能最先进、运行最可靠的泵站新型控制设备。

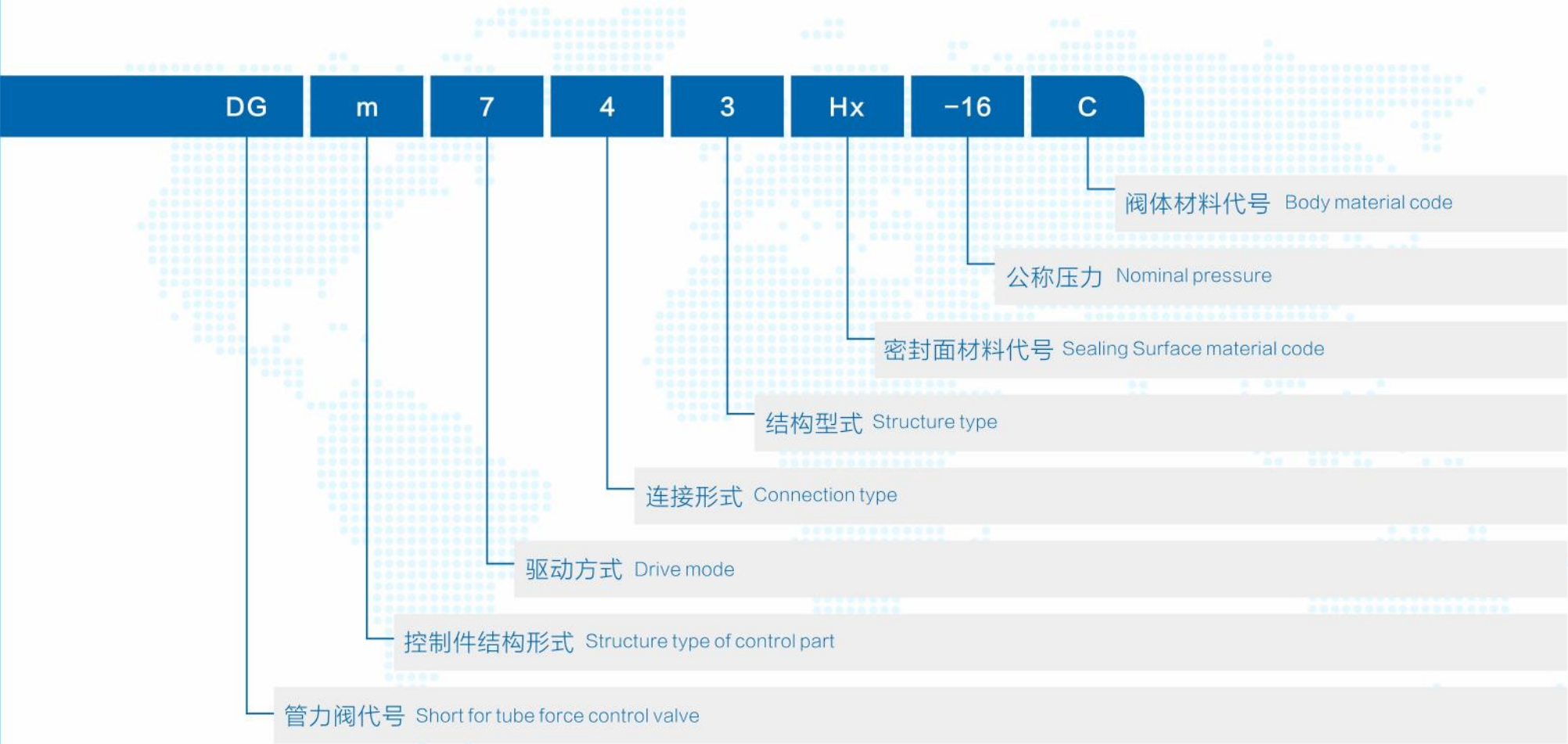
The tube force control valve is a new type of water pump control valve. It is the replacement product of micro-resistance slow-closing check valve, hydraulic control check butterfly valve and multi-functional hydraulic control valve. It has the functions of electric gate valve, electric butterfly valve and check valve. By increasing the quick closing time, the water hammer hazard can be better eliminated, and the safety of the water pump and the pipe network system can be protected.

It can feed back the online operation of valve in real time through auxiliary parts, and realize automatic control and remote detection function for distance conveying engineering. The pipe force valve is mainly used for the centrifugal pump, mixed flow pump and axial flow pump outlet pipe of the automatic water supply and drainage pump station. It is designed with two kinds of control devices: live cold type and diaphragm type. In terms of product types, there are common type, low pressure type of backwater, sewage type and other specifications.

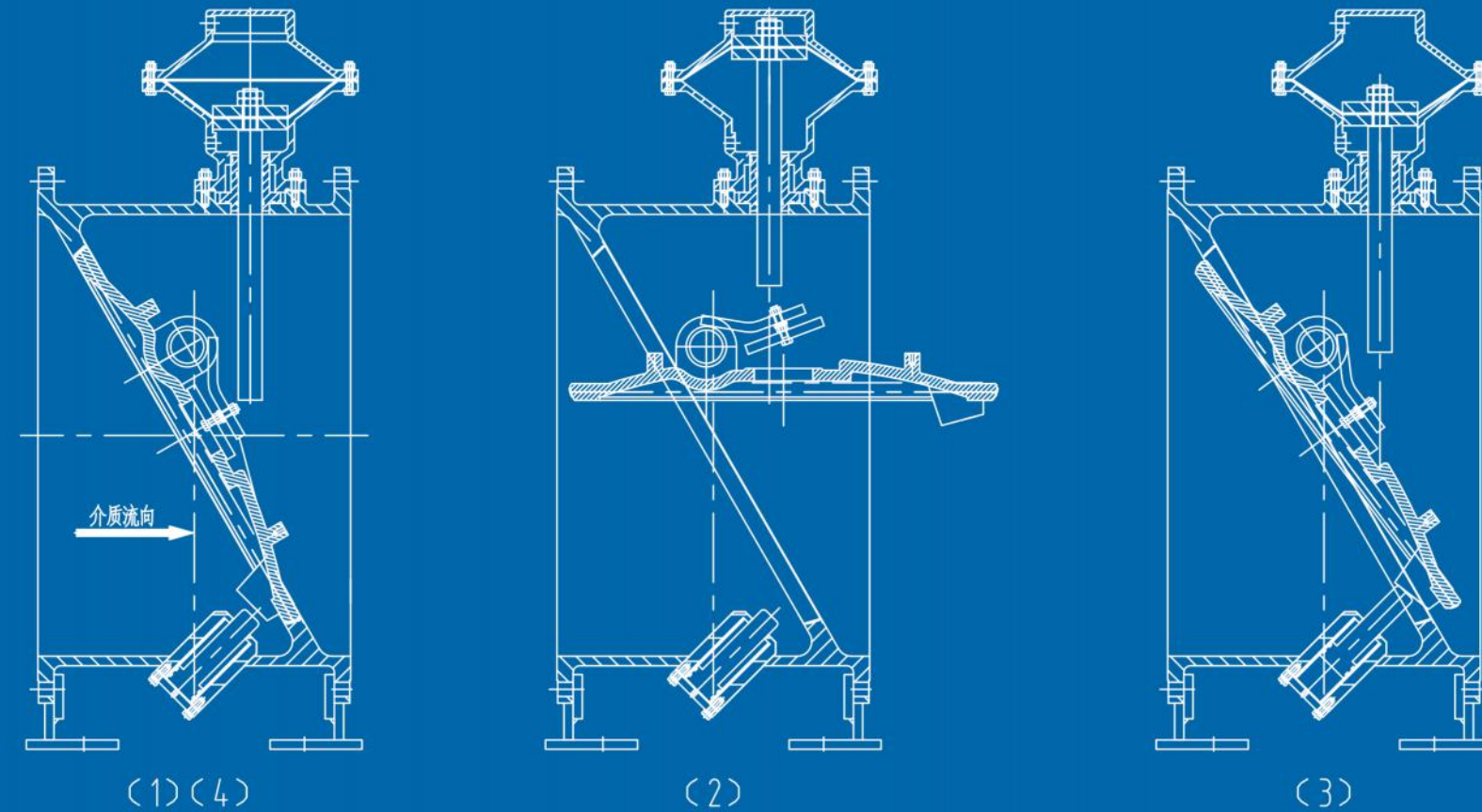
It is applicable for clean water, raw water medium and sewage, slurry water medium, with compact structure, small volume and light weight, especially suitable for large-diameter pipeline system, and can be widely used in electric power, environmental protection, metallurgy, petrochemical, water treatment , municipal, food and other industries water supply and drainage system, sewage pump room, chemical fluid and other transportation systems, is the most novel structure, the most advanced performance, the most reliable operation of the new control equipment for pumping stations at home and abroad.

How to order

型号意义说明



Working principle 工作原理



▲ 开阀 Valve opening

初始状态如图（1）示，当水泵启动，水压通过进口带微孔止回阀的旁通管，进入控制腔下腔，大阀板在进水口端水力作用下，连同小阀板一同缓慢开启，如图（2）示。开阀速度可根据工况要求，调节旁通调节阀，以达到最佳效果。

when the pump starting work (fig 1), the water will flow through bypass pipewith check valve ,then flow into control room. Large disc as well as small disc,will open slowlyin the function of water from the inlet (as the fig2). To meet the requirement of the workingcondition ,the speed of valve opening can be controlled by adjusting the bypass control valve.

▲ 关阀 Valve closing

停泵瞬间，阀门进口流量及压力突然降低，大阀板在重力作用下迅速关闭，截断大部门介质，消减水锤峰值，如图（3）示；但是由于缓闭活塞杆处于顶端位置，使阀瓣不能全部关闭，还剩有一部分面积使水通过，减弱了水锤的压力。大阀板压在活塞杆上，而活塞后腔的水阻碍活塞退回，也能缓冲大阀板关闭，这股水只能通过针型调节阀控制，缓慢流回阀体，使大阀板缓慢关闭。同时一部分水通过旁通管道进入到控制腔上腔，推动控制顶杆，向下移动，关闭小阀板至完全切断介质，如图（4）所示。关阀的时间，可通过旁通阀门调节，使水锤压力在可控范围内。

As the reduction of flow rate and pressure from the valve inlet, the large disc willclose quickly in the self gravity when the pump stop work. The water is cut off, small disc willautomatic open as spring. Afterword ,most of back flow water will be remove ,and the waterhammer eliminate ,as the fig 3 stated , Meanwhile ,some of the flow back water will enter intothe upper room by bypass line ,and push the control stem move downward ,small valve stem isclosed ,and the water is fully cut off (as fig4). The time of closing valve can be controlled byadjusting the bypass valve,so the peak value of water hammer is controlled in some range.



Benefits 技术特点

01

有截止、止回、消除水锤等功能，一阀顶多阀，节省设备总投资；
With function of cutting off water, stopping water flow back and eliminating water hammer,the tube forced contro"alve take many valve's place ,and save the cost of equipment.

02

采用控制装置置顶的创新性结构，外形小、结构简单、运行可靠；
Innovative structure , simple structure ,small volume ,and reliable running performance .

03

阀门的启闭由输送的介质驱动，与水泵自动联锁，无需人员与外力操作，使用便捷；
Due to driving by medium and connecting with pump aotomatically , the valve reduce the cost ofoperational people greatly.

04

缓开启泵，启泵后该阀进口压力要达到预定值后，阀门才开启，可减小启泵电流，确保电机和电控系统安全；
Open the pump slowly:Only the inlet pressure up to the presetting value after opening the pump ,the valve can beopened . The current of starting pump is reduced to improve the security of motor and electriccontrol system.

05

停泵时先快关后缓闭，有效消除水锤，保证系统安全；
The valve opens quickly and closing slowly , which eliminating the water hammer and grantee the system safety.

06

启闭件为斜置蝶板式，水流平顺，压力损失小；
The valve opens quickly and closing slowly , which eliminating the water hammer and grantee the system safety.

07

采用软硬双重密封或全金属硬密封结构，密封副摩擦力矩小；斜置偏心结构密封副，减少了密封圈滑移距离，降低了摩擦力矩，达到了瞬间离合效果，并且具有防泥沙和压力自动补偿功能；
As metal - soft sealing or metal sealing structure is adopt , torque of friction will be greatlyreduced; eccentric and oblique sealing pair, make the travel of closing valve becoming shorter ,reduce the movement of distance sealing ring ,torque of friction become lower . So the valvecan be opened in a moment . Further more , sand- proof function and pressure automatiocompensation is also designed .

08

无外接动力和元器件，故障少。关键零件均采用优质材料，基本无需维护，外控通道中过滤器具有自动冲洗功能；
Less fault point without external power . The key parts of the valve is made by high qualitymaterial, without any maintain. The filter in external line has self washing function.

09

采用蝶式结构，体积小、重量轻，占用空间小，安装成本低。无电液控制系统，节能减排；
Because of butterfly structure ,the valve has light weight and small volume ,and saves the construction cost . Without hydraulic control unit ,the cost is reduced and performance isincreased . Due to less power is consumed ,it realizes energy - saving goal .

10

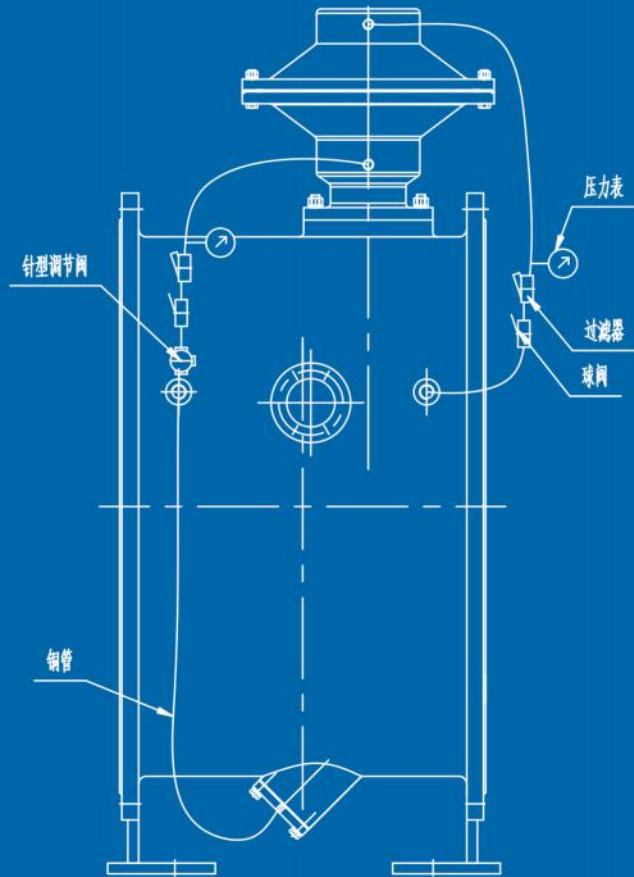
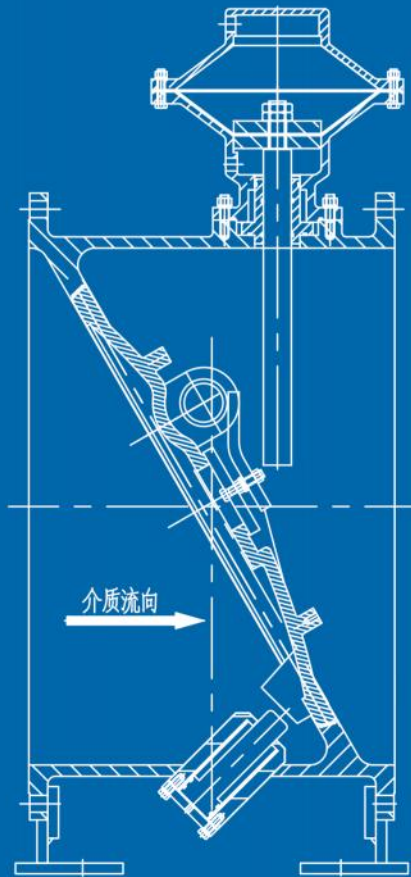
产品有膜片式与活塞式，适用于各类工况与介质。外控件中的特殊过滤器能有效过滤污水中的杂质颗粒，保证进入膜片腔或活塞缸内介质为清洁液体，该过滤装置具有自冲洗功能，其下部有排渣装置，可定期手动排渣；
There are two types , diaphragm type and piston type ,widely use in all kinds of medium .Tograntee the medium is clean before entering into diaphragm ,a filer have to be installed toremove the particles of the sewage . The filter have self washing function .Because a specialunit is designed below the filter, slag discharging will be done periodically .

11

调节型可根据工况需求，采用手动或电动控制开度进行流量调节。
To meet the requirement of different operating conditions , control type is optional. Flow rate ofthe valve can be adjusted by manual or electric actuator.



Main structure and parts material
主要结构及零部件材料

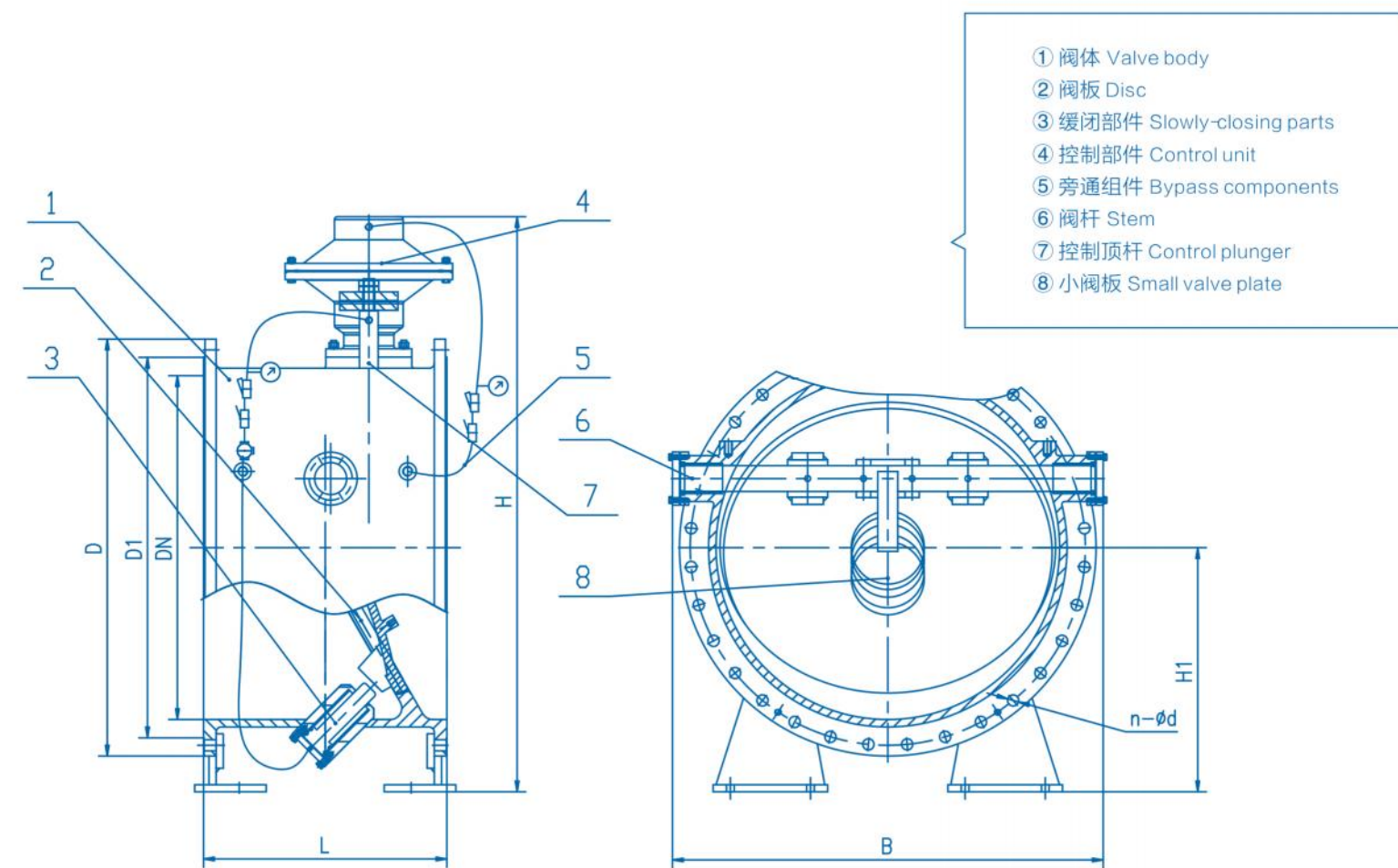


名称 Name		常规材质 General material
阀杆 Valve stem		20Cr13/304/316
膜片 Diaphragm		NBR/EPDM
活塞 Piston		20Cr13/304/316
阀体密封面 Sealing surface of valve body		D507 Mo(H) /STL(Y)
阀板密封面 Sealing	双重密封 Dual sealing	D577 (H) +NBR/EPDM (X)
		STL(Y)+NBR /EPDM(X)
	硬密封 Metal Sealing	D577 (H) /A102
		STL(Y)/A102

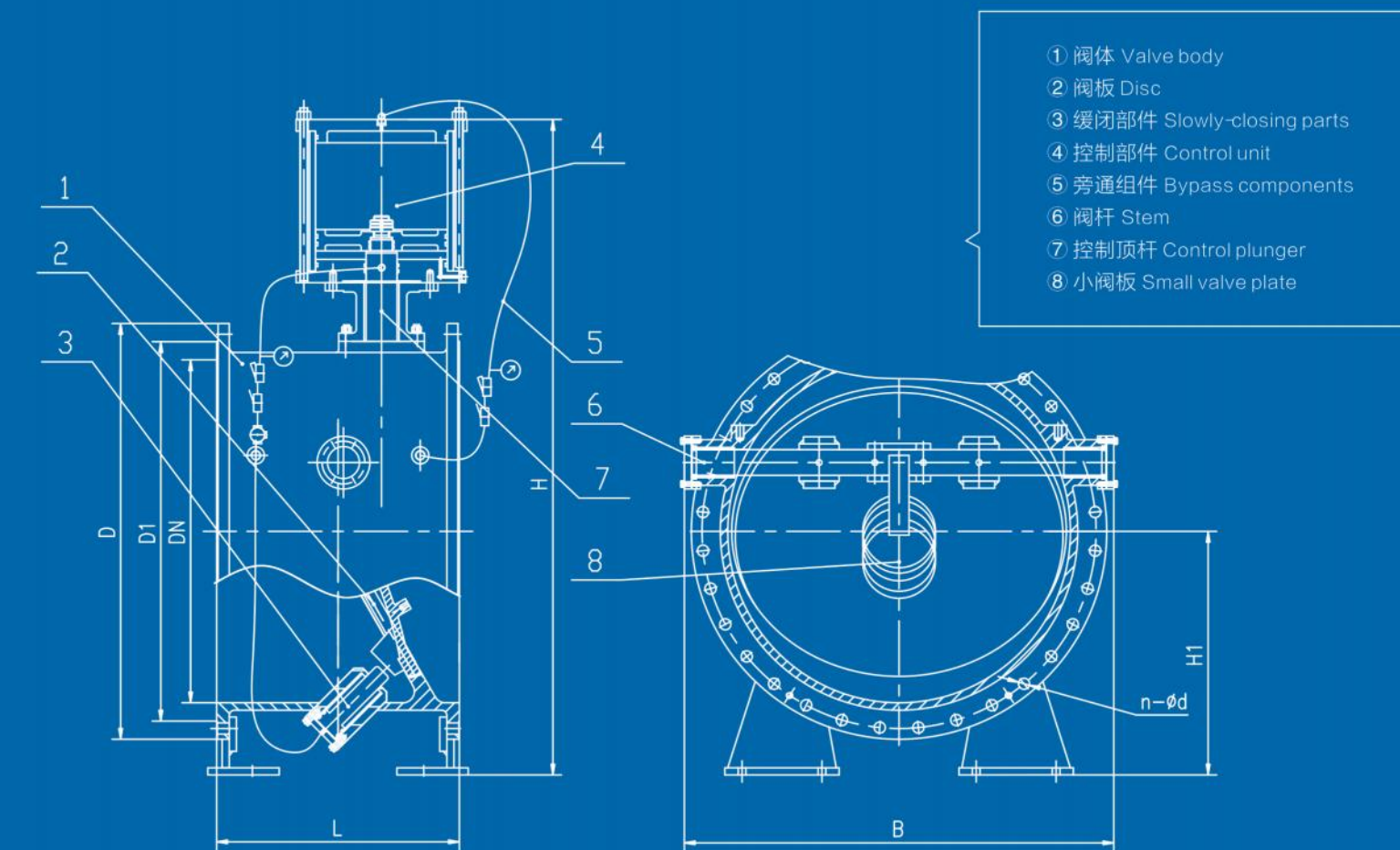
标准内容 Item	标准号 Standard Code
法兰标准 Flange	GB/T9124
	GB/T17241.6
设计标准 Design	CJ/T 379-2011
结构长度标准 Face to face dimension	GB/T12221
压力试验标准 Testing	GB/T13927

序号 NO.	项目 Item	参数 Value	备注 Remarks
1	公称压力 PN Pressure nominal	6-63	—
2	壳体试验压力 (Mpa) Shell test pressure	1.5PN	—
3	密封试验压力 (Mpa) Sealing test pressure	1.1PN	—
4	最低动作压力 (Mpa) Min working pressure	0.05	开阀与关阀动作 Valve open or close
5	设计流速 (m/s) Design flow rate	1.5-3.0	—
6	缓开时间 (s) Slowly open time	3-120	可调 Adjustable
7	缓闭时间 (s) Slowly close time	3-120	可调 Adjustable
8	快关时间 (s) Quickly close time	1-2	—
9	水锤峰值 Water hammer peak	≤1.5倍水泵出口额定压力 Less than 1.5 times of pump outlet rated presure	
10	水泵最高反转速度 Max pump reversal speed	≤1.2倍水泵额定转速 Less than 1.2 times of pump rated speed	

Valve structure principle and dimensions 阀门结构原理与外形尺寸



DGm745膜片式管阀结构原理图



DGh745活塞式管阀结构原理图

DN	L	H	H1	B	PN6			PN10			重量 (kg)
					D	D1	N-d	D	D1	N-d	
150	--	--	--	--	--	--	--	--	--	--	--
200	292	520	--	355	320	280	8-18	340	295	8-22	135
250	320	580	--	420	375	335	12-18	395	350	12-22	160
300	356	710	--	490	440	395	12-22	445	400	12-22	226
350	380	770	--	560	490	445	12-22	505	460	16-22	335
400	406	830	--	625	540	495	16-22	565	515	16-26	420
450	432	870	--	685	595	550	16-22	615	565	20-26	520
500	457	930	--	720	645	600	20-22	670	620	20-26	572
600	508	1090	--	910	755	705	20-26	780	725	20-30	815
700	610	1260	520	1050	860	810	24-26	895	840	21-30	996
800	660	1440	600	1170	975	920	24-30	1015	950	24-33	1650
900	711	1535	650	1315	1075	1020	24-30	1115	1050	28-33	1856
1000	811	1750	700	1460	1175	1120	28-30	1230	1160	28-36	2110
1200	850	1960	800	1580	1405	1340	32-33	1455	1380	32-39	3050
1400	950	2250	900	1900	1630	1560	36-36	1675	1590	36-42	3200
1600	1100	2500	1020	2100	1830	1760	40-36	1915	1820	40-48	6100
1800	1200	2820	1150	2400	2045	1970	44-39	2115	2020	44-48	7150
2000	1300	3150	1250	2750	2265	2180	48-42	2325	2230	48-48	9280
2200	1450	3500	1360	3000	2475	2390	52-42	2560	2440	52-62	12000
2400	1550	3800	1480	3200	1685	2600	56-42	2760	2650	56-66	15300
2600	1700	4180	1600	3500	2905	3810	60-48	2960	2850	60-48	18500
2800	1850	4550	1700	3800	3115	3020	64-48	3180	3070	64-48	22800
3000	2000	4900	1850	4100	3315	3220	68-48	3400	3290	68-48	26800

DN	L	H	H1	B	PN16			PN25			重量 (kg)
					D	D1	N-d	D	D1	N-d	
150	--	--	--	--	--	--	--	--	--	--	--
200	292	520	--	355	340	295	12-22	360	310	12-26	155
250	320	580	--	420	405	355	12-26	425	370	12-30	185
300	356	710	--	490	460	410	12-26	485	430	16-30	252
350	380	770	--	560	520	470	16-26	555	490	16-33	366
400	406	830	--	625	580	525	16-30	620	550	16-36	455
450	432	870	--	685	640	585	20-30	670	600	20-36	560
500	457	930	--	720	715	650	20-33	730	660	20-36	640
600	508	1090	--	910	840	770	20-36	845	770	20-39	852
700	610	1260	520	1050	910	840	24-36	960	875	24-42	1205
800	660	1440	600	1170	1025	950	24-39	1085	990	24-48	1780
900	711	1535	650	1315	1125	1050	28-39	1185	1090	28-48	2005
1000	811	1750	700	1460	1255	1170	28-42	1320	1210	28-55	2200
1200	850	1960	800	1580	1485	1390	32-48	1530	1420	32-55	3200
1400	950	2250	900	1900	1685	1590	36-48	1755	1640	36-60	3305
1600	1100	2500	1020	2100	1930	1820	40-55	1975	1860	40-60	6200
1800	1200	2820	1150	2400	2130	2020	44-56	2195	2070	44-68	7350
2000	1300	3150	1250	2750	2345	2230	48-60	2415	2280	48-68	9510

DN	L	H	H1	B	PN40			PN63			重量 (kg)
					D	D1	N-d	D	D1	N-d	
150	--	--	--	--	--	--	--	--	--	--	--
200	292	520	--	355	375	320	12-30	415	345	12-36	175
250	320	580	--	420	450	385	12-33	470	400	12-36	195
300	356	710	--	490	515	450	16-33	530	460	16-36	272
350	380	770	--	560	580	510	16-36	600	525	16-39	386
400	406	830	--	625	660	585	16-39	670	585	16-42	475
450	432	870	--	685	685	610	20-39	--	--	--	580
500	457	930	--	720	755	670	20-42	--	--	--	630
600	508	1090	--	910	890	795	20-48	--	--	--	882
700	610	1260	520	1050	995	900	24-48	--	--	--	1305
800	660	1440	600	1170	1140	1030	24-56	--	--	--	1860
900	711	1535	650	1315	1250	1140	28-56	--	--	--	2105
1000	811	1750	700	1460	1360	1250	28-56	--	--	--	2350

After-sales service and quality assurance 售后服务及质量保证

河南泉舜流体控制科技有限公司拥有数十年阀门售后服务经验，公司拥有专业的售后服务团队及完善的售服系统，质保部专业致力于为用户提供：产品试运转、故障诊断、零部件更换、现场抢修、返厂维修、技术培训等全方位服务。

售后服务实行档案管理，对每一用户、每台阀门建立档案记录、泉舜服务数据库进行统一管理。

We has decades of after-sales service experience in valves, and has a professional after-sales service team and sound sales and service system with Quality Guarantee Department dedicated to provide comprehensive services to users in aspects of product test run, breakdown diagnosis, change of components and parts, on-site emergence repair, depot repair, and technical training.

After-sales service has file management in place with file records established for each user and each valve, and uses Quanshun Service Database for central management.

我公司售后服务部为用户提供全天24小时售后服务，对用户在实际使用中遇到的有关产品问题，随时给予答复。

24小时服务电话：13937142770、0371-55693186。

24-hour after-sales call service is provided by our After-sales Service Department to users with timely reply given to problems come across in the actual use.

24-hour service number: 13937142770、0371-55693186.

1、质量保证期为设备货到之日起18个月或安装调试运行12个月，先到为准。质保期内如发生质量问题，我方在2小时内给予答复，提出解决方案；若因用户使用不当出现故障时，我公司仍将积极配合为用户排除故障、修复或更换零件。

2、质保期满后，我方长期提供该设备的备用配件及维护指导，仍将为用户做好服务，在接到用户通知，及时派技术人员到达现场排除故障、修复或更换零件，为用户排忧解难。

3、积极协助用户或设计单位进行产品选型，及时掌握最新阀门动态，在用户水、电、气等外围条件具备的情况下，我公司负责对产品进行现场调试，直至设备达到最佳使用状态。

4、质保期内，根据用户需要，我公司将派技术人员免费到现场培训用户操作人员实地操作及维护保养知识，直到其能熟练操作。

5、产品提供终身免费技术支持及指导维护方案，确保设备的长期正常运转。

1. Quality Guarantee expires 18months after delivery date of equipment, or 12 months after installation and commissioning, whichever comes first. If quality problem occurred within Quality Guarantee Period, our party would give reply within 2 hours and raise up solutions. If problem occurred due to improper operation by users, our company would still actively cooperate with user to rule out breakdowns, repair or change parts;

2. After Quality Guarantee is due, our company will provide spare parts of this equipment and maintenance guidance in the long term with service provided. Upon receipt of notification of user, we will assign technician on site and help to rule out breakdowns, repair or exchange parts so as to solve problems for users;

3. Positively assist users or design organization for product type selection and keep them posted of the most updated valves trend. Under the availability of water, electricity, gas and other surrounding conditions, our company will be responsible for product commissioning on site till reaching the optimum running status;

4. Within Quality Guarantee, based on the needs of users, our company will designate technicians to be on site and give operators on-site training and maintenance knowledge for free in order to reach their proficiency in operations;

5. Technical support and guide on maintenance plan is provided in the life cycle of product, and free of charge in order to ensure equipment long-term functioning.

Valve Application 阀门应用



适用工况：广泛用于电力、冶金、石化、市政水利、供水工程、环保等行业循环水、供水系统加压输出水泵的出口处，特别适用于大口径管路系统。

Widely used in electric power, metallurgy, petrochemical, municipal water conservancy, water supply engineering, environmental protection and other industries of circulating water, water supply system pressure output pump outlet, especially suitable for large diameter pipeline system



应用案例
Applications

Anti-counterfeiting 防伪查询

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河南泉舜流体控制科技有限公司生产的管阀，每台阀门都有一个唯一的身份证。从原材料到成品，建立有强大的数据库查询系统，可追溯性强。

Every QUANSHUN brand valve has a special identity card No. Large database is established from raw material to finished products, every detail information can be found, so it has strong traceability.

用户可通过扫描阀门标牌上的二维码进行防伪查询：
The end user can scan QR code on the nameplate of valve to verify the product's authenticity.



二维码显示内容 Scanning results

