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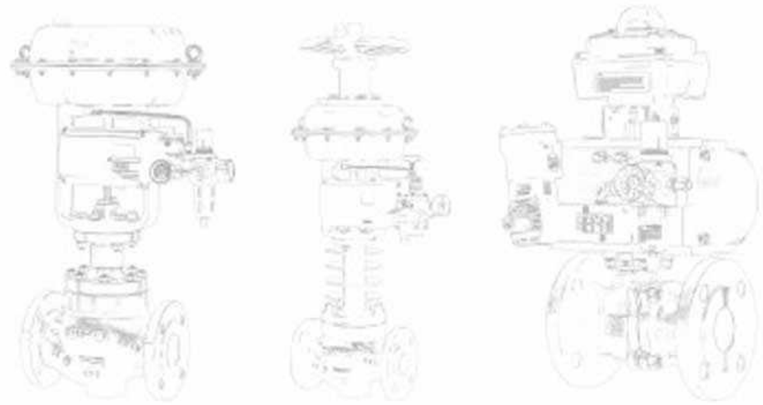
杰心品质 创造未来

OUTSTANDING QUALITY CREATING THE FUTURE



控制阀选型手册

SELECTION MANUAL OF CONTROL VALVE

BCST is your best parter for control valve

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BCST® 杰创集团 | *Control Valve*

CORE VALUE
核心价值

我们要经常把握市场变化，
为所有客户提供最大的满意。
We should constantly grasp the market changes to provide products meeting the greatest satisfaction for all customers.

我们要集公司全体员工智慧，
追求有益于社会革新的独特技术。
We need to integrate the wisdom of all employees of the Group and pursue unique technologies beneficial to social innovation.

我们要尊重每位员工，
创建一个充满企业家精神的企业。
We should respect every employee and create an enterprise full of entrepreneurship.

我们要珍惜利用资源，
致力于地球环境的保护。
We should cherish and utilize resources and devote ourselves to the protection of the earth's environment.

我们要提供公司的技术和产品，
为社会的进步作出贡献。
We will provide the company's technology and products to contribute to the progress of the society.

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ENTERPRISE ARCHITECTURE
企业架构

PRODUCTION EQUIPMENT
生产设备

杰创科技集团专注于阀门及产品的设计与自主生产，并致力于将全球先进的流体控制解决方案带给客户，为客户创造更多的价值。杰创武亿不仅仅是提供一个性能可靠的设备，更多的是充分考虑适用性和经济及节能运行的解决方案。

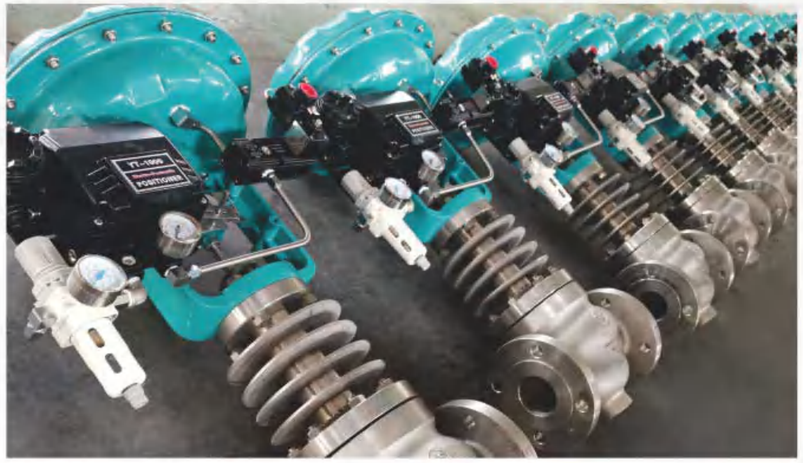
BCST Group focuses on the design and independent production of valves and products, and is committed to bringing the global advanced fluid control solutions to customers and creating more value for customers. BCST Wuyi not only provides equipment with reliable performance, but also takes full account into the applicability, economy and energy-saving operation solutions.

FINISHED PRODUCT WAREHOUSE
成品车间

BCST®
杰创集团

品质体现我们的尊严，出类拔萃的品质拒绝平庸。一丝不苟、千锤百炼、标准化的管理体系和系统化的品质保证体系，让本公司产品品质在世界的每个角落都畅通无阻，我们通过与合作者们卓有成效的努力，正促使“杰创武亿”成为世界上最无可挑剔的品质。

Quality is the proxy of the dignity of the Company. The Company seeks for excellent quality without any place for mediocrity. The meticulous, well-seasoned, standardized management system and systematic quality assurance system make the product quality of the Company unobstructed in every corner of the world. Through effective efforts with partners, the Company is making “BCST Wuyi” the most impeccable quality in the world.



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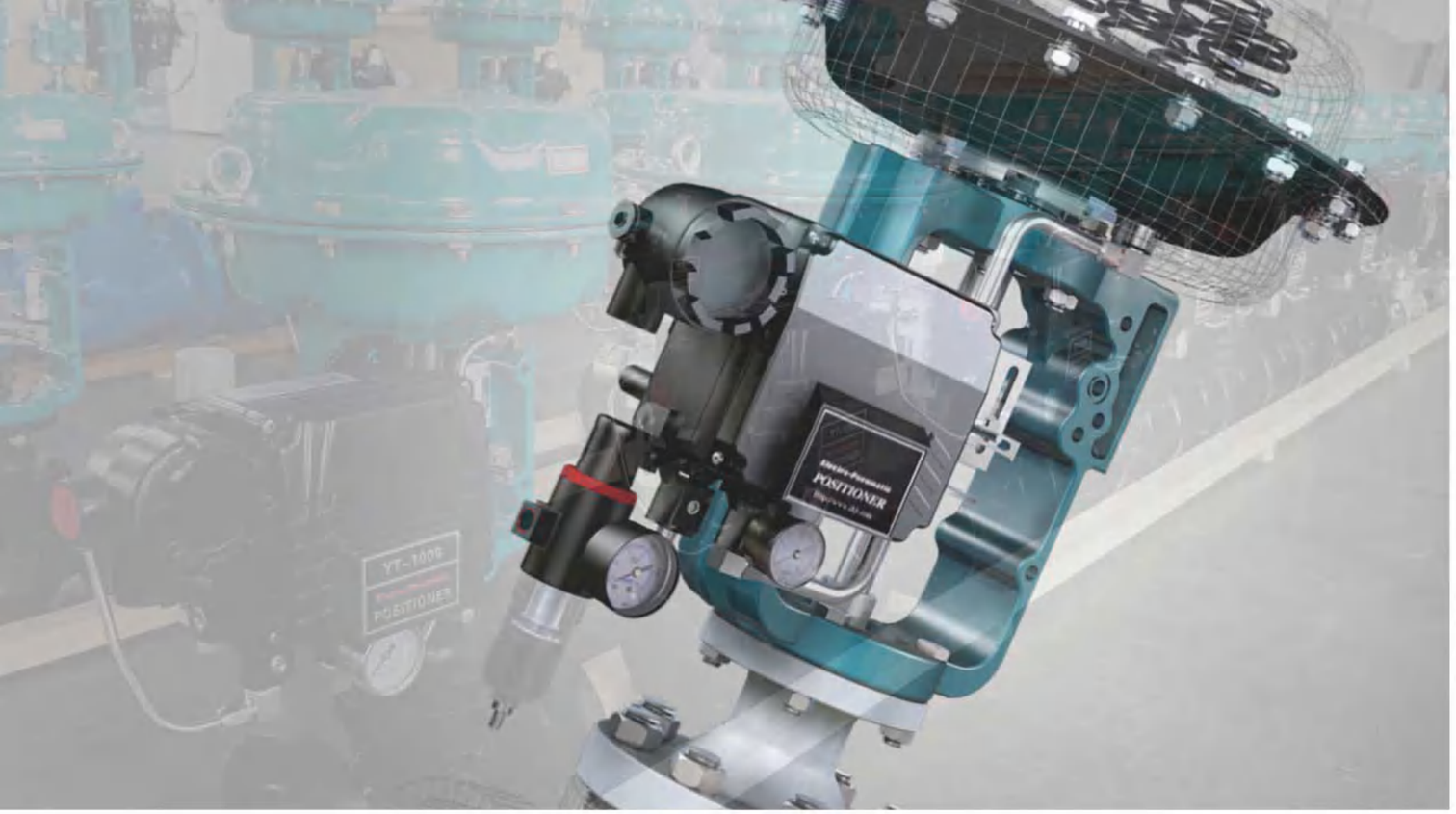
TECHNOLOGICAL INNOVATION
科技创新

杰创阀门将始终坚守产品的品质，因为好的品质永远是未来不可动摇的发展方向。今后我们将再接再厉，以创新为力量，创造更好更高的品质，打造更好的品牌，树立精益求精的态度。

BCSTvalve will always adhere to the good quality of products, and good quality is the unshakable development direction in the future. Driven by innovation, we will continue to make persistent efforts to create better and higher quality, create better brand and set up an attitude of continuous improvement in the future.

BCST® 杰创集团 Control Valve



PPRODUCT HIGHLIGHTS
产品集锦

顶部导向型单座调节阀
Top-guide single-seated control valve

顶部导向型多孔笼式调节阀
Top-guide type porous-cage control valve

注脂密封高温调节阀
Grease seal high temperature control valve

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BCST® 杰创集团 | Control Valve

气动薄膜保温调节阀
Pneumatic film insulation control valve

气动薄膜保温调节阀
Pneumatic film insulation control valve

顶部导向型套筒调节阀
Top-guide type sleeve control valve

三通分流合流调节阀
Three way shunt and confluence control valve

超小流量针式调节阀
Ultra-small flow needle control valve

自力式氮封调节阀
Self-operated nitrogen seal control valve

自力式微压调节阀
Self-operated micro pressure control valve

自力式调节阀
Self-actuated control valve series

气动衬氟调节蝶阀
Pneumatic fluorine lining control butterfly valve

气动O型切断球阀
Pneumatic o-type cut-off ball valve

气动衬氟O型切断球阀
Pneumatic fluorine lined O-type cut-off ball valve

电动O型球阀
Electric o-type ball valve

电动波纹管密封调节阀
Electric bellows seal control valve

电动薄膜切断阀
Electric diaphragm cut-off valve

电动单座调节阀
Electric single seat control valve

自力式电控温度调节阀
Self-operated electronic control temperature control valve

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OUTSTANDING
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BCST® 杰创集团 | Control Valve

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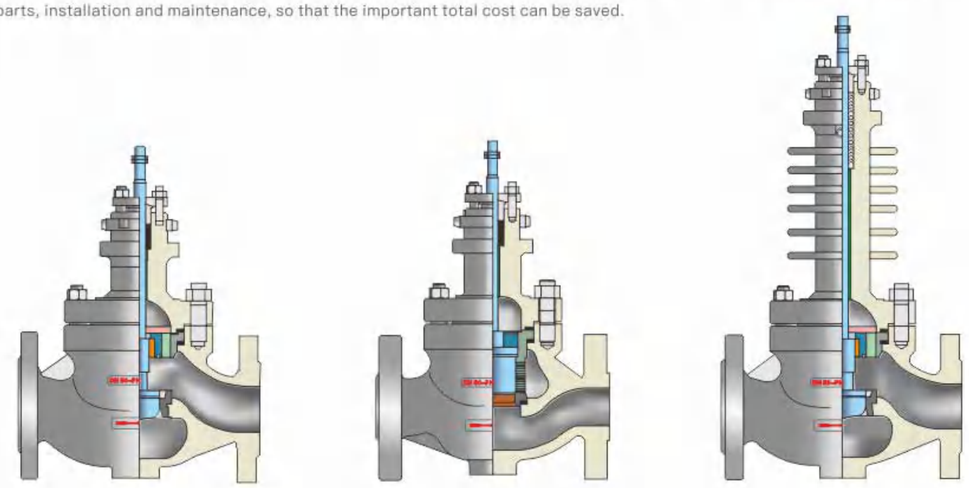
产品概述 Product Overview

当要控制不断增大的成本、用户对技术、产品、质量和服务的改进期望值增加，但同时法律和法规变得更加严格复杂时，在最苛刻的工况下也能表现出高可靠性和出色的性能，无疑会成为重要的先决条件。本公司的产品正是以此为目标。

本公司的产品采用模块化设计，满足特定工况要求，使控制阀能够在最苛刻工况下适应最难需求。此外，模块化设计降低了备件、安装和维护的成本，使重要的总成本得以节约。

When it is necessary to control the increasing cost, the user's expectation of technology, product, quality and service improvement increase, but at the same time, laws and regulations become more strict and complex. It will undoubtedly become an important prerequisite to show high reliability and excellent performance under the most demanding working conditions. This is the goal of the products of the Company.

Modular design is adopted for the products of the Company to meet the requirements of specific working conditions, so that the regulating valve can adapt to the most difficult requirements under the most severe working conditions. In addition, modular design reduces the cost of spare parts, installation and maintenance, so that the important total cost can be saved.



产品特点 Products features

1、计算与选型简单；
2、维护简单且方便；
3、设计紧凑合理，使用寿命长；
4、可提供一体化式控制器及执行器；
5、阀体通径从DN20～500 (3/4"～20")；
6、压力等级从PN1.0～42.0MPa (ANSI 150～2500LB)；
7、可供选择类型范围广泛。

1. Simple calculation and selection;
2. Simple and convenient maintenance;
3. Compact and reasonable design; long service life;
4. Integrated controller and actuator can be provided;
5. Body diameter from DN20 to 500 (3/4" to 20");
6. Pressure rating from PN1.0 to 42.0MPa (ANSI 150 to 2500LB);
7. Wide range of available types.

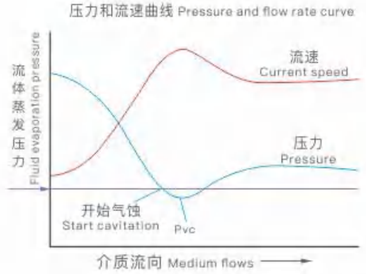
应用领域 Application Fields

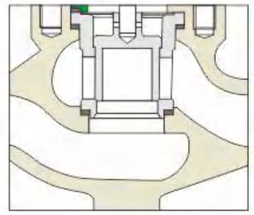
广泛应用于石油天然气、环保水处理、生物制药、化工、电力、食品、造纸、冶金、采矿、船舶及一般工业系统。

It is widely used in petroleum and natural gas, environmental water treatment, biopharmaceutical, chemical, electric power, food, papermaking, metallurgy, mining,ships and general industrial systems.

HIGH-PERFORMANCE CONTROL VALVE SERIES
高性能调节阀系列

通过控制阀的流体 Flow Through Regulating Valve

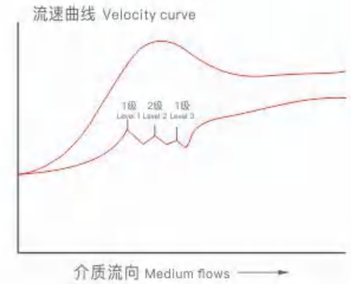


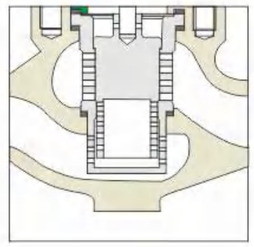


当流体通过控制阀时。流体的阻力影响压力下降。同时流速成比例增加，阻力越大流速增加越大。对不同的流体工况，通过阀门的能量改变会影响空气噪音和气蚀问题。

When the fluid passes through the regulating valve, the resistance of the fluid affects the pressure to drop. At the same time, the flow rate increases proportionally, and the larger the resistance is, the larger the flow rate is. For different fluid conditions, the energy change through the valve will affect air noise and cavitation problems.

空气动力噪音解决方案 Solutions for Aerodynamic Noise

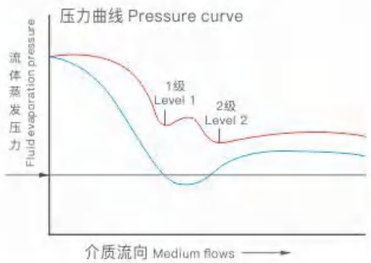


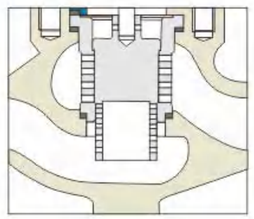


控制通过阀门的流速动力之一是控制流体的空气动力学噪音。通过多级的鼠笼结构，连续吸收压降产生的能量将通过阀门的流速控制到可以接受的范围以内。

One of the forces that control the flow rate through the valve is the aerodynamic noise of the fluid. Through the multi-stage squirrel cage structure, the energy generated by continuous absorption of pressure drop will be controlled to an acceptable range of flow rate through the valve.

气蚀解决方案 Solutions for Cavitation





将压力控制在临界压力（Pvc)以上，可实现对气蚀的控制，通过多级结构，连续吸收压降产生能量，流道的阻力增加，Pvc得以控制，这样可以避免气蚀。

By controlling the pressure above the critical pressure (PVC), cavitation can be controlled. Through the multi-stage structure, the pressure drop can be absorbed continuously to generate energy, the resistance of the flow channel increases, and PVC can be controlled, so cavitation can be avoided.

HIGH PERFORMANCE CONTROL VALVE SERIES

高性能调节阀系列

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BCST® 杰创集团 Control Valve

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TOP-GUIDE SINGLE-SEATED CONTROL VALVE
顶部导向型单座调节阀

产品概述 Product Overview

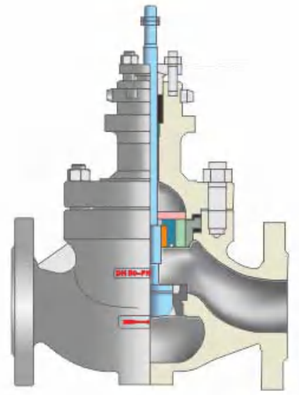
本公司生产的系列单座调节阀，采用顶部导向平衡笼式结构，具有高强度、重载荷、S型流道、压降损失小、流量系数大、可调范围广、流量特性精度高。此调节阀适用于工况压差较小的场合，关闭严密，适用于对介质流量或者压力的调节。

The series of single seat-control valves produced by the Company adopt top guide balanced cage structure, with high strength, heavy load, S-shaped flow passage, small pressure drop loss, large flow coefficient, wide adjustable range and high flow characteristic accuracy. This control valve is suitable for the occasion with small working condition pressure difference and it can close tightly. It is suitable for the regulation of medium flow or pressure.

产品特点 Products Features

阀座采用压笼式结构，具有可靠性能强，后期更换维修方便等特点，解决了传统的无阀座结构泄露无法更换的困难，延长了使用寿命。采用流开式设计，介质趋向于阀门开启的方向，小开度可控性好，流量特性畸变小。根据工况可选配电动或气动执行器进行控制。

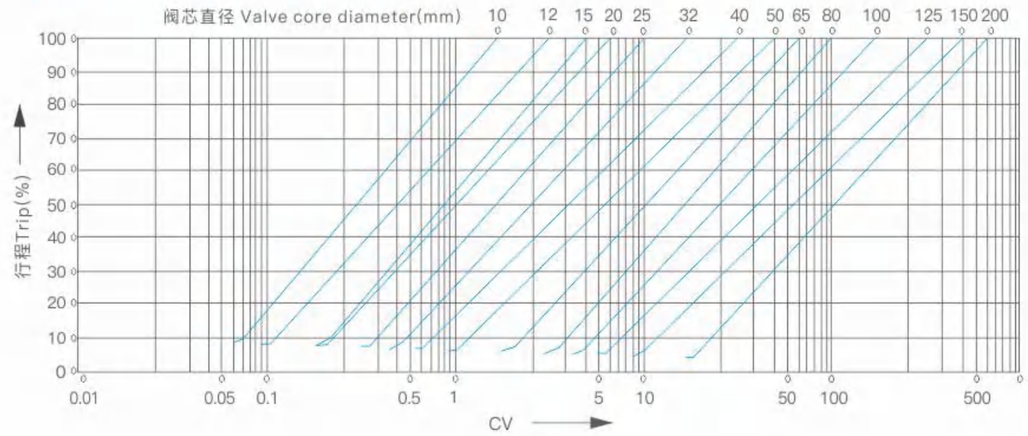
The valve seat adopts pressure cage structure, which has the characteristics of strong reliability and convenient replacement and maintenance in the later stage, and solves the problem that the traditional structure without valve seat cannot be replaced due to leakage. The service life can be extended. With flow opening design, the medium tends to the direction of valve opening, with good controllability of small opening and small flow characteristic distortion. According to the working conditions, electric or pneumatic actuators can be selected for control.



技术参数 Technical Parameters

阀体形式 Body type	直通S型铸造阀 Straight-through S-type cast valve
阀芯形式 Plug type	平衡笼式单座柱塞阀芯 Balance cage single-seat plunger valve core
公称通径 Nominal diameter	DN15~300mm；NPS 1/2"~12"
公称压力 Nominal pressure	PN1.6~6.4MPa；CLASS 150~300LB
适用温度 Applicable temperature	-196~+550℃（按工矿可选）(Optional according to working conditions)
连接形式 Type of connection	法兰、焊接、螺纹(适用于1"内) Flange, welding, thread (applicable within 1")
法兰距 Flange distance	符合IEC 60534 According to IEC 60534
压盖形式 Gland type	螺栓压紧式 Bolt compression type
密封垫片 Sealing gasket	金属石墨缠绕垫片 Metal graphite spiral wound gasket
填 料 Packing	聚四氟乙烯、柔性石墨 PTFE, flexible graphite
执行器 Actuator	气动执行器、电动执行器 Pneumatic actuator, electric actuator

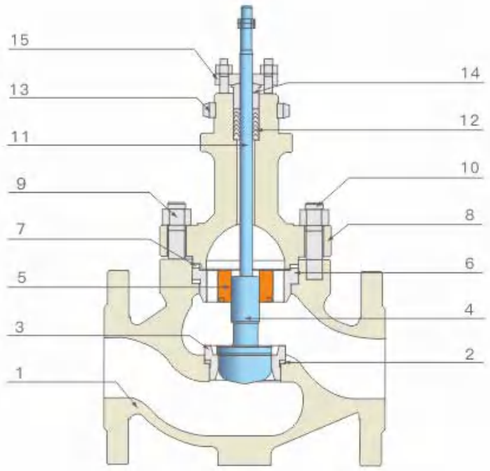
流量特性曲线图 Flow Characteristic Curve



结构与材料 Structure and Materials

本体材质为碳钢 Carbon steel for body material

1	阀体 Body	WCB	LCB	WC9
2	垫片 Gasket	316+石墨 Graphite / FTFE		
3	阀座 Seat	304	304	304
4	阀芯 Plug	304	304	304
5	铜套 Copper bush	Cu/316L		
6	导向套 Guide sleeve	304	304	304
7	垫片 Gasket	316+石墨 Graphite / FTFE		
8	阀盖 Bonnet	WCB	LCB	WC9
9	螺母 Nut	304	304	304
10	螺柱 Double-screw bolt	304	304	304
11	阀杆 Stem	304	304	304
12	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
13	锁紧螺母 Lock nut	304	304	304
14	压套 Pressing sleeve	304	304	304
15	压板 Plate	304	304	304



本体材质为不锈钢 Body Material Is Stainless Steel

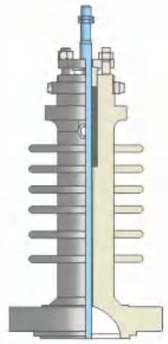
1	阀体 Body	CF8	CF8M	CF3M
2	垫片 Gasket	316+石墨 Graphite / FTFE		
3	阀座 Seat	304	316	316L
4	阀芯 Plug	304	316	316L
5	铜套 Copper bush	Cu/316L		
6	导向套 Guide sleeve	304	316	316L
7	垫片 Gasket	316+石墨 Graphite / FTFE		
8	阀盖 Bonnet	CF8	CF8M	CF3M
9	螺母 Nut	304	316	316L
10	螺柱 Double-screw bolt	304	316	316L
11	阀杆 Stem	304	316	316L
12	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
13	锁紧螺母 Lock nut	304	316	316L
14	压套 Pressing ring	304	316	316L
15	压板 Plate	304	316	316L

注：1、以上为标准配置结构，阀座为金属密封，阀座为软密封选用VI级可选件。可提供喷焊硬质合金的阀内件。2、常规材质为碳钢和不锈钢两种，可根据用户现场条件订制特殊材质控制阀产品。

Note: 1. the above is of standard configuration structure; the valve seat is metal seal, and the valve seat is soft seal, grade VI optional. It can provide valve trim of spray welding cemented carbide.2. The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.

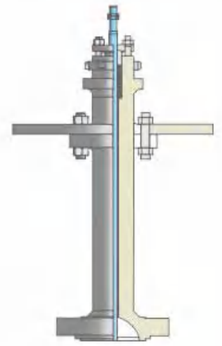
TOP-GUIDE SINGLE-SEATED CONTROL VALVE
顶部导向型单座调节阀

可应用于不同工况的结构 Can be Applied to Different Conditions of the Structure



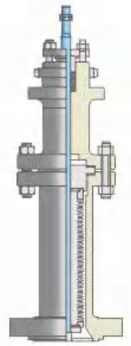
高温型：
适用介质：蒸汽、热油等
适用温度：+250~550℃

High temperature type:
Applicable media: steam, hot oil, etc.
Applicable temperature: +250~550℃



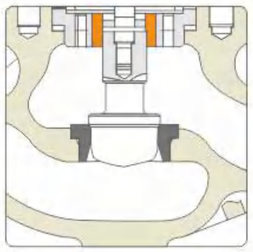
低温型：
适用介质：液氮、液氧等
适用温度：-70~-196℃

Low temperature type:
Applicable medium: liquid nitrogen, liquid oxygen, etc.
Applicable temperature:-70~-196℃



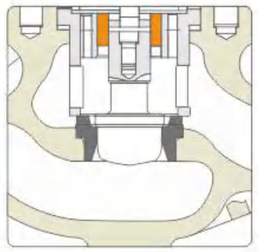
波纹管型：
适用介质：易燃易爆气体、有毒液体、腐蚀性介质等

Bellows type:
Applicable medium: flammable and explosive gas, toxic liquid, corrosive medium, etc.



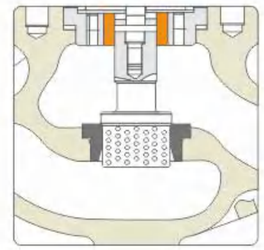
标准单座结构：
适用于阀前后压差较小，允许少量软性杂质的场合。此结构操作稳定、流量特性好、调节范围大等优点。

Standard single seat structure:
It is suitable for the occasion where the pressure difference between the front and back of the valve is small and a small amount of soft impurities are allowed. The structure has the advantages of stable operation, good flow characteristics and large adjustment range.



笼式单座结构：
适用于阀前后压差较小，允许少量软性杂质的场合。此结构具有动态稳定性好、噪音低的优点。

Cage-type single-seat structure:
It is suitable for the occasion where the pressure difference between the front and back of the valve is small and a small amount of soft impurities are allowed. This structure has the advantages of good dynamic stability and low noise.



改进型单座结构：
适用于阀前后压差较大，介质干净的场合。此结构设计具有双重导向，稳定性高、泄漏量低等优点。

Improved single-seat structure:
It is suitable for the occasions with large pressure difference between the front and back of the valve and clean medium. The structure design has the advantages of double guidance, high stability and low leakage

规格参数 Specification Parameter

阀座直径（mm） Inside diameter(in)			20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12
流量系数(KV) Flow coefficent		直线 Straight line	6.9	11	17.6	27.5	44	69	110	176	275	440	690	1100	1760
		等百分 Percent	6.3	10	16	25	40	63	100	160	250	400	630	1000	1600
口径（DN） Diameter(in)		行程 Travel	可选流量系数Cv(★标准型 ●推荐 ○定制) Optional flow coefficient Cv(★ standard type ●Recommended ○Customized)												
20	3/4	16mm	★												
25	1		●	★											
32	1-1/4	25mm	○	○	★										
40	1-1/2		○	○	●	★									
50	2		○	○	●	●	★								
65	2-1/2	40mm			○	○	○	★							
80	3				○	○	○	●	★						
100	4				○	○	○	●	●	★					
125	5	60mm						○	○	○	★				
150	6								○	○	●	★			
200	8								○	○	●	●	★		
250	10	100mm								○	○	●	●	★	
300	12									○	○	●	●	●	★
气动执行机构 Pneumatic actuator			HA/B-22		HA/B-23		HA/B-34			HA/B-45				HA/B-56	
			350cm²		350cm²		560cm²			900cm²				1400cm²	
作用方式 Mode of action	弹簧范围 Spring range		金属密封允许压差（MPa） Metal seal allows differential pressure(MPa)												
气开式 Gas opening	20-100 KPa		1.16	0.7	0.44	0.28	0.18	0.17	0.11	0.07	0.07	0.05	0.03	0.02	0.01
	40-200 KPa		3.34	2.14	1.31	0.84	0.53	0.51	0.33	0.21	0.21	0.15	0.09	0.06	0.04
	80-240 KPa		6.40	4.99	3.05	1.95	1.25	1.18	0.78	0.50	0.50	0.36	0.21	0.15	0.08
气关式 Gas off	20-100 KPa		2.23	2.14	0.87	0.56	0.36	0.34	0.22	0.14	0.14	0.1	0.06	0.03	0.02
	40-200 KPa		6.40	6.40	5.86	3.64	2.30	2.21	1.43	0.91	0.91	0.66	0.37	0.25	0.20
	80-240 KPa		6.40	6.40	6.40	5.04	3.18	3.06	1.98	1.26	1.26	0.92	0.52	0.47	0.35
电动执行机构 Electric actuator			金属密封允许压差（MPa） Metal seal allows differential pressure （MPa）												
推力(N) Thrust(N)	800		2.38												
	2000		4.77	3.05	1.86	1.19	0.76								
	3000				2.79	1.79	1.14								
	5000				4.66	2.98	1.91	1.13	0.6	0.47					
	6500							1.35	0.8	0.57	0.39	0.26	0.16		
	10000										0.61	0.42	0.20	0.15	
	16000										0.97	0.67	0.35	0.12	0.09

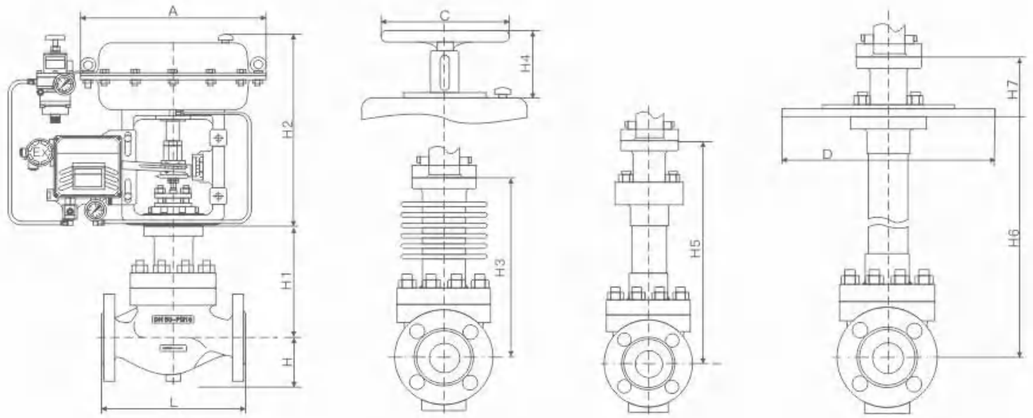
TOP-GUIDE SINGLE-SEATED CONTROL VALVE
顶部导向型单座调节阀
BCST® 杰创集团

执行机构参数 Actuator parameters

型号 Model / 形式 Form	气动薄膜执行机构 Pneumatic film actuator	电子式电动执行机构 Electronic electric actuator
	ZH22~ZH56	3810L、RSL
	多弹簧型 Multi spring	智能一体化型 Intelligent integrated type
用途 Purpose	调节 、开关 Adjustment, switch	调节 Regulating
驱动 Drive	气压 （弹簧范围） Air pressure (spring range) 140(20~100) KPa G 240(40~200) KPa G 280(80~240) KPa G	电源 Power supply：AC 220 V ±10% 50Hz 电源 Power supply：AC 380 V ±10% 50Hz
接头 Joint	Rc 1/4	普通型 Common type：2-PF(G1/2") 隔爆型 Flameproof type：2-PF(G3/4")
正作用 Positive action	气压增加推动阀门关闭 Air pressure increases to push the valve to close	控制信号增加推动阀门关闭 Control signal increases to push the valve to close
反作用 Reaction	气压增加推动阀门开启 Air pressure increases to push the valve open	控制信号增加推动阀门开启 Control signal increases to push the valve open
控制信号 Control signal	4~20mA.DC（带定位器 With positioner）	输入输出 Input output 4~20mA.DC
滞后 Lag	≤1% FS（带定位器 With positioner）	≤0.8% FS
直线性 Linearity	2% FS（带定位器 With positioner）	≤±1% FS
环境温度 Ambient temperature	-10~+70℃	
表面涂层 Surface coating	阀体 Body：黑色磷化处理 Black phosphating treatment 执行器 Actuator：丙烯酸聚氨酯漆 Acrylic polyurethane paint	
选配附件 Optional accessories	阀门定位器、手轮、电磁阀、行程开关、保位阀 Optional accessories,Hand wheel,Magnetic valve, Travel switch,Lock up valve	加热器 Heater

主要性能参数 Main Performance Parameters

流量特性 Flow characteristics		等百分比 Equal percentage、直线 Straight line	
可调范围 Adjustable range		50:1	
额定Cv值 Rated Cv value		等百分比 TEqual percentage：10~1400 直线 Straight line：11~1500	
允许泄漏量 Allowable leakage		硬密封：Ⅳ级（0.01%阀额定流量）；软密封：V级 hard seal: level-Ⅳ (0.01% rated flow of valve); Soft seal: Level-V	
性能指标 Performance index	驱动方式 Driving mode	气动 Pneumatic	电动 Electric
	基本误差 Intrinsic error%	±1.0	±1.0
	回差 Return difference%	≤1.0	≤1.0
	死区 Dead zone %	≤0.6	≤1.0
	始终点偏差 Constant point deviation%	±2.5	±2.5
	额定行程偏差 Rated stroke deviation%	≤2.5	≤2.5



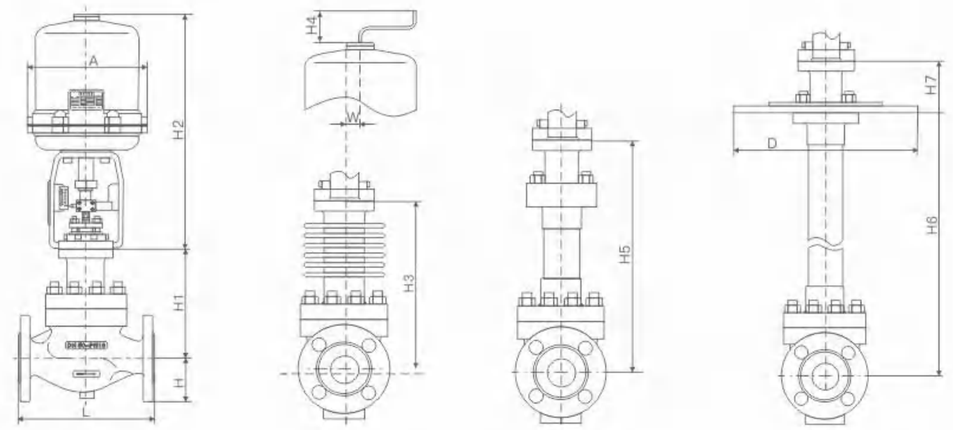
标准型 Standard type　高温型 High temperature type　波纹管型 Corrugated pipe type　低温型 Low temperature type

气动调节阀连接尺寸 Connection Dimension of Pneumatic Control Valve

	DN / In	20 / 3/4	25 / 1	32 / 1-1/4	40 / 1-1/2	50 / 2	65 / 2-1/2	80 / 3	100 / 4	125 / 5	150 / 6	200 / 8	250 / 10	300 / 12
L	PN16/25	181	184	200	222	254	276	298	352	410	451	600	650	700
	PN40	181	184	200	222	254	276	298	352	410	451	600	670	770
	PN64	210	210	210	251	286	311	337	394	440	508	650	690	800
H	PN16/25	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158	170	195	230
	PN40	52.5	57.5	75	75	82.5	92.5	100	117.5	150	167.5	187.5	205	245
	PN64	65	40	85	85	90	102.5	107.5	125	172.5	195	207.5	230	260
H1		132	132	158	170	179	214	221	234	270	294	331	390	450
H2		285	285	285	285	285	360	360	360	470	470	470	580	580
H3		208	208	224	228	228	334	334	342	408	453	482	520	550
H4		153	153	153	153	153	181	181	181	247	247	247	/	/
H5		336	338	402	402	405	627	628	635	698	702	728	755	790
H6		700（根据实际温度定制 According to the actual temperature）												
H7		88	88	88	88	88	95	95	95	95	110	110	140	140
D		310	310	355	355	390	430	465	520	585	660	770	890	950
A		200	200	200	200	200	240	240	240	350	350	350	450	450
C		282	282	282	282	282	360	360	360	470	470	470	650	650
法兰 Flange		可执行：GB 、HG、JB、DIN、JIS、ANSI 等相应标准 Executable: GB、HG、JB、DIN、JIS、ANSI Corresponding standard												

注：1、表中尺寸为不带附件标准数据，附件尺寸根据实际配置计算。
2、由于产品的技术创新与改进，尺寸可能会有所变化，最新资料请联系本公司技术部。
Note: 1. The dimensions in the table are standard data without accessories. The dimensions of accessories are calculated according to the actual configuration. 2. Due to the technical innovation and improvement of the product, the size may change. Please contact the technical department of the Company for the latest information.

TOP-GUIDE SINGLE-SEATED CONTROL VALVE
顶部导向型单座调节阀



标准型 Standard type　高温型 High temperature type　波纹管型 Corrugated pipe type　低温型 Low temperature type

电动调节阀连接尺寸 Connection Dimension of Electric Control Valve

	DN / In	20 / 3/4	25 / 1	32 / 1-1/4	40 / 1-1/2	50 / 2	65 / 2-1/2	80 / 3	100 / 4	125 / 5	150 / 6	200 / 8	250 / 10	300 / 12
L	PN16/25	181	184	200	222	254	276	298	352	410	451	600	640	880
	PN40	181	184	200	222	254	276	298	352	410	451	600	640	880
	PN64	210	210	210	251	286	311	337	394	440	508	650	810	950
H	PN16/25	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158	170	195	230
	PN40	52.5	57.5	75	75	82.5	92.5	100	117.5	150	167.5	187.5	205	245
	PN64	65	40	85	85	90	102.5	107.5	125	172.5	195	207.5	230	260
H1		132	132	158	170	179	214	221	234	270	294	331	390	450
H2		373	373	456	456	538	538	548	548	725	725	725	795	795
H3		208	208	224	228	228	334	334	342	408	453	482	520	550
H4		90	90	90	90	90	90	90	90	90	90	90	90	90
H5		336	338	402	402	405	627	628	635	698	702	728	755	790
H6		700（根据实际温度定制 According to the actual temperature）												
H7		88	88	88	88	88	95	95	95	95	110	110	140	140
D		310	310	355	355	390	430	465	520	585	660	770	890	950
A		225	225	225	255	255	255	255	255	310	310	310	350	350
法兰 Flange		可执行：GB、HG、JB、DIN、JIS、ANSI等相应标准 Executable: GB, HG, JB, DIN, JIS, ANSI Corresponding standard												

注：1、表中尺寸为不带附件标准数据，附件尺寸根据实际配置计算。
2、由于产品的技术创新与改进，尺寸可能会有所变化，最新资料请联系本公司技术部。
Note: 1. The dimensions in the table are standard data without accessories. The dimensions of accessories are calculated according to the actual configuration. 2. Due to the technical innovation and improvement of the product, the size may change. Please contact the technical department of the Company for the latest information.

BCST® 杰创集团

TOP-GUIDE TYPE SLEEVE CONTROL VALVE
顶部导向型套筒调节阀

产品概述 Product Overview

本公司生产的系列双密封套筒调节阀，采用套筒导向，压力平衡式阀芯。该系列的调节阀是套筒双密封结构主要应用于泄漏要求不高的场合，因为是双密封结构两个密封面都是金属密封，因此使用的温度范围更宽一些。

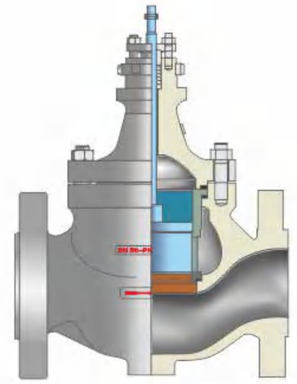
The Company produces a series of double-sealed sleeve control valve, for which sleeve-guided and pressure-balanced plugs are adopted. The control valve of this series is a double-sealed sleeve structure, which is mainly used in occasions with low leakage requirements. Because both sealing surfaces of the double seal structure are metal seals, the temperature range for use is wider.

BCST® 杰创集团

产品特点 Products Features

阀芯利用压力平衡式结构，启闭力小，通过较小的执行机构推力就能控制高压差的工况。广泛应用于要求动态稳定性好的中低温、中低压管线的流体控制。密封性能好、允许压差大。套筒导向，导向面积大，稳定性好，结构紧凑，可以快速在线更换阀内件，维修效率高，节约人力和时间。平衡式阀芯结构确保所需的执行机构推力最小。

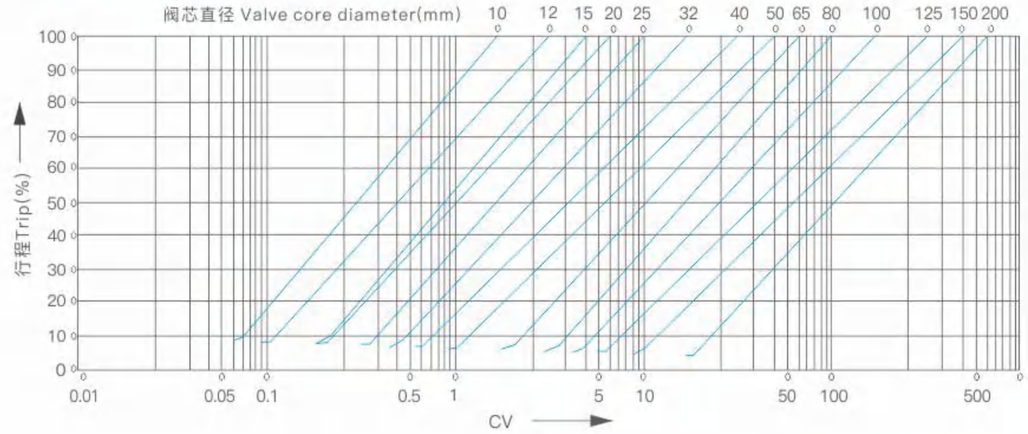
The pressure balanced structure is used for the plug, with small opening and closing force, and the working condition of high-pressure difference can be controlled by a small actuator thrust. It is widely used in the fluid control of medium and low temperature, medium and low pressure pipelines with good dynamic stability. It has good sealing performance and large allowable pressure difference. It has sleeve guide, with large guide area, good stability, compact structure, quick on-line replacement of valve trim, high maintenance efficiency, saving manpower and time. Balanced valve plug construction ensures minimum actuator thrust.



技术参数 Technical Parameters

阀体形式 Body type	直通S型铸造阀 Straight-through S-type cast valve
阀芯形式 Plug type	平衡式双密封套筒阀芯 Balanced double seal sleeve plug
公称通径 Nominal diameter	DN25~300mm；NPS 1"~12"
公称压力 Nominal pressure	PN1.6~16.0MPa;CLASS 150~1500LB
适用温度 Applicable temperature	-196~+550℃（按工矿可选）(Optional according to working conditions)
连接形式 Type of connection	法兰、焊接、螺纹(适用于1"内) Flange, welding, thread (applicable within 1")
法兰距 Flange distance	符合IEC 60534 According to IEC 60534
压盖形式 Gland type	螺栓压紧式 Bolt compression type
密封垫片 Sealing gasket	金属石墨缠绕垫片 Metal graphite spiral wound gasket
填 料 Packing	聚四氟乙烯、柔性石墨 PTFE, flexible graphite
执行器 Actuator	气动执行器、电动执行器 Pneumatic actuator, electric actuator

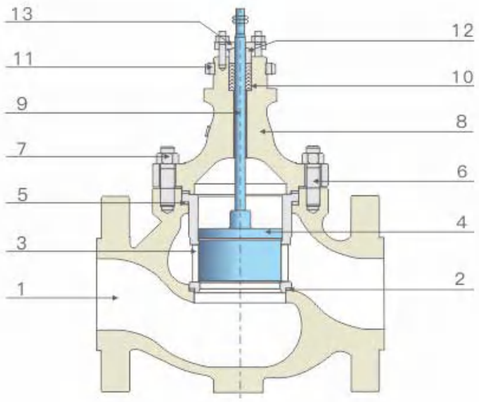
流量特性曲线图 Flow Characteristic Curve



结构与材料 Structure and Materials

本体材质为碳钢 Body Material Is Carbon Steel

1	阀体 Body	WCB	LCB	WC9
2	垫片 Gasket	316+石墨 Graphite / FTFE		
3	套筒 Sleeve	304	304	304
4	阀芯 Plug	304	304	304
5	垫片 Gasket	316+石墨 Graphite / FTFE		
6	螺柱 Double-screw bolt	304	304	304
7	螺母 Nut	304	304	304
8	阀盖 Bonnet	WCB	LCB	WC9
9	阀杆 Stem	304	304	304
10	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
11	锁紧螺母 Lock nut	304	304	304
12	压套 Pressing sleeve	304	304	304
13	压板 Plate	304	304	304



本体材质为不锈钢 Body Material Is Stainless Steel

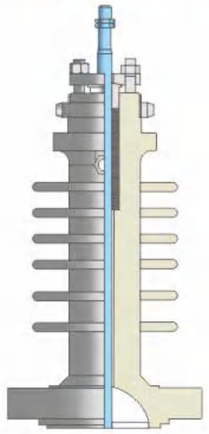
1	阀体 Body	CF8	CF8M	CF3M
2	垫片 Gasket	316+石墨 Graphite / FTFE		
3	套筒 Sleeve	304	316	316L
4	阀芯 Plug	304	316	316L
5	垫片 Gasket	316+石墨 Graphite / FTFE		
6	螺柱 Double-screw bolt	304	316	316L
7	螺母 Nut	304	316	316L
8	阀盖 Bonnet	CF8	CF8M	CF3M
9	阀杆 Stem	304	316	316L
10	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
11	锁紧螺母 Lock nut	304	316	316L
12	压套 Pressing ring	304	316	316L
13	压板 Plate	304	316	316L

注：1、以上为标准配置结构，阀座为金属密封，阀座为软密封选用VI级可选件。可提供喷焊硬质合金的阀内件。2、常规材质为碳钢和不锈钢两种，可根据用户现场条件订制特殊材质控制阀产品。

Note: 1. the above is of standard configuration structure; the valve seat is metal seal, and the valve seat is soft seal, grade VI optional. It can provide valve trim of spray welding cemented carbide.2. The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.

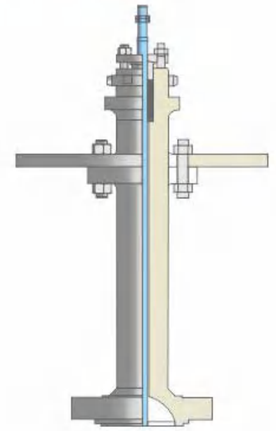
TOP-GUIDE TYPE SLEEVE
CONTROL VALVE
顶部导向型套筒调节阀

可应用于不同工况的结构 Can be Applied to Different Conditions of the Structure



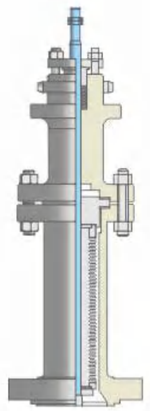
高温型：
适用介质：蒸汽、热油等
适用温度：+250~550℃

High temperature type:
Applicable media: steam, hot oil, etc.
Applicable temperature: +250~550℃



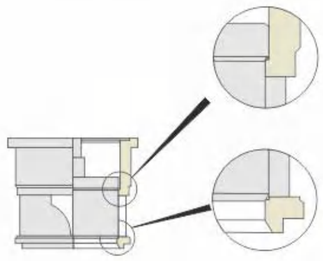
低温型：
适用介质：液氮、液氧等
适用温度：-70~-196℃

Low temperature type:
Applicable medium: liquid nitrogen, liquid oxygen, etc.
Applicable temperature:-70~-196℃



波纹管型：
适用介质：易燃易爆气体、有毒液体、腐蚀性介质等

Bellows type:
Applicable medium: flammable and explosive gas, toxic liquid, corrosive medium, etc.



密封原理：
套筒调节阀采用双密封导向型结构。具有耐压差高，运行稳定的特点，特别适用于蒸汽、热油自动控制系统中。

Sealing principle:
Double sealing and guiding structure are adopted for sleeve control valve. It has the characteristics of high pressure difference and stable operation, especially suitable for automatic control system with steam and hot oil.

规格参数 Specification Parameter

阀座直径（mm） Inside diameter（in）			25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12
流量系数（Kv） Flow coefficient		直线 Straight line	10	16	25	40	63	100	160	250	400	630	1000	1400
		等百分比 Percent	11	17.6	27.5	44	69	110	176	275	440	690	1100	1500
口径(DN) Diameter(in)		行程 Travel	可选流量系数Cv(★标准型 •推荐 ○定制) Optional flow coefficient Cv(★ standard type •Recommended ○Customized)											
25	1	16mm	★											
32	1-1/4		○	★										
40	1-1/2	25mm	○	•	★									
50	2		○	•	•	★								
65	2-1/2			○	○	○	★							
80	3	40mm		○	○	○	•	★						
100	4			○	○	○	•	•	★					
125	5						○	○	○	★				
150	6	60mm						○	○	•	★			
200	8							○	○	•	•	★		
250	10	100mm								○	•	•	★	
300	12										○	•	•	★
气动执行机构 Pneumatic actuator			HA/B-23				HA/B-34			HA/B-45			HA/B-56	
			350cm²				560cm²			900cm²			1400cm²	
作用方式 Mode of action	弹簧范围 Spring range		金属密封允许压差（MPa） Allowable differential pressure (MPa)											
气开式 Gas opening	20-100KPa		3.0	2.25	2.25	1.95	2.36	2.04	1.67	1.41	1.41	1.14	0.65	0.55
	40-200KPa		6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	1.55	1.4
	80-240KPa		6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	4.08	4.08
气关式 Gas off	20-100KPa		1.5	1.13	1.13	0.98	1.18	1.02	0.84	0.71	0.71	0.57	0.65	0.55
	40-200KPa		4.5	3.38	3.38	2.93	3.54	3.06	2.51	2.12	2.12	1.71	0.8	1.55
	80-240KPa		6.4	6.4	6.4	6.4	6.4	6.4	5.85	4.94	4.94	4.0	4.08	3.65
电动执行机构 Electric actuator			金属密封允许压差（MPa） Allowable differential pressure (MPa)											
推力（N） Thrust (N)	800		6.4	6.4										
	2000		6.4	6.4	6.4	5.1								
	3000		6.4	6.4	6.4	6.4	5.7	4.76						
	5000				6.4	6.4	6.4	6.4	6.25					
	6500								6.4	6.4	4.23	3.23		
	10000										6.4	6.1	3.31	2.07
	16000												6.0	4.0

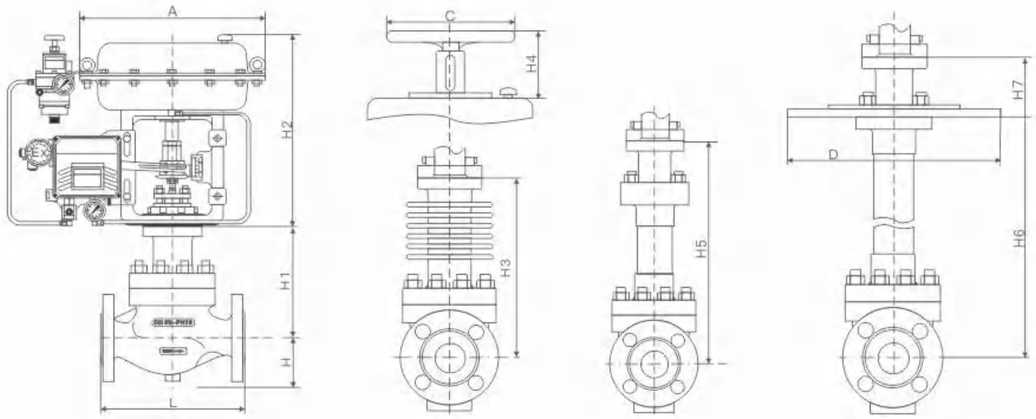
TOP-GUIDE TYPE SLEEVE
CONTROL VALVE
顶部导向型套筒调节阀

执行机构参数 Actuator parameters

型号 Model / 形式 Form	气动薄膜执行机构 Pneumatic film actuator	电子式电动执行机构 Electronic electric actuator
	ZH23~ZH56	3810L、RSL
	多弹簧型 Multi spring	智能一体化型 Intelligent integrated type
用途 Purpose	调节 、开关 Adjustment, switch	调节 Regulating
驱动 Drive	气压 （弹簧范围） Air pressure (spring range) 140(20~100) KPa G 240(40~200) KPa G 280(80~240) KPa G	电源 Power supply：AC 220 V ±10% 50Hz 电源 Power supply：AC 380 V ±10% 50Hz
接头 Joint	Rc 1/4	普通型 Common type：2-PF(G1/2") 隔爆型 Flameproof type：2-PF(G3/4")
正作用 Positive action	气压增加推动阀门关闭 Air pressure increases to push the valve to close	控制信号增加推动阀门关闭 Control signal increases to push the valve to close
反作用 Reaction	气压增加推动阀门开启 Air pressure increases to push the valve open	控制信号增加推动阀门开启 Control signal increases to push the valve open
控制信号 Control signal	4~20mA.DC（带定位器 With positioner）	输入输出 Input output 4~20mA.DC
滞后 Lag	≤1% FS（带定位器 With positioner）	≤0.8% FS
直线性 Linearity	2% FS（带定位器 With positioner）	≤±1% FS
环境温度 Ambient temperature	-10~+70℃	
表面涂层 Surface coating	阀体 Body：黑色磷化处理 Black phosphating treatment 执行器 Actuator：丙烯酸聚氨酯漆 Acrylic polyurethane paint	
选配附件 Optional accessories	阀门定位器、手轮、电磁阀、行程开关、保位阀 Optional accessories,Hand wheel,Magnetic valve, Travel switch,Lock up valve	加热器 Heater

主要性能参数 Main Performance Parameters

流量特性 Flow characteristics		等百分比 Equal percentage、直线 Straight line	
可调范围 Adjustable range		50:1	
额定Cv值 Rated Cv value		等百分比 TEqual percentage：10~1400 直线 Straight line：11~1500	
允许泄漏量 Allowable leakage		硬密封：Ⅳ级（0.01%阀额定流量）；软密封：V级 hard seal: level-Ⅳ (0.01% rated flow of valve); Soft seal: Level-V	
性能指标 Performance index	驱动方式 Driving mode	气动 Pneumatic	电动 Electric
	基本误差 Intrinsic error%	±1.0	±1.0
	回差 Return difference%	≤1.0	≤1.0
	死区 Dead zone %	≤0.6	≤1.0
	始终点偏差 Constant point deviation%	±2.5	±2.5
	额定行程偏差 Rated stroke deviation%	≤2.5	≤2.5



标准型
Standard type

高温型
High temperature type

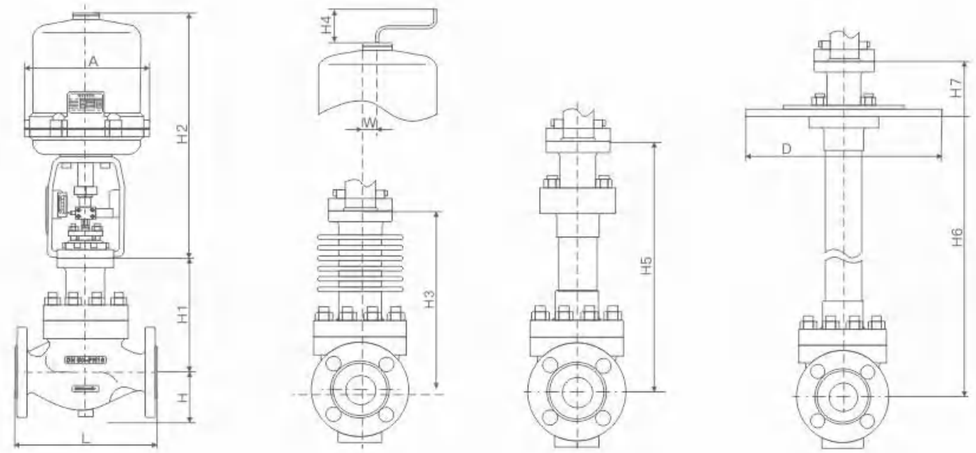
波纹管型
Corrugated pipe type

低温型
Low temperature type

气动调节阀连接尺寸 Connection Dimension of Pneumatic Control Valve

	DN In	20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12
L	PN16/25	181	184	200	222	254	276	298	352	410	451	600	650	700
	PN40	181	184	200	222	254	276	298	352	410	451	600	670	770
	PN64	210	210	210	251	286	311	337	394	440	508	650	690	800
H	PN16/25	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158	170	195	230
	PN40	52.5	57.5	75	75	82.5	92.5	100	117.5	150	167.5	187.5	205	245
	PN64	65	40	85	85	90	102.5	107.5	125	172.5	195	207.5	230	260
H1		132	132	158	170	179	214	221	234	270	294	331	390	450
H2		285	285	285	285	285	360	360	360	470	470	470	580	580
H3		208	208	224	228	228	334	334	342	408	453	482	520	550
H4		153	153	153	153	153	181	181	181	247	247	247	/	/
H5		336	338	402	402	405	627	628	635	698	702	728	755	790
H6		700（根据实际温度定制 According to the actual temperature）												
H7		88	88	88	88	88	95	95	95	95	110	110	140	140
D		310	310	355	355	390	430	465	520	585	660	770	890	950
A		200	200	200	200	200	240	240	240	350	350	350	450	450
C		282	282	282	282	282	360	360	360	470	470	470	650	650
法兰 Flange		可执行：GB 、HG、JB、DIN、JIS、ANSI 等相应标准 Executable: GB、HG、JB、DIN、JIS、ANSI Corresponding standard												

注：1、表中尺寸为不带附件标准数据，附件尺寸根据实际配置计算。
2、由于产品的技术创新与改进，尺寸可能会有所变化，最新资料请联系本公司技术部。
Note: 1. The dimensions in the table are standard data without accessories. The dimensions of accessories are calculated according to the actual configuration. 2. Due to the technical innovation and improvement of the product, the size may change. Please contact the technical department of the Company for the latest information.



标准型
Standard type

高温型
High temperature type

波纹管型
Corrugated pipe type

低温型
Low temperature type

电动调节阀连接尺寸 Connection Dimension of Electric Control Valve

	DN In	20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12
L	PN16/25	181	184	200	222	254	276	298	352	410	451	600	640	880
	PN40	181	184	200	222	254	276	298	352	410	451	600	640	880
	PN64	210	210	210	251	286	311	337	394	440	508	650	810	950
H	PN16/25	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158	170	195	230
	PN40	52.5	57.5	75	75	82.5	92.5	100	117.5	150	167.5	187.5	205	245
	PN64	65	40	85	85	90	102.5	107.5	125	172.5	195	207.5	230	260
H1		132	132	158	170	179	214	221	234	270	294	331	390	450
H2		373	373	456	456	538	538	548	548	725	725	725	795	795
H3		208	208	224	228	228	334	334	342	408	453	482	520	550
H4		90	90	90	90	90	90	90	90	90	90	90	90	90
H5		336	338	402	402	405	627	628	635	698	702	728	755	790
H6		700（根据实际温度定制 According to the actual temperature）												
H7		88	88	88	88	88	95	95	95	95	110	110	140	140
D		310	310	355	355	390	430	465	520	585	660	770	890	950
A		225	225	225	255	255	255	255	255	310	310	310	350	350
法兰 Flange		可执行：GB、HG、JB、DIN、JIS、ANSI等相应标准 Executable: GB, HG, JB, DIN, JIS, ANSI Corresponding standard												

注：1、表中尺寸为不带附件标准数据，附件尺寸根据实际配置计算。
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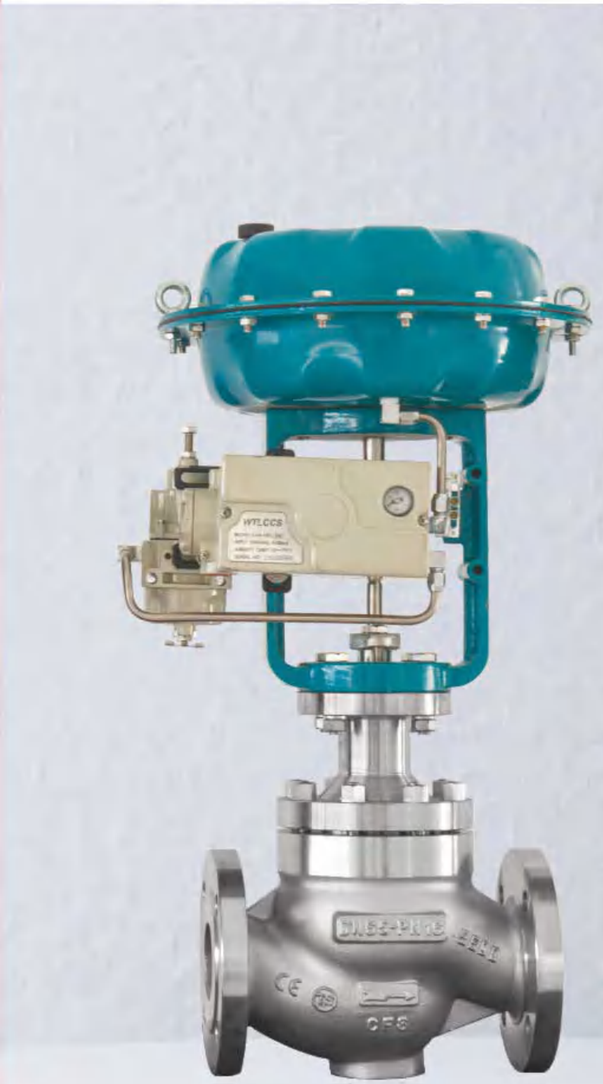
TOP-GUIDE TYPE POROUS-CAGE CONTROL VALVE
顶部导向型多孔笼式调节阀



产品概述 Product Overview

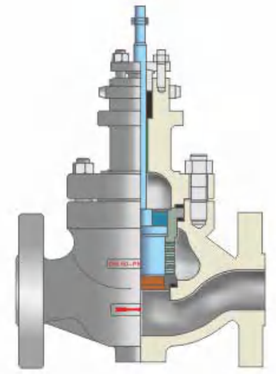
本公司生产的系列多孔笼式调节阀，采用套筒导向，压力平衡式阀芯。是一种动态稳定性好，适合于苛刻工况的高性能控制阀。它具有工作平稳、允许压差大、流量特性精确噪音低等特点。特别适用于允许泄漏小、要求噪音低、阀前后压差较大的工作场合。

The sleeve guide and pressure-balanced plug is used for the company's production of a series of porous-cage control valve. It is a kind of high-performance control valve with good dynamic stability and suitable for severe working conditions. It has the characteristics of stable operation, large allowable pressure difference, accurate flow characteristics and low noise. It is especially suitable for the work place with small leakage, low noise requirement and large pressure difference between the front and back of the valve.

产品特点 Products Features

由于工况压差较大，介质的流速快对阀内件产生严重的冲蚀破坏，同时会产生很大的噪音，于是本公司将窗口式的标准套筒改成多孔式套筒。对于液体一般流向是从阀门高进低出，通过多孔节流使介质在套筒内部碰撞，消耗内能降低流速。而对于气体介质一般采用低进高出，使气体介质通过多孔套筒的节流之后在阀座后面有一个体积的膨胀，从而把介质的压力降下来降低流速。

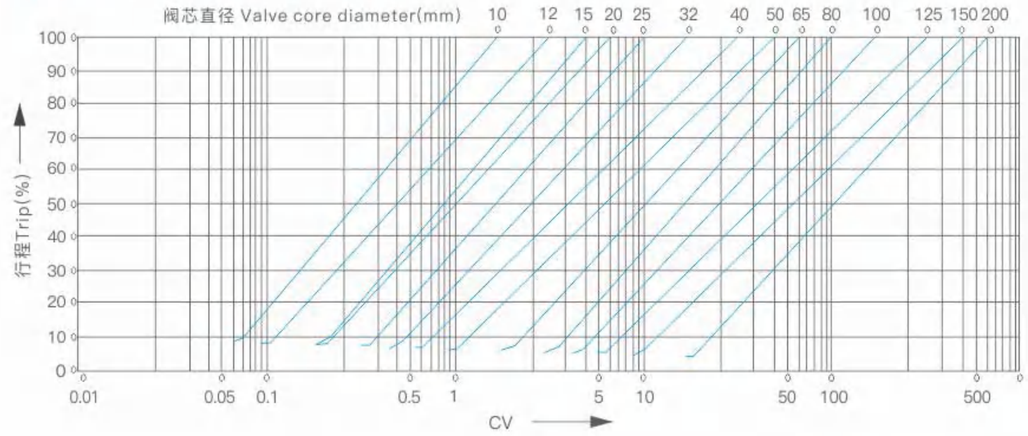
Due to the large pressure difference of working condition and the fast flow rate of medium, the valve internals will be seriously damaged by erosion and generate a lot of noise, so the company changed the window type standard sleeve to porous sleeve. For the general flow direction of liquid, it is from the valve high in and low out. Through porous throttling, the medium collides in the sleeve, and the internal consumption can reduce the flow rate. As for the gas medium, low inlet and high outlet are generally adopted, so that the gas medium has a volume expansion behind the valve seat after throttling through the porous sleeve, so as to reduce the pressure of the medium and reduce the flow rate.



技术参数 Technical Parameters

阀体形式 Body type	直通S型铸造阀 Straight-through S-type cast valve
阀芯形式 Plug type	平衡型多孔式阀芯 Balanced porous plug
公称通径 Nominal diameter	DN25~300mm；NPS 1"~12"
公称压力 Nominal pressure	PN1.6~16.0MPa;CLASS 150~1500LB
适用温度 Applicable temperature	-196~+550℃（按工矿可选）(Optional according to working conditions)
连接形式 Type of connection	法兰、焊接、螺纹(适用于1"内) Flange, welding, thread (applicable within 1")
法兰距 Flange distance	符合IEC 60534 According to IEC 60534
压盖形式 Gland type	螺栓压紧式 Bolt compression type
密封垫片 Sealing gasket	金属石墨缠绕垫片 Metal graphite spiral wound gasket
填 料 Packing	聚四氟乙烯、柔性石墨 PTFE, flexible graphite
执行器 Actuator	气动执行器、电动执行器 Pneumatic actuator, electric actuator

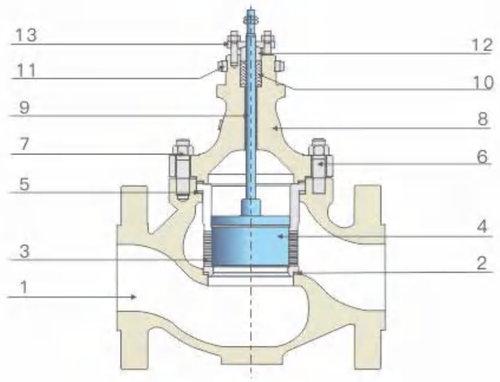
流量特性曲线图 Flow Characteristic Curve



结构与材料 Structure and Materials

本体材质为碳钢 Body Material Is Carbon Steel

1	阀体 Body	WCB	LCB	WC9
2	垫片 Gasket	316+石墨 Graphite / FTFE		
3	阀笼 Cage	304	304	304
4	阀芯 Plug	304	304	304
5	垫片 Gasket	316+石墨 Graphite / FTFE		
6	螺柱 Double-screw bolt	304	304	304
7	螺母 Nut	304	304	304
8	阀盖 Bonnet	WCB	LCB	WC9
9	阀杆 Stem	304	304	304
10	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
11	锁紧螺母 Lock nut	304	304	304
12	压套 Pressing sleeve	304	304	304
13	压板 Plate	304	304	304



本体材质为不锈钢 Body Material Is Stainless Steel

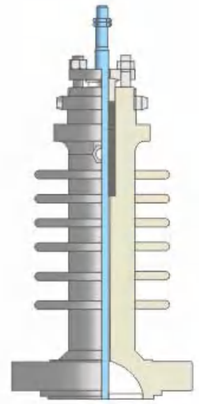
1	阀体 Body	CF8	CF8M	CF3M
2	垫片 Gasket	316+石墨 Graphite / FTFE		
3	阀笼 Cage	304	316	316L
4	阀芯 Plug	304	316	316L
5	垫片 Gasket	316+石墨 Graphite / FTFE		
6	螺柱 Double-screw bolt	304	316	316L
7	螺母 Nut	304	316	316L
8	阀盖 Bonnet	CF8	CF8M	CF3M
9	阀杆 Stem	304	316	316L
10	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
11	锁紧螺母 Lock nut	304	316	316L
12	压套 Pressing sleeve	304	316	316L
13	压板 Plate	304	316	316L

注：1、以上为标准配置结构，阀座为金属密封，阀座为软密封选用Ⅵ级可选件。可提供喷焊硬质合金的阀内件。2、常规材质为碳钢和不锈钢两种，可根据用户现场条件订制特殊材质控制阀产品。

Note: 1. the above is of standard configuration structure; the valve seat is metal seal, and the valve seat is soft seal, grade Ⅵ optional. It can provide valve trim of spray welding cemented carbide.2. The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.

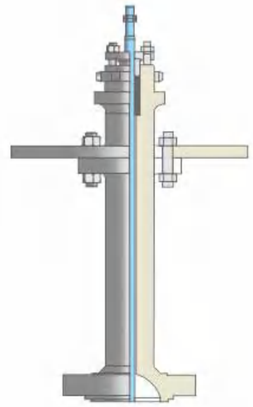
TOP-GUIDE TYPE POROUSCAGE CONTROL VALVE
顶部导向型多孔笼式调节阀

可应用于不同工况的结构 Can be Applied to Different Conditions of the Structure



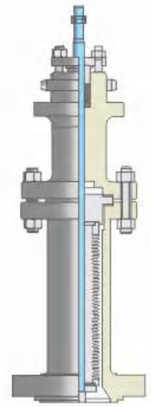
高温型：
适用介质：蒸汽、热油等
适用温度：+250~ 550℃

High temperature type:
Applicable media: steam, hot oil, etc.
Applicable temperature: +250~550℃



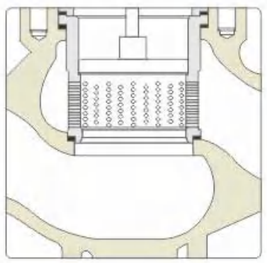
低温型：
适用介质：液氮、液氧等
适用温度：-70 -196℃

Low temperature type:
Applicable medium: liquid nitrogen, liquid oxygen, etc.
Applicable temperature:-70~-196℃



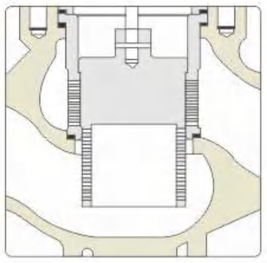
波纹管型：
适用介质：易燃易爆气体、有毒液体、腐蚀性介质等

Bellows type:
Applicable medium: flammable and explosive gas, toxic liquid, corrosive medium, etc.



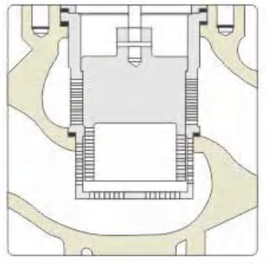
笼式套筒结构：
适用于压差较大且介质干净无杂质的场合。对介质要求较高。

Cage sleeve structure:
It is suitable for occasions with large pressure difference and clean medium without impurities. High condition is required for medium.



单级笼式结构：
适用于高温高压且工作压力≤PN16.0MPa 的场合中。对介质要求较高。

Single-stage cage structure:
It is suitable for the conditions of high temperature, high pressure, and working pressure ≤ PN16.0MPa. High condition is required for medium.



二级笼式结构：
适用于高温高压且工作压力≤PN32.0MPa 的场合。非常适合阀前后压差较大的工矿中。对介质要求较高。

Double-stage cage structure:
It is suitable for the conditions of high temperature, high pressure, and working pressure ≤ PN32.0MPa. It is very suitable for the large pressure difference between the front and back of the valve. High condition is required for medium.

规格参数 Specification Parameter

阀座直径（mm） Inside diameter（in）			25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12
流量系数（Kv） Flow coefficient	直线 Straight line		10	16	25	40	63	100	160	250	400	630	1000	1400
	等百分比 Percent		11	17.6	27.5	44	69	110	176	275	440	690	1100	1500
口径(DN) Diameter(in)		行程 Travel	可选流量系数Cv(★标准型 •推荐 ○定制) Optional flow coefficient Cv(★ standard type •Recommended ○Customized)											
25	1	16mm	★											
32	1-1/4		○	★										
40	1-1/2	25mm	○	•	★									
50	2		○	•	•	★								
65	2-1/2			○	○	○	★							
80	3	40mm		○	○	○	•	★						
100	4			○	○	○	•	•	★					
125	5						○	○	○	★				
150	6	60mm						○	○	•	★			
200	8							○	○	•	•	★		
250	10	100mm								○	•	•	★	
300	12										○	•	•	★
气动执行机构 Pneumatic actuator			HA/B-23				HA/B-34			HA/B-45			HA/B-56	
			350cm²				560cm²			900cm²			1400cm²	
作用方式 Mode of action	弹簧范围 Spring range		金属密封允许压差（MPa） Allowable differential pressure (MPa)											
气开式 Gas opening	20-100KPa		3.0	2.25	2.25	1.95	2.36	2.04	1.67	1.41	1.41	1.14	0.65	0.55
	40-200KPa		6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	1.55	1.4
	80-240KPa		6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	4.08	4.08
气关式 Gas off	20-100KPa		1.5	1.13	1.13	0.98	1.18	1.02	0.84	0.71	0.71	0.57	0.65	0.55
	40-200KPa		4.5	3.38	3.38	2.93	3.54	3.06	2.51	2.12	2.12	1.71	0.8	1.55
	80-240KPa		6.4	6.4	6.4	6.4	6.4	6.4	5.85	4.94	4.94	4.0	4.08	3.65
电动执行机构 Electric actuator			金属密封允许压差（MPa） Allowable differential pressure (MPa)											
推力（N） Thrust (N)	800		6.4	6.4										
	2000		6.4	6.4	6.4	5.1								
	3000		6.4	6.4	6.4	6.4	5.7	4.76						
	5000				6.4	6.4	6.4	6.4	6.25					
	6500								6.4	6.4	4.23	3.23		
	10000										6.4	6.1	3.31	2.07
	16000												6.0	4.0

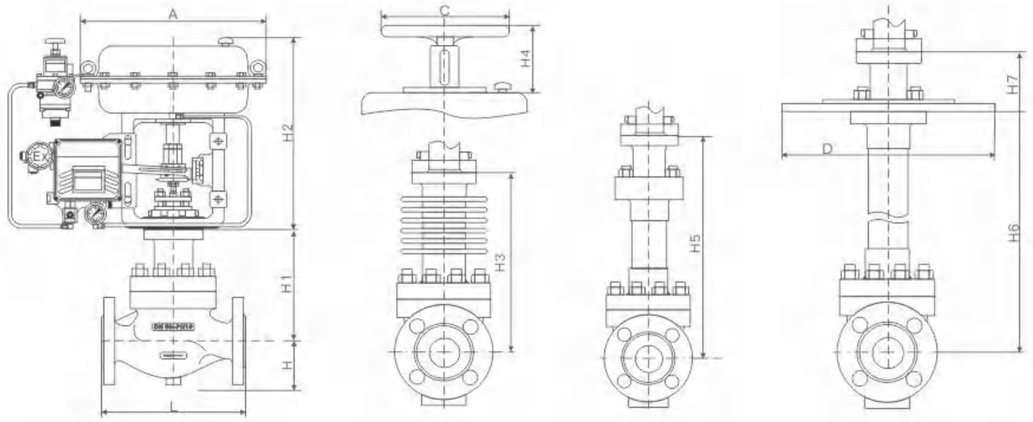
TOP-GUIDE TYPE POROUSCAGE CONTROL VALVE
顶部导向型多孔笼式调节阀

执行机构参数 Actuator parameters

型号 Model / 形式 Form	气动薄膜执行机构 Pneumatic film actuator	电子式电动执行机构 Electronic electric actuator
	ZH23~ZH56	3810L、RSL
	多弹簧型 Multi spring	智能一体化型 Intelligent integrated type
用途 Purpose	调节 、开关 Adjustment, switch	调节 Regulating
驱动 Drive	气压 （弹簧范围）Air pressure (spring range) 140(20~100) KPa G 240(40~200) KPa G 280(80~240) KPa G	电源 Power supply：AC 220 V ±10% 50Hz 电源 Power supply：AC 380 V ±10% 50Hz
接头 Joint	Rc 1/4	普通型 Common type：2-PF(G1/2") 隔爆型 Flameproof type：2-PF(G3/4")
正作用 Positive action	气压增加推动阀门关闭 Air pressure increases to push the valve to close	控制信号增加推动阀门关闭 Control signal increases to push the valve to close
反作用 Reaction	气压增加推动阀门开启 Air pressure increases to push the valve open	控制信号增加推动阀门开启 Control signal increases to push the valve open
控制信号 Control signal	4~20mA.DC（带定位器 With positioner）	输入输出 Input output 4~20mA.DC
滞后 Lag	≤1% FS（带定位器 With positioner）	≤0.8% FS
直线性 Linearity	2% FS（带定位器 With positioner）	≤±1% FS
环境温度 Ambient temperature	-10~+70℃	
表面涂层 Surface coating	阀体 Body：黑色磷化处理 Black phosphating treatment 执行器 Actuator：丙烯酸聚氨酯漆 Acrylic polyurethane paint	
选配附件 Optional accessories	阀门定位器、手轮、电磁阀、行程开关、保位阀 Optional accessories,Hand wheel,Magnetic valve, Travel switch,Lock up valve	加热器 Heater

主要性能参数 Main Performance Parameters

流量特性 Flow characteristics		等百分比 Equal percentage、直线 Straight line	
可调范围 Adjustable range		50:1	
额定Cv值 Rated Cv value		等百分比 TEqual percentage：10~1400 直线 Straight line：11~1500	
允许泄漏量 Allowable leakage		硬密封：Ⅳ级（0.01%阀额定流量）；软密封：V级 Hard seal: level-Ⅳ (0.01% rated flow of valve); Soft seal: Level-V	
性能指标 Performance index	驱动方式 Driving mode	气动 Pneumatic	电动 Electric
	基本误差 Intrinsic error%	±1.0	±1.0
	回差 Return difference%	≤1.0	≤1.0
	死区 Dead zone %	≤0.6	≤1.0
	始终点偏差 Constant point deviation%	±2.5	±2.5
	额定行程偏差 Rated stroke deviation%	≤2.5	≤2.5

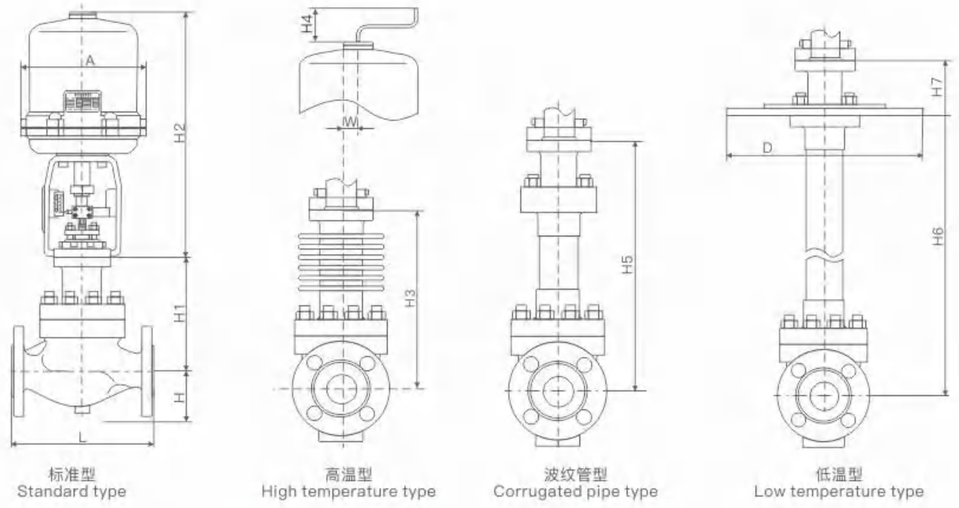


标准型 Standard type　高温型 High temperature type　波纹管型 Corrugated pipe type　低温型 Low temperature type

气动调节阀连接尺寸 Connection Dimension of Pneumatic Control Valve

	DN / In	20 / 3/4	25 / 1	32 / 1-1/4	40 / 1-1/2	50 / 2	65 / 2-1/2	80 / 3	100 / 4	125 / 5	150 / 6	200 / 8	250 / 10	300 / 12
L	PN16/25	181	184	200	222	254	276	298	352	410	451	600	650	700
	PN40	181	184	200	222	254	276	298	352	410	451	600	670	770
	PN64	210	210	210	251	286	311	337	394	440	508	650	690	800
H	PN16/25	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158	170	195	230
	PN40	52.5	57.5	75	75	82.5	92.5	100	117.5	150	167.5	187.5	205	245
	PN64	65	40	85	85	90	102.5	107.5	125	172.5	195	207.5	230	260
H1		132	132	158	170	179	214	221	234	270	294	331	390	450
H2		285	285	285	285	285	360	360	360	470	470	470	580	580
H3		208	208	224	228	228	334	334	342	408	453	482	520	550
H4		153	153	153	153	153	181	181	181	247	247	247	/	/
H5		336	338	402	402	405	627	628	635	698	702	728	755	790
H6		700（根据实际温度定制 According to the actual temperature）												
H7		88	88	88	88	88	95	95	95	95	110	110	140	140
D		310	310	355	355	390	430	465	520	585	660	770	890	950
A		200	200	200	200	200	240	240	240	350	350	350	450	450
C		282	282	282	282	282	360	360	360	470	470	470	650	650
法兰 Flange		可执行：GB 、HG、JB、DIN、JIS、ANSI 等相应标准 Executable: GB、HG、JB、DIN、JIS、ANSI Corresponding standard												

注：1、表中尺寸为不带附件标准数据，附件尺寸根据实际配置计算。
2、由于产品的技术创新与改进，尺寸可能会有所变化，最新资料请联系本公司技术部。
Note: 1. The dimensions in the table are standard data without accessories. The dimensions of accessories are calculated according to the actual configuration. 2. Due to the technical innovation and improvement of the product, the size may change. Please contact the technical department of the Company for the latest information.



标准型 Standard type　高温型 High temperature type　波纹管型 Corrugated pipe type　低温型 Low temperature type

电动调节阀连接尺寸 Connection Dimension of Electric Control Valve

	DN / In	20 / 3/4	25 / 1	32 / 1-1/4	40 / 1-1/2	50 / 2	65 / 2-1/2	80 / 3	100 / 4	125 / 5	150 / 6	200 / 8	250 / 10	300 / 12
L	PN16/25	181	184	200	222	254	276	298	352	410	451	600	640	880
	PN40	181	184	200	222	254	276	298	352	410	451	600	640	880
	PN64	210	210	210	251	286	311	337	394	440	508	650	810	950
H	PN16/25	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158	170	195	230
	PN40	52.5	57.5	75	75	82.5	92.5	100	117.5	150	167.5	187.5	205	245
	PN64	65	40	85	85	90	102.5	107.5	125	172.5	195	207.5	230	260
H1		132	132	158	170	179	214	221	234	270	294	331	390	450
H2		373	373	456	456	538	538	548	548	725	725	725	795	795
H3		208	208	224	228	228	334	334	342	408	453	482	520	550
H4		90	90	90	90	90	90	90	90	90	90	90	90	90
H5		336	338	402	402	405	627	628	635	698	702	728	755	790
H6		700（根据实际温度定制 According to the actual temperature）												
H7		88	88	88	88	88	95	95	95	95	110	110	140	140
D		310	310	355	355	390	430	465	520	585	660	770	890	950
A		225	225	225	255	255	255	255	255	310	310	310	350	350
法兰 Flange		可执行：GB、HG、JB、DIN、JIS、ANSI等相应标准 Executable: GB, HG, JB, DIN, JIS, ANSI Corresponding standard												

注：1、表中尺寸为不带附件标准数据，附件尺寸根据实际配置计算。
2、由于产品的技术创新与改进，尺寸可能会有所变化，最新资料请联系本公司技术部。
Note: 1. The dimensions in the table are standard data without accessories. The dimensions of accessories are calculated according to the actual configuration. 2. Due to the technical innovation and improvement of the product, the size may change. Please contact the technical department of the Company for the latest information.

HIGH-TEMPERATURE CONTROL
VALVE OF GREASE INJECTION SEAL
注脂密封高温调节阀

产品概述 Product Overview

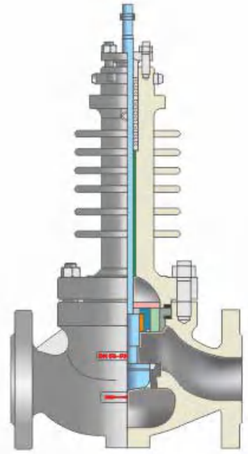
本公司生产的系列高温注脂型调节阀可广泛用于控制各种不同压力和温度的流体，阀体结构紧凑，流体通道呈S流线型，具有压降损失小流通量大，可调范围广，流量特性精度高等特点。阀门采用平衡式阀塞结构，具有阀稳定性好，不易震动，噪音低，对温度敏感性小。广泛使用于流量大、温度高、泄漏量要求不严格的场合。

The series of high-temperature control valves of grease injection type produced by the company can be widely used to control various kinds of fluids with different pressures and temperatures. The valve body is compact and the flow channel is S-streamlined, with the characteristics of small pressure drop loss and large flux, wide adjustable range and high accuracy of flow characteristics. The balanced plug structure, adopted for the valve, has the advantages of good valve stability, low vibration, low noise and low temperature sensitivity. It is widely used in occasions of large flow, high temperature, and leakage requirements not strict.

产品特点 Products Features

阀芯具有丰富的Cv值，阀座关闭密封性能符合调节阀国际行业标准，调节阀配用气动或者电动执行机构，结构紧凑、输出力大，更适用于要求可靠性及关闭性能高的高温场合下的控制使用。增加密封注脂结构及双层密封在用于蒸汽、高温的工况下，有明显增强阀杆密封填料的使用寿命及密封性能。

The plug has rich Cv value, and the sealing performance of the valve seat is in line with the international industry standard of the regulating valve. The regulating valve is equipped with pneumatic or electric actuator, with compact structure and large output force, which is more suitable for the control use in the high temperature situation requiring high reliability and closing performance. The service life and sealing performance of the valve stem packing can be significantly enhanced by adding the structure of sealing grease and double-layer sealing when it is used in steam and high temperature conditions.



技术参数 Technical Parameters

阀体形式 Body type	直通S型铸造阀 Straight-through S-type cast valve
阀芯形式 Plug type	平衡式套筒结构阀芯 Balanced sleeve structure plug
公称通径 Nominal diameter	DN15~300mm；NPS 1/2"~12"
公称压力 Nominal pressure	PN1.6~6.4MPa;CLASS 150~300LB
适用温度 Applicable temperature	+250~+650℃（按工矿可选）(Optional according to working conditions)
连接形式 Type of connection	法兰、焊接、螺纹(适用于1"内) Flange, welding, thread (applicable within 1")
法兰距 Flange distance	符合IEC 60534 According to IEC 60534
压盖形式 Gland type	螺栓压紧式 Bolt compression type
密封垫片 Sealing gasket	金属石墨缠绕垫片 Metal graphite spiral wound gasket
填 料 Packing	柔性石墨 Flexible graphite
执行器 Actuator	气动执行器、电动执行器 Pneumatic actuator, electric actuator

设计特点 Design features

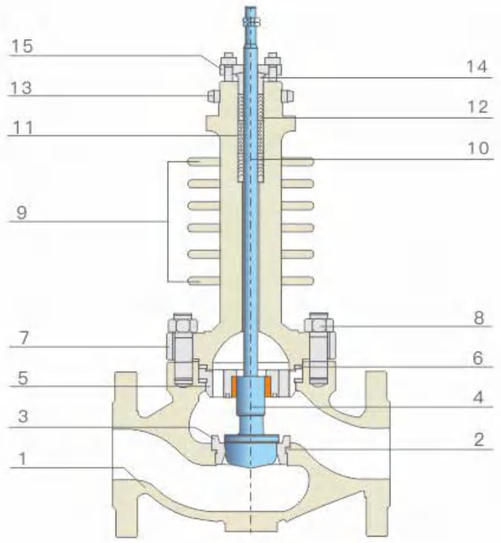
1、采用顶部导向结构
2、流量系数大，可调范围广
3、双密封结构，密封更可靠
4、增加散热片，散热功能强
5、带注脂油槽，填料寿命更长
6、主要应用于高温蒸汽、热油等场合

1. With top guide structure
2. Large flow coefficient and wide adjustable range
3. Double sealing structure, more reliable sealing
4. With heat sink, strong heat dissipation function
5. With grease injection tank, longer packing life
6. Mainly used in high temperature steam, hot oil and other occasions

结构与材料 Structure and Materials

本体材质为碳钢 Body Material Is Carbon Steel

1	阀体 Body	WCB	LCB	WC9
2	垫片 Gasket	316+石墨 Graphite / FTFE		
3	阀座 Seat	304	304	304
4	阀芯 Plug	304	304	304
5	导向套 Guide sleeve	304	304	304
6	垫片 Gasket	316+石墨 Graphite / FTFE		
7	阀盖 Bonnet	WCB	LCB	WC9
8	螺柱螺母 Bolt and Nut	304	304	304
9	散热片 Heat sink	25	25	25
10	阀杆 Stem	304	304	304
11	储油环 Oil storage ring	304	304	304
12	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
13	锁紧螺母 Lock nut	304	304	304
14	压套 Pressing sleeve	304	304	304
15	压板 Plate	304	304	304



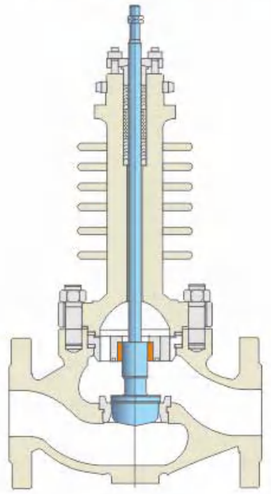
本体材质为不锈钢 Body Material Is Stainless Steel

1	阀体 Body	CF8	CF8M	CF3M
2	垫片 Gasket	316+石墨 Graphite / FTFE		
3	阀座 Seat	304	316	316L
4	阀芯 Plug	304	316	316L
5	导向套 Guide sleeve	304	316	316L
6	垫片 Gasket	316+石墨 Graphite / FTFE		
7	阀盖 Bonnet	CF8	CF8M	CF3M
8	螺柱螺母 Bolt and Nut	304	316	316L
9	散热片 Heat sink	304	316	316L
10	阀杆 Stem	304	316	316L
11	储油环 Oil storage ring	304	316	316L
12	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
13	锁紧螺母 Lock nut	304	316	316L
14	压套 Pressing sleeve	304	316	316L
15	压板 Plate	304	316	316L

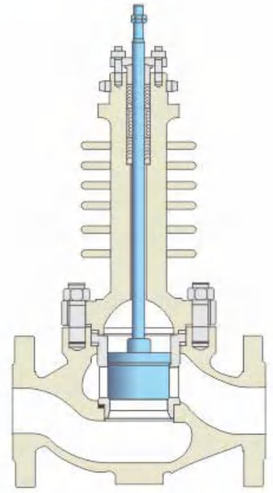
注：1、以上为标准配置结构，阀座为金属密封，阀座为软密封选用VI级可选件。可提供喷焊硬质合金的阀内件。2、常规材质为碳钢和不锈钢两种，可根据用户现场条件订制特殊材质控制阀产品。

Note: 1. the above is of standard configuration structure; the valve seat is metal seal, and the valve seat is soft seal, grade VI optional. It can provide valve trim of spray welding cemented carbide.2. The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.

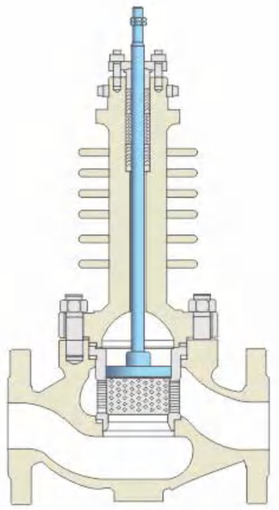
可应用于不同工况的结构 Can be Applied to Different Conditions of the Structure



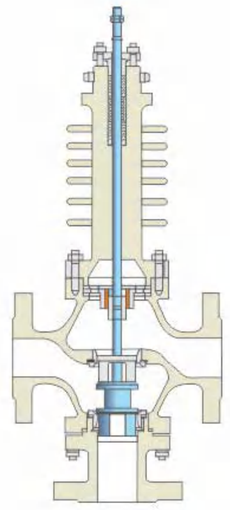
高温单座阀结构
High temperature single seat valve structure



高温套筒阀结构
High temperature sleeve valve structure



高温笼式套筒结构
High temperature cage type sleeve structure



高温三通阀结构
High temperature three-way valve structure

规格参数 Specification Parameter

阀座直径（mm） Inside diameter（in）			25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12
流量系数（Kv） Flow coefficient		直线 Straight line	10	16	25	40	63	100	160	250	400	630	1000	1400
		等百分比 Percent	11	17.6	27.5	44	69	110	176	275	440	690	1100	1500
口径(DN) Diameter(in)		行程 Travel	可选流量系数Cv(★标准型 •推荐 ○定制) Optional flow coefficient Cv(★ standard type •Recommended ○Customized)											
25	1	16mm	★											
32	1-1/4		○	★										
40	1-1/2	25mm	○	•	★									
50	2		○	•	•	★								
65	2-1/2			○	○	○	★							
80	3	40mm		○	○	○	•	★						
100	4			○	○	○	•	•	★					
125	5						○	○	○	★				
150	6	60mm						○	○	•	★			
200	8							○	○	•	•	★		
250	10	100mm								○	•	•	★	
300	12										○	•	•	★
气动执行机构 Pneumatic actuator			HA/B-23				HA/B-34			HA/B-45			HA/B-56	
			350cm²				560cm²			900cm²			1400cm²	
作用方式 Mode of action	弹簧范围 Spring range		金属密封允许压差（MPa） Allowable differential pressure (MPa)											
气开式 Gas opening	20-100KPa		3.0	2.25	2.25	1.95	2.36	2.04	1.67	1.41	1.41	1.14	0.65	0.55
	40-200KPa		6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	1.55	1.4
	80-240KPa		6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	4.08	4.08
气关式 Gas off	20-100KPa		1.5	1.13	1.13	0.98	1.18	1.02	0.84	0.71	0.71	0.57	0.65	0.55
	40-200KPa		4.5	3.38	3.38	2.93	3.54	3.06	2.51	2.12	2.12	1.71	0.8	1.55
	80-240KPa		6.4	6.4	6.4	6.4	6.4	6.4	5.85	4.94	4.94	4.0	4.08	3.65
电动执行机构 Electric actuator			金属密封允许压差（MPa） Allowable differential pressure (MPa)											
推力（N） Thrust (N)	800		6.4	6.4										
	2000		6.4	6.4	6.4	5.1								
	3000		6.4	6.4	6.4	6.4	5.7	4.76						
	5000				6.4	6.4	6.4	6.4	6.25					
	6500								6.4	6.4	4.23	3.23		
	10000										6.4	6.1	3.31	2.07
	16000												6.0	4.0

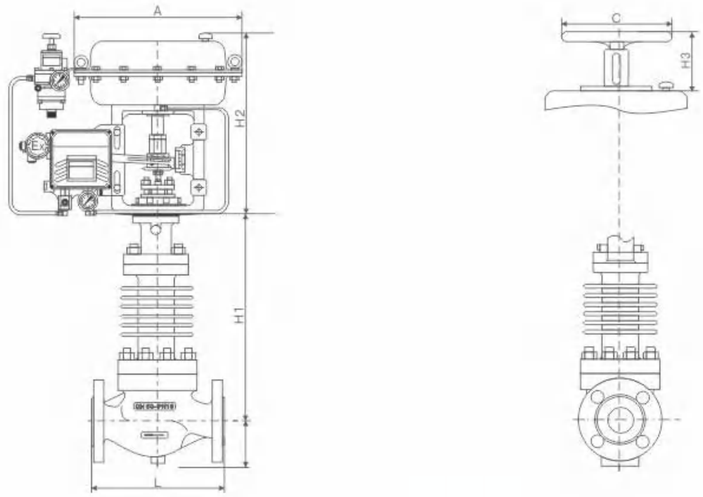
HIGH-TEMPERATURE CONTROL VALVE OF GREASE INJECTION SEAL
注脂密封高温调节阀

执行机构参数 Actuator parameters

型号 Model / 形式 Form	气动薄膜执行机构 Pneumatic film actuator	电子式电动执行机构 Electronic electric actuator
	ZH22~ZH56	3810L、RSL
	多弹簧型 Multi spring	智能一体化型 Intelligent integrated type
用途 Purpose	调节 、开关 Adjustment, switch	调节 Regulating
驱动 Drive	气压 （弹簧范围） Air pressure (spring range) 140(20~100) KPa G 240(40~200) KPa G 280(80~240) KPa G	电源 Power supply：AC 220 V ±10% 50Hz 电源 Power supply：AC 380 V ±10% 50Hz
接头 Joint	Rc 1/4	普通型 Common type：2-PF(G1/2") 隔爆型 Flameproof type：2-PF(G3/4")
正作用 Positive action	气压增加推动阀门关闭 Air pressure increases to push the valve to close	控制信号增加推动阀门关闭 Control signal increases to push the valve to close
反作用 Reaction	气压增加推动阀门开启 Air pressure increases to push the valve open	控制信号增加推动阀门开启 Control signal increases to push the valve open
控制信号 Control signal	4~20mA.DC（带定位器 With positioner）	输入输出 Input output 4~20mA.DC
滞后 Lag	≤1% FS（带定位器 With positioner）	≤0.8% FS
直线性 Linearity	2% FS（带定位器 With positioner）	≤±1% FS
环境温度 Ambient temperature	-10~+70℃	
表面涂层 Surface coating	阀体 Body：黑色磷化处理 Black phosphating treatment 执行器 Actuator：丙烯酸聚氨酯漆 Acrylic polyurethane paint	
选配附件 Optional accessories	阀门定位器、手轮、电磁阀、行程开关、保位阀 Optional accessories,Hand wheel,Magnetic valve, Travel switch,Lock up valve	加热器 Heater

主要性能参数 Main Performance Parameters

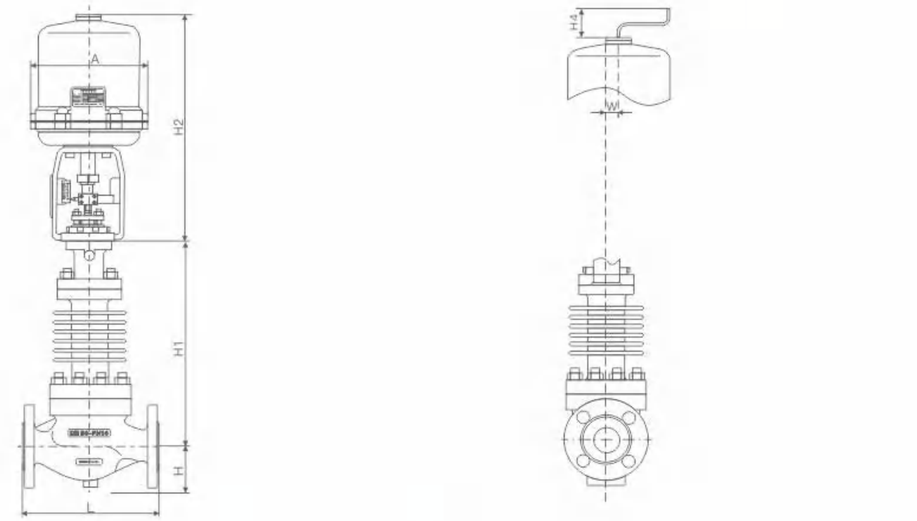
流量特性 Flow characteristics		等百分比 Equal percentage、直线 Straight line	
可调范围 Adjustable range		50:1	
额定Cv值 Rated Cv value		等百分比 TEqual percentage：10~1400 直线 Straight line：11~1500	
允许泄漏量 Allowable leakage		硬密封：Ⅳ级（0.01%阀额定流量）；软密封：V级 Hard seal: level-Ⅳ (0.01% rated flow of valve); Soft seal: Level-V	
性能指标 Performance index	驱动方式 Driving mode	气动 Pneumatic	电动 Electric
	基本误差 Intrinsic error%	±1.0	±1.0
	回差 Return difference%	≤1.0	≤1.0
	死区 Dead zone %	≤0.6	≤1.0
	始终点偏差 Constant point deviation%	±2.5	±2.5
	额定行程偏差 Rated stroke deviation%	≤2.5	≤2.5



气动调节阀连接尺寸 Connection Dimension of Pneumatic Control Valve

DN / In		20 / 3/4	25 / 1	32 / 1-1/4	40 / 1-1/2	50 / 2	65 / 2-1/2	80 / 3	100 / 4	125 / 5	150 / 6	200 / 8	250 / 10	300 / 12
L	PN16/25	181	184	200	222	254	276	298	352	410	451	600	650	700
	PN40	181	184	200	222	254	276	298	352	410	451	600	670	770
	PN64	210	210	210	251	286	311	337	394	440	508	650	690	800
H	PN16/25	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158	170	195	230
	PN40	52.5	57.5	75	75	82.5	92.5	100	117.5	150	167.5	187.5	205	245
	PN64	65	40	85	85	90	102.5	107.5	125	172.5	195	207.5	230	260
H1		208	208	224	228	228	334	334	342	408	453	482	520	550
气动 Pneumatic	H2	285	285	285	285	285	360	360	360	470	470	470	580	580
	H3	153	153	153	153	153	181	181	181	247	247	247	/	/
	C	282	282	282	282	282	360	360	360	470	470	470	650	650
	A	200	200	200	200	200	240	240	240	350	350	350	450	450
法兰 Flange		可执行：GB、HG、JB、DIN、JIS、ANSI等相应标准 Executable: GB, HG, JB, DIN, JIS, ANSI Corresponding standard												

注：1、表中尺寸为不带附件标准数据，附件尺寸根据实际配置计算。
2、由于产品的技术创新与改进，尺寸可能会有所变化，最新资料请联系本公司技术部。
Note: 1. The dimensions in the table are standard data without accessories. The dimensions of accessories are calculated according to the actual configuration. 2. Due to the technical innovation and improvement of the product, the size may change. Please contact the technical department of the Company for the latest information.



电动调节阀连接尺寸 Connection Dimension of Electric Control Valve

DN / In		20 / 3/4	25 / 1	32 / 1-1/4	40 / 1-1/2	50 / 2	65 / 2-1/2	80 / 3	100 / 4	125 / 5	150 / 6	200 / 8	250 / 10	300 / 12
L	PN16/25	181	184	200	222	254	276	298	352	410	451	600	650	700
	PN40	181	184	200	222	254	276	298	352	410	451	600	670	770
	PN64	210	210	210	251	286	311	337	394	440	508	650	690	800
H	PN16/25	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158	170	195	230
	PN40	52.5	57.5	75	75	82.5	92.5	100	117.5	150	167.5	187.5	205	245
	PN64	65	40	85	85	90	102.5	107.5	125	172.5	195	207.5	230	260
H1		208	208	224	228	228	334	334	342	408	453	482	520	550
电动 Electric	H2	373	373	456	456	538	538	548	548	725	725	725	795	795
	H4	90	90	90	90	90	90	90	90	90	90	90	90	90
	A	225	225	225	225	255	255	255	255	310	310	310	350	350
	W	28	28	45	45	45	45	60	60	60	60	60	60	60
法兰 Flange		可执行：GB、HG、JB、DIN、JIS、ANSI等相应标准 Executable: GB, HG, JB, DIN, JIS, ANSI Corresponding standard												

注：1、表中尺寸为不带附件标准数据，附件尺寸根据实际配置计算。
2、由于产品的技术创新与改进，尺寸可能会有所变化，最新资料请联系本公司技术部。
Note: 1. The dimensions in the table are standard data without accessories. The dimensions of accessories are calculated according to the actual configuration. 2. Due to the technical innovation and improvement of the product, the size may change. Please contact the technical department of the Company for the latest information.

THREE WAY SHUNT AND CO-NFLUENCE CONTROL VALVE
三通分流合流调节阀

产品概述 Product Overview

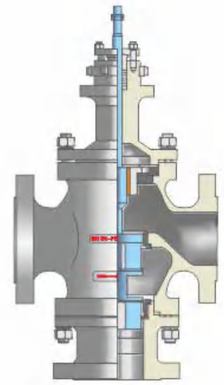
本公司生产的系列三通调节阀有三通合流及三通分流两种作用方式，在某些场合可以代替两个二通阀和一个三通阀接管而得到广泛应用。实现对压力、流量、温度、液位等参数的调节，阀芯结构采用圆筒薄壁窗口，并采用阀芯侧面导向，稳定性好、不易产生震动、噪声低、允许使用压差大，连线简单等特点。

The series of three-way control valves produced by the company have two action modes, three-way confluence and three-way shunt, which can replace two two-way valves and a three-way valve connection in some occasions and are widely used. To realize the adjustment of pressure, flow, temperature, liquid level and other parameters, the valve core is subject to cylinder thin-wall window, and the side guide of valve core, which has the characteristics of good stability, difficulty in producing vibration, low noise, large allowable pressure difference, simple connection, etc.

产品特点 Products Features

三通分流合流调节阀整体具有动作灵敏、连线简单、流量大、体积小、调节精度高等特点。三通合流调节阀主要用于将两种流体混合成第三种流体；三通分流调节阀主要用于将一股流体分成两股流体。三通分流合流调节阀产品可代替两台互为开关的单、双座调节阀，用于液体、气体、蒸汽等介质的调节与控制。

The three-way shunt and confluence regulating valve is characterized by sensitive action, simple connection, large flow, small volume and high regulating accuracy. The three-way confluence regulating valve is mainly used to mix two kinds of fluids into the third one; the three-way shunt regulating valve is mainly used to divide one fluid into two streams. The three-way shunt and confluence control valve products can replace two sets of single and double seat control valves which are mutually switched and can be used for regulating and controlling liquid, gas, steam and other media.



技术参数 Technical Parameters

阀体形式 Body type	直通S型铸造阀 Straight-through S-type cast valve
阀芯形式 Plug type	柱塞式、套筒式 Body type: straight-through S-type cast valve
公称通径 Nominal diameter	DN20～300mm NPS 3/4"～12"
公称压力 Nominal pressure	PN1.6～10.0MPa；CLASS 150～600LB
适用温度 Applicable temperature	-196~+550℃（按工矿可选）(Optional according to working conditions)
连接形式 Type of connection	法兰、焊接、螺纹(适用于1"内) Flange, welding, thread (applicable within 1")
法兰距 Flange distance	符合IEC 60534 According to IEC 60534
压盖形式 Gland type	螺栓压紧式 Bolt compression type
密封垫片 Sealing gasket	金属石墨缠绕垫片 Metal graphite spiral wound gasket
填 料 Packing	聚四氟乙烯、柔性石墨 PTFE, flexible graphite
执行器 Actuator	气动执行器、电动执行器 Pneumatic actuator, electric actuator

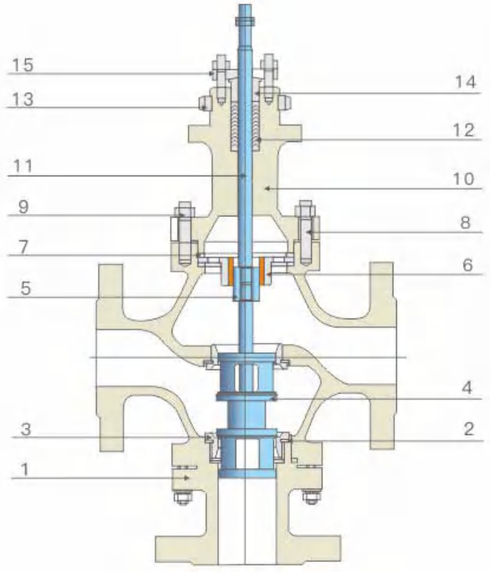
特殊规格 Special Specification

特殊检验 Special inspection	本体材料渗透探伤(PT)、射线探伤(RT)、流量曲线测试、低温测试 PT, RT, flow curve test, low temperature test
特殊处理 Special treatment	内件氮化处理、密封件喷涂硬质合金处理 Internal nitriding treatment, seal spraying cemented carbide treatment
特殊清洗 Special cleaning	完全禁油、脱脂处理 Complete oil prohibition and degreasing treatment
特殊规格 Special specification	特殊连接件、特殊气管、特殊材质接头、特殊涂层 Special connector, special gas pipe, special material joint, special coating
特殊尺寸 Special size	接照使用要求进行量身定制 Customized according to the use requirements
认证检验 Certification inspection	第三方认证检验报告 Third party certification inspection report

结构与材料 Structure and Materials

本体材质为碳钢 Body Material Is Carbon Steel

1	阀体 Body	WCB	LCB	WC9
2	垫片 Gasket	316+石墨 Graphite/FTFE		
3	阀座 Seat	304	304	304
4	阀芯 Plug	304	304	304
5	连接器 Connector	304	304	304
6	导向套 Guide sleeve	304	304	304
7	垫片 Gasket	316+石墨 Graphite/FTFE		
8	螺柱 Double-screw bolt	304	304	304
9	螺母 Nut	304	304	304
10	阀盖 Bonnet	WCB	LCB	WC9
11	阀杆 Stem	304	304	304
12	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
13	锁紧螺母 Lock nut	304	304	304
14	压套 Pressing sleeve	304	304	304
15	压板 Plate	304	304	304



本体材质为不锈钢 Body Material Is Stainless Steel

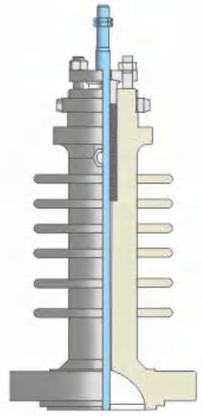
1	阀体 Body	CF8	CF8M	CF3M
2	垫片 Gasket	316+石墨 Graphite/FTFE		
3	阀座 Seat	304	316	316L
4	阀芯 Plug	304	316	316L
5	连接器 Connector	304	316	316L
6	导向套 Guide sleeve	304	316	316L
7	垫片 Gasket	316+石墨 Graphite/FTFE		
8	螺柱 Double-screw bolt	304	316	316L
9	螺母 Nut	304	316	316L
10	阀盖 Bonnet	CF8	CF8M	CF3M
11	阀杆 Stem	304	316	316L
12	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
13	锁紧螺母 Lock nut	304	316	316L
14	压套 Pressing sleeve	304	316	316L
15	压板 Plate	304	316	316L

注：1、以上为标准配置结构，阀座为金属密封，阀座为软密封选用VI级可选件。可提供喷焊硬质合金的阀内件。2、常规材质为碳钢和不锈钢两种，可根据用户现场条件订制特殊材质控制阀产品。

Note: 1. the above is of standard configuration structure; the valve seat is metal seal, and the valve seat is soft seal, grade VI optional. It can provide valve trim of spray welding cemented carbide.2. The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.

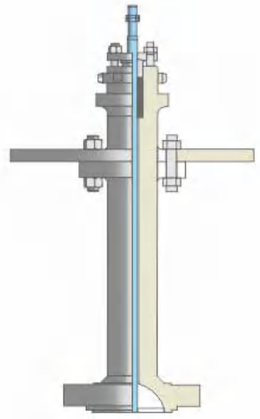
THREE WAY SHUNT AND CONFLUENCE CONTROL VALVE
三通分流合流调节阀

可应用于不同工况的结构 Can be Applied to Different Conditions of the Structure



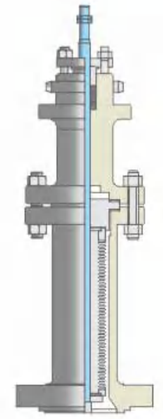
高温型：
适用介质：蒸汽、热油等
适用温度：+250~ 550℃

High temperature type:
Applicable media: steam, hot oil, etc.
Applicable temperature: +250~550℃



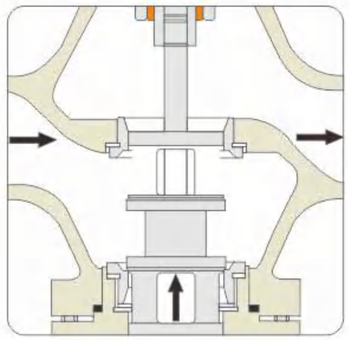
低温型：
适用介质：液氮、液氧等
适用温度：-70~-196℃

Low temperature type:
Applicable medium: liquid nitrogen, liquid oxygen, etc.
Applicable temperature:-70~-196℃

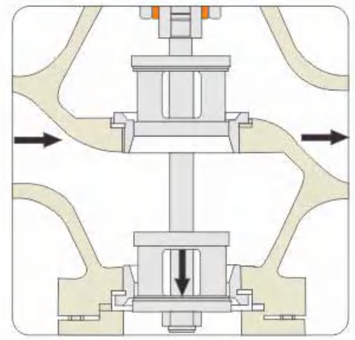


波纹管型：
适用介质：易燃易爆气体、有毒液体、腐蚀性介质等

Bellows type:
Applicable medium: flammable and explosive gas, toxic liquid, corrosive medium, etc.



三通合流调节阀 结构示意图
Three-way confluence control valve structure diagram



三通分流调节阀 结构示意图
Three-way shunt control valve structure diagram

规格参数 Specification Parameter

阀座直径（mm） Inside diameter（in）		25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12
流量系数（Kv） Flow coefficient		8.5	13	21	34	53	85	135	210	340	535	800	1280
口径(DN) Diameter(in)	行程 Travel	可选流量系数CV(★标准型 ●推荐) Optional flow coefficient CV(★ standard type ●Recommended)											
25	1	16mm	★										
32	1-1/4	25mm		★									
40	1-1/2			●	★								
50	2			●	●	★							
65	2-1/2	40mm					★						
80	3						●	★					
100	4						●	●	★				
125	5	60mm								★			
150	6									●	★		
200	8									●	●	★	
250	10	100mm									●	★	
300	12										●	●	★
气动执行机构 Pneumatic actuator		HA/B-23				HA/B-34			HA/B-45			HA/B-56	
		350cm²				560cm²			900cm²			1400cm²	
作用方式 Mode of action	弹簧范围 Spring range	金属密封允许压差（MPa） Allowable differential pressure (MPa)											
气开式 Gas opening	20-100KPa	0.7	0.44	0.28	0.18	0.17	0.11	0.07	0.07	0.05	0.03	0.05	0.03
	40-200KPa	2.14	1.31	0.84	0.53	0.51	0.33	0.21	0.22	0.15	0.09	0.11	0.07
	80-240KPa	4.99	3.05	1.95	1.25	1.18	0.78	0.5	0.51	0.36	0.21	0.21	0.15
气关式 Gas off	20-100KPa	2.14	0.87	0.56	0.35	0.34	0.22	0.14	0.15	0.1	0.06	0.05	0.03
	40-200KPa	6.4	5.86	3.64	2.3	2.21	1.43	0.91	0.95	0.66	0.37	0.11	0.07
	80-240KPa	6.4	6.4	5.04	3.18	3.06	1.98	1.26	1.32	0.92	0.52	0.21	0.15
电动执行机构 Electric actuator		金属密封允许压差（MPa） Allowable differential pressure (MPa)											
推力（N） Thrust（N）	800	1.52											
	2000	3.05	1.86	1.19	0.76								
	3000		2.79	1.79	1.14	1.13	0.6						
	5000		4.66	2.98	1.91	1.35	0.8	0.47					
	6500							0.57	0.39	0.26	0.16		
	10000								0.61	0.42	0.20	0.17	0.11
	16000								0.97	0.67	0.35	0.27	0.18

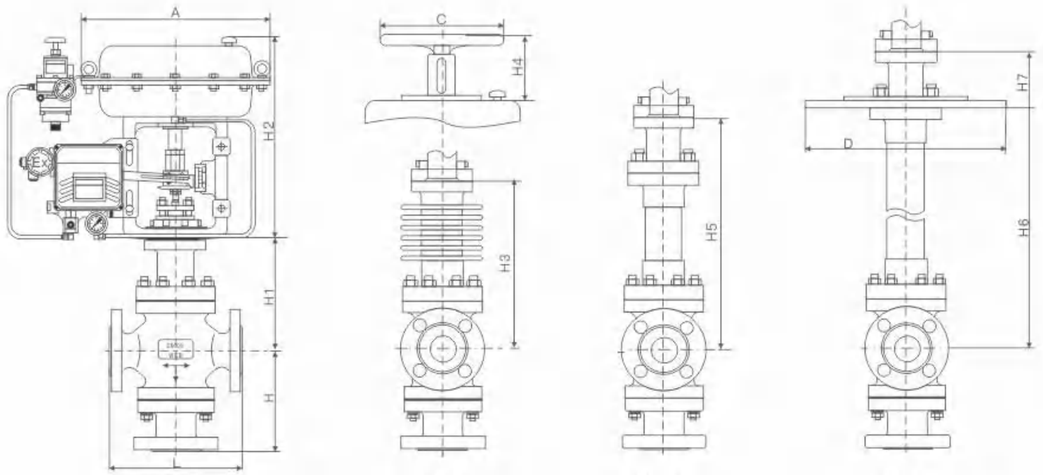
THREE WAY SHUNT AND CONFLUENCE CONTROL VALVE
三通分流合流调节阀

执行机构参数 Actuator parameters

形式 Form / 型号 Model	气动薄膜执行机构 Pneumatic film actuator	电子式电动执行机构 Electronic electric actuator
	ZH23~ZH56	3810L、RSL
	多弹簧型 Multi spring	智能一体化型 Intelligent integrated type
用途 Purpose	调节 、开关 Adjustment, switch	调节 Regulating
驱动 Drive	气压 （弹簧范围） Air pressure (spring range) 140(20~100) KPa G 240(40~200) KPa G 280(80~240) KPa G	电源 Power supply：AC 220 V ±10% 50Hz 电源 Power supply：AC 380 V ±10% 50Hz
接头 Joint	Rc 1/4	普通型 Common type：2-PF(G1/2") 隔爆型 Flameproof type：2-PF(G3/4")
正作用 Positive action	气压增加推动阀门关闭 Air pressure increases to push the valve to close	控制信号增加推动阀门关闭 Control signal increases to push the valve to close
反作用 Reaction	气压增加推动阀门开启 Air pressure increases to push the valve open	控制信号增加推动阀门开启 Control signal increases to push the valve open
控制信号 Control signal	4~20mA.DC（带定位器 With positioner）	输入输出 Input output 4~20mA.DC
滞后 Lag	≤1% Fs（带定位器 With positioner）	≤0.8% FS
直线性 Linearity	2% Fs（带定位器 With positioner）	≤±1% FS
环境温度 Ambient temperature	-10~+70℃	
表面涂层 Surface coating	阀体 Body：黑色磷化处理 Black phosphating treatment 执行器 Actuator：丙烯酸聚氨酯漆 Acrylic polyurethane paint	
选配附件 Optional accessories	阀门定位器、手轮、电磁阀、行程开关、保位阀 Optional accessories,Hand wheel,Magnetic valve, Travel switch,Lock up valve	加热器 Heater

主要性能参数 Main Performance Parameters

流量特性 Flow characteristics		直线 Straight line	
可调范围 Adjustable range		50:1	
额定Cv值 Rated Cv value		等百分比 Equal percentage：10~1400 直线 Straight line：11~1500	
允许泄漏量 Allowable leakage		硬密封：Ⅳ级（0.01%阀额定流量）；软密封：V级 hard seal: level-Ⅳ (0.01% rated flow of valve); Soft seal: Level-V	
性能指标 Performance index	驱动方式 Driving mode	气动 Pneumatic	电动 Electric
	基本误差 Intrinsic error%	±1.0	±1.0
	回差 Return difference%	≤1.0	≤1.0
	死区 Dead zone %	≤0.6	≤1.0
	始终点偏差 Constant point deviation%	±2.5	±2.5
	额定行程偏差 Rated stroke deviation%	≤2.5	≤2.5



标准型 Standard type　高温型 High temperature type　波纹管型 Corrugated pipe type　低温型 Low temperature type

气动调节阀连接尺寸 Connection Dimension of Pneumatic Control Valve

	DN / In	20 / 3/4	25 / 1	32 / 1-1/4	40 / 1-1/2	50 / 2	65 / 2-1/2	80 / 3	100 / 4	125 / 5	150 / 6	200 / 8	250 / 10	300 / 12
L	PN16/40	160	160	180	200	230	290	310	350	400	480	600	670	770
	PN64/100	230	230	260	260	300	340	380	430	500	550	650	752	819
H	PN16/40	140	140	150	160	180	200	222	230	270	280	306	474	584
	PN64/100	150	160	170	180	200	220	240	260	300	322	380	495	605
H1		155	155	175	180	200	235	250	260	330	350	420	530	680
H2		285	285	285	285	285	360	360	360	470	470	470	580	580
H3		208	208	224	228	228	334	334	342	408	453	482	520	550
H4		153	153	153	153	153	181	181	181	247	247	247	/	/
H5		336	338	402	402	405	627	628	635	698	702	728	755	790
H6		700（根据实际温度定制 According to the actual temperature）												
H7		88	88	88	88	88	95	95	95	95	110	110	140	140
D		310	310	355	355	390	430	465	520	585	660	770	890	950
A		200	200	200	200	200	240	240	240	350	350	350	450	450
C		282	282	282	282	282	360	360	360	470	470	470	650	650
法兰 Flange		可执行：GB、HG、JB、DIN、JIS、ANSI等相应标准 Executable: GB, HG, JB, DIN, JIS, ANSI Corresponding standard												

注：1、表中尺寸为不带附件标准数据，附件尺寸根据实际配置计算。
2、由于产品的技术创新与改进，尺寸可能会有所变化，最新资料请联系本公司技术部。
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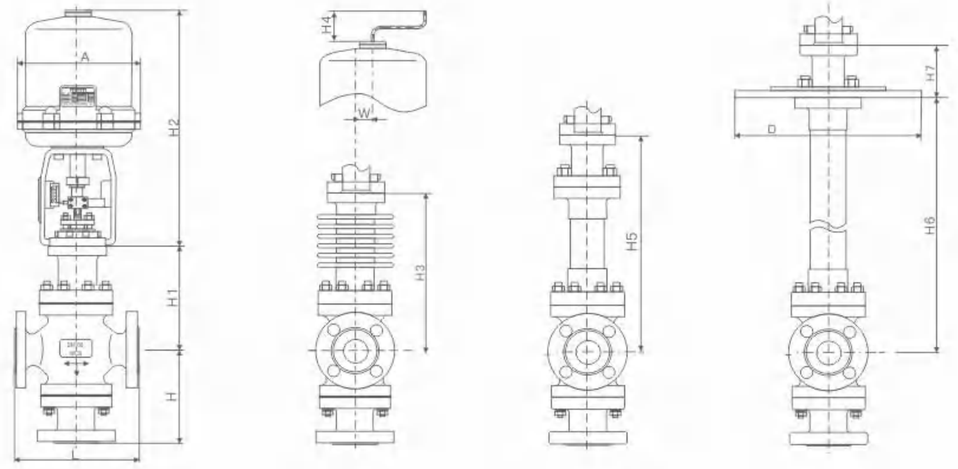

标准型 Standard type　高温型 High temperature type　波纹管型 Corrugated pipe type　低温型 Low temperature type

电动调节阀连接尺寸 Connection Dimension of Electric Control Valve

	DN / In	20 / 3/4	25 / 1	32 / 1-1/4	40 / 1-1/2	50 / 2	65 / 2-1/2	80 / 3	100 / 4	125 / 5	150 / 6	200 / 8	250 / 10	300 / 12
L	PN16/40	160	160	180	200	230	290	310	350	400	480	600	670	770
	PN64/100	230	230	260	260	300	340	380	430	500	550	650	752	819
H	PN16/40	140	140	150	160	180	200	222	230	270	280	306	474	584
	PN64/100	150	160	170	180	200	220	240	260	300	322	380	495	605
H1		155	155	175	180	200	235	250	260	330	350	420	530	680
H2		373	373	456	456	538	538	548	548	725	725	725	795	795
H3		208	208	224	228	228	334	334	342	408	453	482	520	550
H4		90	90	90	90	90	90	90	90	90	90	90	90	90
H5		336	338	402	402	405	627	628	635	698	702	728	755	790
H6		700（根据实际温度定制 According to the actual temperature）												
H7		88	88	88	88	88	95	95	95	95	110	110	140	140
D		310	310	355	355	390	430	465	520	585	660	770	890	950
A		225	225	225	255	255	255	255	255	310	310	310	350	350
法兰 Flange		可执行：GB、HG、JB、DIN、JIS、ANSI等相应标准 Executable: GB, HG, JB, DIN, JIS, ANSI Corresponding standard												

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PTFE LINING ANTI-CORRO-SION CONTROL VALVE
内衬PTFE耐腐调节阀

产品概述 Product Overview

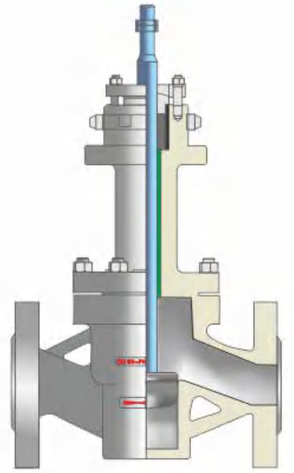
本公司生产的系列内衬PTFE耐腐调节阀，接触介质部位采用高压注塑工艺，内部衬有聚四氟乙烯耐腐材料，可耐腐蚀及耐老化功能。如：盐酸、硫酸、硝酸、氢氟酸等，又采用聚四氟乙烯波纹管密封，广泛应用于各种工艺中对酸、碱等强腐蚀介质以及有毒易挥发等气体、液体介质的过程控制。

The series of PTFE lining anti-corrosion control valve is produced by the company. High pressure injection molding process is adopted for the contact medium part; and its internal lining is made of PTFE corrosion- resistant material, which can resist corrosion and aging by the media, such as hydrochloric acid, sulfuric acid, nitric acid, hydrofluoric acid, etc. The valve is sealed with PTFE bellows, and widely used in the process control of acid, alkali and other strong corrosive media, as well as toxic and volatile gas and liquid media in various processes.

产品特点 Products Features

该系列内衬PTFE耐腐调节阀，采用阀体与内件全部衬氟结构，有效阻隔了腐蚀介质对阀门中金属材质的腐蚀。金属阀体内腔采用齿式加工处理。使内衬材料完全与金属接合，延长内衬材料的使用寿命与性能。阀杆密封可采用F46波纹管密封与PTFE填料两种组合密封，完全消除了介质从阀杆出向外漏的可能。不平衡式全衬结构特别针对低压常温工况下极具腐蚀性的介质使用。

The series of PTFE lining anti-corrosion control valve is of the fluorine lining structure on valve body and internal parts, which effectively obstructs the corrosion of metal materials in the valve caused by corrosive medium. The inner cavity of the metal valve body is processed by tooth type processing, which makes the lining completely connected with the metal, and extends the service life and performance of the lining. F46 bellows seal and PTFE packing are used to seal the valve rod, which completely eliminates the possibility of medium leakage from the valve rod. The unbalanced full lining structure is especially suitable for the extremely corrosive medium under the condition of low pressure and normal temperature.



技术参数 Technical Parameters

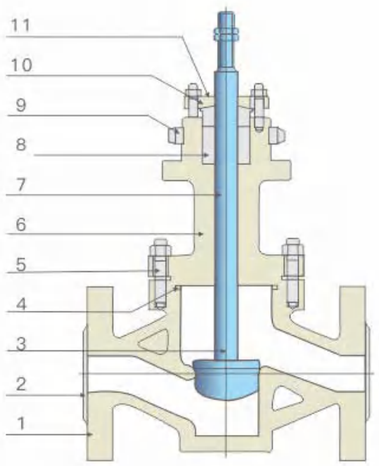
阀体形式 Body type	直通式、角式、夹套保温型 Straight through type, angle type, jacket insulation type
阀芯形式 Plug type	多级节流阀芯 Multistage throttle spool
公称通径 Nominal diameter	DN15～350mm　NPS 1/2"～14"
公称压力 Nominal pressure	PN0.6～2.5MPa；CLASS 150LB
适用温度 Applicable temperature	-30～+180℃（按工矿可选）(Optional according to working conditions)
连接形式 Type of connection	法兰(RF面、FM面)Flange(RF side, FM side)
法兰距 Flange distance	符合IEC 60534、非标定制　Meet IEC 60534,Non-standard customization
压盖形式 Gland type	螺栓压紧式 Bolt compression type
密封垫片 Sealing gasket	锯齿型金属垫片 Serrated metal gasket
填　料 Packing	聚四氟乙烯、柔性石墨 PTFE, flexible graphite
执行器 Actuator	气动执行器、电动执行器 Pneumatic actuator, electric actuator

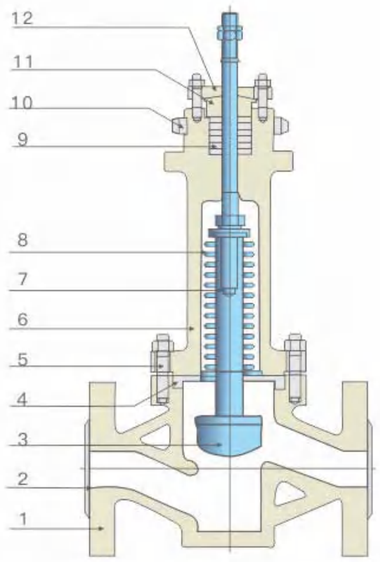
设计特色 Design Features

1、采用顶部导向结构
2、阀体内腔及内件全包四氟
3、可加装四氟波纹管密封
4、双层密封保护，无外漏
5、适用于腐蚀性较强的场合

1. With top guide structure
2. The inner cavity and inner parts of the valve body are all covered with Teflon.
3. Teflon bellows seal can be installed
4. Double seal protection, no leakage
5. Suitable for corrosive occasions

结构与材料 Structure and Materials





本体材质为碳钢 Body Material Is Carbon Steel

1	阀体 Body	WCB	LCB	WC9
2	衬里 Lining	F46/F4		
3	阀芯 Plug	304	304	304
4	垫片 Gasket	PTFE		
5	螺丝螺母 Screw nut	304	304	304
6	阀盖 Bonnet	WCB	LCB	WC9
7	阀杆 Stem	304	304	304
8	填料 Packing	PTFE		
9	锁紧螺母 Lock nut	304	304	304
10	压套 Pressing sleeve	WCB	LCB	WC9
11	压板 Plate	WCB	LCB	WC9

本体材质为不锈钢 Body Material Is Stainless Steel

1	阀体 Body	CF8	CF8M	CF3M
2	衬里 Lining	F46/F4		
3	阀芯 Plug	304	316	316L
4	垫片 Gasket	PTFE		
5	螺丝螺母 Screw nut	304	316	316L
6	阀盖 Bonnet	CF8	CF8M	CF3M
7	阀杆 Stem	304	316	316L
8	波纹管 Corrugated pipe	PTFE		
9	填料 Packing	PTFE		
10	锁紧螺母 Lock nut	304	316	316L
11	压套 Pressing sleeve	CF8	CF8M	CF3M
12	压板 Plate	CF8	CF8M	CF3M

注：1、以上为标准配置结构，阀座为金属密封，阀座为软密封选用VI级可选件。可提供喷焊硬质合金的阀内件。
2、常规材质为碳钢和不锈钢两种，可根据用户现场条件订制特殊材质控制阀产品。
Note: 1. the above is of standard configuration structure; the valve seat is metal seal, and the valve seat is soft seal, grade VI optional. It can provide valve trim of spray welding cemented carbide. 2. The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.

PTFE LINING ANTI-CORROSION
CONTROL VALVE
内衬PTFE耐腐调节阀

规格参数 Specification Parameter

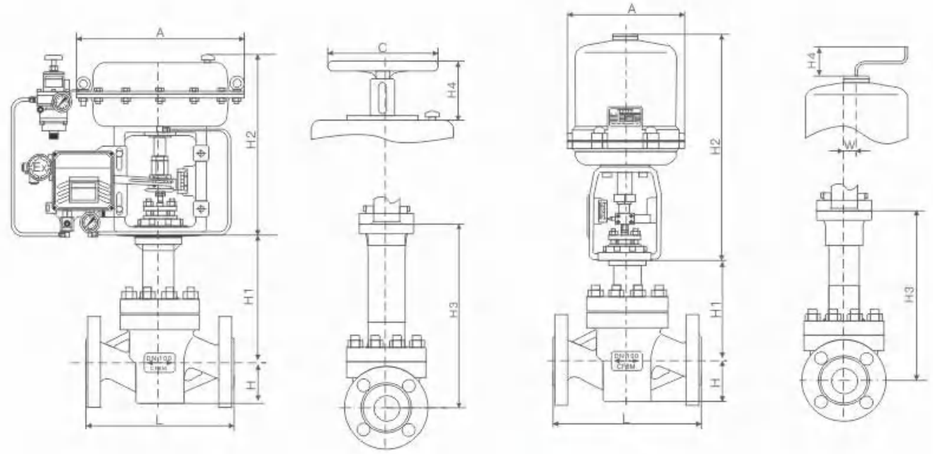
阀座直径（mm）Inside diameter（in）			20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6
流量系数（Kv）Flow coefficient			5	10	16	25	38	63	80	120	220	300
口径（DN）Diameter（in）		行程 Travel	可选流量系数CV(★标准型 ●推荐) Optional flow coefficient CV(★ standard type ●Recommended)									
20	3/4	16mm	★									
25	1	25mm		★								
32	1-1/4			●	★							
40	1-1/2			●	●	★						
50	2	40mm				●	★					
65	2-1/2						●	★				
80	3						●	●	★			
100	4	60mm							●	★		
125	5									●	★	
150	6									●	●	★
气动执行机构 pneumatic actuator			HA/B-23				HA/B-34			HA/B-45		
			350cm²				560cm²			900cm²		
作用方式 Mode of action	弹簧范围 Spring range		金属密封允许压差（MPa） Allowable differential pressure (MPa)									
气开式 Gas opening	20-100Kpa		1.16	0.7	0.44	0.28	0.18	0.17	0.11	0.07	0.07	0.05
	40-200Kpa		3.34	2.14	1.31	0.84	0.53	0.51	0.33	0.21	0.22	0.15
	80-240Kpa		6.4	4.99	3.05	1.95	1.25	1.18	0.78	0.5	0.51	0.36
气关式 Gas off	20-100Kpa		2.23	2.14	0.87	0.56	0.35	0.34	0.22	0.14	0.15	0.1
	40-200Kpa		6.4	6.4	5.86	3.64	2.3	2.21	1.43	0.91	0.95	0.66
	80-240Kpa		6.4	6.4	6.4	5.04	3.18	3.06	1.98	1.26	1.32	0.92
电动执行机构 Electric actuator			允许压差（MPa） Allowable differential pressure (MPa)									
推力（N）Thrust（N）	800		2.38	1.52								
	2000		4.77	3.05	1.86	1.19	0.76					
	3000				2.79	1.79	1.14					
	5000				4.66	2.98	1.91	1.13	0.6	0.47		
	6500							1.35	0.8	0.57	0.39	0.26
	10000										0.61	0.42

执行机构参数 Actuator parameters

形式 Form \ 型号 Model	气动薄膜执行机构 Pneumatic film actuator	电子式电动执行机构 Electronic electric actuator
	ZH23~ZH56	3810L、RSL
	多弹簧型 Multi spring	智能一体化型 Intelligent integrated type
用途 Purpose	调节 、开关 Adjustment, switch	调节 Regulating
驱动 Drive	气压 （弹簧范围）Air pressure (spring range) 140(20~100) KPa G 240(40~200) KPa G 280(80~240) KPa G	电源 Power supply：AC 220 V ±10% 50Hz 电源 Power supply：AC 380 V ±10% 50Hz
接头 Joint	Rc 1/4	普通型 Common type：2-PF(G1/2") 隔爆型 Flameproof type：2-PF(G3/4")
正作用 Positive action	气压增加推动阀门关闭 Air pressure increases to push the valve to close	控制信号增加推动阀门关闭 Control signal increases to push the valve to close
反作用 Reaction	气压增加推动阀门开启 Air pressure increases to push the valve open	控制信号增加推动阀门开启 Control signal increases to push the valve open
控制信号 Control signal	4~20mA.DC（带定位器 With positioner）	输入输出 Input output 4~20mA.DC
滞后 Lag	≤1% Fs（带定位器 With positioner）	≤0.8% FS
直线性 Linearity	2% Fs（带定位器 With positioner）	≤±1% FS
环境温度 Ambient temperature	-10~+70℃	
表面涂层 Surface coating	阀体 Body：黑色磷化处理 Black phosphating treatment 执行器 Actuator：丙烯酸聚氨酯漆 Acrylic polyurethane paint	
选配附件 Optional accessories	阀门定位器、手轮、电磁阀、行程开关、保位阀 Optional accessories,Hand wheel,Magnetic valve, Travel switch,Lock up valve	加热器 Heater

主要性能参数 Main Performance Parameters

流量特性 Flow characteristics		等百分比 Equal percentage、直线 Straight line	
可调范围 Adjustable range		50:1	
额定Cv值 Rated Cv value		等百分比 TEqual percentage：5~300	
允许泄漏量 Allowable leakage		软密封：V级 Soft seal: Level-V	
性能指标 Performance index	驱动方式 Driving mode	气动 Pneumatic	电动 Electric
	基本误差 Intrinsic error%	±1.0	±1.0
	回差 Return difference%	≤1.0	≤1.0
	死区 Dead zone %	≤0.6	≤1.0
	始终点偏差 Constant point deviation%	±2.5	±2.5
	额定行程偏差 Rated stroke deviation%	≤2.5	≤2.5



气动调节阀连接尺寸 Connection Dimension of Pneumatic Control Valve

DN In	20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6
L	150	160	180	200	230	290	310	350	450	480
H	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158
H1	132	132	158	170	179	214	221	234	270	294
H2	285	285	285	285	285	360	360	360	470	470
H3	336	338	402	402	405	627	628	635	698	702
H4	153	153	153	153	153	181	181	181	247	247
A	200	200	200	200	200	240	240	240	350	350
C	282	282	282	282	282	360	360	360	470	470

电动调节阀连接尺寸 Connection Dimension of Electric Control Valve

DN In	20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6
L	150	160	180	200	230	290	310	350	450	480
H	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158
H1	132	132	158	170	179	214	221	234	270	294
H2	373	373	456	456	538	538	548	548	725	725
H3	336	338	402	402	405	627	628	635	698	702
H4	88	88	88	88	88	95	95	95	95	110
A	225	225	225	255	255	255	255	255	310	310

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TOP-GUIDE HIGH-PRESSURE CONTROL VALVE
顶部导向型高压调节阀

产品概述 Product Overview

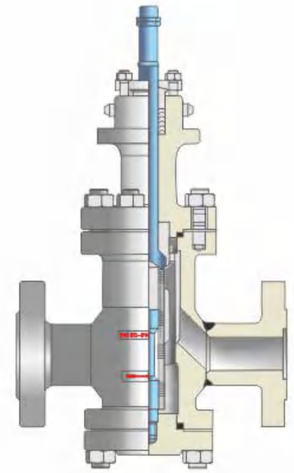
本公司生产的系列顶部导向型高压调节阀，采用套筒导向，压力平衡式阀芯。该系列调节阀主要适用于压差大，工况产生闪蒸、空化的场合。本阀结构可多样化设计，口径从DN20~DN200mm，压力范围设计最大可达2500LB，可配用多种规格电气动执行器。

The series of top-guide type high-pressure regulating valve produced by the company is subject to sleeve guide, pressure balanced valve plug. The series of regulating valves are mainly suitable for the situation of large pressure difference and flash and cavitation. The valve can be designed in a variety of structures, with a diameter of DN20~DN200mm, and a maximum pressure range of 2500LB. It can be equipped with a variety of specifications of electric actuators.

产品特点 Products Features

根据参数的不同设计多个不同的降压笼套组成一个多级降压内件，根据不同的工况设计的笼套，保证消除阀门的闪蒸、空化现象。介质从接触第一只笼套开始节流，通过多次节流将进口的高压差逐步的降低下来，这样有效的保证了介质在阀门中流动时，压力始终在其饱和蒸汽压之上，也就消除了产生闪蒸、空化现象的可能，延长了恶劣工况中调节阀的使用寿命。

According to the different parameters, several different pressure reducing cages are designed to form a multi-stage pressure reducing internals. The cages are designed according to different working conditions to ensure the elimination of flash and cavitation of the valve. The medium begins to throttle from contacting the first cage and gradually reduces the differential pressure of the inlet through multiple throttling. This effectively ensures that the pressure is always above the saturated vapor pressure when the medium flows in the valve, so that it eliminates the possibility of flash and cavitation, and prolongs the service life of the regulating valve in bad working conditions.



技术参数 Technical Parameters

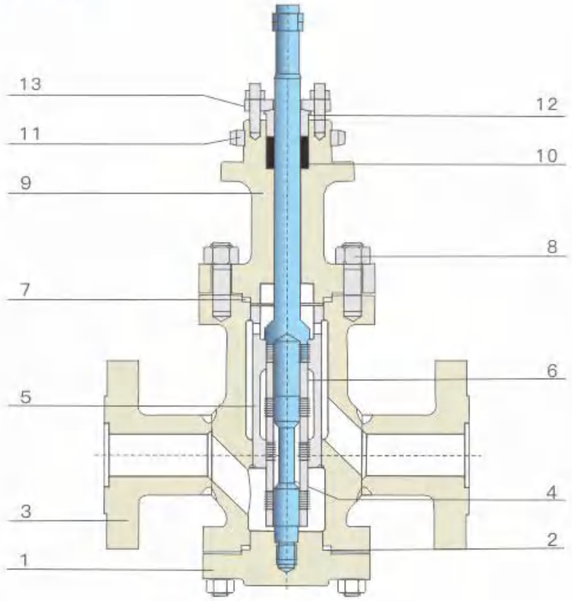
阀体形式 Body type	直通式锻造阀体 Straight through forging body
阀芯形式 Plug type	多级节流阀芯 Multistage throttle plug
公称通径 Nominal diameter	DN20~200mm　NPS 3/4"~8"
公称压力 Nominal pressure	PN10.0~42.0MPa；CLASS 600~2500LB
适用温度 Applicable temperature	-196~+650℃（按工矿可选）(Optional according to working conditions)
连接形式 Type of connection	法兰、焊接、螺纹 Flange, welding, thread
法兰距 Flange distance	符合IEC 60534、非标定制 Meet IEC 60534,Non-standard customization
压盖形式 Gland type	螺栓压紧式 Bolt compression type
密封垫片 Sealing gasket	锯齿型金属垫片 Serrated metal gasket
填　料 Packing	聚四氟乙烯、柔性石墨 PTFE, flexible graphite
执行器 Actuator	气动执行器、电动执行器 Pneumatic actuator, electric actuator

设计特色 Design Features

1、高压差范围内连续调节
2、采用多级逐渐减压、抗汽蚀、噪音低
3、阀芯采用锥面密封、密封效果好
4、阀芯多元化设计、调节性能好
5、阀芯阀座喷焊硬质合金、耐冲蚀、寿命长
6、阀芯设导向结构、调节平衡、无振动
7、执行器可互换安装

1. Continuous regulation in the range of high pressure difference
2. Adopt multi-stage gradual decompression, anti-cavitation and low noise
3. The valve plug is sealed by conical surface with good sealing effect
4. Multiple design of valve plug, good regulation performance
5. Hard alloy spray welding for valve plug and valve seat, erosion resistance and long service life
6. The valve core is provided with guiding structure, balanced adjustment and no vibration
7. Actuator can be subject to interchangeable installation

结构与材料 Structure and Materials

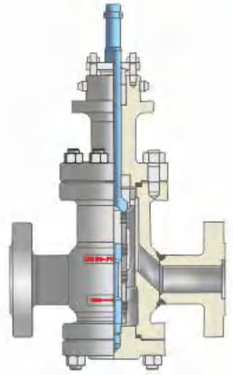


主要零件材料 Part Material

1	阀座 Seat	A105	304	316	316L
2	垫片 Gasket	锯齿型金属垫片 Saw tooth type metal gasket 、金属石墨垫片 Metal graphit, gasket			
3	阀体 Body	A105	304	316	316L
4	导向杆 Guide rod	304	304	316	316L
5	导向套 Guide sleeve	304	304	316	316L
6	阀芯 Plug	304	304	316	316L
7	垫片 Gasket	锯齿型金属垫片 Saw tooth type metal gasket 、金属石墨垫片 Metal graphit, gasket			
8	螺丝螺母 Screw nut	304	304	316	316L
9	阀盖 Bonnet	A105	304	316	316L
10	填料 Packing	聚四氟乙烯PTFE 、柔性石墨 Flexible graphite			
11	锁紧螺母 Lock nut	304	304	316	316L
12	压套 Pressing sleeve	304	304	316	316L
13	压板 Plate	304	304	316	316L

注：1、以上为标准配置结构，阀座为金属密封，阀座为软密封选用VI级可选件。可提供喷焊硬质合金的阀内件。
2、常规材质为碳钢和不锈钢两种，可根据用户现场条件订制特殊材质控制阀产品。
Note: 1. the above is of standard configuration structure; the valve seat is metal seal, and the valve seat is soft seal, grade VI optional. It can provide valve trim of spray welding cemented carbide. 2. The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.

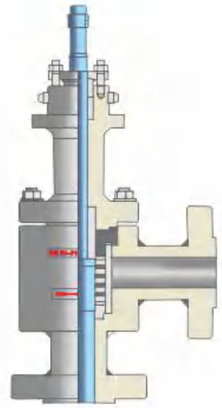
高压调节阀的结构 Structure of high-pressure control valve



多级轴流式结构 Multi-stage axial-flow structure

采用的是多级笼式阀芯或轴流迷宫型阀芯，多级减压，完全控制流过阀内的介质的流速，大幅度的降低了高压气体或者蒸汽在阀内产生的噪音，稳定的多级别降压有效使液体不会产生气蚀，是使用在高压介质场所性能稳定的控制阀，可选择多弹簧气动薄膜机构或电动执行机构等。

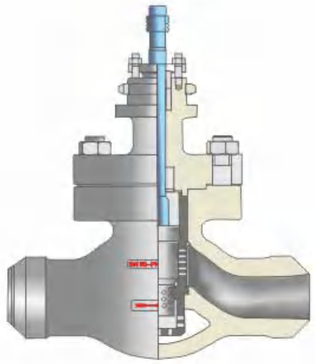
It is subject to multi-stage cage type valve plug or axial-flow labyrinth type valve plug, to reduce pressure by multi-stage, fully control the flow velocity of medium flowing through the valve, and greatly reduce the noise generated by high-pressure gas or steam in the valve. In addition, the stable multi-stage pressure reduction can effectively prevent the liquid from cavitation. It is a regulating valve with stable performance in high-pressure medium place, and multi-spring pneumatic diaphragm actuator or electric actuator, etc. are available.



笼式高压角型结构 Cage type high-pressure angle structure

本阀阀体为直角形，流路简单，阻力小。特别适用于高粘度，含有悬浮物和颗粒状介质流体的调节，可避免结焦、粘结、堵塞。阀芯为柱塞形，用于高压差条件下的阀芯，采用堆焊钨钴合金，具有耐气蚀、抗冲涮等优点，大大提高了使用寿命。广泛应用于化工、炼油等行业，尤其适用于合成氮、尿素工业上高压和高压差介质调节。

The valve body is rectangular, with simple flow passage and small resistance. It is especially suitable for the adjustment of high viscosity, suspension and granular medium fluid, avoiding coking, sticking and blocking. The valve plug is plunger type, which is used under the condition of high pressure difference. The valve plug is surfacing with tungsten cobalt alloy, which has the advantages of cavitation resistance, impact resistance, greatly improving the service life. It is widely used in chemical industry, petroleum refining and other industries, especially in the medium regulation under high-pressure and high pressure difference conditions in the synthesis of nitrogen and urea industry.



二级笼式套筒结构 Two-stage cage sleeve structure

本阀主要适用于压差大，易产生闪蒸、空化的场合。根据参数的不同设计多个不同的降压笼套组成一个多级降压内件，根据不同的工况设计的笼套，保证消除阀门的闪蒸、空化现象。介质从接触第一只笼套开始节流，通过多次节流将进口的高压差逐步的降低下来，这样有效的保证了介质在阀门中流动时，压力始终在其饱和蒸汽压之上，也就消除了产生闪蒸、空化现象的可能，延长了恶劣工况中调节阀的使用寿命。

The valve is mainly suitable for the occasion with large pressure difference and easy to produce flash and cavitation. According to different parameters, several different pressure reducing cages are designed to form a multi-stage pressure reducing internals. The cages are designed according to different working conditions to ensure the elimination of flash and cavitation of the valve. The medium begins to throttle from contacting the first cage and gradually reduces the differential pressure of the inlet through multiple throttling. This effectively ensures that the pressure is always above the saturated vapor pressure when the medium flows in the valve, which eliminates the possibility of flash and cavitation, and prolongs the service life of the control valve in bad working conditions.

TOP-GUIDE HIGH-PRESSURE CONTROL VALVE

顶部导向型高压调节阀

执行机构参数 Actuator parameters

型号 Model / 形式 Form	气动薄膜执行机构 Pneumatic film actuator	电子式电动执行机构 Electronic electric actuator
	ZH23~ZH56	3810L、RSL
	多弹簧型 Multi spring	智能一体化型 Intelligent integrated type
用途 Purpose	调节 、开关 Adjustment, switch	调节 Regulating
驱动 Drive	气压 （弹簧范围）Air pressure (spring range) 140(20~100) KPa G 240(40~200) KPa G 280(80~240) KPa G	电源 Power supply：AC 220 V ±10% 50Hz 电源 Power supply：AC 380 V ±10% 50Hz
接头 Joint	Rc 1/4	普通型 Common type：2-PF(G1/2") 隔爆型 Flameproof type：2-PF(G3/4")
正作用 Positive action	气压增加推动阀门关闭 Air pressure increases to push the valve to close	控制信号增加推动阀门关闭 Control signal increases to push the valve to close
反作用 Reaction	气压增加推动阀门开启 Air pressure increases to push the valve open	控制信号增加推动阀门开启 Control signal increases to push the valve open
控制信号 Control signal	4~20mA.DC（带定位器 With positioner）	输入输出 Input output 4~20mA.DC
滞后 Lag	≤1% FS（带定位器 With positioner）	≤0.8% FS
直线性 Linearity	2% FS（带定位器 With positioner）	≤±1% FS
环境温度 Ambient temperature	-10~+70℃	
表面涂层 Surface coating	阀体 Body：黑色磷化处理 Black phosphating treatment 执行器 Actuator：丙烯酸聚氨酯漆 Acrylic polyurethane paint	
选配附件 Optional accessories	阀门定位器、手轮、电磁阀、行程开关、保位阀 Optional accessories,Hand wheel,Magnetic valve, Travel switch,Lock up valve	加热器 Heater

主要性能参数 Main Performance Parameters

流量特性 Flow characteristics		等百分比 Equal percentage、直线 Straight line	
可调范围 Adjustable range		50:1	
额定Cv值 Rated Cv value		等百分比 Equal percentage：5~300	
允许泄漏量 Allowable leakage		硬密封：III级（0.5%阀额定流量）；软密封：V级 Metallic seal: III (0.5% valve rated flow); soft seal: v	
性能指标 Performance index	驱动方式 Driving mode	气动 Pneumatic	电动 Electric
	基本误差 Intrinsic error%	±1.0	±1.0
	回差 Return difference%	≤1.0	≤1.0
	死区 Dead zone %	≤0.6	≤1.0
	始终点偏差 Constant point deviation%	±2.5	±2.5
	额定行程偏差 Rated stroke deviation%	≤2.5	≤2.5

ULTRA-SMALL FLOW NEEDLE CONTROL VALVE

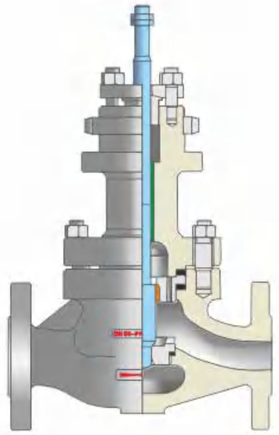
超小流量针式调节阀

产品概述 Product Overview

本公司生产的系列超小流量针式调节阀是一种顶部导向单阀座调节阀，具有结构简单、密封性能好、使用可靠等特点。有效而足够的顶部导向系统克服小开度时的震动，有效使用寿命更长。更小的流量系数选择增加了该阀的使用。可选择多弹簧气动薄膜机构或电动执行机构等。

The series of the ultra-small flow needle valve produced by the company is a top guide single seated regulating valve with simple structure, good sealing performance and reliable use. The effectively and sufficient top guide system can overcome the vibration when the opening is small, and lengthen the effective service life. Smaller flow coefficient options increase the use of the valve. Multi-spring pneumatic diaphragm actuator or electric actuator can be selected.

产品特点 Products Features



该系列超小流量针式调节阀是本公司专业针对小流量场合自主研发的一款产品。阀体体积小，重量轻，内螺纹结构更加便于安装及拆卸。整体具有体积小、重量轻、性能高、用于微小流量的精确控制等特点。调节不干净介质时，应针对其节流间隙小的问题，注意预防堵卡现象的发生。特别适用于液体、蒸汽等介质的主流量调节场合。

The series of the ultra-small flow needle valve is a product independently developed by the Company for small flow occasions. The valve body is small in volume and light in weight; and the internal thread structure is more convenient for installation and disassembly. The whole system has the characteristics of small volume, light weight, high performance and precise control of small flow. When adjusting the unclean medium, for the matter of small throttling gap, it's necessary to pay attention to prevent the jamming. It is especially suitable for regulating the main flow of liquid, steam and other media.

技术参数 Technical Parameters

阀体形式 Body type	直通式锻造阀体 Straight through forging body
阀芯形式 Plug type	非平衡式单座阀芯 Non-balanced single seat plug
公称通径 Nominal diameter	DN8~25mm NPS 1/4"~1"
公称压力 Nominal pressure	PN1.6~32.0MPa；CLASS 150~1500LB
适用温度 Applicable temperature	-196～+650℃（按工矿可选）(Optional according to working conditions)
连接形式 Type of connection	法兰、焊接、螺纹 Flange, welding, thread
法兰距 Flange distance	符合IEC 60534、非标定制 Meet IEC 60534,Non-standard customization
压盖形式 Gland type	螺栓压紧式 Bolt compression type
密封垫片 Sealing gasket	金属石墨垫片、聚四氟乙烯 Metallic graphite gasket, polytetrafluoroethylene
填 料 Packing	聚四氟乙烯、柔性石墨 PTFE, flexible graphite
执行器 Actuator	气动执行器、电动执行器 Pneumatic actuator, electric actuator

设计特色 Design Features

1、小开度范围内可连续调节
2、采用顶部导向结构，抗震动
3、阀芯采用锥面密封，密封效果好
4、阀芯多元化设计，调节性能好
5、阀芯阀座喷焊硬质合金，耐冲蚀，寿命长
6、体积精小，重量轻、便于安装
7、电气动执行器可互换安装

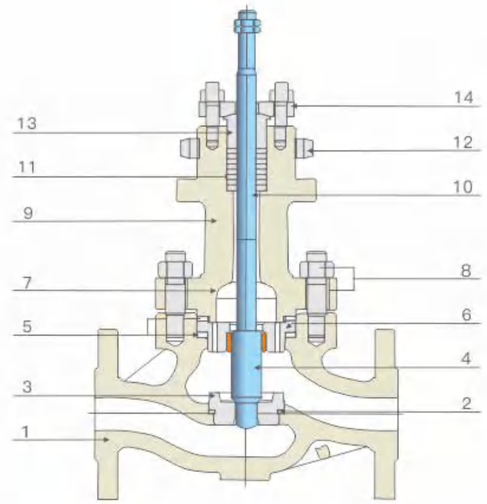
1. Continuously adjustable in small opening range
2. With top guide structure, anti-vibration
3. The valve plug is sealed with conical surface, with good sealing effect
4. Multiple design of valve plug, good regulation performance
5. Hard alloy spray welding for valve plug and valve seat, erosion resistance, long service life
6. Small size, light weight, easy to install
7. Interchangeable installation of electric actuator

ULTRA-SMALL FLOW NEEDLE CONTROL VALVE
超小流量针式调节阀

结构与材料 Structure and Materials

本体材质为碳钢 Body Material Is Carbon Steel

1	阀体 Body	WCB	LCB	WC9
2	垫片 Gasket	316+石墨 Graphite/FTFE		
3	阀座 Seat	304	304	304
4	阀芯 Plug	304	304	304
5	垫片 Gasket	316+石墨 Graphite/FTFE		
6	导向套 Guide sleeve	304	304	304
7	铜套 Copper bush	Cu/316L		
8	螺丝 Screw	304	304	304
9	阀盖 Bonnet	WCB	LCB	WC9
10	阀杆 Stem	304	304	304
11	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
12	锁紧螺母 Lock nut	304	304	304
13	压套 Pressing sleeve	304	304	304
14	压板 Plate	304	304	304

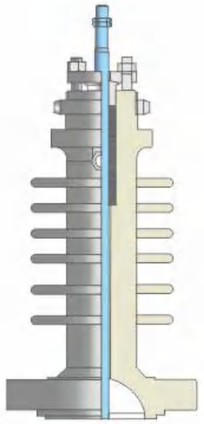


本体材质为不锈钢 Body Material Is Stainless Steel

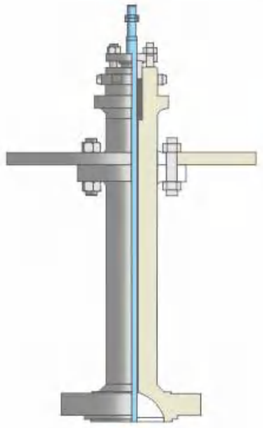
1	阀体 Body	CF8	CF8M	CF3M
2	垫片 Gasket	316+石墨 Graphite/FTFE		
3	阀座 Seat	304	316	316L
4	阀芯 Plug	304	316	316L
5	垫片 Gasket	316+石墨 Graphite/FTFE		
6	导向套 Guide sleeve	304	316	316L
7	铜套 Copper bush	Cu/316L		
8	螺丝 Screw	304	316	316L
9	阀盖 Bonnet	CF8	CF8M	CF3M
10	阀杆 Stem	304	304	316L
11	填料 Packing	PTFE / 柔性石墨 Flexible graphite		
12	锁紧螺母 Lock nut	304	304	316L
13	压套 Pressing sleeve	304	304	316L
14	压板 Plate	304	304	316L

注：1、以上为标准配置结构，阀座为金属密封，阀座为软密封选用VI级可选件。可提供喷焊硬质合金的阀内件。
2、常规材质为碳钢和不锈钢两种，可根据用户现场条件订制特殊材质控制阀产品。
Note: 1. the above is of standard configuration structure; the valve seat is metal seal, and the valve seat is soft seal, grade VI optional. It can provide valve trim of spray welding cemented carbide. 2. The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.

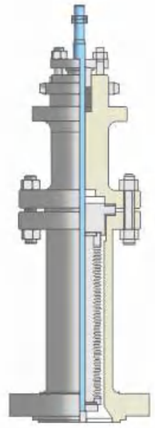
可应用于不同工况的结构 Can be Applied to Different Conditions of the Structure



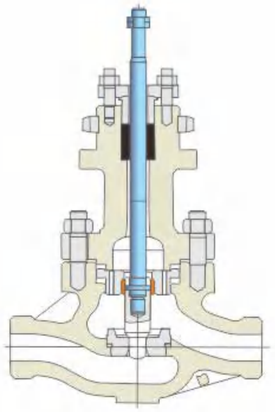
高温型:
适用介质：蒸汽、热油等
适用温度：+250~550℃
High temperature type:
Applicable media: steam, hot oil, etc.
Applicable temperature: +250~550℃



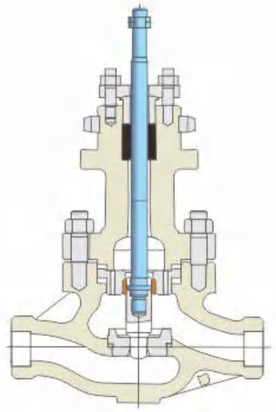
低温型:
适用介质：液氮、液氧等
适用温度：-70~ -196℃
Low temperature type:
Applicable medium: liquid nitrogen, liquid oxygen, etc.
Applicable temperature:-70~-196℃



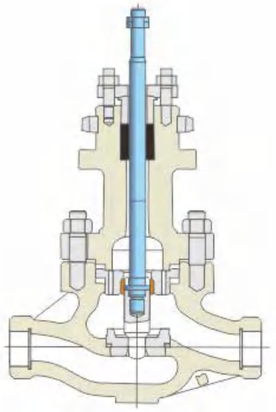
波纹管型:
适用介质：易燃易爆气体、有毒液体、腐蚀性介质等
Bellows type:
Applicable medium: flammable and explosive gas, toxic liquid, corrosive medium, etc.



对焊连接：BW
Butt welded joint: BW



承插焊连接：SW
Socket weld joint: SW



内螺纹连接：G
Internal thread connection: G

ULTRA-SMALL FLOW NEEDLE CONTROL VALVE
超小流量针式调节阀

规格参数 Specification Parameter

流量系数（Cv） Flow coefficient		等百分比 Equal percentage								
		直线 Straight line	0.01	0.04	0.1	0.16	0.25	0.1	0.4	0.63	1.0
口径 (in)		行程 Trip	可选流量系数Cv（★符合IEC ●推荐） Optional flow coefficient Cv（★ Conform to IEC ●Recommend）								
8	1/4"	16mm 25mm	●	●	●	●	●	●	★	★	★
10	3/8"		●	●	●	●	●	●	★	★	★
15	1/2"		●	●	●	●	●	●	★	★	★
20	3/4"		●	●	●	●	●	●	★	★	★
25	1"		●	●	●	●	●	●	★	★	★
配用执行机构 Actuator			气动执行器 Pneumatic actuator：ZHA/B；电动执行器 Electric actuator：3810、PSL								

执行机构参数 Executing Agency

型号 Model / 形式 Form	气动薄膜执行机构 Pneumatic film actuator	电子式电动执行机构 Electronic electric actuator
	ZH23~ZH56	3810L、RSL
	多弹簧型 Multi spring type	智能一体化型 Intelligent integrated type
用途 Purpose	调节 、开关 Adjustment, switch	调节 Regulating
驱动 Drive	气压 （弹簧范围）Air pressure (spring range) 140(20~100) KPa G 240(40~200) KPa G 280(80~240) KPa G	电源 Power supply：AC 220 V ±10% 50Hz 电源 Power supply：AC 380 V ±10% 50Hz
接头 Joint	Rc 1/4	普通型 Common type：2-PF(G1/2") 隔爆型 Flameproof type：2-PF(G3/4")
正作用 Positive action	气压增加推动阀门关闭 Air pressure increases to push the valve to close	控制信号增加推动阀门关闭 Control signal increases to push the valve to close
反作用 Reaction	气压增加推动阀门开启 Air pressure increases to push the valve open	控制信号增加推动阀门开启 Control signal increases to push the valve open
控制信号 Control signal	4~20mA.DC（带定位器 With positioner）	输入输出 Input output 4~20mA.DC
滞后 Lag	≤1% FS（带定位器 With positioner）	≤0.8% FS
直线性 Linearity	2% FS（带定位器 With positioner）	≤±1% FS
环境温度 Ambient temperature	-10~+70℃	
表面涂层 Surface coating	阀体 Body：黑色磷化处理 Black phosphating treatment 执行器 Actuator：丙烯酸聚氨酯漆 Acrylic polyurethane paint	
选配附件 Optional accessories	阀门定位器、手轮、电磁阀、行程开关、保位阀 Optional accessories,Hand wheel,Magnetic valve, Travel switch,Lock up valve	加热器 Heater

主要性能参数 Main Performance Parameters

流量特性 Flow characteristics	等百分比 Equal percentage、直线 Straight line
可调范围 Adjustable range	30:1
额定Cv值 Rated Cv value	0.01~1.0
允许泄漏量 Allowable leakage	泄漏量标准 Leakagc standard：GB/T4213

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