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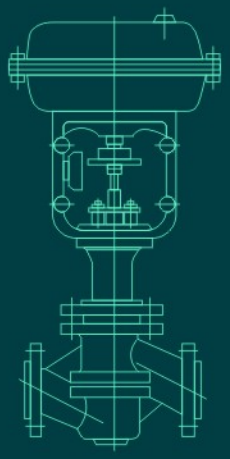

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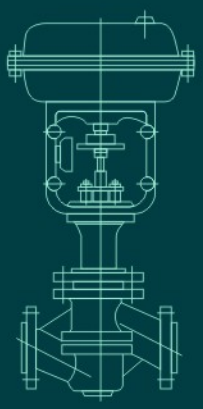

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CONTROL VALVE EXPERTS

控制阀专家

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SICHUAN BOLANGSHUWEI TECHNOLOGY CO., LTD.

Company Profile >

公司介绍

四川勃朗蜀威科技有限公司是我国流体工业自动化控制领域中控制阀行业的创新型企业，公司致力于与国际高端控制阀市场接轨，与美国勃朗技术联合投资成立于2013年，并于2016年成功并购四川华林自控设备有限公司，公司依托现有技术基础全面引进美国勃朗系列产品，结合国际高端控制阀制造技术，全方位深入研究、开发，制造出迎合自控及阀门市场的高性能系列产品。同时公司具备一批经验丰富的工艺、设计技术人员，有很强的自主创新能力，已经拥有多项专利技术，并不断改进及研发新的产品。公司延续着强劲的发展势头，以打造国家振兴工业自动化控制及装备制造业的骨干企业为公司奋斗目标。

公司座落于四川德阳高新技术产业园区，占地面积25000平方米，其中办公及生产试验用房（综合楼）5000平方米，生产厂房8000平方米；注册资金7800万，固定资产投入约8000万，年产值超亿元，年生产控制阀能力数万台；公司集科研、设计、生产、销售、服务、维修于一体。采用机标、国标、化工部标准及美国ANSI、日本JIS、德国DIN等相关工业标准进行生产，先后取得了压力管道阀门特种设备制造A1级许可证、美国石油行业API、欧盟CE、ISO9001、ISO14000、OHSAS18001等相关资质。公司主要生产高性能偏芯旋转阀、高性能球阀、高性能偏心蝶阀、单双座套筒阀、自力式阀、耐腐蚀阀和各种高温、高压、耐磨特殊阀等系列产品，温度从-190℃~1000℃，口径从DN10~DN3500,压力从0.6MPa~42MPa。主体材质有碳钢、不锈钢、316及特殊材料。广泛运用于科研测试装置、核电、电力、石油、化工、纸厂、钢厂、铝厂等行业。

我公司现有员工百余人，高级工程技术人员22人，管理人员14人，其中中高级技术人员8人用于研发复杂工况特殊阀系列产品实际运用；公司拥有各种先进生产、检测、试验设备50余台（套），并建立了压力、流量试验台和理化检测中心。

公司将秉承“提供优质的产品，及时贴心的专业服务”的经营理念，持续培植、提升企业核心竞争力，“因为专一，所以专业”，“勃朗蜀威”全体员工将鞠躬尽瘁，全力打造民族精品，为全面完成工业自动化控制阀国产化献上绵薄之力！

Sichuan Bolangshuwei Technology Co.,ltd. (Hualin controlled Equipment Co., Ltd.) is the automation and control of industrial fluid control valve industry, innovative enterprises, the company is committed to international high-end control valve market, with the United States Brown technology set up joint investment in 2013, the company relies on existing technology base introduction of a comprehensive US Blanc products, combined with international brands control valve manufacturing technology, combined with all the advantages of a full range of home-depth research, development, manufacture to meet the market and there is absolute competitive specialty products. The company has experienced a number of process design and technical personnel, has a strong capability of independent innovation, continuously strong development momentum continue to build revitalize the equipment manufacturing enterprises.

The company settled in Deyang high-tech industrial park, covering 18,000 square meters, including office buildings and production test (Building) 5,000 square meters, production plant 6800 square meters; registered capital of 58 million, fixed assets investment of about 80 million the annual output value of over billion, annual production capacity of over million units; company research, design, production, sales and service in one. Using machine standard JB, GB GB, Ministry of Chemical Industry Standard HB and the United States ANSI, Japanese JIS, German DIN and other industry standards. The company mainly produces high performance eccentric rotary valve, high-performance ball valves, high performance butterfly valve, single-seat sleeve valve, self-operated valve, corrosion-resistant valves and other products, the temperature from -190 ℃ ~ 1000 ℃, diameter from DN10 ~ DN3500, pressure from 0.6MPa ~ 42MPa. The main materials are carbon steel, stainless steel, 316, and special materials. Widely used in nuclear power, power plants, petroleum, chemical, paper mills, steel mills, aluminum and other industries.

My company has nearly 100 employees, 22 senior engineers and technicians, management staff of 14 people, including senior technical staff eight people for the development of complex conditions special valve series practical application; company has advanced production equipment, testing equipment 50 Yu Taiwan (sets).

The company will uphold "to provide quality products and timely attentive service" business philosophy, continuing to cultivate and enhance core competitiveness of enterprises, because the single-minded, so professional so that the "Bolangshuwei" crew spared no efforts to build national boutique for the full completion of domestic industrial automation and control valves offer modest!

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勃朗蜀威的品牌

勃朗蜀威，国内同行业著名品牌之一，被多家大中型工业企业长期定为首选品牌

勃朗蜀威的产品

公司主要生产高性能偏心旋转阀、高性能球阀、高性能偏心蝶阀、单双座套筒阀、自力式阀、耐腐蚀阀和各种高温、高压、耐磨特殊阀等系列产品。

Quality cast Soul
Technology and development

质量铸灵魂 · 技术谋发展

Win market services · Integrity question >

服务赢市场 · 诚信待客户

BOLANGSHUWEI brand
BOLANGSHUWEI, one of the domestic industry with well-known brands, a number of medium-sized industrial enterprises long as the brand of choice.
The company mainly produces high performance eccentric rotary valve, high-performance ball valves, high performance butterfly valve, single-seat sleeve valve, self-operated valve, corrosion-resistant valves and other products.

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BOLANGSHUWEI

Production Equipment >

生产装备

勃朗蜀威人运用精良的生产装备、崭新的工业概念及强大的技术力量，生产出符合国际标准的高品质终端产品，从而加快了企业的产业化速度。无论是产品原材料的选择还是产品的出厂检验，勃朗蜀威人均一丝不苟地按照国际标准严格把关，使出厂产品合格率保持在100%，真正确保产品的卓越品质。

BOLANGSHUWEI people use of sophisticated production equipment, new industrial concepts and strong technical force, in line with international standards to produce high quality end products, thereby accelerating the pace of industrial enterprises. Selection of raw materials, whether products or product delivery inspection, BOLANGSHUWEI people all trace of informal strictly in accordance with international standards, so keep the factory products 100% pass rate, the real quality to ensure product excellence.









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Product Contents >

产品目录

Product Contents >

产品目录

本公司产品型号共有三部分组成如下所示：

第一部分	第二部分	第三部分
表示本体部基本特征，共九位具体意义见下表	公称压力及公称通径	执行机构方式

第一位

代号	BLH	BLP	BLM	BLO	BLW	BLY
本体部大类	高性能偏心阀	直行程单座调节阀	直行程套筒调节阀	球阀	蝶阀	自力式调节阀

第二位

本体部大类	1	2	3	4	5	6
P	顶部导向单座调节阀	波纹管密封单座调节阀	三通合（分）流调节阀	衬塑调节阀		
M	平衡笼式双座调节阀	平衡笼式单座调节阀	低噪音笼式调节阀	多级降压低噪音调节阀	先导式平衡笼式调节阀	波纹管密封平衡笼式调节阀
O	O/V型球阀	衬塑O/V型球阀	三通O型球阀			
W	衬氟塑蝶阀	双偏心蝶阀	高性能硬密封蝶阀	端面密封蝶阀		
Y	自力式压力调节阀	自力式差压调节阀	指挥操作自力式压力调节阀			
H	高性能偏心调节阀	高性能偏心切断阀				

第三位

连接形式	4	7	6
	法兰式	对夹式	焊接式

第四位

上盖形式	O：标准型	D：加长型	W：波纹管型	G：散热型

执行机构方式

作用方式	Kd	Ks	Bd	Bs
	电动：信号增加开启	气动：信号增加开启	电动：信号增加关闭	气动：信号增加关闭
手轮机构	P	D	W	省略
	旁式手轮机构	顶装式手轮机构	涡轮式手轮机构	不带手轮机构

特殊阀系列

高温高压多级降压调节阀	BLKP	保温夹套调节阀	BLT
多级降压低噪音调节阀	BLMK	–	–

电力行业专用阀系列

联动三通切换阀	BLQ	Vv阀	BTO
Y型疏水阀	ZSHY	减温减压装置	BLWY
超临界阀	ZSRHO	抽汽止回阀	H644H
减温减压喷水阀	BLCP		

The products model of our company was constituted by three parts as below.

1st part	2nd part:	3rd part:
Representative The Essential Feature Of Main Body, Totally In 9 Positions And Details See Below Sheet	Nominal Pressure And Nominal Diameter	Type Of Actuator

1st position

code	BLH	BLP	BLM	BLO	BLW	BLY
Broad heading of main body	High performance eccentric valve	Linear motion single seat regulating valve	Linear motion sleeve regulating valve	Ball valve	Butterfly valve	Self operated regulating valve

2nd position

Broad heading of main body	1	2	3	4	5	6
P	Top oriented single seat regulating valve	Bellows seal single seat regulating valve	Tee interflow (or splite-flow) regulating valve	Plastic lined regulating valve		
M	balance cage type double seats regulating valve	Balance cage type single seat regulating valve	Low noise cage type regulating valve	Multistage decompression & denoise regulating valve	Pilot-operated type balance cage type regulating valve	Bellows seal balance cage type regulating valve
O	O/V type ball vale	Plastic lined O/V type ball vale	Tee O type ball valve			
W	Fluorine/plastic lined valve	Double eccentric butterfly valve	High performance rigidity seal butterfly valve	End faces seal butterfly valve		
Y	Self operated type pressure regulating valve	Self operated type differential pressure regulating valve	Externally-piloted self operated type pressure regulating valve			
H	High performance eccentric regulating valve	High performance eccentric stop valve				

3rd position

Connection type	4	7	6
	Flange type	Butt clamp type	Welding type

4th position

Type of upper cover	O：Standard type	D：Elongated type	W：Bellows type	G：Heat dissipation type

Mode of actuator

Mode of action	Kd	Ks	Bd	Bs
	Electric: signal increase – open	Pneumatic: signal increase – open	Electric: signal increase – closing	Pneumatic: signal increase – closing
Hand wheel device	P	D	W	ignore
	Side hand wheel	Top hand wheel	Turbo type hand wheel	Without hand wheel

Special valve series

High temperature & high pressure multistage depressurization regulating valve	BLKP	heat preservation jacket regulating valve	BLT
Multistage depressurization & noise reduction regulating valve	BLMK	–	–

Utility industry special service valve series

linkage tee joint changeover valve	BLQ	VV valve	BTO
Y type drain valve	ZSHY	Temperature and pressure reducer	BLWY
Supercritical valve	ZSRHO	Extraction check valve	H644H
Temperature And Pressure Reducer Spray Water Valve	BLCP		

高性能偏心阀 High-performance eccentric valve

随着计算机技术的迅猛发展及现场总线技术的广泛应用，自控系统对配套的要求越来越高。作为自控系统“手脚”的调节阀始终滞留在六、七十年代的技术水平上。“跑、冒、漏、滴、堵、卡、动作差、寿命短、笨重、品种多、选型难”等问题一直成为控制系统的难题。自控系统急需高品质的阀门，它必须可靠、超轻、功能全、适用广、使用简便，有先进技术和广泛应用前景，以适用现场总线和智能化技术发展的需要。为此，博朗蜀威公司推出了高性能偏心阀，它已被广泛地应用于数百套空置系统中。无论是条件极其恶劣的煤浆、纸浆调节，还是高温、高压、大口径、大压差切断和要求高的核动力试验装置上，它都以良好的性能赢得了客户的普遍赞誉。

事实证明，作为第二代调节阀，尤其是高性能偏心阀的特点，它必将替代单座阀（DN≥20）、双座阀、套筒阀，CV3000、精小型阀、隔膜阀、偏心旋转阀、球阀、蝶阀（DN≤400），成为二十一世纪调节阀的主流。该阀的显著特点是

①重量轻，比老式阀轻50~70%，比Cv3000轻40~60%；

②功能全，一个品种可替代十几个品种；

③可靠性高，解决了许多不可靠性因素；

④应用简单，简化了计算、选型、安装、维备件管理。

Along with the rapidly development of each industry in these years, the automatic control system needs better and better valves, which must be reliable, ultralight, complete function, multipurpose and easy operation, also should with advanced technology and extensive application prospect. Therefore, our company research and development the High-performance eccentric valve which already widely applied on over thousands control system. No matter was applying for the regulation of coal slurry or paper pulp, even in the environment of high temperature, high pressure, heavy caliber, large pressure difference and nuclear power testing apparatus, our valves show perfect property and won widespread commend.

Proof by facts, as the second generation regulating valve, specially the characteristic of full-featured, our products must could substitution the current single seated valve (Dn≥20), double seated valve, telescopic valve, CV3000, diaphragm valve, eccentric rotary valve, ball valve, butterfly valve(DN≤400) etc products and become the mainstream product of 21th century.

The main characteristic of ourHigh-performance eccentric valve:

①In light weight: the weight is 50%~70% less than old valve;

②Complete function: one valve could substitution over 10 types of old valve;

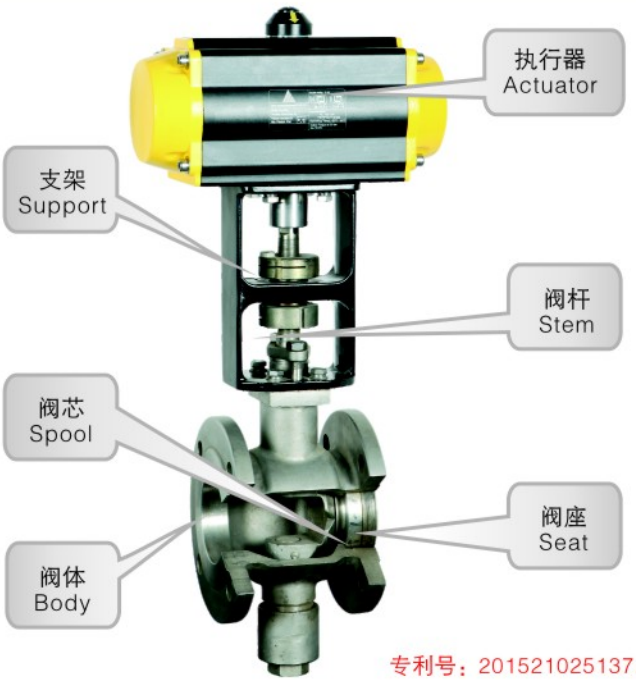
③High reliability: lots of unreliable factor were solved;

④Simplicity: the calculation, type selection, installation, maintain, spare parts management all in easy way.

主要参数 Main Parameters

公称通径		15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
流量系数（Kv）	高容量 high power capacity	8	13	20	32	50	80	130	200	320	500	800	1300	2000	3200	5300	8000
	调节型 External regulation	6.3	10	16	25	40	63	100	160	250	400	630	1000	1600	2500	4000	6300
		2.5	4.0	10	16	25	40	63	100	160	250	400	630	1000	1600	2500	4000
		1.6	1.6	6.3	10	16	25	40	63	100	160	250	400	630	1000	1600	2500
		0.6	1.0	4.0	6.3	10	16	25	40	63	100	160	250	400	630	1000	1600
	两位型 two step type	10	16	25	40	63	100	160	250	400	630	1000	1600	2500	4000	6300	10000
流量特性 flow characteristic		近似等百分比、快开 discharge coefficient, approximate equal percentage, fast open															
公称压力 PN(MPa)		标准产品1.6、4.0、6.4MPa; 特殊订货 10、16、22、32 MPa Standard products 1.6、4.0、6.4MPa; special order goods 10、16、22、32MPa															
法兰标准 Flange standard		符合 JB78-59、JB79-59 标准，可按 JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准订货生产															
可调范围 Adjustable Scope		100:1；200:1															

高性能结构剖析 Full analysis of the functional structure



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独特的零部件 Unique Parts

阀体：阀体为直通式，结构简单，流通能力好，阻力小，防堵卡，重量轻。

支架：结构为轴式支架，承上启下，定位准确，阀芯整个重量承载在支架轴承上，上下配合二个轴承，开启灵活；两端并用螺栓锁紧，防止阀杆长时间工作上下窜动，保证阀门的密封性能更可靠。

阀座：根据工况不同，阀座形式多种选择；Z型硬密封阀座(获国家发明专利)，具有弹性力矩密封补偿作用，适用于高温高压下泄漏要求较高的工况。Z型硬密封阀座，强度高，适用于浆料、粉尘、含杂质、颗粒、易堵卡介质。复合型密封阀座，主要适用于常温常压下干净介质零泄漏。

阀杆：由于该阀结构为旋转型，阀杆与填料之间滚动摩擦，摩擦力小，故阀杆可比普通单双座阀粗几倍或几十倍，并且很好的解决了外漏问题，增加了强度及使用寿命。根据不同介质可以在球轴上采用断轴和通轴阀杆。

阀芯：阀芯采用偏心半球，有O型和V型两种；O型为切断用，由于采用半球冠形式，具有较强的剪切作用，阀芯轻，完全开启情况下，阀芯位于阀体一侧，阀体内为直通，阻力小，耐堵卡；V型为调节，V型口的开度可根据提供参数计算开口的长度及宽度，使调节性能更好，调节精度更高。

综上各阀件结构组合而成的新型阀门，使该阀具有重量轻，调节性能好，防堵卡，密封严，噪音小，耐压差，使用寿命长，安装维护方便等特点，在诸多复杂工况下运用良好。

Body: Body is straight-through, simple structure, good flow capacity, low resistance, attempts to prevent the card, light weight.

Bracket: Axis bracket structure, nexus, accurate positioning, the spool carrying the entire weight of the bearing bracket, with two upper and lower bearings, open and flexible; both ends and bolt lock to prevent the valve stem ran up and down to work long hours to ensure that the valve more reliable sealing performance.

Seat: Depending on the operating conditions, the valve seat in the form of multiple choice; Z-type hard sealed seat (national invention patents), has an elastic torque compensation seal leakage demanding conditions suitable for high temperature and pressure. Z-type hard seal seat, high strength, suitable for the slurry, dust, containing impurities, particles, easy to lay a trap media. Composite seal seat, is mainly applied to a clean medium zero leakage under normal temperature and pressure.

Stem: As the rotary valve structure and asked the stem and packing of rolling friction, friction is small, solid than ordinary single-seat valve stem crude several times or several times, and a good solution to the leakage problem , increasing the strength and service life. You can use the ball off the shaft axis and the axis through the stem depending on the media.

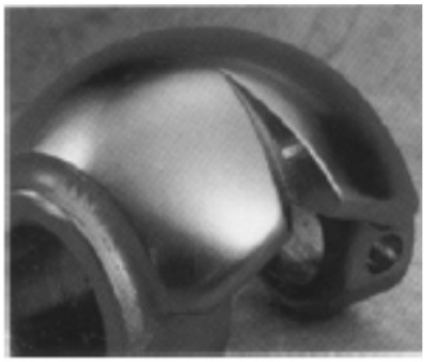
Spool: Spool eccentric hemisphere, there are O and V type two; O-type for the disconnection, the use of hemi-spherical form, with a strong shearing action, light valve, fully open the case, the spool is located one side of the body, the valve body is straight, resistance, resistance to lay a trap; V - to adjust the opening degree V-shaped opening can be calculated according to the length and width of the opening to provide parameters to adjust better performance, more accurate adjustment.

To sum up each valve element combination structure of the new valve so that the valve has a light weight, regulation performance, attempts to prevent the card, sealing strict, low noise, differential pressure, long life, easy installation and maintenance features, in many good use complex conditions.

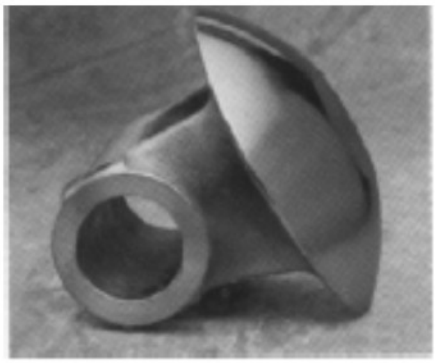
阀体、阀内件材料组合、工作温度及泄漏率 Material of each part, working temperature and leakage rate

阀体 Body	铸钢 Steel casting（ZG230-450）、不锈钢 Stainless Steel（ZG1Cr18Ni9Ti、316、316L）等				
球体 Sphere	不锈钢Stainless Steel（ZG1Cr18Ni9Ti、316、316L）等				
阀杆 Stem	不锈钢Stainless Steel（1Cr18Ni9Ti、316、316L)等				
填料 Packing	聚四氟乙烯、柔性石墨 Polytef, Flexible Graphite				
密封型式 Sealing Type	软密封 Soft Seal				硬密封
阀座 Seat	聚四氟乙烯 Polytef	二硫化钼强化聚四氟乙烯 Molybdenum Disulfide Intensified Polytef	碳纤维强化聚四氟乙烯 carbon fiber intensified polytef	特种复合石墨 special type compound graphite	不锈钢或不锈钢+STL stainless steel or stainless steel + STL
泄漏率 Leakage Rate	零泄漏 Zero Leakage			小于额定流量的10^{-7} Less than 10^{-7} of rated flow	小于额定流量的10^{-6} Less than 10^{-6} of rated flow
工作温度 Working Temperature	-40~180℃	-40~200℃	-40~220℃	-40~500℃	-40~600℃

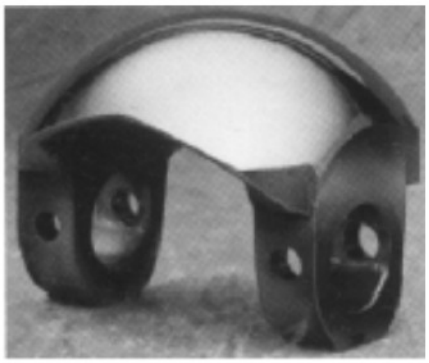
V型阀芯实现剪切带调节
V-type valve to achieve shear zone adjustment



微切口阀芯实现精密小流量调节
Small Flow Regulating Realized By Tiny Notch Valve Spool

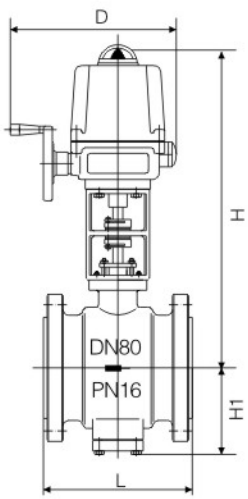


偏心结构延长密封寿命
Eccentric Structure Extend Seal Service Life

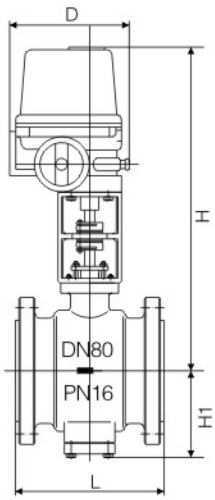


直通结构实现无阻调节
Unimpeded Regulating Realized By Straight-in Structure

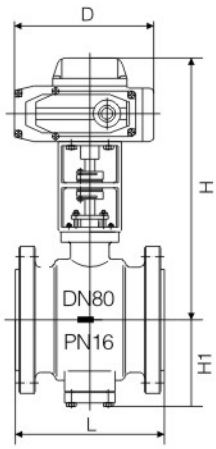
外形尺寸及重量 External Dimensions And Weight



配PSQ型执行器



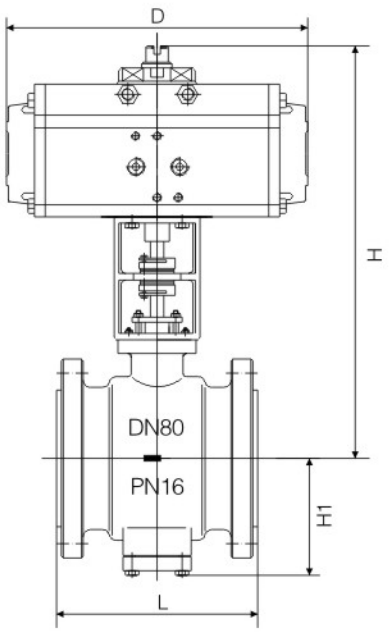
配HQ型执行器



配UNIC、DHL型执行器

公称通径			15	20	25	40	50	65	80	100	125	150	200	250	300	350	400
L	PN1.6		130	130	130	130	138	148	158	166	190	216	280	310	370	410	490
	PN4.0		130	130	130	130	138	148	158	174	190	224	290	320	380	420	500
	PN3.6		134	134	140	146	150	160	174	190	220	224	290	320	380	420	500
H1			103	103	103	103	125	127	140	155	170	188	225	250	290	325	355
UNIC、DHL	H	常温	399	399	399	399	424	427	446	456	471	491	610	670	760	790	/
		中温	499	499	499	499	524	527	546	556	571	591	710	770	860	890	/
		高温	569	569	569	569	594	597	616	626	641	661	800	860	940	970	/
	D		207	207	207	207	207	207	256	256	256	256	380	380	380	380	/
	重量		15.5	17	17	18	19.5	22.5	34.5	39	45	69.5	104	201	247	342	/
PSQ	H	常温	522	522	522	522	547	550	635	645	660	766	856	916	/	/	/
		中温	622	622	622	622	647	650	735	745	760	866	956	1016	/	/	/
		高温	692	692	692	692	717	720	805	815	830	936	1046	1106	/	/	/
	D		125	125	125	125	125	125	200	200	200	250	250	250	/	/	/
	重量		18	19.5	19.5	20.5	22	25	38.5	43	49	87	111	207	/	/	/
HQ	H	常温	535	535	535	535	560	563	575	612	627	662	758	858	1098	1163	1233
		中温	635	635	635	635	660	663	675	712	727	762	858	953	1198	1263	1303
		高温	705	705	705	705	730	733	745	782	797	832	948	1043	1278	1343	1383
	D		231	231	231	231	231	261	261	285	285	285	325	325	325	325	325
	重量		22	23.5	323.5	24.5	26	30	38.5	47	54	79	106	205	293	390	480

注：各规格所配执行机构因工艺参数不同会有变化。根据性价比，特别推荐配置UNIC、DHL型电动头。
Notes: The matched electric actuator might be different according to different technological parameter. However, UNIC and DHL type electric actuator will be suggested as their cost performance.



公称通径		15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500
L	PN1.6	130	130	130	130	130	138	148	158	166	190	216	280	310	370	410	490	560	620
	PN4.0	130	130	130	130	130	138	148	158	174	190	224	290	320	380	420	500	580	640
	PN6.3	134	134	140	140	146	150	160	174	190	220	224	290	320	380	420	500	580	640
H1		103	103	103	103	103	125	127	140	155	170	188	225	250	290	325	355	470	470
H	常温	427	427	450	450	450	475	498	548	553	625	645	782	842	932	1030	1100	1240	1350
	中温	527	527	550	550	550	575	598	648	563	725	745	882	942	1032	1130	1200	1340	1450
	高温	597	597	620	620	620	645	668	718	723	795	815	972	1032	1112	1210	1250	1450	1560
D		203	203	222	222	222	294	300	380	380	450	450	603	603	683	840	840	900	960
重量		15	16	18	19	19	23	28	44	47	75	99	106	262	320	470	560	620	720

注：各规格所配执行机构因工艺参数不同会有变化。
Note: the specifications for actuators for different process parameters will have change.

BLP1顶部导向单座调节阀 Top-guided Single Seated Control Valve

BLP1单座调节阀阀芯采用上导结构，阀体结构紧凑，流体通道呈S型，具有压降损失小，流量大，可调范围广，流量特性精度高，符合IEC534-2-1976标准，调节阀泄漏量符合ANSI B16.104标准。调节阀配用多弹簧薄膜或气缸执行机构，其结构紧凑，输出力大。

BLP1型调节阀更适用于要求可靠性及关闭性能高的高温、低温及低压差场合。

产品符合GB/T4213-2008标准。

BLP1 Single seated Control Valve with a top-guided valve plug, a compact valve body and an S-shape flow passage which features low pressure loss, large flow capacity, wide rangeability and high accuracy flow characteristics. The design complies with the IEC534-2-1976 standards and the leakage complies with the ANSI B16.104 standards. The compact size and large output force are available when the control valve is combined with multi-spring diaphragm actuator or cylinder actuator.

BLP1 control valve is more suitable for high temperature, low temperature and low pressure drop applications that require reliability and high on-off performance. This product complies with the GB/T4213-2008 standards.

主要参数 Major parameters

公称通径 DN(mm)		40			50			65			80			100			150			200		
阀座直径 (mm) Seat dia.		25	32	40	32	40	50	40	50	65	50	65	80	65	80	100	100	125	150	125	150	200
额定Cv值 Rated Cv	高精度 high precision	10	17	24	17	24	44	24	44	68	44	68	99	68	99	175	175	275	360	275	360	640
	高容量 High capacity			30			50			85			125			200			420			700
	快开 Fast open			35			55			95			135			220			460			720
额定行程(mm) Rated travel	快开阀芯 Fast open spool	10			13			19						25			30			50		
	其他阀芯 Other spool	25						38									50			75		
可调范围 adjustable range		50：1																				
公称压力 PN		JIS 10、16、20、30、40K；ANSI 125、150、300、600；JPI 125、150、300、600；PN1.6、4.0、6.4MPa																				
流量特性 flow characteristic		等百分比、直线、快开 equal percent, straight line, fast open																				
阀芯形式 Valve spool type		上导向单座柱塞型阀芯 Upper oriented Single seat plug type valve spool																				

法兰标准 Flange standard	JB78-59、JB79-59、JB/T79.1-94、JB/T79.2-94、ANSI、JIS、 DIN等 JB78-59、JB76-59、JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN etc.
上阀盖 Upper cover	常温型（-17～230℃）； 伸长Ⅰ型（-45～-17℃、230～566℃）伸长Ⅱ型（-200～-45℃）伸长Ⅲ型（-196～-100℃） Normal temperature（-17~230℃）; extension I (230~566℃、-45~-17℃); extension II （-200~-45℃）; extension III （-196～-100℃）
作用形式 Function type	气开式、气关式 air to open, air to close
执行机构 actuator	ZHA/B型多弹簧气动薄膜执行机构 ZHA/B type Multiple springs pneumatic diaphragm actuator
可配附件 Available Accessories	定位器、电磁阀、空气过滤减压阀、限位开关、阀位反馈器、紧急动作装置、手轮机构等 Locator, magnetic valve, air filtering and pressure relief valve, limit switch, valve location ultramagnifier, urgency action device, hand wheel etc.

注：工作温度、公称压力、公称通径超出列表范围的产品可与本公司商洽解决。
Notes: please contact with us if the working temperature, PN, DN of your ordering products over above list scope.

主要技术性能指标Major technical performance index

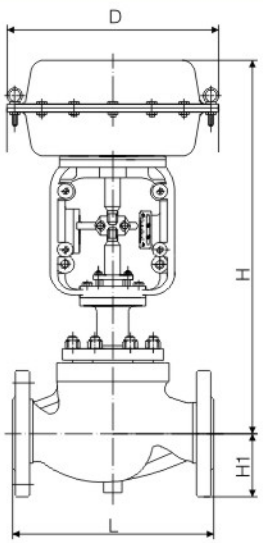
泄 漏 率：硬密封Ⅳ级，小于额定流量的10^{-4}　　软密封Ⅵ级，小于额定流量的10^{-7}
回　　差：不带定位，小于全行程的3%　　带定位器，小于全行程的1%
基本误差：不带定位器，小于全行程的±5%　　带定位器，小于全行程的±1%
死　　区：不带定位器，小于全行程的3%　　带定位器，小于全行程的1%
注：采用标准聚四氟乙烯填料

Leakage rate: Rigidity seal grade IV, less than 10^{-4} of rated flow; soft seal grade VI, less than 10^{-7} of rated flow
Return difference: without locator, less than 3% of full travel; with locator, less than 1% of full travel
fundamental error: without locator, less than ±5% of full travel; with locator, less than ±1% of full travel.
Dead zone: without locator, less than 3% of full travel; with locator, less than 1% of full travel.
Notes: standard Teflon packing applied.

主要零部件材料Material of main components

阀体材质：ZG230-450、ZG1Cr18Ni9Ti、316、316L、耐腐蚀合金等
芯座材质：1Cr18Ni9Ti、316、316L、耐腐蚀合金、F4等
填料材质：聚四氟乙烯、柔性石墨
膜片材质：丁腈橡胶夹尼龙布

Valve body: ZG230-450、ZG1Cr18Ni9Ti、316、316L and corrosion resistant alloy etc.
Spool seat: 1Cr18Ni9Ti、316、316L、corrosion resistant alloy, F4 etc.
Packing: Teflon, flexible graphite
Diaphragm sheet: chemigum clip nylon cloth



外形尺寸及重量 boundary dimension and weight

L(mm)														
公称通径 DN	JIS 10K FF RF ANSI 125FF ANSI 150RF JPI 150RF PN1.6 (MPa)	JIS 16K RF	JIS 20K RF JIS 30K RF ANSI 300 RF JPI 300 RF PN4.0 (MPa)	JIS 40K RF JIS 40K LG ANSI600 RF JPI600 RF PN6.4 (MPa)	ANSI 150 RJ JPI 150 RJ	ANSI 300 RJ JPI 300 RJ	ANSI 600 RJ JPI 600 RJ	JIS 16K LG	JIS 20K LG	JIS 30K LG	ANSI 300 LG JPI 300 LG	ANSI 600 LG JPI 600 LG	ANSI 150 JPI150 SW、BW	ANSI 300 ANSI 600 JPI 300 JPI 600 SW、BW
40	222	231	235	251	235	248	251	235	236	248	277	248	251	251
50	254	263	267	286	267	283	289	265	267	276	276	283	286	286
65	276	288	292	311	289	308	314	290	292	303	302	308	311	311
80	298	313	317	337	311	333	340	310	317	326	327	333	337	337
100	352	364	368	394	365	384	397	360	368	379	378	391	394	394
150	451	465	473	508	464	489	511	475	473	486	483	505	473	508
200	543	560	568	610	556	584	613	570	568	580	578	606	568	610

公称通径（mm）DN		40	50	65	80	100	150	200
H (mm)	常温型 Normal temperature type	425	427	575	580	610	785	1090
	伸长Ⅰ型 Extension type I	590	595	745	755	810	1020	1350
	伸长Ⅱ型 Extension type II	705	710	880	900	915	1250	1580
	伸长Ⅲ型 Extension type III	945	950	1130	1135	1150	1385	1710
H1(mm)		70	80	88	98	113	170	220
D(mm)		285	285	360	360	360	470	470
重量 Weight (Kg)	ANSI 125 150JIS 10K	35	41	62	75	92	201	276
	ANSI 300 JIS 16 20 30K	40	46	65	83	100	233	339
	ANSI 600 JIS 40K	48	51	82	105	135	283	459
	焊接 SW Welding SW	42	48	67	88	97	223	330

BLP2波纹管密封单座调节阀 Bellows Seal Single Seated Control Valve

BLP2波纹管密封单座调节阀阀芯采用上导结构，阀体结构紧凑，流体通道呈S型，具有压降损失小，流量大，可调范围广，流量特性精度高，符合IEC534-2-1976标准。调节阀泄漏量符合ANSI B16.104标准。其上阀盖采用波纹管密封结构，适用于极毒、易燃易爆易挥发和稀有贵重金属介质的。另外该阀也可用在真空的场合。

调节阀泄漏量符合ANSI B16.104标准。调节阀配用多弹簧薄膜执行机构，其结构紧凑，输出力大。

产品符合GB/T4213-2008标准。

BLP2 Bellows Seal Single Seated Control Valves with a top-guided valve plug, a compact valve body and an S-shape flow passage which features low pressure loss, large flow capacity, wide range ability and high accuracy flow characteristics. The design complies with the IEC534-2-1976 standards and the leakage complies with the ANSI B16.104 standards. The bonnet with bellows seal is suitable for highly toxic, flammable, explosive, volatile process fluid and rare metal. Moreover, this valve is also available in vacuum situation.

The leakage rate accords with ANSI B16.104 standard. The compact size and large output force are available when the control valve is combined with multi-spring diaphragm actuator or cylinder actuator.

This product complies with the GB/T4213-2008 standards.

主要参数 Major parameters

公称通径 DN(mm)		40			50			65			80			100			150			200		
阀座直径（mm） Seat dia.		25	32	40	32	40	50	40	50	65	50	65	80	65	80	100	100	125	150	125	150	200
额定Cv值 Rated Cv	高精度 high precision	10	17	24	17	24	44	24	44	68	44	68	99	68	99	175	175	275	360	275	360	640
	高容量 High capacity			30			50			85			125			200			420			700
	快开 Fast open			35			55			95			135			220			460			720
额定行程(mm) Rated travel	快开阀芯 Fast open spool			30			50			85			125			200			420			700
	其他阀芯 Other spool			35			55			95			135			220			460			720
可调范围 adjustable range		50：1																				
公称压力 PN		JIS 10、16、20、30、40K；ANSI 125、150、300、600；JPI 125、150、300、600；PN1.6、4.0、6.4MPa																				
流量特性 flow characteristic		等百分比、直线、快开 equal percent, straight line, fast open																				
阀芯形式 Valve spool type		单座柱塞型阀芯 Single seat plug type valve spool																				
法兰标准 Flange standard		JB78-59、JB76-59、JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等 JB78-59、JB76-59、JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN etc.																				

上阀盖 Upper cover	常温型（-17~230℃）；伸长I型（230~566℃、-45~-17℃）；伸长II型（-100~-45℃） Normal temperature（-17~230℃）; extension I (230~566℃、-45~-17℃); extension II （-100~-45℃）
作用形式 Function type	气开式、气关式 air to open, air to close
执行机构 actuator	ZHA/B型多弹簧气动薄膜执行机构 ZHA/B type Multiple springs pneumatic diaphragm actuator
可配附件 Available Accessories	定位器、电磁阀、空气过滤减压阀、限位开关、阀位反馈器、紧急动作装置、手轮机构等 Locator, magnetic valve, air filtering and pressure relief valve, limit switch, valve location ultramagnifier, urgency action device, hand wheel etc.

主要技术性能指标Major technical performance index

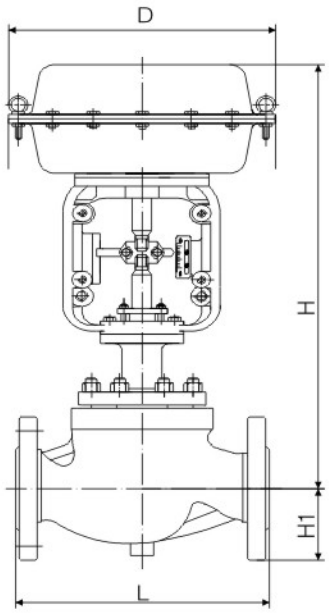
泄 漏 率：硬密封IV级，小于额定流量的10^{-4} ；　　软密封VI级，小于额定流量的10^{-7}
回　　差：不带定位，小于全行程的5%；　　带定位器，小于全行程的3%
基本误差：不带定位器，小于全行程的±11%；　　带定位器，小于全行程的±3%
死　　区：不带定位器，小于全行程的3%；　　带定位器，小于全行程的1%
注：采用标准聚四氟乙烯填料

Leakage rate: Rigidity seal grade IV, less than 10^{-4} of rated flow; soft seal grade VI, less than 10^{-7} of rated flow.
Return difference: without locator, less than 5% of full travel; with locator, less than 3% of full travel
fundamental error: without locator, less than ±11% of full travel; with locator, less than ±3% of full travel.
Dead zone: without locator, less than 3% of full travel; with locator, less than 1% of full travel.
Notes: standard Teflon packing applied.

主要零部件材料Material of main components

阀体材质：ZG230-450、ZG1Cr18Ni9Ti、316、316L耐腐蚀合金等
芯座材质：1Cr18Ni9Ti、316、316L、耐腐蚀合金、F4等
填料材质：聚四氟乙烯、柔性石墨
膜片材质：丁腈橡胶夹尼龙布
波纹管材质：1Cr18Ni9Ti、聚四氟乙烯等

Valve body: ZG230-450、ZG1Cr18Ni9Ti、316、316L and corrosion resistant alloy etc.
Spool seat: 1Cr18Ni9Ti、316、316L、corrosion resistant alloy, F4 etc.
Packing: Teflon, flexible graphite
Diaphragm sheet: chemigum clip nylon cloth
Bellows: 1Cr18Ni9Ti, Teflon etc.



外形尺寸及重量 boundary dimension and weight

L(mm)									
公称通径 DN	JIS 10K FF RF ANSI 125FF ANSI 150RF JPI 150RF PN1.6 (MPa)	JIS 20K RF JIS 30K RF ANSI 300 RF JPI 300 RF PN4.0 (MPa)	ANSI 150 RJ JPI 150 RJ	ANSI 300 RJ JPI 300 RJ	JIS 20K LG	JIS 30K LG	ANSI 300 LG JPI 300 LG	ANSI 150 JPI1 50 SW、BW	ANSI 300 JPI 300 SW、BW
40	222	235	235	248	236	248	244	251	251
50	254	267	267	283	267	276	276	286	286
65	276	292	289	308	292	303	302	311	311
80	298	317	311	333	317	326	327	337	337
100	352	368	365	384	368	379	378	394	394
150	451	473	464	489	473	486	483	473	508
200	543	568	556	584	568	580	578	568	610

公称通径（mm）DN		40	50	65	80	100	150	200
H (mm)	常温型 Normal temperature type	615	617	775	780	805	990	1290
	伸长型 Extension type	780	787	945	955	1005	1220	1550
H1(mm)		70	80	88	98	113	170	220
D(mm)		285	285	360	360	360	470	470
重量 Weight (Kg)	ANSI 125 150JIS 10K	43	49	70	83	100	209	284
	ANSI 300 JIS 16 20 30K	48	54	73	91	108	241	347
	焊接 SW Welding SW	50	56	75	96	105	231	338

BLP3（Q）X三通合（分）流调节阀 Converging（Diverging）Three-way Control Valve

BLP3（Q）X三通合（分）流调节阀通常用在热交换器上，调节流体的温度，具有调节精度高，调节性能好的特点。一般把一路进口流体分成两路出口流体，或者把两路进口流体合成一路出口流体。

产品符合GB/T4213-2008标准。

BLP3（Q）X Converging（Diverting）Three-way Control Valves are usually used for heat exchanger to adjust the temperature of the fluid. It features with high accuracy and good performance of adjustment. Generally the valve divides one flow into two or combined with two flows This product complies with the GB/T4213-2008 standards.

主要零部件材料 Material of main components

阀体材质：ZG230-450、ZG1Cr18Ni9Ti、316、316L耐腐蚀合金等
芯座材质：1Cr18Ni9Ti、316、316L、耐腐蚀合金、F4等
填料材质：聚四氟乙烯、柔性石墨
膜片材质：丁腈橡胶夹尼龙布
Valve body: ZG230-450、ZG1Cr18Ni9Ti、316、316L and corrosion resistant alloy etc.
Spool seat: 1Cr18Ni9Ti、316、316L、corrosion resistant alloy, F4 etc.
Packing: Teflon, flexible graphite
Diaphragm sheet: chemigum clip nylon cloth

主要参数 Main Parameters

公称通径（mm）DN		25	40		50	65	80	100	150		200
阀座直径(mm) Seat dia.		25	32	40	50	65	80	100	125	150	200
流量系数 KV	合流 flow collecting	8.5	13	21	34	53	85	135	210	340	535
	分流 Splite flow						85	135	210	340	535
可调范围 adjustable range		30：1									
公称压力 PN		1.6、4.0、6.4 MPa									
阀芯形式 Valve spool type		薄壁圆筒型阀芯 Thin-wall tubular type valve spool									
流量特性 flow characteristic		直线、对数 Straight line, logarithm									
作用形式 Function type		气开式、气关式 air to open, air to close									
工作温度 Working temperature		普通型-40～230℃，散热片型230～450℃ Normal type: -40～230℃; cooling fan type: 230～450℃									
法兰标准 Flange standard		符合JB78-59、JB79-59标准，可按JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准订货生产 Compliance with JB78-59、JB76-59, also could ordering as JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN etc. standards									
执行机构 actuator		ZHA/B型多弹簧气动薄膜执行机构、ZSL型直行程气动活塞式执行机构 ZHA/B type Multiple springs pneumatic diaphragm actuator; ZSL type straight journey pneumatic piston type actuator									
可配附件 Available Accessories		定位器、电磁阀、空气过滤减压阀、限位开关、阀位反馈器、紧急动作装置、手轮机构等 Locator, magnetic valve, air filtering and pressure relief valve, limit switch, valve location ultramagnifier, urgency action device, hand wheel etc.									

注：（1）工作温度、公称压力、公称通径超出列表范围的产品可与本公司商洽解决。
（2）公称通径<DN80时，分流阀可以由合流阀代替。

Notes: 1. please contact with us if the working temperature, PN, DN of your ordering products over above list scope.
2. Splite-flow valve could be instead by flow collecting valve if DN＜80

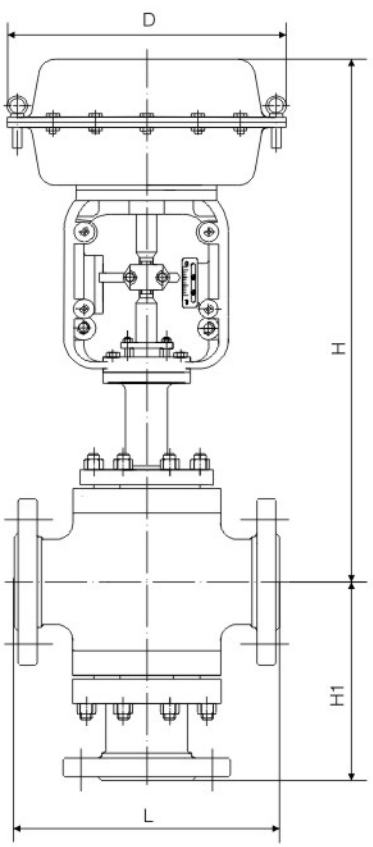
主要技术性能指标Major technical performance index

泄露率：IV级，小于额定流量的10^{-4}
回　差：不带定位器，小于全行程的3%；　带定位器，小于全行程的1%
基本误差：不带定位器，小于全行程的±5%；　带定位器，小于全行程的±1.5%
死区：不带定位器，小于全行程的3%；　带定位器，小于全行程的1%
注：测试使用的填料为标准聚四氟乙烯填料。

Leakage rate: Grade IV, less than 10^{-4} of rated flow
Return difference: without locator, less than 3% of full travel; with locator, less than 1% of full travel
fundamental error: without locator, less than ±5% of full travel; with locator, less than ±1.5% of full travel.
Dead zone: without locator, less than 3% of full travel; with locator, less than 1% of full travel.
Notes: Standard Teflon packing applied when testing.

外形尺寸及重量 boundary dimension and weight

公称通径（mm）DN		25	32	40	50	65	80	100	125	150	200
L(mm)	PN1.6MPa	185	200	220	250	275	300	350	410	450	550
	PN4.0MPa	190	210	230	255	285	310	355	425	460	560
	PN6.4MPa	200	210	235	265	295	320	370	440	475	570
H1(mm)	PN1.6MPa	140	150	160	180	200	220	220	256	278	322
	PN4.0MPa	150	160	170	190	220	232	256	295	313	372
	PN6.4MPa	160	170	180	200	220	242	266	300	318	382
H(mm)	c	435	441	465	480	584	585	575	762	772	792
	散热片型 With cooling fan	565	571	595	610	631	748	738	961	971	989
D(mm)		285	285	285	285	360	360	360	470	470	470
重量weight（Kg）		72	75	81	88	135	158	190	262	322	450



BLP4衬塑调节阀 Lining Plastic Control Valve

BLP4衬塑调节阀是一种防腐蚀直通单座调节阀，与流体接触的阀体内壁和阀内组件均采用高压注塑工艺，衬有能耐腐蚀、耐老化的聚全氟乙丙烯（F46），又采用聚四氟乙烯波纹管密封。广泛适用于对酸、碱等强腐蚀介质和有毒、易挥发等气体、液体的控制。

特点：

1. 耐腐蚀几乎能耐所有的介质（包括浓硝酸和王水）的腐蚀。
2. 密封性能好。采用波纹管和填料双重密封，确保无外渗漏。
3. 泄漏量小。由于阀芯、阀座采用软密封，故泄漏量低。
4. 配用HA执行机构，输出力大、结构紧凑。

BLP4 Lining Plastic Control Valves are the anti-corrosive type globe valves. Body wetted parts and trims use the high-pressure injection which are lined Fluorinated ethylene-propylene (F46), and gland parts are completely sealed by bellows seal bonnet made of pure teflon. They are applicable for controlling high corrosive and poisonous fluid.

Features:

1. Corrosion resistant. Resistant corrosion for all medium (including concentrated nitric acid and aqua regia)
2. High seal performance. Adopt bellows and double packing.
3. Low leakage. Use the soft seal for plug and valve seat.
4. Equipped with HA actuator, large output and compact structure.

主要参数 Major parameters

公称通径 DN(mm)	G1/2"		G3/4 "					20				25	40		50	65	80	100	125	150
阀座直径(mm) Seat dia.	3	4	5	6	7	8	9	10	12	15	20	25	32	40	50	65	80	100	125	150
流量系数 Kv	0.08	0.12	0.20	0.32	0.50	0.80	1.00	1.6	2,5	4	6.3	10	16	25	40	63	100	160	250	360
可调范围 Adjustable range	30:1																			
公称压力 PN	1.0、1.6MPa																			
阀芯形式 Spool type	单座柱塞型阀芯 Single seat plug type valve spool																			
流量特性 Flow characteristic	直线、对数 Straight line, logarithm																			
作用形式 Function type	气开式、气关式 air to open, air to close																			
工作温度 Working temp.	-40~180℃																			
法兰标准 Flange standard	符合JB78-59、JB79-59标准，可按JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准订货生产 Compliance with JB78-59、JB76-59, also could ordering as JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN etc. standards																			
执行机构 Actuator	ZHA/B型多弹簧气动薄膜执行机构 ZHA/B type Multiple springs pneumatic diaphragm actuator																			
可配附件 Available Accessories	定位器、电磁阀、空气过滤减压阀、限位开关、阀位反馈器、紧急动作装置、手轮机构等 Locator, magnetic valve, air filtering and pressure relief valve, limit switch, valve location ultramagnifier, urgency action device, hand wheel etc.																			

主要技术性能指标 Major technical performance index

泄 露 率：IV级，小于额定流量的10^{-8}；

回　　差：不带定位器，小于全行程的3%；　　带定位器，小于全行程的1%

基本误差：不带定位器，小于全行程的±5%；　　带定位器，小于全行程的±1%

死　　区：不带定位器，小于全行程的3%；　　带定位器，小于全行程的1%

注：测试使用的填料为标准聚四氟乙烯填料。

Leakage rate: Grade IV, less than 10^{-8} of rated flow

Return difference: without locator, less than 3% of full travel; with locator, less than 1% of full travel

fundamental error: without locator, less than ±5% of full travel; with locator, less than ±1% of full travel.

Dead zone: without locator, less than 3% of full travel; with locator, less than 1% of full travel.

Notes: Standard Teflon packing applied when testing.

主要零部件材料 Main components material

阀体材质：ZG230-450+F4、ZG1Cr18Ni9Ti+F4等
芯座材质：聚四氟乙烯
填料材质：聚四氟乙烯
膜片材质：丁腈橡胶夹尼龙布

Valve body: ZG230-450+F4、ZG1Cr18Ni9Ti+F4 etc.
Spool seat: Teflon
Packing: Teflon
Diaphragm sheet: chemigum clip nylon cloth

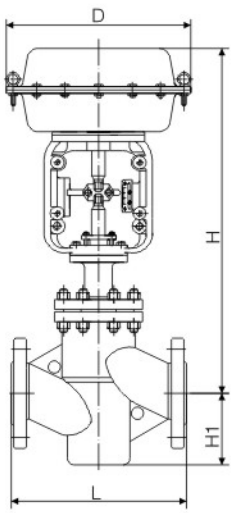
材料适用性说明 Instruction for the applicability of material

聚四氟乙烯外文简称为F4、PTFE。它的耐高温性能好，可在-250~260℃温度内长期使用。除高温高压下氟元素和熔融状态的碱金属对它有腐蚀作用，某些卤化物或芳香烃使其有轻微的膨胀外，其他诸如强酸（包括浓硝酸和王水）、强碱、强氧化剂、油脂、酮、醚、醇等即使在高温下也对它不起作用。

Teflon also named F4 or PTFE, which will very good performance of high temperature resistance, that could keep long term operation in temperature of -250~260℃. The material will be corrosion by fluorine element of under high temperature and high pressure, and alkali metal of molten condition, also will with slightly expand by influence of halogenide or aromatic hydrocarbon, however which will never influence by any other medium such as strong acid (includes concentrated nitric acid and aqua regia), strong base, strong oxidant, grease, ketone, ether and alcohol etc. even under high temperature.

外形尺寸及重量 boundary dimension and weight

公称通径DN	L(mm)	H1(mm)	H(mm)	D(mm)	重量weight(kg)
20	180	55	382	285	28
25	185	55	382		30
32	200	60	406		34
40	220	65	426		37
50	250	73	433		44
65	275	83	530	360	86
80	300	95	550		93
100	350	115	530		118
150	410	120	620		152
150	450	123	720	470	224



BLM 平衡笼式调节阀 BLW Balance cage type regulating valve

BLM平衡笼式调节阀是一种压力平衡式的调节阀。阀体结构紧凑，流体通道呈S型，还设有一个改善套筒周围流体平衡流动的导流翼，使其压降损失小，流量大，可调范围广，流量特性精度高，符合IEC534-2-1976标准。调节阀动态稳定性好，噪音低，空化腐蚀小。调节阀泄漏量符合ANSI B16.104标准。调节阀配用多弹簧薄膜或气缸执行机构，其结构紧凑，输出力大。

BLM1型平衡笼式双座调节阀适用于控制各种高温、低温的高压流体。

BLM2型平衡笼式单座调节阀适用于控制各种高温、低温的高压流体。

BLM3型低噪音笼式调节阀可以降低可压缩流体的噪音，为适应气体节流扩散与膨胀，套筒上设有许多对称小孔来降低压力降。适用于控制各种高温、高压差流体。

BLM4型多级降压低噪音调节阀是我厂在吸收CV3000调节阀技术的基础上自主研发的实用新型阀门，特殊的阀内件设计可实现阀门在高温高压差工况下达到降噪降压的效果。该系列阀门采用多层套筒结构，套筒层数一般为2～6层，最高压差可达7MPa。

BLM5型先导式平衡笼式调节阀是一种改进型压力平衡式的调节阀，介质自上而下流动。该阀在普通笼式调节阀基础上新增了先导阀芯来实现小开度调节，使得阀门整体调节能力得到提高。

产品符合GB/T4213-2008标准。

BLW Balance cage type regulating valve is a kind of regulating valve of pressure balance type. The valve body with compact structure, flow path is "S" type, and there is a turning vane to improve the medium balance flow around the sleeve, to make it with low pressure drop loss, large flow, wide adjustable range and high flow characteristic precision, be compliance with IEC 534-2-1976 standard. The regulating valve with good dynamic stability, low noise and low cavitation corrosion. The leakage of the regulating valve was compliance wit ANSI B16.104. The regulating valve with multiple springs diaphragm or cylinder actuator, which with compact structure and large output force.

BLM1 Balance cage type double seats regulating valve is suitable for controlling each kinds of high pressure fluid in high and low temperature.

BLM2 Balance cage type single seat regulating valve is suitable for controlling each kinds of high pressure fluid in high and low temperature.

BLM3 Low noise cage type regulating valve could reduce the noise of compressible fluid, to adapt with the diffusion and expand of gas throttle, there are some symmetrical holes on sleeve to reduce the pressure. The valve is suitable for controlling each kinds of high temperature and high differential pressure fluid.

BLM4 Multistage pressure reducing low noise regulating valve is a new type valve of independent research and development by our company according to the technique of CV3000 regulating valve. The special valve trim could realize the function of reduce noise and pressure under high temperature and high differential pressure conditions. The series valve with multilevel sleeve structure, the level number normally in 2-6, the maximum differential pressure could reach 7MPa.

BLM5 pilot-operated balance cage type regulating valve with advanced pressure balance type, the medium flows from top to bottom. Base on normal cage type regulating valve, the valve added pilot-operated valve element to realize small opening regulating, to rise the whole regulation capacity of valve.

The products is compliance with GB/T4213-2008.

主要技术性能指标 Major technical performance index

泄 漏 率：Ⅳ级，小于额定流量的10^{-4}

回　　差：不带定位器，小于全行程的3%；　　带定位器，小于全行程的1%

基本误差：不带定位器，小于全行程的±5%；　　带定位器，小于全行程的±1%

死　　区：不带定位器，小于全行程的3%；　　带定位器，小于全行程的1%

注：采用标准聚四氟乙烯填料

Leakage rate: Grade IV, less than 10^{-4} of rated flow

Return difference: without locator, less than 3% of full travel; with locator, less than 1% of full travel

fundamental error: without locator, less than ±5% of full travel; with locator, less than ±1% of full travel.

Dead zone: without locator, less than 3% of full travel; with locator, less than 1% of full travel.

Notes: standard Teflon packing applied.

主要零部件材料 Main components material

阀体材质：ZG230-450、ZG1Cr18Ni9Ti、316、316L耐腐蚀合金等

芯座材质：1Cr18Ni9Ti、316、316L、耐腐蚀合金、F4等

填料材质：聚四氟乙烯、柔性石墨

膜片材质：丁腈橡胶夹尼龙布

Valve body: ZG230-450、ZG1Cr18Ni9Ti、316、316L and corrosion resistant alloy etc.

Spool seat: 1Cr18Ni9Ti、316、316L、corrosion resistant alloy, F4 etc.

Packing: Teflon, flexible graphite

Diaphragm sheet: chemigum clip nylon cloth

主要参数 Major parameters

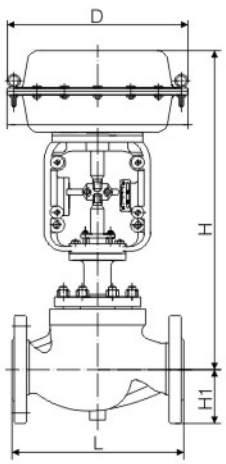
公称通径(mm) DN			40			50			65			80			100			150			200		
阀座直径(mm) Seat dia.			25	32	40	32	40	50	40	50	65	50	65	80	65	80	100	100	125	150	125	150	200
额定Cv值 Rated Cv	高精度 high precision		11	17	24	17	24	44	24	44	68	44	68	99	68	99	175	175	275	360	275	275	650
	高容量 High capacity	等百分比 Equal percentage			36			60			100			140			220			420			820
		线性 linea			40			75			110			150			240			235			850
	其它阀芯 Other spool		25						38									50			75		
可调范围 adjustable range			50：1																				
公称压力 PN			JIS 10、16、20、30、40K；ANSI 125、150、300、600；JPI 125、150、300、600；PN1.6、4.0、6.4MPa																				
流量特性 flow characteristic			等百分比、直线、快开 equal percent, straight line, fast open																				
阀芯形式 Valve spool type			压力平衡式阀芯 Pressure balance type valve spool																				
法兰标准 Flange standard			JB78–59、JB79–59、JB/T79.1–94、JB/T79.2–94、ANSI、JIS、DIN等 JB78–59、JB76–59、JB/T79.1–94、JB/T79.2–94、ANSI、JIS、DIN etc.																				
上阀盖 Upper cover			常温型（–17～230℃）；伸长Ⅰ型（–45～–17℃、230～566℃）； 伸长Ⅱ型（–100～–45℃）；伸长Ⅲ型（–196～–100℃） Normal temperature（–17~230℃）; extension I (230~566℃、–45~–17℃); extension II （–100~–45℃）; extension III （–196～–100℃）																		
作用形式 Function type			气开式、气关式 air to open, air to close																				
执行机构 actuator			ZHA/B型多弹簧气动薄膜执行机构 ZHA/B type Multiple springs pneumatic diaphragm actuator																				
可配附件 Available Accessories			定位器、电磁阀、空气过滤减压阀、限位开关、阀位反馈器、紧急动作装置、手轮机构等 Locator, magnetic valve, air filtering and pressure relief valve, limit switch, valve location ultramagnifier, urgency action device, hand wheel etc.																				

注：工作温度、公称压力、公称通径超出列表范围的产品可与本公司商洽解决。
Notes: please contact with us if the working temperature, PN, DN of your ordering products over above list scope.

外形尺寸及重量 boundary dimension and weight

公称通径 DN	L(mm)													
	JIS 10K FF RF ANSI 125FF ANSI 150RF JPI 150RF PN1.6(MPa)	JIS 16K RF	JIS 20K RF JIS 30K RF ANSI 300 RF JPI 300 RF PN4.0(MPa)	JIS 40K RF JIS 40K LG ANSI600RF JPI600RF PN6.4(MPa)	ANSI150RJ JPI150RJ	ANSI 300RJ JPI 300RJ	ANSI600RJ JPI600RJ	JIS 16K LG	JIS 20K LG	JIS 30K LG	ANSI 300LG JPI 300LG	ANSI 600LG JPI 600LG	ANSI150 JPI150 SW、BW	ANSI300 ANSI600 JPI300 JPI600 SW、BW
40	222	231	235	251	235	235	235	235	235	248	277	248	251	251
50	254	263	267	286	267	267	267	265	265	276	276	283	286	286
65	276	288	292	311	289	289	289	290	290	303	302	308	311	311
80	298	313	317	337	311	311	311	310	310	326	327	333	337	337
100	352	364	368	394	365	365	365	360	360	379	378	391	394	394
150	451	465	473	508	464	464	464	475	475	486	483	505	473	508
200	543	560	568	610	556	556	556	570	570	580	578	606	568	610

公称通径（mm）DN		40	50	65	65	100	150	200
H (mm)	常温型 Normal temperature type	425	427	575	575	610	785	1090
	伸长Ⅰ型 Extension type I	590	595	745	745	810	1020	1350
	伸长Ⅱ型 Extension type II	705	710	880	880	915	1250	1580
	伸长Ⅲ型 Extension type III	945	950	1130	1130	1150	1385	1710
H1(mm)		70	80	90	90	115	170	220
D(mm)		285	285	360	360	360	470	470
重量 weight (Kg)	ANSI 125 150 JIS 10K	35	41	62	62	92	201	276
	ANSI 300 JIS 16 20 30K	40	46	65	65	100	233	339
	ANSI 600 JIS 40K	48	51	82	82	135	283	459
	焊接 SW Welding SW	42	48	67	67	97	223	330



BLM6波纹管密封平衡笼式调节阀 Bellows Seal Balance Cage Guided Control Valve

BLM6 波纹管平衡笼式调节阀控制各种高温、低温的中压流体,是一种压力平衡式的调节阀。阀体结构紧凑，流体通道呈S型，还设有一个改善套筒周围流体平衡流动的导流翼，使其压降损失小，流量大，可调范围广，流量特性精度高，符合IEC534-2-1976标准。调节阀动态稳定性好，噪音低，空化腐蚀小。其上阀盖采用波纹管密封结构，适用于极毒、易燃易爆易挥发和稀有贵重金属介质的。另外该阀也可用在真空的场合。

调节阀泄漏量符合ANSI B16.104标准。调节阀配用多弹簧薄膜或气缸执行机构，其结构紧凑，输出力大。

产品符合GB/T4213-2008标准。

BLM6 Bellows Seal Balance Cage Guided Control Valve is a kind of pressure balanced type control valve which is applicable for controlling high or low temperature and high pressure fluid. The valve with a compact structure, S type flow way and a guide wing that improved the fluid balance around the cage makes the low pressure loss, large flow, wide adjustable range and high-precision flow characteristic are available. The design of valve is in compliance with IEC534-2-1976.This valve represents dynamic stability, low noise and small cavitation corrosion. The bonnet with bellows seal is suitable for highly toxic, flammable, explosive, volatile process fluid and rare metal. Moreover, this valve is also available in vacuum situation.

The leakage rate accords with ANSI B16.104 standard. The compact size and large output force are available when the control valve is combined with multi-spring diaphragm actuator or cylinder actuator.

This product complies with the GB/T4213-2008 standards.

主要参数 Major parameters

公称通径(mm) DN			40			50			65			80			100			150			200		
阀座直径(mm) Seat dia.			25	32	40	32	40	50	40	50	65	50	65	80	65	80	100	100	125	150	125	150	200
额定Cv值 Rated Cv	高精度 high precision		11	17	24	17	24	44	24	44	68	44	68	99	68	99	175	175	275	360	275	275	650
	高容量 High capacity	等百分比 Equal percentage			36			60			100			140			220			420			820
		线性 linea			40			75			110			150			240			235			850
	其它阀芯 Other spool		25						38									50			75		
可调范围 adjustable range			50：1																				
公称压力 PN			JIS 10、16、20、30、40K；ANSI 125、150、300、600；JPI 125、150、300、600；PN1.6、4.0、6.4MPa																				
流量特性 flow characteristic			等百分比、直线 equal percent, straight line																				
阀芯形式 Valve spool type																							
法兰标准 Flange standard			JB78–59、JB79–59、JB/T79.1–94、JB/T79.2–94、ANSI、JIS、DIN等 JB78–59、JB76–59、JB/T79.1–94、JB/T79.2–94、ANSI、JIS、DIN etc.																				
上阀盖 Upper cover			常温型（–17~230℃）；伸长型（230~350℃） Normal temperature type (–17~230℃); Extension type (230~350℃)																				
作用形式 Function type			气开式、气关式 air to open, air to close																				
执行机构 actuator			ZHA/B型多弹簧气动薄膜执行机构 ZHA/B type Multiple springs pneumatic diaphragm actuator																				
可配附件 Available Accessories			定位器、电磁阀、空气过滤减压阀、限位开关、阀位反馈器、紧急动作装置、手轮机构等 Locator, magnetic valve, air filtering and pressure relief valve, limit switch, valve location ultramagnifier, urgency action device, hand wheel etc.																				

注：工作温度、公称压力、公称通径超出列表范围的产品可与本公司商洽解决。
Notes: please contact with us if the working temperature, PN, DN of your ordering products over above list scope.

主要技术性能指标 Major technical performance index

泄 漏 率：硬密封IV级，小于额定流量的10^{-4}

回 差：不带定位，小于全行程的3%； 带定位器，小于全行程的1%

基本误差：不带定位器，小于全行程的±5% 带定位器，小于全行程的±1%

死 区：不带定位器，小于全行程的3%； 带定位器，小于全行程的1%

注：采用标准聚四氟乙烯填料

Leakage rate: Rigidity seal grade IV, less than 10^{-4} of rated flow

Return difference: without locator, less than 3% of full travel; with locator, less than 1% of full travel

fundamental error: without locator, less than ±5% of full travel; with locator, less than ±1% of full travel.

Dead zone: without locator, less than 3% of full travel; with locator, less than 1% of full travel.

Notes: standard Teflon packing applied.

主要零部件材料 Main components material

阀体材质：ZG230-450、ZG1Cr18Ni9Ti、316、316L耐腐蚀合金等

芯座材质：1Cr18Ni9Ti、316、316L、耐腐蚀合金、F4等

填料材质：聚四氟乙烯、柔性石墨

膜片材质：丁腈橡胶夹尼龙布

波纹管材质：1Cr18Ni9Ti、聚四氟乙烯等

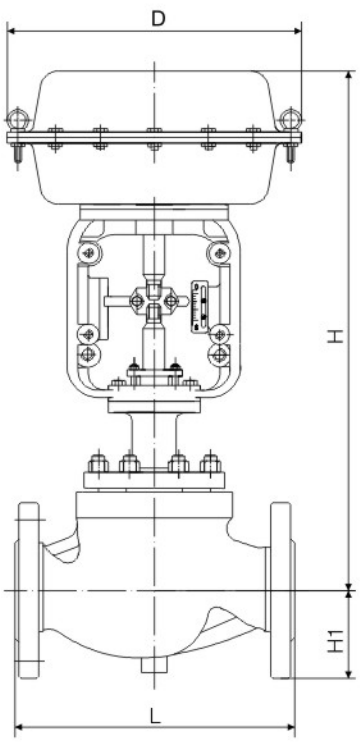
Valve body: ZG230-450、ZG1Cr18Ni9Ti、316、316L and corrosion resistant alloy etc.

Spool seat: 1Cr18Ni9Ti、316、316L、corrosion resistant alloy, F4 etc.

Packing: Teflon, flexible graphite

Diaphragm sheet: chemigum clip nylon cloth

Bellows: 1Cr18Ni9Ti, Teflon etc.



外形尺寸及重量 boundary dimension and weight

公称通径 DN	L(mm)								
	JIS 10K FF RF ANSI 125FF 150RF JPI 150RF PN1.6(MPa)	JIS20K30KRF ANST 300 RF JPI300RF PN4.0(MPa)	ANSI 150 RJ JPI 150 RJ	ANST 300RJ JPI 300 RJ	JIS 20K LG	JIS 30K LG	ANSI 300LG JPI 300LG	ANST 150 JPI 150 SW、BW	ANSI 300 JPI 300 SW、BW
40	222	235	235	248	236	236	244	251	251
50	254	267	267	283	267	267	276	286	286
65	276	292	292	308	292	292	302	311	311
80	298	317	317	333	317	317	327	337	337
100	352	368	368	384	368	368	378	394	394
150	451	473	473	489	473	473	483	473	473
200	543	568	568	584	568	568	578	568	568

公称通径（mm）DN		40	50	65	80	100	150	200
H (mm)	常温型 Normal temperature type	615	617	775	780	805	990	1290
	伸长型 Extension type	780	787	945	955	1005	1220	1550
H1(mm)		70	80	88	98	113	170	220
D(mm)		285	285	360	360	360	470	470
重量 weight (Kg)	ANSI 125 150 JIS 10K	43	49	70	83	100	209	284
	ANSI 300 JIS 16 20 30K	48	54	73	91	108	241	347
	焊接 SW Welding SW	50	56	75	96	105	231	338

BLO1 O/V型球阀 Type O/V Ball Valve

BLO1 O/V型球阀采用国际通用标准设计，选用可靠性高的国际上广泛使用的HT、AW系列执行机构、DCL电动执行机构，整机可靠性高。其结构紧凑、重量轻、体积小、装拆维护方便；用于控制高粘度、带有纤维性和含有颗粒的介质。

产品特点：1、流路畅通、流阻小。

2、密封性能好，泄漏低。

3、防静电。

4、阀杆防飞出。

5、防火达到API 607/API 6FA要求。

BLO1 type O/V ball valve is designed according to international universal standard and choice of high reliability actuator for international extensive use such as HT and AW series pneumatic actuator or DCL electric actuator to ensure high reliability. The characteristic includes compact construction, light weight, small volume, convenient maintains. It is applicable for controlling high viscosity medium with fiber and granule.

Features: 1、Unimpeded flow passage and low flow resistance

2、perfect sealing and low leakage

3、Anti-static

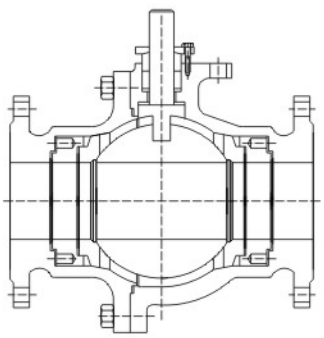
4、Stem anti-fly.

5、Fire proof satisfies API 607/API 6FA requirements.

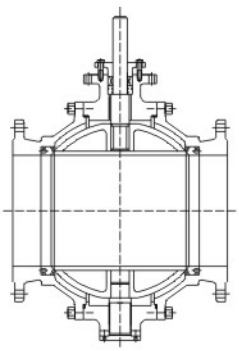
阀体 Body

形　式 Type	直通铸造球型阀 Straight-through casting globe valve
公称通径 Normal size	1/2"（15）、3/4"（20）、1"（25）、1 1/4"（32）、1 1/2"（40）、2"（50）、2 1/2"（65）、3"（80）、4"（100）、5"（125）、6"（150）、8"（200）、10"（250）、12"（300）、14"（350）、16"（400）、18"（450）、20"（500）
公称压力 Pressure rating	PN1.6、4.0、6.3MPa ANSI 150#、300#、600# JIS10K、20K、40K
连接型式 End connection	法兰型 Flanged:FF、RF、MFM 法兰标准 Flange standard: JIS B2201-1984、B/T79.1-94(PN1.6MPa);JB/T79.2-94(PN4.0、6.4MPa); ANSI B16.5-2009;HG20592-2009、HG20615-2009
填　料 Packing	聚四氟乙烯填料、石墨填料 Teflon or Graphite

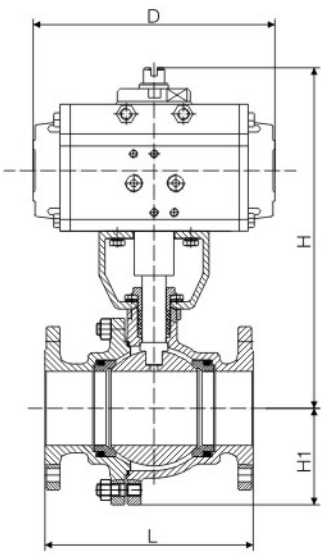
结构示意图 Structure diagram

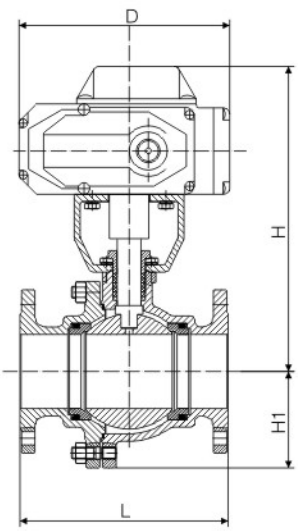


浮动球型
（DN15-DN200）



固定球型
（DN250-DN400）





主要参数 Major Parameter

公称通径(mm) DN		15	20	25	40	50	65	80	100	125	150	200	250	300
额定行程 Rated travel		90°												
公称压力 PN		1.6、4.0 MPa												
流量特性 flow characteristic		快开 Fast open												
产品型号 Products Model	气动 P	ZSRO（配GTX、AL等系列气动活塞执行机构） ZSRO (matched with GTX, AL etc series pneumatic piston actuator)												
	电动 E	ZDRO（配UNIC、PSQ、HQ、DHL等系列电子式电动执行机构） ZDRO (matched with UNIC, PSQ, HQ, DHL etc series electronic type electric actuator)												
作用形式 Function type		气动：气开式、气关式；电动：电开式、电关式 Pneumatic: air to open, air to close; Electric: electrical open, electrical close												
法兰标准 Flange standard		JB78-59、JB79-59、JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准 JB78-59, JB79-59, JB/T79.1-94, JB/T79.2-94, ANSI, JIS, DIN etc standards.												

注：公称压力、公称通径超出列表范围的产品请与本公司联系
Notes: Please contact with us if products DN & PN exceed the scope of above.

阀体、阀内件材料组合、工作温度及泄漏率

Material of valve body and other components, working temperature and leakage rate

阀体材料 Valve Body	铸钢（ZG230-450）、不锈钢（ZG1Cr19Ni9Ti、316、316L）等 Casting steel (ZG230-450), Stainless steel (ZG1Cr19Ni9Ti,316,316L) etc.				
球体材料 Sphere Body	不锈钢（ZG1Cr19Ni9Ti、316、316L）等 Stainless steel (ZG1Cr19Ni9Ti,316,316L) etc.				
阀杆材料 Valve Rod	不锈钢（1Cr19Ni9Ti、316、316L）等 Stainless steel (1Cr19Ni9Ti,316,316L) etc.				
填料材料 Packing	聚四氟乙烯、柔性石墨 Teflon, flexible graphite				
密封型式 Seal type	软密封 Soft seal				硬密封 Rigidity Seal
密封材料 Seal Material	聚四氟乙烯 Teflon	二硫化钼强化聚四氟乙烯 molybdenum disulfide intensify Teflon	碳纤维强化聚四氟乙烯 carbon fiber intensify Teflon	特种复合石墨 Special composite graphite	不锈钢或不锈钢+STL SS or SS+STL
泄漏量 Leakage Rate	零泄漏 No leakage			小于额定流量的10^{-6} less than 10^{-6} of rated flow	小于额定流量的10^{-5} less than $10^{-5}$of rated flow
工作温度 Working temperature	-40~180℃	-40~200℃	-40~220℃	-40~500℃	-40~600℃

硬密封建议选用弹性密封式全功能阀代替 Suggested to select elastic seal type full-featured valve to instead of rigidity seal.
注：特殊材质要求请与本公司联系，可商洽解决。Notes: please contact with us if special material required.

允许压差 Allowable pressure differential

允许压差与执行机构配置等有关，订货时应注明工作压差，便于确定执行机构的配置
The allowable pressure differential is relative with the matched actuator, the working pressure differential should be mentioned when ordering then we can confirm the actuator.

外形尺寸 Boundary dimension

PN 1.6MPa （ANSI115Lb）

DN公称通径(mm)			15	20	25	40	50	65	80	100	125	150	200	250	300
L(mm)			140	152	165	190	216	241	283	305	381	403	502	568	648
H1(mm)			50	55	60	75	85	95	105	115	140	160	210	310	350
配 UNIC	D(mm)		157			207			256			380		420	
	H (mm)	常温 Normal Temp.	275	280	305	330	340	410	460	535	670	690	750	795	840
		中温 Middle Temp.	295	300	325	370	400	470	525	600	740	760	850	990	1060
配 GTX	D(mm)		222			294	300		380		450	603	683	720	
	H (mm)	常温 Normal Temp.	306	309	321	340	370	410	468	555	717	771	774	915	950
		中温 Middle Temp.	326	329	341	380	430	470	533	620	787	840	874	1115	1150

PN 4.0MPa (ANSI1300Lb)

DN公称通径(mm)			15	20	25	40	50	65	80	100	125	150	200	250	300
L(mm)			140	152	165	190	178	190	203	229	256	394	457	533	610
H1(mm)			50	55	60	75	85	95	105	115	140	160	210	310	350
配 UNIC	D(mm)		157			207			256			380			420
	H (mm)	常温 Normal Temp.	275	280	290	330	340	400	460	535	640	690	750	795	840
		中温 Middle Temp.	295	300	310	370	400	460	525	600	710	760	850	990	1060
配 GTX	D(mm)		203			294		300		380		450	603	683	720
	H (mm)	常温 Normal Temp.	283	286	298	340	350	410	420	555	660	724	774	885	950
		中温 Middle Temp.	303	306	318	380	410	470	485	620	730	794	874	1085	1150

注：各规格所配执行机构因工艺参数不同会有变化。
Notes: The matched actuator might be different according to different technological parameter.

BLO2 衬塑O/V型球阀 Fluoroplastic Lined Type O/V Ball Valve

BLO2衬塑O/V型球阀采用国际通用标准设计，选用可靠性高的HT、AW系列执行机构。该阀结构紧凑，体积小，拆卸维修方便，阀体内腔及球体均采用高压衬塑工艺，衬有耐腐蚀、耐老化的聚全氟乙烯（简称F46）或PFA，该产品具有耐腐蚀性和密封性好等特点。产品广泛应用于化工、石油、冶金、医药、电力等行业，特别适用于生产过程中酸、碱等强腐蚀介质的切断。

BLO2 Fluoroplastic Lined Type O/V Ball Valves is designed according to international universal standard and choice of high reliability for international extensive use such as HT and AW series actuator. The valve features with compact structure, small volume and easy maintenance and disassembly. The valve cavity and the ball are lined Fluorinated ethylene propylene (F46 for short) or PFA under high pressure for corrosion resistance and tightness. The products are widely used in chemical industry, petroleum, metallurgy, medicine, electric power and so on, especially suitable for the production process of acid, alkali and other strong corrosive medium cut-off.

阀体 Body

形　式 Type	直通铸造球型阀 Straight-through casting globe valve
公称通径 Normal size	1/2"(15)、1"(25)、1 1/4"(32)、1 1/2"(40)、2"(50)、2 1/2"(65)、3"(80)、4"(100)、5"(125)、6"(150)
公称压力 Pressure rating	PN 1.6MPa , ANSI 150#
连接型式 End connection	法兰连接密封面型式 Sealing face of flange connection：FF, RF
材　料 Material	JIS B2201-1984、JB/T79.1-94(PN1.6MPa); ANSI B16.5-2009;HG20592-2009、HG20615-2009
填　料 Packing	WCB衬氟塑 Fluoroplastic Lined (F46、PFA)、 SCS13A衬氟塑 Fluoroplastic Lined (F46、PFA)
表面涂层 Surface coating	V型聚四氟乙烯填料 Teflon V-ring asbestos

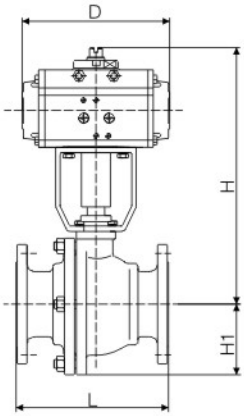
* 法兰标准 Standard: JIS B2201-1984、JB/T79.1-94(PN1.6MPa);JB/T79.2-94(PN4.0、6.4MPa);
ANSI B16.5-2009;HG20592-2009、HG20615-2009

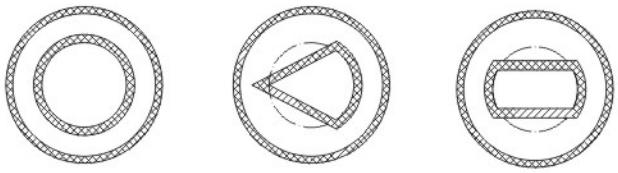
主要参数 Major Parameter

公称通径(mm) DN	15	20	25	32	40	50	65	80	100	125	150	200
流量系数Kv(V型) Kv (V type)	10	16	25	40	63	100	160	250	400	630	1000	1600
额定行程 Rated travel	90°											
公称压力 PN	1.0、1.6 MPa											
流量特性 flow characteristic	V型：近似等百分比；O型：快开 V type: approximate equal percent; O type: fast open											
可调范围 Adjustable range	V型：100：1 V type: 100:1											
产品型号 Products Model 气动 P	ZSRO (V) F (配GTX、AL等系列气动活塞执行机构) ZSRO (V) F (matched with GTX, AL etc series pneumatic piston actuator)											
产品型号 Products Model 电动 E	ZDRO (配UNIC、PSQ、HQ、DHL等系列电子式电动执行机构) ZDRO (matched with UNIC, PSQ, HQ, DHL etc series electronic type electric actuator)											
作用形式 Function type	气动：气开式、气关式；电动：电开式、电关式 Pneumatic: air to open, air to close; Electric: electrical open, electrical close											
法兰标准 Flange standard	JB78-59、JB79-59、JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准 JB78-59, JB79-59, JB/T79.1-94, JB/T79.2-94, ANSI, JIS, DIN etc standards.											

注：公称压力、公称通径超出列表范围的产品请与本公司联系
Notes: Please contact with us if products DN & PN exceed the scope of above.

本体结构图 Noumenon structure drawing





O型通道　V型通道　矩型通道

BLO2衬塑球阀通道形式代替本体结构图

O型水处理球阀：O type water treatment ball valve

阀体、阀内件材料组合、工作温度及泄漏率

Material of valve body and other components, working temperature and leakage rate

阀体材料 Valve Body	ZG230-450+F46	ZG1Cr18Ni9Ti+F46
球体材料 Sphere Body	ZG1Cr18Ni9Ti+F46等 ZG1Cr18Ni9Ti+F46 etc.	
阀杆材料 Valve Rod	1Cr18Ni9Ti+F46等 1Cr18Ni9Ti+F46 etc.	
填料材料 Packing	聚四氟乙烯 Teflon	
密封型式 Seal type	软密封 Soft Seal	
密封材料 Seal Material	聚四氟乙烯 Teflon	
泄漏量 Leakage Rate	VI级，零泄漏 VI grade, zero leakage	
工作温度 Working temperature	-5~200℃	-20~200℃

注：特殊材质要求请与本公司联系
Notes: please contact wit us if special material grade is needed.

外形尺寸 Boundary dimension

公称通径 DN(mm)		15	20	25	32	40	50	65	80	100	125	150	200	250	300
L (mm)	PN 1.6MPa	130	140	150	165	180	200	220	250	280	320	360	400	450	520
H1(mm)		50	55	60	70	75	85	95	105	115	125	140	170	205	230
配 GTX	H(mm)	306	308	320	350	370	380	410	420	555	660	724	774	885	950
	D(mm)	222				294		300		380		450	603	683	720
配 UNIC	H(mm)	275	280	290		330	340	400	460	535	640	690	750	795	840
	D(mm)	157				207		256				380			420

注：各规格所配执行机构因工艺参数不同会有变化。
Notes: The matched actuator might be different according to different technological parameter.

BLO3三通O型球阀 Three way type O ball valve

BLO3三通O型球阀采用国际通用标准设计，其标准球芯有L型三通双口孔道和T型三通孔道。改变球芯与管道的相对角度，可对三条支管流体实现不同的组合控制。T型孔道可使三条正交的管道相互连通，也可使其中两条管道连通而切断另一条管道。L型孔道只能连通相互正交的两条管道或切换方向。即T型孔道起分流合流作用，L型孔道起分配作用。选用可靠性高的国际上广泛使用的HT、AW系列气动执行机构和DCL电动执行机构，整机可靠性高。其结构紧凑、重量轻、体积小、装拆维护方便；流路畅通、流阻小；密封性能好，泄漏低。用于控制高粘度、带有纤维性和含有颗粒的介质。

BLO3 three way type O ball valve is designed according to international universal standard, its standard plug includes L-pattern three way double port and T-pattern three way type. Change the relative angle between the plug and pipeline, the different combination control of fluid in three branch pipes can be available. T-port can connect three orthogonal pipelines with each other or connect two pipelines of them but cut off another. L-port can only connect two orthogonal pipelines or change direction, that means, T-port plays a diverging and converging role and L-port act as distribution function. The valve chooses high reliability for international extensive use such asHT and AW series actuator or DCL electric actuator. The features such as compact construction, light weight, small volume, convenient maintenance, unimpeded flow passage, low flow resistance, perfect sealing and low leakage of the valve shall applicable for controlling high viscosity medium with fiber and granule.

主要参数 Major Parameter

公称通径 DN	全通径型 Full DN type	20	25	40	50	65	80	100	125	150	200
	缩径型 Reducing type	–	–	–	–	–	–	–	–	–	–
公称压力 PN		1.6, 2.5, 4.0 MPa									
产品型号 Product model	气动 Pneumatic	ZSRQ（配GTX、AL等系列气动活塞执行机构） ZSRQ (matched with GTX, AL etc series pneumatic piston actuator)									
	电动 Electric	符合JB78-59、JB79-59标准， 可按JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准订货生产 Compliance with JB78-59 and JB79-59 standards, also could ordering as JB/T79.1-94, JB/T79.2-94, ANSI, JIS, DIN etc standards. ZDRQ（配UNIC、PSQ、HQ、DHL等系列电子式电动执行机构） ZDRQ (matched with UNIC, PSQ, HQ, DHL etc series electronic type electric actuator)									
法兰标准 Flange standard		符合JB78-59、JB79-59标准， 可按JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准订货生产 Compliance with JB78-59 and JB79-59 standards, also could ordering as JB/T79.1-94, JB/T79.2-94, ANSI, JIS, DIN etc standards.									

公称通径超出列表范围的产品请与本公司联系
Notes: Please contact with us if products DN & PN exceed the scope of above.

通道形式 Valve passage type

T型通口三通球阀 “T” type three-way ball valve

L型通口三通球阀 “L” type three-way ball valve

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阀体、阀内件材料组合、工作温度及泄漏率

Material of valve body and other components, working temperature and leakage rate

阀体材料 Valve Body	铸钢（ZG230-450）、不锈钢（ZG1Cr19Ni9Ti、316、316L）等 Casting steel (ZG230-450), Stainless steel (ZG1Cr19Ni9Ti,316,316L) etc.		
球体材料 Sphere Body	不锈钢（ZG1Cr19Ni9Ti、316、316L）等 Stainless steel (ZG1Cr19Ni9Ti,316,316L) etc.		
阀杆材料 Valve Rod	不锈钢（1Cr19Ni9Ti、316、316L）等 Stainless steel (1Cr19Ni9Ti,316,316L) etc.		
填料材料 Packing	聚四氟乙烯 Teflon		
密封型式 Seal type	软密封 Soft seal		硬密封 Rigidity Seal
密封材料 Seal Material	聚四氟乙烯 Teflon	碳纤维强化聚四氟乙烯 carbon fiber intensify Teflon	不锈钢或不锈钢+STL SS or SS+STL
泄漏量 Leakage Rate	VI级、小于额定流量的10^{-7}~10^{-8} VI, less than 10^{-7}~10^{-8} of rated flow		IV级、小于额定流量的10^{-4} IV, less than 10^{-4} of rated flow
工作温度 Working temperature	-20~150℃	-20~180℃	-20~250℃

阀体 Body

形　式 Type	直通铸造球型阀 Straight-through casting globe valve
公称通径 Normal size	L型 L-port：1"（25）、11/4"（32）、11/2"（40）、2"（50）、2?"（65）、3"（80）、4"（100）、5"（125）、6"（150）、8"（200） T型 T-port：1"（25）、11/4"（32）、11/2"（40）、2"（50）、2?"（65）、3"（80）、4"（100）、5"（125）、6"（150）、8"（200）
公称压力 Pressure rating	PN 1.6MPa、4.0MPa ANSI 150#、300# JIS 10K、20K
连接型式 End connection	法兰连接密封面型式 Sealing face of flange connection：FF, RF, MFM
法兰标准 Flange standard	JIS B2201-1984、JB/T79.1-94(PN1.6MPa);JB/T79.2-94(PN4.0、6.4MPa); ANSI B16.5-2009;HG20592-2009、HG20615-2009
填　料 Packing	V型聚四氟乙烯填料、石墨填料 Teflon V-ring, Graphite

外形尺寸 Boundary dimension

两体式 Double body type

公称通径 DN(mm)		20	25	40	50	65	80	100	125	150	200
L (mm)		150	160	210	220	250	260	330	430	510	580
H1(mm)		55	60	75	85	95	105	115	140	160	210
配 GTX	H(mm)	309	321	340	370	410	468	555	717	771	774
	D(mm)	222		294	300		380		450	603	683
配 UNIC	H(mm)	280	305	330	340	410	460	535	670	690	750
	D(mm)	157	207		256				380		

三体式 Triple body type

公称通径 DN(mm)		20	25	40	50	65	80	100	125	150	200
L (mm)		260	260	340	400	500	500	600	640	680	750
H1(mm)		55	60	75	85	95	105	115	140	160	210
配 GTX	H(mm)	309	321	340	370	410	468	555	717	771	774
	D(mm)	222		294	300		380		450	603	683
配 UNIC	H(mm)	280	305	330	340	410	460	535	670	690	750
	D(mm)	157	207		256				380		

注：各规格所配执行机构因工艺参数不同会有变化。
Notes: The matched actuator might be different according to different technological parameter.

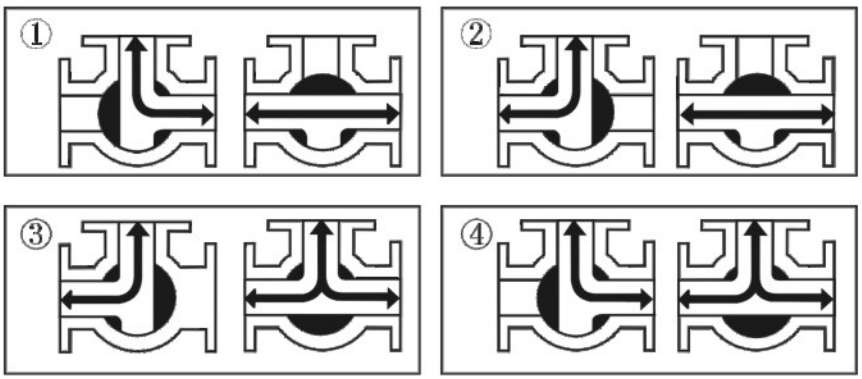
阀控制方式 Valve control

L型三通双口：有A、B二种见图1，订货时请注明电磁阀通电时是A、B哪种状态。
L-pattern three way double port: A and B, See Fig.1

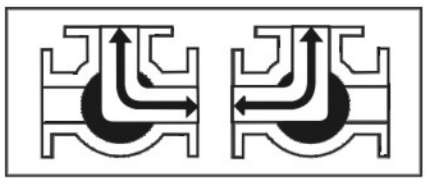
T型三通双口：有C、D、E、F四种，见图2、3、4、5，订货时请注明电磁阀通电时是C、D、E、F哪种状态。
T-pattern three way double port: C、D、E and F, See Fig.2、3、4、5.

通道形式

T型通口三通球阀



L型通口三通球阀



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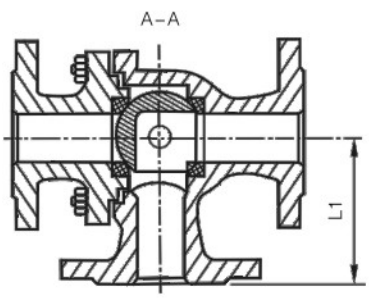
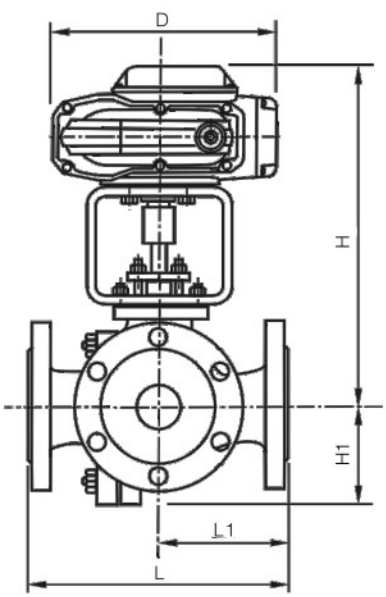
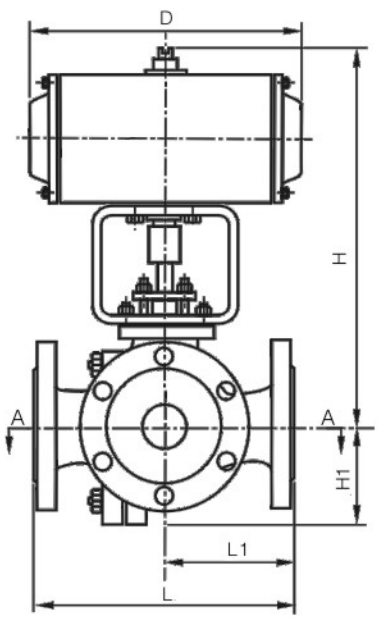






BLW1衬氟塑蝶阀 Fluorine-butterfly Butterfly Valve

BLW1衬氟塑蝶阀由于阀门内腔及蝶板均采用高压注塑工艺衬有耐腐蚀、耐老化的聚全氟乙炳烯，故具有可靠的耐腐蚀性和密封性。能广泛适用于化工、石油、冶金、医药、电力等工业部门，实现对生产过程中酸碱等强腐蚀介质的调节或切断。

本产品符合GB/T4213-2008标准。

BLW1 fluorine lined butterfly valve, the valve inner cavity and butterfly plate are lined with perfluorinated ethylene-propylene for anti-corrosion and anti-aging, high pressure shooting technique ensure the products with reliable corrosion resistance and leakproofness. The valve could be applied on chemical industry, petroleum, metallurgy, medicines and power etc. industries, to regulating or cut off the highly corrosive medium such as strong acid and strong base in production process.

The products is compliance with GB/T4213-2008.

阀体 Body

形式 Type	衬氟塑蝶阀 Fluorine-butterfly Butterfly Valve
公称通径 Normal size	50～600mm（2"～24"）
公称压力 Pressure rating	PN1.0、1.6MPa，ANSI 150#，JIS10K
连接型式 End connection	无法兰式（对夹式）Flangeless type (wafer type)
材 料 Material	ZG230-450衬F46或PFA
压盖型式 Gland type	螺栓压紧式 Bolted gland
填 料 Packing	聚四氟乙烯填料 PTFE

* 法兰标准 Standard: JIS B2201-1984、JB/T79.1-94(PN1.6MPa); ANSI B16.5-2009;HG20592-2009、HG20615-2009

额定Cv值 Rated Cv Value

公称通径 Valve size mm(Inch)	50	80	100	125	150	200	250	300	350	400	450	500	600
	2"	(3")	(4")	(5")	(6")	(8")	(10")	(12")	(14")	(16")	(18")	(20")	(24")
额定Cv值 Rated Cv value	100	265	480	750	1350	2310	3740	5100	6860	8960	11340	14000	20160

阀体、阀内件材料组合、工作温度及泄漏率

Material of valve body and other components, working temperature and leakage rate

阀板、阀体材料 Valve Plate, Valve Body	铸钢（ZG230-450）、不锈钢（ZG1Cr19Ni9Ti、316、316L）等 Casting steel (ZG230-450), Stainless steel (ZG1Cr19Ni9Ti,316,316L) etc.			
阀座、阀杆材料 Valve Seat, Valve Rod	不锈钢（1Cr19Ni9Ti、316、316L）等 Stainless steel (1Cr19Ni9Ti,316,316L) etc.			
填料 Packing	聚四氟乙烯、柔性石墨 Teflon, flexible graphite			
密封型式 Seal type	软密封 Soft seal		弹性硬密封 Elastic rigidity seal	硬密封 Rigidity Seal
密封材料 Seal Material	聚四氟乙烯 Teflon	碳纤维强化聚四氟乙烯 carbon fiber intensify Teflon	不锈钢或不锈钢+STL SS or SS+ST	不锈钢或不锈钢+STL SS or SS+ST
泄漏量 Leakage Rate	VI级，零泄漏 Grade VI, no leakage		V级、VI级 Grade V, Grade VI	V级、VI级 Grade V, Grade VI
工作温度 Working temperature	-40~180℃	-40~220℃	-40~450℃	-40~600℃

主要参数 Major parameters

公称通径 DN(mm)	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800
流量系数 Kv(90°)	35	60	90	180	270	420	620	1080	1700	2600	3500	4600	5800	7200	10900	15000	19500

额定行程 Rated travel		调节型：70度；两位型：90度 Regulating type: 70° ;Two step type: 90°
流量特性 flow characteristic		近似等百分比 approximate equal percent
公称压力 PN		标准产品 0.6、1.0、1.6MPa Standard products 0.6、1.0、1.6 MPa
可调范围 adjustable range		60度 10:1；90度 20:1 60° 10:1;90° 20:1
产品型号 Products model	气动 Pneumatic	ZSRWF(配GTX、AL等系列气动活塞执行机构) ZSRWF (matched with GTX, AL etc series pneumatic piston actuator)
	电动 Electric	ZDRWF(配UNIC、PSQ、HQ、DHL等系列电子式电动执行机构) ZDRWF (matched with UNIC, PSQ, HQ, DHL etc series electronic type electric actuator)
作用形式 Function type		气动：气开式、气关式；电动：电开式、电关式 Pneumatic: air to open, air to close; Electric: electrical open, electrical close
法兰标准 Flange standard		对夹式或法兰连接符合JB78-59、JB79-59标准， 可按JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准订货生产 Compliance with JB78-59 and JB79-59 standards, also could ordering as JB/T79.1-94, JB/T79.2-94, ANSI, JIS, DIN etc standards.

注：公称通径、公称压力超出列表范围的产品请与本公司联系。
Notes: Please contact with us if products DN & PN exceed the scope of above.

阀体、阀内件材料、工作温度及泄漏率

Material of valve body and other components, working temperature and leakage rate

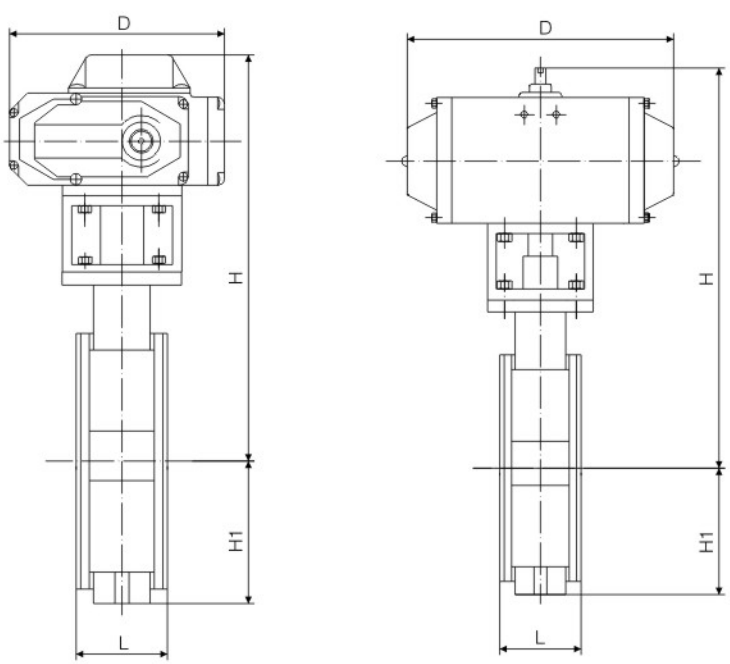
阀体材料Valve body material	(ZG230-450)+F46	ZG1Cr18Ni9Ti+F46
阀板材料Valve plate material	(ZG230~450)+F46等	
阀杆材料Valve rod material	(ZG230~450)+F46等	
填料材料Packing material	聚四氟乙烯Teflon	
密封型式Seal type	软密封Soft seal	
密封材料Seal material	聚四氟乙烯Teflon	
泄漏量Leakage rate	V,VI级 Grade V or VI	
工作温度Working temperature	-20~180℃	-40~180℃

注：特殊材质要求请与本公司联系。Notes: please contact with us if special material required.

外形尺寸boundary dimension

公称通径DN（mm）			40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800
L (mm)	对夹式 wafer type		40	43	46	46	52	56	56	60	68	78	78	102	114	127	154	165	190
	法兰式 Flange type		106	108	112	114	127	140	140	152	165	178	190	216	222	229	267	292	318
H1（mm）			80	90	95	110	120	135	155	180	210	235	270	310	330	370	420	490	550
配 UNIC	H (mm)	普通型 Normal	404	409	419	429	439	454	469	494	531	556	631	691	781	840	935	975	1040
		散热片型 with cooling fin	504	509	519	529	539	554	569	594	631	656	731	791	881	940	1005	1045	1100
	D(mm)		207	207	207	207	207	207	207	207	256	256	256	256	256	380	380	380	380
配 GTX	H (mm)	普通型 Normal	413	418	428	460	470	485	500	525	588	613	775	835	960	990	1085	1185	1250
		散热片型 with cooling fin	513	518	528	560	570	585	600	625	688	713	875	935	1060	1090	1155	1255	1320
	D(mm)		203					222	294		300		450		630			720	840

注：此表数据为常规配置数据，会因执行机构配置不同而变化。
Notes: The listed data is for normal option only, which will be changed if matched actuator was different.



BLW2双偏硬密封蝶阀 Double hard seal butterfly valve

BLW2硬密封蝶阀是一种双偏心高性能的硬密封蝶阀，具有优良的切断性和耐久性；是兼备调节、切断两种功能的经济实用自控阀。其流通能力大，关闭时摩擦力小、重量轻、易于维修保养、泄漏率低、产品性能价格比高。广泛应用于控制大流量、低压差、要求泄漏低的流体。

本产品符合GB/T4213-2008标准。

BLW2 rigidity seal butterfly valve with double eccentric, high property, also fine cuttability and durability, which is a kind of economical and practical internally piloted valve with both regulating and cut off functions. The valve with high flow capacity, low force of friction when cutting off, light weight, easy operation, low leakage and high cost performance, the valve could be widely used on control the fluid which mass flow, low differential pressure and required low leakage.

The products is compliance with GB/T4213-2008.

阀体 Body

形式 Type	偏心型 Eccentric type
公称通径 Normal size	80～800mm（3"～32"）
公称压力 Pressure rating	PN1.0、1.6MPa、ANSI 150、JIS10K
连接型式 End connection	法兰式（对夹式）Flangeless type (Wafer type)
材　料 Material	ZG230-450、ZG1Cr19Ni9Ti,316,316L etc.
压盖型式 Gland type	螺栓压紧式 Bolted gland
填　料 Packing	聚四氟乙烯填料、石墨填料 Teflon or Graphite

* 法兰标准 Standard: JIS B2201-1984、JB/T79.1-94(PN1.6MPa); ANSI B16.5-2009;HG20592-2009、HG20615-2009

主要参数 Major parameters

公称通径 DN(mm)			80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1500
流量系数 Kv	L级	60°开度	125	230	365	630	1100	1760	2450	3250	4270	5350	7000	10100	13650	17800	22400	28700	42600	55800	63500
		90°开度	260	470	760	1300	2250	3600	5000	6700	8700	11000	14400	21000	28100	36500	45900	58800	87300	114200	130200
	M级	60°开度	110	210	325	550	1000	1630	2220	2960	3870	4900	6300	9240	12400	16200	20300	26000	37800	50800	57800
		90°开度	185	330	530	910	1690	2700	3750	5360	7000	8800	11500	16800	25400	33200	41600	53300	77500	104100	118500

额定行程 Rated travel		调节型：60度；两位型：90度 Regulating: 60° ;Two step: 90°
流量特性 flow characteristic		近似等百分比 approximate equal percent
公称压力 PN		标准产品1.6、4.0MPa Standard products: 1.6, 4.0 MPa
可调范围 adjustable range		25：1（60度）；50:1（90度） 25：1（60° ）; 50：1（90° ）
产品型号 Products model	气动 Pneumatic	ZSRWh（配GTX、AL等系列气动活塞执行机构） ZSRWh (matched with GTX, AL etc series pneumatic piston actuator)
	电动 Electric	ZDRWh(配UNIC、PSQ、HQ、DHL等系列电子式电动执行机构) ZDRWh (matched with UNIC, PSQ, HQ, DHL etc series electronic type electric actuator)
作用形式 Function type		气动：气开式、气关式；电动：电开式、电关式 Pneumatic: air to open, air to close; Electric: electrical open, electrical close
法兰标准 Flange standard		符合JB78-59、JB79-59标准， 可按JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准订货生产 Compliance with JB78-59 and JB79-59 standards, also could ordering as JB/T79.1-94, JB/T79.2-94, ANSI, JIS, DIN etc standards.

注：公称通径、公称压力超出列表范围的产品请与本公司联系。
Notes: Please contact with us if products DN & PN exceed the scope of above.

阀体、阀内件材料、工作温度及泄漏率

Material of valve body and other components, working temperature and leakage rate

阀体材料 Valve body material		铸钢（ZG230-450）、不锈钢（ZG1Cr18Ni9Ti、316、316L）等 Casting steel (ZG230-450), Stainless steel (ZG1Cr18Ni9Ti、316、316L) etc.		
阀板材料 Valve plate material		不锈钢（ZG1Cr18Ni9Ti、316、316L）等 Stainless steel (ZG1Cr18Ni9Ti、316、316L) etc.		
填料材料 Packing material		聚四氟乙烯、柔性石墨 Teflon, flexible graphite		
密封型式 Seal type		软密封 Soft seal	弹性硬密封 Elastic rigidity seal	
密封材料 Seal material		聚四氟乙烯 Teflon	碳纤维强化聚四氟乙烯	不锈钢或不锈钢+STL SS or SS+STL
泄漏量 Leakage rate		VI级，零泄漏 Grade VI, no leakage	V级，小于额定流量的10^{-7} Grade V, less than 10^{-7} of rated flow	
工作温度 Working temperature	铸钢阀体 Casting steel body	-5~180℃	-5~220℃	-5~350℃
	不锈钢阀体 Stainless steel body	-20~180℃	-20~600℃	-20~450℃

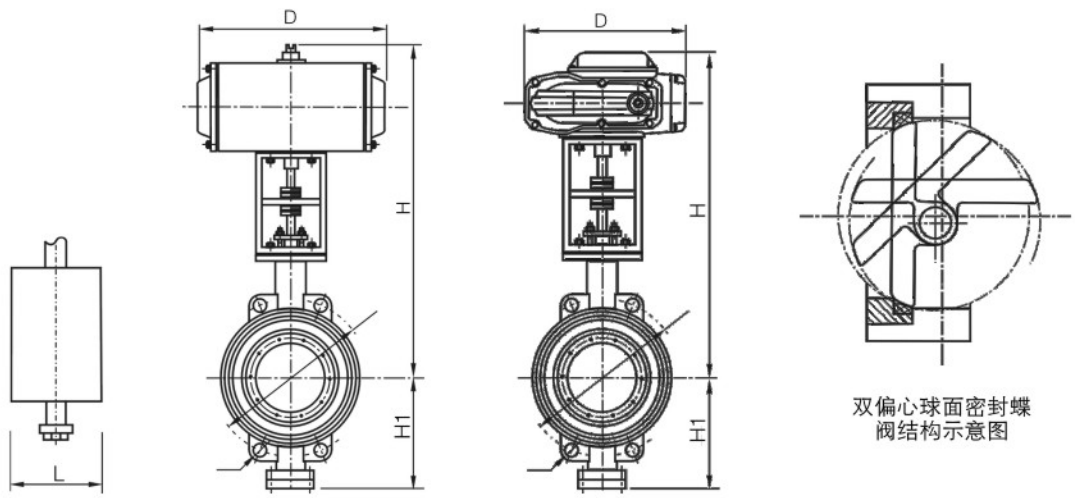
注：特殊材质要求请与本公司联系。Notes: please contact with us if special material required.

允许压差allowable pressure differential

允许压差与执行机构配置等有关，订货时应注明工作压差，便于确定配置。
The allowable pressure differential is relative with the matched actuator,
the working pressure differential should be mentioned when ordering then we can confirm the actuator.

额定Cv值 Rated Cv Value

公称通径 Valve size mm(Inch)	80	100	125	150	200	250	300	350	400	450	500	600	700	800
	(3")	(4")	(5")	(6")	(8")	(10")	(12")	(14")	(16")	(18")	(20")	(24")	28"	32"
90° 开度 90° Opening	265	480	750	1350	2310	3740	5100	6860	8960	11340	14000	20160	27440	35840



双偏心球面密封蝶阀结构示意图

外形尺寸boundary dimension

公称通径DN（mm）			80	100	150	200	250	300	350	350	450	500	600	700	800	900	1000	1200	1400	1500
L (mm)	对夹式 wafer type		64	64	76	89	114	114	127	127	152	152	178	229	241	241	300	360	390	420
	法兰式 Flange type		80	100	150	150	180	180	200	200	250	250	300	300	350	350	410	470	530	560
H1（mm）			120	140	180	210	240	290	320	320	385	410	450	510	560	630	680	790	900	960
配 UNIC	H (mm)	普通型 Normal	475	500	540	570	638	688	805	805	955	1010	1110	1215	1275	1325	1450	1510	1640	1760
		散热片型 with cooling fin	575	600	640	670	738	788	905	905	1055	1130	1230	1240	1300	1475	1500	1660	1790	1910
	D(mm)		203		294		300		450			603		683		700		795		
配 GTX	H (mm)	普通型 Normal	444	469	509	539	581	631	661	661	805	860	960	990	1060	1120	1170	1255	1380	1430
		散热片型 with cooling fin	544	569	609	639	681	731	761	761	905	980	1080	1100	1180	1250	1320	1405	1530	1580
	D(mm)		207				256			380						560				

注：此表数据为常规配置数据，会因执行机构配置不同而变化。
Notes: The listed data is for normal option only, which will be changed if matched actuator was different.

BLW3高性能硬密封蝶阀 BLW4 high-performance hard seal butterfly valve

BLW3高性能硬密封蝶阀，密封面是采用圆锥面型式，在水平中心上有一个角度偏心，阀杆相对于流道中心在其轴向和径向上有两个距离偏心，实现了蝶板密封圈与阀座密封面之间在关闭之前无摩擦的运动，密封面上压力角大于摩擦角，使蝶板开启阻力极低，快速实现关闭自动吻合密封动作。具有结构先进、 密封可靠、寿命长、成本低等优点。是兼备调节、切断两种功能的经济实用自控阀。广泛应用于控制大流量、中低压差、要求泄漏严密的流体。

本产品符合GB/T4213-2008标准。

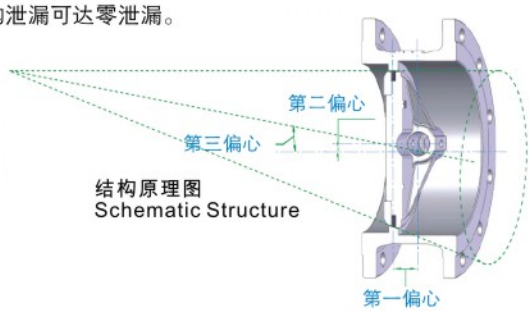
BLW3 high-performance rigidity seal butterfly valve, the sealing face is cone type. There is one angle eccentricity on horizontal center, and, relative to the center of flow path, there are two distance eccentricity on both the axial direction and radial direction on valve rod, therefore the zero friction was realized between the butterfly plate sealing ring and valve seat sealing face. The pressure angle on sealing face is larger than friction angle, so the butterfly plate with very low resistance when opening to realize the fast close and auto-anastomose sealing. The valve with advance structure, reliable sealing performance, long service life, low cost etc. advantages, is a kind of economical and practical internally piloted valve with both regulating and cut off functions and could be widely used on control the fluid which mass flow, low differential pressure and required low leakage.

The products is compliance with GB/T4213-2008.

产品特点 Product Feature:

1、三偏心密封蝶阀与执行器的连接尺寸按ISO5211标准进行设计，通用性强，安装简单方便。
2、三偏心密封蝶阀采用三偏心结构，适用于高温高压等复杂工况并要求严密切断的场合，阀门开闭过程无死区，开启力矩小。
3、阀体与阀板有多种材料组合，以满足不同压力、温度、介质的需要，该产品使用温度从-196到550摄氏度，公称压力从ANSI150至ANSI2500。
4、阀座和阀体一体式结构，阀座密封面采用堆焊高强度耐腐蚀合金材料，保证了阀体密封面的可靠性，产品使用寿命长，基本上做到零维护。
5、密封圈采用双相不锈钢全金属和多层次组合密封材料两种，阀座和密封圈结构相对独立，易更换，维修方便。
6、整体式的阀杆，并采用高强度的不锈钢材料，阀门承受的允用压差大；台阶式结构设计能有效防止阀杆飞出，大大保证阀门安全性。
7、采用轴封结构有效防止不洁净的介质等杂质进入阀体和阀杆之间的间隙，避免阀门出现卡死现象。
8、填料系统采用碟簧动态加载补偿结构，可以避免填料处绝对不外漏，可以达到TA-Luft标准要求。
9、该系列产品金属密封圈结构泄漏等级可达ANSI V级，多层次组合密封圈结构泄漏可达零泄漏。
10、产品设计选材符合与环保相关标准和法律、法规、节能降耗的要求。

三偏心原理：
第一偏心：阀杆中心偏离密封面中心；
第二偏心：阀杆中心偏离阀体（流道）中心；
第三偏心：密封面的中心线与阀体（流道）中心线



结构原理图
Schematic Structure

The connection dimension of triple eccentric seal butterfly valve and actuator was designed as per ISO 5211, with high universality and easy installation.
Triple eccentric structure was applied on the seal butterfly valve, which is suitable for the site of high temperature, high pressure and required tight shutoff, the valve without dead zone in switching process, and with low open torque.
The valve body and valve plate could be made in different material, to ensure the requirements of different pressure, temperature and medium, the operating temperature of the products could be from -196℃ to 550℃, the nominal pressure is from ANSI 150 to ANSI 2500.
The integrated structure was applied on the valve seat and valve body, and high strength corrosion-resisting alloy was overlaying on the sealing face of valve seat, so the sealing face of valve is very reliability and the products with long service life, zero maintenance is basically achieved.
The sealing ring could be made by duplex stainless steel (all-metal) or multilevel combined sealing material, the valve seat and sealing ring is relatively independent from structure, easy for replace and repair.
The unitary type valve rod was made by high strength stainless steel, the valve could bear large differential pressure; the step type structure design could avoid the valve rod fly off, to ensure the security of valve.
The shaft seal structure could avoid the unclean medium got into the space between valve body and rod, to avoid the valve to be stuck.
The disc spring dynamic loading compensation structure was applied on the padding system, which could ensure the padding hole with zero leakage and reach TA-Luft standard requirements.
The leakage grade of metal sealing ring structure could reach ANSI V grade, multilevel combined sealing material could realize zero leakage.
The design and material selection of the products is compliance with the requirements of standards, law, regulation about energy conservation and consumption reduction.

The theory of triple eccentric
1st eccentric: the center of valve rod eccentric with the center of sealing face.
2nd eccentric: the center of valve rod eccentric with the center of valve body (flow path)
3rd eccentric: the center line of sealing ring and the center line of valve body (flow path)

阀体 Body

形式 Type	三偏心型 Three-dimensional Eccentric
公称通径 Normal size	50～2000mm（2"～80"）
公称压力 Pressure rating	PN1.0、1.6、2.5、4.0、6.3MPa、10MPa ANSI 150、300、600、900、1500#
连接型式 End connection	无法兰式（对夹式）RF、法兰式 Flangeless type (wafer type), Flange type 密封面型式 Flanged end：RF、MFM、RJ
法兰标准 Flange standard	JB/T79.1-94(PN1.6MPa);JB/T79.2-94(PN4.0、6.4MPa); ANSI B16.5-2009;HG20592-2009、HG20615-2009
使用温度 Operating temperature	-100℃～+550℃
压盖型式 Gland type	螺栓压紧式 Bolted gland
填 料 Packing	聚四氟乙烯填料、石墨填料 Teflon or Graphite

额定Cv值 Rated Cv Value

Cv值的定义：阀处于全开状态，两端压差为1磅/英寸（0.07kgf/cm）的条件下，60 F(15.6C)的清水，每分钟通过阀的美加仑数。
The definition of Cv value: when the valve is wide open and differential pressure of two sides is 1 pound/inch (0.07kgf/cm), the gallon of 60°F (15.6℃) water pass the valve in one minute.

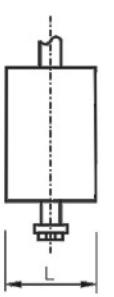
ANSI150	公称通径 Nominal diameter	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600	1800	2000
		2″	21/2"	3″	4″	5″	6″	8″	10″	12″	14″	16″	18″	20″	24″	28″	32″	36″	40″	48″	56″	60″	72″	80″
	额定Cv值 Rated Cv	90	160	240	430	670	1210	2256	3178	4942	6317	8604	11053	13850	24498	33866	42638	53963	66622	95935	143271	174816	210456	259826
ANSI300	公称通径 Nominal diameter	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000					
		2″	21/2"	3″	4″	5″	6″	8″	10″	12″	14″	16″	18″	20″	24″	28″	32″	36″	40″					
	额定Cv值 Rated Cv	90	160	240	430	670	1210	2256	3178	4942	6317	8604	11053	13850	24498	29570	40060	50725	61958					
ANSI600	公称通径 Nominal diameter						150	200	250	300	350	400	450	500	600									
							6″	8″	10″	12″	14″	16″	18″	20″	24″									
	额定Cv值 Rated Cv						790	1530	2589	3923	5195	6940	9116	11590	17590									
ANSI900	公称通径 Nominal diameter						150	200	250	300	350	400	450	500	600									
							6″	8″	10″	12″	14″	16″	18″	20″	24″									
	额定Cv值 Rated Cv						600	1080	1700	2520	4068	5380	7470	9820	14940									
ANSI1500	公称通径 Nominal diameter						150	200	250	300	350	400	450	500	600									
							6″	8″	10″	12″	14″	16″	18″	20″	24″									
	额定Cv值 Rated Cv						500	930	1450	2150	3140	4358	5670	7499	10400									

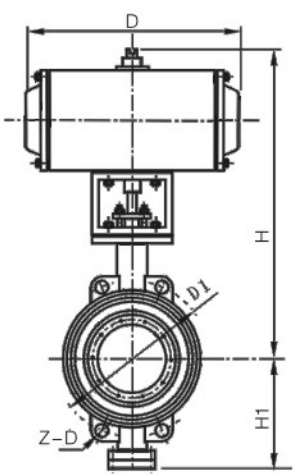
主要参数 Major parameters

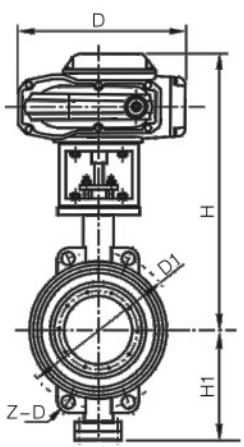
公称通径 DN(mm)			80	100	125	150	200	300	350	400	500	600	700	800	900	1000	1200	1400	1500
流量系数 Kv	1.6 MPa	60°开度	125	230	365	630	1100	2450	3250	4270	7000	10100	13650	17800	22400	28700	42600	55800	63500
		90°开度	260	470	760	1300	2250	5000	6700	8700	14400	21000	28100	36500	45900	58800	87300	114200	130200
	4.0 MPa	60°开度	110	210	325	550	1000	2220	2960	3870	6300	9240	12400	16200	20300	26000	37800	50800	57800
		90°开度	185	330	530	910	1690	3750	5360	7000	11500	16800	25400	33200	41600	53300	77500	104100	118500

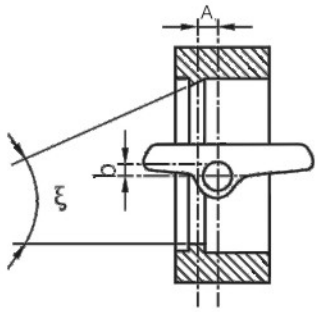
额定行程 Rated travel		调节型：60度；两位型：90度 Regulating: 60° ;Two step: 90°
流量特性 flow characteristic		近似等百分比 approximate equal percent
公称压力 PN		标准产品1.6、4.0MPa Standard products: 1.6, 4.0 MPa
可调范围 adjustable range		25:1（60度）；50:1（90度） 25:1（60° ）;50:1（90° ）
产品型号 Products model	气动 Pneumatic	ZSRWs（配GTX、AL等系列气动活塞执行机构） ZSRWs (matched with GTX, AL etc series pneumatic piston actuator)
	电动 Electric	ZDRWs（配UNIC、PSQ、HQ、DHL等系列电子式电动执行机构） ZDRWs (matched with UNIC, PSQ, HQ, DHL etc series electronic type electric actuator)
作用形式 Function type		气动：气开式、气关式；电动：电开式、电关式 Pneumatic: air to open, air to close; Electric: electrical open, electrical close
法兰标准 Flange standard		符合JB78-59、JB79-59标准， 可按JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准订货生产 Compliance with JB78-59 and JB79-59 standards, also could ordering as JB/T79.1-94, JB/T79.2-94, ANSI, JIS, DIN etc standards.

注：公称通径、公称压力超出列表范围的产品请与本公司联系。
Notes: Please contact with us if products DN & PN exceed the scope of above.









三偏心结构示意图

允许压差allowable pressure differential

允许压差与执行机构配置等有关，订货时应注明工作压差，便于确定执行机构的配置。
The allowable pressure differential is relative with the matched actuator,
the working pressure differential should be mentioned when ordering then we can confirm the actuator.

阀体、阀内件材料组合、工作温度及泄漏率

Material of valve body and other components, working temperature and leakage rate

阀板、阀体材料 Valve Plate, Valve Body	铸钢（ZG230-450）、不锈钢（ZG1Cr19Ni9Ti、316、316L）等 Casting steel (ZG230-450), Stainless steel (ZG1Cr19Ni9Ti,316,316L) etc.			
阀座、阀杆材料 Valve Seat, Valve Rod	不锈钢（1Cr19Ni9Ti、316、316L）等 Stainless steel (1Cr19Ni9Ti,316,316L) etc.			
填料材料 Packing	聚四氟乙烯、柔性石墨 Teflon, flexible graphite			
密封型式 Seal type	软密封 Soft seal		弹性硬密封 Elastic rigidity seal	硬密封 Rigidity Seal
密封材料 Seal Material	聚四氟乙烯 Teflon	碳纤维强化聚四氟乙烯 carbon fiber intensify Teflon	不锈钢或不锈钢+STL SS or SS+ST	不锈钢或不锈钢+STL SS or SS+ST
泄漏量 Leakage Rate	VI级，零泄漏 Grade VI, no leakage		V级、VI级 Grade V, Grade VI	V级、VI级 Grade V, Grade VI
工作温度 Working temperature	-40~180℃	-40~220℃	-40~450℃	-40~600℃

注：特殊材质要求请与本公司联系。
Notes: please contact with us if special material required.

BLW4端面密封蝶阀 Mechanical (End Face) Seal Butterfly Valve

BLW4端面密封蝶阀是一种重量轻，结构简单的后座式端面密封蝶阀。阀体、阀板均用钢板焊接或铸造加工而成。适用于低压状态的空气或其他气体的流量、压力控制。

本产品符合GB/T4213-2008标准。

BLW4 back-seated mechanical seal butterfly valve features with light weight and compact construction. Both the body and disc are made of machined steel plates or casting. It is designed suitable for controlling flow capacity and pressure of low pressure air or other gases. The design of this product complies with GB/T4213-2008 standard.

阀体 Body

形式 Type	扁平式焊接或铸造阀体 Flat type welding or casting body
公称通径 Normal size	125～2000mm（5"～80"）
公称压力 Pressure rating	PN0.25、0.6、1.0、1.6MPa，ANSI 150,JIS2K、 5K、10K
连接型式 End connection	法兰式 Flange type 密封面型式 Flanged end：RF
材 料 Material	25#、SUS304、SUS316、高温耐热钢Ni25Mo等 25#, SUS304, SUS316 or heat resistant steel Ni25Mo, etc.
标准型 Standard type	适用-17～200℃，公称通径DN550以下。 Suitable for the condition of -17～200℃ and DN550 below
外部轴承型 Outer bearing	公称通径DN600以上；公称通径DN550以下，温度200～600℃。 Suitable for the condition of DN600 above or DN550 below and 200～600℃.
压盖型式 Gland type	螺栓压紧式 Bolted gland
填 料 Packing	聚四氟乙烯（常温用）；柔性石墨（中、高温用） Teflon (Plain); Flexible graphite (Intermediate and high Temp.)

主要参数Major parameters

公称通径 DN(mm)		150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1500
流量系数 Kv	60°开度	725	1290	2190	3350	4270	6350	7810	9870	14600	20500	27400	35900	42000	62600	82600	98700
	90°开度	370	645	1180	1700	2030	3090	3820	4720	7120	9700	12500	16300	20000	28800	39600	44900
额定行程 Rated travel		调节型：60度；两位型：90度 Regulating: 60° ;Two step: 90°															
流量特性 flow characteristic		近似等百分比 approximate equal percent															
公称压力 PN		标准产品0.6、1.0、1.6 MPa Standard products 0.6、1.0, 1.6 MPa															
可调范围 adjustable range		60° 15:1;90° 30：1															
产品型号 Products model	气动 Pneumatic	ZSRWD（配GTX、AL等系列气动活塞执行机构） ZSRWD(matched with GTX, AL etc series pneumatic piston actuator)															
	电动 Electric	ZDRWD(配UNIC、PSQ、HQ、DHL等系列电子式电动执行机构） ZDRWD (matched with UNIC, PSQ, HQ, DHL etc series electronic type electric actuator)															
作用形式 Function type		气动：气开式、气关式；电动：电开式、电关式 Pneumatic: air to open, air to close; Electric: electrical open, electrical close															
法兰标准 Flange standard		对夹式或法兰连接符合JB78-59、JB79-59标准， 可按JB/T79.1-94、JB/T79.2-94、ANSI、JIS、DIN等标准订货生产 Compliance with JB78-59 and JB79-59 standards, also could ordering as JB/T79.1-94, JB/T79.2-94, ANSI, JIS, DIN etc standards.															

注：公称通径、公称压力超出列表范围的产品请与本公司联系。
Notes: Please contact with us if products DN & PN exceed the scope of above.

允许压差allowable pressure differential

允许压差与执行机构配置等有关，订货时应注明工作压差，便于确定配置。
The allowable pressure differential is relative with the matched actuator,
the working pressure differential should be mentioned when ordering then we can confirm the actuator.

阀体、阀内件材料组合、工作温度及泄漏率

Material of valve body and other components, working temperature and leakage rate

阀体材料 Valve body material		铸钢（ZG230-450）、不锈钢（ZG1Cr18Ni9Ti、316、316L）等 Casting steel (ZG230-450), Stainless steel (ZG1Cr18Ni9Ti、316、316L) etc.				
阀板材料 Valve plate material		不锈钢（ZG1Cr18Ni9Ti、316、316L）等 Stainless steel (ZG1Cr18Ni9Ti、316、316L) etc.				
填料材料 Packing material		聚四氟乙烯、柔性石墨 Teflon, flexible graphite				
密封型式 Seal type		软密封 Soft seal			硬密封 Rigidity seal	
密封材料 Seal material		丁腈橡胶 Nitrile rubber	聚四氟乙烯 Teflon	炭纤维强化聚四氟乙烯 carbon fiber intensify Teflon	不锈钢或不锈钢+STL Stainless steel or Stainless steel + STL	
泄漏量 Leakage rate		V级（10^{-5}） Grade V			Iv级,小于额定流量的10^{-4} Grade IV, less than 10^{-4} of rated flow	
工作温度 Working temperature	铸钢阀体 Casting steel body	-5～80℃	-5～180℃	-5～220℃	-5～400℃	耐高温合金可达1000℃ high temperature alloy could reach 1000℃
	不锈钢阀体 Stainless steel body	-20～80℃	-20～180℃	-20～220℃	-20～600℃	

注：特殊材质要求请与本公司联系。
Notes: please contact with us if special material required.

额定Cv值 RATED Cv VALUE

公称通径 Nominal diameter mm(Inch)		125	150	200	250	300	350	400	450	500	550	600	650	700
		(5″)	(6″)	(8″)	(10″)	(12″)	(14″)	(16″)	(18″)	(20″)	(22″)	(24″)	(26″)	(28″)
额定Cv值 Rated Cv value	60° 开度 60° Opening	280	430	750	1350	1950	2650	3600	4450	5500	6900	8300	10000	11000
	90° 开度 90° Opening	580	840	1500	2550	3900	5500	7400	9100	11500	14000	17000	20500	23900
公称通径 Nominal diameter mm(Inch)		750	800	850	900	1000	1100	1200	1300	1400	1500	1600	1800	2000
		(30″)	(32″)	(34″)	(36″)	(40″)	(44″)	(48″)	(52″)	(55″)	(60″)	(64″)	(72″)	(80″)
额定Cv值 Rated Cv value	60° 开度 60° Opening	13000	14500	16500	19000	23400	28300	33600	39400	45600	52300	59500	75300	92970
	90° 开度 90° Opening	27800	31900	36000	41000	49000	61000	73000	85000	98900	115000	130800	165600	204400

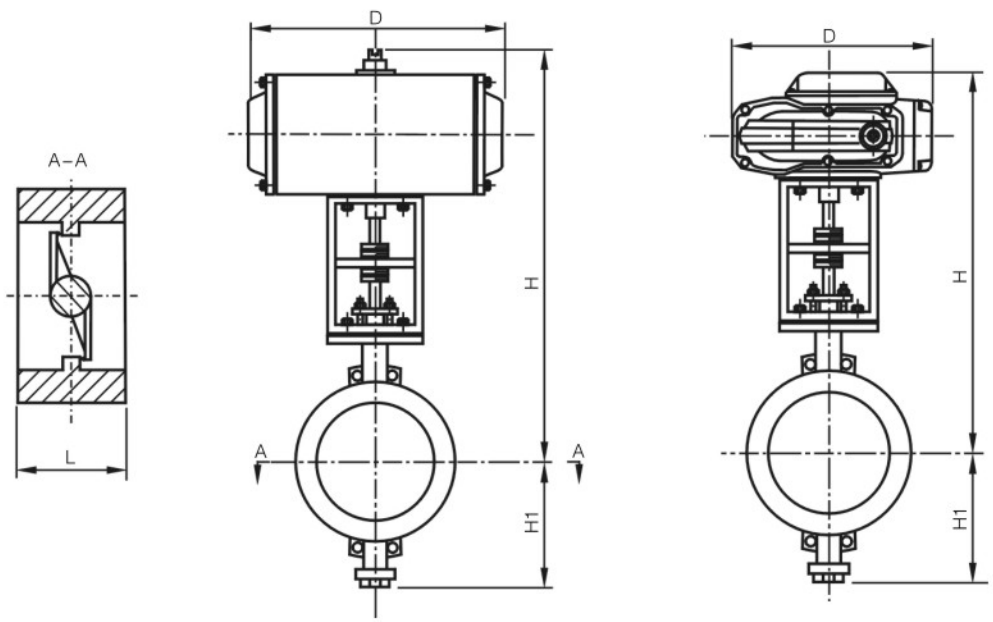
泄漏量 Leakage Rate

公称通径DN	125～250 (5″ ～10″)	300～450 (12″ ～18″)	300～450 (12″ ～18″)	800～2000 (32″ ～80″)
允许泄漏率 Allowable leakage rate	0.2%	0.15%	0.15%	0.1%

外形尺寸boundary dimension

公称通径DN (mm)			150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1500
L(mm)			70	70	80	80	100		150		200		300		400		500	
H1 (mm)			150	180	210	230	260	290	320	350	400	455	510	560	625	735	845	900
配 GTX	H (mm)	普通型 Normal	480	520	550	608	775	835	960	990	1070	1185	1240	1290	1425	1475	1615	1730
		散热片型 with cooling fin	580	620	750	708	875	935	1060	1090	1190	1305	1390	1440	1575	1640	1780	1920
	D(mm)		210	230	280	300	450			630		720	840					
配 UNIC	H (mm)	普通型 Normal	450	480	520	551	631	691	781	840	920	975	1030	1080	1215	1155	1295	1420
		散热片型 with cooling fin	550	580	620	651	731	791	881	960	1040	1095	1180	1230	1365	1420	1460	1580
	D(mm)		256							380								

注：此表数据为常规配置数据，会因执行机构配置不同而变化。
Notes: The listed data is for normal option only, which will be changed if matched actuator was different.



BLY1自力式压力调节阀 Self-operated Pressure Regulator

BLY1系列调节阀采用外取压结构，能依靠介质自身压力变化达到自动调节和稳定压力的目的，适用于公称通径≤DN100，P1≤1.0MPa，P2≥15KPa，减压比≤10，≥1.25的液体、蒸汽、非腐蚀性气体及低粘度液体的场合。

该系列分为阀后式BLY14-□B和阀前式BLY14-□K两种。

BLY1 self-operated pressure regulator can self-adjust according to medium pressure and stabilize outlet pressure as a constant with external pressure structure. It is widely applicable to control liquid, steam, non-corrosive gas and low viscosity liquid with nominal size≤DN100，P1≤1.0MPa，P2≥15KPa,reduction ration ≤10,≥1.25.

This series has type BLY14-□B (reducing type) and BLY14-□K (back pressure type)

阀体 Body

形　式 Type	流体压力平衡型阀芯 Fluid pressure balanced type 套筒平衡型阀芯 Cage-guided balanced plug
公称通径 Nominal size	15、20、25、40、50、65、80、100
公称压力 Pressure rating	ANSI 150、300;PN16、40;JIS10、20K
连接型式 End connection	法兰式Flange type（JIS B2201-1984、JB/T79.1-94、ANSI B16.5-2009; HG20592-2009、HG20615-2009）
阀体及上阀盖 Body & Bonnet	SCPH2/WCB, SCS13A/CF8, SCS14A/CF8M
填　料 Packing	聚四氟乙烯V型填料及石墨 V-Teflon and graphite
垫　圈 Gasket	无石棉橡胶板 Non-asbestos rubber sheet

执行机构 Actuator

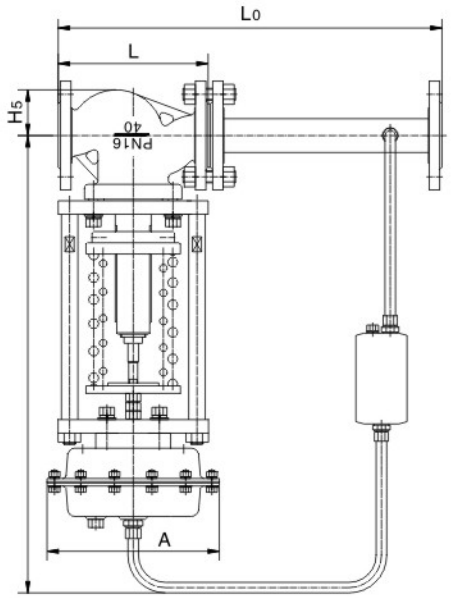
类型 Type / 规格 Specification	薄膜式 Diaphragm type	气缸式 Cylinder type
	膜片材质 Diaphragm material	活塞 Piston：
	丁腈橡胶 NBR	铝合金 Aluminum alloy
用途 Purpose	调节 Adjust	
接口 Connection	M16X1.5	
最小压差△P Min. pressure drops	△P≥0.04MPa	
压力调节范围 Pressure adjusting range	≤0.5MPa	0.5～1.0MPa
使用温度 Operating temp.	-5～350℃	
标准涂层色 Painting color	灰色 Gray	

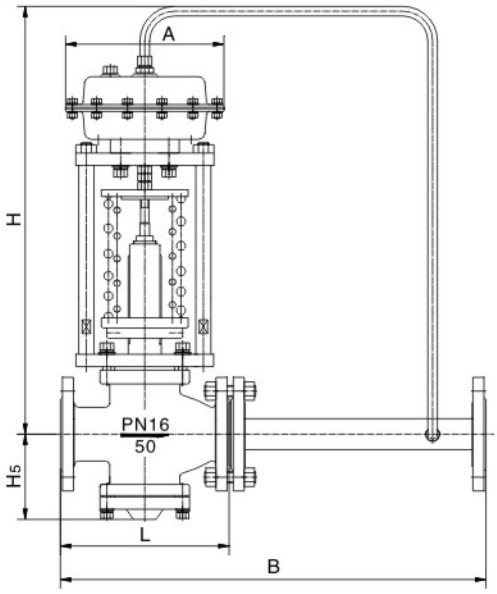
额定Kv值 Rated Kv value

公称通径DN(mm) Nominal size	15	20	25	32	40	50	65	80	100
额定流量系数（Kv） Rated flow coefficient	5	7	11	20	30	48	75	120	190
额定行程（mm） Rated travel	8	8	8	10	10	14	20	20	25
压力分段范围（kPa） Pressure subsection range	15~50、40~80、60~100、80~140、120~180、160~220、200~260、240~300、280~350、330~400、380~450、430~500、480~560、540~620、600~700、680~800、780~900、880~1000								

注：额定Kv值也可选用0.12、0.2、0.3、0.5、0.8、1.2、2.0、3.2
Note: It can chose 0.12、0.2、0.3、0.5、0.8、1.2、2.0、3.2 as a rated Kv.

阀后式外形尺寸图 External Dimensions Of Reducing Type



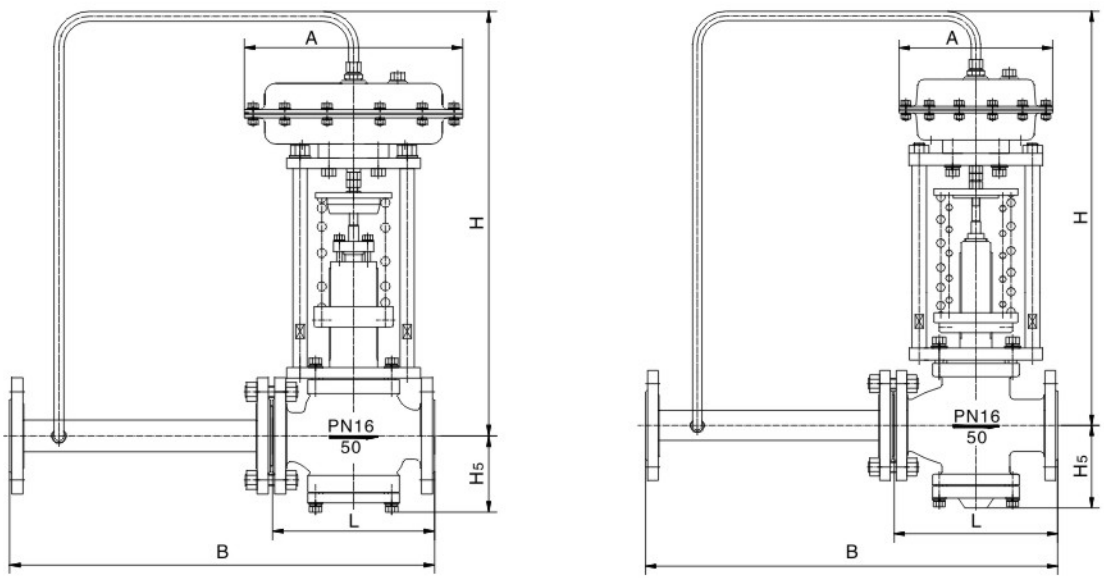


外形尺寸及重量 External Dimensions And Weight

阀后式 Reducing type

公称通径DN（mm） Nominal size			15	20	25	32	40	50	65	80	100
法兰接管尺寸（A1） Flange connection pipe dimensions			383			512		603	862		1023
法兰端面距（A） Face-to-face dimensions			150	150	160	180	200	230	290	310	350
H1			32	32	36	58	58	62	75	85	105
压力调节范围kPa Pressure adjusting range	15-140	H	475			520		540	710		780
		B	280			310					
	120-300	H	455			500		520	690		760
		B	195			230					
	280-500	H	450			490		510	680		750
		B	176						200		
	480-1000	H	445			480			670		740
		B	176						200		
重量 (kg) Weight			26			37		42	72	90	114
导压管接头螺纹 Pressure pipe joint thread			M16X1.5								

阀前式外形尺寸图 External Dimensions Of Back Pressure Type



阀前式 Back pressure type

公称通径DN（mm） Nominal size			15	20	25	32	40	50	65	80	100
法兰接管尺寸（A1） Flange connection pipe dimensions			383			512		603	862		1023
法兰端面距（A） Face-to-face dimensions			150	150	160	180	200	230	290	310	350
H1			93	93	110	120	130	145	180	190	195
压力调节范围kPa Pressure adjusting range	15-140	H	485			530		550	720		790
		B	280			310					
	120-300	H	465			510		530	700		770
		B	195			230					
	280-500	H	460			500		520	690		760
		B	176						200		
	480-1000	H	455			490			680		750
		B	176						200		
重量 (kg) Weight			26			37		42	72	90	114
导压管接头螺纹 Pressure pipe joint thread			M16X1.5								

BLY2型自力式差压调节阀 BLY2 self-operated pressure difference regulator

BLY2型自力式差压调节阀，是一种依靠被调介质自身的压力变化进行自动调节的一种节能型调节阀。

它可应用于燃烧系统，发电机、空压机轴封系统，阀前P≤0.1MPa、阀后＜10kpa，连续控制。其特点是设备运行中可进行设定值调整；无填料，动作灵敏；能检测出微小的压力变化。广泛应用于工业生产微压压力的自动控制中，减压比大于100要用两级降压。

该系列分为BLY24□-16B常开（控制压力高于设定时阀闭合）和BLY24□-16K常闭（控制压力高于设定时阀开启）两种。

BLY2 Self-operated pressure difference regulator is one kind of energy-saving control valve which it can adjust according to medium pressure.

It is applicable for continuously controlling to burning system, generator and shaft seal system of air compressor(P1≤0.1Mpa, P2＜10kpa). It can set the value in running and feature no packing and adaptable. Inspect the slight variation. It is widely used in automatic control of micropressure in industry producing. Use the secondary pressure reduction when the reduction ratio is more than 100.

This series has BLY24□-16B normally open type (valve close for control pressure more than set value) and BLY24□-16K normally close type (valve open for control pressure more than set value).

阀体 Body

形　式 Type	流体压力平衡型阀芯 Fluid pressure balanced type
公称通径 Nominal size	20、25、40、50、65、80、100
公称压力 Pressure rating	ANSI 150；PN16；JIS10K
连接型式 End connection	法兰式Flange type（JIS B2201-1984、JB/T79.1-94、ANSI B16.5-2009; HG20592-2009、HG20615-2009）
阀体及上阀盖 Body & Bonnet	SCPH2/WCB, SCS13A/CF8, SCS14A/CF8M
填　料 Packing	无 Non
垫　圈 Gasket	无石棉橡胶板 Non-asbestos rubber sheet

执行机构 Actuator

类型 Type / 规格 Specification	
	薄膜式 Diaphragm type
	膜片材质 Diaphragm material
	丁腈橡胶 NBR
用途 Purpose	调节 Adjust
压力调节范围kPa Pressure adjusting range	0.5～5.5，5～10，9～14，13～19，18～24，22～28，26～33，31～38，36～44，42～51，49～58，56～66，64～78，76～90，88～100
使用温度 Operating temp.	-5～80℃
标准涂层色 Painting color	灰色

额定Kv值 Rated Kv value

公称通径DN(mm) Nominal size	20	25	40	50	65	80	100
额定流量系数（Kv） Rated flow coefficient	7	11	30	48	75	120	190
额定行程（mm） Rated travel	6	8	10		15		20
压力分段范围（kPa） Pressure subsection range	0.5～5.5，5～10，9～14，13～19，18～24，22～28，26～33，31～38，36～44，42～51，49～58，56～66，64～78，76～90，88～100						

压力调节范围 Pressure Adjusting Range

压力调节范围(kPa) Pressure adjusting range	执行机构膜室有效面积（cm^2） Effective area of diaphragm room	使用阀门口径（mm） Using valve size
0.5～5.5,5～10,9～14,13～19,18～24,22～28,26～33, 31～38,36～44,42～51,49～58,56～66,64～78,76～90, 88～100	100	20~50
	280	65~100

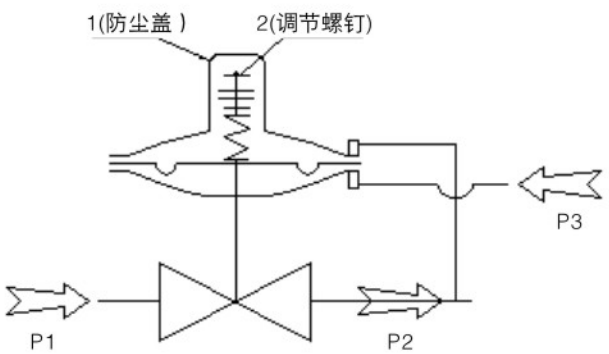
阀体结构及原理 Structure And Principle

控制压力小于或等于100Kpa的调节阀称为自力式微压力调节阀(P3通大气)，差压调节阀是微压调节阀的另一种控制方式。由执行机构、调节机构、导压管等组成。差压调节阀工作原理：见原理图。

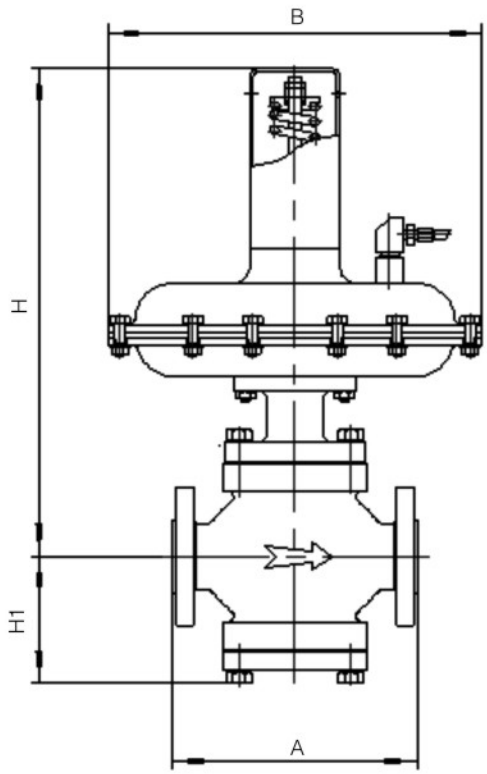
BLY24□-16K作用方式为压开式，即差压增大阀开启型。流体P1节流后成P2，经导压管与差压调节阀执行机构上模室联通，P2作用在波纹模片有效面积上产生一个向下的作用力，加上弹簧的初始压力（向下）作用力；讯号源压力P3（恒定值）引入执行机构下模室，作用在波纹模片有效面积上产生一个向上的作用力。与上模室P2和弹簧的合力（向下）的作用力平衡。P3与P2之间有一个差压值，这个差压值就是设定值。若差压变化，增大或减小，则平衡被破坏，阀门开大或关小，保住差压值恒定。若差压达不到设定值：如，小于设定值，调整方法如下：打开防尘盖1；反时针旋转调节螺钉2，减小弹簧的预压力，使设定值达到理想要求。反之，则调节螺钉的旋转方向相反。

Control pressure is less than or equal to 100Kpa of the control valve is called self pressure regulating valve (P3), differential pressure control valve is a micro pressure control valve of another control method. By the executive agencies, regulatory agencies, such as the composition of the pilot. Differential pressure regulating valve working principle: see schematic.

The action of BLY24□-16K is pressure -to-open. After P1 throttling, P2 connects the diaphragm case (top) by pressure pipe. It brings the down force at the effective area of bellows diaphragm, adding the spring first force (down). P3 guided into diaphragm case (bottom) brings the up force that is equal to that resultant force at the effective area of bellows diaphragm. There is a differential pressure between P3 and P2 that is set value. If differential pressure changes, increasing or reducing, this balance is destroyed and valve open wider or close smaller in the following to keep it as a constant. If the differential pressure is less than set value, adjusting method: open the dustproof cover 1, turn bolt 2 counterclockwise to reduce spring pressure and make the setting value meeting the requirement. Otherwise, turn bolt 2 clockwise.



差压调节阀原理
Principle diagram



外形尺寸图
External dimensions

外形尺寸及重量 External Dimensions And Weight

单位 Unit：mm

公称通径 Nominal size	20	25	40	50	65	80	100
ΦB	195				280		
A	184	184	222	254	276	298	352
H1	88	102	114	114	156	166	176
H	285	337	344	344	386	396	406
重量（Kg） Weight	12	13	17	20	28	38	43

BLY3指挥操作自力式压力调节阀（氮封阀）Pilot-operated regulator（Nitrogen Sealed Valve）

BLY3型指挥器操作自力式压力调节阀（氮封阀），是一种无须外来能源，利用被调介质自身的压力变化达到自动调节和稳定阀后压力为设定值的节能型压力调节阀。

该阀压力设定在指挥器上实现，方便、快捷，压力设定值在运行中也可随意调整；控制精度高，适合阀前P=1MPa，阀后＜10kPa，用于开关控制，不能连续控制，但精度要求高的场合。它广泛应用于化工、石油、冶金、电力、轻纺等工业部门中用作生产过程的自动调节。特别适用于储罐氮封系统，该阀减压比1:100。

该系列只有阀后式BLY34□-16B一种。

BLY3 pilot-operated regulator is one kind of energy-saving control valve which it can adjust according to medium pressure and stabilize outlet pressure as a constant without any external energy source.

It is convenient and quickly for setting pressure value on the pilot and can adjust the set value in operating at will. It features with high precision for high required occasion where it is used to only shut-off (P1=1MPa,P2＜10kPa). It is widely applicable for chemistry engineering, petroleum, metallurgy, electric power, light and textile industries .etc. It is especially suitable for tank nitrogen sealed system,Reduction ratio is 1:100.

This series is only one typeBLY34□-16B.

BLY3指挥操作自力式压力调节阀(氮封阀)

Pilot-operated regulator (Nitrogen Sealed Valve)

阀体 Body

形　式 Type	流体压力平衡型阀芯 Fluid pressure contoured type
公称通径 Nominal size	20、25、40、50、65、80、100、150
公称压力 Pressure rating	ANSI 150；PN16；JIS10K
连接型式 End connection	法兰式Flange type (JIS B2201-1984、JB/T79.1-94、ANSI B16.5-2009; HG20592-2009、HG20615-2009)
阀体及上阀盖 Body & Bonnet	SCPH2/WCB,SCS13A/CF8,SCS14A/CF8M.
填　料 Packing	聚四氟乙烯V型填料及石墨 V-Teflon and graphite
垫　圈 Gasket	无石棉橡胶板 Non-asbestos rubber sheet

执行机构 Actuator

类型 Type / 规格 Specification				
	薄膜式 Diaphragm type			
	膜片材质 Diaphragm material			
	丁腈橡胶 NBR			
执行机构有效面积 (cm^2)	100	200	280	400
用途 Purpose	调节 Adjust			
接口 Connection	M10X1			M16X1
压力调节范围kPa Pressure adjusting range	0.1～0.5、0.4～5.0、4.0～12.0			
使用温度 Operating temp.	-5～100℃			
标准涂层色 Painting color	灰色 Gray			

额定Kv值 Rated Kv value

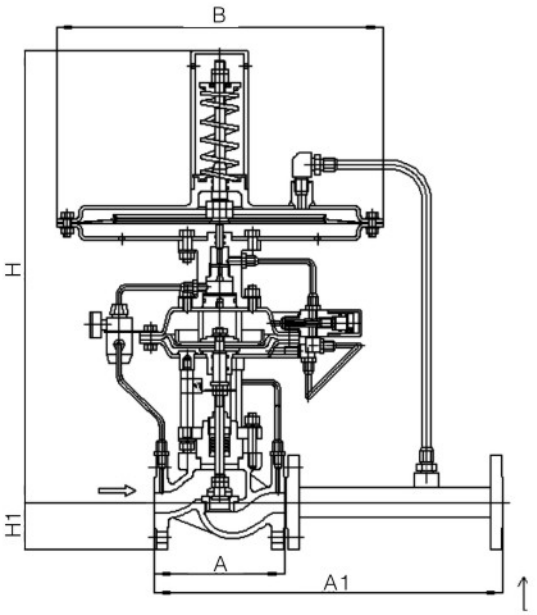
公称通径DN(mm) Nominal size	20			25	40	50		80		100	150	
阀座直径dn(mm) Seat size	6	15	20	25	32	40	50	65	80	100	125	150
额定流量系数 (Kv) Rated flow coefficient	0.32	5	8	11	20	30	48	75	120	190	300	480
压力分段范围 (kPa) Pressure subsection range	0.1～0.5、0.4～5.0、4.0～12.0											

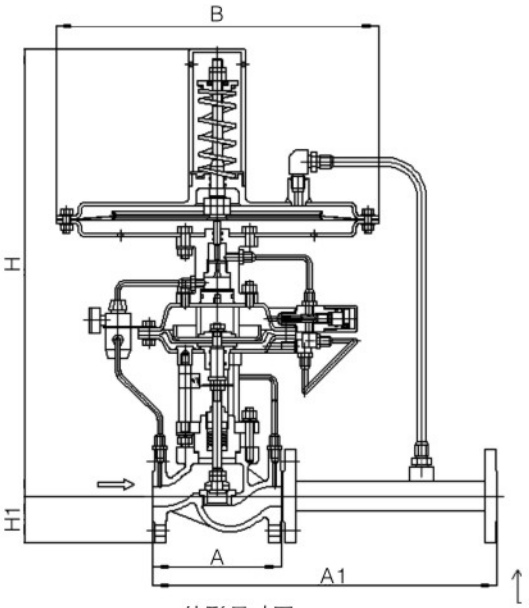
压力调节范围 Pressure Adjusting Range

压力调节范围(kPa) Pressure adjusting range	指挥器膜室有效面积（cm^2） Effective area of pilot diaphragm room	执行机构膜室有效面积（cm^2） Effective area of diaphragm room	使用阀门口径（mm） Using valve size
0.1~0.5	1200	100	20~32
0.4~5.0	600		
4.0~12.0	400		
0.1~0.5	1200	200	40~50
0.4~5.0	600		
4.0~12.0	400		
0.1~0.5	1200	400	65~100
0.4~5.0	600		
4.0~12.0	400		
0.1~0.5	1200	600	125~150
0.4~5.0	600		
4.0~12.0	400		

阀体结构和原理 Structure And Principle

阀后式（薄膜式执行机构）
Reducing type (Diaphragm actuator)





外形尺寸图
External dimensions

BLY3指挥操作自力式压力调节阀(氮封阀)

Pilot–operated regulator (Nitrogen Sealed Valve)

BLY3型指挥器操作自力式压力调节阀是由指挥器、调节阀、执行机构和阀后接管四部分组成。

工作原理：介质以所示箭头方向进入阀体，一路经过滤减压器减压后的压力被引入指挥器；另一路通过阀芯、阀座，节流后的压力流向阀后，并通过导压管引入指挥器执行机构。当阀后压力高于设定压力时，其压力作用在指挥器薄膜有效面上产生一个推力带动指挥器阀芯关闭，切断引入主阀执行机构膜室中的压力，使主阀阀芯关闭，阀后压力随之降低。当阀后压力低于设定值时，由于指挥器主弹簧的反作用力打开指挥器阀芯，阀前压力又被引入主阀执行机构膜室产生推力，使主阀阀芯打开，阀后压力随之升高。如此往复，保持阀后压力为设定值。

BLY3 pilot–operated regulator is consist of pilot, valve, actuator and pressure pipe.

Principle: The medium flows into valve body according to the arrowhead direction, the one is guided into pilot after pressure reducing and the other pass plug and seat, and is guided into pilot actuator by pressure pipe after throttling. When outlet pressure is more than set value, a thrust produced by pressure effecting on the pilot diaphragm to drive pilot closing plug, cut off the pressure guided into valve actuator and make plug closing, so does outlet pressure reduce. When outlet pressure is less than set value, for counterforce of pilot spring opening pilot plug, inlet pressure is guided into valve actuator to produce thrust making plug opening, so does outlet pressure increase. So repeatedly, keep outlet pressure as a constant.

外形尺寸及重量 External Dimensions And Weight　　单位Unit:mm

公称通径 Nominal size	A	A1	H1	H		
				B=1200 cm^2	B=600 cm^2	B=400 cm^2
				压力调节范围（KPa）Pressure adjusting range		
				0.1～0.5	0.4～5.0	0.5～7
20	150	383	53	605	554	554
25	160		58	605	554	554
32	180	512	70	615	564	564
40	200		75	640	589	589
50	230	603	83	655	604	604
65	290	862	93	722	671	671
80	310		100	738	687	687
100	350	1023	110	755	704	704
125	400	1380	125	918	867	867
150	480		143	1.25	974	974

产品重量 Weight　　重量 Unit: kg

公称通径（mm） Nominal size	20	25	32	40	50	65	80	100	125	150
B=400cm^2	18	18	25	27	40	55	80	108	130	150
B=600 cm^2	20	20	27	30	45	60	86	115	140	160
B=1200 cm^2	22	22	30	34	50	66	92	120	150	170

BLKP高温高压多级降压调节阀

BLKP high temperature and high pressure multistage depressurization regulating valve

BLKP高温高压多级降压调节阀 BLKP high temperature and high pressure multistage depressurization regulating valve

BLKP高温高压多级降压调节阀是一种压力平衡式笼式调节阀，是在HPC的基础上进行改进，套筒上设有单级或多级低噪音孔，完全控制流经阀内件的流体流速，可大幅降低高压差气体或蒸汽所产生的噪音，也可有效降低液体产生气蚀现象。阀体结构紧凑，流体通道呈S型，使其压降损失小，流量大，可调范围广，流量特性精度高，符合IEC534-2-1976标准。

调节阀泄漏量符合ANSI B16.104标准。调节阀配用多弹簧薄膜或气缸执行机构，其结构紧凑，输出力大。

产品符合GB/T4213-2008标准。

BLKP high temperature and high pressure multistage depressurization regulating valve is a kind of pressure balance cage type regulating valve, which is improved base on HPC, there are single grade or multistage low noise hole on sleeve, the speed of fluid pass valve inner element could be totally controlled, which could wide reduce the noise generated by high differential pressure air or steam, also effective reduce the cavitation of generated by fluid. The valve body with compact structure, fluid path was in "S" type, so the pressure losses is very low, rate of flow and adjustable range is large, flow characteristic with high accuracy. The valve is compliance with ICE534-2-1976 standard.

The leakage rate is compliance with ANSI B16.104 standard. The regulating valve matched with multiple spring diaphragm or cylinder actuator, with compact structure and large output force.

The product is compliance with GB/T4213-2008 standard.

阀体 Body

形 式 Type	直通单座铸造球型阀 Straight-through, single seated, cast globe valve
公称通径 Normal size	40、50、80、100、150、200、250、300、350、400mm
公称压力 Pressure rating	ANSI Class900、1500、2500
连接型式 End connections	法兰型 Flanged：RF、RJ 焊接型 Welded end： SW（40～80mm）；BW（80～300mm）
尺寸 Dimensions	请参见表5 See Table 5
阀体及上阀盖材质 Body & Bonnet Material	SCPH2/WCB,SCPH21/WC6,SCS13A/CF8,SCS14A/CF8M, SCS16A/CF3M and other alloy steels.
上阀盖型式 Bonnet type	常温型（P） Plain type ：－17～＋230℃ 伸长I型（EI）Extension Type I：＋230～＋566℃、－45～－17℃ 注：工作温度不准超过各种材料的允许范围。 Note:Take care not to exceed the operating temperature ranges specified for required materials.
压盖型式 Gland type	螺拴压紧式 Bolted gland
填 料 Packing	JM397石墨填料
垫 圈 Gasket	缠绕式垫圈（柔性石墨/SUS316） spiral wound gasket (flexible graphite/SUS316)
表面涂层 Surface coating	银灰色（环氧树脂）。但是阀体材质为不锈钢时，本体部不加涂层。 SLV（Epoxy resin group）is standard. In the case of stainless steel body, no painting is standard.

* 法兰标准 Standard: JIS B2201-1984、ANSI B16.5-2009、HG20615-2009*

CV值和行程 Rated Cv value and Travel

公称通径Nominal size			40	50	80	100	150	200	250	300	350	400
阀座直径Seat size			25	32	50	65	100	125	150	200	250	300
额定Cv值 Rated Cv value	等百分比特性 Equal percentage	ANSI 900、1500、JIS63K	12	17	52	78	180	270	375	650	950	1350
		ANSI 2500	—	12	31	52	125	180	—	—	—	—
	线性特性 Linear	ANSI 900、1500、JIS63K	12	20	62	90	210	330	650	850	1240	1650
		ANSI 2500	—	12	43	62	125	210	—	—	—	—
额定行程(mm) Rated travel			25		38		50	75	100		120	

注：符号○表示阀的规格范围，特殊Cv可咨询公司技术部。
Note：○ denotes production ranges,special Cv consulting company technology department.

BLMK 多级降压低噪音调节阀 BLMK multistage depressurization & low noise regulating valve

BLMK多级降压低噪音调节阀是我厂在吸收CV3000调节阀技术的基础上自主研发的实用新型阀门，特殊的阀内件设计可实现阀门在高温高压差工况下达到降噪降压的效果。该系列阀门采用多层套筒结构，套筒层数一般为2～6层，最高压差可达7MPa。

原理：当流体介质流经阀体内件时，复杂的节流通道具有较大的阻尼系数，会逐级降低压力和速度，防止对内件的冲蚀。同时控制其噪音，最大降噪可达30分贝左右。

调节阀的泄漏量符合ANSI B16.104标准。调节阀配用多弹簧薄膜执行机构或气缸执行机构，其结构紧凑，输出力大。

产品符合GB/T4213－2008标准。

BLMK multistage depressurization noise regulating valve is a kind of new type valve of independent research and development by our company according to the technique of CV3000 regulating valve, the special valve inner components could make the valve to realize the noise and pressure reduction under high temperature and high differential pressure working condition. The series valve applied multilayer sleeve structure, the layer number of sleeve normally be 2 to 6, the maximum differential pressure could be 7 MPa.

Theory: when the fluid medium passing valve inner components, the complicated throttle channel with larger damping coefficient which could reduce the pressure and speed grade by grade to avoid the washout of inner components. At the same time, the noise could be controlled and noise reduction could reach about 30 decibel.

The leakage rate is compliance with ANSI B16.104 standard. The regulating valve matched with multiple spring diaphragm or cylinder actuator, with compact structure and large output force.

The product is compliance with GB/T4213–2008 standard.

阀体 Body

形 式 Type	直通单座铸造球型阀 Straight-through, single seated, cast globe valve
公称通径 Normal size	25、32、40、50、65、80、100、125、150、200、250、300、350mm
公称压力 Pressure rating	ANSI Class 300,600; JIS 20K, 30K,40K; PN 4.0, 6.4 MPa *
连接型式 End connections	法兰型：FF、RF、RJ、TG、MFM 焊接型：SW（40～50mm）；BW（65～350mm）
阀体及上阀盖材质 Body & Bonnet Material	SCPH2/WCB,SCPH21/WC6,SCS13A/CF8,SCS14A/CF8M,SCS16A/CF3M
上阀盖型式 Bonnet type	常温型Plain type：－17～＋230℃ 伸长I型（EI）Extension Type I：－45～－17℃ and ＋230～＋566℃ 伸长II型（EII）Extension Type II：－100～－45℃ 伸长III型（EII）Extension Type III：－196～－100℃ 注：工作温度不准超过各种材料的允许范围。
压盖型式 Gland type	螺拴压紧式 Bolt compress type
填 料 Packing	V型聚四氟乙烯填料、石墨填料 V type polytef padding material, graphite padding material.
垫 圈 Gasket	平型、锯齿型（碳钢、不锈钢（SUS304、SUS316、SUS316L）、其它合金） Flat type, sawtooth type (carbon steel, stainless steel（SUS304、SUS316、SUS316L）, other alloy)
表面涂层 Surface coating	银灰色（环氧树脂）；但是阀体材质为不锈钢时，本体部不加涂层。 SLV（Epoxy resin group）is standard. In the case of stainless steel body, no painting is standard.
法兰标准 Flange standard	JIS B2201-1984、JB/T79.1-94(PN1.6MPa);JB/T79.2-94(PN4.0、6.4MPa); ANSI B16.5-2009;HG20592-2009、HG20615-2009

CV值和行程 CV values and stroke

公称压力(ANSI300~600)
Pressure rating (ANSI300~600)

公称通径 Nominal size mm		25		32		40		50		65		80		100		125	
套筒层数 Cage layer No.		2	3	2	3	2	3	3	4	3	4	3	4	3	4	3	4
阀座直径 Seat size mm		25	16	30	20	40	30	40	30	50	40	63	50	75	63	90	75
额定Cv Rated Cv value	线性L Liner	8.5	4	17	11	24	17	19	13	32	19	54	32	78	54	120	78
	等百分比% EQ%	6.3	4	11	6.3	17	11	17	11	24	17	44	24	68	44	99	68
额定行程 Travel mm		14.3		25						38						50	

公称通径 Nominal size		150			200			250			300			350		
套筒层数 Cage layer No.		3	4	5	3	4	5	3	4	5	3	4	5	3	4	5
阀座直径 Seat size mm		115	90	75	160	130	115	190	160	130	275	205	160	300	250	205
额定Cv Rated Cv value	线性L Liner	200	120	75	330	226	163	454	330	243	625	410	310	840	720	446
	等百分比% EQ%	150	99	68	240	175	99	365	275	175	435	365	275	585	492	330
额定行程 Travel mm		50			75			100						120		

BLT系列保温夹套调节阀 BLT series heating jacket regulating valve

BLT系列保温夹套调节阀是直行程和角行程调节阀的派生产品，是在原调节阀阀体部件外部增加伴热夹套层而成。通过对夹套层通入伴热蒸汽，对阀体进行持续加热，使阀腔内的温度保持在设定范围内，以使某些易冷凝、易结晶介质（如沥青、硫磺、树脂、烧碱、尿素等）保持在完全的液态流体状态，保证工艺过程按要求正常进行。

保温夹套调节阀的型号表示方法是在原型号后面加“T”，如BLTP、BLTM、BLTH、BLTW等。

BLT series heat preservation jacket regulating valve is the derivatives of linear motion and rotary motion regulating valve, there is a layer of heat preservation jacket be added at the outside of the original regulating valve body. When the tracing steam get into jacket layer, then the valve body could be sustained heating and make the inner temperature of valve chamber could be keep in setting range, then those medium of easy to be condensation and crystallized such as pitch, sulphur, resin, caustic soda, carbamide etc could keep in liquid state, to ensure the technology process could be on the rails.

The representing method of the model of heat preservation jacket regulating valve is, add "T" in front of original model, such as BLTP, BLTM, BLTH, BLTW.

公称通径与额定流量系数Cv Nominal diameter and rated discharge coefficient Cv

公称通径mm		20、25	32	40	50	65	80	100	125	150	200
BLTP	等百分比 Equal Percent	0.25~10	6.3、10 16	10、16 24、30	16、24 42、50	24、42 66、84	42、66 96、124	66、96 172、200	96、172 270	172、270 350、410	270、350 640、700
	直线 straight line	0.01~11	6.3、11 18	11、18 25、32	18、25 45、54	25、45 70、90	45、70 102、130	70、102 185、210	102、185 280	185、280 370、430	280、370 660、720
BLTM	等百分比 Equal Percent	0.01~2.5	2.5、4.0 6.3	4.0、6.3 12	6.3、12 22	12、22 32	72、32 50	32、50 88	50、88 130	88、130 200	130、200 320
	直线 straight line	0.01~2.5	2.5、4.0 6.3	4.0、6.3 12	6.3、12 22	12、22 32	72、32 50	32、50 88	50、88 130	88、130 200	130、200 320
BLTH	等百分比 Equal Percent	4.0、6.3 10	6.3、10 16	10、16 24、38	16、24 42、60	24、42 66、105	42、66 96、140	66、96 172、230	96、172 270	172、270 350、430	270、350 640、830
	直线 straight line	4.0、6.3 11	6.3、11 18	11、18 25、42	18、25 45、75	25、45 70、115	45、70 102、150	70、102 185、250	102、185 280	185、280 370、450	280、370 660、895

公称压力与法兰标准 Nominal pressure and flange standard

公称压力采用美标、日标和中国标准；法兰标准有ANSI、JIS和GB、JB、HG供选择，其它标准作为特殊标准。
The American, Japanese and Chinese Standard was applied on nominal pressure, the flange standard could be selection from ANSI, JIS, GB, JB, HG, other standards will be considered as special standard.

公称压力	ANSI CLASS 150 300
	JIS 10K 20K 30K
	PN(MPa) 1.6 4.0
法兰标准	ANSI B 16.5~1981
	JIS B 2201~1984
	GB/T9115.1~2000 、GB/T9115.2~2000
	JB/T79.194、JB/T79.2~94、HG20596~97
联接方式与密封面型式 Connection type and sealing surface type	法兰式 FF（平面） RF（突面） MF（凹凸面） RJ（环连接面） TG（榫槽面） Flange type: FF (flat face) RF (raised face) MF(concave-convex face) RJ(ring joint face) TG (tongue and groove face)

阀门本体结构 Valve mechanical structure

BLT系列保温夹套调节阀由带夹套的阀体、上阀盖或带夹套的上阀盖、阀芯（阀塞）、阀座（套筒）、阀杆及填料涵等零部件组成，它是通过改变节流件之间的流通面积来改变介质流经阀门的压差和流通能力，达到调节流量或压力的目的。按照保温的要求，有全保温和部分保温两种结构。全保温系指输送流体的管道亦为夹层管道，其阀门法兰颈部也必须是夹套，相应的连接法兰尺寸比阀门公称通径大1档或2档，其上阀盖也是夹套层。部分保温只需对阀体内腔部位保温，法兰尺寸及法兰距同普通阀一样。

BLT series heat preservation jacket regulating valve was constituted by valve body with jacket, upper valve deck or valve deck with jacket, valve element(valve plug), valve seat (sleeve), valve rod and padding material, which could change the differential pressure and flow capacity of medium passing valve by change the flow area between throttling elements, to reach the target of flow or pressure regulating. As per requirements of heat preservation, there are full heat preservation and part heat preservation total two kinds of structure. Full heat preservation means the pipeline of conveyance of fluid also be the interlayer pipeline, the neck of valve flange also must be jacket, relevant connection flange dimension should be one or two grade larger than the DN of valve, its upper valve deck also is jacket layer. The part heat preservation only need to keep the temperature of valve inner chamber, flange dimension and distance is the same wit normal valve.

VV阀（通风阀）Vent valve

产品介绍：VV阀是一种全新概念的先导式套筒截止阀，这种结构形式的阀门关闭严密、耐冲刷、抗汽蚀，特别适合火电厂高温高压、大压差以及控制饱和水等极易发生闪蒸、汽蚀、冲刷的运行环境，如可用于蒸汽疏水、本体疏水、抽汽疏水、锅炉排污以及调节阀前后关断位置等。

1、节流面与密封面分开，流体在通过密封面之前，经过了对冲等节流过程，有效降低了速度，保护了密封面。

2、.阀芯阀座采用线密封形式密封、密封比压大、关闭严密。

3、阀芯与阀杆采用浮动连接，并有套筒导向，不会因为阀杆与阀芯不同心而影响其关断性及严密性。

VV阀的控制逻辑为：电磁阀带电时，VV阀气缸内压缩空气泄掉，VV阀开启；电磁阀失电时，压缩空气进入VV阀气缸内，VV阀关闭。

Product introduction: vent valve is a kind of pilot-operated type sleeve globe valve, the valve in this structure with tight closure, abrasion resistance and anti-cavitations, which is specially suitable for the operation environment of high temperature, high pressure, and large differential pressure and to control the saturated water etc. which might happen flash, cavitations or abrasion, the valve could be applied on the location of steam water discharge, noumenon water discharge, air exhaust water discharge, boiler blow-off and the location of shut off the regulating valve.

The throttle surface and seal surface are divided, the fluid through the process of hedging throttling before pass the seal surface, which reduced the speed and protect the seal surface.

The sealing type of valve element and valve seat is line sealing, with high seal pressure and tight closure.

The floating connection was applied on valve element and rod, and with sleeve oriented, the shutoff and tight performance will not be influenced if valve rod and element are non-concentric.

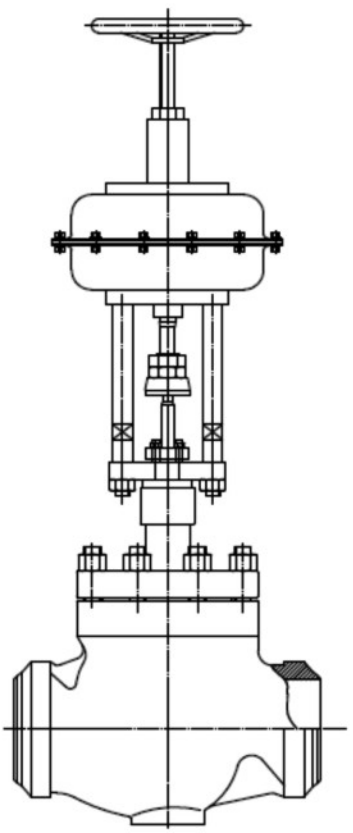
The control logic of vent valve is: when solenoid valve is electrification, the compressed air in vent valve cylinder will be discharged and then vent valve will be opened; when solenoid valve is in power-lossing, the compressed air will get into the vent valve cylinder and then vent valve will be closed.

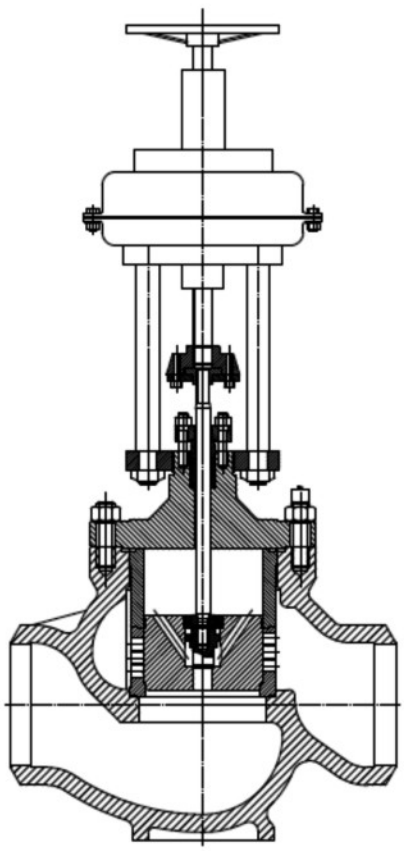
技术参数 Technical Parameters：

1、阀门结构：采用先导式多孔套筒结构
2、公称通径：DN100～DN600
3、公称压力：PN6.3～PN42.0MPa
ANSI CLASS 300～2500#
4、阀体材质：WCB、WC6、WC9、CF8、CF8M、 CF3M
5、阀内主件材质：304、316、316L、F11、F22、420+STL
6、泄漏等级：Ⅳ～Ⅵ级
7、控制方式：电动和气动
8、动作时间：小于2秒

1、Valve structure: pilot-operated type multihole sleeve structure was applied.
2、Nominal diameter:DN100～DN600
3、Nominal pressure:ANSI CLASS 300～2500#
4、Valve body material: WCB、WC6、WC9、CF8、CF8M、 CF3M
5、Material of main components：304、316、316L、F11、F22、420+STL
6、Leakage grade:Ⅳ～Ⅵ
7、Control mode: electric and pneumatic
8、Actuation time: less than 2 seconds

外形图 Profile Drawing：





联动双三通切换阀 linkage tee joint changeover valve

联动双三通切换阀有两台L型三通阀和双级蜗轮操作机构组成。在汽轮机润滑供油系统中，当冷油器选用100%备用容量时，采用这样切换阀作为两台冷油器之间切换设备，它具有操作简便，不会由于误动作，造成润滑油系统断油的特点。

联动双三通球阀采用蜗轮蜗杆手动执行机构来控制阀门，操作简单、轻便、灵活。其阀门具有结构简单、工作可靠、体积小、阻力小、允许压差大等优点，广泛应用于控制气体、液体介质的分流、合流和切换。它可用于代替四个二通阀和两个三通接管，在双向交换、两相调节和配比调节上大量采用，具有良好的操作性和推广使用价值。

The linkage tee joint changeover valve constituted by two sets of "L" type tee valve and double-stage turbine operating mechanism. In the steam turbine lubricating oil supply system, if the 100% reserve capacity of oil cooler was selected, then our changeover valve just could be the change-over unit between the two oil cooler, which with very easy operation and lubricating oil system cut-off will not be happened if malfunction.

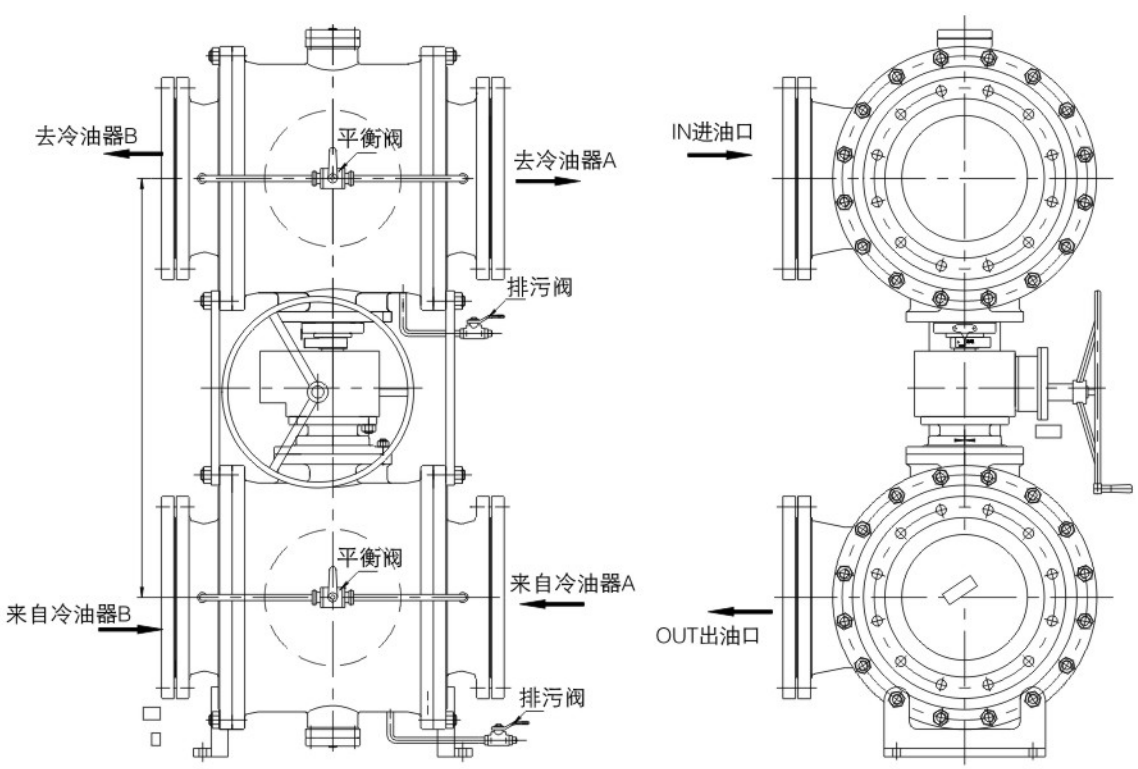
The linkage tee joint ball valve was controlled by orm and wormwhcel manual operation actuator, which operation is very easy, handiness and flexible. The valve with several advantages such as simple structure, reliable operation, small size, low resistance, large allowable pressure differential etc., which is widely applied on control the splite-flow or interflow for air and fluid. The valve could be used to replace four two-way valve and two straight tee, that widely applied on the two-way alternate, two phase regulating and proportioning regulating, with fine operability and value of popularize and apply.

技术参数 Technical Parameters：

1、阀门形式：双三通联动式结构
2、连接方式：法兰式
3、公称通径：DN80～DN500
4、公称压力：ANSI 150Lb
PN1.0MPa～PN1.6MPa
5、阀体材质：WCB、CF8等材质
6、阀内主件：A105镀铬 、F304、F316等材质
7、泄漏量：V～VI级
8、控制方式：手动
9、工作温度：0~80℃

1、Valve type: double tee linkage type structure
2、Connection type: flange
3、Nominal diameter: Dn80～DN500
4、Nominal pressure: ANSI 150Lb
PN1.0MPa～PN1.6MPa
5、Valve body material: WCB, CF8 etc
6、Material of main components: A105 chromeplate, F304, F316 etc.
7、Leakage grade:V～VI
8、Control mode: manual operation
9、Working temperature: 0~80℃

外形图Profile Drawing：



BLCP减温减压喷水阀 Temperature And Pressure Reducer Spray Water Valve

BLCP型气动/电动套筒喷水阀，稳定性好、通用性强、相对于老式套筒阀比较，有尺寸小、重量轻、流量大的优点。气动套筒阀，阀体流道流线形好，流量系数和可调比例较老式套筒阀提高30%，质量和高度下降30%，其结构有利于减小噪音、减小闪蒸和空化对阀芯的破坏，适用于工作压差较大、泄漏要求不严的干净介质场合。

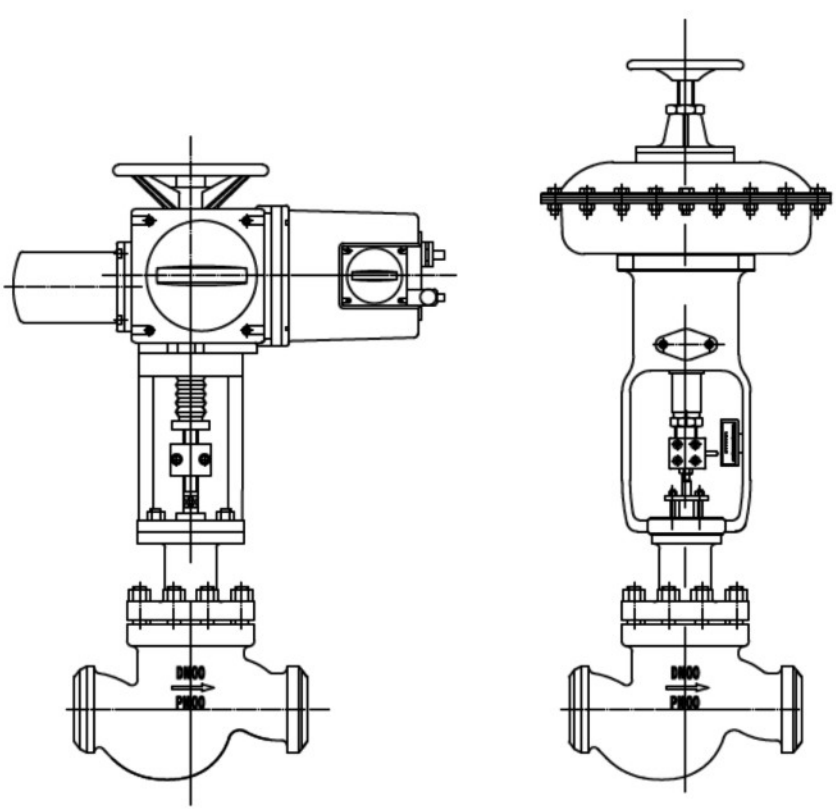
BLCP type pneumatic/electric sleeve spray water valve with find stability and high universality, which with advantages such as smaller size, lighter weight, larger rate of flow etc. if compare with older type sleeve valve. The pneumatic sleeve valve with fine streamline form on flow channel of valve body, the discharge coefficient and scaleable is 30% higher than older type sleeve valve, but weight and height is 30% less than it, the structure is in favour of reduce the noise, flash and the valve element damage by cavitation, the valve is suitable for applying on those site of clean medium with large working differential pressure and lower requirements on leakage.

技术参数 Technical Parameters：

1、阀门结构：采用单座套筒柱塞式结构
2、公称通径：DN15～DN250
3、公称压力：PN1.60～PN10.0Mpa
ANSI CLASS 150～900#
4、阀体材质：WCB、CF8、CF8M、WC6
5、阀内主件材质：F304、F316硬化处理
6、泄漏等级：Ⅳ～Ⅵ级
7、控制方式：电动和气动

1、Valve structure: single seat sleeve plunger type structure was applied
2、Nominal diameter:DN15～DN250
3、Nominal pressure:PN1.60～PN10.0Mpa
ANSI CLASS 150～900#
4、Valve body material:WCB、CF8、CF8M、WC6
5、Material of main components: F304, F316 hardening treatment
6、Leakage grade:Ⅳ～Ⅵ
7、Control mode: electric and pneumatic

外形图 Profile Drawing：



BLWY减温减压装置 Temperature and pressure reduction device

减温减压装置本体的供货范围为系列图中粗实线绘制部分。主要有：

1.减压系统：减温减压阀、节流孔板等。

2.减温系统：给水、节流阀、止回阀、截止阀等。

3.安全系统：安全阀等。

4.管路系统：蒸汽管道、过渡管、减温水管等；

5.配套附件：压力表双金属温度计及其安装附件，以上阀门的配对法兰及标准件等。

Temperature and pressure reduction device body's scope of supply is part of the series drawn in thick solid line in FIG. There are:

1. depressurization system: Reduction Valve, orifice plates and so on.
2. desuperheating systems: water supply, throttle valve, check valve, globe valve.
3. Safety system: safety valve.
4. Piping Systems: steam pipes, transition tube, temperature and water pipes;
5. Matching accessories: pressure gauge double metal thermometer its accessories, above the valve mating flange and standard parts.

工作原理 Working principle

分体式减温减压装置由减压阀、节流孔板、蒸汽混合管道（带喷嘴）、安全阀、给水调节阀、节流阀、截止阀、止回阀、减温水管、法兰、标准件等组成。其主要特点：减压系统采用套筒式多级减压阀结构，不平衡力小，调节范围大，动作平稳，无卡阻现象。

Split type desuperheating decompression device by the pressure reducing valve, throttle orifice, steam mixing pipe (with nozzle), safety valve, water supply control valve, throttle valve, globe valve, check valve, reduction of warm water pipe, flanges, standard parts, etc. Its main features: structure of telescopic multistage pressure reducing valve, decompression system unbalanced force is small, the adjusting range is big, smooth movement, no jam phenomenon.

减温系统采用可调喷嘴减温器进行减温，由执行机构控制调节喷嘴通过改变喷嘴流通面积来调整给水水量，在给水量变化较大情况下，减温水始终保持很好的雾化效果。

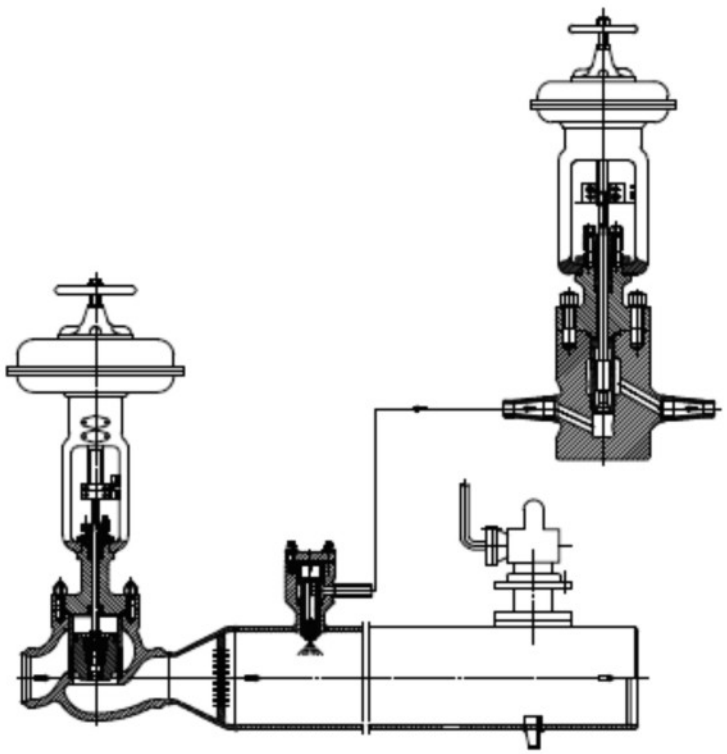
Desuperheating system adopts adjustable nozzle attemperator for temperature reduction, the executing agency control by changing the nozzle flow nozzle area to adjust the water supply of water, in the case of larger changes to water, reduce water always maintain good atomization effect.

订货时请提供 Order when the contract, please provide

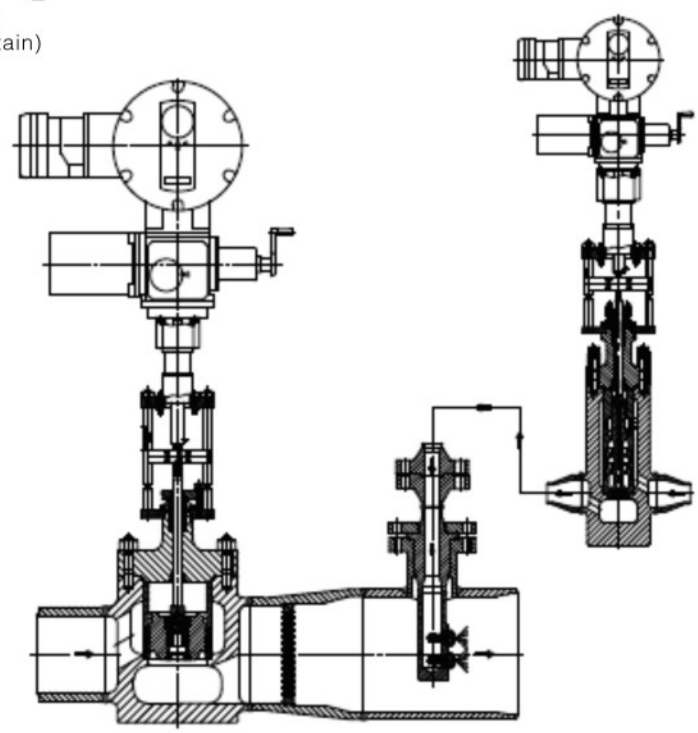
1、出口蒸汽流量Q、进口蒸汽压力P1、温度t1、出口蒸汽压力P2、温度t2；
2、减温给水压力Pb、温度tb；
3、注明控制方式；（仪表盘控制，DCS控制，DCS监视）；
4、控制类别：电动、气动；
选择气动执行机构时还必须提供：
1) 作用形式：气开式或气闭式；
2) 气源压力；
3) 提供电气阀门定位器电信号；
5、其它特殊要求，应在商定后注明或另行签订技术协议。
注：因减温减压装置其参数变化多样，为了提供给用户提供详细准确的方案图，设计、用户单位应提供详尽的工艺参数，由我公司针对每一套装置进行设计并提供方案图，以便施工图设计，同时亦可作为合同的附件。

1.Export steam flow rate Q, import steam pressure P1, t1 and outlet steam temperature pressure P2, temperature t2
2.Pb desuperheating water pressure, temperature TB;
3.indicate the control mode; (dashboard control, DCS control, DCS monitoring;
4.control categories: electric and pneumatic;
When selecting pneumatic actuators must also provide:
1) role form: gas gas open or closed;
2) air pressure;
3) provide electrical valve positioner electric signals;
5, and other special requirements, shall be indicated after the agreed or otherwise signed the technical agreement.
Note: since desuperheating decompression device parameter variety, in order to provide customers with detailed and accurate scheme, design, user unit should provide detailed technical parameters, by my company to design and provide solutions for each set of device, so that construction drawing design, at the same time can also be as the attachment of the contract.

外形图 Profile Drawing:



分体式减温减压器（壁面喷水）
Split Pressure Reducer (wall fountain)



分体式减温减压器（插入喷水）
Split type temperature and pressure reducer (insertion spray water)

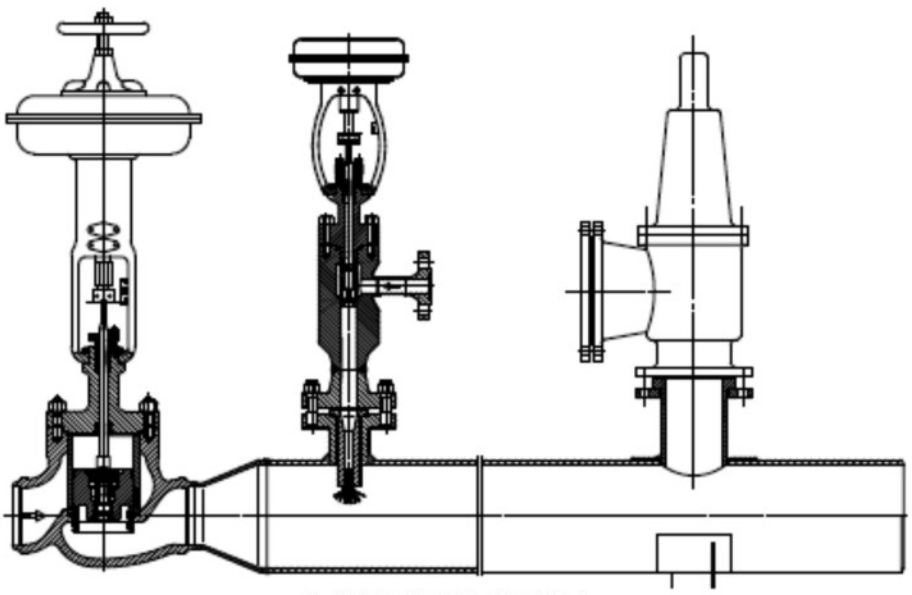
●各种工况过热蒸汽减温减压火电厂用各种减温减压器石化、冶金行业用减温减压器

●减压阀：为预启式阀芯，关断严密，驱动力小

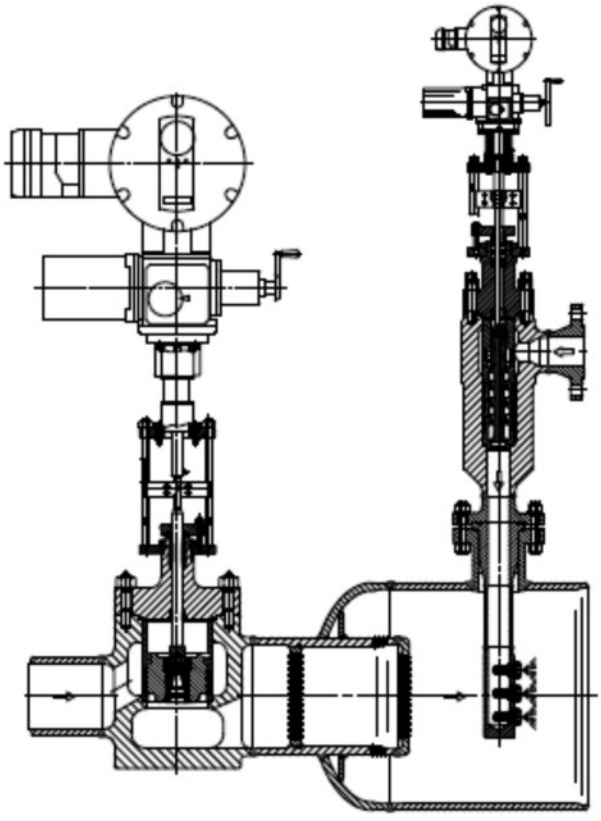
●Superheated steam temperature and pressure reduction on variant working condition
Variant temperature and pressure reducer of thermal power pant; temperature and pressure reducer of petrochemical and metallurgy industry.

●Reducing valve: pre-inlet valve element, tight closure, low driving force

外形图 Profile Drawing：



一体式减温减压器（壁面喷水）
Integrated pressure and temperature reducing (wall fountain)



一体式减温减压器（插入喷水）

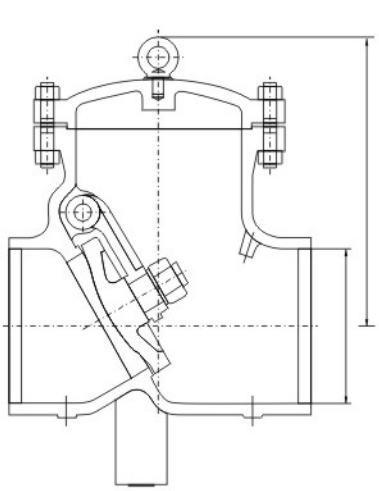
- ●减温水阀：大多为BA系列调节阀，多级涡流降压结构，抗冲刷，寿命长
- ●喷水装置：内置弹簧喷嘴，雾化效果极佳
- ●管道连接：焊接；法兰
- ●蒸汽管道：DN50~DN1000
- ●压力等级：~42MPa

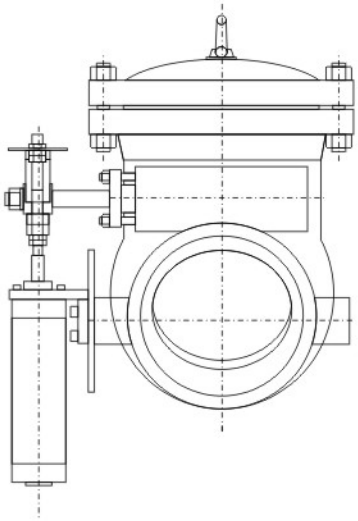
- ●Desuperheating water valve: mostly be BA series regulating valve Multistage eddy depressurization structure, anti-scouring and with long service life.
- ●Spray water device: internally installed spring nozzle, with very fine atomization effect.
- ●Pipeline connection: welded; flange
- ●Steam pipeline：DN50~DN1000
- ●Pressure grade：~42MPa

H644H抽气止回阀 Extraction check valve

抽气止回阀主要用在600MW以下火力发电汽轮机抽汽系统，防止介质或水倒流，对汽轮机水泵等重要设施起到保护作用。在管道介质倒流、断电、事故等非常状态下，该阀门能够瞬间关闭，关闭时间小于0.5秒。

The extraction check valve mainly applied on the extraction steam system of 600MW and below thermal power steam turbine, to avoid the medium or water backflow and protect the steam turbine pump etc important devices. Under the unnormal condition such as medium backflow, power failure or accident, the valve could be closed immediately and the closing period less than 0.5 seconds.





抽汽止回阀设计制造检验标准 The design, manufacture and inspection standard of extraction check valve

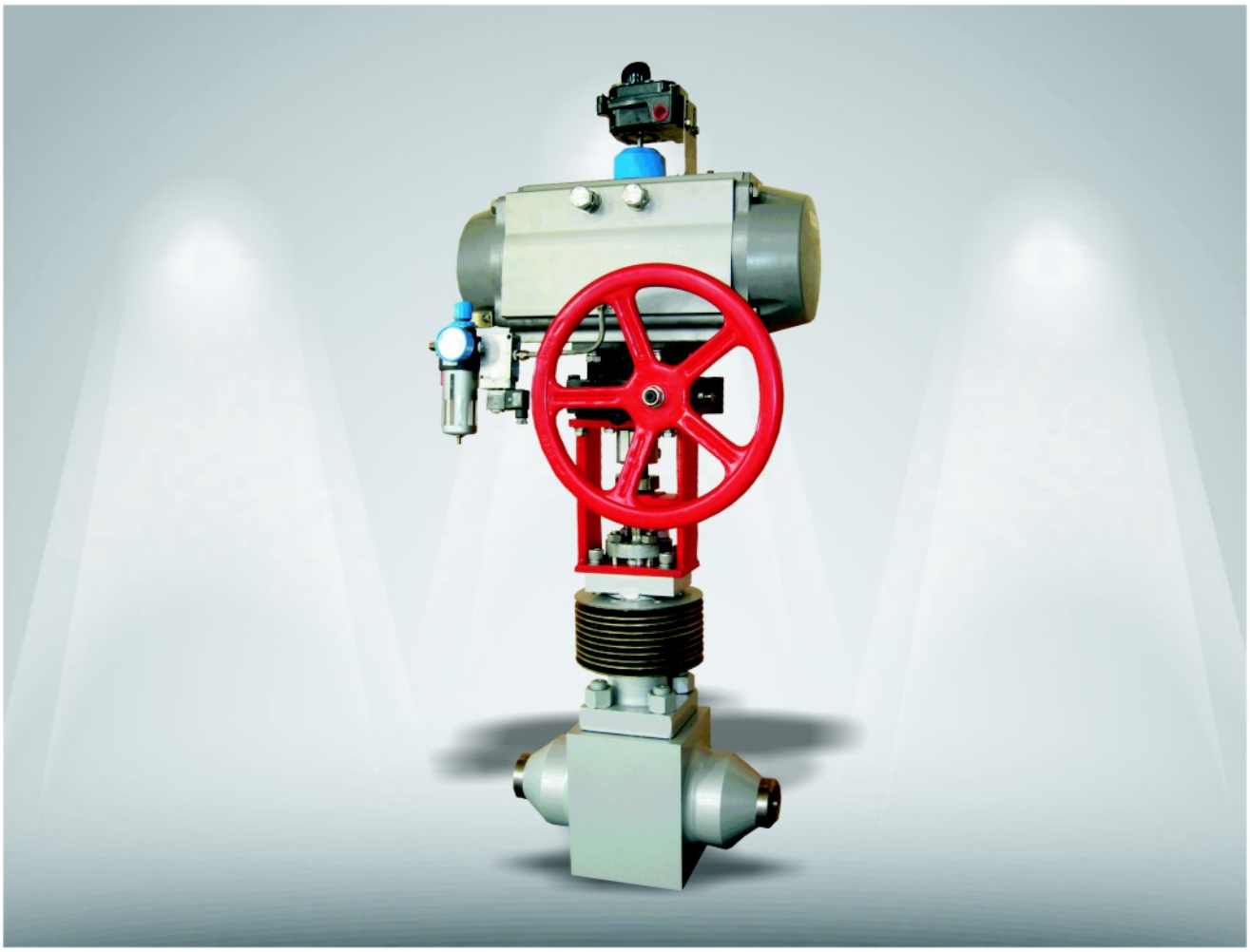
设计制造标准：ASME/ANSIB16.34、E101、JB/T3595
结构长度标准：JB/T3595、ASME/ANSIB16.10、GB/T12221
焊接端或法兰标准：GB/T12224、ASME/ANSIB16.25、GB/T9113、JB/T79~JB/T82
试验验收标准：JB/T9092、JB/T3595、ASME/ANSIB16.34、E101

Design & manufacture standard：ASME/ANSIB16.34、E101、JB/T3595
Structure length standard：JB/T3595、ASME/ANSIB16.10、GB/T12221
Welding end or flange standard：GB/T12224、ASME/ANSIB16.25、GB/T9113、JB/T79~JB/T82
Test & acceptance standard：JB/T9092、JB/T3595、ASME/ANSIB16.34、E101

抽汽止回阀特点 Characteristics Of Extraction Check Valve

●设计制造验收标准采用ANSIB16.34、E101或JB/T3595，强度及密封性能完全符合标准需要，
●真空状态下的阀门进行真空试验，整机寿命满足用户要求；
●针对不同温度，主体材料采用碳钢或高温钢，密封面堆焊硬质合金；
●阀瓣设计为经摇杆与阀杆活动连接，可与阀座密封面自对对中，保证密封面吻合；
●阀座密封面倾斜一定角度，减少关闭时间，减轻冲击，保护设备本身和管道安全；
●阀门配有阻尼重锤，可平衡关闭件动力矩，防止水锤的发生；
●阀体内腔采用流线型设计，流通能力大，减小阀门阻力；
●执行机构为弹簧复位式气缸或液压缸，并与阀门关闭件动作相对独立，执行机构故障不影响关闭件动作；
●气缸或液压缸内壁涂耐磨耐蚀层，可增加寿命，减轻动作阻力，使阀门灵活、可靠；
●关闭件开启设有限位机构，避免开启过位造成损坏；
●执行机构配有阀门开关位置信号输出、阀门开启位置就地指示；
●也可根据用户具体要求进行针对性设计。

●The standard of design, manufacture and acceptance is compliance with ANSIB16.34, E101 or JB/T3595, the strength and sealing performance totally compliance with standard requirements.
●The valve to be vacuum testing under vacuum condition, the service life of unit will be satisfied with user requirements
●The main body material will be carbon steel or high temperature steel base on different temperature requirements, the cemented carbide will be overlaying on sealing face.
●The valve clack was designed as flexible connection through rocker and valve rod,
●The sealing face of valve seat is slant, which could reduce the closing period and alleviate impact to protect the device and pipe.
●The valve matched with damping heavy punch, which could balance the kinetic moment closing components to avoid the non-punch .
●The inner chamber of valve body was streamline, with large flow capacity and reduce valve resistance.
●The actuator is spring reset type cylinder or hydraulic cylinder, which is relatively independent with valve closing components, the malfunction of actuator will not influence the action of closing components.
●The inner wall of cylinder and hydraulic cylinder painted with wear and corrosion resistance layer, which could increase the service life and alleviate the action resistance, to make the valve to be flexible and reliable.
●There is a stop gear on switch, which could avoid damage caused by opening over limit.
●The actuator matched with valve switch location signal output
●Specific design as per users' requirements is accepted.



中压叶轮冷却系统超临界阀 Cooling system pressure impeller supercritical valve

超临界阀主要运用于汽轮机中压转子叶轮冷却系统中，控制高温高压蒸汽，代替长期依赖进口产品，降低了设备的生产成本，缩短了交货期。现在国内为东汽独家供应此产品的生产厂家。

1、阀门结构采用角行程球阀形式，连接方式为BW。

2、阀芯阀座材质高温合金喷涂司太立硬质合金。

3、阀门内漏等级为VI级，无外漏

4、气动执行器采用进口品牌，结构形式为单作用角行程活塞式。（其他附件：电磁阀，减压阀，限位开关，加速器采用进口品牌）

5、阀门动作时间，开、关小于3S。

6、阀门要求采用侧装手轮机构，方便现场操作，手动和自动切换方便。

7、阀门在全开时，介质流向不能正对着阀芯密封面，防止气蚀、冲刷。

Supercritical valve is mainly used in steam turbine rotor wheel cooling system, control temperature and high pressure steam, instead of long-term dependent imports, reduce the production cost of the device, shortening delivery time. China is now the sole supplier of this product Dongqi manufacturers.

1, the valve structure using rotary ball valve, connection to BW.

2, the valve seat material sprayed superalloy stellite alloy.

3, the valve leakage grade VI grade, no leakage

4, pneumatic actuators imported brands, form a single-acting rotary piston. (Other accessories: solenoid valves, valves, limit switches, accelerators imported brands)

5, the valve action time, opening and closing less than 3S.

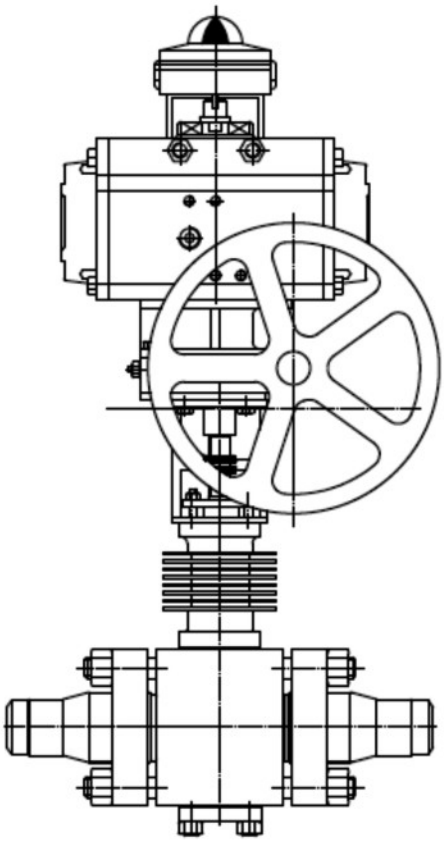
6, valves require the use of side-mounted hand wheel, convenient and easy on-site operation, manual and automatic switching.

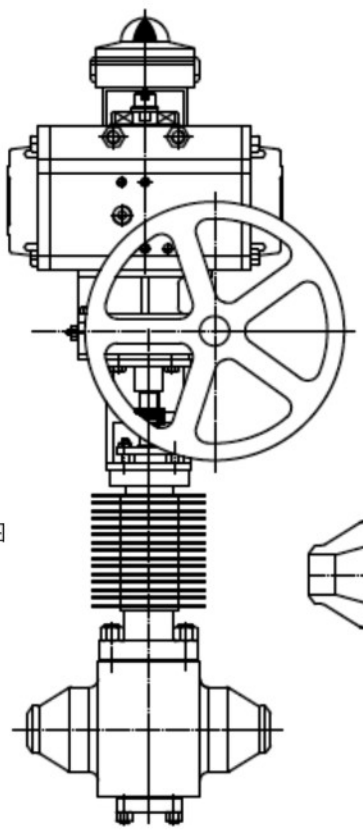
7, the valve fully open, the medium flow is not facing the valve sealing surface to prevent cavitation, erosion.

技术参数 Technical Parameters：

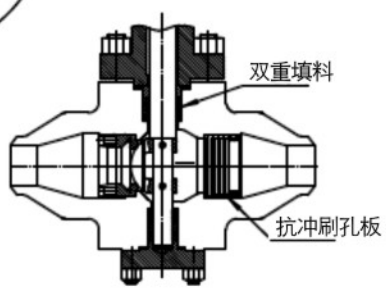
1、阀门结构：采用偏心冠状加孔板结构
2、公称通径：DN40～DN200
3、公称压力：PN10.0～PN42.0MPa
ANSI CLASS 900～2500#
4、阀体材质：F304、F11、F22、F91、F92
5、阀内主件材质：F316、F11、F22、F91、 F92
6、泄漏等级：Ⅳ～Ⅵ级
7、控制方式：电动和气动

1, the valve structure: coronal plus eccentric orifice structure
2, nominal diameter: DN40 ~ DN200
3, nominal pressure: PN10.0 ~ PN42.0Mpa
ANSI CLASS 900 ~ 2500 #
4, Body material: F304, F11, F22, F91, F92
5, the valve member in the main material: F316, F11, F22, F91, F92
6, leakage rating: Ⅳ ~ Ⅵ grade
7, Control: electric and pneumatic





结构图



结构图

Y型疏水阀 Y-type trap valve

阀体为锻造Y型，流通阻力小，Cv值大。
阀芯上带有节流片，有效保护密封面，延长阀门使用寿命。
阀芯阀座密封面经过特殊工艺处理和加工，防汽蚀、耐冲刷。
阀芯上加工有两道引导环，阀杆受力均衡，动作灵活，不发生卡塞现象。
阀杆填料全部为美国ga rlock进口优质柔性石墨填料，化学性和柔韧性好，摩擦小，使用寿命长(平均可用4～5年)。
开关速度快，一般3～5秒，有效保护系统安全，大大的减少密封面受介质冲刷时间。
阀盖上有散热片，充分散热，保障气动执行结构和电磁阀等不会受到高温而失效。
中腔垫片为夹丝高目柔性石墨垫，比一般柔性石墨垫具有更好的密封性和可靠性。

Y-type valve body forging, flow resistance is small, Cv value is large.
With the throttle valve sheet, effectively protect the sealing surface, to extend valve life.
Valve seat sealing surface and processed through a special process, anti-cavitation erosion resistance.
On the spool processing prescribe a guide ring, stem force balance, agility and jam phenomenon does not occur.
Stem packing all ga rlock US imports of high-quality flexible graphite packing, chemical resistance and good flexibility, low friction, long life (average available 4～5 years).
Fast switching speed, generally 3 to 5 seconds, the effective protection of the safety system, greatly reducing the time by the sealing surface erosion medium.
Bonnet heat sink, sufficient cooling to protect the structure of pneumatic actuators and solenoid valves are not subjected to high temperatures and failure. Cavity
Head gasket sandwiched Sgro flexible graphite pad, flexible graphite pad than having better sealing and reliability.

技术参数 Technical Parameters：

公称通径：3 / 4"～4"
公称压力：ANSI 150LB～4500LB
适用温度：20℃～610℃
执行机构：气动(可选电动)
泄露：零泄漏

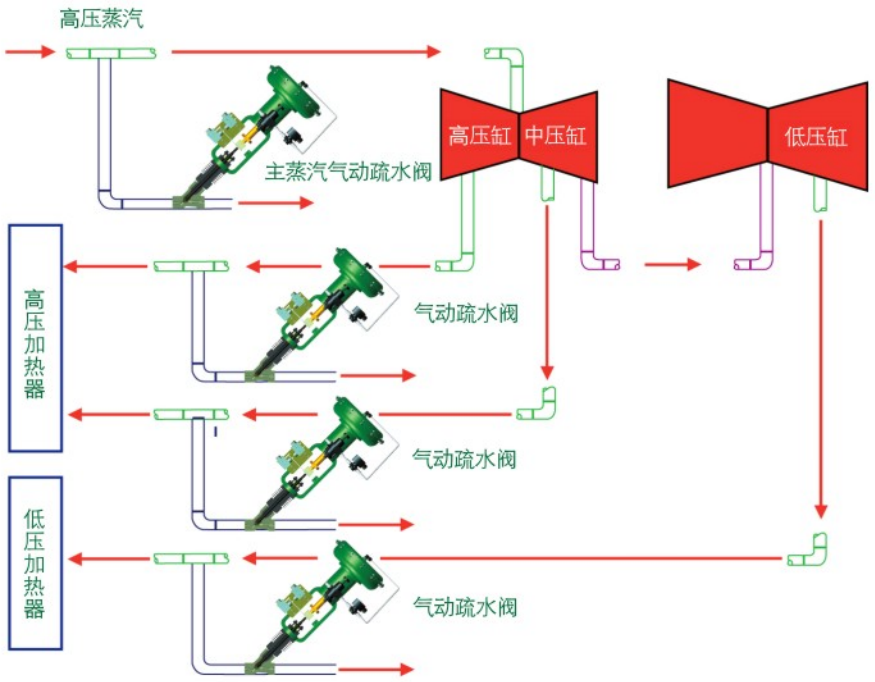
Nominal diameter: 3/4 "～4"
Nominal pressure: ANSI 150LB ~ 4500LB
Temperature: 20 ℃ ~ 610 ℃
Actuator: pneumatic (electric optional)
Leak: zero leakage

应用范围 A pplication

气动疏水阀安装在火电机组蒸汽管道上，按其部位可分为：
1、主蒸汽管道疏水阀
2、再热热管道疏水阀
3、冷再热管道疏水阀
一段、二段、三段、四段、五段、六段抽汽管道疏水阀及其它。

Pneumatic trap mounted on the thermal power steam pipe, can be divided according to their location:
1, the main steam pipe trap
2, hot reheat piping trap
3, the cold reheat piping trap
Period, two-stage, three-stage, four, five paragraphs, sixth extraction steam traps and other pipeline

疏水阀工作示意图 Traps working schematic



BLSW 勃朗蜀威
BOLANGSHUWEI

附　录

流量系数计算

控制阀选型计算书

调节阀泄露量标准

材料选择表

常用金属材料中外牌号对照表

部分业绩

流量系数计算

调节阀的流量系数Kv，是调节阀的重要参数，它反映调节阀通过流体的能力，也就是调节阀的容量。根据调节阀流量系数Kv的计算，就可以确定选择调节阀的口径。为了正确选择调节阀的口径，必须正确计算出调节阀的额定流量系数Kv值。

调节阀额定流量系数Kv的定义是：在规定条件下，即阀的两端压差为105Pa，流体的密度为lg/cm³，额定行程时流经调节阀以m³/h或t/h的流量数。

1．一般液体的Kv值计算

a．非阻塞流

判别式：△P＜FL2（P1－FFPV）

计算公式：$Kv=10QL\sqrt{\frac{\rho}{P_1-P_2}}$

式中：F_L－压力恢复系数，见附表

F_F－流体临界压力比系数，$FF=0.96-0.28\sqrt{P_V/P_C}$

P_V－阀入口温度下，介质的饱和蒸汽压（绝对压力），kPa

P_C－流体热力学临界压力（绝对压力），kPa

Q_L－液体流量m³/h

ρ －液体密度g/cm³

P_1－阀前压力（绝对压力）kPa

P_2－阀后压力（绝对压力）kPa

b．阻塞流

判别式：△P≥FL2（P1－FFPV）

计算公式：$Kv=10QL\sqrt{\frac{\rho}{F_L^2(P_1-F_FP_V)}}$

式中：各字符含义及单位同前

调节阀的压力恢复系数F_L表

调节阀的类型	单座阀				双座阀	套筒阀		角型阀		V形球阀	蝶阀	
	VP		JP		VN	VM	JM	VS		VV	VW	
	流开	流关	流开	流关	任意	任意	任意	流开	流关	任意	任意90°	任意70°
F_L	0.93	0.75	0.92	0.85	0.84	0.91	0.84	0.93	0.80	0.62	0.61	0.72

2．气体的Kv值计算

a．一般气体

当$P_2>0.5P_1$时

$$Kv=\frac{Qg}{4.73}\sqrt{\frac{G(273+t)}{\triangle P\,P_m}}$$

当$P_2\leqslant 0.5P_1$时

$$Kv=\frac{Qg}{2.90P_1}\sqrt{G(273+t)}$$

式中：Qg－标准状态下气体流量Nm^3/h

Pm－$\frac{P_1+P_2}{2}$（P_1、P_2为绝对压力）kPa

$\triangle P=P_1-P_2$

G －气体比重（空气G＝1）

t －气体温度℃

b．**高压气体**（PN＞10MPa）

当$P_2>0.5P1$时

$$Kv=\frac{Qg}{4.73}\sqrt{\frac{G(273+t)}{\triangle P\,P_m}}\cdot\sqrt{Z}$$

当$P_2\leq 0.5P1$时

$$Kv=\frac{Qg}{2.90P_1}\sqrt{G(273+t)}\cdot\sqrt{Z}$$

式中：Z－气体压缩系数，可查GB/T 2624－81《流量测量节流装置的设计安装和使用》

3．低雷诺数修正（高粘度液体KV值的计算）

液体粘度过高或流速过低时，由于雷诺数下降，改变了流经调节阀流体的流动状态，在Rev＜2300时流体处于低速层流，这样按原来公式计算出的KV值，误差较大，必须进行修正。此时计算公式应为：

$$Kv=10\Phi Q_L\sqrt{\frac{\rho}{P_1-P_2}}$$

式中：Φ－粘度修正系数，由Rev查FR－Rev曲线求得；QL－液体流量 m^3/h

对于单座阀、套筒阀、角阀等只有一个流路的阀

$$Rev=7000\frac{Q_L}{r\sqrt{Kv'}}$$

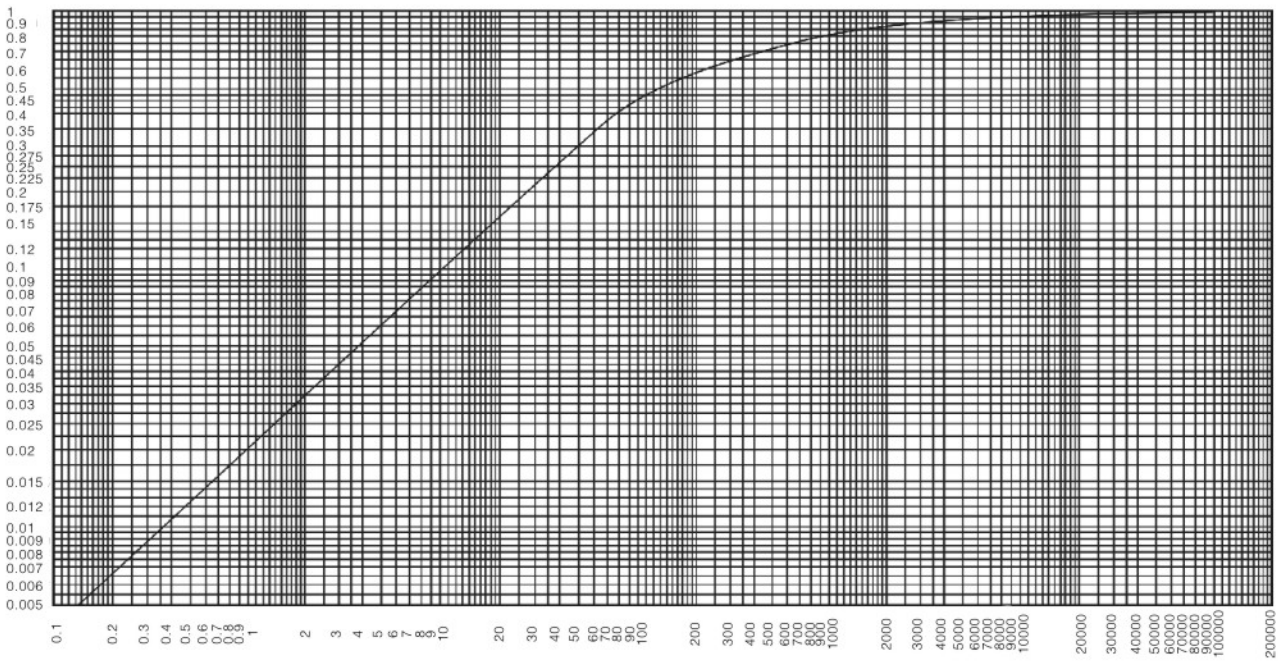
对于双座阀、蝶阀等具有二个平行流路的阀

$$Rev=49600\frac{Q_L}{v\sqrt{Kv'}}$$

式中：Kv′ －不考虑粘度修正时计算的流量系数

v －流体运动粘度mm^2/s

FR －Rev关系曲线



F_R-R_{ev}关系曲线

4. 水蒸气的Kv值的计算

a. 饱和蒸汽

当$P_2 > 0.5P_1$时

$$Kv = \frac{120G_S}{K}\sqrt{\frac{1}{(P_1+P_2)(P_1-P_2)}}$$

当$P_2 \leqslant 0.5P_1$时

$$Kv = \frac{140G_S}{KP_1}$$

式中：G_S－蒸汽流量kg/h，P_1、P_2含义及单位同前，K－蒸汽修正系数，部分蒸汽的K值如下：

水蒸汽：K＝19.4；氨蒸汽：K＝25；氟里昂11：K＝68.5；甲烷、乙烯蒸汽：K＝37；

丙烷、丙烯蒸汽：K＝41.5；丁烷、异丁烷蒸汽：K＝43.5。

b. 过热水蒸汽

当$P_2 > 0.5P_1$时

$$Kv = 6.23G_S\frac{1+0.0013\Delta t}{\sqrt{(P_1+P_2)(P_1-P_2)}}$$

当$P_2 \leqslant 0.5P_1$时

$$Kv = 7.25G_S\frac{1+0.0013\Delta t}{P_1}$$

式中：△t－水蒸汽过热度℃，Gs、P_1、P_2含义及单位同前。

调节阀泄漏量标准

1 GB-T4213-2008

表1

泄漏等级	试验介质	试验程序	最大阀座泄漏量
Ⅰ	由用户与制造商商定		
Ⅱ	L或G	1	$5\times10^{-3}\times$阀额定容量，1/h
Ⅲ	L或G	1	$10^{-3}\times$阀额定容量，1/h
Ⅳ	L	1或2	$10^{-4}\times$阀额定容量，1/h
	G	1	
Ⅳ－S1	L	1或2	$5\times10^{-4}\times$阀额定容量，1/h
	G	1	
Ⅳ－S2	G	1	$2\times10^{-4}\times\Delta P\times D$，1/h
Ⅴ	L	2	$1.8\times10^{-7}\times\Delta P\times D$，1/h
Ⅵ	G	1	$3\times10^{-3}\times\Delta P\times$(表2规定的泄漏量)

注 ① ΔP为阀前后压差，以kPa为单位

② D为阀座直径，以mm为单位。

③ 对于可压缩流体体积流量，是在绝对压力为101.325kPa和绝对温度为273K的标准状态下的测定值。

④ L为水，G为空气。

⑤ 程序1，试验压力 P≤0.35MPa；程序2，试验压力为阀最大工作压差。

表2

阀座直径（mm）		25	40	50	65	80	100	150	200	250	300	350	400
泄漏量	mL/min	0.15	0.30	0.45	0.60	0.90	1.70	4.00	6.75	11.1	16.0	21.6	28.4
	气泡数/min	1	2	3	4	6	11	27	45	—	—	—	—

注：① 每分种气泡数是用外径6mm、壁厚1mm的管子垂直浸入水下5～10mm深度的条件下测得的，管端表面应光滑，无倒角和毛刺。

② 如果阀座直径与表列值之一相差2mm以上，则泄漏系数可假设泄漏量与阀座直径的平方成正比的情况下，通过内推法取得。在计算确定泄漏量的允许值时，阀的额定容量应按表3所列公式计算。

表3

介质 \ 条件	$\Delta P<\frac{1}{2}P_1$	$\Delta P\geq\frac{1}{2}P_1$
液体	$Q_1=0.1K_V\sqrt{\frac{\Delta P}{\rho/\rho_0}}$	
气体	$Q_2=4.73K_V\sqrt{\frac{\Delta P.Pm}{G(273+t)}}$	$Q_2=2.9P1K_V\sqrt{G(273+t)}$

表中：Q_1－液体流量，m^3/h；

Q_2－标准状态下的气体流量，Nm^3/h；

K_V－额定流量系数；

$P_m=\frac{P_1+P_2}{2}$，kPa；

P_1－阀前绝对压力，kPa；

P_2－阀后绝对压力，kPa；

△P －阀前后压差，kPa；

t －试验介质温度，取20℃；

G－气体比重，空气＝1；

ρ/ρ_0－相对密度（规定温度范围内的水 $\rho/\rho_0=1$）

2 美国ANSI B16.104-1976调节阀的泄漏量标准

级别	最小泄漏量				试验介质	压力和温度
Ⅱ级	0.5%额定Cv				空气或水	工作压差△P或50磅/英寸^2(3.5巴)压差，取其中较小的一个值，温度10～52℃
Ⅲ级	0.1%额定Cv				空气或水	工作压差△P或50磅/英寸^2(3.5巴)压差，取其中较小的一个值，温度10～52℃
Ⅳ级	0.01%额定Cv				空气或水	工作压差△P或50磅/英寸^2(3.5巴)压差，取其中较小的一个值，温度10～52℃
Ⅴ级	级 $5\times10^{-12}m^3$/秒/巴(压差)/mm(阀座直径)(公制)				水	工作压差△P，温度10～52℃
Ⅵ级	阀座直径		气泡/分	ml/分	空气或氮气	工作压差△P或50磅/英寸^2(3.5巴)压差，取其中较小的一个值，温度10～52℃
	(in)	(mm)				
	1″	25	1	0.15		
	1.5″	38	2	0.30		
	2″	51	3	0.45		
	2.5″	64	4	0.60		
	3″	76	6	0.90		
	4″	102	27	1.70		
	6″	152	27	4.00		
	8″	203	45	6.75		

控制阀选型计算书

位号 Tag No.
数量 Quantity
P&ID 号
管道设备号 Line No.
管道等级
管道规格 PIPE SPECIFICATION
管道材质 Pipe Material

工艺参数 Parameters

工艺介质 Process Fluid
操作温度 Oper Temper. ℃
设计温度℃
阀前压力 Upstream Pressure KG/CM^2
阀后压力Mpa
关闭压力 kg/cm^2

流量Flow. 气体Gas Nm^3/h 最大Max.
蒸汽Vapor kg/h 正常Nor.
液体Liquid kg/h 最小Min.

操作密度 Oper.Density kg/m^3（气体kg/Nm^3）
动力粘度Dynamic viscosity（mPa.s）
压缩系数 Compress Factor
液化压力 Vapor Pressure
临界压力 Critical press
比热比
噪音 Noise Level
气源故障时阀开/关 Open/Close

阀体/阀芯规格 Body/plug Specification

型号 Model
型式 Type
口径 Require Ments
阀芯形式Valve Size
压力等级 Grade of pressure
连接形式及标准 Connect Type

材质 Material
阀体 Body
阀芯 Plug
阀座 Seat
阀杆 Stem
填料 Packing

流开/流闭 Flow Open/Close
泄漏等级 Leakage Class
流量特性 Flow Characteristic
上阀盖形式Valve Type

计算Cv Calc. Cv
最大 Max.
正常 Nor.
最小 Min.

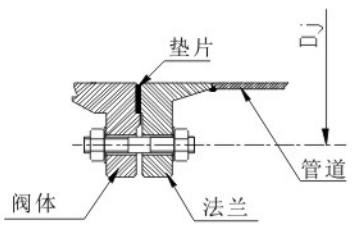
选择Cv Selected Cv
允许最大压差 Allow ΔP

开度 % Open Degree
最大 Max.
正常 Nor.
最小 Min.

气动执行机构 Pneumatic Actuator

型号 Model
型式 Type
生产厂家 Manufacturer
作用形式 Action Style
弹簧范围 Spring Range
气源压力 Air Press
行程 Travel
全行程时间
手轮 Hand Wheel
气信号接口尺寸 Pneu. Conn. Size
阀门实际推力 N
执行器最大推力 N

法兰标准及等级 Flange Std.& Degree



配对法兰
法兰螺栓
螺母
垫片
法兰孔尺寸
连接形式
法兰密封面形式

附件 Accessories

定位器 POSITIONER	型号 Model 输入信号 Input Signal 输出信号 Output Signal 电源电压 Power Supply 作用形式 Action Style 电气接口尺寸 Elec. Size 防爆等级 Ex.Certification 防护等级 Protection Class	限位开关 LIMITED SWITCH	型号 Model 防爆等级Ex. Certification 防护等级 Protection Class 电气接口尺寸 Elec. Size
			空气过滤减压阀 Regulator 保位阀 气控阀 接线箱及接口
电磁阀 SOLENOID VALVE	型号 Model 阀体材质 Body Material 电源电压 Power Supply 防爆等级Ex. Certification 防护等级 Protection Class 电气接口尺寸 Elec. Size 动作方式	其 它 Other	外接气源管尺寸Worthy of managing size 管路附件Pipeline Accessories

参考公式

液体：$KV = Q\sqrt{\frac{r}{\Delta P}} / KV = Q\sqrt{\frac{r}{\Delta Pc}}$ 气体：$KV = \frac{Q_N}{380} * \sqrt{\frac{r_N(273+t)}{\Delta P(p1+p2)}} / KV = \frac{Q_N}{330} * \sqrt{\frac{r_N(273+t)}{p1}}$；饱和蒸汽：$KV = \frac{G_S}{16} * \frac{1}{\sqrt{\Delta P(P1+P2)}} / KV = \frac{G_S}{13.8P1}$

备 注

表中代号及单位：
Q：液体流量m^3/h，
QN：气体流量Nm^3/h，
Gs：蒸气流量kgf/h，r：
液体重度g/cm^3，rn：
气体重度kg/Nm，P1：
阀前压力100KPa，
P2：阀后压力 100KPa；

本计算书采用以上公式进行流量系数计算，Kv与Cv换算关系：Cv=1.167Kv

材料选择表

流体	材料													
	碳钢	铸铁	302/304不锈钢	316不锈钢	青铜	蒙乃尔	哈氏合金B	哈氏合金C	不锈钢20#	钛	钴-铬合金6#	416不锈钢	440C不锈钢	17-4PH
乙醛	A	A	A	A	A	A	I、L	A	A	I、L	I、L	A	A	A
醋酸，气	C	C	B	B	B	B	A	A	A	A	A	C	C	B
醋酸，汽化	C	C	A	A	A	A	A	A	A	A	A	C	C	B
醋酸，蒸汽	C	C	A	A	B	B	I、L	A	B	A	A	C	C	B
丙　酮	A	A	A	A	A	A	A	A	A	A	A	A	A	A
乙　炔	A	A	A	A	I、L	A	A	A	A	I、L	A	A	A	A
醇	A	A	A	A	A	A	A	A	A	A	A	A	A	A
硫酸铅	C	C	A	A	B	B	A	A	A	A	I、L	C	C	I、L
氨	A	A	A	A	C	A	A	A	A	A	A	A	A	I、L
氯化铵	C	C	B	B	B	B	A	A	A	A	B	C	C	I、L
硝（酸）铵	A	C	A	A	C	C	A	A	A	A	A	C	B	I、L
磷酸铵(单基)	C	C	A	A	B	B	A	A	B	A	A	B	B	I、L
硫酸铵	C	C	B	A	B	A	A	A	A	A	A	C	C	I、L
亚硫酸铵	C	C	A	A	C	C	I、L	A	A	A	A	B	B	I、L
苯　胺	C	C	A	A	C	B	A	A	A	A	A	C	C	I、L
苯	A	A	A	A	A	A	A	A	A	A	A	A	A	A
苯（甲）酸	C	C	A	A	A	A	I、L	A	A	A	I、L	A	A	A
硼　酸	C	C	A	A	A	A	A	A	A	A	A	B	B	I、L
丁　烷	A	A	A	A	A	A	A	A	A	I、L	A	A	A	A
氯化钙	B	B	C	B	C	A	A	A	A	A	I、L	C	C	I、L
次氯酸钙	C	C	B	B	B	B	C	A	A	A	I、L	C	C	I、L
石碳酸	B	B	A	A	A	A	A	A	A	A	A	I、L	I、L	I、L
二氧化碳(干)	A	A	A	A	A	A	A	A	A	A	A	A	A	A
二氧化碳(湿)	C	C	A	A	B	A	A	A	A	A	A	A	A	A
二氧化碳	A	A	A	A	C	B	A	A	A	A	A	B	B	I、L
四氯化碳	B	B	B	B	A	A	B	A	A	A	I、L	C	A	I、L
碳酸H_2CO_3	C	C	B	B	B	A	A	A	A	I、L	I、L	A	A	A
氯气，干	A	A	B	B	B	A	A	A	A	C	B	C	C	C
氯气，湿	C	C	C	C	C	C	C	B	C	A	B	C	C	C
氯气，液态	C	C	C	C	B	C	C	A	B	C	B	C	C	C
铬酸H_2CrO_4	C	C	C	B	C	A	C	A	C	A	B	C	C	C
焦炉气	A	A	A	A	B	B	A	A	A	A	A	A	A	A
硫酸铜	C	C	B	B	B	C	I、L	A	A	A	I、L	A	A	A
乙烷	A	A	A	A	A	A	A	A	A	A	A	A	A	A

材料选择表

流体	材料													
	碳钢	铸铁	302/304不锈钢	316不锈钢	青铜	蒙乃尔	哈氏合金B	哈氏合金C	不锈钢20#	钛	钴-铬合金6#	416不锈钢	440C不锈钢	17-4PH
醚	B	B	A	A	A	A	A	A	A	A	A	A	A	A
氯乙烷	C	C	A	A	A	A	A	A	A	A	A	B	B	I、L
乙烯	A	A	A	A	A	A	I、L	A	A	A	A	A	A	A
乙二醇	A	A	A	A	A	A	I、L	I、L	A	I、L	A	A	A	A
氯化铁	C	C	C	C	C	C	C	B	C	A	B	C	C	I、L
甲酮HCHO	B	B	A	A	A	A	A	A	A	A	A	A	A	A
甲醛HCO_2H	I、L	C	B	B	A	A	A	A	A	C	B	C	C	B
氟里昂，湿	B	B	B	A	A	A	A	A	A	A	A	I、L	I、L	I、L
氟里昂，干	B	B	A	A	A	A	A	A	A	A	A	I、L	I、L	I、L
糖醛	A	A	A	A	A	A	A	A	A	A	A	B	B	I、L
汽油，精制	A	A	A	A	A	A	A	A	A	A	A	A	A	A
盐酸，汽化	C	C	C	C	C	C	A	B	C	C	B	C	C	C
盐酸，游离	C	C	C	C	C	C	A	B	C	C	B	C	C	C
氢氟酸，汽化	B	C	C	B	C	C	A	A	B	C	B	C	C	C
氢氟酸，游离	A	C	C	B	C	A	A	A	B	C	I、L	C	C	I、L
氢气	A	A	A	A	A	A	B	A	A	A	A	A	A	A
过氧化氢	I、L	A	A	A	C	B	A	B	A	A	I、L	B	B	I、L
硫化氢，液体	C	C	A	A	C	C	A	A	B	A	A	C	C	I、L
氢氧化镁	A	A	A	A	B	A	A	A	A	A	A	A	A	I、L
甲基乙基甲酮、丁酮	A	A	A	A	A	A	A	A	A	I、L	A	A	A	A
天然气	A	A	A	A	A	A	A	A	A	A	A	A	A	A
硝酸	C	C	A	B	C	C	C	B	A	A	C	C	C	B
草酸	C	C	B	B	B	B	A	A	A	B	B	B	B	I、L
氧气	A	A	A	A	A	A	A	A	A	A	A	A	A	A
甲醇	A	A	A	A	A	A	A	A	A	A	A	A	B	A
润滑油，精制	A	A	A	A	A	A	A	A	A	A	A	A	A	A
磷酸，汽化	C	C	A	A	C	C	A	A	A	B	A	C	C	I、L
磷酸，游离	C	C	A	A	C	B	A	A	A	B	A	C	C	I、L
磷酸蒸汽	C	C	B	B	C	C	A	I、L	A	B	C	C	I、L	
苦味酸	C	C	A	A	C	C	A	A	A	I、L	I、L	B	B	I、L
亚氯酸钾	B	B	A	A	B	B	A	A	A	A	I、L	C	C	I、L
氢氧化钾	B	B	A	A	B	A	A	A	A	A	I、L	B	B	I、L
丙烷	A	A	A	A	A	A	A	A	A	A	A	A	A	A
松香、松脂	B	B	A	A	A	A	A	A	A	I、L	A	A	A	A
醋酸钠	A	A	B	A	A	A	A	A	A	A	A	A	A	A

材料选择表

流体	材料													
	碳钢	铸铁	302/304不锈钢	316不锈钢	青铜	蒙乃尔	哈氏合金B	哈氏合金C	不锈钢20#	钛	钴-铬合金6#	416不锈钢	440C不锈钢	17-4PH
碳酸钠	A	A	A	A	A	A	A	A	A	A	A	B	B	A
氯化钠	C	C	B	B	A	A	A	A	A	A	A	B	B	B
铬酸钠	A	A	A	A	A	A	A	A	A	A	A	A	A	A
氢氧化钠	A	A	A	A	C	A	A	A	A	A	A	B	B	A
次氯酸钠	C	C	C	C	B-C	B-C	C	A	B	A	I、L	C	C	I、L
硫代硫酸钠	C	C	A	A	C	C	A	A	A	A	I、L	B	B	I、L
二氯化锡	B	B	C	A	C	B	A	A	A	A	I、L	C	C	I、L
硬质酸	A	C	A	A	B	B	A	A	A	A	B	B	B	I、L
硫酸盐溶液	A	A	A	A	C	A	A	A	A	A	A	I、L	I、L	I、L
硫	A	A	A	A	C	A	A	A	A	A	A	A	A	A
二硫化氧干	A	A	A	A	A	A	B	A	A	A	A	B	B	I、L
二氧化硫干	A	A	A	A	A	A	B	A	A	A	A	B	B	I、L
硫酸，汽化	C	C	C	C	C	C	A	A	A	B	B	C	C	C
硫酸，游离	C	C	C	C	B	B	A	A	A	B	B	C	C	C
亚硫酸	C	C	B	B	B	C	A	A	A	A	B	C	C	I、L
焦油	A	A	A	A	A	A	A	A	A	A	A	A	A	A
三氟乙烯	B	B	B	A	A	A	A	A	A	A	A	B	B	I、L
松节油	B	B	A	A	A	B	A	A	A	A	A	A	A	A
醋	C	C	A	A	B	A	A	A	A	I、L	A	C	C	A
水、锅炉供水	B	C	A	A	C	A	A	A	A	A	A	B	A	A
水、蒸馏水	A	A	A	A	A	A	A	A	A	A	A	B	B	I、L
海水	B	B	B	B	A	A	A	A	A	A	A	C	C	A
氯化锌	C	C	C	C	C	C	A	A	A	A	B	C	C	I、L
硫酸锌	C	C	A	A	B	A	A	A	A	A	A	B	B	I、L

符号：A－能够或正被成功的应用
B－应用过程注意
C－不能应用
I.L.－缺乏资料

摘自《调节阀手册》第二版　美国仪表学会　J.W.哈奇森　主编　林秋鸿等译　1984年12月
本表是用来大致指出与某种流体接触而发生反应时，应如何选择适当的材料。表中的推荐不是绝对的，
因为材料的耐腐蚀性与流体的浓度、温度、压力和杂质等因素有关。因此，必须强调本表只能作为一个导则。
蒙乃尔合金－Monel
哈氏合金B（C）－Hastelloy“B”、（“C”）
不锈钢#20－Durimet 20
钴－铬合金#6－Alloy 6(Co-Cr)

常用金属材料中外牌号对照表

分类	序号	中国 GB1220、GB1221、GB12228、GB12229、Gb12230	日本JIS	国际标准 ISO683/13 ISO683/16	美国 ANSI ASTM	英国 BS970 BS1449	德国 DIN17440 DIN17224
铸碳素钢合金钢	1	WCA	G5151 SCPH1		A216 WCA	161Cr-430F	GS-C25
	2	ZG230-450 WCB	G5151 SCPH2 SC410		A216 WCB		
	3	WCC			A216 WCC		
	4	ZG20CrMo			A217 Wc5	3100 B2	
	5		G5151 SCPH21		A217 Wc4	1504 621E	
	6	ZG15CrMoV				3100 B3	
铸不锈钢	7	ZG00Cr18Ni10	G5121 SCS19A		A351 CF3	1504 304C12E	
	8	ZG0Cr18Ni9Ti	G5121 SCS13A		A351 CF8	1504 304C15E	G-X6CrNiMo1810
	9	CF3M	G5121 SCS16A		A351 CF3M	1504 316C12E	
	10	ZG0Cr18Ni12Mo2Ti	G5121 SCS14A		A351 CF8M	1504 316C16E	
	11	CF8M	G5121 SCS14A		A744 CF-8M	3100 316C16	
	12	CF8C	G5121 SCS21		A351 CF8C	1504 347C17E	G-X7CrNiNb1189
	13	CF8	G5121 SCS13A G5121 SCS13		A744 CF-8	3100 304C15	G-X6CrNi189
	14	CF3	G5121 SCS19A		A744 CF-3	3100 304C12	
锻不锈钢	15	ZG0Cr17Ni4Cu4Nb	G5121 SCS24		17-4PH		
	16	1Cr18Ni9	SUS302	12	302, S30200	302S25	X12CrNi188
	17	0Cr18Ni9	SUS304	11	304, S30400	304S15	X5CrNi189
	18	00Cr18Ni10	SUS304L	10	304L, S30403	304S12	X2CrNi189
	19	0Cr25Ni20	SUS310S		310S, S31008		
	20	0Cr17Ni12Mo2	SUS316	20, 20	316, S31600	316S16	X5CrNiMo1810
	21	1Cr18Ni12Mo2Ti				320S17	X10CrNiMoTi1810
	22	0Cr18Ni12Mo2Ti				320S17	X10CrNiMoTi1810
	23	00Cr17Ni14Mo2	SUS316L	19, 19	316L, S31603	320S12	X2CrNiMo1810
	24	0Cr17Ni12Mo2N	SUS316N		316N, S31651		
	25	0Cr17Ni4Cu4Nb			17-4PH		X2CrNiMoN1812
	26	0Cr17Ni13Mo2N	SUS316LN				
	27	0Cr18Ni12Mo2Cu2	SUS316J1				X10CrNiTi189
	28	1Cr18Ni9Ti					X10CrNiTi189
	29	0Cr18Ni10Ti	SUS321	15	321, S32100	321S21, 321S20	
	30	1Cr13	SUS410	3	410, S41000	410S21	X10Cr13
	31	0Cr13	SUS410S	1	410S	403S17	X7Cr13
	32	2Cr13	SUS420J1	4	420, S42000	420S37	X20Cr13
	33	3Cr13	SUS420J2	5	420S45		
	34	4Cr13	SUS420J2	5	431, S43100	431S29	X22CrNi17
	35	0Cr17Ni14Cu4Nb	SUS630B		630, S17400		X7CrNiA1177
	36	00Cr25Ni20Mn3Mo3N				U3	
	37	0Cr17Mn14Mo2N			A4		
	38	00Cr20Ni25Mo4Cu2		904L		UB6	
	39	00Cr15Ni60M16W4			(哈氏C)		
	40	0Cr20Ni30Mo2Cu3		(20号合金)			
	41	0Ni70Cu30Mn		(蒙耐尔)			

核电 / 电厂

单位名称	机 组
中核集团方家山核电站	方家山一期工程汽轮机润滑油系统2×1000MW
中国广东核电集团台山核电站	台山一期工程核电汽轮机润滑油系统2×1000MW
中核集团福清核电有限公司	福清核电工程汽轮机组润滑油系统2×1000MW
岭澳核电有限公司	岭澳4#，2×1000MW
宁德核电有限公司	宁德一期#1#2，2×1000MW
辽宁红沿河核电有限公司	红沿河#1#2#3#4，4×1000MW
江苏省国信资产管理集团有限公司	射阳港电厂三期2*660MW工程
国电南宁发电有限责任公司	国电南宁2*660MW工程、
郑州裕中能源有限责任公司新密电厂	新密二期2*1000MW工程
徐矿集团新疆阿克苏热电有限公司	新疆阿克苏2×200MW工程
重庆合川第二发电有限责任公司	重庆合川双槐电厂二期扩建工程2×660MW超临界机组给水泵汽轮机
国电汉川发电有限公司	国电汉川电厂三期工程2*1000MW机组
神华福能发电有限责任公司	福建石狮鸿山2×1000MW
四川东方锅炉	东锅印尼金光项目DGG220/9.8MX
湖南长沙电厂	三级减温减压器/疏水扩容器2×600MW
三河发电厂	水幕保护装置2×300MW
马来西亚古普电厂	三级减温减压电动控制阀2×300MW
	低加疏水调节阀2×135MW
云南宣威电厂七期	三级减温减压器电动控制阀2×300MW
重庆合川电厂	三级减温减压电动控制阀/疏水扩容器气动喷水调节阀2×300MW
沙特拉比格电站	沙特RABIGH2×660MW机组
宁德核电有限公司	宁德一期工程#12#3#4#汽轮机组4×1000MW
辽宁红沿河核电有限公司	红沿河一期工程#12#3#4#汽轮机组4×1000MW
中国广东核电集团台山核电站	台山核电工程2×1000MW阀
中核集团福清核电有限公司	福清工程2×1000MW
中核集团方家山核电站	方家山一期2×1000MW
岭澳核电有限公司	岭澳二期#4机组润滑油GGR系统2×1000MW
岭澳核电有限公司	岭澳二期#3、#4机组润滑油GGR系统2×1000MW
郑州裕中能源有限责任公司新密电厂	新密3#、4#工程2×1000MW
中核集团福清核电有限公司	福清工程汽轮机低压缸喷水调节阀4×1000MW
中核集团福清核电有限公司	福清工程润滑油系统温度调节阀4×1000MW
中核集团福清核电有限公司	福清工程汽轮机疏水泵最小流量阀4×1000MW
中核集团方家山核电站	方家山工程汽轮机低压缸喷水调节阀
中核集团方家山核电站	方家山工程润滑油系统温度调节阀
中核集团方家山核电站	方家山一期核电工程汽轮机疏水小流量阀
中国广东核电集团台山核电站	台山核电工程2×1700MW
中核集团福清核电有限公司	福清3#
辽宁红沿河核电有限公司	红沿河#1#2#3#4，4×1000MW
印度尼西亚马拉扎瓦燃煤电站	印尼马拉扎瓦
鄂州电厂	疏水扩容器喷水调节阀/ 减温减压器喷水调节阀2×600MW

化　工

单位名称	省份及项目名
中石油兰州炼油化工仪表厂	甘肃
中国石化广州石油化工总厂	广东
中国一阿拉伯化肥有限公司	河北
中原油田华大利精细化工厂	河南
湖北三宁化工股份有限公司	湖北
湖南大乘资氮集团有限公司	湖南
江苏扬州农药化工集团	江苏
中石化南京化学工业有限公司供销公司	江苏
江西贵溪化肥有限责任公司	江西
陕西华山化工集团有限公司	陕西
绵竹川润化工有限公司	四川
四川盛马化工股份有限公司	四川/重油深加工及产品质量升级项目
四川龙蟒磷化工有限公司	四川
四川龙蟒钛业有限责任公司	四川
中国核工业建峰化工总厂	四川
四川金路树脂有限公司	四川
天津渤海化工有限责任公司天津化工厂	天津
浙江工业大学化工装备公司	浙江
浙江省建德市新化化工有限责任公司	浙江
南京钛白粉厂	江苏
江苏扬州农药化工集团	江苏
中原油田华大利精细化工厂	河南
中石化洛阳石油化工工程公司	河南
广西东油沥青	广西
广西田东石油化工总厂	广西
洛阳奥通华林石油化工	河南
四川美青氟胺有限责任公司	四川
上海硅盐酸研究所中试基（红溪）	上海
中国石油天然气管道工程有限公司	四川
乐山科尔碱业有限公司	四川
蓝星化工新材料股份有限公司江西星火有机硅厂	江西/十万吨合成恢复建设项目气动阀
洪泽银珠化工科技有限公司	江苏
菏泽市德润化工有限公司	山东/脱硫尾气回收项目
广安诚信化工有限责任公司	四川
山西瑞恒化工有限公司	山西省/年产40万吨离子膜烧碱、年产40万吨聚氯乙烯树脂工程项目所需高性能单座调节阀
中化云龙有限公司	云南
四川龙蟒磷化工有限公司	四川
长治市霍家工业有限公司	山西

能　源

单位名称	项目名称
大庆油田建设集团有限公司广西钦州项目部	中国石油广西石化1000万吨/年炼油工程
中国石油天然气第一建设公司广西项目部	广西石化1000万吨/年炼油工程码头库区装置
神华集团塔煤炼油公司	神华集团塔煤炼油公司上海煤液化中试装置项目
神华集团塔煤炼油公司	神华集团煤液化6t/a试验装置
湛江东兴石油企业有限公司	炼油改扩建工程
新疆新星实业集团塔里木石油化工分公司	技术改造工程项目
洛阳炼油厂	洛阳炼油厂项目
洛阳炼油厂	洛阳炼油厂改造项目
洛阳石化总厂	中石化连续重整装置技术改造项目
上海神华煤制油研究中心有限公司	神华PDU改造项目
重庆环球石化公司	甘肃深加工10万吨已醇
山东胜利油田有限公司石油化工厂	稠油厂扩建项目
中国石化洛阳石化总厂	芳烃抽提装置溶剂油加氢改造
陕西永泰石化设备有限公司	技改项目
中国石油天然所股份有限公司兰州分公司	两酸处理联合装置改造6000t/a硫磺回收
中国石油天然所股份有限公司兰州分公司	两酸处理联合装置改造1.5×104t/a硫磺回收
西安石化总厂	清洁燃料生产技术改造项目
中国石化集团洛阳分公司	油品升级改造硫磺回收装置
金山石化公司	溶剂脱沥青装置改造
中国石化集团洛阳分公司	220×104t/a加氢处理装置
中国石化集团洛阳分公司	延迟加氢