

# 暖通空调控制阀系列



## ***HVAC CONTROL VALVE SERIES***



### 简介 Brief

ZVP系列开关式电动阀用于控制暖通空调系统管道的开启或关闭，达到控制室内温度的目的。控制阀由单向磁滞同步马达驱动，弹簧复位功能。阀门处于常闭状态，工作时，由温控器提供一个开阀信号，电动阀接通交流电源而动作，阀门开启，冷冻水或热水进入风机盘管，为房间提供冷气或暖气；当室温到达温控器设定要求时，温控器令电动阀断电，阀门复位功能启动，电动阀关闭，从而截断进入风机盘管的水流。通过电动阀的开启和关闭，使室温始终保持在温控器设定的范围内。

ZVP061型电动阀阀体与执行器采用彩螺套连接方式；ZVP062型可选配带辅助开关应用于其他设备的控制，介质流向不受限制。并可选用不同接管形式、适用电压以满足不同的控制要求。ZVP063电动三通阀适用于将水从AB转向流至A或B，或从A或B转向流至AB。

ZVP系列开关式电动阀可以在阀门安装完成后，再安装执行器，现场装配，接线灵活、快捷。阀门在开启或关闭时，动作特别轻柔，绝无水垂现象，产品可靠耐用，占用空间小，工作噪音低，并能在隐蔽式风机盘管装置内常出现的高温环境可靠工作。

ZVP series switch type electric valve for control of HVAC pipe to open or close, to achieve the purpose of controlling the indoor temperature. Control valve driven by the one-way hysteresis synchronous motor, spring reset function. The valve is normally closed state, when the work is provided by the temperature controller, an open valve signal, the electric valve connected to AC power and action, the valve opening, chilled water or hot water into the fan coil, the rooms offer air-conditioning or heating; when the temperature reaches the thermostat setting requirements, the thermostat so the electric valve off, the valve reset the function of starting, electric valve closed, thus cutting off the flow into the fan coil. Through the electric valve is opened and closed, the room temperature is always maintained within the range set the thermostat at.

ZVP061 electric valve and actuator using color screw sleeve connection mode; ZVP062 type optional control with auxiliary switch applied to other equipment, unrestricted flow of medium. And can choose different forms, over voltage applied to meet different requirements of control. ZVP063 electric three-way valve is applicable to water from AB to flow to the A or the B, or the steering flow from AB to A or B.

ZVP series switch type electric valve can be installed in the valve is completed, and then install the actuator, field assembly, wiring and flexible, fast. The valve is opened or closed, the action of light, no water vertical phenomenon, durable and reliable products, small occupied space, low noise, reliable work and high temperature environment can often appear in the device concealed fan coil in.

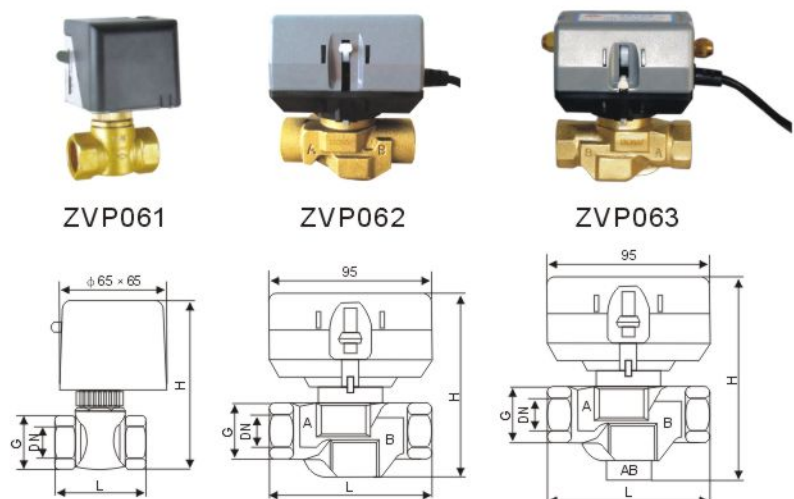
### 性能规范 Technical data

公称压力PN(MPa) Nominal pressure	1.0,1.6,2.5	适用介质 Suitable medium	冷热水、蒸汽、非腐蚀性气体 Cold and hot water, steam, non corrosive gas
公称通径DN(mm) Nominal diameter	15~25	适用温度℃ Suitable temperature	-25~200
泄漏量 Amount leakage	小于Kvs值的0.02% Less than the Kvs value of 0.02%	相对湿度 Relative humidity	5~90%(执行器无结露 Actuator without dewing)

型号 Model	额定电压 Rated voltage	功率 Power	驱动电机 Drive motor	全程时间 Whole time
ZVP061	AC220V ± 10%	7W	单向电机驱动 弹簧复位功能 Check the motor drive Spring reset function	全开时间: 通电后约10秒 关闭时间: 断电后约5秒 Open time: electricity for about 10 seconds Closing time: off after about 5 seconds
	AC110V ± 10%			
	AC24V ± 10%			
ZVP062	AC220V ± 10%	≤5W	磁滞同步电机 弹簧复位功能 Hysteresis synchronous motor Spring reset function	全开时间: 通电后约6秒 关闭时间: 断电后约4秒 Open time: electricity for about 6 seconds Closing time: off after about 4 seconds
ZVP063				

### 主要尺寸表 Main dimensions

型号 Model	DN (mm)	L	H	G	Kv
ZVP061	15	55	113	1/2"	1.5
	20	66	124	3/4"	2.5
	25	90	145	1"	4.8
ZVP062	15	98	136	1/2"	4.66
	20	112	136	3/4"	9.57
	25	126	136	1"	10.5
ZVP063	15	98	136	1/2"	4.08
	20	112	136	3/4"	7.24
	25	126	136	1"	8.17





### 简介 Brief

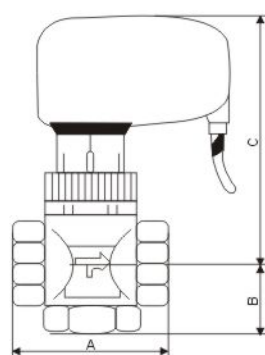
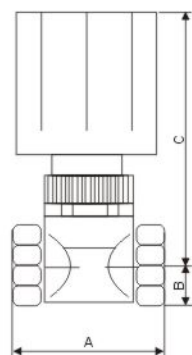
黄铜锻造或青铜阀门，适用于风机盘管或空调末端装置水盘管控制；它们根据控制器的要求，调节水流量；它们通常与开关式电动执行器、浮点或比例式执行器配合使用；与电动执行器配套提供开关控制，可选择带有弹簧复位功能执行器阀门有二通常闭及三通混流阀型号可供选择。

Forging brass or bronze valves for air-conditioning fan coil or coil end of the water control devices; them in accordance with the requirements of the controller to regulate the water flow; they are usually associated with switching electric actuator, or the proportion of floating-point-type actuator with use; and supporting the provision of electric actuator switch control option reset function with spring actuator has two normally closed valves and three mixed-flow valve models to choose from.

### 特点 Features

- 1、二通常闭及三通型阀体；
  - 2、黄铜锻造或青铜阀体，不锈钢阀杆及弹簧；
  - 3、合成橡胶阀芯，关闭时无气泡；
  - 4、二通常闭型阀门的KV值，出厂前设于最大值；
  - 5、执行器可以在阀体安装之后安装；
  - 6、可选择内置复位弹簧。
- 1, Two and three type normally closed valve;
  - 2, Brass or bronze valve body forging, stainless steel stem and copper spring;
  - 3, Wynthetic rubber spool, closed when no air bubbles;
  - 4, Two normally closed type valve Kv value, the factory located at the maximum;
  - 5, Valve actuator can be installed after the installation;
  - 6, May choose to reset the built-spring.


**SERIES HV2000 系列**

**SERIES HV2100 系列**


### 性能规范 Technical data

公称通径 Nominal diameter	DN15~25
公称压力 Nominal pressure	PN16-25
适用介质 Medium media	水、蒸汽 Water, steam
适用温度 Medium temperature	-10~+120℃
连接标准 Connect the standard	螺纹 DIN2999 ISO228

注：使用于120℃以上蒸汽系统时请在订货时说明。  
 Note: The use of steam above 120℃ the system described in the order.

### MV5000执行器技术参数 Actuator specifications

供电电源 (50/60Hz) Power supply	最小作用力 Minimum force	行程时间 Travel Time	行程 Itinerary	防护等级 Protection level
24 VAC ± 10%	90N	开阀 10S Open valve	3mm	IP 40
230 VAC ± 10%	90N	开阀 10S Open valve	3mm	

### 主要尺寸表 Main dimensions

型号 Model	阀体类型 Body Type	DN (mm)	关闭力 Closing force (MPa)	A	B	C
HV2015	二通 Two way	15	200	55	15	100
HV2020	二通 Two way	20	100	65	19	103
HV2025	二通 Two way	25	62	90	24	106
HV2215	三通 Three way	15	200	55	29	100
HV2220	三通 Three way	20	100	66	33	103
HV2225	三通 Three way	25	62	90	37	106

### 主要零部件材料 Material of main parts

零件名称 Part name	材料 Material
阀体 Valve body	青铜或黄铜 EN-1982G
阀杆 Stem	不锈钢 WN1.4301 Stainless Steel
弹簧 Spring	不锈钢 WN1.4310 Stainless Steel

### 简介 Brief

T2000为开关型风阀控制器，应用于管道机风管风阀的控制，使所控场所环境温度恒定为设定温度。温度设定拨盘指针应设定为所需恒定温度位置。拨动开关分别为：电源开关(开ON-关OFF)；运行模式开关(暖气HEAT-冷COOL)。

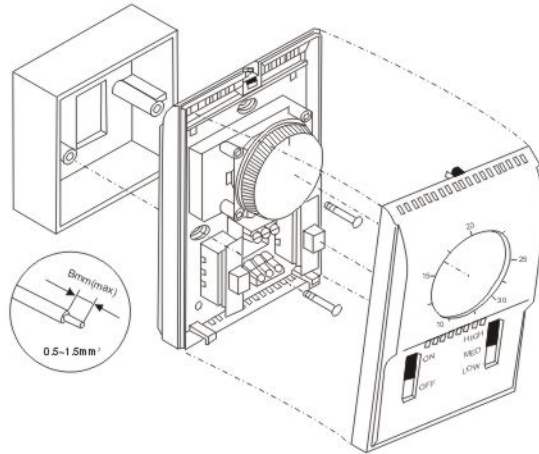
T2000 is switching valve controller, used pipe machine duct damper control, so that the control places a constant ambient temperature set temperature. Temperature setting dial pointer should be set to a desired position a constant temperature. Toggle switch are: Power switch (ON-OFF); operating mode switch (HEAT- COOL).

### 特点 Features

- |                         |   |
|-------------------------|---|
| 1、充气膜盒感温元件。             | 1, Inflatable diaphragm temperature sensing element.                    |
| 2、大拨盘+拨动开关，操作简明。        | 2, Large dial + toggle switch, the operation simple.                    |
| 3、精密传动机械结构可保长寿命工作。      | 3, Precision mechanical transmission structure can guarantee long life. |
| 4、86型标准安装暗盒(60mm)，安装方便。 | 4, 86 Standard Installation cassette (60mm), easy to install.           |



T2000



### 技术参数 Technical parameters

感温元件 Temperature sensing element	充气膜盒 Inflatable diaphragm
额定电压 Rated voltage	220V/AC, 50/60Hz
额定电流 Rated Current	3A
恒温范围 Temperature range	5~30 °C
温度偏差 Temperature deviation	在25°C时 ≤ 1°C
材料和颜色 Materials and colors	底座、面盖及拨盘均白色ABS塑料。拨动开关为灰白色 Base, cover, dial are white ABS plastic. Toggle switch to off-white
环境条件 Environmental conditions	-20~55°C
相对湿度 Relative humidity	<85% (23°C)
装箱数量(只) Packing quantity (only)	50
外箱尺寸 Carton dimension	46cm × 28cm × 28cm(长Length × 宽Width × 高Height)



## 简介 Brief

本公司生产的液晶显示可编程恒温控制器选用抗干扰很强的工控专用芯片，采用7A250VAC继电器输出，负载能力强，可靠性高(根据以往工程统计，可靠性达99.4%)，电源不稳或接线错误都不会导致控制器损坏，但接线错误可能会烧毁保险丝，只要更换保险丝即可。

The company produces LCD programmable thermostat controller selects a strong industrial interference dedicated chip, using 7A250VAC relay output, load capacity, high reliability (based on past engineering statistics, reliability, up 99.4%), power surge or wiring errors do not cause damage to the controller, but may burn the fuse wiring error, as long as you can replace the fuse.

## 特点 Features

- 1、四种风速调节模式：自动、高速、中速、低速
  - 2、具有记忆功能，掉电后能保存所有参数(检验方法：掉电前保持开机，来电后也保持开机状态)
  - 3、可通过机板上的按键，校准房间显示温度
  - 4、24小时定时开机/关机，二个功能同时具备
  - 5、低温防冻功能
  - 6、可与主机联动
  - 7、配VDY100电源驱动块，输出继电器7A250VAC，负载很大，可靠性很高
  - 8、可配遥控器WKY-A(选配)
  - 9、蓝色背光(选配)
- 1, Four kinds of speed regulation modes: automatic, high, medium, low.
  - 2, With memory function, all parameters can be saved after power(test method: leave it on before the power after the call also remains switched on).
  - 3, Through the machine panel buttons, display the room temperature calibration.
  - 4, 24 hour timer power on/off, two functions along with.
  - 5, Low antifreeze function.
  - 6, Can be linked with the host.
  - 7, With VDY100 power driver blocks.output relay 7A250VAC, big load, high reliability.
  - 8, Can be equipped with remote control WKY-A(optional).
  - 9, Blue backlight(optional).

## 技术参数 Technical parameters

额定电压 Rated voltage	220VAC 50Hz
自耗功率 Since power consumption	<1.5W
负载 Load	1000W
测温范围 Temperature range	0~40℃
测温精度 Measurement accuracy	+0.5℃
阻燃 Natural resistance	ABS工程塑料 ABS plastic

## 确保可靠的技术措施 Ensure reliable technical measures

对于采用继电器输出的系统，由于继电器触点闭合和断开会产生电火花，产生很强的干扰信号，对单片机要求较高，继电器越大，产生的干扰信号也越强，对单片机要求也更高，系统开发难度将增大。所以由于市场上常见的几款温控器所选用的单片机档次较低，故所选继电器电流都在3A以下，但继电器太小，表明其触点也小，当电源不稳或接线错误触点也极易烧毁，整机可靠性受到限制。

考虑到以上原因，本公司生产的液晶显示可编程恒温控制器选用抗干扰很强的高级工控专用芯片，使输出部分能够选用7A250VAC继电器，这样就确保了其可靠性很高，性能极为稳定。

For a system using relay outputs, relay contacts are closed and disconnect the spark will generate strong interference signal, the microcontroller higher, and relays the greater the interference signal is also stronger, more requirements on the microcontroller high, the system will increase the difficulty of development. So several of the common market, the choice of microcontroller thermostat lower end, so the selected relay current in 3A or less, but the relay is too small, indicating that the contacts are small, unstable or incorrect connection when the power contacts also vulnerable to burning, machine reliability is limited.

Taking into account the above reasons, the company's LCD programmable thermostat controller selects highly advanced industrial interference dedicated chip, so that the output portion can choose 7A250VAC relays, thus ensuring its high reliability, performance is extremely stable.



**BS-318**  
液晶温度控制器



**BS-398**  
空调温控器



**BS-368**  
触摸空调温控器

## 简介 Brief

AC808系列数字恒温器适用于风机盘管、电动阀、电动风阀、电动风口及供热设备的温度控制。采用特大屏幕液晶显示，通过温控器内部的NTC(负温度系数)温度传感器，检测出室内温度，并实时地与用户所设定温度进行比较，自动调节暖气气的进气量和开启或关闭管道电动阀，达到保持室内恒温的目的。

AC808 Series Digital thermostat for fan coil, electric valve, electric valve, electric outlet and heating equipment temperature control. Using the large screen liquid crystal display, by the temperature inside the NTC (negative temperature coefficient) temperature sensors to detect the indoor temperature, and real-time with the user to compare the set temperature, the automatic adjustment of the intake air and air-conditioning on or off pipeline electric valve, keep the indoor temperature reaches the purpose.

## 特点 Features

- 1、国际通用LCD液晶显示(符号+英文+中文)。
- 2、自动风状态能实际工作风速。
- 3、室温校正补偿功能(通过面板按键直接实现)。
- 4、多按键家电化操作界面，超薄超小型设计。
- 5、5V电源开关，8小时定时开关机。
- 6、温度控制精度 $\pm 1^{\circ}\text{C}$ ，温度显示分辨率 $\pm 0.1^{\circ}\text{C}$ 。
- 7、温度误差小于 $\pm 1^{\circ}\text{C}$ 。

- 1, The international generic LCD display (symbol+English+Chinese).
- 2, Automatic air condition can actually work speed.
- 3, More positive temperature compensation function (implemented directly by panel keys).
- 4, Multi-key appliance user interface, ultra-thin ultra-compact design.
- 5, 5V power switch, 8 hours timer switch.
- 6, The temperature control accuracy  $\pm 1^{\circ}\text{C}$ , Temperature display resolution  $\pm 0.1^{\circ}\text{C}$ .
- 7, The temperature error is less than  $\pm 1^{\circ}\text{C}$ .

## 产品功能 Product features

- 1、分时段定时开/关机功能(选配)。
- 2、睡眠功能(选配)，房间温度舒适，省电节能。
- 3、具备红外遥控接口，选配遥控器实行遥控。
- 4、断电数据记忆，断电后来电恢复工作。
- 5、风机风速可以自动控制，也可以手动控制。
- 6、低温保护功能(低温自启动、防冻)。

- 1, Scheduled timer on/off function (optional).
- 2, The sleep function (optional), the room temperature comfortable, energy saving.
- 3, With infrared remote control interface, optional remote control to implement remote control.
- 4, Power data memory, power calls back to work.
- 5, The fan speed can be controlled automatically or manually controlled.
- 6, The low-temperature protection (low self-starting, antifreeze).

**国际通用LCD显示、  
EI 背光、睡眠运行、定时开关机功能**  
**International Universal LCD display,  
EI backlight, sleep operation, timer switch function**

**睡眠功能运行状态**  
**Sleep function operation status**

**防止结露(选配)**  
**Prevent condensation (optional)**

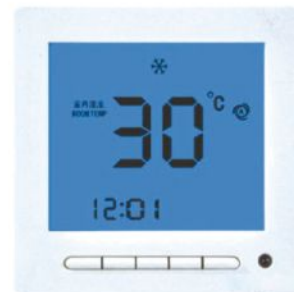
任何状态关闭后，低风运行延时30秒，可防止结露，杜绝能源浪费。

Any state off valve after running low wind delay 30 seconds, to prevent condensation, eliminate energy waste.

**关闭后风机延时30秒**  
**Off valve 30 seconds after the fan delay**



**BS-378**  
**液晶温度控制器**

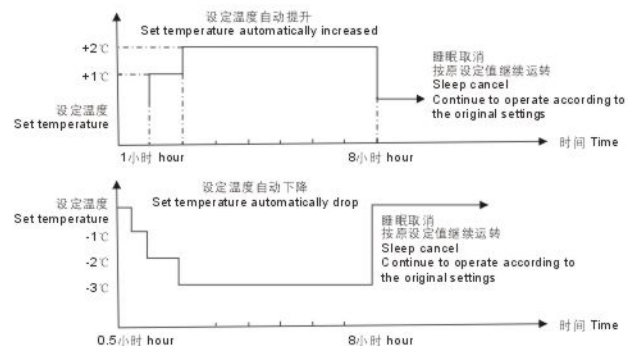


**BS-388**  
**液晶显示温控器**



**比例积分**  
**温度控制器**

**制冷运行状态 Cooling operation status**





## 变压器 Transformer

TR系列变压器用于电视驱动器, 分级控制器及其它低压控制电器。

- 1、满负荷时的环境温度: 最高: 50℃ 最低: -40℃
- 2、功率: 40VA
- 3、电压: 200/220VAC
- 4、满负荷时二次电压: 24VAC
- 5、断路二次电压(无负荷): 26 ± 1VAC

Series of TR transformer is applicable to motor driver, grade controller and other low-pressure controller.

1. Environmental temperature when fully load: maximum: 50℃ minimum: -40℃
2. Power: 40VA
3. Voltage: 200/220VAC
4. Secondary voltage when fully load: 24VAC
5. Secondary voltage when open circuit: 26 ± 1VAC



TR-40



TC8000

## 比例积分电子温控器 Proportional Integral electronic thermostats

TC8000系列电子式温度控制器, 用于中央空调、采暖和冷却系统。

当TC系列温度传感器检测到受控环境的负荷产生变化, 该温控器以比例加积分的控制算法, 产生一个递增输出信号, 可调节可逆马达驱动器。

TC8000 Series electronic temperature controller for central air conditioning, heating and cooling systems.

When the sensor detects the temperature TC series load controlled environment produce changes in the temperature controller proportional plus integral control algorithm to produce a increasing the output signal, adjustable reversible motor drive.

## 特点 Features

- 1、内置或远程可变电阻温度敏感元件(NTC热敏电阻)。
- 2、设定值明调的型号有一个透明的搭锁式刻度盘罩, 用于防止未经许可的人员去改变设定值。
- 3、输出作用可转换: 正向或逆向的(夏季/冬季)-通过就地的内部跨接器或远程集中开关(或根据需要用SPST触点)实现。
- 4、比例带可调节。
- 5、备用设定值。
- 6、安装灵活: 墙装、嵌装、嵌盘安装或暗装于风机盘管内。末端装置上等。
- 7、TC8000型电子温度控制器。有明调设定值度盘

- 1, Built-in or remote variable resistance temperature sensor (NTC thermistor).
- 2, Setting clear tone models have a transparent dial snap-on cover to prevent unauthorized personnel to change the setting.
- 3, The output function can be converted: forward or reverse direction (summer/winter)-via an internal jumper in situ or remote centralized switch (or as needed with SPST contacts) implementation.
- 4, Can be adjusted over rewind.
- 5, The alternate setting.
- 6, Flexible installation: wall mounted, flush-mounted, recessed panel mounting or concealed in the fan coil unit. Upper end device.
- 7, TC8000 electronic temperature controller. Ariake dial tone settings

## 技术参数 Technical parameters

产品名称 Product name	TC8000电子控制器, 增量输出 TC8000 electronic controller, incremental output
作用 Action	比例加积分, 正或反 Proportional plus integral, positive or anti
供电电压 Supply voltage	24VAC ± 10%, 50/60Hz
输出信号 Output signal	24VAC × 210.5A 通过经双向可控硅元件 Adoption of the triac element
电耗 Power consumption	2VA (0.8A) 无负载 No load
比例带 Proportional band	约从1~7K/4%~40%, 可调节, 厂方设定在约4K/20%处 From about 1~7K/4%~40%, can be adjusted in the factory set at approximately 4K/20%
复位时间 Reset time	5或2.5分钟, 用内部跨接器调节 5/2.5 minutes, with an internal jumper adjustment
设定值再调节(只用于型号) Setting and then adjust (only for model)	0~10VDC 相应于-8K~+8K(输入独立, 约15K欧姆) 0~10VDC correspond -8K~+8K (input independent, approximately 15K ohms)
备用设定值 Standby settings	2K, 通过闭合外部触点 By closing an external contact
设定值范围 Setting range	见表 Table
敏感元件 Sensitive element	NTC热敏电阻 NTC thermistors
配线 Wiring	组合接线柱/适用于最大1.5mm <sup>2</sup> 粗的电线 Combination Stud/thick for maximum 1.5mm <sup>2</sup> wire
外壳 Shell	热阻型与自熄性ABS塑料; 米黄色 Thermal resistance type with self-extinguishing ABS plastic; beige
工作环境范围 Scope of the work environment	0~+50℃, 10~90%RH 不结露 No condensation
存放温度范围 Storage temperature range	-40~+70℃
净重 Net weight	120g
附件(单独订货) Accessories (order separately)	TSC系列远程温度传感器 TSC series remote temperature sensor

## 简介 Brief

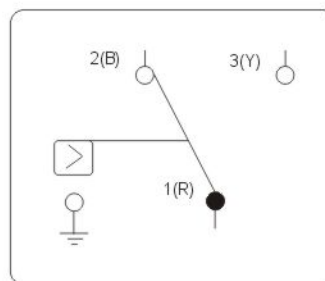
SLKG为单刀双掷的流量开关，用于检测，查察液体流量一般用于空气调节，供水设备方便，用于感应流经管道的液体流量变化，如水、乙烯，乙二醇或其它非危害性液体，其典型应用是使用在需要有联锁作用或“断流”保护的场所。

本开关应用于测量流经管道的液体流量，例如水、乙烯、乙二醇或任何对黄铜、磷青铜无腐蚀作用及对密封性能无影响的液体，不可用于危险性的液体之中。其典型应用是使用在需要有连锁作用或“断流”保护的场所，例如在关键性或高值产品需加保护的地方，本开关常被用作独立的备用控制。

SLKG flow switch for single pole double throw for the detection and observation of liquid flow rate is generally used in air conditioning, water supply equipment convenient, for inductive flow diameter pipeline liquid flow change, such as water, ethylene, ethylene glycol or other non hazardous liquid and its typical application is used in place of interlocking effect or "flow" to protect.

This switch is used to measure the flow through the pipeline flow of liquid, such as water, ethylene, ethylene glycol or any of the brass, phosphor bronze no corrosive effect and the sealing performance was not affected by liquid, used in hazardous liquids. Its typical application is to use at the chain effect or "flow" to protect places, such as in critical or high value products to increase protection of place, this switch is often used as independent backup control.


**F61KB**

**SLKG**


流量上升时，触点1-3(或红-黄)闭合  
 Flow increases, contacts 1-3(or red-yellow) closed

## 技术参数 Technical parameters

最大工作压力 Maximum working pressure	1.6MPa	
接头尺寸 Joint dimension	1"NPT、3/4"NPT和1/2"NPT、带三通管式接头 Three way pipe joint	
流体最大压力 Maximum fluid pressure	10巴	
流量 Flow	SLKG为微小流量的流量开关，采用干簧管感应流经管道的液体流量变化 SLKG flow switch micro flow, the liquid flow change reed induction flow path pipeline	
流量调节范围 Flow regulation range	标准型 Standard type	18升/分(L / min)~2000升/分(L / min)
	非标准型 Non standard type	5升/分(L / min)~3000升/分(L / min)
流体温度 Fluid temperature	最低 Minimum	4℃
	最高 Highest	120℃
环境温度 Ambient temperature	120℃	
介质温度范围 Medium temperature range	-45~120℃	
开关接点额定值 Switch contact rating	5A, 500VAC	
额定电流、电压 Rated current and voltage	15(8)A, 220V AC	
调整方法 Adjustment method	用盖下面的调整螺丝调整 Adjust the adjusting screw with the cover.	
与水管的连接方法 Connection method for water pipe	1"管螺纹(阳) 1"pipe thread (positive)	

## 主要零部件材料 Material of main parts

零件名称 Part name	材料 Material
外壳及盖 Shell and cover	拉伸铜板 Drawn copper
连接管 Connecting pipe	黄铜 Brass
内部零件 Internal parts	黄铜及磷青铜 Brass and phosphor bronze
水闸 Sluice	磷青铜 Phosphor bronze



## 温度传感器 Temperature sensor

9104系列/9105系列电子温度传感器主要用于测量风道或水管中的空气或水的温度，9104配合8803系列控制器，9105配合8804系列控制器。

- 1、传感元件: NTC (热敏电阻)
- 2、输出信号: 电阻信号 25℃时10K
- 3、温度范围: 0~70℃
- 4、精 度: ±0.2K
- 5、存储条件: -40℃~70℃, 10~90%RH, 无凝露
- 6、环境温度: 电气连接箱的最大温度70℃

9104/9105 series electronic temperature mainly is used to measure the temperature of air or water inside wind flue or water pipe,9104 co-operates with 8803 series of control,9105 cl-operates with 8804 series control.

1. Sensor part:NTC(thermistor)
2. Output signal:resistance signal when 25℃,10K
3. Range of temperature 0~70℃
4. Preciseness: ±0.2K
5. Reservation condition:-40~70℃,10~90%RH,No dew
6. Environmental temperature.the maximum temperature of electrical connection box is 70℃



9104系列

## 温湿度传感器、变送器 Temperature and humidity sensor

适用于暖通空调系统中新风、回风、送风温度和湿度的检测。

- 1、采用精度较高的测温元件保证测量精度。
- 2、多种量程范围满足各种测量要求。
- 3、可提供电阻、电压、电流等多种信号。
- 4、易于安装和维护。

Applicable to check temperature and humidity of mew wind,return air and air blow inside of heating air-conditioner system.

1. Precise temperature-measure parts insure the precision of measurement.
2. Many kinds of measure range are available to reach measurement's requirement.
3. Provides many dinds of signals for resistance,voltage,current etc.
4. Easy to install and maintain.



9105系列  
水管型

## 技术参数 Technical parameters

- 1、测量范围: 温度-20℃~140℃,湿度0~100%RH
- 2、输出信号: NTC10K、NTC20K、Pt100、Pt1000、标准模拟量信号以及通讯协议
- 3、工作电源: 24V DC
- 4、适合介质: 空气、水等
1. Measurement range:temperature-20℃~140℃,Humidity 0~100%RH
2. Output signal:NTC10K、NTC20K、Pt100、Pt1000、sandard analog signal and according to the rule of communication protocol
3. Working electrical source:24V DC
4. Applicable media:air,water etc.

名称 Name	风管型温度传感器 Duct temperature Sensor	水管型温度传感器 Mains temperature sensor	风管型温度变送器 Duct temperature Transmitter	水管型温度变送器 Pipe-type temperature transmitter	风管型温湿度变送器 Duct temperature humidity transmitter
型号 Model	9104	9105	TS-9003	TS-9001	TS-9008
工作电压 Working voltage				24V DC	
输出信号 Output signal				0~10V,4~20mA	
温度范围 Temperature range	NTC10K、NTC20K、Pt100、Pt1000		0~50 -20~140℃		
湿度范围 Humidity range	0~90℃			0~100%RH	
温度精度 Temperature accuracy				±0.5℃ ±1℃	
湿度精度 Humidity accuracy	温度±0.2K (Temperature ±0.2K)			±5%RH	
环境温度 Environmental temperature	-20~60℃				
存储条件 Storage conditions	-40~70℃,无凝露 (-40~70℃ Without dewing)				
外壳材料 Enclosures	ABS工程塑料 (ABS Engineering plastics)				

### 简介 Brief

自力式温控阀不需外界能源而进行温度自动调节。它适用于蒸汽、热水、热油等为介质的各种换热工况。广泛应用于供暖、空调、生活热水中的温度自动调节，以及特殊工况的温度自动调节，如化工、纺织、制药等生产工程。

Self-type thermostatic valve without external energy and thermostat. It is suitable for steam, hot water, hot oil as the medium of various heat transfer conditions. Widely used in heating, air conditioning, domestic hot water temperature to automatically adjust, as well as special conditions of temperature auto-regulation, such as chemicals, textiles, pharmaceutical and other production engineering.

### 工作原理 Principle of work

自力式温控阀利用液体受热膨胀及液体不可压缩的原理实现自动调节。温度传感器内的液体膨胀是均匀的，其控制作用为比例调节。被控介质温度变化时，传感器内的感温液体体积随着膨胀或收缩。被控介质温度高于设定值时，感温液体膨胀，推动阀芯向下关闭阀门，减少热媒的流量；被控介质的温度低于设定值时，感温液体收缩，复位弹簧推动阀芯开启，增加热媒的流量。

self-operated temperature control valve using liquid thermal expansion and liquid incompressible principle of automatic adjustment. Expansion of the liquid within the temperature sensor is uniform, controlling for the proportion of adjustment. Charged with a medium temperature, the sensor temperature liquid volume with the expansion or contraction. Charged with the medium temperature is higher than the set value, the temperature of liquid expansion, to promote the spool down to close the valve, reduce the heat medium flow temperature liquid contraction; charged with the medium temperature below the set value, the reset spring to push the spool open, increase the flow of the heat medium.

### 性能规范 Technical data

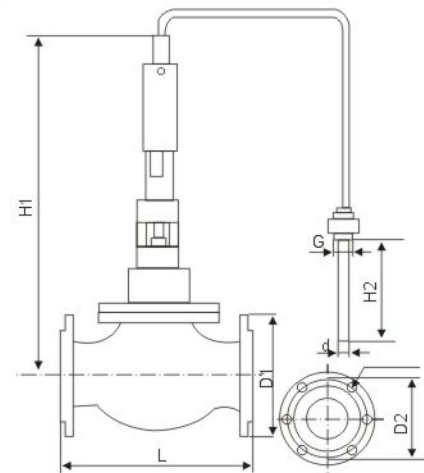
公称通径DN(mm) Nominal diameter	32	40	50	65	80	100	125	150	200	250
Kv值(m <sup>3</sup> /h)	12.5	20	32	50	80	120	180	260	350	450
公称压力PN(MPa) Nominal pressure	1.6(阀体材质为球墨铸铁, 工作温度 < 220℃) body made of ductile iron, the working temperature < 220℃									
	2.5(阀体材质为铸钢, 工作温度 < 350℃) body made of cast steel, the working temperature < 350℃									
适用温度℃ Suitable temperature	30~110℃									
平衡元件 Balance components	不锈钢316L波纹管 316L stainless steel bellows									
导管长度(m) Catheter length	4(可根据现场要求订做)									
适用介质 Suitable medium	蒸汽、水、导热油 Steam, water, thermal oil									



RZZW

### 主要尺寸表和重量 Main dimensions and weight

DN (mm)	L	H1	H2	D1	D2	d	G	重量(kg) Weight
32	555	135	400	100	180	25	1	23
40	570	145	400	110	200	25	1	25
50	610	160	400	125	230	25	1	28
65	635	180	400	145	290	25	1	33
80	680	195	400	160	310	25	1	45
100	720	215	400	180	350	25	1	57
125	760	245	400	210	395	25	1	73
150	800	280	400	240	470	25	1	100
200	950	335	400	300	550	25	1	200
250	985	405	400	355	640	25	1	250
300	1010	460	400	410	720	25	1	300





### 简介 Brief

静态平衡阀用于完成一个系统中各分支回路间的水力平衡。它的测量通道改变了流量的测量精度，协助调试工程师在完成系统平衡的过程中，降低操作难度，提高调试的精确度。精细的球墨铸铁阀体及软密封设计保证了阀门长时间的使用寿命及严密的关断功能。

Static balance valve for the completion of each branch circuit between a hydraulic balance system. It changes the measurement channel flow measurement accuracy, to assist engineers in debugging complete system balance, reduce the difficulty of operation, improve the accuracy of debugging. Ductile iron body design and fine soft sealing valve for a long time to ensure the service life and rigorous off function.

### 性能规范 Technical data

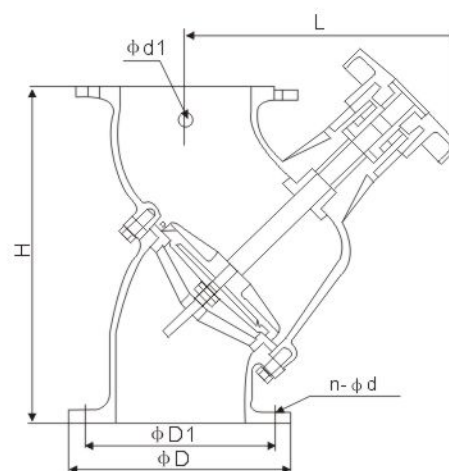
公称压力PN(MPa) Nominal pressure	1.0	1.6
强度试验(MPa) Strength test	1.5	2.4
密封试验(MPa) Seal test	1.1	1.76
适用温度℃ Suitable temperature	≤ 80℃	
适用介质 Suitable medium	水、油品等 Water, oil etc.	



STAF

### 主要零部件材料 Material of main parts

零件名称 Part name	材料 Material
阀体 Valve body	铸铁、铸钢 Cast iron, cast steel
阀座 Valve seat	乙丙橡胶 EPDM
阀帽 Valve cap	球墨铸铁 Ductile iron
阀芯 Valve core	黄铜 Brass
阀盖螺栓 Bonnet bolt	镀铬钢 Chrome plated steel
阀锥、阀轴 Valve cone, valve shaft	铜合金 Brass alloy
密封圈 Seal ring	PTFE
手轮 Hand wheel	聚酰胺塑料 Polyamide plastics



### 主要尺寸表 Main dimensions

DN (mm)	D	D1		n-φd		H	L	H1	φd1
		1.0	1.6	1.0	1.6				
50	165	125		4-φ19		230	203	140	Rc3/8"
65	185	145		4-φ19		260	219	195	Rc1/2"
80	200	160		8-φ19		280	238	220	Rc1/2"
100	220	180		8-φ19		350	259	234	Rc1/2"
125	250	210		8-φ19		376	296	267	Rc1/2"
150	255	240		8-φ23		447	366	303	Rc1/2"
200	340	295		8-φ23	12-φ23	528	419	364	Rc1/2"
250	405	350	355	12-φ23	12-φ28	578	546	405	Rc1/2"
300	460	400	410	12-φ23	12-φ28	707	592	485	Rc1/2"
350	520	460	470	16-φ23	16-φ28	771	675	549	Rc1/2"
400	580	515	525	16-φ23	16-φ31	908	771	624	Rc1/2"

### 简介 Brief

本公司生产的动态流量平衡阀，可在工作压差范围内精确的控制管路流量。使整个系统能时刻保持平衡。无需对整个管道进行繁琐的阻力计算。无需人工调节，可省去大量人力，安装空间也不受限制，同时也避免了人为的破坏性调节。能够防止因流量过大而造成对设备的损耗，提高设备的耐用性和安全性。整个水系统无须安装铜程管道，节省安装及材料费用。

The company's production of dynamic flow balance valve, can work in the range of pressure differential control of the flow of the pipeline. Keep the system in balance at all times. No need to calculate the entire pipeline cumbersome. Without manual adjustment, can save a lot of manpower, installation space is not limited, but also to avoid the artificial destruction of regulation. To prevent the loss of equipment due to excessive flow, improve the durability and safety of equipment. The whole water system does not need to install copper pipe, saving installation and material cost.

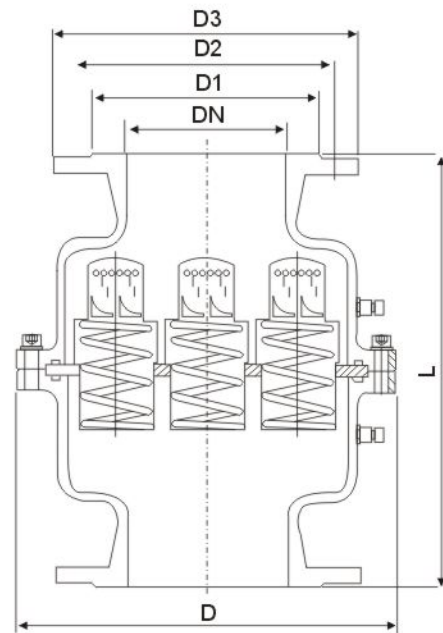

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### 性能规范 Technical data

公称压力PN(MPa) Nominal pressure	1.6
强度试验(MPa) Strength test	2.4
密封试验(MPa) Seal test	1.76
适用温度℃ Suitable temperature	≤ 80℃
适用介质 Suitable medium	水、油品等 Water, oil etc.

### 主要零部件材料 Material of main parts

零件名称 Part name	材料 Material
阀体 Valve body	球墨铸铁、铸钢 Ductile iron, cast steel
阀芯 Valve core	不锈钢 Stianless steel
弹簧 Spring	不锈钢 Stianless steel
密封圈 Seal ring	丁腈橡胶 NBR



### 主要尺寸表和重量 Main dimensions and weight

DN (mm)	D1	D2	D3	L	D	重量(kg) Weight	DN (mm)	D1	D2	D3	L	D	重量(kg) Weight
50	99	125	165	239	205	16	250	330	370	425	435	488	128
65	118	145	185	239	205	19	300	389	430	485	450	565	187
80	132	160	200	239	205	22	350	448	490	555	450	645	249
100	156	190	235	365	265	38	400	503	550	620	500	730	356
125	184	220	270	365	280	46	450	548	640	670	500	800	418
150	211	250	300	410	355	66	500	609	660	730	500	880	518
200	274	310	360	410	400	96	600	720	770	845	530	1050	718



### 简介 Brief

既有平衡及调节功能，温度控制精确性高，在工作压差范围内，流量始终保持不变，阀的调节开度只随室温温度的变化而变化，在系统压力下波动较大的变流量系统中保持精确的流量，启闭状态稳定，启闭时间相对恒定，抗干扰能力强，要求维持最小压差以保持动态平衡，适用于暖通空调风机盘管系统的温度控制。

Both balancing and regulating function, temperature control accuracy is high, the working pressure range, flow rate remains constant, the valve to regulate the opening of only with the real sound temperature change and change. Under the system pressure fluctuations larger variable flow system, maintain accurate flow, opening and closing of the steady state, the opening and closing time is relatively constant, strong anti-interference ability, required to maintain the minimum differential pressure to keep dynamic balance, suitable for the control to the temperature of the heating ventilating air-conditioning fan coil system.

### 性能规范 Technical data

公称压力PN(MPa) Nominal pressure	1.6~2.5
适用温度℃ Suitable temperature	-10~120
连接标准 Connection standard	螺纹 Thread DIN2999 ISO228
结构长度 Structure length	EN558-1 BS2080 ISO5752
流量误差 Flow rate error	+ 5%

### 主要零部件材料 Material of main parts

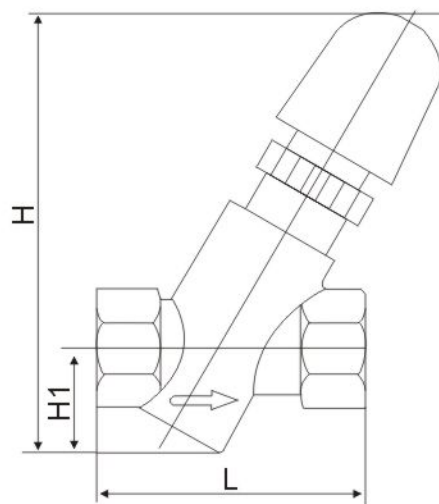
零件名称 Part name	材料 Material
阀体 Valve body	球墨铸铁、铸钢 Ductile iron, cast steel
阀芯 Valve core	不锈钢 Stianless steel
弹簧 Spring	不锈钢 Stianless steel
密封圈 Seal ring	丁腈橡胶 NBR

### 压差流量范围 Differential pressure flow range

DN (mm)	压差范围 Differential pressure range(kPa)	流量范围 Flow range (m³/h)	工作压力 working pressure	流量误差 Flow rate error	关闭压力 Closing pressure
25	30-300	0.2-2.9	PN16 PN25	5%	0.27 MPa
32	30-300	0.5-4.7			
40	30-300	1.1-7.7			
50	35-380	8.1-18.6			
65	35-380	8.1-27.4			
80	35-380	12.3-50.8			
100	35-380	16.2-49.3			
125	35-380	23.3-96.2			
150	35-380	25.7-105.8			



ATD2720



### 主要尺寸表 Main dimensions

DN(mm)	H1	H	L
15	35	140	80
20	35	140	80
25	35	140	80

### 简介 Brief

动态平衡电动调节阀是动态平衡与电动调节一体化的产品，主要适用于暖通空调系统末端空调设备(如空调箱、新风机组、空气处理机)的温度控制，通过配置智能模块控制装置，可方便发对各环路的流量、温度进行自动控制，实现合理利用能量，节能降耗，智能化管理。应用此阀使末端设备只受标准控制信号的影响，而不受系统压力波动的影响，使系统调节更稳定、更节能，特别适用于系统负荷变化较大的变流量系统中。

Dynamic balance electric control valve is a dynamic equilibrium with the electric control integration products, mainly used to control the temperature of the heating, ventilating and air conditioning system air conditioning terminal equipment (such as air conditioning box, air units, air processor), through the configuration of intelligent module control device, to facilitate the flow of the loop, temperature automatic control, to realize the rational utilization of energy, energy saving, intelligent management. Application of this valve to terminal equipment only by the standard control signals without the influence of the pressure fluctuation in the system, make the system adjustment is more stable, more - saving, especially suitable for system load changes in the larger variable flow system.

### 性能规范 Technical data

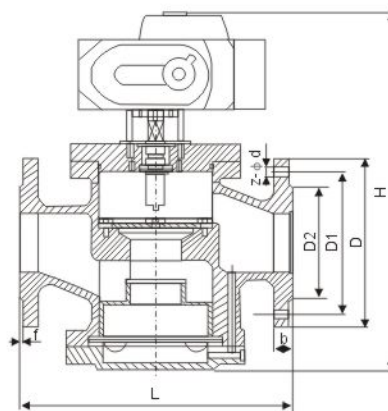
公称压力PN(MPa) Nominal pressure	1.6
适用温度℃ Suitable temperature	0~100
适用介质 Suitable medium	水 Water
流量特性 Flow characteristics	线性/百分比 Linear/percentage
流量误差 Flow rate error	< 5%



EDRV

### 主要零部件材料 Material of main parts

零件名称 Part name	材料 Material
阀体 Body	铸铁、球铁 Cast iron, ductile iron
外壳 Shell	铝合金 Aluminium alloy
阀芯 Valve core	黄铜 Brass
膜片 Diaphragm	EPDM
密封圈 Seal ring	PTFE
弹簧 Spring	不锈钢 Stainless steel



### 主要尺寸表和重量 Main dimensions and weight

DN (mm)	L	D	D1	D2	b	f	z-φd	H	重量(kg) Weight
40	200	145	110	85	18	2	4-φ18	365	9.5
50	230	160	125	100	20	2	4-φ18	400	13.5
65	290	180	145	120	20	2	4-φ18	432	29
80	310	195	160	135	22	2	4-φ18	450	35
100	350	215	180	155	22	2	8-φ18	483	56
125	400	245	210	185	24	2	8-φ18	534	79
150	480	280	240	210	24	2	4-φ23	607	117
200	495	335	295	265	26	2	4-φ23	715	185



## 简介 Brief

近年来，随着人们对生活品质以及节能意识的不断提高，暖通空调工程中变流量水力系统得到了广泛的应用，通过电动调节阀对系统的水量进行连续调节来实现对环境温度的精确控制，通过调节水流量和泵的工况点来节约能源。电动调节阀既可以通过与各种传感器、变送器以及控制器相连组成分散式控制系统，也可以与楼宇控制系统相连组成分散控制、集中管理的中央控制系统，从而大大提高了系统对环境温度控制的能力。

在暖通空调系统设计中设定温度的控制实质就是输配能量的控制，从水路上讲就是流量的控制。电动调节阀由阀门主体和执行器组成。为了更好的调节流量，控制设定温度，这就要求阀门应具有等百分比或线性流量特性，实现系统的能量自动分配，精确的控制系统的设定温度，达到舒适满意的调节效果，进一步节能降耗。

智能型平衡电动调节阀主要包括电动二通调节阀、电动三通调节阀、电动蝶阀。在引用国外先进技术的基础上采用平衡式结构，平衡组件采用不锈钢精密铸造工艺其材质为316L，确保阀门在大压差工况下长期稳定、精确控制。广泛应用于城市集中供热、供暖，中央空调和区域供热、生活热水中的温度、湿度、流量、压力等参数的控制。

执行器采用原装进口西门子(SIEMENS)、霍尼韦尔(HONEYWELL)和伯力谋(BELIMO)电-液或电动执行器在准确定位的同时具有力量和行程限位的双重保护，具有功耗低、输出量大、寿命长等特点。远传式电子控制器，具有多种输入形式选择，实现各种不同的功能。可配置各类传感器，实现温度、流量、湿度、压力的自动调节。根据控制需求，可组成智能化网络控制系统，优化控制，实现远程监控。

In recent years, as people's life quality and energy-saving awareness continues to improve, the HVAC variable flow hydraulic system has been widely used, the electric control valve is continuously adjusted to achieve the precise control of the environmental temperature on the water system, to save energy by adjusting the water flow rate and the pump operating point. Electric control valve is connected with various sensors can, transmitter and controller of decentralized control system through, but also with the building control system connected to a central control system composed of distributed control, centralized management, which greatly improves the ability of the system to the environment temperature control.

Control set temperature control substance in HVAC system design is the transmission and distribution of energy, from the waterway to mean flow control. Electric control valve comprises a valve body and actuator. In order to better control the flow regulation, set the temperature, which requires the valve should have the equal percentage or linear flow characteristics, the realization of the energy of the system is automatically assigned, set the temperature precise control system, to achieve the moderating effect of comfortable satisfaction, further saving energy.

Intelligent balance of electric control valve mainly comprises electric two regulating valve, electric three regulating valve, electric butterfly valve. Adopting the balance structure based on reference of foreign advanced technology, a balance component adopts stainless steel precision casting process of the material was 316 L, ensure that the valve long-term stability, in the high differential pressure condition accurately control. Widely used in the city central heating, heating, central air conditioning control and district heating, hot water in the temperature, humidity, flow, pressure and other parameters.

The actuator adopts imported Siemens (SIEMENS), Honeywell (HONEYWELL) and Bo Limou (BELIMO) electric hydraulic or electric actuator with double protection force and stroke limit in accurate position at the same time, has the advantages of low power consumption, high output, long life and other characteristics. Remote electronic controller, with multiple input form, the realization of various functions. Can be configured for various sensor, automatic adjustment to achieve temperature, flow, humidity, pressure. According to the control requirements, can be composed of intelligent network control system, optimal control, the realization of remote monitoring.

## 特点 Features

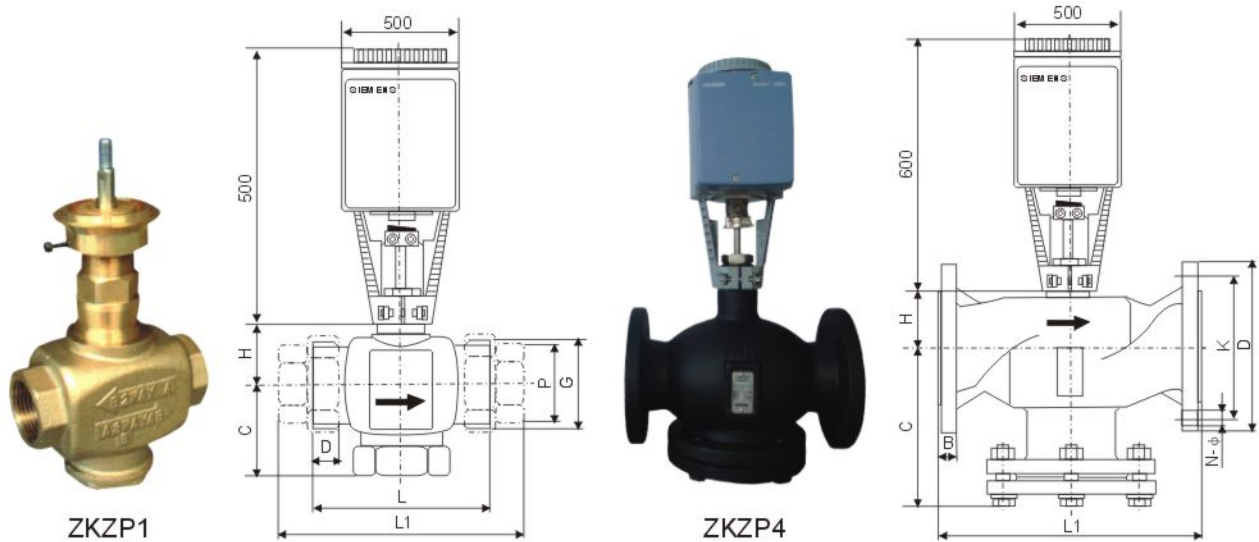
- |   |   |
|---|---|
| 1、材质优良、外形美观、使用寿命长。                        | 1, Excellent material, beautiful appearance, long service life.   |
| 2、在供热系统中调节阀的开度变化与较多的散热器的散热量的变化成线性关系，调节范围广 | 2, Changes in heat flow regulating valve in the heating system of opening change with more of the radiator into a linear relationship, wide regulating range. |
| 3、阀瓣采用柱塞式结构，流阻小；具有线性或百分比两种调节方式的突出特点。      | 3, The valve of the plunger structure, small flow resistance; with linear or percentage of two prominent characteristics adjustment method.                   |
| 4、在水管已降压和冷却时无需拆下阀门就可对阀杆密封件进行更换，维修方便。      | 4, The pipe has antihypertensive and cooling when there is no need to remove the valve stem can seal replacement, repair convenient.                          |
| 5、大推力，适用于大压差和大关闭力，具有手动调节功能。               | 5, Big thrust, suitable for high pressure difference and large closing force, with the manual adjustment function.  |
| 6、抗污物阻塞、低噪音，泄漏率低至<0.02%Kvs。               | 6, Anti dirt blocking, low noise, low leakage rate to <0.02%Kvs.  |

## 性能规范 Technical data

公称压力PN(MPa) Nominal pressure	1.6
公称通径DN(mm) Nominal diameter	20~300
泄漏量 Amount leakage	小于Kvs值的0.02% Less than the Kvs value of 0.02%
流量特性 Flow characteristics	线性/百分比 Linear/percentage
适用介质 Suitable medium	冷热水、蒸汽、非腐蚀性气体 Cold/hot water, steam, non corrosive gas
适用温度℃ Suitable temperature	-25~200
额定流量数 Rated flow number	Kvs=6.5~1800
相对湿度 Relative humidity	5~90% (执行器无结露 Actuator without dewing)

## 主要零部件材料 Material of main parts

零件名称 Part name	材料 Material	
	DN20~50mm	DN50~300mm
阀体 Body	铜合金 Copper alloy	QT500-7
阀瓣 Disc	不锈钢 Stainless steel	
阀杆 Stem	316L	
轴套 Sleeve	ZCuAl9Mn2	
密封圈 Seal ring	氟橡胶 Fluorine rubber	


**螺纹式主要尺寸表 Screw type main dimensions**

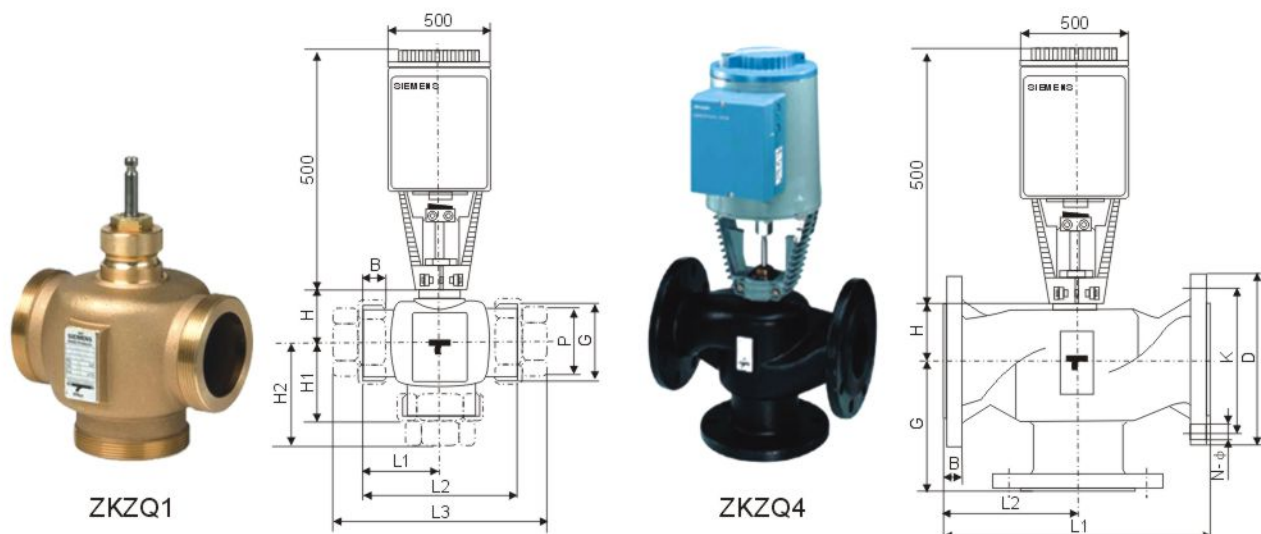
DN		L	L1	D	C	H	P	G
mm	inch							
20	3/4"	100	150	10	57	26	3/4"	1 1/4"
25	1"	105	160	14	59	34	1"	1 1/2"
32	1 1/4"	105	169	14	60	34	1 1/4"	2"
40	1 1/2"	130	169	15	73	46	1 1/2"	2 1/4"
50	2"	150	225	16	83	46	2"	2 1/2"

**法兰式主要尺寸表 Flange type main dimensions**

DN(mm)	B	C	H	L1	K	D	N-φ
50	20	143	39	230	125	165	4-φ19
65	20	173	60	290	145	185	4-φ19
80	22	185	60	310	160	200	8-φ19
100	24	205	93	350	180	220	8-φ19
125	26	232	102	400	210	250	8-φ19
150	26	275	120	480	240	285	8-φ23
200	26	308	164	580	295	340	12-φ23
250	28	360	210	665	355	405	12-φ28
300	30	425	280	760	410	460	12-φ28

注：螺纹连接符合ISO228，法兰连接符合ISO 7005-2。  
 Note: The thread connection with ISO228, flange connection conforming to ISO 7005-2.




**螺纹式主要尺寸表 Screw type main dimensions**

DN		L1	L2	L3	H	H1	H2	P	G	B
mm	inch									
20	3/4"	50	100	148	26	50	74	3/4"	1 1/4"	10
25	1"	52	105	160	34	52	80	1"	1 1/2"	14
32	1 1/4"	52	105	168	34	52	84	1 1/4"	2"	14
40	1 1/2"	65	130	198	46	65	99	1 1/2"	2 1/4"	15
50	2"	75	150	222	46	75	111	2"	2 1/2"	16

**法兰式主要尺寸表 Flange type main dimensions**

DN (mm)	B	G	H	L1	L2	K	D	N-φ
50	20	113	39	230	115	125	165	4-φ19
65	20	143	60	290	145	145	185	4-φ19
80	22	153	60	310	155	160	200	8-φ19
100	24	171	93	350	175	180	220	8-φ19
125	26	197	102	400	200	210	250	8-φ19
150	26	237	120	480	240	240	285	8-φ23
200	26	270	164	580	290	295	340	12-φ23
250	28	317	210	665	333	355	405	12-φ28
300	30	377	280	760	380	410	460	12-φ28

注：螺纹连接符合ISO228，法兰连接符合ISO 7005-2。  
 Note: The thread connection with ISO228, flange connection conforming to ISO 7005-2.