

SELF-ACTUATED CONTROL  
VALVE SERIES  
自力式调节阀系列





## SELF-ACTUATED CONTROL VALVE SERIES

### 自力式调节阀系列

#### 产品概述 Product Overview

本公司生产的系列自力式控制阀为模块化设计，易于装配和维护，大大降低了成本。此外，无需任何能源，且自动运行。在断电时能够继续运行，更加安全可靠。

为满足用户的特殊需求，本公司将电动控制阀和自力式控制阀组合在一起，提供最终解决方案。

用于毫巴范围的自力式压力控制阀可靠地控制惰性气体反应、以及含有易氧化、有毒和爆炸性物质的储罐，从而保护了环境。

本公司将其成功作为探索更好、更创新的解决方案的基石，这体现本公司在不断致力于制造更高品质的产品。

Serial self-actuated control valve of the Company is subject to building block design, making it easy to assemble and maintain and greatly reducing cost. In addition, it operates automatically without need of energy and it is safer and more reliable that it can keep on operating during the period of blackout.

To satisfy special requirements of customers, the company will combine electrical actuated valve and self-actuated actuated valve to provide final solution.

Self-actuated actuated valve used in mbar range can achieve protection of environment by unfailingly controlling inter-gas reaction and storage tanks which contain easily oxidized, poisonous and explosive materials.

Success of the Company is regarded as footstone for exploration of better and more innovative solution, which embodies that the company is being continually devoted to manufacturing superior products.

#### 产品特点 Products Features

计算与选型简单;  
 维护简单且方便;  
 设计紧凑合理, 使用寿命长;  
 阀体口径从 DN15~ 300 (1/2"~12");  
 压力等级从 PN1.0~16.0MPa (ANSI 150~900LB);  
 可供选择类型范围广泛。

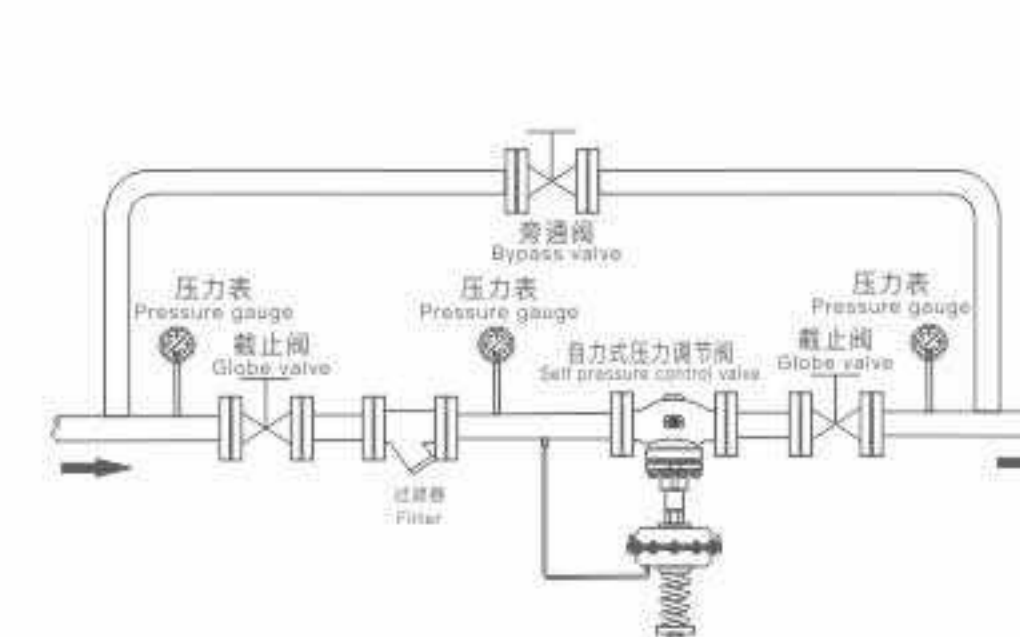
Simple calculation and selection;  
 Maintenance is simple and convenient;  
 Reasonably compact design, long life;  
 Valve diameter from DN15 to 300 (1/2" to 12");  
 Pressure rating from PN1.0 to 16.0MPa (ANSI 150 to 900LB);  
 Choose from a wide variety range.

#### 应用范围 Applied Range

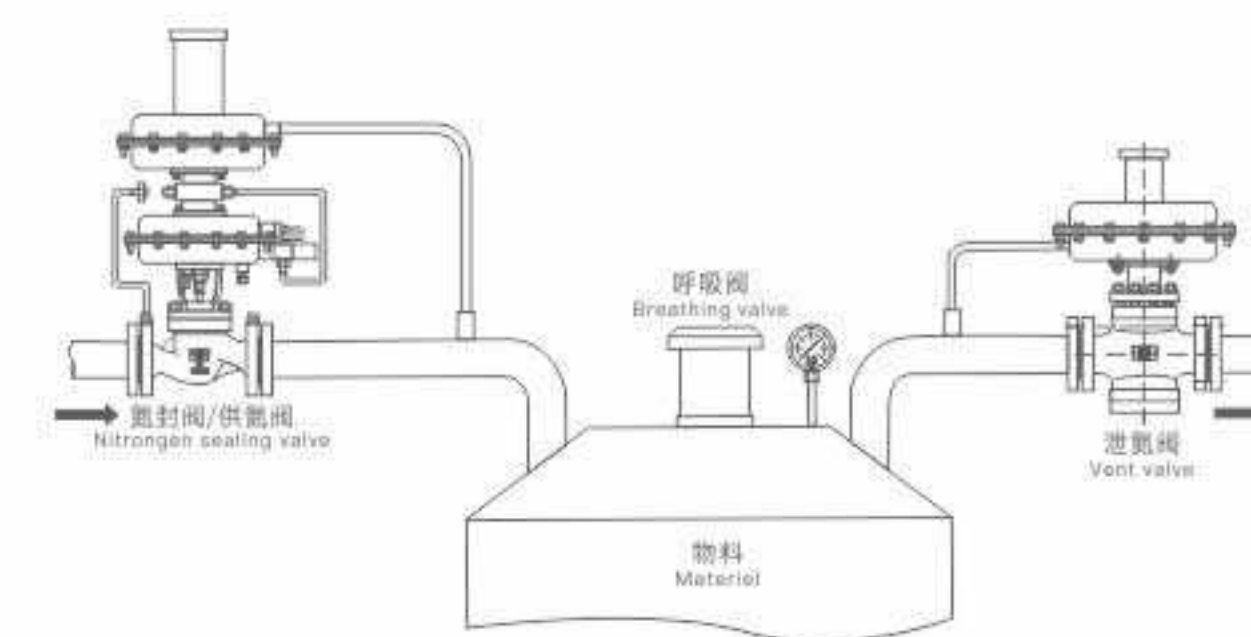
石油天然气、环保水处理、生物制药、化工、电力、食品、造纸、冶金、采矿、船舶及一般工业系统。

Petroleum and natural gas, environmental protection water treatment, bio pharmaceutical, chemical, electric power, food, paper, metallurgy, mining, shipping and general industrial systems.

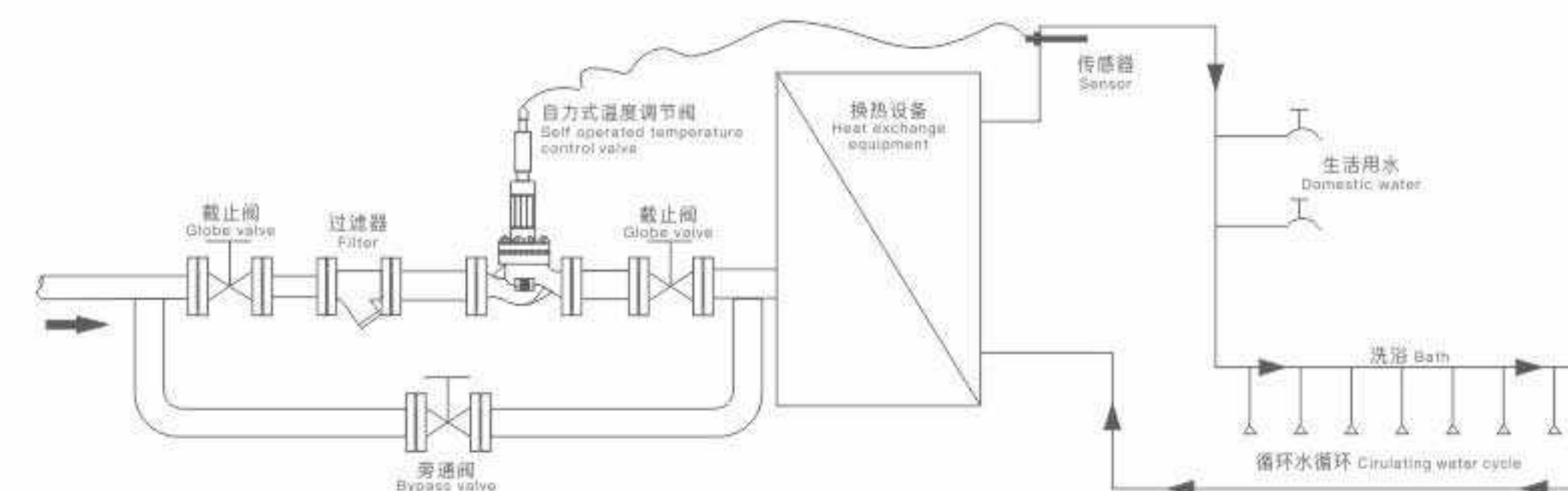
#### 典型安装示意图 Typical Installation Diagram



自力式压力调节阀安装示意图  
Installation Diagram of Self-Operated Pressure Control Valve



氮封阀安装示意图  
Schematic Diagram of Nitrogen Seal Valve Installation



自力式温度调节阀安装示意图  
Installation Diagram of Self-Operated Temperature Control Valve



## SELF-ACTUATED PRESSURE CONTROL VALVE 自力式压力调节阀

### 产品概述 Product Overview

本公司生产的系列自力式压力调节阀无需外加能源，利用被调介质自身能量为动力源引入执行机构控制阀芯位置，改变两端的压差和流量，使阀前（或阀后）压力稳定。具有动作灵敏，密封性好，压力设定点波动力小等优点，本阀广泛应用于气体、液体及介质稳压或泄压稳压的自动控制。

Without requirement of any external energy, serial self-actuated control valve produced by the company controls valve spool position by using self-energy of the adjusted medium as power producer and leading it into actuator, and stabilizes upstream (downstream) pressure by changing differential pressures and fluxes of both ends. With advantages such as agile action, perfect airtightness and low wave force of pressure set point, this control valve widely applies to automatic control of pressure stabilization or pressure relief and stabilization of gases, liquids and mediums.

### 产品特点 Products Features

- 1、无需外加能源，节约了能源。
  - 2、压力分段范围细且互相交叉，调节精度高。
  - 3、压力设定值在运行期间可连续设定。
  - 4、对阀后压力调节，阀前压力与阀后压力之比可为10:1~10:8。
  - 5、橡胶膜片式检测，执行机构检测精度高、动作灵敏。
  - 6、采用压力平衡机构，使调节阀反应灵敏、控制精确。
1. Needing little external energy and saving energy.
  2. Pressure subsection ranges are small and crossing over one another, contributing to high regulation precision.
  3. Pressure set value can be successively set during operation process.
  4. As to adjustment of pressure after valve match, proportion of upstream pressure and downstream pressure can be 10:1~10:8.
  5. In terms of rubber diaphragm type detection, actuator can conduct detection of high precision and agile action.
  6. Adoption of pressure balance mechanism makes action of this control valve sensitive and its control accurate.

### 技术参数 Technical Parameters

阀体形式 Body form	直通式铸造阀体 Straight-through cast body
阀芯形式 Plug type	非平衡式单座阀芯 Non-balanced single seat plug
公称口径 Nominal diameter	DN15~300mm NPS 1/2"~12"
公称压力 Nominal pressure	PN1.6~4.0MPa; CLASS 150~1500LB
适用温度 Applicable temperature	-20~+350℃
连接形式 Type of connection	法兰式 Flange
法兰距 Flange distance	符合IEC 60534 Meet IEC 60534
泄漏等级 Leakage level	按ASME B16.104规定 As per ASME B16.104
设定值偏差 Set value deviation	±8%
执行器 Actuator	气动执行器（薄膜式、活塞式） Pneumatic actuator (film type, piston type)



SELF-ACTUATED PRESSURE  
CONTROL VALVE  
自力式压力调节阀



结构与材料 Structure and Materials

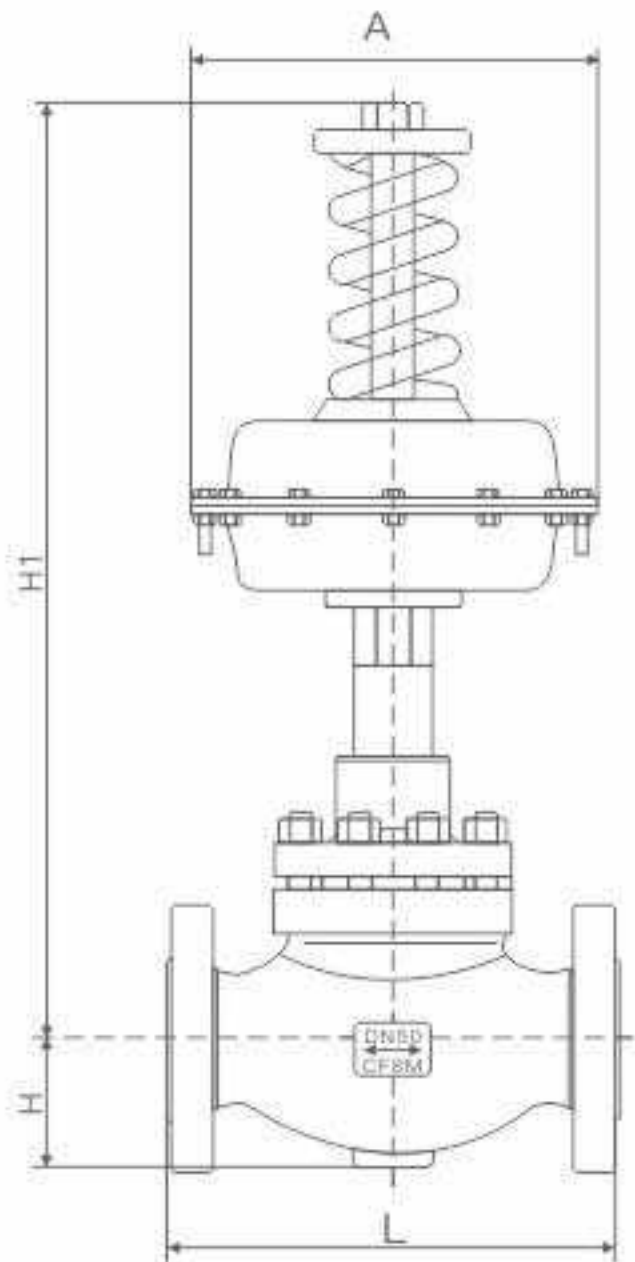
公称通径DN(mm) NPS(in)	15 1/2	20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8	250 10
额定流量系数Kv Flow coefficient Kv	7	11	20	30	48	75	120	190	300	480	760	1100	1750
额定行程L (mm) Rated travel L(mm)	8		10		14	20		25	40		50	60	70
公称压力(MPa) Pressure(MPa)	1.6 、4.0												
压力调节范围(KPa) Pressure range (KPa)	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、600~1500、 1000~2500												
固有流量特性 Flow characteristics	快开 Quick open												
调节精度(%) Adjustment precision	±5												
使用温度(℃) Use temperature	≤350												
允许泄漏量 Allowable leakage	硬密封 Hard seal	单座：≤10 <sup>-3</sup> ×阀额定容量（Ⅳ级）、套筒：≤5×10 <sup>-3</sup> 阀额定容量（Ⅱ级） Single seat:≤10 <sup>-3</sup> Rated valve capacity(Ⅳ)、Sleeve:≤5×10 <sup>-3</sup> Rated valve capacity(Ⅱ)											
	软密封 Soft seal	0.15	0.30		0.45	0.60	0.90	1.70	4.0		6.75	11.10	16.0

主要零件材料 Part material

阀体 Body	ZG230-450, ZG1Cr18Ni9Ti, ZGCr18Ni12Mo2Ti
阀芯 Plug	1Cr18Ni9Ti, Cr18Ni12Mo2Ti
阀座 Seat	1Cr18Ni9Ti, Cr18Ni12Mo2Ti
阀杆 Stem	1Cr18Ni9Ti, Cr18Ni12Mo2Ti
执行器材质 Actuator material	A3, 1Cr18Ni9Ti
填料Packing	聚四氟乙烯、柔性石墨 PTFE, Flexible graphite
膜片 Diaphragm	丁腈橡胶、耐油橡胶、氟橡胶 Nitrile rubber, oil resistant rubber, fluorine rubber

注: 常规材质为碳钢和不锈钢两种, 可根据用户现场条件订制特殊材质控制阀产品。  
The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.

SELF-ACTUATED PRESSURE  
CONTROL VALVE  
自力式压力调节阀



主要外形连接尺寸 Main External Connection Dimensions

公称通径DN(mm) NPS(in)	15 1/2	20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8	250 10
L	185	200	205	222	254	276	298	352	410	451	600	670	735
H	52.5	57.5	67.5	72.5	80	90	97.5	107	122	140	167	225	230
H1	615	645	650	710	730	745	760	800	890	960	1050	/	/

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



## SELF-OPERATED MICRO PRE-SSURE CONTROL VALVE

### 自力式微压调节阀

#### 产品概述 Product Overview

本公司生产的系列自力式微压调节阀是一种无需外来能源的节能型产品，利用工业管道中介质的压力变化与信号进行比较，使被调节介质的力与执行机构的输出力平衡，以达到稳定压力、差压值。

The series of self operated micro pressure regulating valve produced by the company is an energy-saving product without external energy. The pressure change and signal of the medium in the process pipe-line are compared to make the force of the regulated medium and the output force of the actuator balance, so as to achieve stable pressure and differential pressure.



#### 产品特点 Products Features

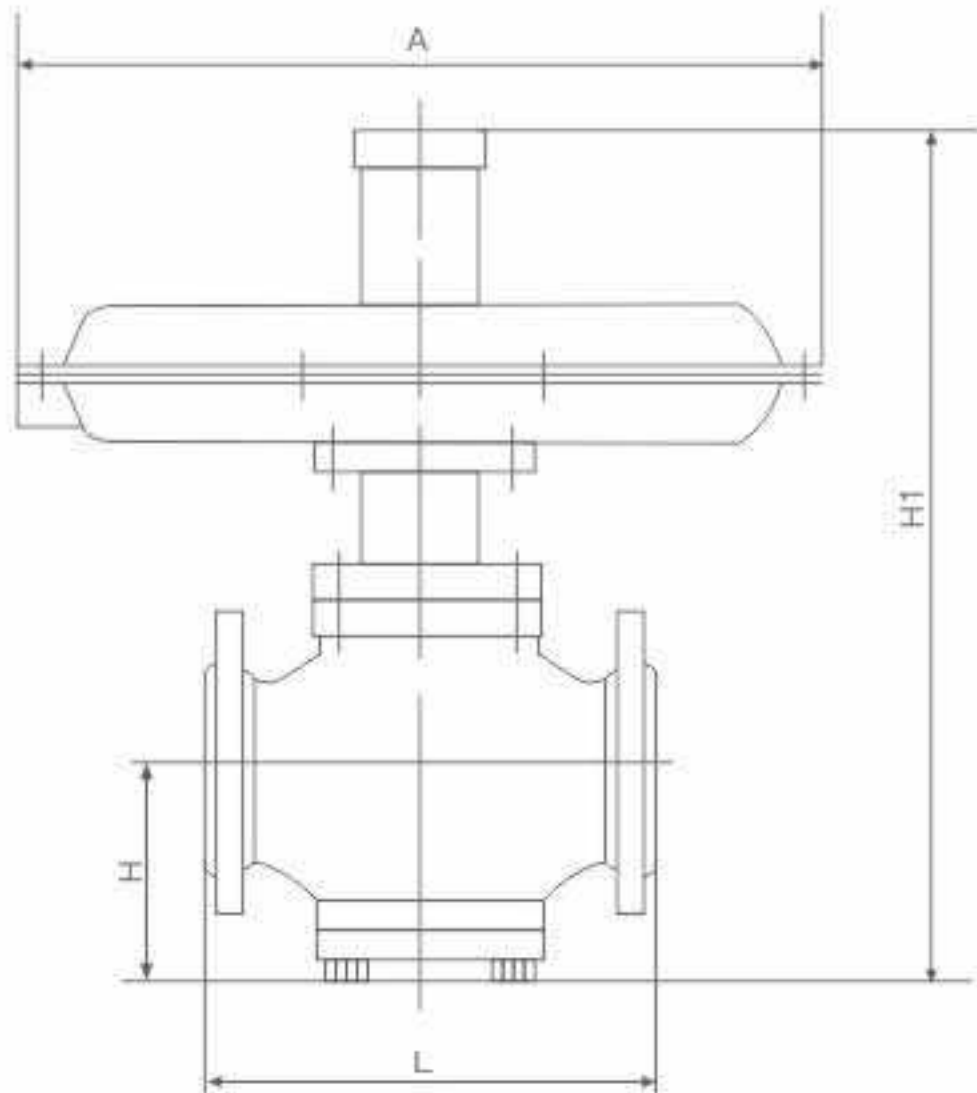
该系列自力式微压调节阀，采用平衡单座阀，在运行中可任意对设定值进行调整等特点。因而适用于各种工业炉燃烧系统，控制两种燃料气体混合比流量或用于氢冷发电机组密封油系统中、石油制品或油库储罐保护气体与热处理保护气体的微压自动调节等场合，还可用于各种工业气体的减压、稳压或泄压的自动控制。

Owing to its adoption of balanced single seated valve and random adjustment of set value in service, this serial self-operated micro pressure control valve is applicable to combustion systems of various industrial furnaces, control of mixed specific discharges of two kinds of fuel gas, sealed oil system for hydrogen-cooled generator set, petroleum products, and micro pressure automatic regulation of protective gas and heat treating protective gas in oil storage tanks. In addition, it is suitable for automatic control of pressure reducing, stabilization and relief of all industrial gases.

#### 技术参数 Technical Parameters

公称通径DN(mm) NPS(in)		15 1/2	20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6
额定流量系数 Kv Flow coefficient Kv		7	11	20	30	48	75	120	190	300	480	760
允许压差 Ug-U <sub>s</sub> (MPa)	PN16	1.6								1.5	1.2	
	PN40	2.0										
阀盖形式 Bonnet form		标准型 Standard type										
压盖型式 Gland type		螺栓压紧式 Bolt pressing type										
密封填料 Sealing packing		聚四氟乙烯、柔性石墨 PTFE, Flexible graphite										
压力范围 Pressure range (KPa)		0.5 ~6    5 ~ 10    9 ~ 15    12 ~ 19    18 ~ 25    22 ~ 30 28 ~ 35    32 ~ 40    38~ 50    48 ~ 60    58 ~ 72    70 ~100										
最小压差P Minimum Pressure difference		≥0.01(MPa)										
工作温度 Working temperature		≤80℃										
适合介质 Suitable medium		气体、蒸汽、低粘度液体 Gas, Steam, Low viscosity liquid										
阀芯形式 Plug form		单座、套筒型阀芯 The single seater, sleeve type valve										
流量特性 Flow characeristics		直线性 Straight line										





主要性能参数 Main Performance Parameters

调节精度Control accuracy		≤10%										
允许泄漏量 Allowable leakage	硬密封 Hard seal	4x0.01%阀额定容量 Rated valve capacity										
	软密封 Soft seal	DN (mm)										
		20	25	32	40	50	65	80	100	125	150	200
		0.15		0.3		0.45	0.6	0.9	1.7	4.0		6.75

主要外形连接尺寸 Main External Connection Dimensions

公称通径DN(mm) NPS(in)	20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4
L	150	160	180	200	230	290	310	350
H	52.5	57.5	75	75	85.5	92.5	100	110
H1	323	350	370	370	370	397	397	400
A	308	394	308	394	308	394	394	394
导压管接口螺纹 Interface thread	M16x1.5							
重量G (Kg)	12	18	25	32	45	58	68	76

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

SELF-OPERATED NITROGEN SEAL  
CONTROL VALVE  
自力式氮封调节阀

产品概述 Product Overview

本公司生产的系列自力式氮封调节阀主要由控制阀门、执行器、指挥器、压力弹簧等部件组成。主要用于保持容器顶部保护气体(一般为氮气)的压力恒定，以避免容器内物料与空气直接接触，防止物料挥发、被氧化，以及容器的安全。适用于各类大型储罐的气封保护系统。

Serial self-operated nitrogen seal regulating valve of the company is mainly composed of several parts including actuated valve, actuator, director and pressure spring. It is utilized to maintain constant pressure of protective gas (generally nitrogen) on the top of containers for avoiding direct contacts of containers and materials, preventing materials from volatilizing and being oxidized and ensuring containers safeties. It applies to air seal protection systems of all kinds of large-scaled storage tank.





SELF-OPERATED NITROGEN SEAL  
CONTROL VALVE  
自力式氮封调节阀



产品特点 Products Features

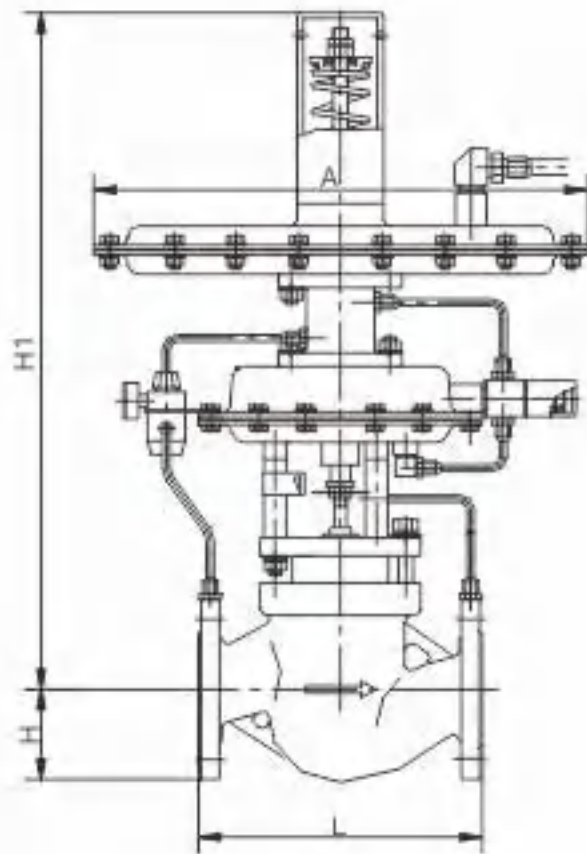
储罐内压力升高至设定压力时，快速泄放阀迅速开启，将罐内多余压力泄放。微压调节阀在储罐内压力降低时，开启阀门，向罐内充注氮气。因微压调节阀必须使用在压力为0.1MPa压力以下，现场压力较高，必须安装V230Y型压力调节阀将压力调节阀将压力降低至0.1MPa以下才可使用。公称压力0.1MPa，压力可按分段设定，从0.5KPa至66 KPa以下，介质温度 $\leq 80^{\circ}\text{C}$ 。

When pressure in a storage tank increases to setting pressure, quick relief valve should be unlocked instantly to release excess pressure in this tank. Valve of micro pressure regulating valve requires to be opened to fill the tank with nitrogen if pressure decay occurs in it. On the condition that micro pressure regulating valve must be used below 0.1MPa while the field pressure is relatively high, it can't be used until pressure is reduced below 0.1MPa by installed V230Y pressure regulating valve. The nominal pressure is 0.1MPa, and the pressure can be set in sections, from 0.5kPa to below 66kPa, and the medium temperature is  $\leq 80^{\circ}\text{C}$ .

技术参数 Technical Parameters

公称通径DN(mm) NPS(in)	20 3/4			25 1	40 1-1/2		50 2	80 3		100 4	150 6	
阀座直径(mm) Valve seat diameter	6	15	20	25	32	40	50	65	80	100	125	150
额定流量系数Kv Rated flow coefficient	3.2	5	8	10	20	32	50	80	100	160	250	400
压力调节范围 Pressure regulating range	0.4 ~ 0.5 5 ~10 9 ~ 14 13 ~ 19 18 ~ 24 22 ~ 28 27 ~ 33 36 ~ 44 42 ~ 51 49 ~ 58 56 ~ 66( KPa )											
公称压力PN Nominal pressure	1.0、1.6 MPa											
介质温度 Applicable temperature	-30~150℃											
流量特性 Flow characteristics	快开型 Quick opening characteristic											
调节精度 Adjustment precision	≤5%											
允许压降(MPa) Allowable pressure drop	1.6			1.6		1.1	0.6		0.4			
薄膜有效面积(cm²) Effective area of film	200			280			400					
泄漏等级 Leakage level	ASME B16.104 V（软密封 Soft seal）、ASME B16.104 IV（硬密封 Hard seal）											
阀体形式 Type of body	直通铸造阀 Straight casting valve											
阀芯形式 Plug form	顶部导向平衡内件、先导式结构 Top guide balance inner part, Pilot structure											
连接方式 Connection mode	法兰式 Flange type											

SELF-OPERATED NITROGEN SEAL  
CONTROL VALVE  
自力式氮封调节阀



主要外形连接尺寸 Main External Connection Dimensions

公称通径DN(mm) NPS(in)	20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 1-1/2	80 3	100 4	125 5	150 6
L	150	160	180	200	230	290	310	350	400	480
H	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158
H1	330	330	350	350	360	430	440	450	520	650
A	310								400	

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Note: 1. The dimensions in the table are standard data without accessories. The dimensions of accessories are calculated according to the actual configuration. 2. Due to the technical innovation and improvement of the product, the size may change. Please contact the technical department of the Company for the latest information.

设计特色 Design Features

- 1、无需外加能源，能在无电、无气的场合工作，既方便又节约能源，降低成本。
- 2、氮封装置供氮，泄氮压力设定方便，可在连续生产的条件下进行。
- 3、压力检测膜片有效面积大，设定弹簧刚度小、动作灵敏、装置工作平衡。
- 4、采用无填料设计，阀杆所受摩擦力小、反应迅速、控制精度高。
- 5、供氮装置采用指挥器操作，减压比可达100:1，减压效果好、控制精度高。
- 6、为确保储罐的安全，需在罐顶设置呼吸阀。
- 7、呼吸阀可起安全作用，避免了常规氮封装置中启闭频繁易损坏的缺陷。
1. It can be operated on sites lacking of electricity and gas without any external energy, which is very convenient and conducive to energy saving and cost reduction.
2. Utilization of nitrogen seal device to provide nitrogen makes pressure setting for releasing nitrogen convenient easy and it able to be conducted during successive production.
3. Pressure detection diaphragm has large active area with setting spring of low stiffness, agile action and balanced device operation.
4. Valve rod bears low frictional force, and embraces quick action and high control accuracy because non-padding design is adopted.
5. As nitrogen supply device uses directing device to operate, pressure reducing ratio can reach 100:1. In addition, perfect pressure reducing effect and high control precision are also achieved.
6. To ensure safety of a storage tank, breather valve needs to be installed on the top of this tank.
7. Breather valve can exert safety function, stopping conventional nitrogen seal device from being brittle in the course of frequent start and stop.



## SELF-OPERATED ELECTRONIC CONTROL TEMPERATURE CONTROL VALVE

### 自力式电控温度调节阀

#### 产品概述 Product Overview

本公司生产的V230WD型自力式电控温度调节阀最大的特点只需普通220V电源，利用介质自身热量，直接对蒸汽、热水、热油与气体等介质的温度实行自动调节和控制，也可使用在防止对过热或热交换场合，本产品结构简单，操作方便，选用温度范围广、响应时间快、密封性能可靠，并可在运行中随意进行调节，因而该阀广泛应用于化工、石油、食品、轻纺、宾馆与饭店等部门的热水供应。

The major characteristic of V230WD self-operated electronic control temperature control valve is that it realizes directly automatic adjustment and control of temperatures of many mediums such as steam, hot water, hot oil and gas through using heat of mediums with requirement of 220V power supply. What's more, it can be used in the circumstance that overheating and heat exchange should be prevented. Because of its simple structure, easy operation, wide selected temperature range, fast response time and reliable sealing property as well as being optionally adjusted in service, it is widely used to provide hot water for many departments including chemical engineering, petroleum, food, light textile, hotel and restaurant.

#### 产品特点 Products Features

- 1、使用现场只须具有单相交流电源AC220V和温度传感器（温包）即可自成温控系统。
- 2、执行器内具有高度集成化的FDY-258T型温控模块，将温控仪和执行器合二为一，实现机电一体化，使温控系统简化。
- 3、控制精度高，响应速度快，性能稳定可靠，工作寿命长。
- 4、适应范围广，可在很宽温度范围内进行温度控制。
- 5、结构紧凑，安装调试、使用简便。

1. Temperature control system can be automatically formed as long as using single phase alternating current power supply AC220V and temperature sensor on the site.
2. FDY-258T temperature control module of high integration in actuator succeeds in uniting temperature controller and actuator as one, realizing electromechanical integration and simplifying temperature control system.
3. It has the features of high control accuracy, rapid response speed, stable and reliable property, and long working life.
4. Possessed of broad subject range, it has the ability to conduct temperature control in extremely wide temperature range.
5. It is characterized by compact structure, easy installation and debugging, and simple usage.

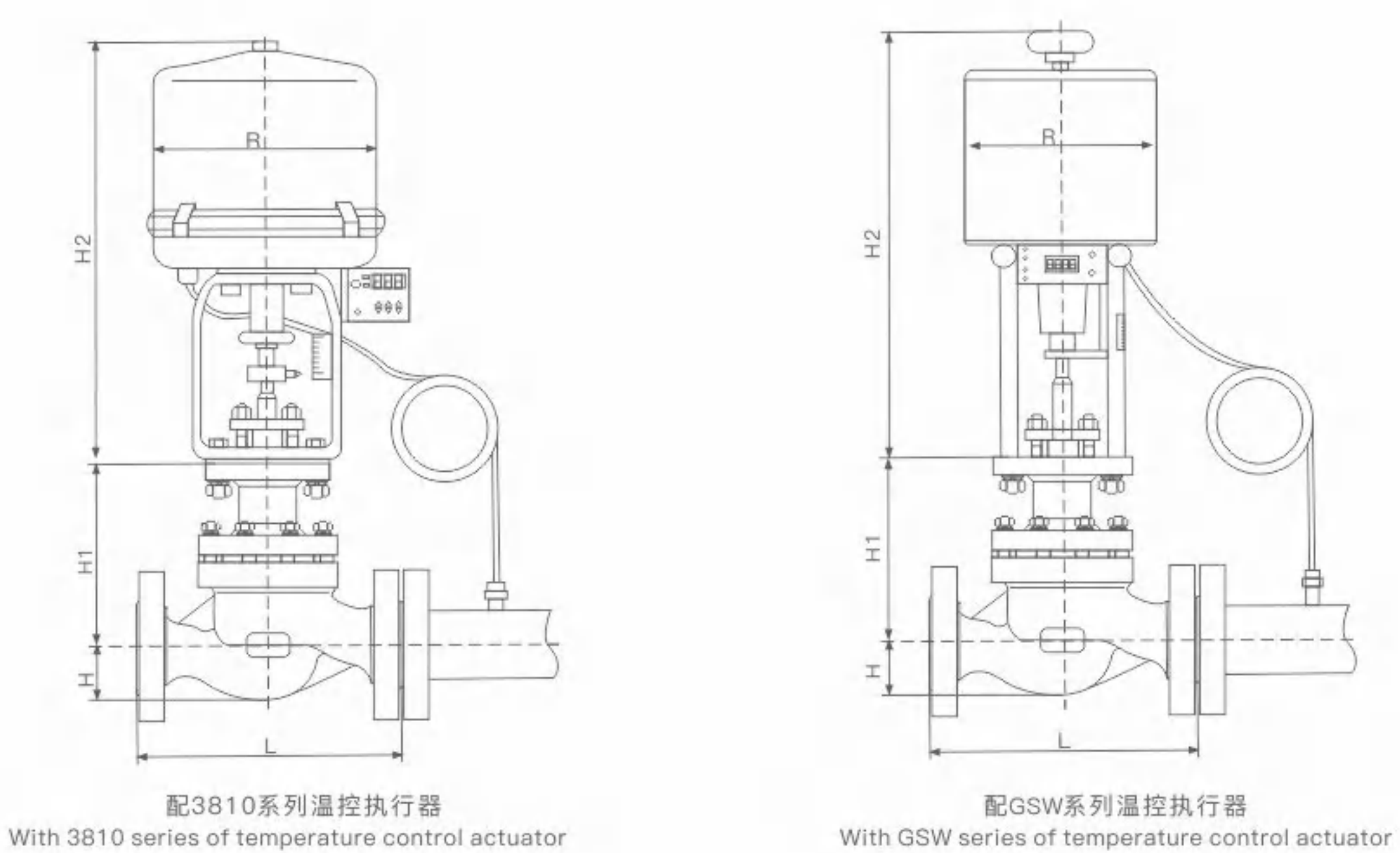
#### 技术参数 Technical Parameters

阀体形式 Body form	直通式铸造阀体 Straight-through cast body
阀芯形式 Plug form	非平衡式单座阀芯 Non-balanced single seat spool
公称口径 Nominal diameter	DN20~200mm NPS 3/4"~8"
公称压力 Nominal pressure	PN1.6~4.0MPa; CLASS 150~300LB
适用温度 Applicable temperature	-20~+425℃
连接形式 Connection form	法兰式 Flange
法兰距 Flange distance	符合IEC 60534 Meet IEC 60534
泄漏等级 Leakage level	按ASME B16.104规定 As per ASME B16.104
设定值偏差 Set value deviation	±5%
执行器 Actuator	温控型电动执行器 Temperature-controlled electric actuator



技术参数 Technical Parameters

公称通径DN(mm) NPS(in)		20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8
流通能力(m³/h) Cirulation ability		7	10	16	25	40	63	100	160	250	400	630
额定行程(mm) Rated travel		6		8	10	14		20		30	30	40
阀盖形式 Bonnet form		标准型-17~+230℃、高温型+230~+425℃ Standard type -17~+230℃, high temperature type +230~+425℃										
压盖型式 Gland form		螺栓压紧式 Bolt pressing type										
密封填料 Sealing packing		V型聚四氟乙烯填料、含浸聚四氟乙烯石棉填料、石棉纺织填料、石墨填料 V type PTFE packing, PTFE impregnated asbestos packing, asbestos textile packing, graphite packing										
阀芯形式 Plug form		单座、套筒式阀芯 The single seater, sleeve type valve										
流量特性 Flow characteristics		直线性 Straight line										
调节精度(℃) Adjustment precision		±1~±5										
使用介质 Using medium		蒸汽、水、油、气体 Steam, water, oil, gas										
允许 泄漏量 Allowable leakage	硬密封 Hard seal	10 <sup>-4</sup> X阀额定容量 10 <sup>-4</sup> X Rated capacity of valve										
	软密封 Soft seal	"0"										
温包、毛细管材料 Temperature package capillary material		H62、1Cr18Ni9Ti										
毛细管长度 Capillary length		3米、5米、10米 3 meters, 5 meters, 10 meters										
温度控制范围 Temperature control range		0 ~ 250℃										
设定值偏差 Set value bias		±2℃										



主要外形连接尺寸 Main External Connection Dimensions

公称通经(mm) Size (in)		20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8
L	PN16/25	181	184	200	222	254	276	298	352	410	451	600
	PN40	194	197	200	235	267	292	317	368	425	473	610
	PN64	206	200	210	251	286	311	337	394	440	508	650
H	PN16/25	52.5	57.5	75	75	85.5	92.5	100	110	142.5	158	170
	PN40	52.5	57.5	75	75	82.5	92.5	100	117.5	150	167.5	187.5
	PN64	65	40	85	85	90	102.5	107.5	125	172.5	195	207.5
H1		132	132	158	170	179	214	221	234	270	294	331
H2	3810L	373	373	495	495	495	700	700	700	725	725	725
	PSL	465	465	465	465	465	560	560	560	560	560	788
D	3810L	225	225	225	225	225	257	257	257	310	310	310
	PSL	177	177	177	177	177	182	182	182	182	182	218

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



## PNEUMATIC DIAPHRAGM CUT-OFF VALVE 气动薄膜切断阀

### 产品概述 Product Overview

气动薄膜切断阀是采用顶导向结构，配用多弹簧薄膜执行机构。阀体结构形式有单座、套筒、三通等三种结构。具有结构紧凑、重量轻、动作灵敏、流体通道呈S流线型、压降损失小、阀容量大、拆装方便等优点。该阀接收来自调节仪表的信号，切断、开启或改变介质流向，达到对压力、流量、温度或液位等工艺参数自动控制。广泛应用于环保水处理、石油、化工、冶金、电力、轻工、纺织等各种工业部门的生产过程自动控制和远程控制系统中。

The pneumatic diaphragm cut-off valve is subject to a top guide structure with multi spring diaphragm actuator. There are three types of valve body structure: single seat, sleeve and three-way. It has the advantages of compact structure, light weight, sensitive action, S streamlined fluid passage, small pressure drop loss, large valve capacity, convenient disassembly and assembly, etc. The valve receives the signal from the regulating instrument, cuts off, opens or changes the flow direction of the fluid to achieve the automatic control of the process parameters such as pressure, flow, temperature or liquid level. It is widely used in the automatic control and remote control system of production process of environmental protection water treatment, petroleum, chemical industry, metallurgy, electric power, light industry, textile and other industrial sectors.



### 产品特点 Products Features

- 1、整体高度可减小约30%，重量可减轻约30%。
  - 2、阀体按流体力学原理设计成等截面低流阻流道，额定流量系数增大30%。
  - 3、密封形式为软、硬密封2种，采用聚四氟乙烯或对位聚苯密封，硬密封堆焊硬质合金，密封性能好。
  - 4、平衡型阀内件，提高了切断阀的许用压差。
1. The overall height of the valve can be reduced by about 30%; and the weight can be reduced by about 30%.
2. The valve body is designed as a low flow resistance passage with constant cross section according to the fluid mechanics principle; and its rated flow coefficient increases by 30%.
3. There are soft and hard two kinds of sealing forms. PTFE or PPPs are used for soft sealing. Hard sealing is overlaid with hard alloy. The sealing performance is better.
4. Balanced valve trim improves the allowable pressure difference of cut-off valve.

### 主要零件材料 Part material

阀体 Body	ZG230~450、ZG1Cr18Ni9Ti、ZGCr18Ni12Mo2Ti
阀芯 Plug	1Cr18Ni9Ti、Cr18Ni12Mo2Ti
阀座 Seat	1Cr18Ni9Ti、Cr18Ni12Mo2Ti
阀杆 Stem	1Cr18Ni9Ti、Cr18Ni12Mo2Ti
执行器材质 Actuator material	A3、1Cr18Ni9Ti
填料 Filler	聚四氟乙烯、柔性石墨 PTFE, Flexible graphite
膜片 Diaphragm	丁腈橡胶、耐油橡胶、氟橡胶 Nitrile rubber, oil resistant rubber, fluorine rubber

注：常规材质为碳钢和不锈钢两种，可根据用户现场条件订制特殊材质控制阀产品。  
The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.



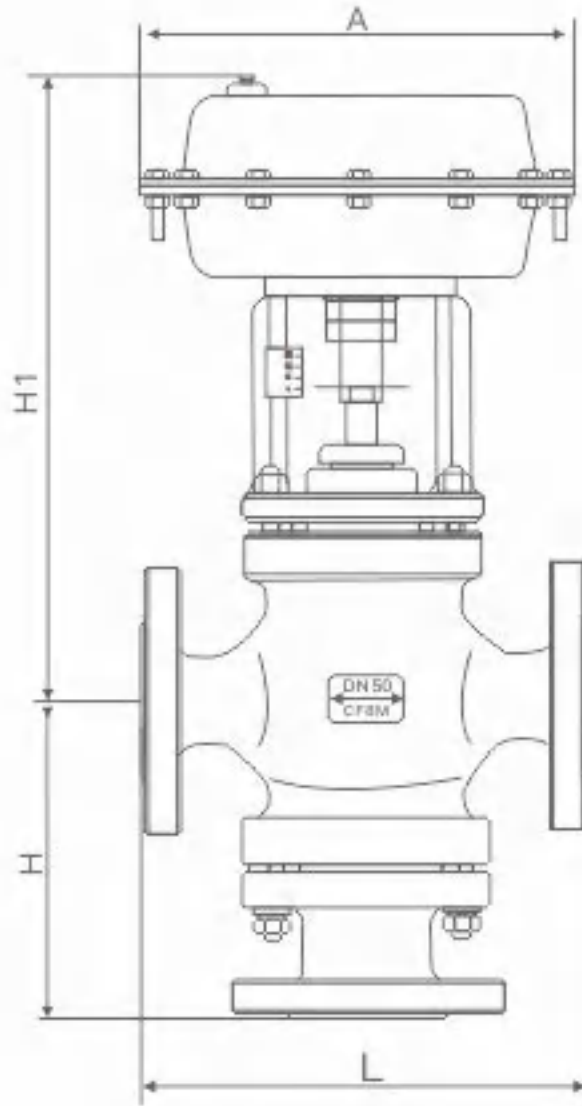
PNEUMATIC DIAPHRAGM  
CUT-OFF VALVE  
气动薄膜切断阀



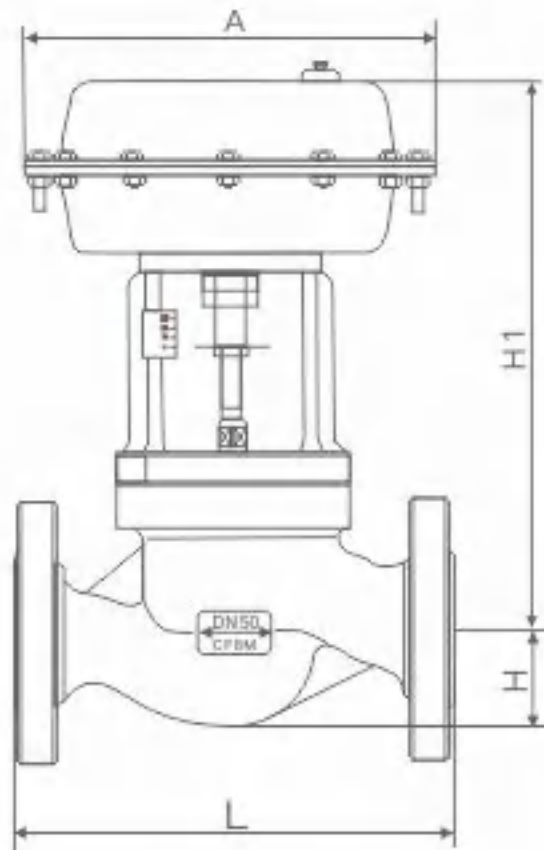
技术参数 Technical Parameters

公称通径DN(mm) NPS(in)		20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8
公称压力(MPa) Nominal pressure		PN1.6、2.5、4.0、6.4MPa										
额定流量 系数Kv Rated flow coefficient	单座 Single seat	7	11	20	30	48	75	120	190	300	480	760
	套筒 Sleeve	8	11	20	30	48	75	120	190	300	480	760
	三通 Tee	8	12	17	29	43	70	110	165	275	440	690
额定行程mm Rated travel		8			12		20		25	40		60
活塞有效面积cm <sup>2</sup> Effective piston area		100			200		400			600		1000
允许 泄露量 Allowable leakage	硬密封 Hard seal	一般：10 <sup>-4</sup> ×阀额定容量；严密型：单座：1.2X10 <sup>-7</sup> General: 10 <sup>-4</sup> × valve rated capacity; seal type: single seat: 1.2X10 <sup>-7</sup>										
	软密封 Soft seal	VI级										
允许压差 MPa Allowable differential pressure	正作用 Positive effect	5.09	2.91	1.85	2.18	1.33	1.52	0.99	0.62	0.60	0.69	0.39
	反作用 Counter action	6.4	3.88	2.47	2.91	1.77	2.03	1.32	0.83	0.80	0.92	0.52
信号压力KPa Signal pressure		0 或 400~600 0 or 400~600										
阀盖形式 Valve cover form		标准型(-17~+250℃)、高温型(+250~+450℃)、低温型(-40~-196℃)、波纹管密封型(-40~+350℃) The standard type (-17~+250℃), high temperature (+250~+450℃) and low temperature (-40~-196℃), bellows seal type (-40~+350℃)										
压盖型式 Gland type		螺栓压紧式 Bolt pressing type										
密封填料 Sealing packing		V型聚四氟乙烯填料、含浸聚四氟乙烯填料、石棉编织填料、柔性石墨 V type PTFE packing, impregnated PTFE packing, asbestos braided packing, flexible graphite										
阀芯形式 Plug form		单座锥式阀芯 Single seat valve										
流量特性 Flow characteristics		快开特性 Quick opening characteristic										

PNEUMATIC DIAPHRAGM  
CUT-OFF VALVE  
气动薄膜切断阀



三通结构  
Three way structure



二通式结构  
Straight through structure

(单座式、套筒式) 连接尺寸 (Single seater, sleeve type) connection dimensions

公称通径DN(mm) NPS(in)		20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8
A		196			232		308			394		498
L	PN16	150	160	180	200	230	290	310	350	400	480	600
H		53	58	70	75	83	93	100	110	125	143	170
H1		340	345	370	380	390	475	490	500	765	825	927

(三通式) 连接尺寸 (Three way structure) connecting dimensions

公称通径(mm) Nominal diameter (in)		20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8
A		196			232		308			394		498
L	PN16	150	160	180	200	230	290	310	350	400	480	600
H		132	132	135	140	150	160	160	170	325	450	495
H1		340	345	370	380	390	475	490	500	765	825	927

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



## PNEUMATIC PISTON CUT-OFF VALVE 气动活塞切断阀

### 产品概述 Product Overview

本公司生产的系列气动活塞切断阀是属于组合仪表中的执行单元。它接收来自调节仪表的信号，控制工艺管道内流体的切断与接通。该系列阀具有设计新颖，流阻小、额定流量系数大、用压差大、密封性能好等优点。因而本产品广泛应用于石油、化工、冶金、电力、轻纺等工业部门的生产过程自动控制与远程控制系统中。

The series of pneumatic piston cut-off valves produced by the company belong to the execution unit in the combination instrument. The valve receives the signal from the regulating instrument and controls the cut-off and connection of the fluid in the process pipeline. This series of valves have the advantages of novel design, small flow resistance, large rated flow coefficient, large allowable pressure difference, good sealing performance, etc. Therefore, this product is widely used in the automatic control and remote control system of production process of petroleum, chemical industry, metallurgy, electric power, light textile and other industrial sectors.



## PNEUMATIC PISTON CUT-OFF VALVE 气动活塞切断阀

### 产品特点 Products Features

- 1、整体高度可减小约30%，重量可减轻约30%。
- 2、阀体按流体力学原理设计成等截面低流阻流道，额定流量系数增大30%。
- 3、密封形式为软、硬密封2种，采用聚四氟乙烯或对位聚苯密封，硬密封堆焊硬质合金，密封性能好。
- 4、平衡型阀内件，提高了切断阀的许用压差。

1. The overall height of the valve can be reduced by about 30%; and the weight can be reduced by about 30%.
2. The valve body is designed as a low flow resistance passage with constant cross section according to the fluid mechanics principle; and its rated flow coefficient increases by 30%.
3. There are soft and hard two kinds of sealing forms. PTFE or PPPs are used for soft sealing. Hard sealing is overlaid with hard alloy. The sealing performance is better.
4. Balanced valve trim improves the allowable pressure difference of cut-off valve.



### 主要零件材料 Part material

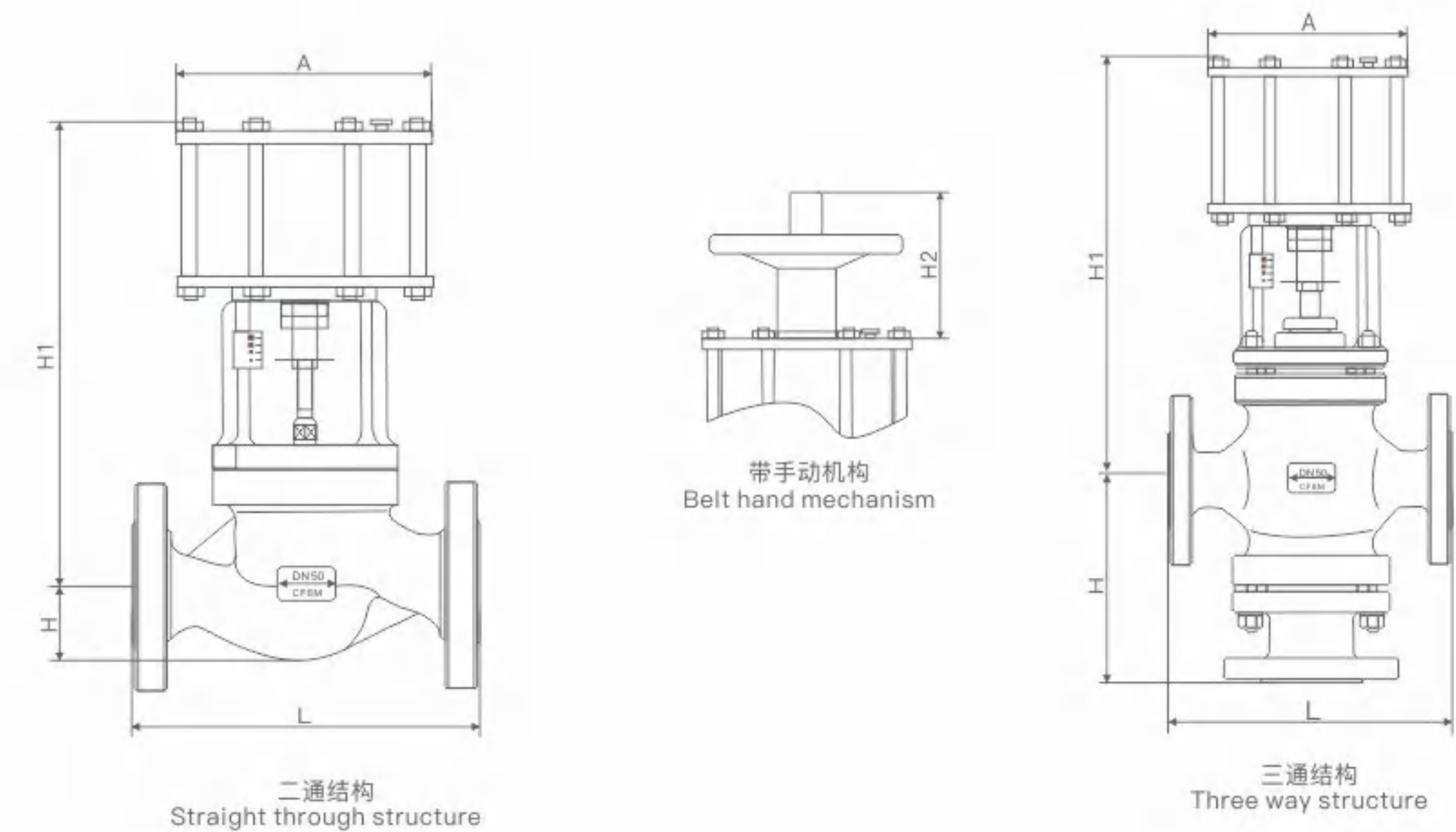
阀体 Body	HT200、QT450、WCB、304、316、316L
阀芯 Plug	304、316、316L
阀座 Seat	304、316、316L
阀杆 Stem	304、316、316L
执行器材质 Actuator material	ZG230-450 (WCB)
填 料 Packing	聚四氟乙烯、柔性石墨 PTFE、Flexible graphite
活塞 Piston	ZAISI12

注：常规材质为碳钢和不锈钢两种，可根据用户现场条件订制特殊材质控制阀产品。  
The conventional material is carbon steel and stainless steel, and the special material regulating valve products can be customized according to the user's work conditions.



技术参数 Technical Parameters

公称通径DN(mm) NPS(in)		20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8
公称压力(MPa) Nominal pressure		PN1.6、2.5、4.0、6.4MPa										
额定流量系 数Kv Rated flow coefficient	单座 Single seat	7	11	20	30	48	75	120	190	300	480	760
	套筒 Sleeve	8	11	20	30	48	75	120	190	300	480	760
	三通 Tee	8	12	17	29	43	70	110	165	275	440	690
额定行程mm Rated travel		8			12		20		25	40		60
活塞有效面积cm <sup>2</sup> Effective cross-area of piston		150			175		305			700		1245
允许泄漏量 Allowable leakage	硬密封 Hard seal	一般：10 <sup>-4</sup> ×阀额定容量；严密型：单座：1.2X10 <sup>-7</sup> General: 10 <sup>-4</sup> × valve rated capacity; seal type: single seat: 1.2X10 <sup>-7</sup>										
	软密封 Soft seal	VI级										
允许压差MPa Allowable pressure differential		≤公称压力 Nominal pressure										
信号压力KPa Signal pressure		0 或 400~600 0 or 400~600										
阀盖形式 Bonnet type		标准型(-17~+250℃)、高温型(+250~+450℃)、低温型(-40~-196℃)、波纹管密封型(-40 +350℃) Standard type (-17~+250℃), High temperature type (+250~+450℃) Low temperature type (-40~-196℃), Bellows seal type (-40~+350℃)										
压盖型式 Gland type		螺栓压紧式 Bolt compression type										
密封填料 Sealing packing		V型聚四氟乙烯填料、含浸聚四氟乙烯填料、石棉编织填料、柔性石墨 V-type PTFE packing, impregnated PTFE packing, asbestos braided packing, flexible graphite										
阀芯形式 Plug form		单座锥式阀芯、套筒双座阀芯、三通结构 Single seat cone valve, sleeve double seat valve core and three-way structure										
流量特性 Flow characteristics		快开特性 Quick opening characteristic										
可配附件 Optional Accessories		手轮机构、限位开关、电磁阀、阀位传送器、气动加速器、保位阀、其它 Hand-wheel mechanism, limit switch, solenoid valve, valve position transmitter, pneumatic accelerator, lock up valve, other										



(单座式、套筒式) 连接尺寸 (Single seater, sleeve type) connection dimensions

公称通径DN(mm) NPS(in)		20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8
A		125			160		200			250		320
L	PN16	150	160	180	200	230	290	310	350	400	480	600
H		53	58	70	75	83	93	100	110	125	143	170
H1		220	220	235	235	240	250	260	265	350	400	500
H2		120	120	120	155	155	200	200	200	230	230	230

(三通式) 连接尺寸 (Three way structure) connecting dimensions

公称通径(mm) Nominal diameter (in)		20 3/4	25 1	32 1-1/4	40 1-1/2	50 2	65 2-1/2	80 3	100 4	125 5	150 6	200 8
A		125			160		200			250		320
L	PN16	150	160	180	200	230	290	310	350	400	480	600
H		80	80	80	75	95	105	105	105	150	195	250
H1		220	220	235	235	240	250	260	265	350	400	500
H2		120	120	120	155	155	200	200	200	230	230	230

注: 1、表中尺寸为不带附件标准数据, 附件尺寸根据实际配置计算。

2、由于产品的技术创新与改进, 尺寸可能会有所变化, 最新资讯请联系本公司技术部。

Note: 1. The dimensions in the table are standard data without accessories. The dimensions of accessories are calculated according to the actual configuration. 2. Due to the technical innovation and improvement of the product, the size may change. Please contact the technical department of the Company for the latest information.