

Self Operated Pressure Control Valve



公称口径 DN	15 ~ 300mm
公称压力 PN	1.6 ~ 6.4MPa
适用温度 Applicable Temp.	PTFE & FEP(F46): -17 ~ +100°C 低温型 Low temp. type -196 ~ +100°C 高温型 High temp. type -17 ~ +566°C 常温型 Normal temp. type -17 ~ +230°C
流量特性 Flow characteristics	快开 Quick open
调节精度 Regulation accuracy	± 10%
减压比 Reduction ratio	100:1 ~ 1.25:1

压差范围 Differential pressure range

Unit: 100KPa

	压差范围 Differential pressure range													
	阀芯 Core													
最大压差 Maximum differential Pressure	15	20	25	32	40	50	65	80	100	125	150	200	250	300
	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.2	1.0	1.0	1.0
CV	3.7	5.8	9.3	14.6	23.3	37.8	58.3	93.3	145.8	221.7	326.7	490	583.5	828.5
压力设定范围 Pressure setting range	20~120、80~250、200~500、450~1000、800~1600、1000~2200、2000~2800													

备注 Note : 1、最大允许压差不超过最大工作压力
The maximum allowable differential pressure does not exceed the maximum pressure

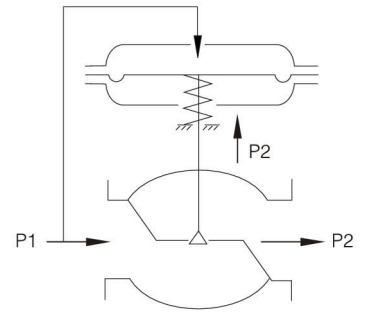
自立式调节阀是利用介质自身能量而实现自动调节的产品，该产品的最大特点就是能在无任何外来能源的场合使用，实现对压力、温度、流量、液位的调节，达到简化设备，节约能源的效果。
Self-pressure control valve is a product using medium energy to realize automatic adjustment. The biggest characteristic of the product is that it can be used in the situation in the absence of any external energy. Implement the adjustment of the pressure, temperature, flow, liquid level to achieve the effect of simplifying the equipment and saving the energy.

- ※ 不需要任何外来能量实现自动调节。
Do not need any external energy to realize automatic adjustment.
- ※ 简化设备、节约能源。
Simplify equipment and save energy.
- ※ 结构紧凑，部件少，重量轻。
Compact structure, less parts, light in weight.
- ※ 调节性能优异，流量系数精确。
Regulation performance is excellent, flow coefficient is accurate.

自力式阀前压力调节阀的工作原理 How does it works for inlet control

自力式阀前压力调节阀，其初始阀芯的位置在关闭状态。当阀前压力P1通过阀芯、阀座的节流后变为阀后压力P2，同时P1通过管线输入上膜室作用在膜片上，其作用力与弹簧的反作用力相平衡时的阀芯位置决定了阀的开度，从而控制阀前压力。The initial position of valve core of self inlet pressure control valve is in closed state. When upstream pressure P1 becomes downstream pressure P2 after throttling of valve core and valve seat, P1 imported to upper membrane room through pipeline acting on the membrane and its acting force maintains balance with reactive force of spring, the degree of valve opening depends on the position of valve core to control the upstream pressure.

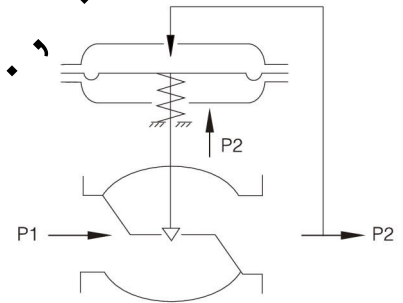
当阀前压力P1增加时，P1作用在膜片上的作用力也随之增加。此时，膜片上的作用力大于设定弹簧的反作用力，使阀芯向离开阀座方向移动，导致阀的开度变大，流阻变小，P1向阀后泄压，直到膜片上的作用力与弹簧反作用力相平衡为止，从而使P1将为设定值。同理，当阀前压力P1降低时，动作方向与上述相反，这就是阀前压力调节的工作原理。When upstream pressure P1 increases, acting force of P1 on membrane also increases. At this time, acting force on membrane is greater than setting reactive force of spring to make valve core move toward the direction which is apart from valve seat. As a result, valve opening becomes larger, flow resistance decreases and P1 relieves pressure toward downstream until acting force on membrane maintains balance with reactive force of spring so that P1 decreases to set value. In the same way, when upstream pressure P1 decreases, direction of movement described above is reversed, this is the working principle of upstream pressure regulation.



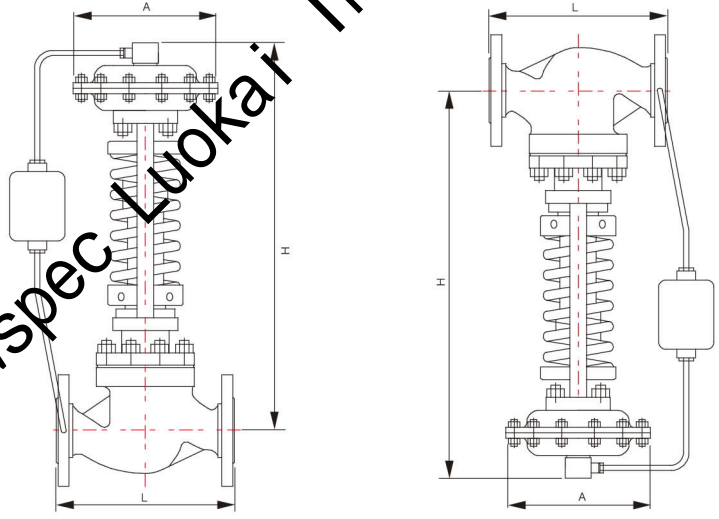
自力式阀后压力调节阀的工作原理 How does it works for outlet control

自力式阀后压力调节阀，其初始阀芯的位置在开启状态。当阀前压力P1通过阀芯、阀座的节流后变为阀后压力P2，P2并经过导压管输入上膜室作用在膜片上，其作用力与弹簧的反作用力相平衡时的阀芯位置决定了阀的开度，从而控制阀后压力。Position of initial valve core of self outlet pressure control valve is in open state. When upstream pressure P1 becomes downstream pressure P2 after throttling of valve core and valve seat, P2 imported to upper membrane room through connecting pipe acts on the membrane and its acting force maintains balance with reactive force of spring, and valve opening depends on the position of valve core to control the downstream pressure.

当阀后压力P2增加时，P2作用在膜片上的作用力也随之增加。此时膜片上的作用力大于设定弹簧的反作用力，使阀芯向阀座位置上，导致阀的开度减少，流阻变大，P2降低，直到膜片上的作用力与弹簧反作用力相平衡为止，从而使P2降低为设定值。同理，当阀后压力P2降低时，动作方向与上述相反，这就是阀后压力调节的工作原理。When downstream pressure P2 increases, acting force of P2 on membrane also increases. At this time, acting force on membrane is greater than setting reactive force of spring to make valve core close to the direction which is apart from valve seat. As a result, valve opening becomes larger, flow resistance decreases and P2 decreases until acting force on membrane maintains balance with reactive force of spring so that P2 decreases to set value. In the same way, when downstream pressure P2 decreases, direction of movement described above is reversed, this is the working principle of downstream pressure regulation.



Flowspec Luokai Industrial Co., Ltd.



Unit:mm

SIZE	L	压力设定范围 Pressure setting range												H1	
		20~120		80~250		200~500		450~1000		800~1600		1000~2800			
		H	A	H	A	H	A	H	A	H	A	H	A		
DN15	1/2"	160	475	402	450	297	455	234	430	176	420	158	410	158	40
DN20	3/4"	160	475	402	450	297	455	234	430	176	420	158	410	158	40
DN25	1"	160	475	402	450	297	455	234	430	176	420	158	410	158	40
DN32	1-1/2"	180	520	402	495	297	500	234	480	176	470	176	450	158	70
DN40	2"	200	520	402	495	297	500	234	480	176	470	176	450	158	70
DN50	2-1/2"	230	540	402	510	297	520	234	500	176	470	176	450	158	80
DN65	3"	290	710	402	680	297	690	234	670	234	650	176	640	176	88
DN80	4"	310	710	402	680	297	690	234	670	234	650	176	640	176	98
DN100	5"	350	780	402	750	297	760	234	740	234	650	176	640	176	113
DN125	6"	400	840	402	790	297	800	234	780	234	740	176	730	176	170
DN150	8"	451	880	402	860	297	870	234	850	234	740	176	730	176	170
DN200	10"	543	915	402	870	297	880	234	860	234	860	176	850	176	220
DN250	12"	673	940	402	890	297	900	234	880	234	860	176	850	176	—
DN300	14"	737	1000	402	950	297	960	234	940	234	860	176	850	176	—