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80L01Y、80L01R

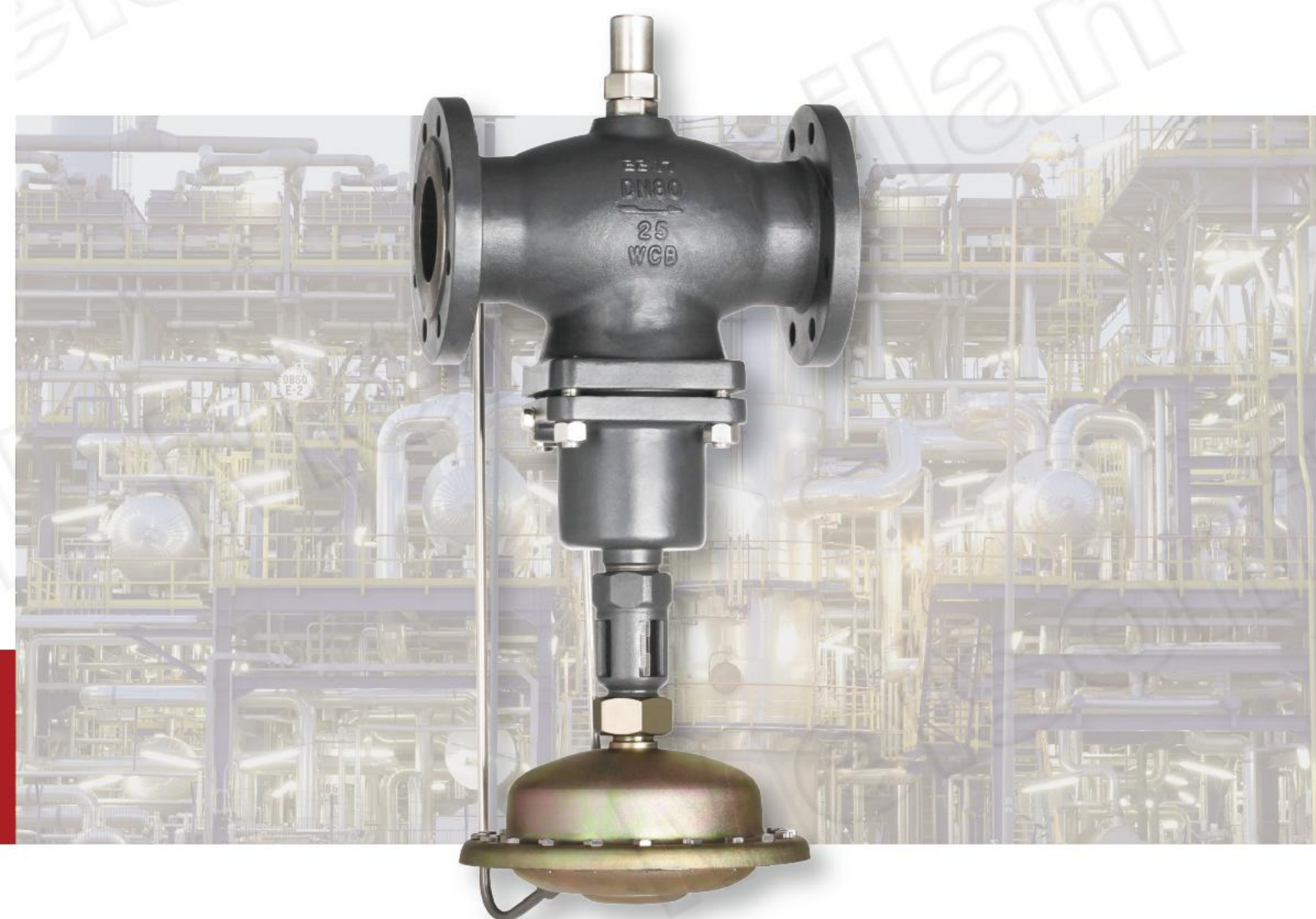
自力式流量控制阀

Meisonilan®

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梅索尼兰阀门(苏州)有限公司
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CONTROL VALVE

► 80L01Y、80L01R 自力式流量控制阀

▲ 概述

80L01Y/80L01R 自力式流量控制阀，由一个带设定流量的控制阀门和执行器组成。适用于非腐蚀性的液体，在系统管道中的流量控制。

主要特点如下：

- 1、具有压力平衡功能，灵敏度高
- 2、低噪音，性能可靠，免于维护
- 3、采用标准模块化设计
- 4、通过节流阀按标准图调节流量，方便快捷。
- 5、通过组合件，可以进行多项组合控制



技术参数和性能				
阀体				
公称通径		DN15、20、25、32、40、50、65、80、100、125、200、250mm		
公称压力		PN1.6、4.0MPa		
法兰标准		ANSI、JIS、DIN、GB、JB（特殊可按用户提供）		
阀体材料		铸铁（HT200）、铸钢（ZG230-450）、铸不锈钢（ZG1Cr18Ni9Ti、ZG1Cr18Ni12Mo2Ti）		
阀芯材料	硬密封	不锈钢（1Cr18ni9Ti、1Cr18Ni12MoTi）		
	软密封	不锈钢镶嵌橡胶圈		
压力平衡		不锈钢波纹管（DN15~125）、平衡膜片（DN150~250）		
执行器				
有效面积(cm²)		250	630	
节流压差		0.02;0.05		
允许上下膜室之间最大压差(Mpa)		0.4	0.15	
材 料		膜盖：钢板镀锌； 膜片：EPDM或FKM夹纤维		
控制管线、接头		铜管或钢管 Φ10X1(mm)；卡套式接头：R1/4"		
性能				
设定值偏差		±8%		
允许泄漏量 (在规定的实验条件下)	硬密封	4×0.01% 阀额定容量		
		DN15~50	DN65~125	DN150~250
	软密封	10气泡/min	20气泡/min	40气泡/min

► The 80L01Y、80L01R self-operated flow control valve



▲ Summary

The 80L01Y,830L01R self-operated flow control valve is composed of the control valve provided with flow setting and actuator.

The main features are as follows:

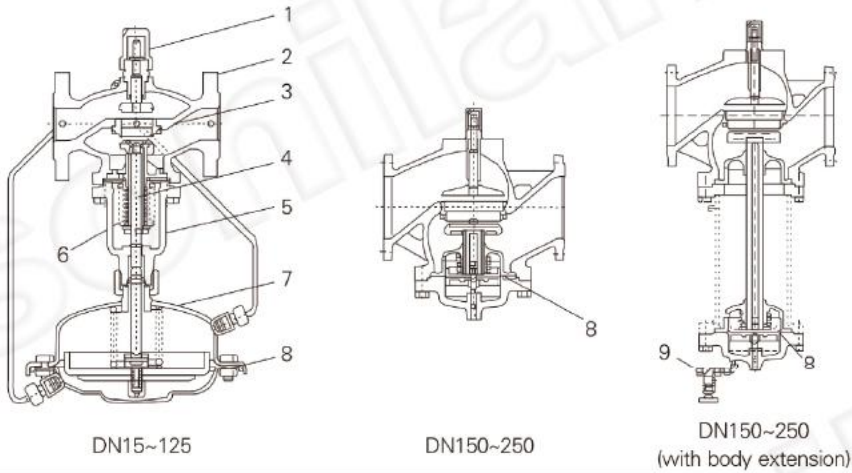
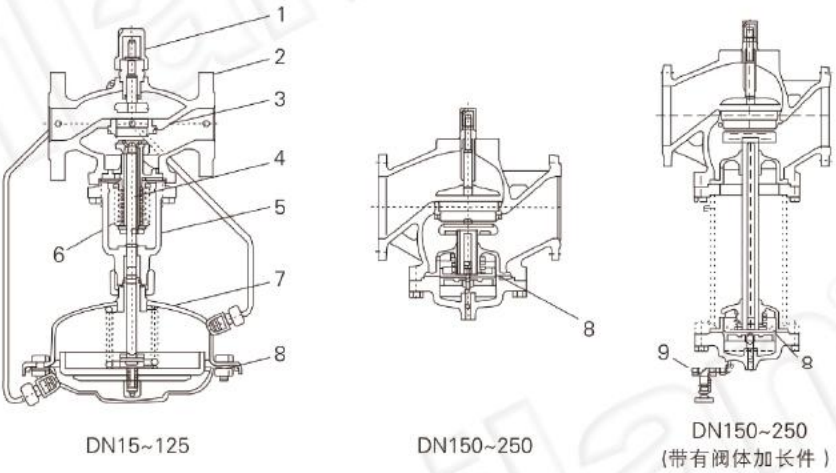
- 1.It has the pressure balancing function with high sensitivity.
- 2.Low noise, reliable performance,free of maintenance
- 3.The standard modular design is a dopted.
- 4.The flow is adjusted according to the standard figure by the throttle valve, which is convenient and fast.
- 5.Various combined controls can be carried out through the assemblies.

Technical parameters and performances				
Body				
DN		DN15、20、25、32、40、50、65、80、100、125、200、250mm		
PN		PN1.6、4.0MPa		
Flange standard		ANSI、JIS、DIN、GB、JB(special standards can be offered according to user requirements)		
Body material		Cast iron (HT200), cast steel (ZG230-450), cast stainless steel (ZG1Cr18Ni9Ti, ZG1Cr18Ni12Mo2Ti)		
Plug material	Hard seal	Stainless steel (1Cr18Ni9Ti, 1Cr18Ni12Mo2Ti)		
	Soft seal	Stainless steel embedded with rubber ring		
Pressure balancing		Stainless steel bellows (DN15~125), balanced diaphragm (DN150~250)		
Actuator				
Effective area		250	630	
Differential pressure of throttle		0.02;0.05		
Allowable maximum differential pressure between the upper and lower diaphragm chambers		0.4	0.15	
Material		Diaphragm cover: galvanized steel sheet; diaphragm: EPDM or FKM with fiber		
Control pipeline, connection		Copper pipe or steel pipe Φ10X1(mm); ferrule connection: R1/4"		
Performance				
Set value error		±8%		
Allowable leakage (under stipulated testing conditions)	Hard seal	4x0.01% valve rated capacity		
		DN15~50	DN65~125	DN150~250
	Soft seal	10 bubbles/min	20 bubbles/min	40 bubbles/min



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结构简图									
1	限流器	2	阀体	3	阀座	4	阀轴	5	阀盖
6	波纹管	7	膜盖	8	膜片	9	充注阀		
允许工作温度									
公称通径		15~125mm			150~250mm				
密封型式		硬密封			≤150℃				
		软密封			≤150℃				
		冷却罐 ≤200℃			冷却罐和加长 ≤200℃				

Structural figure									
1	Flow restrictor	2	Body	3	Seat	4	Valve shaft	5	Bonnet
6	Bellows	7	Diaphragm Cover	8	Diaphragm	9	Charging valve		
Allowable working temperature									
DN		15~125mm				150~250mm			
Seal type	[	Hard seal		≤150℃		≤140℃			
		Two cooling tanks		≤200℃		Two cooling tanks and extension ≤200℃			
		Soft seal		≤150℃					

注：流量阀的节流器分别为0.02MPa和0.05MPa两种，应根据实际情况选用，选取时阀前后的压差要大于该节流器压差

Note: The differential pressure of throttle in the flow valve includes two types such as 0.02MPa and 0.05MPa, which shall be selected according to the actual situations. The differential pressure before and after the valve shall be higher than that of the throttle.

额定流量系数、噪音衡量系数、允许压差															
公称通径DN		15	20	25	32	40	50	65	80	100	125	150	200	250	
额定流量系数KvS		4	6.3	8	16	20	32	50	80	125	160	280	320	400	
节流器压差的 流量范围(m3/h)	0.02MPa	0.1-2	0.2-3	0.2-4	0.4-7	0.6-11	0.8-16	3-28	4-40	6-63	8-80	12-125	15-150	18-180	
	0.05MPa	0.2-3	0.3-4.5	0.3-6	0.5-10	0.8-16	1.1-24	4-40	6-58	9-90	12-120	18-180	22-220	25-250	
噪音衡量系数 Z值		0.6	0.6	0.6	0.55	0.55	0.5	0.5	0.45	0.4	0.35	0.3	0.2	0.2	
允许压差 (Mpa)	PN16	1.6					1.5					1.2		1.0	
	PN40	2.0													

Rated flow coefficient, noise measuring coefficient, allowable differential pressure														
DN		15	20	25	32	40	50	65	80	100	125	150	200	250
Rated flow coefficientKvS		4	6.3	8	16	20	32	50	80	125	160	280	320	400
Throttle pressure difference Flow range(m³/h)	0.02MPa	0.1~2	0.2~3	0.2~4	0.4~7	0.6~11	0.8~16	3~28	4~40	6~63	8~80	12~125	15~150	18~180
	0.05MPa	0.2~3	0.3~4.5	0.3~6	0.5~10	0.8~16	1.1~24	4~40	6~58	9~90	12~120	18~180	22~220	25~250
Noise measuring coefficient Z value		0.6	0.6	0.6	0.55	0.55	0.5	0.5	0.45	0.4	0.35	0.3	0.2	0.2
Allowable differential pressure(Mpa)	PN16	1.6				1.5				1.2		1.0		
	PN40	2.0												

注：流量阀的节流器分别为0.02MPa和0.05MPa两种，应根据实际情况选用，选取时阀前后的压差要大于该节流器压差

Note: The differential pressure of throttle in the flow valve includes two types such as 0.02MPa and 0.05MPa, which shall be selected according to the actual situations. The differential pressure before and after the valve shall be higher than that of the throttle.

工作原理

被控介质输入阀以后，阀前压力P1通过控制管线输入下膜室，经节流阀节流后的压力Ps输入上膜室，P1与Ps的差即 $\Delta P_s = P_1 - P_s$ 称为有效压力。P1作用在膜片上产生的推力与Ps作用在膜片上产生的推力差与弹簧反力相平衡确定了阀芯与阀座的相对位置，从而确定了流经阀的流量。当流经阀的流量增加时，即 ΔP_s 增加，结果P1、Ps分别作用在下、上膜室，使阀芯向阀座方向移动，从而改变了芯与阀座之间的流通面积，使Ps增加，增加后的Ps作用在膜片上的推力加上弹簧反力与P1作用在膜片上的推力在新的位置产生平衡达到控制流量的目的。反之，同理。

设定被控介质的流量用调整节流阀与阀座的相对位置来确定。

Working principle

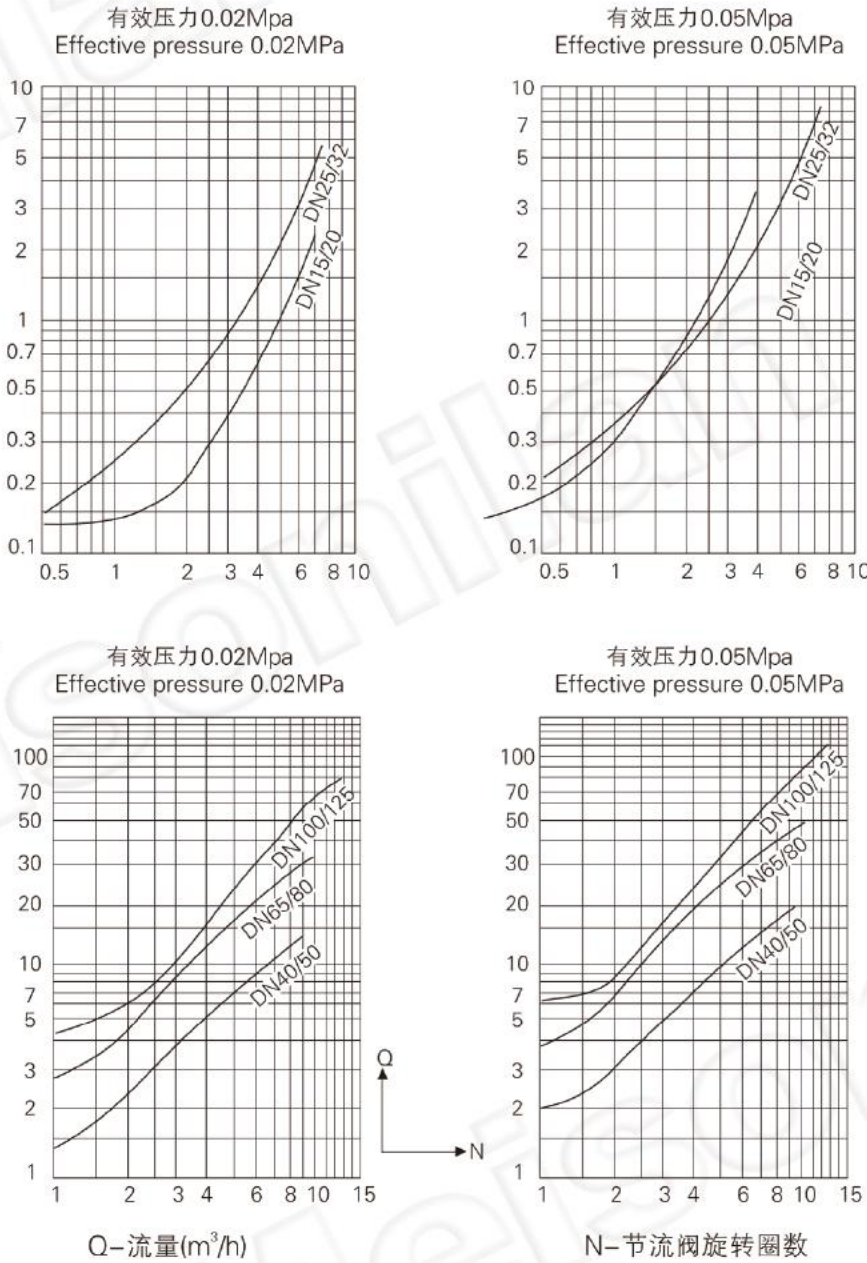
After the controlled medium enters the valve, the before-valve pressure P1 is input into the lower diaphragm chamber through the control pipeline, and the pressure Ps after throttling by the throttle valve is input into the upper diaphragm chamber. The difference between P1 and Ps $\Delta P_s = P_1 - P_s$ is called effective pressure. The difference between the thrust produced on the diaphragm by P1 and the thrust produced on the diaphragm by Ps determines relative positions of the plug and seat and determines the flow that passes through the valve. When the flow that passes through the valve increases, i.e. ΔP_s increases, P1 and Ps respectively acts on the lower diaphragm chamber and upper diaphragm chamber to make the plug move towards the seat, so that the flow area between the plug and seat is changed and Ps is increased. The thrust acted on the diaphragm by the increased Ps, the reacting force of the spring and the thrust acted on the diaphragm by P1 reaches balance at the new position to realize the purpose of controlling flow, and vice versa. The flow of the controlled medium is determined through adjusting relative positions of the throttle valve and seat.



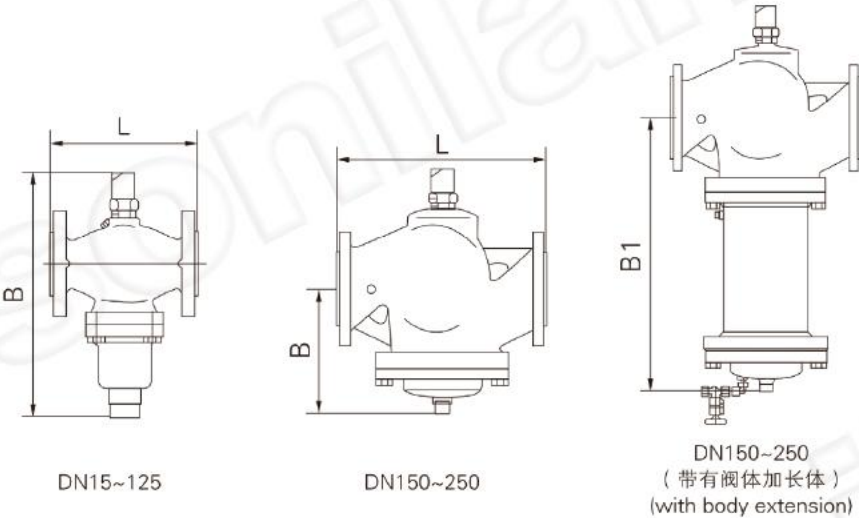
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校准图：为更准确、快速调定阀的流量，提供以下校准图供用户参考（如需更精确设定或公称口径DN150~250的阀门设定流量时，采用流量计测图）笨校准图只适用于水，其他介质可参考该图，并在实际流程中进行适当调整。

Calibration chart: To set the flow more accurately and quickly, the following calibration charts are offered for you reference (please measure the flow with a flowmeter if you need to set the flow more precisely or set the flow for valves with DN150~250). The calibration chart is only applicable to water, and serves as a reference for other media, whose flow shall be properly adjusted in the actual process.



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一、控制阀尺寸及重量 I. Dimensions and weight of control valve													
DN (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250
L (mm)	130	150	160	180	200	230	290	310	350	400	480	600	730
B (mm)	212	212	238	238	240	240	275	275	380	380	326	354	404
重量 Weight(Kg)	6.2	6.7	9.7	13	14	17	29	33	60	70	80	140	220
B1(mm)	--	--	--	--	--	--	--	--	--	--	630	855	1205
重量 Weight(Kg)	--	--	--	--	--	--	--	--	--	--	140	210	300

二、执行器尺寸及重量 II. Dimensions and weight of actuator	
有效面积(cm²) Effective area(cm²)	250
R (mm)	263
H (mm)	150
重量 Weight(Kg)	9

