

KZ02

空气过滤减压阀

AIR FILTRATION PRESSURE-
REDUCING VALVE



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一、概 要:

KZ02 空气过滤减压阀不仅把压缩空气进行过滤净化,而且还把输出压力调到气动仪表所需的给定值。它是一种为气动仪表提供清洁的不同压力气源的辅助装置。

GENERAL

KZ02 Air Filtration Pressure-reducing Valve filters not only compressed air, but also adjusts output pressure to required given value for pneumatic meter. It is a kind of auxiliary device to provide clean different pressure air-source for pneumatic meter.

结构和动作原理

空气过滤减压阀主要由上盖、本体、阀芯、过滤元件,膜片组件、调节弹簧,手轮等零件组成,它们构成 A、B、C 三个气腔室,参见结构图

Structure and Working principle

KZ02 Air Filtration Pressure-reducing Valve consists of mainly spring case, base body, valve plug, filtration element, diaphragm assembly, adjust spring, hand-wheel etc. Parts,forming A、B、C、three air chambers, refer to the structure figure.

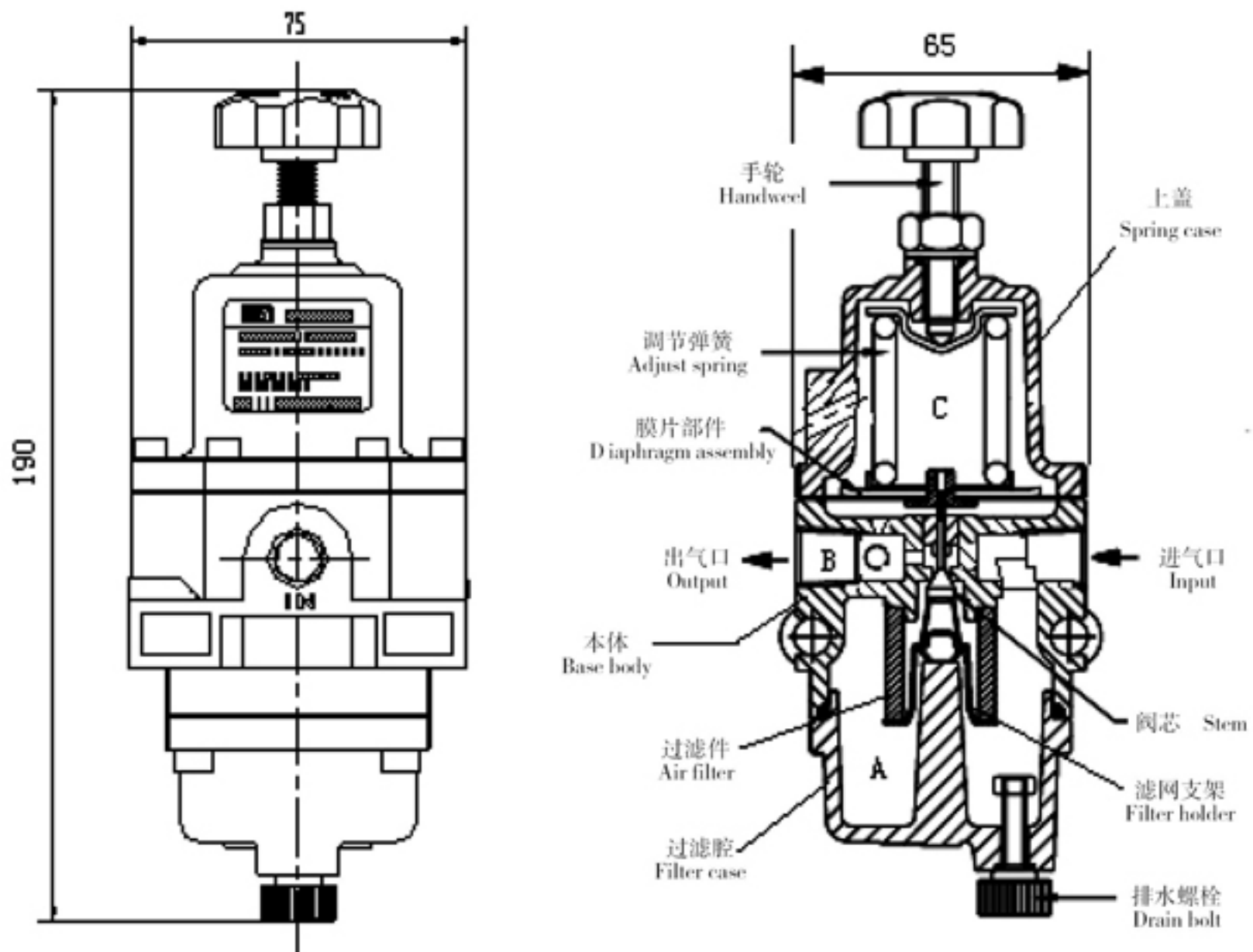
空气过滤减压阀按力平衡原理设计,当来自空压机的压缩空气从减压阀输入端(IN)流进过滤腔 A,经过过滤元件,除去水、油、尘和其它微小物质到达减压腔 B,最后从输出口(OUT)流出。由于输出压力受负载流量变化的影响,有时输出压力会大于或小于这个给定值。假设输出压力小于给定值,则膜片受空气的向上作用力小于给定弹簧的作用力,失去平衡,膜片向下运动,阀芯也向下运动离开阀座,由于输出压力增大。如果输出压力大于给定值,膜片向上运动,阀芯离开弹簧座,空气通过弹簧座的小孔进入排气腔 C,排入大气,达到新的平衡,因而输出压力保持在给定值水平上。

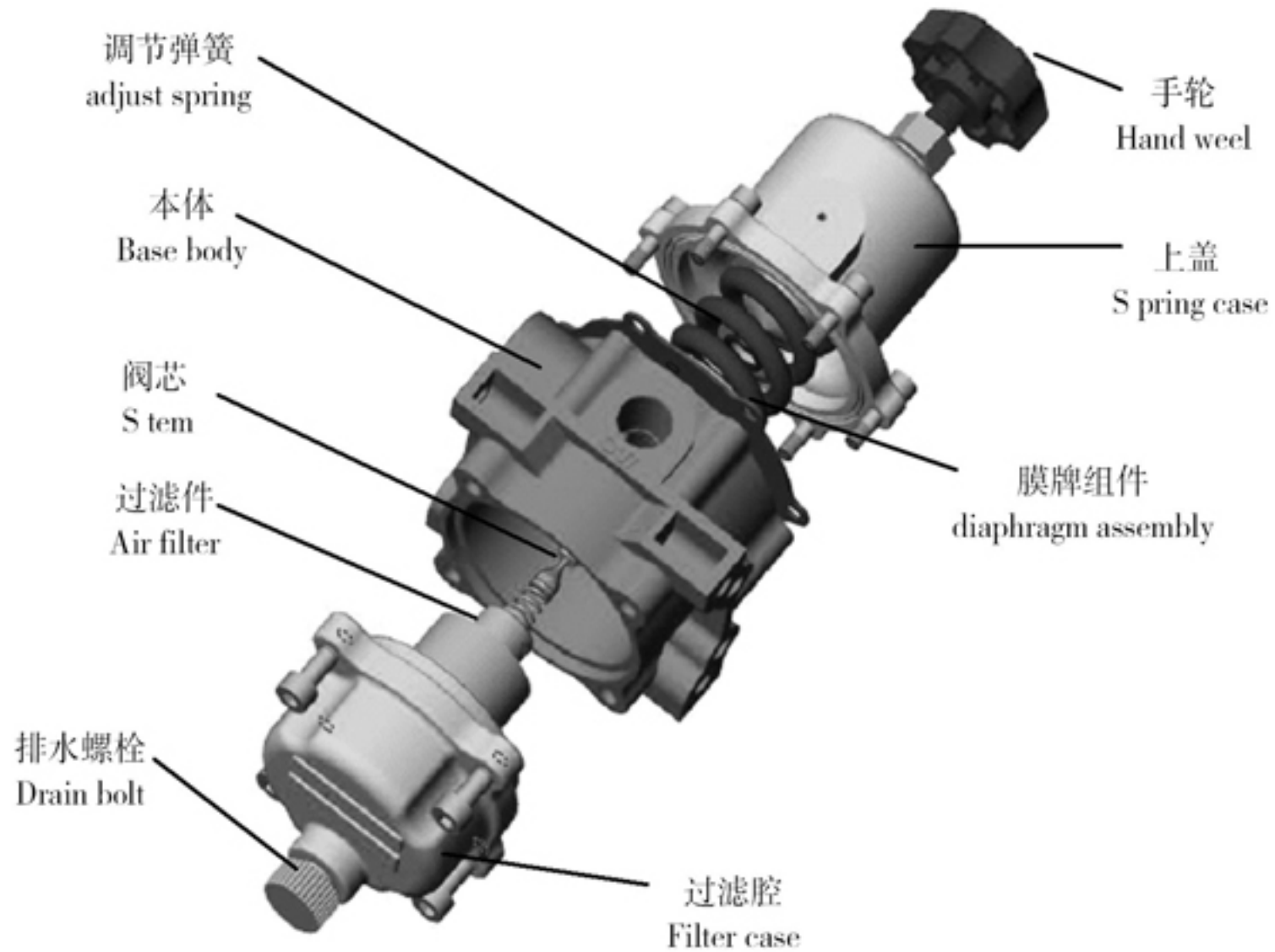
KZ02 Air Filtration Pressure-reducing Valve is designed according to force balanced principle. When the compressed air which from input port (IN) of pressure-reducing valve flows into air chamber A, it passes through filter element to remove water, oil, dust and other little matters to chamber B, and finally flows out from output port (OUT). Due to change of output pressure effected by the flow rate, sometimes the output pressure is higher than this given value or less than that. If the output pressure is less than the given value, the diaphragm is effected by upward action force of air which is less than action force of the given spring, to lose balance, diaphragm to move downward, the valve plug also to move down to leave valve seat, so that the output pressure increases. If the output pressure is more than the given value, the diaphragm moves upward, the valve plug leaves the spring seat, the air comes into the air chamber C and exhausts to atmosphere to reach new balance. Thus the output pressure keeps at the given value.

二、主要技术指标 Main technical indexes

型号 Type	KZ02-2		KZ02-3	
输出压力 Output pressure range(MPa)	0 ~ 0.41		0 ~ 0.82	
气源接口 Air Connection	Re1/4	NPT1/4	Re1/4	NPT1/4
最大气源输入压力 Max.supply(MPa)	1.0			
环境温度 Ambient temperature(℃)	-30 ~ +70			
耗气量 Air consumption(L/min)	≤0.95			
过滤精度 Filtering Size(μm)	5 ~ 25			
相对湿度 Relative humidity	≤95%			
介质 Medium	空气 Air			
重量 Weight(kg)	0.7			

三、外形尺寸及结构图 Dimension (outer) and Assembly





四、产品特征

- 1、维持稳定的设定压力,对于压力设定反应灵敏。
- 2、使用压铸铝材质,坚固耐用。
- 3、内置 5 ~ 25 μ m 过滤网,可以过滤气源中的微小颗粒,并且可以通过排水盖排出凝集水。
- 4、如果输出压力比设定压力高,可通过自动排气维持稳定的输出压力。

Product Characteristic

- 1、Maintain desirable pressure level, regardless of fluctuation of pressure input.
- 2、Aluminum body increases versatility of the product in different environments.
- 3、5 ~ 25micron filter sorts minuteness particles in the air.
- 4、Relief function is available which discharges to atmosphere if the outlet pressure is higher than setting pressure.

五、使用方法

1、气源应为清洁、干燥的空气,应无明显的油蒸汽、油和其他液体;

2、气源应无明显的腐蚀性气体、蒸汽和溶剂;

3、气源中所含固体微粒数量应小于 $0.1\text{g}/\text{m}^3$,且微粒直径应小于 $60\mu\text{m}$,含油量应小于 $10\text{mg}/\text{m}^3$ 。

4、过滤减压阀供气之前将调节螺栓逆时针方向旋转到弹簧不受力为止;

5、在排出口安装压力表;

6、观看设置在出口端的压力表,把调节螺栓按顺时针方向慢慢旋转,当二次压力上升到所需压力时将锁定螺母锁紧,以免调节螺栓旋转;

7、排出凝集水时先要切断通往 KZ02 的压力,或把供气压力降低到 0.1Mpa 以下,以免操作人员受到伤害。要慢慢旋转排水螺丝,排出凝集水后要重新完全拧紧螺丝。

六、维 修

1、切断供气压力,防止喷出高压空气造成意外。

2、使用相应的工具解开过滤腔上的 4 个螺丝,用空压或适当的工具清理过滤腔,更换过滤网。

3、更换安装内部件时

① 观看组装图后确认内部件的位置和名称。

② 清洗所有内部件后参见下图并按分解逆顺序组装。

Instruction

1、The source to be supposed for clean, the dry air, should the not obvious oil steam, the oil and other liquids;

2、The source to be supposed the not obvious caustic gas, the steam and the solvent;

3、In the source contains the solid particle quantity to be supposed to be smaller than $0.1\text{g}/\text{m}^3$, also the particle diameter should be smaller than $60\mu\text{m}$, the oil content should be smaller than $10\text{mg}/\text{m}^3$.

4、In front of filtration pressure relief valve air feed will adjust the spiral to tie up the counter clockwise to revolve to the spring not stress up to;

5、Installs the pressure gauge in the escape-ment;

6、The onlooking establishes in exports the end the pressure gauge, ties up the adjustment spiral according to clockwise slowly revolves, when two second rolling strength rise needs the pressure lock the nut lock, in order to avoid the adjustment spiral ties up revolving.

7、When draining out condensed water, supply air pressure must be shut down completely or adjust the pressure level below 0.1Mpa . The operator can be seriously hurt when draining out at high pressure. Slowly open drain plug to drain condensed water. After draining out completely, close the drain plug.

Maintenance

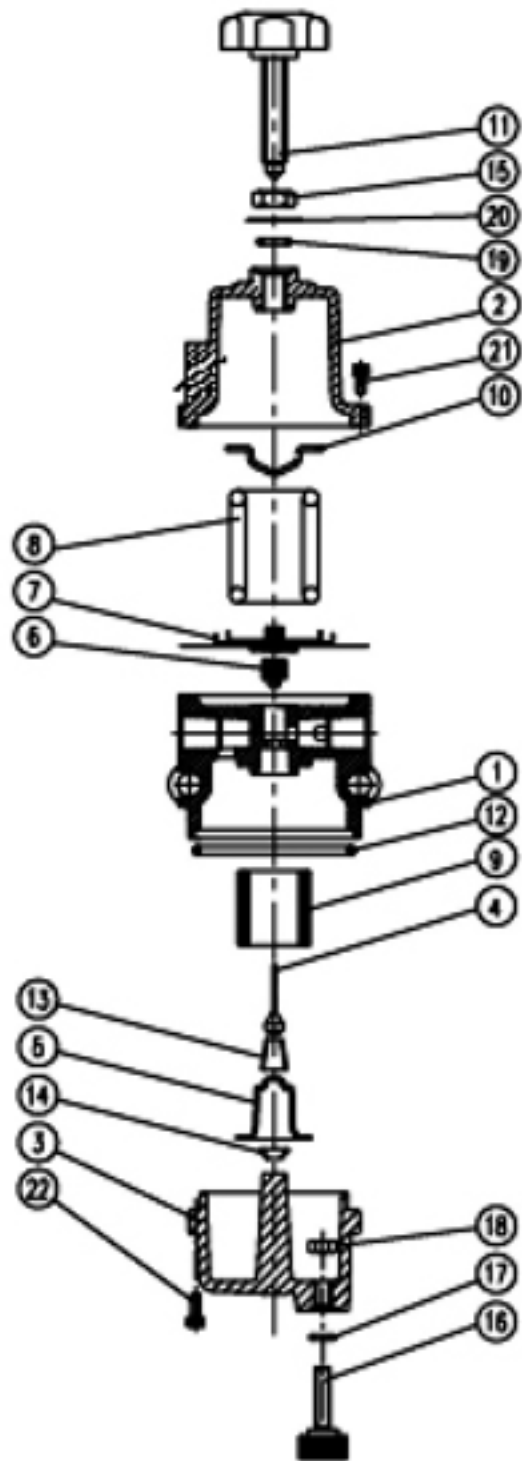
1、Shut off supply air pressure, prevented the blowout compressed air creates the accident.

2、Uses the corresponding tool to untie on the filter chamber 4 screws, has cleaned up the filter chamber with the air pressure or the suitable tool, the replacement strainer.

3、In replacement installment

① In the onlooking assembly chart confirms the part position and the name.

② Under cleans all in parts to see also the chart and according to decomposes the counter smooth assembly.



序号	名称	序号	名称
1	本体 Base body	12	O型圈(O-Ring)48.7X2.65
2	上盖 Spring case	13	复位弹簧 Diaphragm spring
3	过滤腔 Filter case	14	支撑弹簧 Holder spring
4	阀芯 Stem	15	锁紧螺母 M8X1 Lock nut
5	过滤件托盘 Filter holder	16	排水螺栓 Drain bolt
6	阀芯导套 Stem guide	17	O型圈(O-Ring)4.5X1.8
7	膜片部件 diaphragm assembly	18	螺母(Nut) M5
8	调节弹簧 adjust spring	19	O型圈(O-Ring)7.5X1.8
9	过滤件 Air filter	20	垫圈 Washer
10	弹簧座 Spring seat	21	内六角螺钉 (Bolt)M4*16
11	手轮 Handweel	22	内六角螺钉(Bolt)M5*16

组装图 Assembly Fig.

七、注意事项

注:(1)减压腔接口螺纹处标有 "N"(表示接口螺纹为 NPT1/4)
"R"(表示接口螺纹为 Rc1/4)

(2)安装:输入口必须与供气压力管线连接,输出压力口必须与气动仪表连接

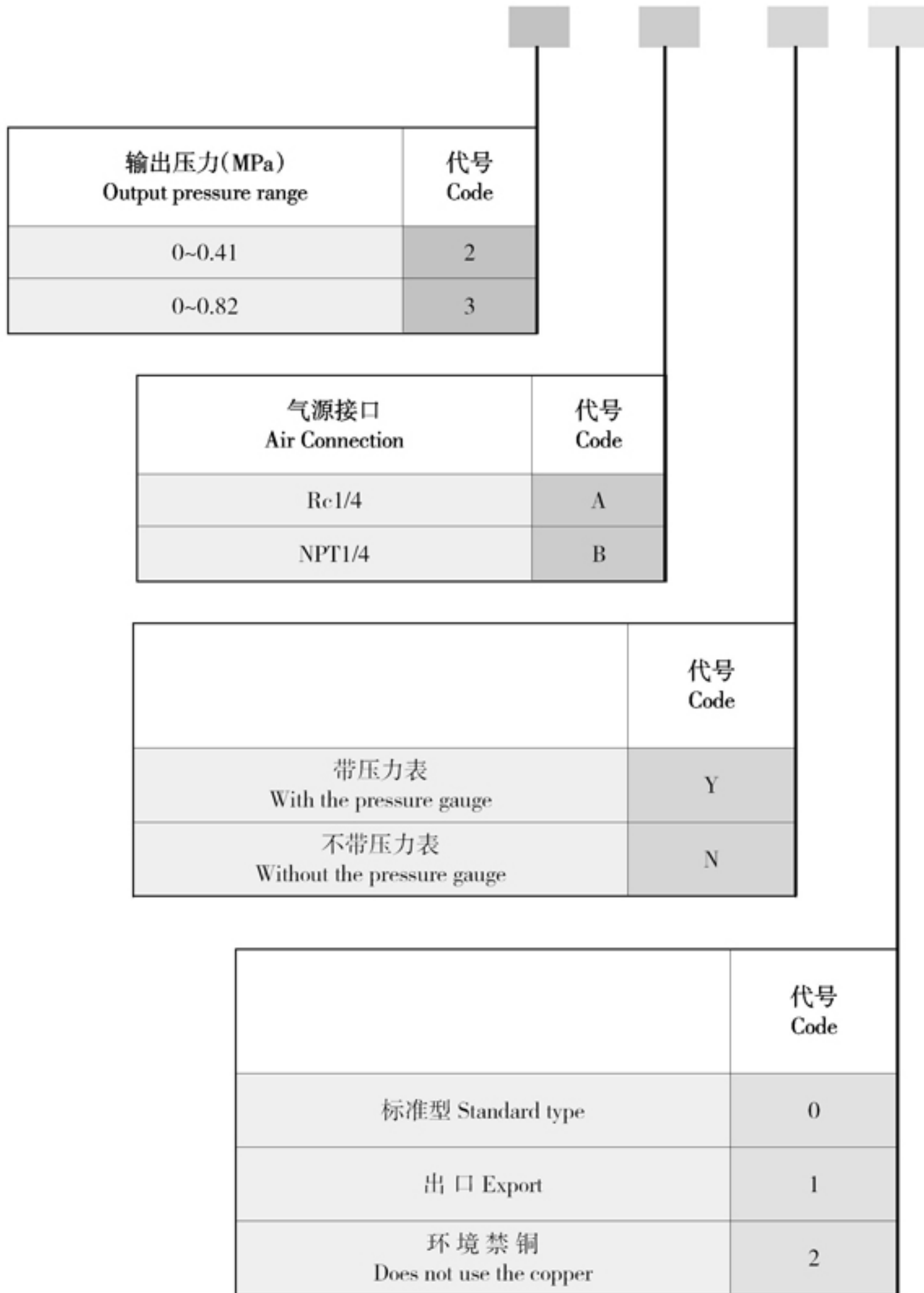
Attention

(1)The reduced pressure cavity connection thread place sign has "N" (connection thread NPT1/4)
"N" (connection thread NPT1/4)

(2)Installment: Input and the air feed pressure piping connection, Output and the air operated measuring appliance connection

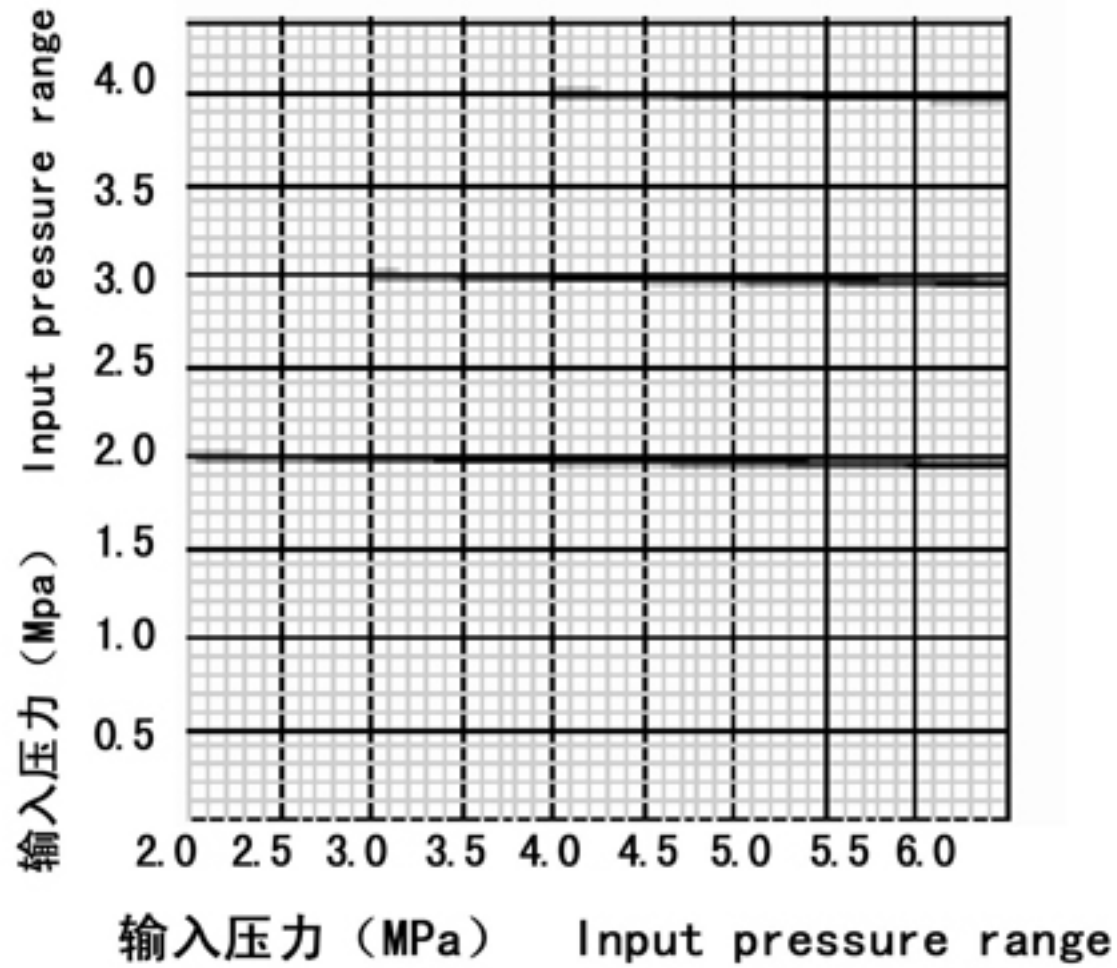
八、选型 Order

型号分类及订货标记 Model classification and order

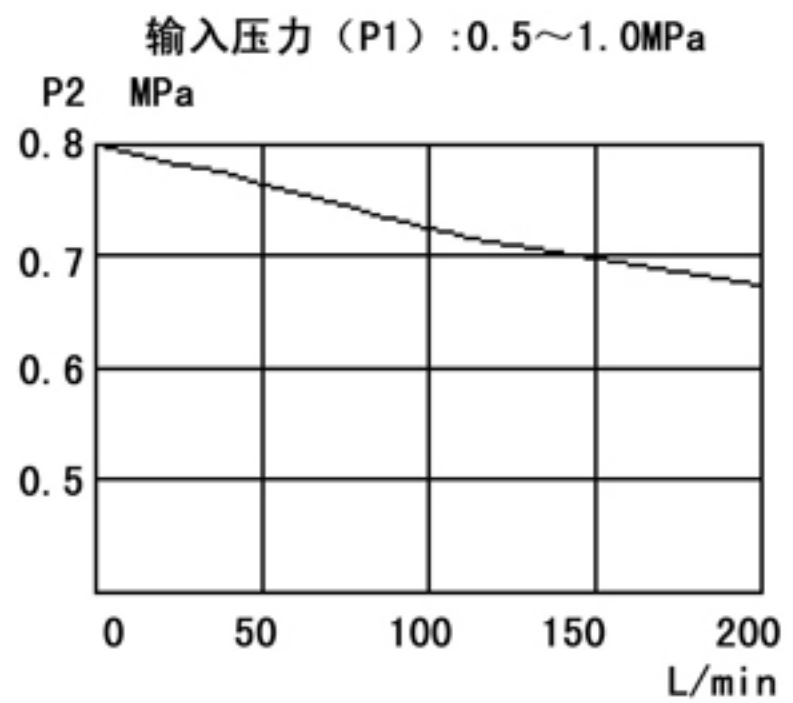
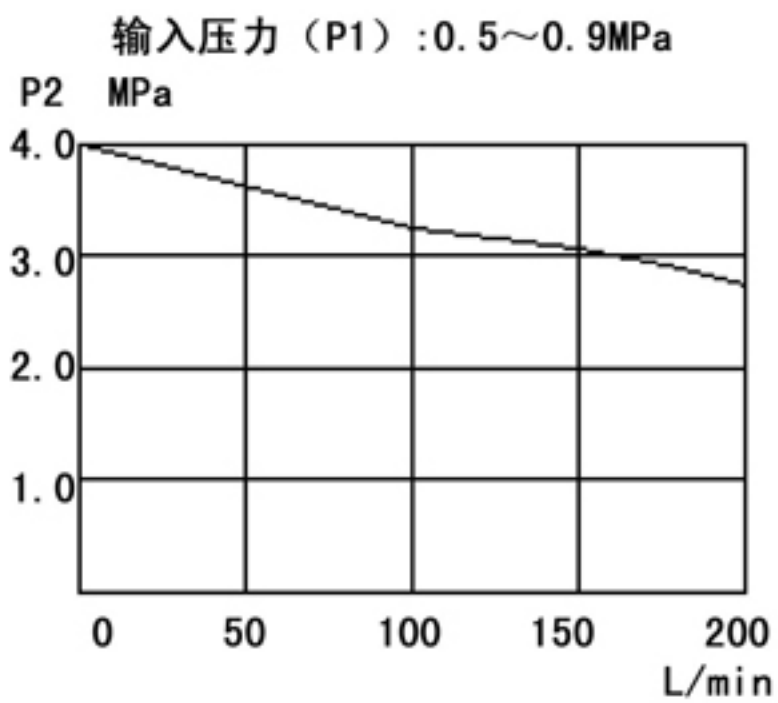


九、压力和流量特性 Output and Flow

1、压力特性 Pressure Effect



2、流量特性 Flow(L/min)



根据二次压力变化的流量特性曲线

50年控制阀制造经验
QUALITY SINCE 1959

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