普雷沃阀业（上海）有限公司

Polovo valves（Shanghai）Co.,Ltd.

POV PO1646 型气动薄膜单座调节阀

简介 （Introduction）

单座调节阀是流体控制阀门中结构最简单，流量特性最精确，重量最轻巧，使用最普遍的阀门。单座调节阀具有泄漏量最小，比套筒阀及双座阀压力损耗小等优点。只要在允许压差内，能用单座的就不用套筒或双座或其他阀门。

◆ 单座阀选型注意事项：

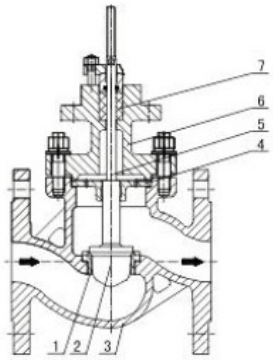
1. 由于单座阀在关闭时不平衡力(Ft) 相对其他类调节阀较大，一定要求执行器具有与之相匹配的输出力，若在允许压差外就不能选用单座阀。
2. 大口径时要验算不平衡力，因为不平衡力较大时，势必造成执行机构规格相应加大。
3. 在大流量时（管道一定，超过单座阀的流量力 KV 时），要考虑其他型调节阀。

Single-seat regulating valve is the most simply structure in the fluid control valve, flow characteristics most accurate weight lightest, most commonly used valve. Single-seat control valve has a minimal amount of leakage than the sleeve valve and valve seat pressure loss is small. As long as within the allowed pressure difference, do not use single-seat or double-seat, or other types of valve;

◆ Single-seat valve selection considerations:

1. due to a single seat valve when closed unbalanced force (Ft) relative to other types of valves bigger, certain requirements have to match the actuator output force ,, if outside the allowed pressure difference will not be able to choose single-seat valve
2. Large diameter when calculating the unbalance force, because of the unbalanced force is bigger, is bound to cause actuators specifications corresponding increase
3. In the large flow (pipes, must be over single-seat valve the flow force KV), to consider other type control valve

◆ 单座阀基本结构（ Single seat valve basic structure ）

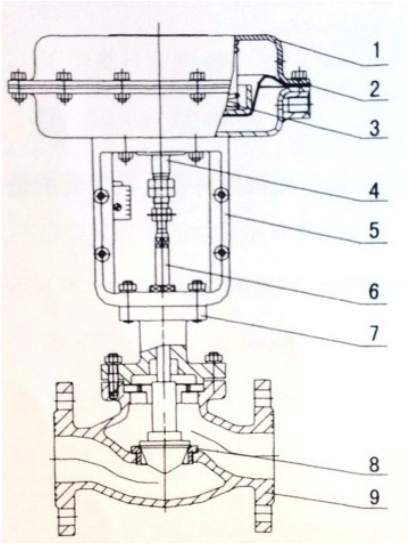
1. 阀座 (Valve seat) 2. 阀芯(Valve core) 3. 阀体(Valve body) 4. 导向阀(Pilot valve) 5. 阀杆(Valve shaft) 6. 阀盖(Bonnet) 7. 填料(Packing)	直通单座(Through single seat) 	角形单座(Angle type single seat) 

普雷沃阀业（上海）有限公司

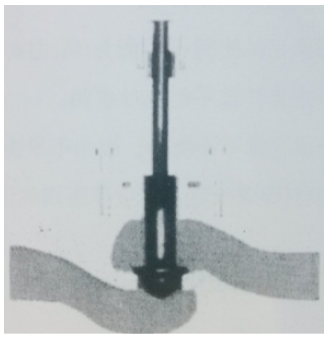
Polovo valves（Shanghai）Co.,Ltd.

◆ POV PO1646 型气动薄膜单座调节阀基本结构：

(PXP Series pneumatic type diaphragm single seat control valve basic structure)



1.膜盖：Cap　　2. 膜片：Diaphragm　　3.弹簧：Spring
4.推杆：Pushrod　　5.支架：Bracket　　6.阀杆：Shaft
7.阀盖(标准型，常温型)：Bonnet (Standard, normal temperature)
8.阀芯（Valve core）　9.阀体（Valve body）



◆ PXP 型主要零部件材料：

(Main Part materials)

零件名称 (Part name)	材 料 Material
阀体、阀盖 (Body, Bonnet)	WCB(ZG230-450)WCC(ZG270-500)WC6(ZG15CrMo) CF8(304)CF8M(316)CF3(304L)CF3M(316L)
阀芯、阀座 Valve core/ seat	304(OCr18Ni9)316 (OCr17Ni12Mo2) 316L (OOCr17Ni14Mo2) 并堆焊司太莱合金 17-4PH（沉淀硬化型不锈钢）
填料 (Packing)	PTFE(聚四氟乙烯)R.TFE（增强聚四氟乙烯）Graphite（柔性石墨）
密封垫片 (Seal gasket)	XB350（石棉橡胶板）、PTFE、柔性石墨夹金属 (Metal flexible graphite)
膜盖 (Cap)	A3(Q235 镀漆或喷塑) 304（特殊情况下采用: Special situation）
波纹膜片 (Bellows diaphragm)	丁晴橡胶夹增涤纶织 (NBR clip added polyester fabric)
弹簧 (Spring)	60Si2Mn 50CrVA
阀盖 (Valve bonnet)	304 316 316L 17-4PH

普雷沃阀业（上海）有限公司

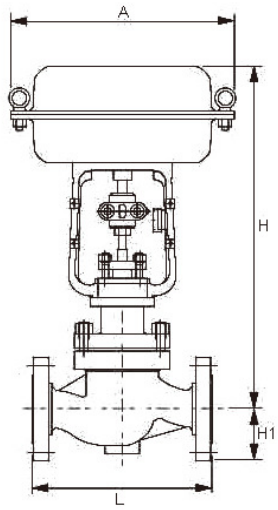
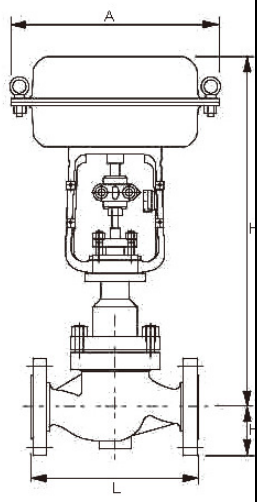
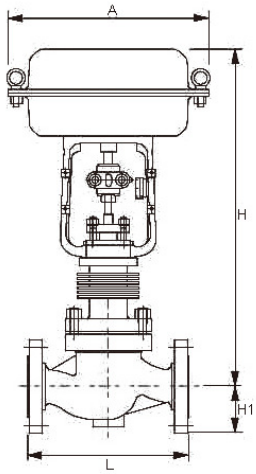
Polovo valves（Shanghai）Co.,Ltd.

产品参数：

Product Parameter	
Nominal Pressure 公称压力	PN1.6, 2.5, 4.0,6.0 ANSI150, 300, 600 JIS10,20,30,40
Working Temperature 工作温度	Normal temperature: -60~+250° C, -20~+200° C Heat-type : -60~+450° C Low temperature: -60~100° C, -100~250° C
Ambient Temperature 环境温度	-20~60° C
Flow Feature 流量特性	Linear type, Equal percentage type
Seat Pattern 阀座形式	Single seat, Double seat, Sleeve, Angle type
Regulating 可调比例	50:1
Air Pressure 气源	0.3-0.6MPa
Input Signal 输入信号	4-20mA, 1-5V, 0-10V
Feedback Signal 反馈信号	4-20mA, 1-5V, 0-10V
Part Name 零件名称	Material
Body Bonnet 阀体阀盖	WCB, CF8, CF8M, CF3, CF3M
Bore Bonnet 阀芯阀盖	304, 316, 316L, Surfacing welding satellite-alloy, 17-4PH
Packing 填料	V type PTFE, PPL, Flexible graphite
Stem 阀杆	304, 316, 316L, 17-4PH

外形尺寸图：

Outline size drawing:

			
常温型 (Normal temperature type)	波纹管密封型 (Bellows sealed)	高温散热型 (High temperature heat- type)	相关图片 (Related pictures)

普雷沃阀业（上海）有限公司

Polovo valves（Shanghai）Co.,Ltd.

◆ 主要技术参数：Main technical parameters:

DN	20				25					32	40		50			
Seat 阀座 (mm)	10	12	15	20	10	12	15	20	25	32	32	40	32	40	50	
KV 直线 (Line)	1.8	2.8	4.4	6.9	1.8	2.8	4.4	6.9	11	17.6	17.6	27.5	17.6	27.5	44	
KV 百分比 (Percentage)	1.6	2.5	4.4	6.9	1.6	2.5	4.0	6.3	10	16	16	25	16	25	40	
Stroke 额定行程 (mm)	16									25						

DN	65	80		100			125	150		200		250				
Seat 阀座 (mm)	65	65	80	65	80	100	125	125	150	150	200	250				
KV 直线 (Line)	69	69	110	69	110	176	275	275	440	440	690	1100				
KV 百分比 (Percentage)	63	63	100	63	100	160	250	250	400	400	630	900				
Stroke 额定行程(mm)	40									60		100				
Effective diaphragm area Ae (cm2) 膜片有效面积	600									1000		1600				

Nominal pressure 公称压力 PN	MPa	1.6, 2.5, 4.0, 6.4(6.3)/20, 5.0, 11.0	
	Bar	16, 25, 40, 64 (63)/20, 50, 110	
	Lb	ANSI: Class 150, Class 300, Class 600	
Inherent flow characteristic	Liner, Equal percentage（流量特性：直线，等百分比）		
Inherent adjustable ratio(R)	50:1（固有可调比）		
Spring (Signal) range Pr(MPa) 弹簧（信号）范围	20~100, 40~200, 80~240, (20~60, 60~100)		
Air pressure Ps (MPa)	0.14/ 0.25/ 0.3 （气源压力）		
Allowable leakage 允许泄漏量	Hard seal core 硬阀芯: IV (10^{-4}×KV) Soft seal core 软阀芯: To see GB / T4213-92		
Working temperature T (°C) 工作温度	Normal temp.		-20~200, -40~250, -60~250
	Radiator type	Code: S	-40~350, -60~350
	High temp.	Code: G	350~550 (Select high temperature materials)
	Low temp.	Code: D	D0: -60~-100, D1: -100~-200, D2:-200~-250
	Regulating	Code: Q	-40~150 (Spool with reinforced PTFE)

◆ POV POW1646 型微小流量气动薄膜单座调节阀基本结构:

POV POW1646 Pneumatic single seat diaphragm miniature flow rate control valve

简介 (Introduction)

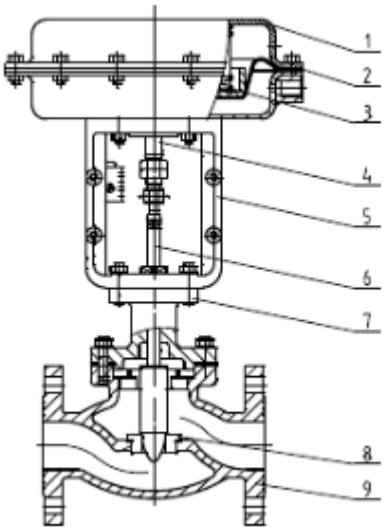
POV PO1646 型小流量薄膜单座调节阀可广泛控制各种气体，液体，蒸汽的流量，确保生产过程的正常进行；

本系列产品应用范围广，压力等级从 1.6MPa 至 11.0MPa. 额定流量系数 Kv 比 PO1646 型要小的多，最小可达到 4×10^{-2} 因而可应用在许多需精确控制微小流量的场合，如：精细化工，食品添加剂，医药，电子行业等；

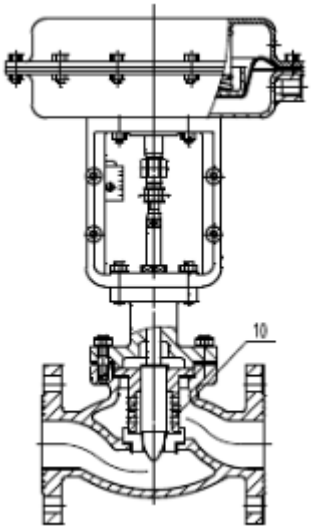
POV PO1646 small flow diaphragm single-seat regulating valve can be widely control all kinds of gas, liquid, steam flow, ensure the normal production process; this series products widely used, pressure class from 1.6MP to 11.0MPa. Rated flow coefficient (Kv) is much smaller than the PO1646 type, the smallest can be up to$4\times10^{-2,}$, Thus can be used in many small flow occasions need precise control, such as fine chemicals, food additives, medicine, electronic industry, etc;

◆ 构造与工作原理:

法兰连接 (Flanged type)



标准型 (Standard)



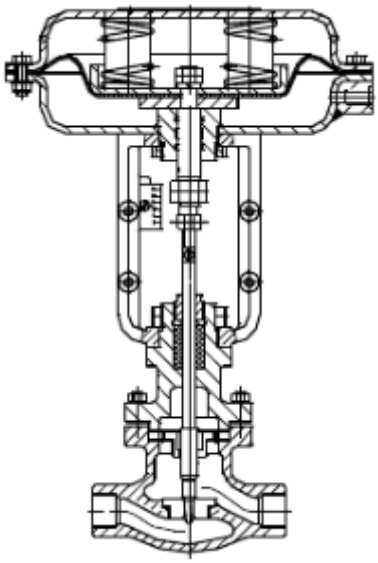
防空化、闪蒸及低噪声型 (Air defense, flash and low noise type)

1. 膜盖 (Bonnet) 2.膜片：Diaphragm
3. 弹簧：Spring 4.推杆：Pushrod
5. 支架（Bracket） 6.阀杆：Stem
7. 阀盖（标准型）（常温型）Cap (Standard) (Normal temperature)
8. 阀芯（Bore） 9.阀体：Body

普雷沃阀业（上海）有限公司

Polovo valves（Shanghai）Co.,Ltd.

螺纹连接　（Thread type）



本产品由多弹簧气动薄膜执行机构及柱塞形单座调节阀两部分组成。执行机构接受外来控制信号，推杆产生位移，带动阀杆 6、阀芯 8 相对于阀座产生相应位移，改变了进入阀体 9 流体流量，从而确保生产过程按一定的程序或要求正常进行。

This product

This product is composed of a plurality of spring pneumatic diaphragm actuator and the plunger single-seat control valve of two parts. Pneumatic actuator to accept the external control signals, push rod to produce displacement, drives the valve stem 6, core 8 produces corresponding displacement relative to the seat, changed into body fluid flow, to ensure the normal production process according to certain procedures or requirements

□特点

阀体流路严格按等截面低流阻设计，故压降损失小。

阀芯采用加强型阀杆单导向结构式，因而工作稳定性极佳，特别能承受高速流体对阀芯冲击。

执行机构采用多弹簧圆周均匀布置，使用高强度橡胶薄膜执行元件，能接受 20-100Kpa、40-200Kpa、80-240Kpa 等不同数值的控制信号。

□ Characteristics:

Valve flow path in strict accordance with section low flow resistance design, so the small pressure drop loss; Valve core with enhanced stem single guide structured, so good job stability, especially can bear high velocity impact of valve core; Actuator adopt more spring uniform circular arrangement, using high strength rubber diaphragm executive element, can take 20 to 100Kpa, 40-200Kpa, 80-240Kpa etc. Different numerical control signals.

普雷沃阀业（上海）有限公司

Polovo valves（Shanghai）Co.,Ltd.

□ 主要技术参数和性能指标

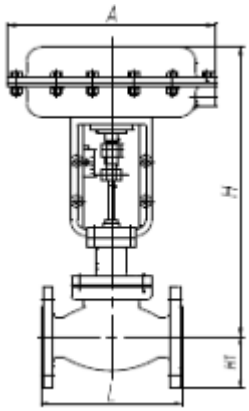
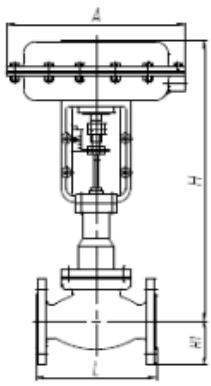
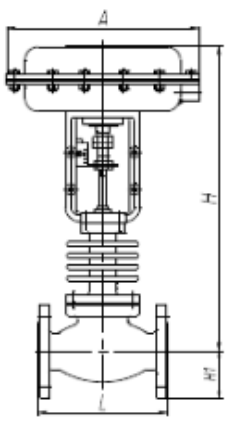
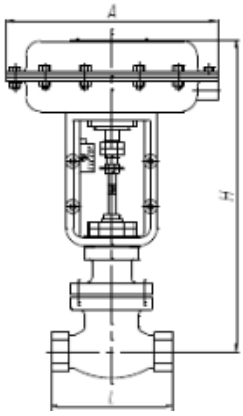
Main technical parameters and performance:

DN	20 25												
Seat diameter 阀座直径 dn (mm)	2	3	4	5	6	7	8	9	10	12	15	20	25
KV (Line) 直线	0.02	0.08	0.12	0.2	0.32	0.5	0.8	1.2	1.8	2.8	4.4	11	6.9
Stroke 额定行程 (mm)	10									16			
Effective diaphragm area Ae (cm2) 膜片有效面积	280 / 400												

Nominal pressure 公称压力 PN	MPa	1.6, 2.5, 4.0, 6.4(6.3)/20, 5.0, 11.0	
	Bar	16, 25, 40, 64 (63)/20, 50, 110	
	Lb	ANSI: Class 150, Class 300, Class 600	
Inherent flow characteristic 固有流量特性	Linear		
Spring (Signal) range Pr(MPa) 弹簧（信号）范围	20~100, 40~200, 80~240, (20~60, 60~100)		
Air pressure Ps (MPa) 气源	0.14/ 0.25/ 0.3		
Allowable leakage 允许泄漏量	Hard seal core 硬阀芯， VI (Micro air bubble level: 微气泡级)		
Working temperature T (°C) 工作温度	Normal temp. 常温型	标准型	-20~200, -40~250, -60~250
	Radiator type 散热型	Code: S	-40~350, -60~350
	High temp. 高温型	Code: G	350~550 (Select high temperature materials) 选用高温材料
	Low temp. 低温型	Code: D	D0: -60~-100, D1: -100~-200, D2:-200~-250

□ 外形尺寸

Outline size drawing:

			
常温型 (Normal temperature type)	波纹管密封型 (Bellows sealed)	高温散热型 (High temperature heat- type)	螺纹焊接尺寸 (Thread , welded type)

□ 连接尺寸及标准 *Connection size and standard:*

● 法兰按 GB/T9113-2000(默认标准)　也可按 JB/T79.1-94, JB/T79.2-94, 或 HG20592～HG20635-97

The flange according to GB/T9113-2000 (the default), also JB/T79.1-94, JB/T79.2-94, or HG20592～HG20635-97

● 法兰密封面型式:PN16 为凸面法兰;PN25 为凸面法兰　PN40、PN64(63)为凹凸面法兰,阀体为凹面法兰

The flange sealing surface model: PN16, RF; PN25, RF; PN40、PN64(63) for MFM, body for FM;

● 法兰端面距按 GB12221-89(其它标准须指明)

Flange end face according to GB12221-89 (other standard must be indicate)

● 螺纹连接:G3/4″

Thread connection: G1/4”

● 焊接连接按：GB12224-89

Welded connection according to GB12224-89

● 执行机构气信号接口:内螺纹 M10x1

Actuator air signal interface according to: Inner thread M10*1

● 阀体法兰及法兰端面距离可以按用户指定的标准制造,如 ANSI，JIS 等。

The valve flange and flange end face distance can be made according to user specified criteria, such as ANSI, JIS, etc

订货须知：

订货时请用户提供以下资料：

- 调节阀名称,型号，用途
- 公称通径（mm），公称压力（MPa），工作温度及范围
- 阀前压力，阀后压力
- 介质名称及状态，介质流量
- 阀盖形式
- 整机作用方式（气开还是气关）仪表风（气源）压力
- 阀体，阀内件材质要求
- 附件要求：

电气阀门定位器，空气过滤减压阀，电磁阀，阀位传送器，保卫阀，（顶装）手轮装置等；

- 阀体法兰标准(不指明时我公司按 GB12221-89 规定订货)
- 其他特殊要求（如耐蚀要求，防爆等级要求，泄漏等级限制要求，等等）

How to order:

◆ Please provide these parameters when place a order:

- Regulating valve name, model, and application;
- Nominal size (mm), nominal pressure (MPa), working temperature and range of it;
- After the valve pressure and before the valve pressure;
- Medium name and state, medium flow;
- Valve bonnet type;
- The valve action type: (air to open or air to close) Air supply pressure;
- Valve body and inner trim material requirements;
- Accessories requirements:

  Electric-pneuamtic positioner, air-filter pressure relief valve, solenoid valve, valve position transmitter, etc;
- Flange standard: (Do not indicate our company according to the regulations of GB12221-89 order)

□ 气动调节阀气动附件

Pneumatic control valve pneumatic accessories:

AFC-2000 过滤减压阀

品牌	Brand Name	POLOVO
压力范围	Pressure Range	0.05~0.85MPa
最大可调范围	The Max. adjustable range	0.95MPa
保证耐压力	Ensured pressure resistance	1.5MPa
环境温度	Ambient temperature	0~60°
滤芯精度	Filter precision	5~40Micron (微米)
接口尺寸	Interface size	G1/4
阀体材质	Material	Die-casting aluminum alloy ; Organic glas 压铸铝合金，有机玻璃
适用介质	Applicable Medium	Compressed air 压缩空气
作用	Function	Pneumatic valve air filter stabilized voltage 用于气动阀门过滤，稳压，减压作用

YT-200/ YT-205/ YT-220/ YT225 过滤减压阀

普雷沃阀业（上海）有限公司

Polovo valves（Shanghai）Co.,Ltd.

□ **气动调节阀气动附件**

YT-100L 电气定位器：

定位器 Positioner	作用形式 action type	单作用 (Single acting)	双作用 (Double acting)
	输入信号 Input signal	4-20mA DC	
	阻抗 Impedance	250±15ohm	
	输入压力 Supply Pressure	1.4~7kgf/c ㎡(20~100psi)	
	行程范围 Stroke	0-90°	
	气源接口 Air Connection	PT(NPT)1/4	
	电源接口 Electric Connection	PF1/2(G1/2)	
	防爆等级 Explosion-proof Class	ExdmIIBT5、 ExdmIICT5、 ExiaIIBT6	
	防护等级 Protection Class	IP66	
	工作温度 Working Temperature	-20~+70℃	
	防爆温度 Explosion-proof Temperature	-20~+60℃	
	直线性 Linear	±1%F.S	±2%F.S
	滞后度 Hysteresis	1%F.S	
	灵敏度 Sensitivity	±0.2%F.S	±0.5%F.S
	重复性 Repeatability	±0.5%F.S	
	空气消耗量 Air Consumption	3LPM	
阀位变送器	输入形式 Input type	2 wires connection （2 线连接）	
	输出信号 Output signal	4-2mA DC	
	负载电阻 load resistance	0~600ohm	
	供给电压 Supply voltage	15~30V DC	
	电源接口 Electric Connection	PF3/4(G3/4)	
	环境温度 Ambient temperature	-20~+60℃	
	直线性 Linear	±1%F.S	
	灵敏度 Sensibility	±0.2%F.S	
	滞后度 Hysteresis	±0.2%F.S	

普雷沃阀业（上海）有限公司

联系电话： 021-68112100

联系传真：021-39652505

2013.7.31

汪琴 （15901763564）