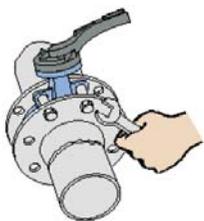


7



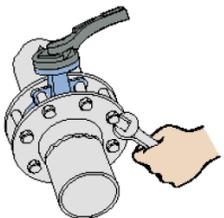
7, 校正阀门位置并将四对螺栓拧紧,
(注意不要拧得过紧) Calibration and
tighten (Note: Not to twist too tight)

8



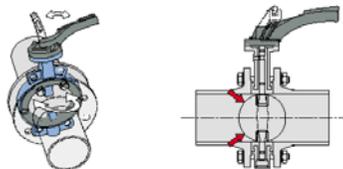
8. 将阀门打开, 保证阀板能自由开闭, 然后
使阀板轻微开启 (Free to open and close,
then make disc slightly open)

9



9, 交叉均衡将所有螺母拧紧
(Cross equalization. Tighten all nuts)

10



10, 再检查一遍确认阀门能自由开闭, 注
意: 请确认阀板没有碰到管道 (Check again
to confirm valve to open and close freely,
Note: Please make sure the valve plate
without meeting pipeline)

普雷沃阀业(上海) 有限公司
Polovo valves (Shanghai) Co., Ltd

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电话 (TEL): 021-68112100 68112068



单位

蝶阀 安装、维护、操作手册

普雷沃阀业(上海)有限公司

POV Valves

Butterfly valve

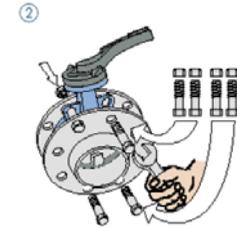
Installation Maintenance manuals

Polovo valves (Shanghai) Co., Ltd

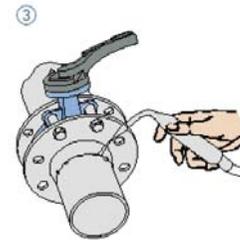
九、安装图解



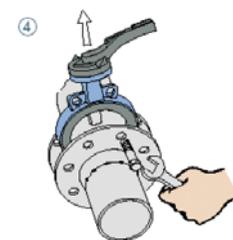
1. 将阀门放置于安装的两法兰片之间
(Put valve between two pieces flanges)



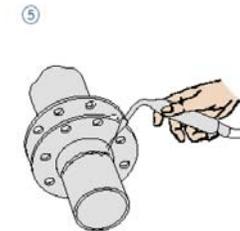
2. 将四对螺栓螺母轻轻插入法兰孔，将螺母稍加拧紧以校正法兰面的平面度 (Put 4sets bolts and nuts insert into the flange holes, tighten nut slightly to calibration on the surface of the flange flatness)



3. 将法兰利用点焊固定于管道上
Fixed on flanges using spot welding



4. 将阀门移出
Remove the valve out

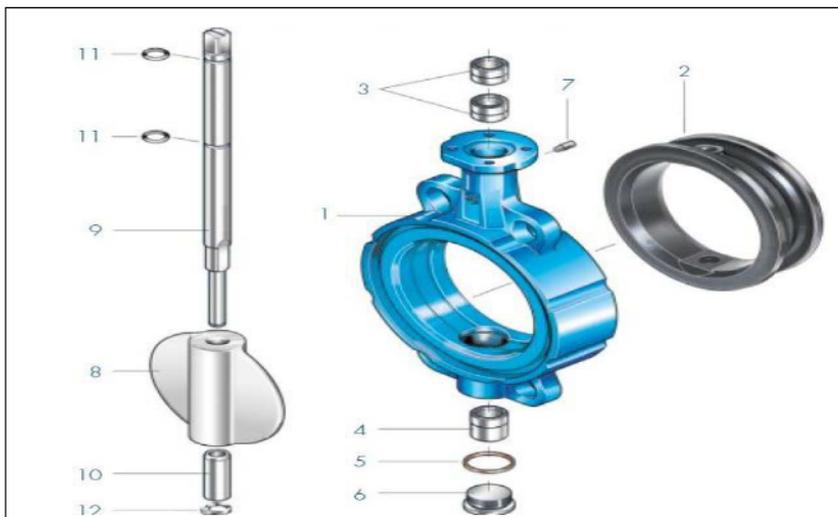


5. 将法兰完全焊接固定在管道上
Will be fixed on the pipeline flange welding completely



6. 待焊口冷却后再安装阀门。保证阀板有一定的开度 (Stay cool joint before installation to ensure that the valve plate has the opening of the valve)

零件图



部件名称:

1. 阀体	Valve body
2. 阀座密封圈	Seat seal ring
3/4. 阀杆轴套	Shaft sleeve
5. 阀塞密封环 DIN7603	The plug sealing ring DIN7603
6. 阀塞 DIN908	Valve plug DIN908
7. 锥销 DIN915 DIN471	Taper pin
8. 阀板	Disc
9. 阀轴	Shaft
10. 单阀杆套筒	Single stem sleeve
11. O-型密封环	O-rings
12. 阀杆定位环化密封圈	Valve stem locating ring seal

普雷沃阀业（上海）有限公司
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PVO气动蝶阀

说明书

POV Pneumatic butterfly valve (Instruction Book)



普雷沃阀业(上海)有限公司



AFC-2000 Air filter pressure release valve

(AFC-2000空气过滤减压阀)

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	
接口尺寸 (Interface size)	G1/4	
材质 (Material)	压铸铝, 有机玻璃 Die-casting aluminum alloy ; Organic glass	
适用介质 (Applicable Medium)	压缩空气 (Compressed air)	
作用 (Function)	气动阀空气过滤器稳定电压 Pneumatic valve air filter stabilized voltage	

AFC-2000 简介

AFC-2000系列空气过滤减压阀为气动调节阀附件之一，

作用：稳压、过滤压缩空气中的油水。使气动阀得到稳定洁净的气源；使得条件阀等能够稳定工作并起到减压的作用，它的滤芯精度为：5~40微米；

AFC-2000 Series air filter pressure reducer as one of the pneumatic regulator accessories,
Action: Stable pressure, filtering compressed air of the oil-water, filter the impurities, dust and make the pneumatic valve get stable and clean the air source; made the regulator valve can be work stable and can reducing the pressure of the valve, the filter precision is: 5 ~ 40micron;

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	4-2mA DC	
	阻抗 Impedance	250±15ohm	
	输入压力 Supply Pressure	1.4~7kgf/cm ² (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 (Ex)	ExdmIIBT5、ExdmIICT5、ExiaIIBT6	
	防护等级 Protection Class	IP66	
	工作温度 Working Temp.	-20~+70℃	
	防爆温度 Exp. 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 Valve Positional Transmitter	输入形式 Input type	2 wires connection	
	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 temp.	-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		



POLOVO是法国著名的控制阀门制造商之一，也是世界流体过程工业领导者。产品以独特的设计、卓越的品质、精湛的制造工艺、近乎完美的运行可靠性，为全球使用者提供最优质的服务。

主要有气动阀、电动阀、止回阀、电磁阀、调节阀等控制阀门，在控制阀的研究、开发与生产制造上有丰富的经验和独特的设计特点。产品广泛应用于水处理设备、环保工程、电站、钢铁工业、石油、化工、纺织印染、煤矿、电子、汽车、供热制冷、制药、市政、造船、冶金、轻工等领域

POLOVO以卓越的品质和完善的售后服务赢得广大客户青睐，广泛应用于纺织、电站、石油化工、供热制冷、制药、造船、冶金、轻工、环保等领域。

POLOVO在中国的业务迅速拓展，POLOVO产品在众多工业领域中得到广泛应用。

POLOVO立足于今天，放眼于将来。POLOVO广大客户一起发展，致力于产品更新、新技术开发及应用，工业现代化做出一份贡献。帮助客户成功，与客户一起成长。

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更多详细资料信息



● POLOVO is a famous French control valve manufacturer, and also one of the world fluid process industry leaders. Products with unique design excellent quality superb manufacturing process nearly perfect operation reliability, for the world to provide users the best quality service

● Mainly with pneumatic valves, electric valves, check valves, Solenoid valves, the regulator, control valves, etc control valve. In the research, development and production have rich experience and unique design features. Products are widely applied to water treatment equipment, environmental engineering, power plant, steel industry, petroleum, chemical industry, textile printing and dyeing, coal mine, electronics, automobiles, heating refrigeration, pharmacy, municipal, shipbuilding, metallurgy, light industry, and other fields

● POLOVO by the excellent quality and perfect after-sale service wins the general customer favor, are widely used in textile, power plant, petrochemical industry, heating refrigeration, pharmacy, shipbuilding, metallurgy, light industry, environmental protection, etc.

● POLOVO business quickly expanding in China, POLOVO products in various industries have been widely used.

● POLOVO based on today, looking in the future POLOVO customers development together, committed to the product update new technology development and application, industrial modernization make a contribution to help the customer get the success to our customers, and grow together.

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More detail information.....

	<p>PLS-200A magnetic type limit switch</p> <ul style="list-style-type: none"> -Operating distance : 3mm -Rated voltage : DC8V -Switching frequency : 0~100HZ -magnetic-lag : Typ.5% -Short-circuit protection : Yes -Valve status indicator : LED yellow -Standard : DIN EN 60847-5-6 (NAMUR) -Ambient temperature : -25~+70℃ -Shell material : PBT butylene -Protection class : IP67
	<p>VEL-F Explosion proof limit switch</p> <ul style="list-style-type: none"> -Protection class : IP67/NEMA4&4(Standard) IP68 -Explosion-proof class : EEX d II BT6, EX d II CT6 -Compact solid shell design Additional limit switch : 3~4 mechanical switch Additional connection terminals : 8-20 Points -Micro switch : 2*SPDT(Standard) , Optional : 3*SPDT\4*SPDT\2 2*DPDT\2*SPDT+0-1K\2*DPDT+4-20mA Inductive switch : AUTONICS\ P + F -Three-dimensional position indicator can clearly show the valve's position -Two wire interface : Dual 3/4 NPT -Anti-off bolt -Easy mounting, stainless steel shaft and bracket accord to NAMUR standard;

PLS / VEL-F 系列限位开关 (Limit Switch Box)

 	<p>PLS-200A磁感应式回讯器</p> <ul style="list-style-type: none"> -操作距离：3mm -额定电压：DC8V -开关频率：0~100HZ -磁滞：Typ.5% -短路保护：Yes -阀状态指示：LED黄色 -标准：DIN EN 60847-5-6 (NAMUR) -环境温度：-25~+70℃ -外壳材料：PBT丁烯 -防护等级：IP67
	<p>VEL-F 防爆限位开关</p> <ul style="list-style-type: none"> -防护等级：IP67/NEMA4&4(标准) IP68 -防爆等级：EEX d II BT6, - - EX d II CT6 -外壳设计坚固紧凑 附加限位开关：3~4个机械开关 附加接线端子：8-20点 -微动开关：2*SPDT(标准), 选项： 3*SPDT\4*SPDT\2 2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma 感应开关：AUTONICS\ P + F -三维位置指示器能够清楚的显示阀门所处的位置 -双线接口：双3/4 NPT -防脱螺栓 -安装方便，不锈钢主轴及安装支架符合NAMUR标准

● 常见故障及检查、排除方法

故障现象	检查项目	解决方法
气动阀门不能动作	1、电磁阀是否正常，线圈是否烧坏，电磁阀芯是否被脏物卡死	更换电磁阀、更换线圈、清除脏物
	2、对气动执行器单独供气试验，检查密封圈及气缸是否损坏。	更换已坏的密封圈及气缸
	3、阀内有杂质将阀芯卡住。	清除杂质，更换已损件
	4、手动机构的手柄处于手动位置。	将手柄转到气动位置
动作迟缓	1、气源压力不够	增加气源压力4 - 7bar
	2、气动执行器输出扭矩过小。	增大气动执行器的型号
	3、阀门阀芯或其它阀件装配太紧。	重新装配调整
	4、气源管路堵塞，流量过小	排除堵塞，更换过滤器滤芯
回信器无信号	1、电源线路短路及断路。	检修电源线路
	2、回信器内凸轮位置不准确。	调整凸轮至正确位置
	3、微动开关损坏	更换微动开关

● 安装调试与维护

气动执行器为现场仪表，应定期进行维护和保养。执行器气源应保持干燥、清洁，定期对执行器相应配合使用的空气过滤器进行放水、排污，以免进入电磁阀和执行器，影响正常工作。在正常工作情况下，应每六个月检验一次，每年检修一次。

● Common fault and check, elimination method

Fault phenomenon	Check Item	Solution
Pneumatic valve can't action	1、 Whether the solenoid valve is normal or not, the coil is bad, the electromagnetic valve core is dirt jammed	Replace solenoid valve, change coil, remove dirt
	2、 Pneumatic actuators to separate gas supply test, check the sealing ring and cylinder for damage.	Change has bad sealing ring and cylinder
	3、 Impurity valve core will be stock.	Remove clutter, change already damaged pieces
	4、 Manual institutions in the manual position.	Will turn the handle to the pneumatic position
Slow action	1、 Air pressure is not enough	Air pressure increase 4-7 bar
	2、 Pneumatic actuators output torque is too small	Increase the pneumatic actuators models
	3、 Valve core or other valve parts assembly is too tight.	Assembly adjusting to
	4、 Gas pipeline plugging, flow is too small	Exclude jams, replace the filter core
Monitoring no signals	1、 Short circuit open circuit	Overhaul the power lines
	2、 The CAM position is not accurate.	Regulate to the right place
	3、 Micro switch damage	Replace micro switch

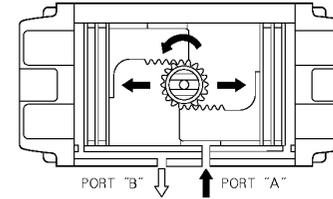
● Installation, Debugging and Maintenance

The pneumatic actuators for the field instrument, shall be regularly maintained actuator air should be kept dry, clean, the regular actuators used together with corresponding to the air filter the water, sewage, lest enter solenoid valve and actuators, affect the normal work. In normal work cases, be every six months an inspection, repair a year.

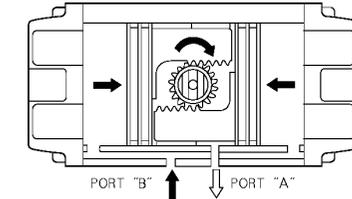
	<p>APL312 series, 2 sets valve position feedback</p> <ul style="list-style-type: none"> - Protection class : IP67/NEMA4&4(Standard) IP68 -Compact shell , indicator position easy to see -dual connection : 2 * 1/2NPT -Connection terminals : 8 Points -Micro Switch : 4*SPDT(Standard) , 2sets valve position feedback Optional : 2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma 1K\2*DPDT+4-20mA Inductive switch : AUTONICS\ P + F - Inductive switch : AUTONICS\ P + F -Anti-off bolt -Easy mounting, stainless steel shaft and bracket accord to NAMUR standard
	<p>APL102 aeries, 2 sets valve position feedback</p> <ul style="list-style-type: none"> -Protection class : IP67/NEMA4&4(Standard) IP68 -Compact shell, switch position easy to check -Additional limit switch: 3~4 mechanical switch Additional terminals : 8-16 Points -Micro switch : 4*SPDT(Standard) , 2 sets valve position feedback Optional : 3*SPDT\2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma Inductive switch : AUTONICS\ P + F -Dual connection: 2 * 1/2 NPT -Connection terminals : 8 Points -Anti-off bolt, - Easy mounting, stainless steel material shaft and bracket accord to NAMUR standard;

APL 系列限位开关 (Limit Switch Box)

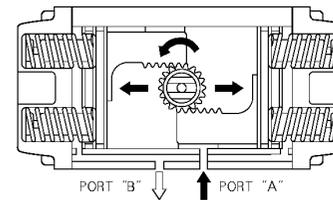
	<p>APL312 限位开关, 两组阀位反馈</p> <ul style="list-style-type: none"> -防护等级: IP67/NEMA4&4(标准) IP68 -外壳设计坚固紧凑 -开关位置可由指示器显示 -双线接口: 双1/2NPT管接口 -接线端子: 8点 -微动开关: 4*SPDT(标准), 两组阀位反馈; 选项: 2*SPDT\2 * DPDT\2*SPDT+0- 1K\2*DPDT+4-20mA 感应开关: AUTONICS\ P + F -防脱螺栓 -安装方便, 不锈钢主轴及安装支架符合 NAMUR标准
	<p>APL102 限位开关, 两组阀位反馈</p> <ul style="list-style-type: none"> -防护等级: IP67/NEMA4&4(标准) IP68 -外壳设计坚固紧凑 -开关位置可由指示器显示 附加限位开关: 3~4个机械开关 附加接线端子: 8-16点 -微动开关: 4*SPDT(标准), 两组阀位反馈; 选项: 2*SPDT\2 * DPDT\2*SPDT+0- 1K\2*DPDT+4-20mA 感应开关: AUTONICS\ P + F -双线接口: 双1/2NPT管接口 -接线端子: 8点 -防脱螺栓 -安装方便, 不锈钢主轴及安装支架符合 NAMUR标准

 执行器动作原理
双作用执行器


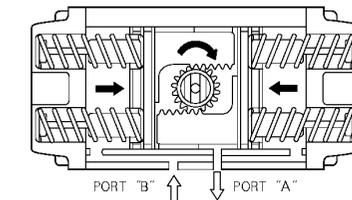
A口进气、B口排气, 推动两活塞分
向两边移动, 输出轴逆时针方向转动
单作用式



B口进气、A口排气, 推动两活塞合拢
向中心, 移动输出轴顺时针方向转动



A口进气、B口排气, 推动两活塞分
向两边移动, 同时压缩弹簧, 输出轴
逆时针方向转动



排气或失电时, 弹簧推动两活塞合拢
向中心移动, 输出轴顺时针方向转动

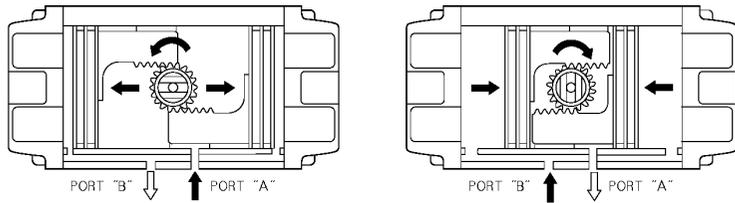
主要零部件材料

名称	材料(材料代号)			
	Z	C	P	R
阀体	HT200	WCB	ZG1Cr18Ni9 Ti	ZG0Cr18Ni12 MO2Ti
阀板	HT200	WCB	ZG1Cr18Ni9 Ti	ZG0Cr18Ni12 MO2Ti
阀杆	2Cr13	2Cr13	1Cr18Ni9Ti	0Cr18Ni12MO 2Ti
密封圈	丁晴, 乙丙, 氟丁, 氟塑料			
填料	丁晴, 柔性石墨, V型橡胶垫			



Actuator Working Principle

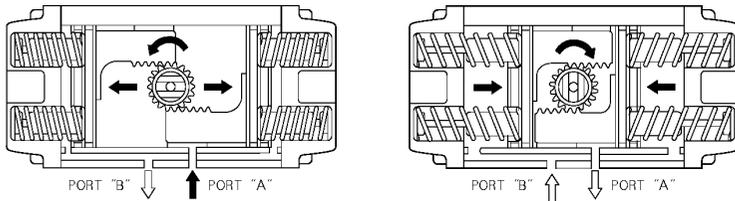
Double acting actuator:



Air to port A, B port exhaust, push two piston separate, The output axis counterclockwise rotation ; Air to port B, A port exhaust, Push two piston fold.

Remove output shaft clockwise.

Single acting actuator:



Air to port A, B port exhaust, Push two piston separate to both sides fold, The output axis counterclockwise rotation; Exhaust or lose electric, the spring push two piston fold to the center. The output shaft clockwise.

Main Part Material

Name	Material (Material Code)		
	C	P	R
Left Body	WCB	ZG1Cr18Ni9Ti	ZG0Cr18Ni12MO2Ti
Right Body	WCB	ZG1Cr18Ni9Ti	ZG0Cr18Ni12MO2Ti
Valve Core	WCB	1Cr18Ni9Ti	0Cr18Ni12MO2Ti
Seal Ring	PTFE (F) or High strength compound PTFE (PPL)		
Packing	PTFE or flexible graphite		

	<p>ITS-100 / ITS-110 Series</p> <ul style="list-style-type: none"> - Protection class : IP67/NEMA4&4(Standard) IP68 -Compact shell , indicator position easy to see -dual connection : 2 * 1/2NPT -Connection terminals : 8 Points -Micro Switch : 2*SPDT(Standard) , Optional : 3*SPDT\4*SPDT\2 2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma Inductive switch : AUTONICS\ P + F - Inductive switch : 2* AUTONICS, 2*P+F ITS-110 -Anti-off bolt -Easy mounting, stainless steel shaft and bracket accord to NAMUR standard
	<p>ITS-300 / ITS-310 series explosion proof</p> <ul style="list-style-type: none"> -Protection class : IP67/NEMA4&4(Standard) IP68 -Shell solenoid and beautiful design -Ex class : EEX d II BT6, EX d II CT6 -Switch position easy to check; - 2* 1/2NPT -Connection terminals : 8 Points - Additional limit switch : 3~4pcs limit switch Additional terminals : 8-20 Points -Micro switch : 2*SPDT(Standard) , Optional : 3*SPDT\4*SPDT\2 2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma Inductive switch : AUTONICS\ P + F (ITS-310 Sereis) Inductive switch: 2* AUTONICIS, 2* P+F

ITS 系列限位开关 (Limit Switch Box)

	<p>ITS-100 / ITS-110 系列</p> <p>-防护等级：IP67/NEMA4&4(标准) IP68</p> <p>-外壳设计坚固紧凑-开关位置可由指示器显示</p> <p>-双线接口：双1/2NPT管接口</p> <p>(ITS-100系列)：</p> <p>-接线端子：8点 -微动开关：2*SPDT(标准)，选项： 3*SPDT\4*SPDT\2</p> <p>2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma</p> <p>感应开关：AUTONICS\ P + F</p> <p>(ITS-110系列)：-防脱螺栓</p> <p>-感应开关：2* AUTONICS, 2* P+F</p>
	<p>ITS-300 / ITS-310系列防爆开关</p> <p>-防护等级：IP67/NEMA4&4(标准) IP68</p> <p>-外壳设计坚固紧凑 -开关位置可由指示器显示</p> <p>-防爆等级：EEX d II BT6, - - EX d II CT6</p> <p>-双线接口：双1/2NPT管接口</p> <p>-接线端子：8点 -附加限位开关：3~4个限位开关</p> <p>附加接线端子：8-20点</p> <p>(ITS-300系列)</p> <p>-微动开关：2*SPDT(标准)，选项： 3*SPDT\4*SPDT\2</p> <p>2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma</p> <p>感应开关：AUTONICS\ P + F</p> <p>(ITS-310 系列)</p> <p>感应开关：2* AUTONICIS, 2* P+F</p>

产品概述：

POLOVO系列气动蝶阀是由气动执行器与中线蝶阀组成,利用洁净的压缩空气作为能源,接受气动信号或电气定位器等附件信号进行工作,具有结构简单,操作方便等优点。蝶阀采用无磨损阀座设计,阀座为缓坡缓冲设计,阀板在关闭时接触到阀座缓冲坡,与阀座不产生硬性的磨擦。提高了使用寿命,从而减少了管道更换阀门频率和维修次数。性价比非常卓越。广泛应用于生产过程自动控制系统中的调节或开关操作场合。

气动执行器概述：

POADA ASR系列气动执行器设计简单紧凑,风格独特,全密封、模块式、内部气路,无须连接管线外露而受损。安装电磁阀、信号回讯器、阀门定位器或其他附件都极其方便。设计上考虑到安全操作,便于维修,容易拆卸和组装。

- 1、外壳是由铝合金挤压压制成型,表面经硬质阳极氧化处理,能够防腐、耐磨。具有重量轻,外形美观,强度和密封性能可靠。
- 2、醇缩醛轴垫片和活塞导环有很低的磨擦阻力,能吸收活塞侧向推力。
- 3、气缸内壁是经过珩磨,减少整体运动摩擦力,在输出轴的顶部和底部、装有醇缩醛轴承,以降低旋转磨擦阻力,延长寿命。
- 4、端盖、活塞是铝合金铸压精制而成。输出轴由316不锈钢制成。
- 5、开度指示器直观地显示“开”或“关”的位置,容易拆除以便扳手操作。
- 6、行程调节螺丝可机械限制气动执行器的转动角度。它以现场方式调整执行器的开或关的位置。

产品工作条件：

- a) 使用流体：空气、无腐蚀性气体和油；
- b) 压力范围：2-10巴 (Bar)
- c) 环境温度：标准型 (使用丁晴橡胶O型圈) -20℃~+80℃
低温型 (使用硅橡胶O型圈) -40℃~+80℃
高温型 (使用氟橡胶O型圈) -20℃~+150℃
- d) 行程调整：在90位置有+/-4°的可调范围: 90° +/-4°
- e) 润 滑：在正常工作条件下,不需添加润滑剂；
- f) 安 装：适合室内或室外安装；



● Summary of Pneumatic Actuators:

PO-ADA ASR Series actuators simple and compact design, unique style, the seal, modular, internal gas path, need not connect line exposed and be damaged. Install solenoid valves, signal back to the valve locator), or other accessories are extremely convenient. Design considerations to the security operation, convenient in maintenance, easy to remove and assembly.

- 1、 Shell is by the aluminum alloy extrusion molding control, surface treatment by the hard anodic oxidation, can anticorrosive, wear-resisting. With light weight, beautiful appearance, strength and reliable sealing performance.
- 2、 Alcohol acetal shaft gasket and piston guide ring have very low friction resistance, can absorb the piston lateral thrust.
- 3、 The cylinder wall is after honing, reduce the overall movement friction, in the top and bottom of the output shaft, and equipped with alcohol acetal bearing, friction resistance to reduce rotation, prolong life.
- 4、 Cover, the piston is aluminum alloy casting pressure refined but become. The output shaft by stainless steel : 316.
- 5、 The opening indicator and direct-viewing showing "on" or "off" position, easy to dismantle to wrench operation.
- 6、 Travel adjustment screws can mechanical limit the pneumatic actuators rotation Angle. It is on the way to the implementation of the adjustment on or off position.

● Product Work Conditions

- b) Use fluid: Air, no corrosive gas and oil;
- c) Pressure range: 2-10 Bar (Bar)
- d) Environmental temperature: standard (use NBR o-rings) -20 °C ~ + 80 °C
Low temperature type (use silicon rubber o-rings) -40 °C ~ + 80 °C
High-temperature type (use fluorine rubber o-rings) -20 °C ~ + 150 °C
- e) Stroke: in 90 position + /-4 ° adjustable range: 90 °C + /-4 °
- f) Lubrication: under normal working conditions, and does not need to add lubricant;
- g) Installation: suitable for indoor or outdoor installation;
- h) The highest use pressure: input pressure not more than 10 Pascal;

	<p>APL210N / APL310N Series</p> <ul style="list-style-type: none"> - Protection class : IP67/NEMA4&4(Standard) IP68 -Compact shell , indicator position easy to see -dual connection : 2 * 1/2NPT -Additional limit switch : 3~4pcs limit switch <p>Additional terminals : 8-16 Points (APL310N)</p> <ul style="list-style-type: none"> -Connection terminals : 8 Points -Micro Switch : 2*SPDT(Standard) , Optional : 3*SPDT\4*SPDT\2 2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma Inductive switch : AUTONICS\ P + F -Anti-off bolt -Easy mounting, stainless steel shaft and bracket accord to NAMUR standard
	<p>APL410N / APL510N Series explosion proof</p> <ul style="list-style-type: none"> -Protection class : IP67/NEMA4&4(Standard) IP68 -Shell solenoid and beautiful design -Ex class : EEX d II BT4, EX d II BT4 (APL510N) -Switch position easy to check; - 2* 1/2NPT -Connection terminals : 8 Points - Additional limit switch : 3~4pcs limit switch <p>Additional terminals : 8-20 Points</p> <ul style="list-style-type: none"> -Micro switch : 2*SPDT(Standard) , Optional : 3*SPDT\4*SPDT\2 2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma Inductive switch : AUTONICS\ P + F Anti-off bolt - easy mounting, stainless steel shaft and bracket accord to NAMUR standard;

APL 系列限位开关 (Limit Switch Box)

	<p>APL210N / APL310N 系列</p> <p>-防护等级：IP67/NEMA4&4(标准) IP68</p> <p>-外壳设计坚固紧凑 -开关位置可由指示器显示</p> <p>-双线接口：双1/2NPT管接口</p> <p>-附加限位开关：3~4个限位开关</p> <p>附加接线端子：8-16点 (APL310N)</p> <p>-接线端子：8点 -微动开关：2*SPDT(标准)，选项： 3*SPDT\4*SPDT\2</p> <p>2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma</p> <p>感应开关：AUTONICS\ P + F</p> <p>-防脱螺栓 -安装方便，不锈钢主轴及安装支架符合NAMUR标准</p>
	<p>APL410N / APL510N系列防爆开关</p> <p>-防护等级：IP67/NEMA4&4(标准) IP68</p> <p>-外壳设计坚固紧凑</p> <p>-防爆等级：EEX d II BT4, EX d II BT4 (APL510N)</p> <p>-开关位置可由指示器显示 -双线接口：双1/2NPT管接口</p> <p>-接线端子：8点 -附加限位开关：3~4个限位开关</p> <p>附加接线端子：8-20点 -微动开关：2*SPDT(标准)，选项：3*SPDT\4*SPDT\2</p> <p>2*DPDT\2*SPDT+0-1K\2*DPDT+4-20Ma</p> <p>感应开关：AUTONICS\ P + F</p> <p>-防脱螺栓</p> <p>-安装方便，不锈钢主轴及安装支架符合NAMUR标准</p>

主要技术参数 (Main Technical Parameters)

Main Technical Parameters

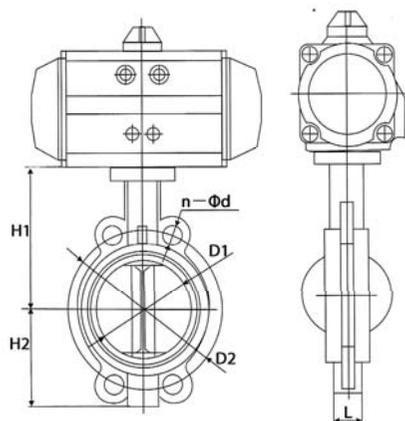
公称口径	DN (mm)	40-1200		
公称压力	PN (MPa)	1.0	1.6	6.4
试验压力 (MPa)	强度试验	1.5	2.1	9.6
	密封试验	1.1	1.7	7.04
连接方式	对夹，凸耳对夹，法兰，卡箍；			
阀体材质	球墨铸铁，碳钢，不锈钢304，316，316L，铝合金，塑料UPVC			
阀板材质	球铁镀锌板，尼龙涂层，不锈钢304,316,316L铝青铜，塑料			
适用介质	水、蒸气、油品、海水、酸碱类、卫生级别			
适用温度	EPDM: -30℃~120℃ Silicon rubber: -30~100℃ PTFE: -30℃~150℃ Hard seal material: -30℃~450℃			
执行器	POADA系列 POASR系列 气源压力 0.2~0.8Mpa			

外形尺寸图 (Outline size drawing)

Nominal diameter	DN (mm)	40-1200		
Nominal pressure	PN (MPa)	1.0	1.6	6.4
Testing pressure (MPa)	Strength testing	1.5	2.1	9.6
	Seal testing	1.1	1.7	7.04
Connection type	Wafer, Lug type, flanged, clamp			
Body material	Ductile iron, WCB, SS304, 316,316L, AL- alloy, plastic UPVC, CPVC, etc			
Seat material	DI galvanized disc, nylon coating, SS304,316,316L, Al-bronze, Plastic UPVC, CPVC, etc.			
Applicable medium	Water, steam, oil, sea water, acid-base, sanitary food grade class occasions, etc			
Applicable temperature	EPDM: -30℃~120℃ Silicon rubber:-30~100℃			
	PTFE: -30℃~150℃ Hard seal material: -30℃~450℃			
Pneumatic actuator	POADA Series POASR Series Air supply 0.2~0.8MPa			

外形尺寸图 (Outline size drawing)

对夹 (Wafer)



(型号规格表) Type Specification Table		尺寸 Size (mm)				
Diameter (mm)	英寸 Inch	L	D1	D2	H1	H2
50	2	43	52.6	125	142	80
65	2 1/2	46	64.4	145	155	89
80	3	46	78.9	160	161	95
100	4	52	104.1	180	180	114
125	5	56	123.4	210	193	127
150	6	56	155.9	240	205	139
200	8	60	202.8	295	250	175
250	10	68	250.8	350	282	203
300	12	78	301.9	400	326	242
350	14	78	334	460	358	267
400	16	102/88	390	515	380	301
450	18	114/107	441	565	422	381
500	20	127	492	620	479	387
600	24	154	593	725	562	457

Pneumatic valve accessories

POLOVO Solenoid Valves

POLOVO POT Series solenoid valves for pneumatic valves “open” or “turn off the electric-controlled operation: Accord with NAMUR standard; can be divided into SMT type and off-board type; double acting pneumatic actuator match with POT521: 2/5way solenoid valve, and single acting pneumatic actuator match with POT321: 2/3way solenoid valve; Structure simple compact, small volume, long service life; POT series has basic type and EXd explosion proof type, explosion type class is: Ex d II BT4, Protection class: IP67;



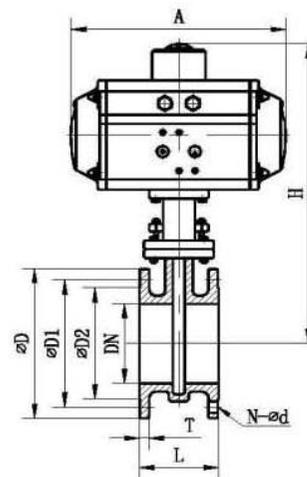
POT Series solenoid valves (POT系列电磁阀)	
Interface	ISO228/1 G1/4
Ambient Temperature	-20~60℃
Working Temperature	Normal temperature
Working Pressure	0.3~10bar
Medium	After filtering 50ms, lubrication or non lubrication of the compressed air.
Applicable occasion	Used for explosion-proof occasions pneumatic valve air reversing
Switching Time	About 40microns
Installation	Accord with NAMUR standard and VDI/DE3845 double hole
Standard Voltage	24VDC, 24VAC50HZ, 110VAC50HZ, 220VAC50HZ
Voltage deviation	±%10
Power Consumption	Standard coil: AC starting power 9VA, Stable power 5VA DC starting power 5W, Stable power 2.5W
Working Style	100% ED(DB) connection working
Protection Class	IP65 accord with correct installation DIN40050 edge connector
Electric Interface	PG9 connect
Explosion-proof Class	EX m II T4

Pneumatic valve accessories
换向电磁阀 (Solenoid valve)
POLOVO 气动换向电磁阀

用于气动阀门的“开启”或“关闭”的电控操作，起到切换气源的作用；电磁阀符合NAMUR连接标准，可分为贴装式和分离式；双作用式配二位五通电磁阀，单作用配二位三通电磁阀；整机简单，紧凑，体积小，寿命长；POT该系列电磁阀有基本型和隔爆型，防爆等级Ex d II BT4，防护等级IP67。



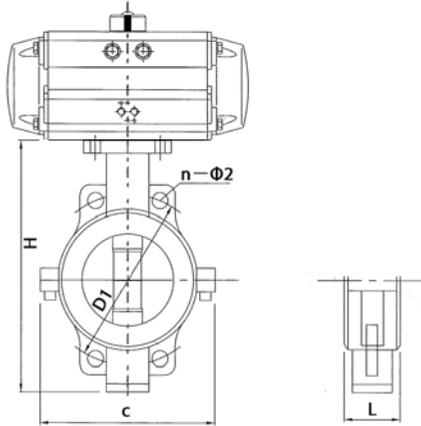
接口	ISO228/1标准G41/4
环境温度	-20℃~+50℃
介质	经过过滤（50微米润滑的或非润滑的压缩空气，而且干燥露点到-20℃
换向时间	大约40毫秒
安装	符合NAMUR标准和DI/VDE3845的双孔
标准电压	24DC,24VAC50Hz, 110VAC50Hz和220VAC50Hz
电压偏差	±10%标准
功耗	标准线圈：AC气动功率6VA,稳定功率4.3VA(热态)DC2.6W(热态)3W (冷态)
工作方式	100%ED(DB) 连续操作
防护等级	IP65带符合DIN40050的正确安装边接器
电气连接	Pg9连接
防爆等级 (可选)	EX m II T4

外形尺寸图 (Outline size drawing) 法兰 (Flange)


英寸 (Inch)	DN (mm)	型号规格表 (Specification Table)							
		D	D1	D2	T	A	H	L	N-d
2"	DN								
2 1/2"	50	165	125	100	16	214	270	108	4-18
3"	65	185	145	120	16	214	280	112	4-18
4"	80	200	160	135	18	252	310	114	8-18
5"	100	220	180	155	18	252	330	127	8-18
6"	125	250	210	185	18	270	368	140	8-18
8"	150	285	240	210	20	354	438	140	8-22
10"	200	340	295	265	20	418	488	152	8-22
12"	250	395	350	315	22	450	540	165	12-22
14"	300	445	400	375	22	450	580	178	12-22
16"	350	505	460	425	24	518	644	190	16-22
18"	400	565	485	485	26	530	685	216	16-26

外形尺寸图 (Outline size drawing)

对夹衬氟 (Wafer PTFE lined)

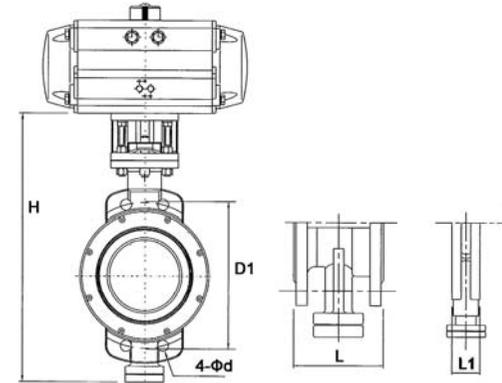


Type Specification Table (型号规格表)

通径 Diameter (mm)	英寸 Inch	尺寸 Size (mm)					
		L	H	C	D1	n-φm	kg
50	2	42	212	130	120	4-22	3.2
65	2 1/2	45	230	150	136.2	4-22	5.8
80	3	45.5	233	164	160	4-22	6.5
100	4	52	270	188	185	4-24	11
125	5	54	298	220	215	4-24	13
150	6	56	337	252	238	4-26	16
200	8	61	407	305	295	4-26	27
250	10	65.3	481	370	357	4-29	35
300	12	77	555	430	407	4-29	51
350	14	77	610	470	467	4-30	76
400	16	86.5	715	565	515	4-28	97
450	18	105.5	778	620	565	4-28	125
500	20	131.8	870	695	620	4-28	186

外形尺寸图 (Outline size drawing)

高性能对夹 (High performance wafer type)

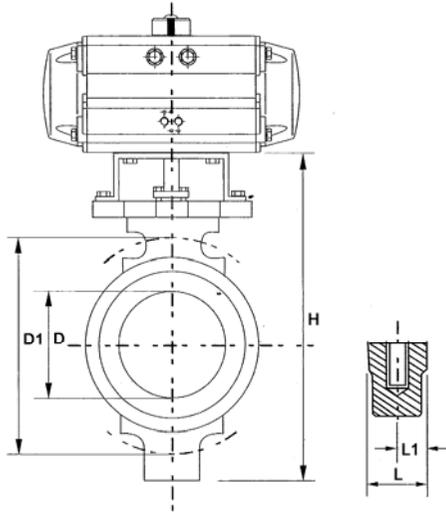


Type Specification Table (型号规格表)

通径(mm)	尺寸 (mm)						
	L	L1	H	1.6Mpa		2.5Mpa	
				D1	4-φd	D1	4-φd
50	43	108	245	125	4-18	125	4-18
65	46	112	250	145	4-18	145	4-18
80	46	114	350	160	4-18	160	4-18
100	52	127	380	180	4-18	190	4-22
125	56	140	410	210	4-18	220	4-26
150	56	140	490	240	4-22	250	4-26
200	60	152	560	295	4-22	310	4-26
250	68	165	621	355	4-26	370	4-30
300	78	178	680	410	4-26	430	4-30
350	78	190	757	470	4-26	490	4-33
400	102	216	825	525	4-30	550	4-36
450	114	222	925	585	4-30	600	4-36
500	127	229	1010	650	4-33	660	4-36
600	154	267	1180	770	4-36	770	4-39

外形尺寸图 (Outline size drawing)

高性能对夹 (High performance wafer type)

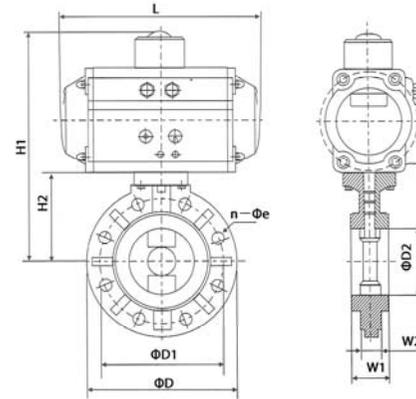


Type Specification Table (型号规格表)

通径 Diameter (mm)	尺寸 Size (mm)				
	L	L1	D1	D	H
65	49	27	119	59	177
80	49	27	132	73	193
100	54	30	157	95	212
125	64	30	186	111	216
150	57	33	216	142	243
200	64	36	270	188	299
250	71	41	324	236	371
300	81	48	381	282	416
350	92	52	413	314	494
400	102	56	470	363	531
450	114	67	533	414	569
500	127	67	584	456	604
600	154	76	692	549	784
700	167	87	857	702	912

外形尺寸图 (Outline size drawing)

塑料对夹 (Plastic wafer)



Type Specification Table (型号规格表)

		50	65	80	100	125	150	200	250	300
JIS	D1	120	140	150	175	210	240	290	355	400
	n- Φ_e	4-19	4-19	8-19	8-19	8-23	8-23	12-23	12-25	16-25
ANSI	D1	120.3 9	139.4 4	152.4	190.5	216	241.5 5	298.5 0	362	432
	n- Φ_e	4-19	4-19	4-19	8-19	8-22	8-22	12-22	12-25	12-25
DIN	D1	125	145	160	180	210	240	295	350	440
	n- Φ_e	4-18	4-18	4-18	8-18	8-18	8-18	8-23	8-23	12-23
D		165	185	200	229	257	285	343	411	490
D2		56.6	69.5	79.5	102.5	130	152	203	255	309.5
W1		43	46	46	56	69	75	85	109	133
W2		29	31	31	40	50	54	69	88	103.5
H1		235	245	260	280	322	374	428	482	574
H2		103	113	115	135.5	164	169	201	242	302
L		214	214	252	252	270	354	418	450	518

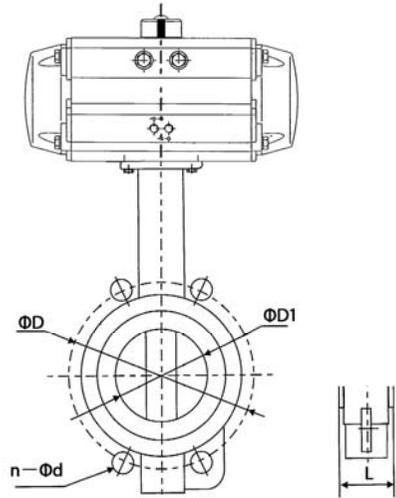


气动蝶阀

Pneumatic butterfly valve

外形尺寸图 (Outline size drawing)

卫生级对夹 (Sanitary wafer type)



Type Specification Table (型号规格表)

通径(mm) Diameter	英寸 Inch	尺寸 Size (mm)			
		L	n-Φd	D1	D
50	2	43	4-18	56	125
65	2 1/2	46	4-18	68	145
80	3	46	8-18	80.5	160
100	4	52	8-18	106	180
125	5	56	8-18	131	210
150	6	56	8-22	153	240
200	8	60	8-22	205	295
250	10	68	8-22	256	350
300	12	78	12-26	307	400
350	14	78	12-26	339	470
400	16	102	12-26	390	525
450	18	114	12-30	440	585
500	20	127	20-33	491	650
600	24	154	20-36	593	770

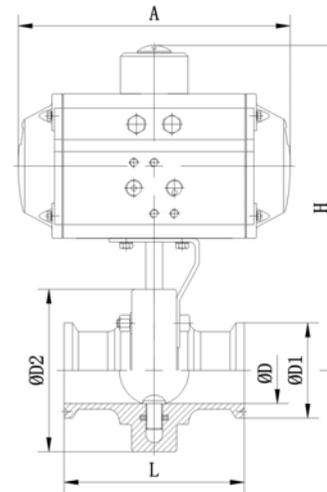


气动蝶阀

Pneumatic butterfly valve

外形尺寸图 (Outline size drawing)

卫生级卡箍 (Sanitary clamp)



Type Specification Table (型号规格表)

规格 Specification ISO	D	D1	D2	L	A	H
Φ25	21	50.5	78	66	144	165
Φ32	29	50.5	78	66	144	165
Φ38	35	50.5	86	70	144	169
Φ51	47	64	102	76	163	190
Φ63	59	77.5	115	98	163	200
Φ76	72	91	128	98	214	210
Φ89	80	106	139	102	214	215
Φ102	97	119	154	106	252	225
Φ108	102	119	159	106	252	230
Φ133	125	145	185	140	270	255
Φ159	150	172	215	260	354	305