

## Product overview

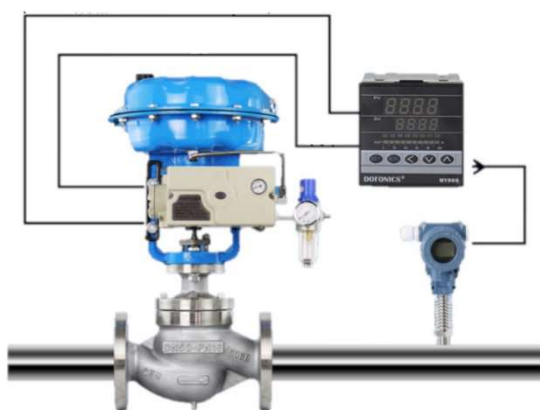
The VPS pneumatic control valve consists of adjustable bolt, actuator box, crank arm, cylinder block, cylinder shaft, piston, connecting rod and universal shaft. It's a right-angle rotation structure and used with valve positioner and can realize the proportional control; The V-shaped valve element is the most applicable to various adjustment occasions with large rated flow coefficient, large adjustable ratio, good sealing effect, flexible regulation performance and small volume and subject to vertical and horizontal installation. It applies to the control of such media as gas, steam and liquid. It's one of the important instruments for industrial process control widely used by the industrial enterprises (such as petroleum, chemical engineering, electric power, metallurgy and lithium battery new energy).



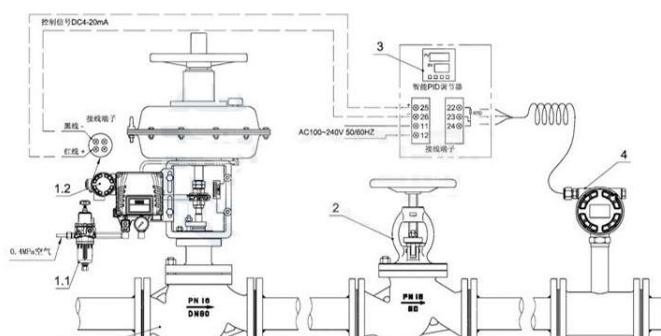
## Product features

- Large rated flow coefficient and adjustable ratio and good sealing effect;
- Sensitive regulation performance, small volume and vertical and horizontal installation;
- Double bearing structure, small break-out torque, good sensitivity and induction speed, and super strong shear capacity.
- Simple control, quick response, essential safety and no explosion precautions needed, separately.
- The corresponding thrusting force is produced as per the control signal pressure to rush and adjust the mechanism action
- Convenient installation and repair.

## Product application



1. Pneumatic regulating valve 2. Pressure sensor 3. PD controller



1. Pneumatic regulating valve 1.1 Filter pressure reducer 1.2 Electropneumatic valve positioner 2. Hand stop valve 3. Intelligent PID regulator 4. Flange type flowmeter

## Technical parameters

Nominal diameter (DN)	20	25	32	40	50	65	80	100	125	150	200	250	300
Valve seat diameter (dn)	20	25	32	40	50	65	80	100	125	150	200	250	300

Rated flow coefficient(KV)	Single seat	6.9	11	17.6	27.5	44	69	110	176	275	440	630	875	1250	
	Sleeve	6.3	10	16	25	40	63	100	160	250	360	570	850	1180	
Allowable pressure differential (MPa)	Single seat	3.8	3.2	3.0	2.0	1.8	1.5	1.4	1.0	0,7	0.6	0.5	0.3	0.1	
	Sleeve	6.4	6.4	5.2	5.2	4.6	4.6	3.7	3.7	3.5	3.1	3.1	2.6	2.2	
Nominal pressure (MPa)		1.6, 2.5, 4.0, 6.4 and 10.0													
Rated travel (mm)		16			25			40			60			100	
Actuator model		PHA220		PHA230			PHA340			PHA450			PHA560		
Valve deck form		Standard type (-17 ~ +250°C), high-temperature type (+250 ~ +450°C), low-temperature type (-40 ~ -196°C) and corrugated pipe sealing type (-40 ~ +350°C)													
Gland form		Bolt compression type													
Gland packing		V-shaped polytetrafluoroethylene packing and V-shaped flexible graphite packing													
Valve element form		Single seat type and sleeve type													
Flow characteristics		Equal percent and linearity													

## Actuator

Category of actuator configured	PHA multiple spring film actuator				
Actuator model	PHA220	PHA230	PHA340	PHA450	PHA560
Effective area (cm <sup>2</sup> )	350	350	560	900	1400
Travel (mm)	10 and 16	24	40	40 and 60	100
Spring range (KPa)	20 ~ 100 (standard), 20-60, 60-100, 40-200 and 80-240				
Diaphragm material	Nitrile rubber with nylon cloth and ethylene propylene rubber with nylon cloth				
Gas supply pressure	140 ~ 400KPa				
Air source port	RC1/4"				
Ambient temperature	-30 ~ +70°C				
Accessories available	Locator, air filtering pressure reducer, lock-up valve, travel switch, valve position transmitter and handwheel				
Acting form	Air-to-close type (B)-the valve is opened when gas leakage (FO); Air-to-open type (K)-the valve is closed when gas leakage (FC)				

## Performance index

Item			Without locator	With locator
Intrinsic error %			±5.0	±1.0
Return difference %			3.0	1.0
Dead zone %			3.0	0.4
Starting/ending point deviation %	Air-to-open type	Starting point	±2.5	±1.0
		Starting point	±5.0	±1.0
	Air-to-close type	Starting point	±5.0	±1.0
		Ending point	±2.5	±1.0
Rated travel deviation %			≤2.5	
Leak amount L/h			0.01%×rated valve capacity	
Adjustable range R			30: 1	

## Control valve material

1	Valve body	WCB	304	316	316L
2	Gasket	Graphite gasket	Graphite gasket	Graphite gasket	Graphite gasket
3	Valve seat/sleeve	304	304	316	316L
4	Valve element	304	304	316	316L
5	Guide sleeve/cap	304	304	316	316L
6	Arolium	Graphite gasket	Graphite gasket	Graphite gasket	Graphite gasket
7	Bonnet	WCB	304	316	316L
8	Valve rod	304	304	316	316L
9	Metal pad	304	304	316	316L
10	Packing	PTFE/graphite	PTFE/graphite	PTFE/graphite	PTFE/graphite
11	Bolt	25	Stainless steel	Stainless steel	Stainless steel
12	Packing gland	WCB	304	316	316L