VPZ self-actuated regulator

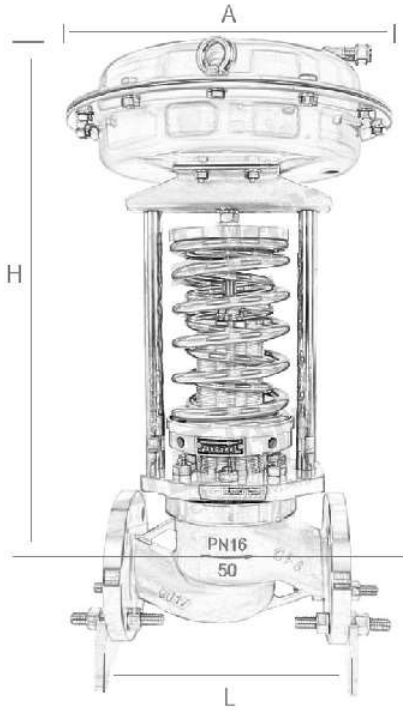
West Lake Bay

Product overview

No external energy is required by the VPZ self-contained pressure regulator. The energy of the adjusted medium is used as the power source for introduction into actuator control valve element position with pressure difference and flow rate at both ends changed and upstream (downstream) pressure stabilized. The self-contained pressure regulator has the advantages (such as sensitive action, good leakproofness and small pressure set point undulation force) and is widely used for gas, liquid and medium pressure stabilization or decompression/pressure stabilization automatic control. The valve body caliber scope is DN20～300 and the pressure segmented regulation is 15～2500Kpa.

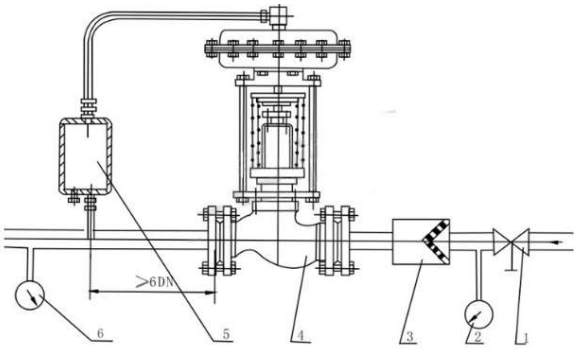
Product features

- No external energy is needed, and it can work in the place without electricity or gas which is convenient and saves energy.
- The pressure section range is fine and intersecting with high regulation precision;
- The pressure setting value can be set continuously during the operation period.
- The downstream pressure is adjusted and the ratio of upstream pressure to downstream pressure can be 10:1～10:8;
- Rubber diaphragm test, high actuator test precision and sensitive action;
- The pressure balance mechanism is used, making the control valve react sensitively with accurate control.



Product application

No external energy is required by the self-contained pressure regulator which is of small volume, simple structure and convenient repair, can work in the place without electricity or gas, is convenient and saves energy, and is widely used for the industries, such as petroleum, chemical engineering, papermaking, power generation and lithium battery new energy.



1. Globe valve 2. Pressure gauge 3. Filter 4. Condenser 5. Pressure regulating valve

Control valve size

Nominal diameter (DN)	20	25	32	40	50	65	80	100	125	150	200	250	300
Flange adapter tube size (B)	383		512		603	862		1023	1380		1800	2000	2200

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Space between flange ends (L)			150	160	180	200	230	290	310	350	400	480	600	730	850
Pressure regulating range (KPa)	15-140	H	475		520		540	710		780	840	880	915	940	1000
		A	280		308										
	200-500	H	455		500		520	690		760	800	870	880	900	950
		A	230												
	120-300	H	450		490		510	680		750	790	860	870	890	940
		A	176					194			280				
	480-1000	H	445		480			670		740	780	850	860	880	930
		A	176					194			280				
	600-1500	H	445		570		600	820		890	950		1000	1100	1200
		A	85		96										
	1000-2500	H	445		570		600	820		980	950		1000	1100	1200
		A	85		96										
Approximate weight (Kg)			26		37		42	72	90	114	130	144	180	200	250
Connecting pipe interface thread			M16X1.5												

Technical parameters

Nominal diameter DN		20	25	32	40	50	65	80	100	125	150	200	250	300
Rated flow coefficient Kv		7	11	20	30	48	75	120	190	300	480	760	1100	1750
Noise measurement 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 pressure differential (Mpa)	PN16	1.6								1.5		1.2	1,0	
	PN40	2.0												
Valve deck form		Standard form -17 ~ +300°C and high-temperature type +300°C ~ +450°C												
Gland type		Bolt compression type												
Gland packing		V-shaped teflon packing, asbestos packing containing immersed teflon, asbestos textile packing and graphite packing												
Valve element form		Single seat and sleeve valve element												
Flow characteristics		Linearity												

Actuator parameter

Effective area (cm)	32	80	250	630
Pressure setting range (MPa)	0.8 ~ 1.6	0.1 ~ 0.6	0.015 ~ 0.15	0.005 ~ 0.035
	0.3 ~ 1.2	0.05 ~ 0.3	0.01 ~ 0.07	
Smaller differential pressure for ensuring the normal operation of the pressure valve △Pmin(MPa)	≥0.05	≥0.04	≥0.01	≥0.005
Allowing greater pressure difference between upper and lower membrane chambers (MPa)	2.0	1.25	0.4	0.15
Material	Membrane cover: Steel plate galvanization; Diaphragm: EPDM or FKM with fiber			
Control line and contact	Copper pipe or steel tube 10×1; Ferrule-type contact: R1/4"			
Note: ※ The pressure setting range corresponding to the effective area isn't applicable to DN150-250.				

Performance index

Set value deviation		±8%		
Allowable leak amount (Under the specified test conditions)	Hard seal	4×0.01% rated valve capacity		
	Soft seal	DN15 ~ 50	DN65 ~ 125	DN150 ~ 250
		10 bubbles/min	20 bubbles/min	40 bubbles/min

Control valve material

Code of material		C (WCB)	P (304)	R (316)
Main parts	Valve body	WCB (ZG230-450)	ZG1Cr18Ni9Ti (304)	ZG1Cr18Ni12Mo2Ti (316)
	Valve element and valve seat	1Cr18Ni9Ti (304)	1Cr18Ni9Ti (304)	1Cr18Ni12Mo2Ti (316)
	Valve rod	1Cr18Ni9Ti	1Cr18Ni9Ti	1Cr18Ni12Mo2Ti
	Diaphragm	NBR, EPR, chloroprene rubber adhesive and oil resistant rubber		
	Membrane cover	A3 and A4 steel applied with tetrafluoroethylene		
	Packing	Teflon and flexible graphite		
	Spring	60Si2Mn		
	Guide sleeve	HPb59-1		

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