

Product overview

The PHW pneumatic piston actuator is applicable to the valves with 90° rotation (1/4 turn), such as ball valve, butterfly valve and plug valve. The product design and manufacturing are subject to JIS standard. The connecting part with the valve is subject to international standard ISO5211. The AW/AW-S pneumatic actuator actuating device is of volume production with excellent performance and stable quality.



Product features

- Double acting pneumatic actuator: Two-step control for valve opening and closing.
- Spring return type: Circuit and gas circuit cutoff or fault. The valve is opened or closed automatically.
- Single electric control solenoid valve: At the moment of power supply, the valve is opened or closed. At the moment of outage, the valve is closed or opened (the explosion-proof type can be provided).
- Double electric control solenoid valve: When a coil is electrified, the valve will be opened. When another coil is electrified, the valve will be closed with memory function (the explosion-proof type can be provided).
- Limit switch position Remote transmission of signal of valve switch position (the explosion-proof type can be provided).
- Electropneumatic positioner: The valve medium flow is adjusted and controlled in line with the current signal (standard: 4-20mA) (the explosion-proof type can be provided).
- Pneumatic positioner: The valve medium flow is adjusted and controlled according to the air pressure signal (standard: 0.02-0.1MPa).
- Electrical/pneumatic converter: The current signal is converted into air pressure signal and it's used together with the pneumatic positioner (the explosion-proof type can be provided).
- Air source treatment triplet: Including air reducing valve, filter and atomized lubricator. Stabilizing pressure of air source, cleaning and lubrication of moving parts.
- Manual operating mechanism: The automatic control can be manually operated under abnormal situations.

Table for Double-acting Output Torque

Model and specification	Air source pressure (Mpa)				
	0.3	0.4	0.5	0.6	0.7
PHW2130	515	620	770	930	1080
PHW2170	950	1270	1590	1910	2230
PHW2200	2150	2870	3580	4300	5020
PHW2250	3360	4480	5600	6720	7850
PHW2280	5150	6860	8580	10300	12020
PHW2350	10120	13500	16870	20250	23620
PHW2400	13220	17630	22040	26450	30860
PHW2500	22460	29950	37440	44930	52420
PHW2600	47300	63070	78840	94610	110380

Table for Single Acting Output Torque

Model and specification	Spring torque		Air source pressure (Mpa)					
			0.4		0.5		0.6	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
PHW1130	230	430	185	340	340	545	490	700
PHW1170	330	670	600	930	920	1290	1230	1573
PHW1200	1190	1980	880	1670	1600	2390	2320	3110
PHW1250	1600	2510	1970	2880	3090	4000	4210	5120
PHW1280	2900	5610	1250	3960	2970	5685	4680	7400
PHW1350	5520	10740	2760	7970	6130	11340	9510	14720
PHW1400	8770	16140	1480	8860	5900	13260	10300	17670
PHW1500	13110	27490	6370	20750	14840	29220	23310	37700

Cylinder volume and air consumption calculation and weight

		PHW130	PHW170	PHW200	PHW250	PHW280	PHW350	PHW400	PHW500	PHW600
Cylinder capacity L (litre)	Double acting A+B	6.5	14.3	30.8	48.5	73.0	148.2	193.2	350	630
	Single acting B	3.25	7.15	15.4	24.2	36.5	74.1	96.1	175	315
Weight Kg	Double acting	48	82	170	195	325	600	800	1070	1580
	Single acting	65	116	223	280	450	845	1070	1400	

Table for Parts

S/N	Name	Quantity
1	Box body	1
2	Shifting yoke	1
3	Revolving shaft	1
4	Clapboard	2
5	Piston	2
6	Cylinder body	2/3
7	Cylinder head	2
8	Piston rod	1
9	Spring	1/2/4
10	Spring cylinder	1
11	Hinge pin	1
12	Roller cage	2
13	Elastic collar	2
14	Oil-free bearing	2
15	O-ring	2
16	Guide ring	2
17	O-ring	2
18	O-ring	2
19	O-ring	2

S/N	Name	Quantity
20	Locknut	2
21	Elastic collar	1
22	Wear reduction gasket	1
23	O-ring	1
24	O-ring	1
25	Wear reduction gasket	1
26	Elastic collar	1
27	Flat key	1
28	O-ring	2
29	Locating pin	2
30	Set screw	1
31	Locknut	2
32	Flat washer	2
33	O-ring	2
34	Adjusting screw	2
35	Nut	8
36	Elastic washer	8
37	Flat washer	8
38	Stud	8,