

Product overview

The PHR piston pneumatic actuator is subject to innovation and optimization design by the CAD 3D model based on the updating technique at home and abroad with beautiful and compact appearance and modern model; The practical model material and new technology are used to make the product quality and performance more reliable with accurate meshing and stable output torque; The cylinder block is of extruded aluminium alloy with hard surface texture and strong wear resistance upon anodic oxidation treatment; The solenoid valve, reply device, locator (opening instruction), triplet and hand-operated gear can be installed as required.

Product features



- Unique bidirectional stroke control;
- Compact double piston gear strip construction, precise meshing and stable output torque;
- The cylinder block is of extruded aluminium alloy with hard surface texture and strong wear resistance upon hard anodic oxidation treatment;
- The piston is equipped with mechanical track direction, O-ring and bearing inside, avoiding the contact between nonmetal and metal and lowering the friction coefficient;
- The connection size is determined pursuant to international standard ISO521-DIN3337-VDI/VDE3845, and can be interchanged with most of common pneumatic actuators;
- The same theme and end cap are used for double-acting and single acting (spring return) types;
- All moving parts are of wear resistant material support;
- The air supply hole conforms to NAMUR standard or is with the patch panel conforming to NAMUR standard. The matching board solenoid valve can be directly installed;
- Unique position indicator;
- The solenoid valve, reply device, locator (opening instruction), triplet and hand-operated gear can be installed as required.

Part material

S/N	Part name	Quantity
1	Cylinder body	1
2	Piston	2
3	Rotation axis	1
4	End cover	2
5	End cover (GTE)	2
6	Circlip for shaft	1
7	Upper gasket for axis	1
8	O-shaped sealing ring	1
9	Upper wearing ring for axis	1
10	Medium gasket for axis	1
11	Lower wearing ring for axis	1

12	O-shaped sealing ring	1
13	Sealing ring for end cap	2
14	Piston wearing ring	2
15	O-shaped sealing ring	2
16	Piston bearing bush	2
17	Hex nut	2
18	Flat washer	2
19	O-shaped sealing ring	2
20	Adjusting bolt	2
21	Inner hexagon screw	4
22	Spring/spring seat	8-12

Table for Double-acting Output Torque

Model	Air source pressure						
	2	3	4	5	6	7	8
PHR240	3.7	5.6	7.4	9.3	11.2	13.0	14.9
PHR252	7.9	11.8	15.7	19.6	23.6	27.5	31.4
PHR265	14.7	22.1	29.5	36.8	44.2	51.5	58.9
PHR280	26.0	39.0	52.0	65.1	78.1	91.1	104
PHR290	37.6	56.5	75.3	94.1	112	131	150
PHR2100	58.0	87.0	116	145	174	203	232
PHR2115	84.5	126	169	211	253	295	338
PHR2125	108	163	217	272	326	381	435
PHR2145	159	239	318	398	478	557	637
PHR2160	223	334	446	557	669	780	892
PHR2190	367	550	734	917	1101	1284	1467
PHR2210	538	807	1075	1344	1613	1882	2151
PHR2255	1057	1586	2115	2644	3172	3701	4230
PHR2300	1656	2470	3293	4117	4940	5764	6587
PHR2350	2490	3735	4981	6226	7471	8717	9962

Table for Single Acting Output Torque

Model	Quantity of springs	Air pressure						Spring return	
		3		4		5			
		Start	Ending point	Start	Ending point	Start	Ending point	Start	Ending point
PHR165	8	15.0	7.9		15.2			14.2	7.1
	10				11.7	27.9	19.1	17.8	8.9
	12				8.1	26.2	15.5	21.3	10.7
PHR180	8	25.1	16.2		29.3			22.8	14.0
	10				23.6	47.6	36.6	28.5	17.5
	12				17.9	44.1	30.9	34.2	21.0
PHR190	8	32.8	20.9		39.8			35.5	23.7
	10				30.9	64.5	49.7	44.4	29.6

	12				22.0	58.6	40.8	53.3	35.5
PHR1100	8	56.1	26.5		55.5			60.7	31.1
	10				40.3	106	69.4	75.9	38.9
	12				25.2	98.6	54.2	91.0	46.6
PHR1115	8	77.9	45.4		87.6			81.4	48.8
	10				67.3	150	109	101	61.1
	12				46.9	138	89.2	122	73.3
PHR1125	8	101	657		120			97.7	62.2
	10				95.7	194	150	122	77.7
	12				71.3	179	125	146	93.2
PHR1145	8	135	837		163			155	103
	10				124	269	204	194	129
	12				85.7	243	165	233	155
PHR1160	8	201	134		246			199	133
	10				196	391	307	249	166
	12				146	357	258	299	199
PHR1190	8	317	21.3		397			336	233
	10				313	626	496	420	291
	12				228	567	412	505	349
PHR1210	8	465	309		578			497	341
	10				454	917	723	621	427
	12				330	832	599	745	512
PHR1255	8	945	670		1199			915	640
	10				970	1843	1499	1144	800
	12				741	1683	1270	1373	961
PHR1300	8	1491	838		1662			1631	979
	10				1254	2893	2077	2039	1223
	12				846	2648	1669	2447	1468
PHR1350	8	21.81	1404		2650			2330	1554
	10				2067	4284	3312	2913	1942
	12				1484	3895	2730	3496	2331

Performance index

Double-acting type	Capacity L	Weight KG	Single acting type	Capacity L	Weight KG	Enabling or disabling time S
PHR240	0.12	0.7	PHR140	0.06	/	≤0.5
PHR252	0.23	1.5	PHR152	0.12	/	≤0.5
PHR265	0.46	2.0	PHR165	0.22	3.6	≤0.5
PHR280	0.80	3.0	PHR180	0.38	5.5	≤1.0
PHR290	1.10	4.5	PHR190	0.50	8.0	≤1.0
PHR2100	1.60	6.0	PHR1100	0.79	10.5	≤1.0
PHR2115	2.33	8.0	PHR1115	1.14	13.6	≤2.0
PHR2125	3.03	9.5	PHR1125	1.46	16.2	≤2.0
PHR2145	5.40	14.0	PHR1145	2.34	23.1	≤2.5
PHR2160	6.10	18.0	PHR1160	3.00	30.0	≤4.0
PHR2190	11.0	26.0	PHR1190	4.80	41.6	≤5.0
PHR2210	15.4	33.0	PHR1210	7.10	52.8	≤7.0
PHR2255	31.1	72.0	PHR1255	14.1	112.0	≤10.0
PHR2300	45.9	102.0	PHR1300	21.3	153.0	≤10.0
PHR2350	68.5	153.0	PHR1350	32.7	222.0	≤10.0