

Process Pump

Automatically Operated Type (Internal Switching Type)

Air Operated Type (External Switching Type)

PA5000 Series

RoHS

PA
PA(P)
PAX
PB
PAF
PA□
PB

How to Order



PA 5 1 1 0 - 04 -

Material of body wetted areas

Symbol	Material of body wetted areas
1	ADC12 (Aluminum)
2	SCS14 (Stainless steel)

Diaphragm material

Symbol	Diaphragm material	Applicable actuation	
		Automatically operated	Air operated
1	PTFE	●	●
2	NBR	●	—

Actuation

Symbol	Actuation
0	Automatically operated
3	Air operated

Option

Symbol	Option	Applicable actuation	
		Automatically operated	Air operated
Nil	Body only	●	●
N	With silencer*	●	—

* For AIR EXH: AN20□02
 (□: Either Nil or N is entered as a thread symbol)

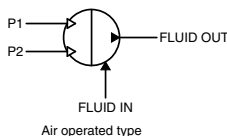
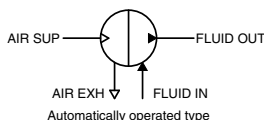
Port size

Symbol	Port size
04	1/2"
06	3/4"

Thread type

Symbol	Type
Nil	Rc
N	NPT
F	G
T	NPTF

Symbol



Specifications

Model	PA5110	PA5120	PA5210	PA5220	PA5113	PA5213
Actuation	Automatically operated				Air operated	
Port size	Main fluid suction/discharge port Rc, NPT, G, NPTF 1/2", 3/4" Female thread					
	Pilot air supply/exhaust port Rc, NPT, G, NPTF 1/4" Female thread					
Material	Body wetted areas ADC12 SCS14 ADC12 SCS14					
	Diaphragm PTFE NBR PTFE NBR		Check valve PTFE, PFA			
Discharge rate	5 to 45 L/min				1 to 24 L/min	
Average discharge pressure	0 to 0.6 MPa				0 to 0.4 MPa	
Pilot air pressure	0.2 to 0.7 MPa				0.1 to 0.5 MPa	
Air consumption	Max. 300 L/min (ANR) or less				Max. 250 L/min (ANR) or less	
Suction lifting range <small>Note 1)</small>	Dry Up to 2 m (Interior of pump dry)				Up to 0.5 m (Interior of pump dry)	
	Wet Up to 6 m (Liquid inside pump)					
Noise	78 dB (A) or less (Option: with silencer, AN 20)				72 dB (A) or less (excluding the noise from the quick exhaust and solenoid valve)	
Withstand pressure	1.05 MPa				0.75 MPa	
Diaphragm life	50 million times					
Operating fluid temperature	0 to 60°C (No freezing)					
Ambient temperature	0 to 60°C (No freezing)					
Maximum viscosity	1000 mPa·s					
Recommended operating cycle	—				1 to 7 Hz (0.2 to 1 Hz also possible depending on conditions) <small>Note 2)</small>	
Pilot air solenoid valve recommended Cv factor <small>Note 3)</small>	—				0.45	
Weight	3.5 kg		6.5 kg		3.5 kg 6.5 kg	
Mounting orientation	Horizontal (with mounting foot at bottom)					
Packaging	General environment					



Made to order specifications
 (For details, refer to pages 563 and 564)

Products complying with ATEX
With air operated reset port ^{Note)}
With operating cycle counting port ^{Note)}

Note) For automatically operated type only.

* Each of the values above are for normal temperatures and when the transferred fluid is fresh water.
 * Refer to page 558 for maintenance parts.
 * For related products, refer to pages 622 and 623.

Note 1) With cycles at 2 Hz or more

Note 2) After initial suction of liquid operating at 1 to 7 Hz, it can be used with operation at lower cycles.

Since a large quantity of liquid will be pumped out, use a suitable throttle in the discharge port if problems occur.

Note 3) With a low number of operating cycles, even a valve with a small Cv factor can be operated.

