UK Flowtechnik

PA PROCESS PUMP SERIES PA3000

The PA process pump series is a compact, high capacity diaphragm pump for transfer and recovery of a wide variety of fluids. The pump is available in two types - an automated operated and air operated type also with solenoid or air pilot actuation.
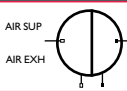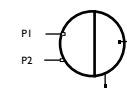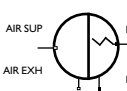
FEATURES & BENEFITS

- Long life, 2 to 5 times that of convetional pumps
- High abrasion resistance and low particle generation
- Self-priming makes priming unnecessary
- No sliding parts in wetted areas
- Incorporates a new diaphragm material
- Enlarged bore size and shortened stroke extend life

PROCESS PUMP VARIATIONS

SERIES	Model	Action		Discharge flow rate l/min	Material	
					Body	Diaphragm
PA3000 PA5000	PA3110	Automatically operated type	AIR SUP / FLUID OUT / AIR EXH / FLUID IN	1 to 20	ADC12 (aluminum SCS14 stainless steel)	PTFE NBR
	PA5110			5 to 45		
	PA3113	Air operated type	P1 / FLUID OUT / P2 / FLUID IN	0.1 to 12		PTFE
	PA5113			1 to 24		
PAX1000	PAX112	Automatically operated type with built-in pulsation attenuator	AIR SUP / FLUID OUT / AIR EXH / FLUID IN	0.5 to 10	ADC12 (aluminum SCS14 stainless steel)	PTFE

APPLICATIONS

- Transfer of liquid by suction
- Atmomising liquid
- Transfer of liquid by pressure
- Stirring of liqiud

SMC
Expertise – Passion – Automation

UK Flowtechnik
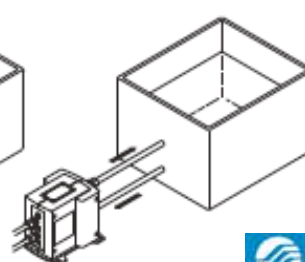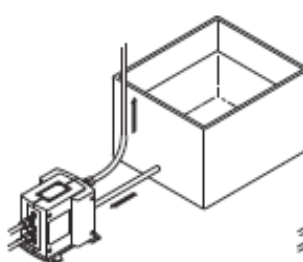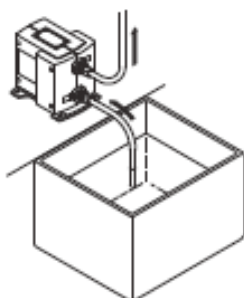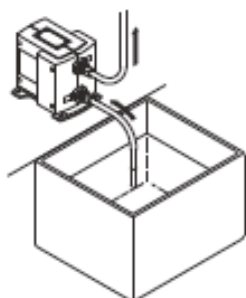
SPECIFICATIONS

		AUTOMATICALLY OPERATED PROCESS PUMP			
MODEL		PA3110	PA3200	PA510	PA5210
Actuation		Automatically operated			
Port Size	Main fluid suction discharge port	Rc, NPT, G, NPTF 3/8" Female thread			
	Pilot air supply/ exhaust port	Rc, NPT, G, NPTF 1/4" Female thread			
Material	Body wetted areas	ADC12		SCS14	-
	Diaphragm	PTFE, NBR			
	Check valve	PTFE, PFA			
Discharge rate		1 to 20 l/min		5 to 45 l/min	
Average discharge pressure		0 to 0.6 MPa		0 to 0.6 MPa	
Pilot air pressure		0.2 to 0.7 MPa		0.2 to 0.7 MPa	
Air consumption		Max 200 min (ANR) or less		Max 200 min (ANR) or less	
Suction lifting range	Dry	1 m (interior of pump dry)		Up to 2m (interior of pump dry)	
	Wet	Up to 6 m (liquid inside pump)			
Noise		80 dB (A) or less (Option: with silencer, AN20)		78 dB (A) or less (Option: with silencer, AN20)	
Recommended operating cycle		-			
Pilot air solenoid valve recommended Cv factor		-			
Diaphragm life		PA3110: 100 million times PA3120: 50 million times		50 million times	
Fluid Temperature		0 to 60°C (with no freezing)			
Ambient Temperature		0 to 60°C (with no freezing)			
Withstand pressure		1.05 MPa			
Mounting position		Horizontal (with mounting foot at bottom)			
Weight		1.7 kg	2.2 kg	3.5 kg	6.5 kg
Packaging		General Environment			

SMC
Expertise – Passion – Automation

UK Flowtechnik

AIR OPERATED TYPE PROCESS PUMP					
		PA3113	PA3213	PA5113	PA5213
Actuation		Air operated			
Port Size	Main fluid suction discharge port	Rc, NPT, G, NPTF 3/8, Female thread		Rc, NPT, G, NPTF, 1/2, 3/4. Female thread	
	Pilot air supply/ exhaust port	Rc, NPT, G, NPTF, 1/4. Female thread		Rc, NPT, G, NPTF, 1/4 Female thread	
Material	Body wetted areas	ADC12	SCS14	ADC12	SCS14
	Diaphragm	PTFE			
	Check valve	PTFE, PFA			
Discharge rate		0.1 to 12 l/min		0.1 to 24 l/min	
Average discharge pressre		0 to 0.4 MPa		0 to 0.4 MPa	
Pilot air pressure		0.1 to 0.5 MPa		0.1 to 0.5 MPa	
Air consumption		Maximum 150 l/min (ANR)		Maximum 250 l/min (ANR)	
Suction lifting range	Dry	1 m (interior pump dry)		1 m (interior pump dry)	
	Wet	Up to 6m (liquid inside pump)			
Noise		72 dB (A) or less (excluding the noise from the quick exhaust and solenoid valve)			
Recommended operating cycle		1 to 7 Hz (0.2 to 1 Hz also possible depending on conditions)			
Pilot air solenoid valve recommended CV factor		0.20		0.45	
Diaphragm life		50 million times			
Fluid temperature		0 to 60°C (with no freezing)			
Ambient temperature		0 to 60°C (with no freezing)			
Withstand pressure		0.75 MPa			
Mouting position		Horizontal (with mounting foot at bottom)			
Weight		1.7 kg	2.2 kg	3.5 kg	6.5 kg
Packaging		General environment			

SMC
Expertise – Passion – Automation

UK Flowtechnik

ORDERING CODES

| PA | 3 | 1 | 1 | 0 | — | | 03 | — | |

Body size

3	3/8 standard
5	1/2 standard

Material of body wetted areas

1	ADC12 (aluminum)
2	SCS14 (stainless steel)

Diaphragm material

Symbol	Diphragm material	Applicable actuation	
		Automatically operated	Air operated
1	PTFE	●	●
2	NBR	●	-

Actuation

Symbol	Actuation
0	Automatically operated
3	Air operated

Thread type

Nil	Rc
T	NPTF
F	G
N	NPT

Connection port size

03	3/8 (10A): PA3
04	1/2 (15A): PA5
06	3/4 (20A): PA5

Option

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

AIR SUP — FLUID OUT
AIR EXH — FLUID IN
Automatically operated type

P1 — FLUID OUT
P2
FLUID IN
Air operated type

SMC
Expertise – Passion – Automation