1.0 ProMinent[®] Alpha Metering Pumps

alpha[®] Metering Pumps



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ProMinent[®] alpha Motor Driven Diaphragm Metering Pumps

- Output range 1.0-30.6 l/h, 10-2 bar
- Stroke length adjustment in 10 % steps from 0-100 %
- Material options: PVDF and Acrylic/PVC
- Patented coarse/fine bleed valve
- Constant stroke rate
- Controlled via mains supply ON/OFF

The alpha is a metering pump designed for simple operations. It is ideal for continuous metering.

It is an oscillating motor diaphragm metering pump for liquid chemicals and consists of drive and delivery unit as main components. The drives are available in 2 gear ratios, delivery units in 4 sizes and in the materials acrylic/PVC. It is therefore possible to specify the required output and the material combination. The alpha pumps are switched on/off via the mains power supply, the metering output can be changed via the stroke length adjustment between 100 % and 0.

The drive consists of a powerful split pole motor with gearbox, eccentric shaft and connecting rod as driving rod. The housing is made of glass fibre reinforced plastic and is resistant to shock and chemicals. The eccentric for the stroke movement is guided in an eccentric cam. Suction and pressure stroke are positively driven.

The stroke length adjustment is carried out by varying the eccentricity in 10 % steps via a notched slide when the pump is not working. This means that the diaphragm deflection is always made from the neutral centre position.

During operation, the alpha pump with its positively driven suction and metering strokes, as well as the stroke length adjustment by varying the eccentricity produces a smooth, sinusoidal stroke action for suction and metering stroke with diaphragm deflection from the centre position.

The result is a good suction performance, smooth metering stroke and consistently accurate metering with low mechanical load on the metering diaphragm.

The delivery unit consists of liquid end, metering diaphragm and head disc. The liquid end in the material combinations PVDF or plexiglass/PVC is equipped with double ball valves on the suction and pressure side as well as coarse/fine bleeding. The bleed valve facilitates suctioning and bleeding at full operating pressure without having to interrupt and de-pressurise the metering line. For media of higher viscosity, the valves can be spring-loaded.

1.3 1.0 ProMinent[®] Alpha Metering Pumps Technical Data Data Data

Technical Data 1.0.2

	at		np Capacity ium Back	at N		p Capacity n Back	Number of strokes	Stroke length	Connector Sizes Outer Ř x Inner Ř	Suction	Intake Head	shipping weight
pump type	bar	l/h	ml/stroke	bar	l/h	ml/stroke	strokes/ min.	mm	mm	m WG	m WG	kg
50 Hz versio	on											
1001	10.0	1.0	0.29	5	1.1	0.32	58	2	6 x 4	5.1	2.5	3
1002	10.0	1.8	0.52	5	2.1	0.60	58	2	6 x 4	5.1	2.5	3
1004	10.0	3.5	1.01	5	3.9	1.12	58	3	8 x 5	5.1	2.5	3
1008	10.0	7.7	1.00	4	8.6	1.12	128	3	8 x 5	5.1	3.0	3
0707	7	6.9	1.98	4	7.7	2.21	58	3	8 x 5	4.1	3.0	3
0417	4	17.0	2.51	3	18.3	2.76	128	3	8 x 5	4.1	3.0	3
0230	2	30.6	3.98	2	32.7	4.26	128	3	12 x 9	4.1	3.0	3

Materials In Contact with Chemicals

	Liquid End	Suction/Discharge	Seals	Valve Balls
		Connector		
NPE	Plexiglass	PVC	EPDM	ceramic
NPB	Plexiglass	PVC	FPM (Viton [®])	ceramic
PVT	PVDF	PVDF	PTFE	ceramic

DEVELOPAN[®] dosing diaphragms with PTFE coating for all versions.

Viton[®] is a registered trademark of DuPont Dow Elastomers. (FPM = flurorubber)

Included in delivery: Metering Pump with 2 m mains cable and plug, connector set for hose/tube connection as indicated in tables.

Motor Data

Type: Split pole motor with integrated thermal overload protection Power supply: 220-240 V, 50Hz Power input: 50 W (at 230 V/50 Hz) Power consumption: 0.4 A (at 230 V/50 Hz)

J.3 Ide	ntity Co	ode Orc	lering System For alpha
ALPc al	pha vers	sion C	
100	1.2 l/n - 2 1.8 l/h -	10 bar 10 bar	NPE NPE NPE NPE
100 100			NPB PVT
100 100 100	4 3.5 l/h -	10 bar	NPE NPB PVT
100 100 100	8 7.7 l/h - ⁻	10 bar	NPE NPB PVT
070 070 070	07 6.9 l/h -	7 bar	NPE NPB PVT
041 041 041	7 17.0 l/h -	4 bar	NPE NPB PVT
023 023 023	0 30.6 l/h	- 2 bar	NPE NPB PVT
	NPE Acr NPB Acr		DM M FE
		Hy	draulic Connectors: andard
		0	Version: With ProMinent [®] logo
			Electrical connectors: A 230 V, 50/60 Hz, 2 m, Euro. plug B 230 V, 50/60 Hz, 2 m, Swiss plug C 230 V, 50/60 Hz, 2 m, Australian plug (STD) D 115 V, 50/60 Hz, 2 m, USA plug
			Ancillary equipment: 0 No ancillary equipment 1 With foot and dosing valve, 2 m PVC and 5 m PE hose (STD)

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