

1.0 ProMinent® Alpha Metering Pumps

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ALPHA.psd

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.



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Technical Data

1.0.2 Technical Data

pump type	Max. Pump Capacity at Maximum Back Pressure			Max. Pump Capacity at Medium Back Pressure			Number of strokes strokes/ min.	Stroke length mm	Connector Sizes Outer R x Inner R	Suction m WG	Intake Head m WG	shipping weight kg
	bar	l/h	ml/stroke	bar	l/h	ml/stroke						
50 Hz version												
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 Connector	Seals	Valve Balls
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 = fluororubber)

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)

1.0 Identity Code Ordering for ProMinent® Alpha Metering Pumps



1.0.3 Identity Code Ordering System For alpha

ALPc	alpha version C						
	Pump type: Capacity at 50 Hz						
	1001	1.2 l/h - 10 bar	NPE				
	1001	1.2 l/h - 10 bar	NPB				
	1001	1.2 l/h - 10 bar	PVT				
	1002	1.8 l/h - 10 bar	NPE				
	1002	1.2 l/h - 10 bar	NPB				
	1002	1.2 l/h - 10 bar	PVT				
	1004	3.5 l/h - 10 bar	NPE				
	1004	3.5 l/h - 10 bar	NPB				
	1004	3.5 l/h - 10 bar	PVT				
	1008	7.7 l/h - 10 bar	NPE				
	1008	7.7 l/h - 10 bar	NPB				
	1008	7.7 l/h - 10 bar	PVT				
	0707	6.9 l/h - 7 bar	NPE				
0707	6.9 l/h - 7 bar	NPB					
0707	6.9 l/h - 7 bar	PVT					
0417	17.0 l/h - 4 bar	NPE					
0417	17.0 l/h - 4 bar	NPB					
0417	17.0 l/h - 4 bar	PVT					
0230	30.6 l/h - 2 bar	NPE					
0230	30.6 l/h - 2 bar	NPB					
0230	30.6 l/h - 2 bar	PVT					
	Liquid end material:						
NPE	Acrylic/PVC/EPDM						
NPB	Acrylic/PVC/FPM						
PVT	PVDF/PVDF/PTFE						
	Valve springs:						
2	No valve springs with bleeding						
3	With 2 valve springs approx. 0.1 bar, stainless steel 1.4571 with bleeding						
	Hydraulic Connectors:						
0	Standard						
	Version:						
0	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, Austral. plug						
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						
ALPc	0707	PVT	2	0	0	C	1