

1.6 ProMinent® Pneumados Metering Pumps

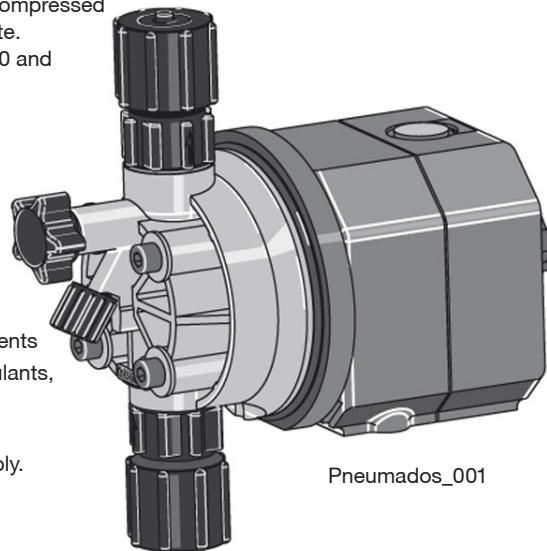
1.6.1 ProMinent® Pneumados Metering Pumps

ProMinent® Pneumados is a pneumatically-operated metering pump. In contrast to solenoid-driven metering pumps, the metering stroke of this pump is effected by a pneumatically actuated diaphragm, the suction stroke by spring force. The delivery capacity can be varied via the stroke frequency and the stroke length setting. The external electrically-pneumatically or pneumatically activated compressed air valves facilitate a setting of up to 180 metering strokes per minute. The stroke length and thus the stroke volume can be set between 10 and 100%. Typical areas of application are:

- FEEDING STUFF TREATMENT
Metering and spraying of feeding stuff with flavouring agents.
- PAINTING PLANTS
Metering of coagulants.
- GREENHOUSES
For metering of fertilisers and minerals compounds.
- CAR WASH
Metering of cleaning agents, shampoo, brighteners, wax, drying agents

as well as for the treatment of recycling water via metering of flocculants, pH adjusters, defoaming agents, and emulsion breakers.

In all plants with central control (e.g. PLC) and compressed air supply.



Pneumatic Ancillary Equipment

	Part No	Price
G 1/4 - 6 mm compressed air threaded connector in anodised aluminium with rotating seals; rapid quick release connector LCK 1/40 (fig. 1)	354641	\$ P.O.A
G 1/8 A - 6 mm threaded connector for regulator valves with seal; threaded connector CK 1/80	354635	\$ P.O.A
G 1/8 blanking plug with seal for regulator valves; G 1/80 plug thread	467921	\$ P.O.A
3/2 way pneumatic solenoid valve G 1/8 220 V 50 Hz 21 VA; solenoid valve 311 C 1/80 (fig. 3)	303054	\$ P.O.A
Sound absorber in sintered bronze with M 1/8 internal thread for solenoid valve (fig 4)	303812	\$ P.O.A
Electric pulse generator for assembly into protective housing on DN 50022 hat rail, adjustable stroking rate 30 - 120 strokes/min. Electrical connection 230 V 50 - 60 Hz 3.5 VA. Switch power max. 3A. Adjustable flash relay (fig. 2) For installation in Ex-protection zones, we recommend pneumatic pulse generator with mechanical regulator units,	700984	\$ P.O.A
e.g. FESTO pulse generator Type 4025 VLG-4 1/80 (fig. 5) All directives and regulations concerning use in hazardous location must be retained by the user.	303836	STANDARD

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1.6.2 Technical Data

Pump type Pneumados PNDb	Delivery output at maximum Pressure			Connection size OD R̄ x id R̄ mm	Suction 3) height mWC	corresp. suction pressure 2) mbar	Suction height 1) mWC	corresp. suction pressure 2) mbar	Admissible pre-pressure on suction side bar
	bar	l/h	ml/ stroke						
1000	10	0.76	0.7	6x4	6	600	2.0	200	8
1601	16	1.00	0.09	6x4	6	600	2.8	280	8
1602	16	1.70	0.16	6x4	6	600	3.0	300	5.5
1005	10	3.80	0.35	8x5	5	500	3.0	300	3
0708	7	6.30	0.58	8x5	4	400	2.0	200	2
0413	4	10.50	0.97	8x5	3	300	2.5	250	1.5
0220	2	16.70	1.55	12x9	2	200	2.0	200	1

1) Suction height / suction pressure (dry) determined with clean as well as moistened valves, is tested with empty liquid end.

2) Value corresponds to the obtainable vacuum compared to atmospheric pressure.

3) Suction height / suction pressure tested with filled liquid end and filled suction line, provided sufficiently dimensioned suction line cross-sections are given.

The delivery outputs were determined with an air hose length of 1m, using the Festo solenoid valve MHE3-M1H-3/2G-QS-6K, as well as at max. stroke frequency (180 strokes/min.) and 100% stroke length, with pump at operating state temperature, test medium water.

Compressed air: 6 bar ± 10 %, filter size 40µm

**Air consumption
for 1m line:** 47 l/min

**Stroking
frequency:** 180 strokes per min.

Connectors

PVT	6, 8 and 12 mm	hose sleeve with clamp ring fitting
SS1 stainless steel	6, 8 and 12 mm	swagelok screw fitting system

Materials in Contact with Chemicals

Liquid End Connector	Suction/Discharge (Connector 6 - 12 mm)	Seals	Balls
PVDF	PVDF	PTFE	Ceramic
stainless steel no. 1.4404	stainless steel no. 1.4404	PTFE	ceramic

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1.6.3 Identity Code Ordering System for Pneumados

PND b Pneumados Version b

Pump Type:	Capacity (simplex)			PVT	SS	PVT	SS
				SIMPLEX	SIMPLEX	DUPLEX	DUPLEX
1000	10	bar	0.76 l/h				
1601	16	bar	1.00 l/h				
1602	16	bar	1.70 l/h				
1005	10	bar	3.80 l/h				
0708	7	bar	6.30 l/h				
0413	4	bar	10.5 l/h				
0220	2	bar	16.7 l/h				

Liquid end material:

- PVT PVDF and PTFE seal
- SST Stainless steel (1.4404) and PTFE seal

Valve Springs:

- 0 No vent, no valve springs
- 1 No vent, with valve springs
- 2 With vent, no valve springs
- 3 With vent, with valve springs

Hydraulic connections:

- 0 Standard according to technical data

Version:

- 0 Pump only
- 1 Pump assembly complete with bracket and controller
- 2 Duplex Pump assembly with bracket (uses existing controller)

Power connector:

- 0 G 1/4 connector for compressed air 6 bar

Controller type:

- 0 Standard 4025 VLG - 1/8" AIR Controller

Approvals

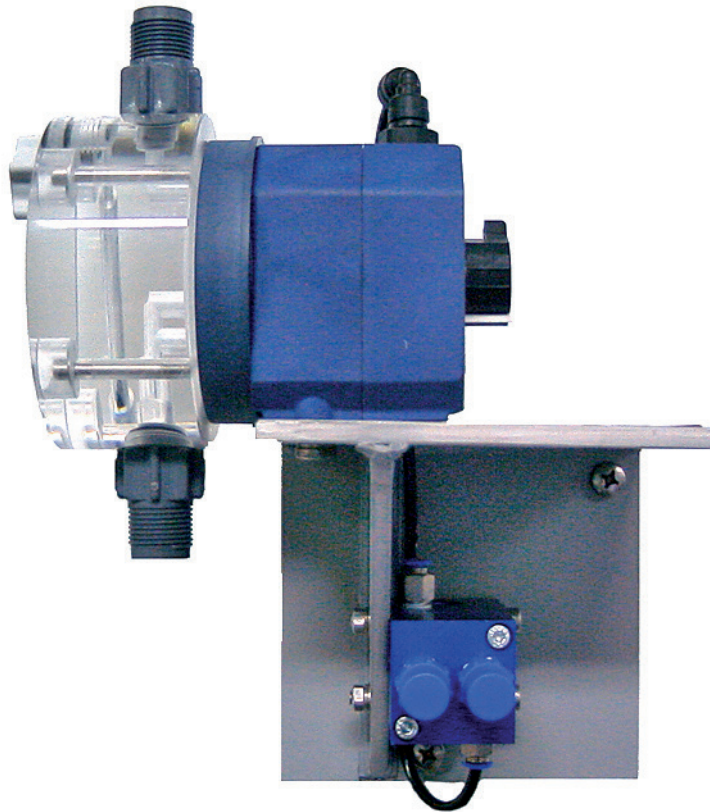
- 01 CE

Note: All pumps are supplied mounted on a bracket with controller Dosing valve, Foot valve and suction and delivery hose and tube are extra.

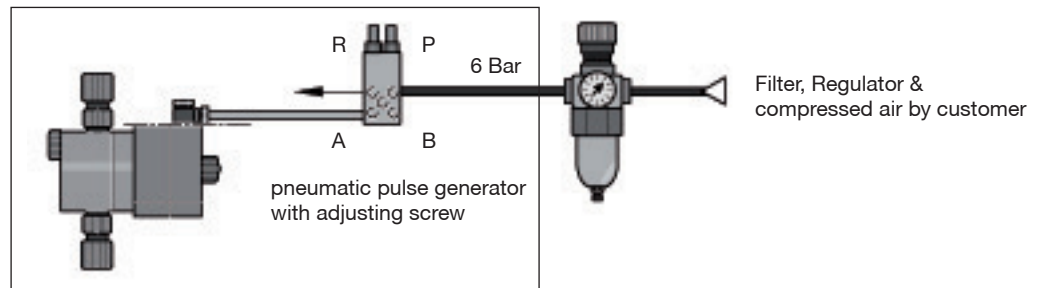
PND b 1601 PVT 0 0 0 0 0 0 01

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1.6.4 Electric and Pneumatic Schematic Diagrams



STANDARD Pneumatic Controller Schematic diagram



OPTIONAL Electrical/Pneumatic Controller Schematic diagram

