

1.2 Motor-Driven Metering Pumps

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Motor-Driven Metering Pump Vario C

The basic pump for simple applications

Capacity range 8 – 76 l/h, 10 – 4 bar



The motor-driven metering pump Vario C delivers a high level of process quality for continuous metering within simple metering tasks. It can be used, for example, in the metering of additives or flocculants in chemical metering.

With 4 gear reduction ratios, 2 dosing head sizes and 2 dosing head materials, the Vario C motor-driven metering pump is well adapted to basic metering tasks. It is available with a three-phase or single-phase AC motor. Its pump capacity is adjusted via the stroke length, in 1% increments, with a self-locking rotary dial.

Your benefits

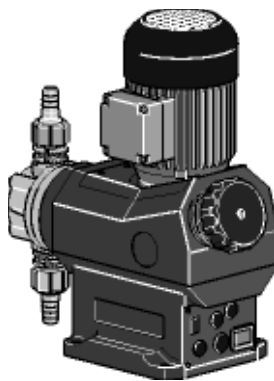
- Excellent suction capacity, gentle metering stroke and consistently precise metering
- Excellent process quality: Metering reproducibility is better than $\pm 2\%$ within the stroke length adjustment range of 30 to 100%
- Flexible adjustment of the pump capacity by means of the stroke length in 1% increments
- Fibreglass-reinforced plastic housing
- Good adaptation to the specific application, thanks to 4 different gear reduction ratios and 2 sizes of liquid ends in 2 material versions
- Power end optionally available with three-phase or single-phase AC motor
- Customised designs are available on request

Technical Details

- Stroke length: 3 mm
- Stroke length adjustment range: 0 – 100 %
- Stroke length adjustment: manually by means of self-locking rotary dial
- Metering reproducibility is better than $\pm 2\%$ in the 30 – 100% stroke length adjustment range under defined conditions and with correct installation
- Wetted materials: PVDF, stainless steel 1.4571/1.4404
- DEVELOPAN® diaphragm (single diaphragm with PTFE)
- Motor: Three-phase AC motor (0.07 KW, 230/400 V, 50/60 Hz) or single-phase AC motor (0.06 kW, 230 V 50 Hz or 115 V 60 Hz)
- Degree of protection: IP 55
- Fibreglass-reinforced plastic housing
- Provide suitable overload protection in all motor-driven metering pumps during installation for safety reasons.

Field of application

- Chemical metering in potable water, cooling and waste water circuits
- Metering of additives, flocculants etc.



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Vario C



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Technical Data

Type VAMc	With 1500 rpm motor at 50 Hz				With 1800 rpm motor at 60 Hz			Suction lift m WC	Perm. pre- pressure suction side bar	Connection, suction/ discharge side G-DN
	Delivery rate at max. back pressure		Max. stroke rate Strokes/ min	Delivery rate at max. back pressure		Max. stroke rate Strokes/min				
	bar	l/h ml/ stroke		psi	l/h/gph (US)					
10008	10	8	4	38	145	9.6/2.5	45	7	2.8	3/4-10
10016	10	16	4	77	145	19.2/5.0	92	7	2.8	3/4-10
07026	7	26	4	120	100	31.2/8.2	144	7	2.8	3/4-10
07042	7	42	4	192	100	50.4/13.3	230	7	2.8	3/4-10
07012	7	12	5	38	100	14.4/3.8	45	6	1.7	3/4-10
07024	7	24	5	77	100	28.8/7.6	92	6	1.7	3/4-10
04039	4	40	5	120	58	48.0/12.6	144	6	1.7	3/4-10
04063	4	64	5	192	58	76.8/20.2	230	6	1.7	3/4-10

The shipping weight of all pump types is 6/7.2 kg (PVDF/SS)

Materials in Contact With the Medium

Material	Dosing head	Suction/pressure connector	Seals	Valve balls	Valve seat
PVT	PVDF	PVDF	PTFE	Ceramic	PTFE
SST	Stainless steel material no. 1.4404	Stainless steel material no. 1.4581	PTFE	Stainless steel material no. 1.4404	PTFE

Motor Data

Identity code characteristic	Voltage supply				Remarks
S	3 ph, IP 55	220-240 V/380-420 V	50 Hz	0.07 kW	
		250-280 V/440-480 V	60 Hz	0.07 kW	
M	1 ph AC, IP 55	230 V ±5%	50/60 Hz	0.06 kW	
N	1 ph AC, IP 55	115 V ±5%	60 Hz	0.06 kW	

Motor data sheets can be requested for more information. Motors for Sigma basic pumps, special motors or special motor flanges are available on request.

Motors less than 0.75 kW and motors designed for speed-controllable operation are not subject to the IE3 standard in compliance with the Ecodesign Directive 2009/125/EC.



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Identity Code Ordering System for Vario Diaphragm Metering Pump

VAMc	Type*		
		bar	l/h
	10008	10	8
	10016	10	16
	07026	7	26
	07042	7	42
	07012	7	12
	07024	7	24
	04039	4	40
	04063	4	64
		Material Liquid end	
	PVT	PVDF, PTFE seal	
	SST	stainless steel, PTFE seal	
		Liquid end version	
		0	no valve spring (standard) PVC
		1	with 2 valve springs. Hastelloy C4
		Hydraulic connection	
		0	standard connection
		1	PVC union nut and insert
		2	PP union nut and insert
		3	PVDF union nut and insert
		4	Stainless steel union nut and insert
		5	PP union nut and hose nozzle
		7	PVDF union nut and hose nozzle
		8	Stainless steel union nut and hose nozzle
		Version	
		0	with ProMinent® logo (standard)
		1	without ProMinent® logo
		M	modified
		Electrical power supply	
		S	3 ph, 230 V / 400 V; 50/60 Hz
		M	1 ph AC 230 V; AC 50/60 Hz
		N	1 ph AC 115 V; AC 60 Hz
		Stroke sensor	
		0	no stroke sensor
		3	with stroke sensor (Namur)
		Stroke length adjustment	
		0	manual (standard)

* Digits 1 and 2=back pressure [bar]; digits 3, 4, 5=flow rate [l/h]

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Spare Parts

The spare parts kit generally includes the wear parts for the liquid ends.

Scope of delivery with PPE, PCB, PVT material versions:

- 1 diaphragm
- 1 suction valve assembly
- 1 discharge valve assembly
- 2 valve balls
- 1 complete sealing set (O-rings or cover rings with PVT design)

Scope of delivery with SST material version:

- 1 diaphragm
- 2 valve balls
- 1 complete sealing set (cover rings, flat seals, ball seat)

Spare parts kits for motor-driven metering pump Vario C

Applicable to Identity code: Type VAMc 10008, 10016, 07026, 07042

Liquid end	Materials in contact with the medium	Order no.
FM 042 - DN 10	PPE	910753
FM 042 - DN 10	PCB	910754
FM 042 - DN 10	PVT	1003641
FM 042 - DN 10	SST	910751

Applicable to Identity code: Type VAMc 07012, 07024, 04039, 04063

Liquid end	Materials in contact with the medium	Order no.
FM 063 - DN 10	PPE	910758
FM 063 - DN 10	PCB	910759
FM 063 - DN 10	PVT	1003642
FM 063 - DN 10	SST	910756

Spare diaphragms for motor-driven metering pump Vario C



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	Order no.
Vario with FM 042 Type VAMc 10008, 10016, 07026, 07042	811458
Vario with FM 063 Type VAMc 07012, 07024, 04039, 04063	811459

Accessories

- Foot Valves for Motor-Driven Metering Pumps see page
- Injection Valves for Motor-Driven Metering Pumps see page
- Connectors and Seals for Motor-Driven Metering Pumps see page → 1-189
- Suction Lances, Suction Assemblies and Level Switches for Motor-Driven Metering Pumps see page → 1-183
- Speed Controllers see page → 1-203

Spare Parts

- Custom Accessories See page