

Motor-Driven Metering Pump Sigma/ 2 (Basic type)

The robust pump for safe and reliable use

ProMinent®



Capacity range 50 – 420 l/h, 16 – 4 bar

The Sigma/ 2 diaphragm metering pump, together with pumps of type Sigma/ 1 and Sigma/ 3, represents an integrated product range. They cover the capacity range from 17 to 1,030 l/h, with a consistent operating concept, control concept and spare parts management. A wide range of power end versions is available, including some for use in ATEX areas.

Your benefits

Excellent process reliability:

- In the event of an accident, the feed chemical does not escape to the outside nor into the pump's power end, thanks to the patented multi-layer safety diaphragm with optical (optionally electric) signalling.
- Integrated relief valve to protect the pump from overloading.
- Reliable operation by bleed option during the suction process

Flexible adaptation to the process:

- The Sigma product range is available as standard in the "Physiologically safe in respect of wetted materials" "F" design.
- Metering pumps with electro-polished stainless steel metering head enable them to be used in hygienically challenging applications
- Wide range of power end versions, also for use in areas at risk from explosion, and different flange designs for the use of customised motors

Field of application

- Volume-proportional addition of chemicals in water treatment, e.g. sodium-calcium hypochlorite for the disinfection of potable water
- Addition of chemicals depending on the measured value, e.g. metering of acid and alkali for pH neutralisation in waste water treatment
- Time-controlled addition of chemicals in the cooling water circuit
- Pulse-controlled metering in the bottling of different volumes e.g. glycerin filling of manometers



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Technical Data

Type	Capacity at max. back pressure with 1500 rpm motor at 50°Hz			Pump capacity at max. back pressure with 1800 rpm motor at 60°Hz			Suction lift	Perm. pre-pressure suction side	Connection, suction/discharge side	Shipping weight	
	Max. stroke rate			Max. stroke rate							
S2Ba	bar	l/h	ml/stroke	Strokes/min	psi	l/h/gph (US)	Strokes/min	m WC	bar	G-DN	kg
16050 PVT	10	50	11.4	73	145	60.0/15.8	87	7	3	1-15	15
16050 SST	16	47	11.4	73	232	56.0/14.7	87	7	3	1-15	20
16090 PVT	10	88	11.4	132	145	106.0/28.0	158	7	3	1-15	15
16090 SST	16	82	11.4	132	232	98.4/25.9	158	7	3	1-15	20
16130 PVT	10	135	10.9	198	145	156.0/41.2	238	7	3	1-15	15
16130 SST	16	124	10.9	198	232	148.0/39.0	238	7	3	1-15	20
07120 PVT	7	126	27.4	73	102	150.0/39.6	87	5	1	1 1/2-25*	16
07120 SST	7	126	27.4	73	102	150.0/39.6	87	5	1	1 1/2-25*	24
07220 PVT	7	220	27.7	132	102	264.0/69.7	158	5	1	1 1/2-25*	16
07220 SST	7	220	27.7	132	102	264.0/69.7	158	5	1	1 1/2-25*	24
04350 PVT	4	350	29.4	198	58	420.0/110.9	238	5	1	1 1/2-25*	16
04350 SST	4	350	29.4	198	58	420.0/110.9	238	5	1	1 1/2-25*	24

*For the Sigma types 07120, 07220 and 04350, the dosing head is fitted with DN 25 (G 1 1/2) valves. As DN 20 is generally sufficient for the pipework for these types (see technical data, suction/discharge side connector), the connector parts that can be ordered with the identity code (e.g. inserts) are already reduced to DN 20, i.e. DN 20 pipework and accessories can be installed.

Performance data for TTT, see type PVT

Integrated relief valve, connector for DN 10 pressure hose sleeve

Materials in Contact With the Medium

Material	Dosing head	Suction/pressure connector	Seals/ball seat	Balls	Integral relief valve
PVT	PVDF	PVDF	PTFE/PTFE	Ceramic/glass*	PVDF/FKM or EPDM
SST	Stainless steel 1.4404	Stainless steel 1.4581	PTFE/PTFE	Stainless steel 1.4404	Stainless steel/FKM or EPDM
TTT**	PTFE + 25% carbon	PTFE + 25% carbon	PTFE/PTFE	Ceramic	-

* with 07120, 07220, 04350

** specifically for areas at risk from explosion

Motor Data

Identity code specification	Power supply	Δ/Y	Remarks			
S	3-phase, IP 55*	230V/400V	50Hz	0.25 kW		
T	3-phase, IP 55*	230V/400V 265V/460V	50Hz 60Hz	0.25 kW 0.25 kW	With PTC, speed control range 1:4	
R	3-phase, IP 55*	230V/400V	50Hz	0.37 kW	With PTC, speed control range 1:20 with external fan (1-phase 230V; 50/60Hz, 134 W)	
M	1-phase AC, IP 55	230V ± 5%	50Hz	0.18 kW		
N	1-phase AC, IP 55	120V ± 5%	60Hz	0.18 kW		
L1	3-phase, II2GExellT3	220 – 240V/380 – 420V	50Hz	0.18 kW		
L2	3-phase, II2GExdlICT4	220 – 240V/380 – 420V	50Hz	0.18 kW	With PTC, speed control range 1:5	

Motor data sheets can be requested for more information. Versions 265/460V - 60Hz, 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.

Information for use in areas at risk from explosion

Only use pumps with the appropriate labelling in line with the ATEX Directive 2014/34/EC in premises at risk from explosion. Ensure that the explosion group, category and degree of protection specified on the label correspond to or are superior to the conditions prevalent in the intended application.

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