

Safe, precise and cost-effective metering

Low-pressure metering pumps up to over 1,000 l/h



Contents



Low-pressure metering pumps up to over 1,000 l/h

Thanks to the extensive diversity of its product range (dosing head, size, capacity, set up and control options), ProMinent® low-pressure metering pumps are capable of performing all metering tasks sustainably and environmentally-friendly, at the same time saving energy.

Get in touch with us and discover the manifold opportunities provided by ProMinent® low-pressure pumps.

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ProMinent



Our extensive **product range** – precise metering and unlimited reliability

You undoubtedly know ProMinent as a manufacturer of solenoid metering pumps? In fact, that is our origin and we are the global market leader in this product range. However, over the 55 years that we have been in existence, we have substantially extended our product range for our customers. Why? Because we know and understand that you, as our customers, do not simply want a product from us, rather a solution to your problem – and justifiably so.

Every industry “works” differently, that is to say, has its own unique peculiarities. We have adapted to this.

Expertise alone is not enough. Our customers are essential for ProMinent’s success story. Their trust and the intensive exchange of ideas relating to their requirements and needs is what has made our success possible.

World market leadership brings obligations, such as the need for close exchanges with customers. This dialogue shows that the trend is moving towards

more energy-efficient and environmentally-friendly technologies. ProMinent is reacting to this with manifold product developments. With energy-efficient products. This means that the future will bring many more innovations in the field of chemical metering and water treatment developed in Heidelberg. They all have only one goal: to exceed our customers’ expectations.

Solenoid Driven Metering Pumps

Low-wear pumps for low capacities

Mode of operation

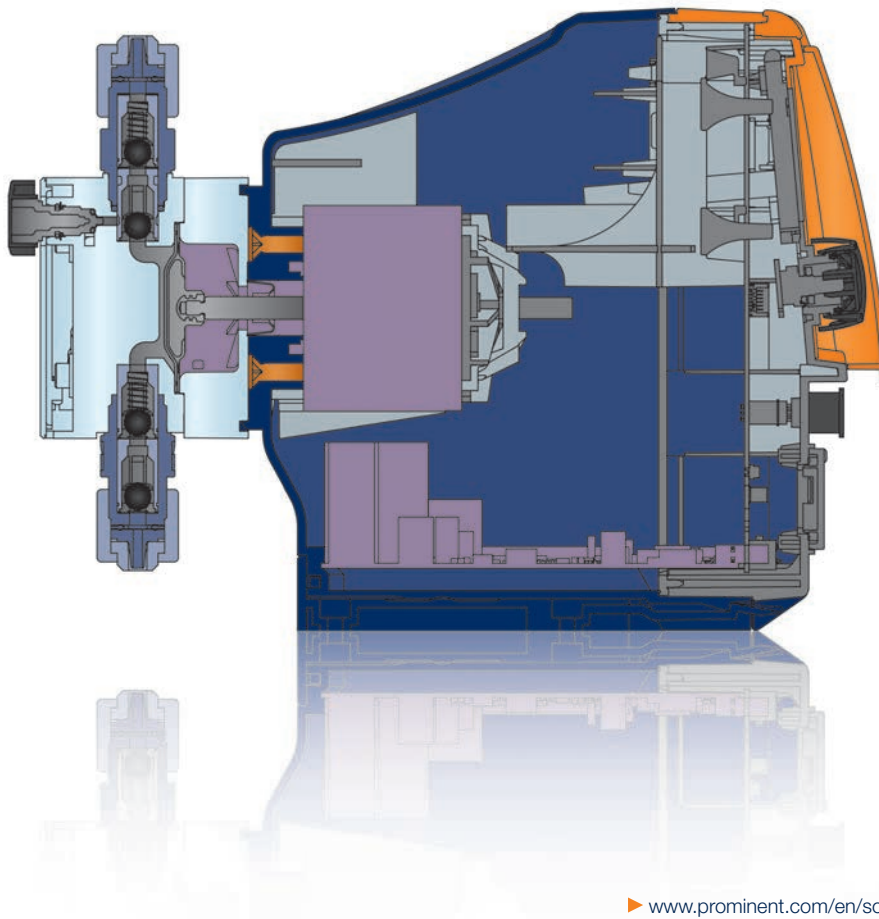
A magnet moves the solenoid shaft forwards and backwards by switching on and off. This stroke movement is transmitted to the diaphragm in the dosing head. Two non-return valves prevent the dosing medium flowing back during pumping. The stroke length and stroke rate can be adjusted to alter the capacity of a solenoid driven metering pump.

Features

- Capacity range: 0.74 to 80 l/h at 25 to 2 bar back pressure
- Virtually wear-free power end/drive, as only one moving part is used – the pump has no lubricated bearing or shafts
- Outstanding long-term stability
- Cost-effective technical alternative in the lower capacity range
- Maximum safety from overloading
- Low energy consumption thanks to excellent efficiency
- IP 65 degree of protection due to fully sealed housing

Applications

- General: Chemical metering in laboratories and in industry up to 80 l/h pump capacity
- Potable water and swimming pool water treatment: Metering of chemicals for disinfection and for pH correction
- General water treatment, water treatment of process water, industrial water and conditioning agents
- Cooling water circuits: Metering of disinfectants
- Mini-plant technology
- Paper industry, de-foamers
- Electroplating and surface treatment, pool additives, slide grinding systems



Motor Driven Metering Pumps

High dosing precision and robust technology

Mode of operation

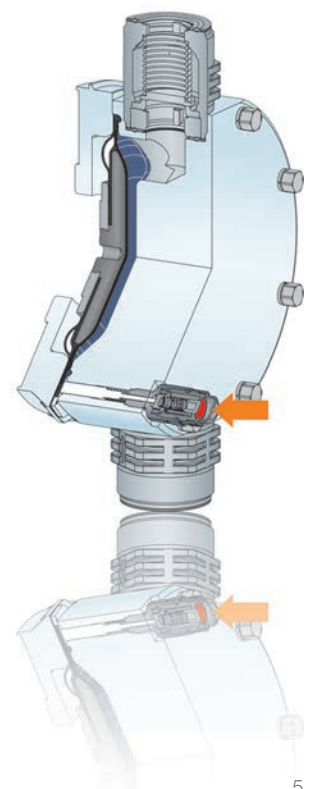
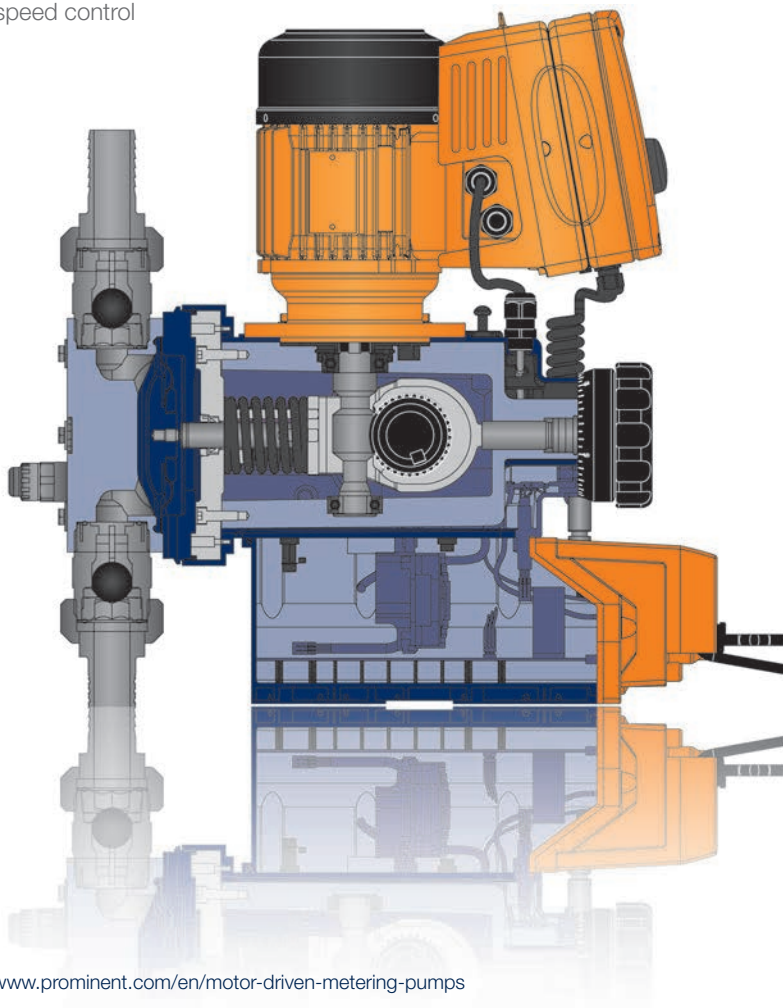
The rotation of an electric motor is stepped down by a worm gear and converted via a cam into a linear stroke movement. The slide rod transmits this stroke movement to the diaphragm in the dosing head. The feed chemical is prevented from flowing back during pumping by two non-return valves. The stroke length and stroke rate – in this instance the motor speed – can be adjusted to alter the capacity of a motor driven metering pump.

Features

- Extremely broad capacity range
- High dosing precision even under varying pressure conditions (rigid characteristic) enables chemicals to be reduced and ensures exact process control
- Robust and cost-effective power end/drive in higher capacity classes
- Simple integration and retrofitting into automated processes by flexible control via stroke length and motor speed control
- Maximum safety thanks to multi-layer safety diaphragm with rupture warning system
- Sigma Basic type: Robust pump for safe and reliable use
- Sigma X Control type: Reliable, smart and network-friendly

Applications

- General: Chemical metering up to over 1,000 l/h
- Potable water treatment: Metering of disinfectants
- Cooling circuits: Metering of disinfectants
- Waste water treatment: Metering of flocculants
- Paper industry: Metering of additives
- Plastics production: Metering of additives



The wide range for reliability and precision

Motor driven metering pumps

alpha c

Robust and simple

Capacity range
1.0 – 30.6 l/h
10 – 2 bar

Vario C

Precise and reliable

Capacity range
8 – 76 l/h
10 – 4 bar

Sigma X Control type

Safety as standard

Sigma/ 1

Capacity range
17 – 144 l/h
12 – 4 bar

Sigma/ 2

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

Sigma/ 3

Capacity range
146 – 1,040 l/h
12 – 4 bar



Solenoid-driven metering pumps / Plunger pumps

Beta® b

The all-rounder

Capacity range
0.74 – 32 l/h
25 – 2 bar

gamma/ X

For versatile uses

Capacity range
2.3 ml – 45 l/h
25 – 2 bar

gamma/ XL

Capacity perfected

Capacity range
8 – 80 l/h
25 – 2 bar



Pneumatically-driven metering pumps

Sigma hygienic pumps

Hygienic design with liquid ends for aqueous media.

Material: 1.4404, 14435, PTFE, EPDM, electropolished, $R_a \leq 0.8 \mu\text{m}$

Sigma/ 1

Capacity range 16 – 108 l/h
10 – 4 bar

Sigma/ 2

Capacity range 45 – 218 l/h
10 – 7 bar

Sigma/ 3

Capacity range 127 – 770 l/h
10 – 4 bar



Pneumados

Ultra-simple handling

Capacity range 0.76 – 16.7 l/h
16 – 2 bar



Peristaltic pumps

DULCO®flex

Precise and reproducible

DF2a

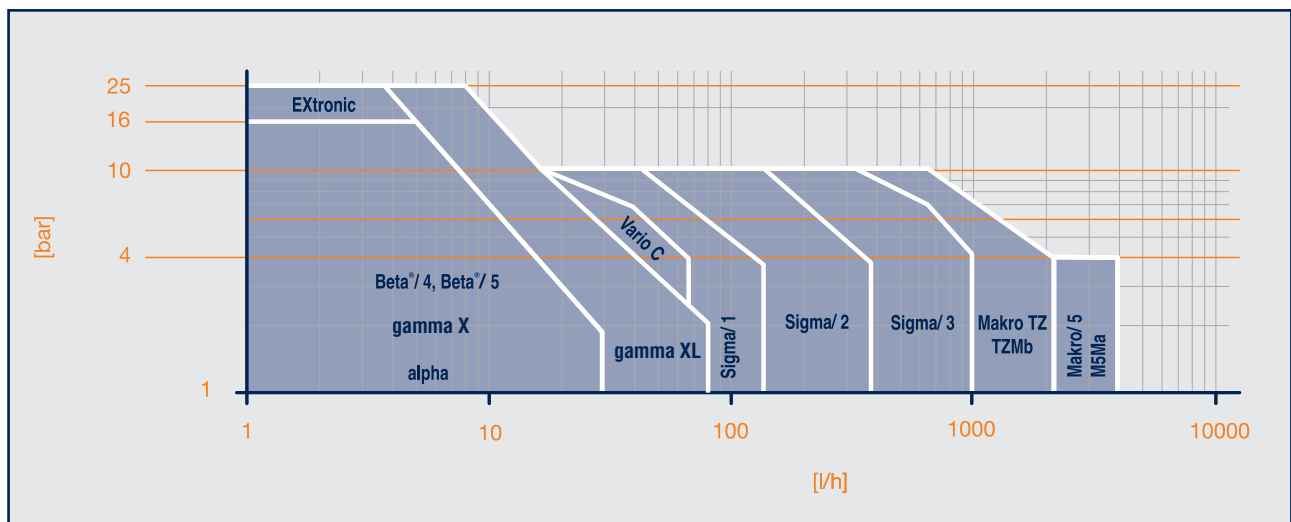
Capacity range 0.4/0.8/1.6/2.4 l/h
up to 1.5 bar

DF4a

Capacity range 1.5/6.0/12.0 l/h
up to 4 bar



Capacity at a Glance Low-pressure metering pumps

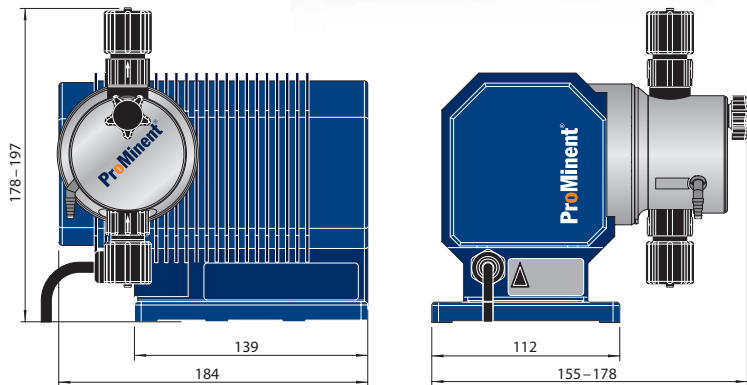


alpha c

Motor driven metering pumps

The economical solution for simple applications in the low capacity range.

- Capacity range
1.0–30.6 l/h, 10–2 bar
- Excellent priming capacity, gentle metering stroke and consistently precise metering
- Reliable operation even with gaseous media thanks to patented venting system
- Suitable for many applications due to two gear reduction ratios, four liquid end sizes and two material versions (PVDF, clear acrylic/PVC)
- Capacity can be adjusted via the stroke length in 10% increments
- Control via ON/OFF voltage supply



Pump type	Pump capacity with 50 Hz design			Stroke rate Strokes/min	Stroke length mm	Suction lift mWs	Connector size a Ø x i Ø mm
	bar	l/h	ml/stroke				
ALPc 1001	10.0	1.0	0.29	30	2	5.1	6x4
ALPc 1002	10.0	1.8	0.52	58	2	5.1	6x4
ALPc 1004	10.0	3.5	1.01	58	3	5.1	8x5
ALPc 1008	10.0	7.7	1.00	128	3	5.1	8x5
ALPc 0707	7.0	6.9	1.98	58	3	4.1	8x5
ALPc 0417	4.0	17.0	2.51	128	3	4.1	8x5
ALPc 0230	2.0	30.6	3.98	128	3	3.1	12x9

60 Hz design approx. 20% more capacity

Wetted materials					
Design	Dosing head	Suction/pressure connector	Seals	Valve balls	Ball seal
PPE	Polypropylene	Polypropylene	EPDM	Ceramic	EPDM
PPB	Polypropylene	Polypropylene	FKM	Ceramic	FKM
NPE	Clear acrylic	PVC	EPDM	Ceramic	EPDM
NPB	Clear acrylic	PVC	FKM	Ceramic	FKM
PVT	PVDF	PVDF	PTFE	Ceramic	PVDF

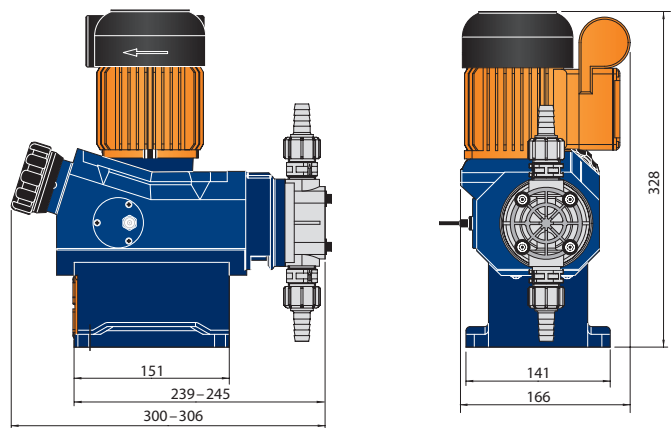
DEVELOPAN® diaphragms with PTFE support in all designs. FPM: fluorine rubber

Vario C

Motor driven metering pumps

The basic pump for simple applications and continuous metering.

- Capacity range
8–75 l/h, 10–4 bar
- Excellent priming capacity, gentle metering stroke and consistently precise metering
- High level of process quality:
Reproducibility of the metering is better than $\pm 2\%$
- Robust construction: powerful drive motor, impact-resistant and chemical-resistant housing made of fibreglass-reinforced plastic
- Good adaptation to the specific application, thanks to four different gear reduction ratios and two sizes of liquid ends in two material designs



Pump type	with 1500 rpm motor at 50 Hz operation, pump capacity at max. back pressure			Stroke rate Strokes/min	Suction lift mWS	Reliable pre-pressure on suction side bar	Connector Suction/discharge side G-DN
	bar	l/h	ml/stroke				
10008	10	8	4	38	7	2.8	3/4–10
10016	10	16	4	77	7	2.8	3/4–10
07026	7	26	4	120	7	2.8	3/4–10
07042	7	42	4	192	7	2.8	3/4–10
07012	7	12	5	38	6	1.7	3/4–10
07024	7	24	5	77	6	1.7	3/4–10
04039	4	40	5	120	6	1.7	3/4–10
04063	4	64	5	192	6	1.7	3/4–10

60 Hz design approx. 20% more capacity

Wetted materials					
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. 1.4404	PTFE	Stainless steel material no. 1.4404	PTFE

DEVELOPAN® diaphragms with PTFE support in all designs. FPM: fluorine rubber

Sigma Basic type

Motor driven metering pumps

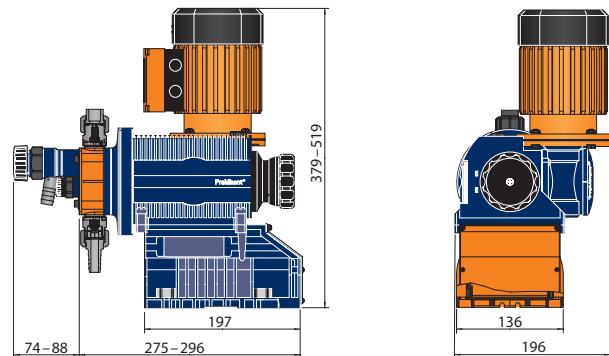
The right capacity for every application. There are two different types of the Sigma product range available (Basic type and Control type).

The three versions differ in terms of their capacities:

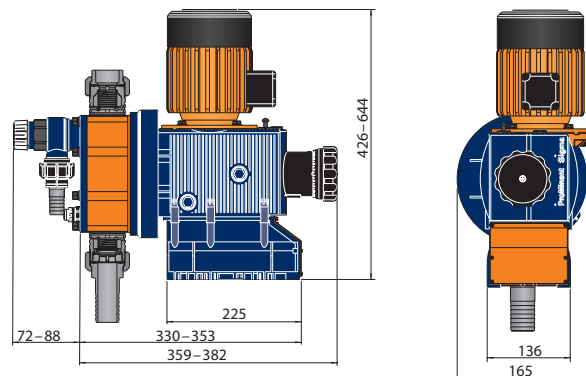
- Sigma/ 1** 17–144 l/h, 12–4 bar
- Sigma/ 2** 50–420 l/h, 16–4 bar
- Sigma/ 3** 146–1,040 l/h, 12–4 bar

- Process safety thanks to dual diaphragm with diaphragm rupture warning system
- Reliable operation due to venting option
- Integrated relief valve protects against overloading
- Simplified management of spare parts when using the Sigma product range
- For volume-proportional, time-controlled, pulse-controlled and measurement-dependent metering
- 2 standard materials
PVDF/PTFE, stainless steel/PTFE

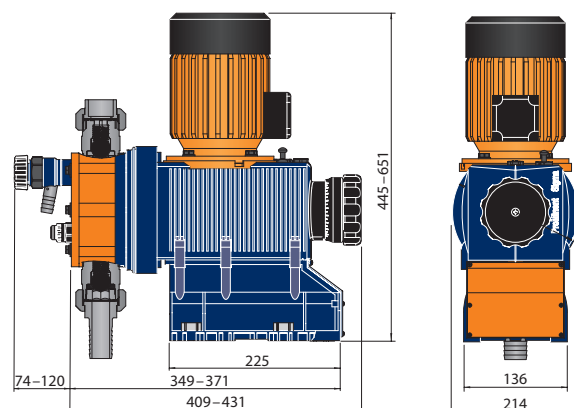
Sigma/ 1



Sigma/ 2



Sigma/ 3





Pump type	Pump capacity at max. back pressure with motor operating at 1,500 rpm at 50 Hz operation			Stroke rate Strokes/min	with motor operating at 1,800 rpm at 60 Hz operation		Stroke rate Strokes/min	Suction lift mWS	Reliable pre-pressure on suction side bar	Connector Suction/ discharge side G-DN
	bar	l/h	ml/stroke		psi	l/h				
Sigma/ 1 Basic Type (S1Ba)										
12017	12	17	3.8	73	174	20	88	7	1	¾-10
12035	12	35	4.0	143	174	42	172	7	1	¾-10
10050	10	50	4.0	205	145	60	246	7	1	¾-10
10022	10	22	5.0	73	145	26	88	6	1	¾-10
10044	10	44	5.1	143	145	53	172	6	1	¾-10
07065	7	65	5.2	205	102	78	246	6	1	¾-10
07042	7	42	9.5	73	102	50	88	3	1	1-15
04084	4	84	9.7	143	58	101	172	3	1	1-15
04120	4	120	9.7	205	58	144	246	3	1	1-15
Sigma/ 2 Basic Type (S2Ba)										
16050	16	47	11.4	73	232	57	87	7	3	1-15
16090	16	88	11.4	132	232	98	158	7	3	1-15
16130	16	124	10.9	198	232	148	238	7	3	1-15
07120	7	126	27.4	73	102	150	87	5	1	1½-25
07220	7	220	27.7	132	102	264	158	5	1	1½-25
04350	4	350	29.4	198	58	420	238	5	1	1½-25
Sigma/ 3 Basic Type (S3Ba)										
120145	12	146	33.7	72	174	174	86	5	2	1½-25
120190	12	208	33.7	103	174	251	124	5	5	1½-25
120270	12	292	33.8	144	174	351	173	5	2	1½-25
120330	12	365	33.8	180	174	-	-	5	2	1½-25
070410	7	410	95.1	72	102	492	86	4	1	2-32
070580	7	580	95.1	103	102	696	124	4	1	2-32
040830	4	830	95.1	144	58	1,000	173	3	1	2-32
041030	4	1,030	95.1	180	58	-	-	3	1	2-32

Dosing head, PVDF design, max. 10 bar. ** DN32 plate valves with valve spring

Wetted materials	Suction/ pressure connector	Seals/ball seat	Valve balls	Integrated relief valve	
Material	Dosing head				
Sigma/ 1 + Sigma/ 2					
PVT	PVDF	PVDF	PTFE/PTFE	Ceramic	PVDF/FPM or EPDM
SST	Stainless steel material no. 1.4404	Stainless steel material no. 1.4581	PTFE/PTFE	Stainless steel material no. 1.4404	Stainless steel/FPM or EPDM

Wetted materials for ATEX design: TTT, PTFE+25% carbon, PTFE, ceramic, PTFE/PTFE, ceramic

Material	Suction/pressure connection of dosing head	DN 25 ball valves			DN 32 plate valves			Integral relief valve
		Seals	Valve balls	Valve seats	Seals	Valve plates/ valve springs	Valve seats	
Sigma/ 3								
PVT	PVDF	PTFE	Glass	PTFE	PTFE	Ceramic/ Hast C. + CTFE	PTFE	PVDF/FPM or EPDM
SST	Stainless steel material no. 1.4404	PTFE	Stainless steel material no. 1.4404	PTFE	PTFE	Stainless steel 1.4404/Hast C.	PTFE	Stainless steel/ FPM or EPDM

Multi-layer safety diaphragm with PTFE support in all designs. FPM: fluorine rubber

Alternative material versions available on request.

TTT, PTFE+25% carbon, PTFE, ceramic, PTFE, PVDF, ceramic/Hast C. + CTFE, for ATEX design

Sigma X Control type

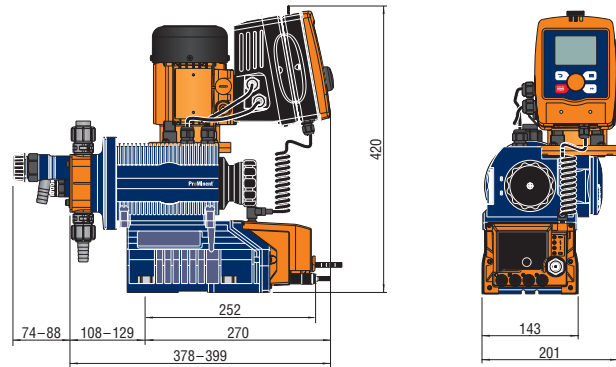
Motor driven metering pumps

The Sigma Control is a smart, flexible motor-driven metering pump that sets new standards in terms of productivity, reliability and safety.

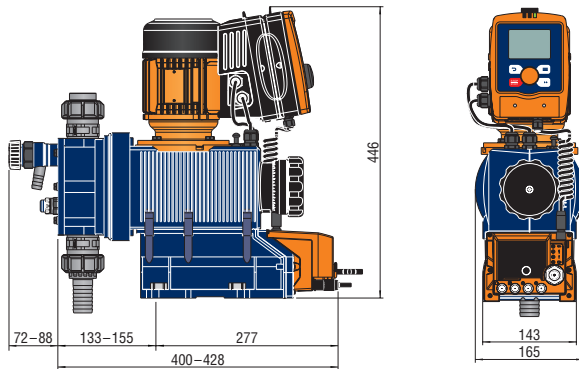
The Sigma X diaphragm metering pump covers the capacity range from 21 to 1,040 l/h in the S1Cb, S2Cb and S3Cb variants. It efficiently protects the power end from overloading by means of an integral frequency converter with microprocessor control. One highlight is the standardised operating concept with click wheel and 4 additional operating keys on a removable control unit. A large illuminated LCD and a 3-LED display for operating, warning and error messages, visible from all sides, provide extra operating convenience. The Sigma, like all smart ProMinent metering pumps, can be flexibly connected to various bus systems. It has a large adjustment range thanks to a combination of frequency and stroke length adjustment. The pump works with high precision across the entire frequency range. Viscous and gaseous media can be metered accurately and without complication by adjustment of the movement profile. Operating statuses are transferred remotely via additional relay modules. Suitable spare parts can be shown on the display.

- External control is scalable via potential-free contacts with pulse step-up and step-down, batch mode or via a 0/4-20 mA standard signal
- Can be flexibly networked: Connection to process control systems via integrated PROFIBUS®, CANopen interface (optional)
- Bluetooth and Wi-Fi connection for the simple configuration of parameters and call-up of process data (optional)

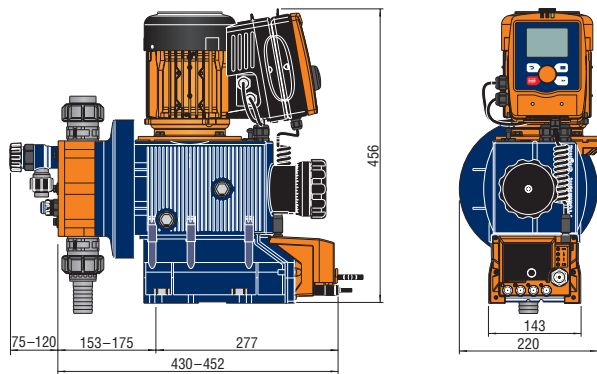
Sigma/ 1



Sigma/ 2



Sigma/ 3



Capacity ranges:

Sigma/ 1 17–117 l/h, 12–4 bar

Sigma/ 2 61–353 l/h, 16–4 bar

Sigma/ 3 182–1,040 l/h, 12–4 bar



Sigma X Family

Pump type	Pump capacity at max. back pressure			Stroke rate Strokes/min	Suction lift mWS	Reliable pre-pressure on suction side bar	Connector Suction/ discharge side G-DN
	bar	l/h	ml/stroke				
Sigma/ 1 Control type (S1Cb)							
12017	12	21	3.9	90	7	1	¾-10
12035	12	42	4.0	170	7	1	¾-10
10050	10	49	4.0	200	7	1	¾-10
10022	10	27	5.1	90	6	1	¾-10
10044	10	53	5.1	170	6	1	¾-10
07065	7	63	5.1	200	6	1	¾-10
07042	7	52	9.5	90	3	1	1-15
07084	4	101	9.7	170	3	1	1-15
04120	4	117	9.7	200	3	1	1-15
Sigma/ 2 Control type (S2Cb)							
16050	16	56	10.4	90	7	2	1-15
16090	16	99	10.3	160	7	2	1-15
16130	16	129	10.9	200	7	2	1-15
07120	7	150	27.4	90	5	1	1½-25 ¹⁾
07220	7	271	27.7	160	5	1	1½-25 ¹⁾
04350	4	353	29.4	200	5	1	1½-25 ¹⁾
Sigma/ 3 Control type (S3Cb)							
120145	12	182	33.7	90	5	2	1½-25
120190	12	243	33.7	120	5	2	1½-25
120270	12	365	33.8	180	5	2	1½-25
070410	7	500	95.1	90	4	1	2-32
070580	7	670	95.1	120	4	1	2-32
040830	4	1,040	95.1	180	3	1	2-32

Dosing head, PVDF design, max. 10 bar. ** DN32 plate valves

Wetted materials

Material	Dosing head	Suction/ pressure connector	Seals/ball seat	Valve balls	Integrated relief valve
Sigma/ 1 + Sigma/ 2					
PVT	PVDF	PVDF	PTFE/PTFE	Ceramic	PVDF/FPM or EPDM
SST	Stainless steel material no. 1.4404	Stainless steel material no. 1.4581	PTFE/PTFE	Stainless steel material no. 1.4404	Stainless steel/FPM or EPDM

Material	Suction/pressure connection of dos- ing head	DN 25 ball valves			DN 32 plate valves			Integrated relief valve
		Seals	Valve balls	Valve seats	Seals	Valve plates/ valve springs	Valve seats	
Sigma/ 3								
PVT	PVDF	PTFE	Glass	PTFE	PTFE	Ceramic/ Hast C. + CTFE	PTFE	PVDF/FPM or EPDM
SST	Stainless steel material no. 1.4404	PTFE	Stainless steel material no. 1.4404	PTFE	PTFE	Stainless steel 1.4404/Hast C.	PTFE	Stainless steel/ FPM or EPDM

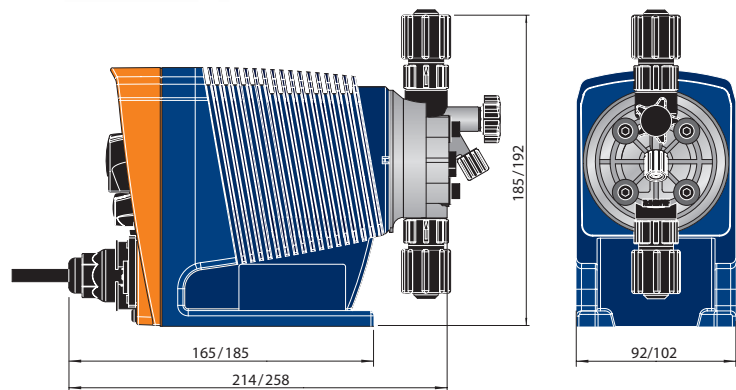
Multi-layer safety diaphragm with PTFE support in all designs. FPM: fluorine rubber
Alternative material versions available on request.

Beta[®] b

Solenoid driven metering pumps

The first choice for modern water treatment and chemical metering.

- Capacity range
0.74–32 l/h, 25–2 bar
- up to 50 % energy-savings through improved efficiency
- Adjustable, integrated pulse step-up and step-down for optimum adaptation to external signal generators
- Dosing heads to suit all chemicals ensure all-purpose use
- Virtually wear-free power end/drive
- Outstanding long-term stability
- Optional: Relay module can be quickly and simply retrofitted
- Input for level switch



Pump type	Pump capacity at max. back pressure			Stroke rate Strokes/min	Suction lift mWs	Connector size a Ø x i Ø mm	medium power consumption W
	bar	l/h	ml/stroke				
BT4b 1000	10	0.74	0.07	180	6.0	6x4	7.2
BT4b 1601	16	1.10	0.10	180	6.0	6x4	9.6
BT4b 1602	16	2.20	0.20	180	6.0	6x4	11.2
BT4b 1604	16	3.60	0.33	180	6.0	6x4	15.2
BT4b 0708	7	7.10	0.66	180	6.0	8x5	15.2
BT4b 0413	4	12.30	1.14	180	3.0	8x5	15.2
BT4b 0220	2	19.00	1.76	180	2.0	12x9	15.2
BT5b 2504	25	2.90	0.27	180	6.0	8x4 ¹⁾	19.2
BT5b 1008	10	6.80	0.63	180	6.0	8x5	19.2
BT5b 0713	7	11.00	1.02	180	4.0	8x5	19.2
BT5b 0420	4	17.10	1.58	180	3.0	12x9	19.2
BT5b 0232	2	32.00	2.96	180	2.0	12x9	19.2

Beta[®] b metering pumps are also available with a self-venting dosing head and for higher viscous media.

Pressure-reduced pump types are available in the pressure stages 4, 7 and 10 bar for special applications, for example in the swimming pool sector.

Suction lift with a filled dosing head and filled suction line, with a self-bleeding dosing head with air in the suction line.

1) With stainless steel design 6 mm connector width.

Wetted materials					
Design	Dosing head	Suction/pressure connector	Seals	Valve balls	Ball seal
PPT	Polypropylene	PVDF	PTFE	Ceramic	PVDF
NPT	Clear acrylic	PVDF	PTFE	Ceramic	PVDF
PVT	PVDF	PVDF	PTFE	Ceramic	PVDF
TTT	PTFE + carbon	PTFE + carbon	PTFE	Ceramic	Ceramic
SST	Stainless steel material no. 1.4404	Stainless steel material no. 1.4404	PTFE	Ceramic	Ceramic

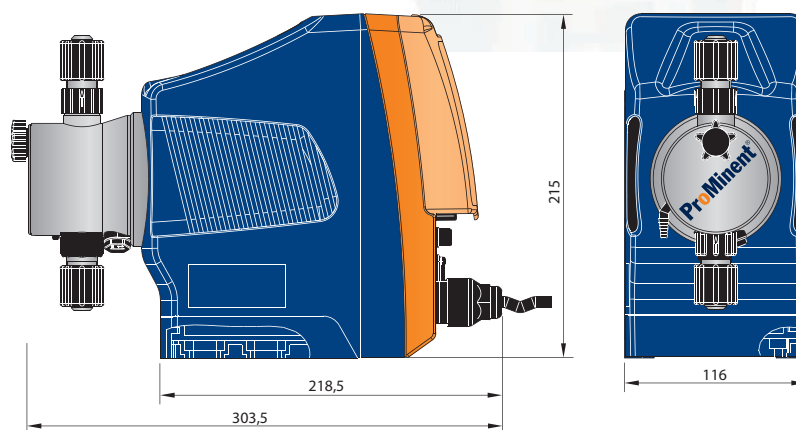
DEVELOPAN[®] diaphragms with PTFE support in all designs.

gamma/ X

Solenoid driven metering pumps

The gamma/ X is ideal for all metering work involving liquid media.

- Capacity range
2.3 –45 l/h, 25–2 bar
- Simple adjustment of the capacity directly in l/h
- Trouble-free processes by the detection of hydraulic malfunctions or blocked discharge lines
- Integrated pressure measurement and display for greater safety during commissioning and in the process
- Integrated 7-day timer for timed metering tasks
- Connection to process control systems via bus interfaces, such as Profinet, CAN bus, from the 3rd quarter of 2015, others on request



Pump type	Pump capacity at maximum back pressure			Stroke rate Strokes/min	Suction lift mWs	Connector size a Ø x i Ø mm
	bar	l/h	ml/stroke			
GMXa 1602	16	2.3	0.19	200	6.0	6 x 4
GMXa 1604	16	3.6	0.30	200	5.0	6 x 4
GMXa 0708	7	7.6	0.63	200	4.0	8 x 5
GMXa 0414	4	13.5	1.13	200	3.0	8 x 5
GMXa 0220	2	19.7	1.64	200	2.0	12 x 9
GMXa 2504	25	3.8	0.32	200	4.0	8x4 ¹⁾
GMXa 1009	10	9.0	0.75	200	3.0	8 x 5
GMXa 0715	7	14.5	1.21	200	3.0	8 x 5
GMXa 0424	4	24.0	2.00	200	3.0	12 x 9
GMXa 0245	2	45.0	3.70	200	2.0	12 x 9

gamma/ X metering pumps are also available with self-bleeding dosing head and for higher-viscosity media.

Suction lift with a filled dosing head and filled suction line, with a self-bleeding dosing head with air in the suction line.

1) With stainless steel design 6 mm connector width.

Wetted materials					
Design	Dosing head	Suction/pressure connector	Seals	Valve balls	Ball seal
PPT	Polypropylene	PVDF	PTFE	Ceramic	PVDF
NPT	Clear acrylic	PVDF	PTFE	Ceramic	PVDF
PVT	PVDF	PVDF	PTFE	Ceramic	PVDF
TTT	PTFE with carbon	PTFE with carbon	PTFE	Ceramic	Ceramic
SST	Stainless steel material no. 1.4404	Stainless steel material no. 1.4404	PTFE	Ceramic	Ceramic

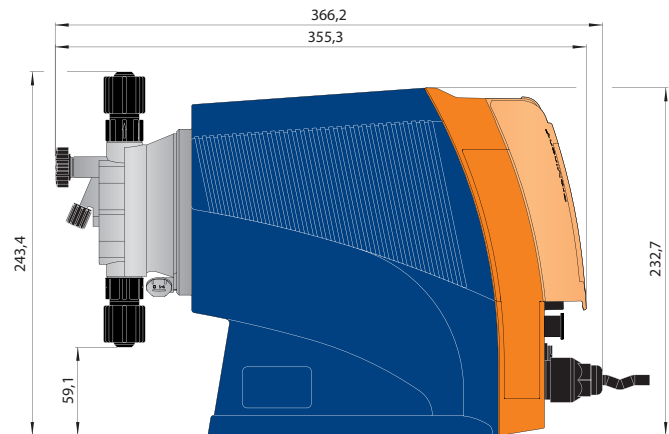
DEVELOPAN® diaphragms with PTFE support in all designs.

gamma/ XL

Solenoid driven metering pumps

The gamma/ XL is a smart, connectible solenoid-driven metering pump that sets new standards in terms of productivity, reliability and cost-effectiveness.

- Capacity range
8–80 l/h, 25–2 bar
- Simple adjustment of the metering rate directly in l/h or gph
- Integrated pressure measurement and display for greater safety during commissioning and in the process
- Bluetooth and Wi-Fi connection for the simple configuration and call-up of process data (optional)
- Adjustment range of metering rate 1:40,000
- Direct input of the required final concentration in concentration mode for volume-proportional metering tasks
- Virtually wear-free solenoid drive, overload-proof and economical



Pump type	Pump capacity		ml/stroke	Stroke rate Strokes/min	Suction lift mWs	Connector size a Ø x i Ø mm
	bar	l/h				
gamma/ XL						
GXLa 2508	25	8	0.67	200	5*	8x4 **
GXLa 1608	16	8	0.67	200	5*	8x5 **
GXLa 1612	16	12	1.0	200	6*	8x5
GXLa 1020	10	20	1.7	200	5*	12x9
GXLa 0730	7	30	2.5	200	5*	12x9
GXLa 0450	4	50	4.2	200	3*	G 3/4 - DN 10
GXLa 0280	2	80	6.7	200	2*	G 3/4 - DN 10
gamma/ XL metering pumps with self-bleeding dosing head without bypass*						
GXLa 1608	16	3.8	0.32	200	1.8	8x5
GXLa 1612	16	6.5	0.54	200	1.8	8x5
GXLa 1020	10	14	1.17	200	1.8	12x9
GXLa 0730	7	28	2.33	200	1.8	12x9

* Suction lift (mWS) = suction lift with a filled dosing head and filled suction line

** 6 mm connection width with stainless steel design

Wetted materials					
Design	Dosing head	Suction/pressure connector	Seals	Valve balls	Ball seal
NPT	Clear acrylic	PVDF	PTFE	Ceramic	PVDF
PVT	PVDF	PVDF	PTFE	Ceramic	PVDF
SST (8 - 12 mm)	Stainless steel material no. 1.4404	Stainless steel material no. 1.4404	PTFE	Ceramic	Ceramic
SST (DN 10)	Stainless steel material no. 1.4404	Stainless steel material no. 1.4404	PTFE	Ceramic	PTFE with carbon

Pneumados

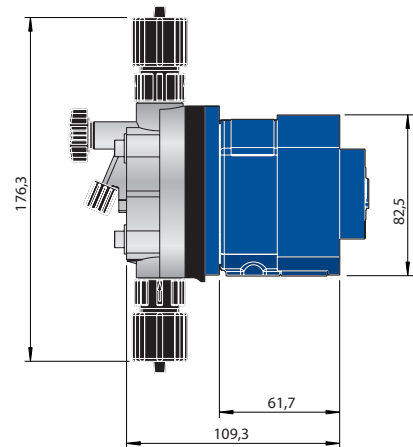
Pneumatically-driven diaphragm metering pumps

The standard solution for simple metering tasks wherever no electrical power is available.

- Capacity range
0.76–16.7 l/h, 16–2 bar
- Continuous stroke length adjustment
- Material versions PTFE and stainless steel
- Stroke rate of up to 180 strokes/min

Typical applications

- Car-washing systems
- Animal feed treatment
- Bottle disinfection in bottling plants



Pump type	Pump capacity at max. back pressure			Stroke rate Strokes/min	Suction lift mWs	Connector size a Ø x i Ø mm
	bar	l/h	ml/stroke			
PNDb 1000	10	0.76	0.07	180	6.0	6x4
PNDb 1601	16	1.00	0.09	180	6.0	6x4
PNDb 1602	16	1.70	0.16	180	6.0	6x4
PNDb 1005	10	3.80	0.35	180	5.0	8x5 ¹⁾
PNDb 0708	7	6.30	0.58	180	4.0	8x5
PNDb 0413	4	10.50	0.97	180	3.0	8x5
PNDb 0220	2	16.70	1.55	180	2.0	12x9

1) With stainless steel design 6 x 4 mm

Wetted materials				
Design	Dosing head	Suction/pressure connector	Seals	Valve balls
PVT	PVDF	PVDF	PTFE	Ceramic
SST	Stainless steel material no. 1.4404	Stainless steel material no. 1.4404	PTFE	Ceramic

DULCO®flex

Peristaltic pumps



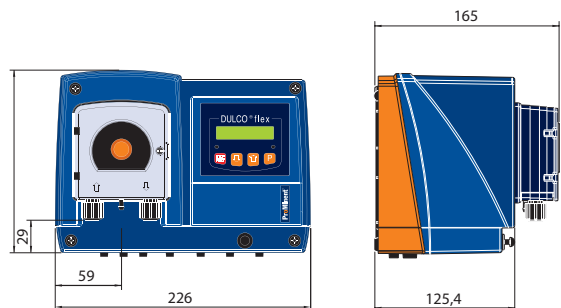
The best solutions are simple. The optimum pump for typical use in swimming pools, Jacuzzis and spa and wellness facilities.

DF2a for private swimming pools

DF4a for private and public swimming pools, and for general chemical metering.

- Capacity range
0.4–12 l/h, 4–1.5 bar
- Virtually silent operation
- Simple and safe to operate
- Efficient operation through
“eco mode” possible
- Service-friendly design
- Spring-mounted rollers for uniform
roller pressure and increased service
life of the hose

DULCO®flex DF4a



Pump type	Pump capacity		Speed rpm	Suction lift mWS	Priming lift mWS	Connector size a Ø x i Ø mm
	bar	l/h				
DULCO®flex DF2a						
0204	1.5	0.4	5	4	3	6x4/10x4
0208	1.5	0.8	10	4	3	6x4/10x4
0216	1.5	1.6	20	4	3	6x4/10x4
0224	1.5	2.4	30	4	3	6x4/10x4
DULCO®flex DF4a						
04004	4.0	0.4	0–85	4	3	6x4/10x4
04015	4.0	1.5	0–85	4	3	6x4/10x4
03060	2.5	6.0	0–85	4	3	6x4/10x4
02120	2.0	12.0	0–85	4	3	6x4/10x4

Contact worldwide



Ready for you. Anytime, anywhere.

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