

Safe, precise and cost-effective dosing

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



Contents



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

Thanks to the company's extensive range (liquid ends, models, capacity, setting and control options), ProMinent® low-pressure pumps can complete almost every dosing process in a sustainable, environmentally-friendly and energy-saving manner.

Give us a call and discover the many opportunities for using ProMinent® low-pressure pumps.

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ProMinent



Our largest **range of products** – well-dosed and infinitely reliable

ProMinent is undoubtedly known to you as a manufacturer of solenoid metering pumps? That is in effect how we originated and we are now the world-leader in this product sector. However over the 50 years since our company was founded, we have significantly extended our product range for our customers. Why? Because we recognise that our customers rightly do not expect us to supply a product but rather a solution to a problem.

Every sector works differently and has its own unique requirements. We have adapted to meet these requirements.

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

Global 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 many new developments, such as energy-saving products. This means that the future will bring many more innovations in the field of chemical metering and water treatment developed in Heidelberg. We all have but a single goal: to exceed our customers' expectations as far as possible.

Solenoid-driven diaphragm metering pumps

Low-wear pumps for small capacities

Function

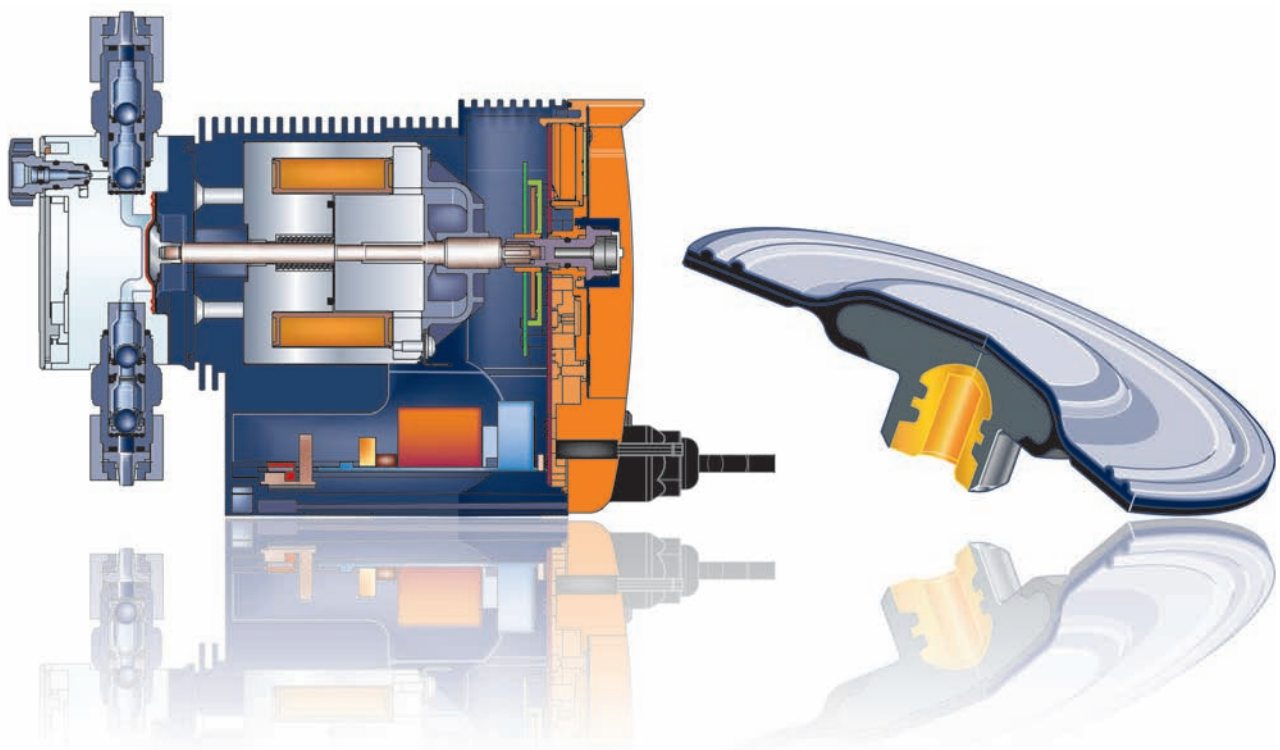
The solenoid armature is moved to and from by switching the solenoid on and off. This stroke movement is transmitted to the diaphragm in the liquid end. Two non-return valves prevent backflow of the feed chemical during the pumping process. The dosing capacity of a solenoid diaphragm metering pump can be adjusted via the stroke length and the stroke frequency.

Features

- Capacity range: 1 to 75 l/h at 25 to 2 bar back pressure
- Virtually wear-free drive with only one moving part
- Pump requires no bearing or shaft lubrication
- Outstanding continuous running properties
- Attractive technical alternative in the small capacity
- Range up to 32 l/h and 2 bar
- Maximum protection against overload
- Low energy consumption thanks to high efficiency
- Fully-sealed housing offers IP 65 protection

Applications

- General: chemical dosing in laboratories and in industry, with capacity up to 75 l/h
- Potable water and swimming pool water treatment: dosing of chemicals for disinfection and pH adjustment
- Cooling water circuits: dosing of disinfectants
- Mini-plant technology
- Paper industry, defoamers
- Electroplating and surface treatment
- Pool additives, slide grinding systems



Motor-driven diaphragm metering pumps

High dosing precision and robust technology

Function

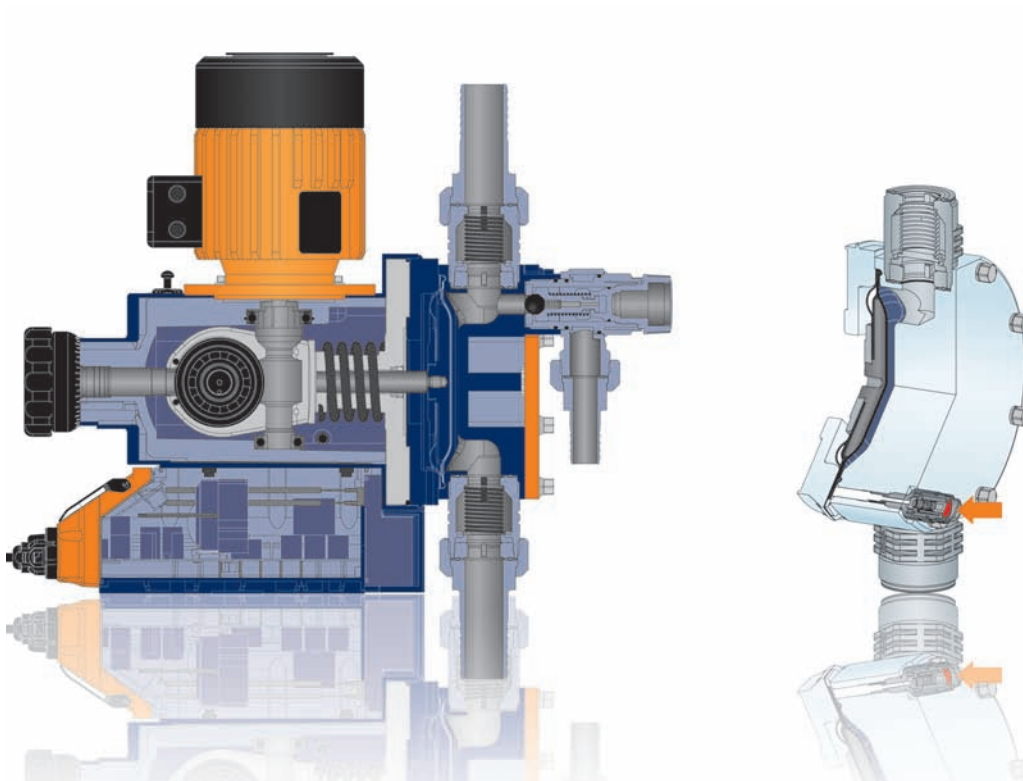
The rotation of an electric motor is transferred through a worm gear and converted to a stroke movement via an eccentric cam. The link rod transmits this stroke movement to the diaphragm in the liquid end. Two non-return valves prevent back-flow of the feed chemicals during the pumping process. The capacity of a motor-driven diaphragm metering pump can be adjusted via the stroke frequency – in this case the motor speed – and the stroke length.

Features

- Extremely wide capacity range
- High dosing precision even with fluctuating pressure conditions (characteristic curve has flat response to changing pressure) ensures savings on chemicals and precise process control
- Robust, attractively priced drive in the higher capacity range
- Simple integration and retrofit in automated processes through flexible control via stroke length and motor speed regulation
- Maximum safety through double diaphragm system and integral overload protection

Applications

- General: chemical dosing up to over 1,000 l/h
- Potable water treatment: dosing of disinfectants
- Cooling water circuits: dosing of disinfectants
- Wastewater treatment: dosing of flocculants
- Paper industry: dosing of additives
- Plastics manufacturing: dosing of additives



Wide range for reliability and precision

Motor-driven diaphragm metering pumps

alpha c
Robust and simple to use
 Capacity range
 1.0 – 30.6 l/h
 10 – 2 bar

Vario C
Precise and reliable
 Capacity range
 8 – 75 l/h
 10 – 4 bar

Sigma
Safety is 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
 145 – 1,030 l/h
 12 – 4 bar



Solenoid-driven diaphragm metering pumps/Precisions piston metering pumps

Beta® b
The all-rounder
 Capacity range
 0.74 – 32 l/h
 25 – 2 bar

gamma/ L
Diverse applications
 Capacity range
 0.74 – 32 l/h
 16 – 2 bar

delta®
Perfect dosing output
 Capacity range
 7.5 – 75 l/h
 25 – 2 bar

mikro delta®
The specialist for ultra-small quantities
 Capacity range
 150 – 1,500 ml/h
 60 – 20 bar



Metering pumps

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

DF3a
Capacity range 0.4/0.8/1.6/2.4 l/h
up to 1.5 bar

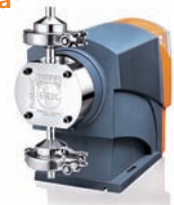
DF4a
Capacity range 0.4/1.5/6.0/12.0 l/h
up to 4 bar



Hygienic pumps

Hygienic pumps with
stainless steel pump
heads (to comply with
the requirements for
EHEDG).

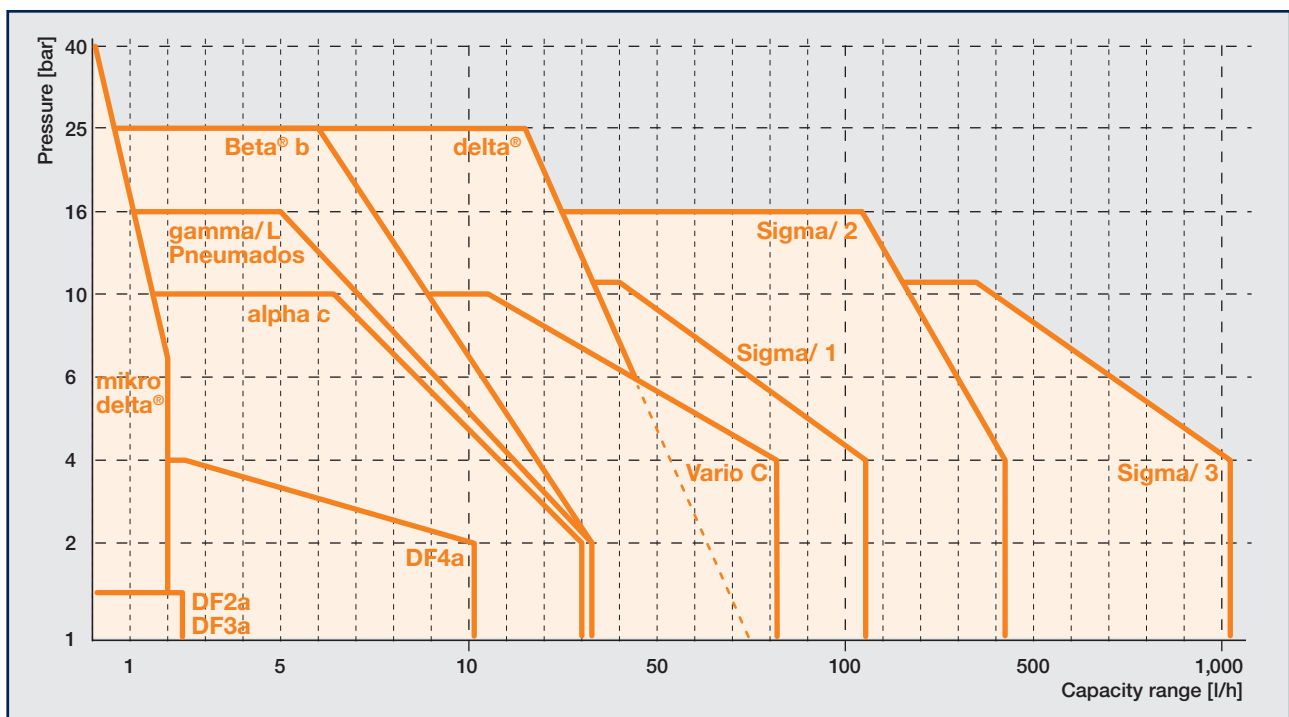
delta®



Sigma



Capacity overview of metering pumps

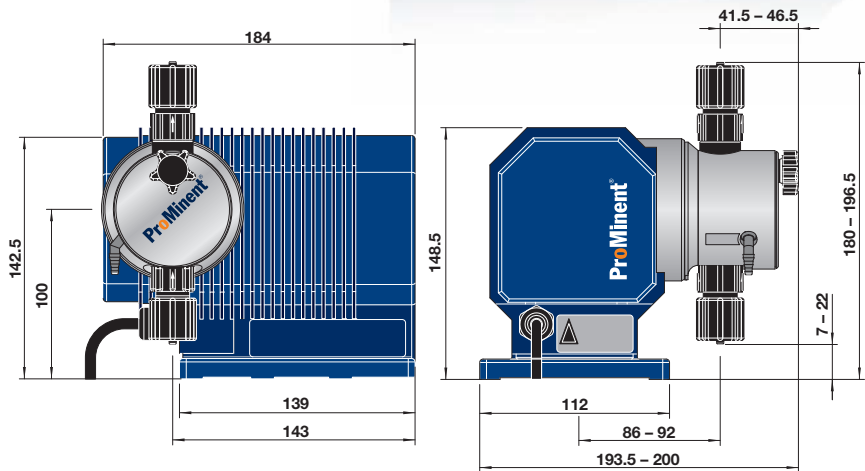


alpha c

Motor-driven diaphragm metering pump

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

- Capacity range
1.0–30.6 l/h, 10–2 bar
- Good suction capacity, smooth dosing stroke and constant, precise dosing
- Safe operation even with effervescent media through patented venting system
- Suitable for many applications through two gear ratios, four sizes of liquid end and two material versions (PVDF, Acrylic glass/PVC)
- Capacity range can be adjusted via the stroke length in 10 % steps
- Control via mains supply ON/OFF



alpha c

Pump type	Delivery rate at 50 Hz		ml/stroke	Nr. of strokes strokes/min	Stroke length mm	Suction head mWC	Connection size o Ø x i Ø mm
	bar	l/h					
ALPc 1001	10.0	1.0	0.29	58	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	7.0	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

With 60 Hz design approx. 20 % increasing delivery rate

Materials in contact with medium

Material	Liquid end	Suction/pressure port	Seals	Valve balls
PPE	Polypropylene	Polypropylene	EPDM	Ceramic
PPB	Polypropylene	Polypropylene	FPM	Ceramic
NPE	Acrylic glass	PVC	EPDM	Ceramic
NPB	Acrylic glass	PVC	FPM	Ceramic
PVT	PVDF	PVDF	PTFE	Ceramic

DEVELOPAN® metering diaphragm with PTFE coating for all types.

FPM: fluorine rubber.

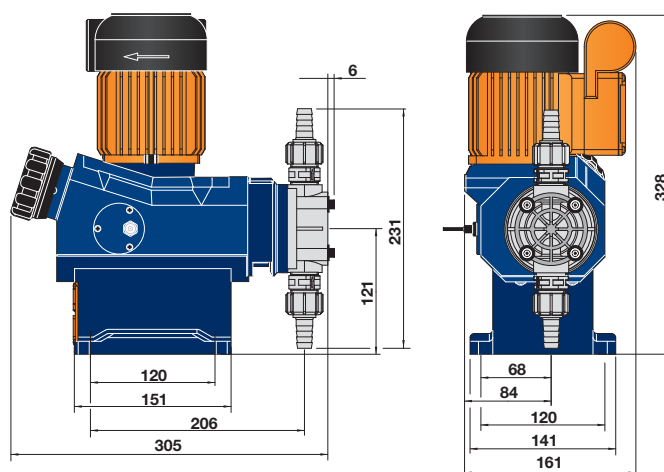
Vario C

Motor-driven diaphragm metering pump



The pump for simple applications.

- Capacity range
8–75 l/h, 10–4 bar
- Good suction capacity, smooth dosing stroke and constant, precise dosing
- High process quality through dosing reproducibility of better than $\pm 2\%$
- Robust construction with powerful motor and glass fibre reinforced housing
- Suitable for many applications through four gear ratios, two sizes of liquid end and two material versions



Vario C

Pump type	With motor 1,500 rpm at 50 Hz Delivery rate at max. backpressure			Stroke rate strokes/min	Suction head mWC	Perm. asmiss. pressure suction side bar	Connection suction/pressure side G-DN
	bar	l/h	ml/stroke				
10008	10	8	3.6	38	7	2.8	3/4–10
10016	10	16	3.6	77	7	2.8	3/4–10
07026	7	26	3.6	120	7	2.8	3/4–10
07042	7	42	3.6	192	7	2.8	3/4–10
07012	7	12	5.4	38	6	1.7	3/4–10
07024	7	24	5.4	77	6	1.7	3/4–10
04039	4	40	5.4	120	6	1.7	3/4–10
04063	4	64	5.4	192	6	1.7	3/4–10

With 60 Hz design approx. 20 % increasing delivery rate

Materials in contact with medium

Material	Liquid end	Suction/pressure port	Seals	Valve balls	Valve seat
PVT*	PVDF	PVDF	PTFE	Ceramic	PTFE
PPE	PP	PP	EPDM	Ceramic	PP
PCB	PVC	PVC	FPM	Ceramic	PVC
SST	Stainless steel Mat. Nr. 1.4404	Stainless steel Mat. Nr. 1.4404	PTFE	Stainless steel W.Nr. 1.4404	

DEVELOPAN® metering diaphragm with PTFE coating for all types.

*on request

Sigma

Motor-driven diaphragm metering pump

The right capacity for every requirement. Each Sigma pump is available as a basic version or as a micro-processor/control version with internal electronics.

The three variants differ in their capacity ranges:

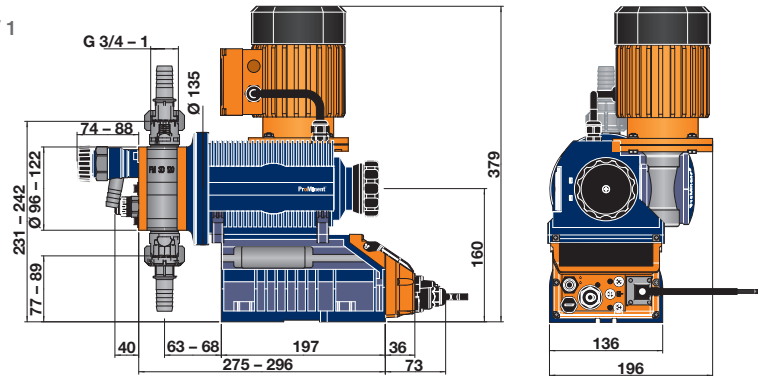
Sigma/ 1 17–144 l/h, 12–4 bar

Sigma/ 2 50–420 l/h, 16–4 bar

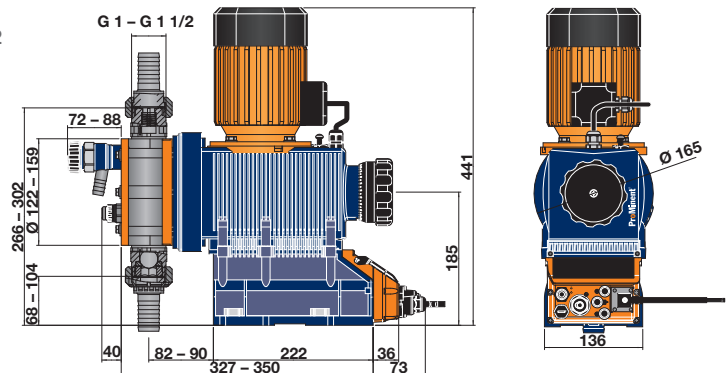
Sigma/ 3 145–1,030 l/h, 12–4 bar

- Process safety through double diaphragm with diaphragm rupture indication
- Ventilation option provides functional reliability
- Integral relief valve protects against overload
- Simple operation through large plain text display (microprocessor version)
- Ideal for simplified spares management when a number of pumps in the Sigma series are used together. Their key features are:
- Straightforward linking to bus-networked systems via PROFIBUS DP® or CAN-open interface (microprocessor version)
- For volume-proportional, measured value-dependent, time and pulse-controlled dosing

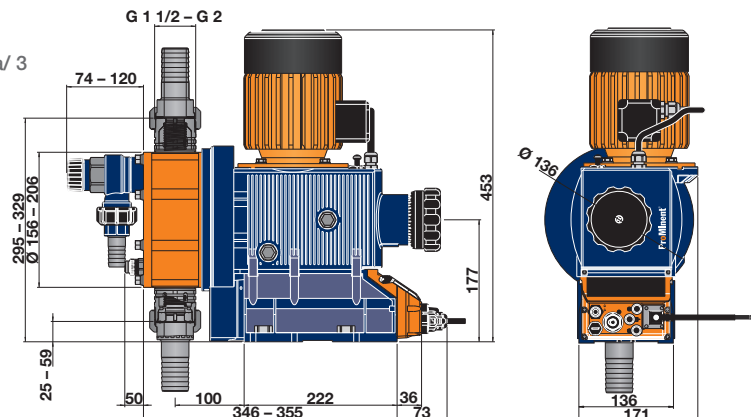
Sigma/ 1



Sigma/ 2



Sigma/ 3





Sigma

Pump type	With motor 1,500 rpm at 50 Hz Delivery rate at max. backpressure			Suction head mWC	Perm. admss. pressure suction side bar	Connection suction/pressure side G-DN	
	bar	l/h	ml/stroke				
Sigma/ 1							
12017	12	17	4.0	73	7	1	¾ – 10
12035	12	35	4.0	143	7	1	¾ – 10
10050	10	50	4.0	200	7	1	¾ – 10
10022	10	22	5.1	73	6	1	¾ – 10
10044	10	44	5.1	143	6	1	¾ – 10
07065	7	65	5.1	200	6	1	¾ – 10
07042	7	42	9.7	73	3	1	1 – 15
04084	4	84	9.7	143	3	1	1 – 15
04120	4	120	9.7	200	3	1	1 – 15
Sigma/ 2							
16050	16	48	11.4	73	7	3	1 – 15
16090	16	86	11.4	132	7	3	1 – 15
16130	16	125	10.9	198	7	3	1 – 15
07120	7	120	27.4	73	5	1	1½ – 25
07220	7	220	27.7	132	5	1	1½ – 25
04350	4	350	29.4	198	5	1	1½ – 25
Sigma/ 3							
120145	12	145	31.5	72	2	5	1½ – 25
120190	12	190	31.5	103	2	5	1½ – 25
120270	12	270	31.5	144	2	5	1½ – 25
120330	12	330	31.5	180	2	5	1½ – 25
070410	7	410	95.1	72	1	4	2 – 32
070580	7	580	95.1	103	1	4	2 – 32
040830	4	830	95.1	144	1	3	2 – 32
041030	4	1,030	95.1	180	1	3	2 – 32

Sigma Control version and basic version operating with 60 Hz increases delivery rate approx. 20 %.

Sigma/ 2 and Sigma/ 3 with PVDF design max. 10 bar.

Materials in contact with medium

Material	Liquid end	Suction/pressure port		Seals/Ball seat	Valve balls	Integrated overflow valve	
Sigma/ 1 + Sigma/ 2							
PVT	PVDF	PVDF		PTFE/PTFE	Ceramic	PVDF/FPM or EPDM	
SST	Stainless steel 1.4404	Stainless steel 1.4581		PTFE/PTFE	Stainless steel 1.4404	Stainless steel/FPM or EPDM	
Sigma/ 3							
Material	Suction/pressure port liquid end	DN 25 ball valve			DN 32 ball valve		Integrated overflow valve
		Seals	Valve balls	Valve seat	Seals	Valve plate/ valve spring	
PVT	PVDF	PTFE	Glas	PTFE	PTFE	Ceramic/Hast C. + CTFE	PVDF/FPM or EPDM
SST	Stainless steel 1.4581	PTFE	Stainless steel 1.4404	PTFE	PTFE	Stainless steel 1.4404/Hast C.	Stainless steel/FPM or EPDM

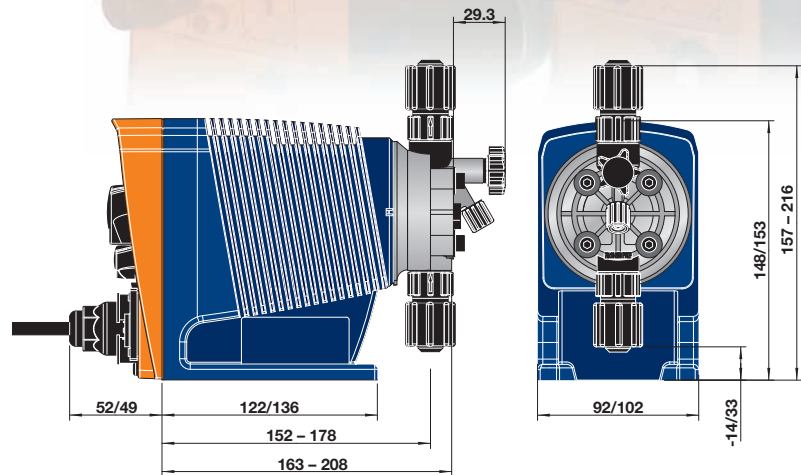
DEVELOPAN® metering diaphragm with PTFE coating for all types.

Beta[®] b

Solenoid-driven diaphragm metering pump

The first choice for modern water treatment and chemical dosing.

- Capacity range
0.74–32 l/h, 25–2 bar
- Improved efficiency generates up to 50% energy savings
- Adjustable integral pulse step-up and step-down for optimum adaptation to existing signal generators
- Liquid ends to suit every chemical guarantee their universal use
- Virtually wear-free drive
- Excellent continuous run properties
- Optional: relay module – fast and simple to retrofit
- Input for level switch



Beta[®] b

Pump type	Delivery rate at max. backpressure		Nr. of strokes strokes/min	Connection size ø Ø x i Ø mm	Suction head mWC	Average power consumption W	
	bar	l/h					ml/stroke
BT4b 1000	10	0.74	0.07	180	6 x 4	6.0	7.2
BT4b 1601	16	1.10	0.10	180	6 x 4	6.0	9.6
BT4b 1602	16	2.20	0.20	180	6 x 4	6.0	11.2
BT4b 1604	16	3.60	0.33	180	6 x 4	6.0	15.2
BT4b 0708	7	7.10	0.66	180	8 x 5	6.0	15.2
BT4b 0413	4	12.30	1.14	180	8 x 5	3.0	15.2
BT4b 0220	2	19.00	1.76	180	12 x 9	2.0	15.2
BT5b 2504	25	2.90	0.27	180	8 x 4 ¹⁾	6.0	19.2
BT5b 1008	10	6.80	0.63	180	8 x 5	6.0	19.2
BT5b 0713	7	11.00	1.02	180	8 x 5	4.0	19.2
BT5b 0420	4	17.10	1.58	180	12 x 9	3.0	19.2
BT5b 0232	2	32.00	2.96	180	12 x 9	2.0	19.2

Beta[®] b metering pumps are also available with self-degassing liquid ends and for highly viscous media.

Reduced pressure 4, 7 and 10 bar pump types are available for specialised applications, e.g. for use in swimming pool systems.

Suction lift readings when liquid end and suction tubing are full, or for self-degassing liquid end when the suction tubing contains air.

1) 6 mm inner diameter in stainless steel version.

Materials in contact with medium

Material	Liquid end	Suction/pressure port	Seals	Valve balls
PPT	Polypropylene	PVDF	PTFE	Ceramic
NPT	Acrylic glass	PVDF	PTFE	Ceramic
PVT	PVDF	PVDF	PTFE	Ceramic
TTT	PTFE with carbon	PTFE with carbon	PTFE	Ceramic
SST	Stainless steel Mat. Nr. 1.4404	Stainless steel Mat. Nr. 1.4404	PTFE	Ceramic

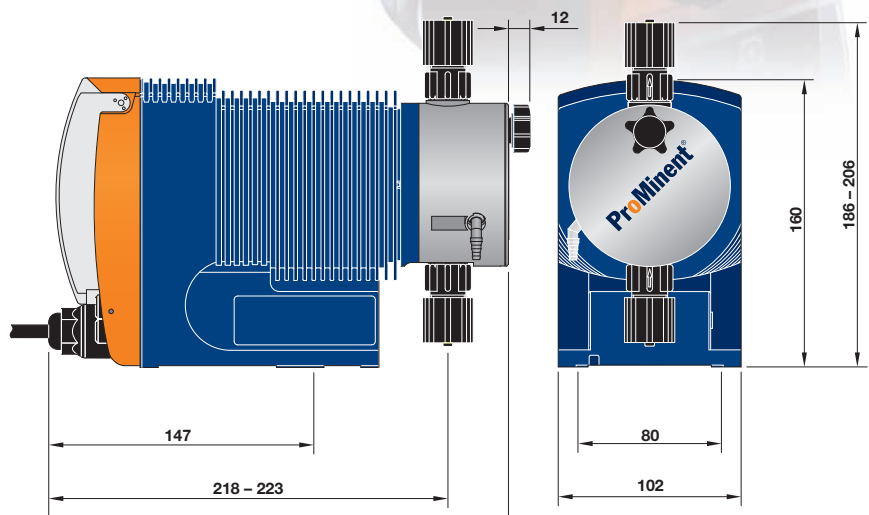
DEVELOPAN[®] metering diaphragm with PTFE coating for all types.

gamma/ L

Solenoid-driven diaphragm metering pump

A calibratable pump for the most exacting output requirements, universally controllable, with BUS interface.

- Capacity range
0.74–32 l/h, 16–2 bar
- Direct adjustment and monitoring of the dosing capacity on a plain text display help prevent incorrect dosing
- Cost and space savings through integral 2-week process timer
- Clearly readable figures thanks to large illuminated LC display
- Simple and straightforward connection to complex process control systems thanks to optional configuration with PROFIBUS® DP interface
- Input for level switch



gamma/ L

Pump type	Delivery rate at max. backpressure		Nr. of strokes strokes/min	Connection size o Ø x i Ø mm	Suction head mWC	Average power consumption W	
	bar	l/h					ml/stroke
GALa 1000	10	0.74	0.07	180	6 x 4	6.0	17
GALa 1601	16	1.10	0.10	180	6 x 4	6.0	17
GALa 1602	16	2.10	0.19	180	6 x 4	6.0	17
GALa 1005	10	4.40	0.41	180	8 x 5 ¹⁾	6.0	17
GALa 0708	7	7.10	0.66	180	8 x 5	6.0	17
GALa 0413	4	12.30	1.14	180	8 x 5	3.0	17
GALa 0220	2	19.00	1.76	180	12 x 9	2.0	17
GALa 1605	16	4.10	0.38	180	8 x 5 ¹⁾	6.0	23
GALa 1008	10	6.80	0.63	180	8 x 5	6.0	23
GALa 0713	7	11.00	1.02	180	8 x 5	4.0	23
GALa 0420	4	17.10	1.58	180	12 x 9	3.0	23
GALa 0232	2	32.00	2.96	180	12 x 9	2.0	23

gamma/ L metering pumps are also available with self-degassing liquid end and for highly viscous media.

Suction lift readings when liquid end and suction tubing are full, or for self-degassing liquid end when the suction tubing contains air.

1) 6 mm inner diameter in stainless steel version.

Materials in contact with medium

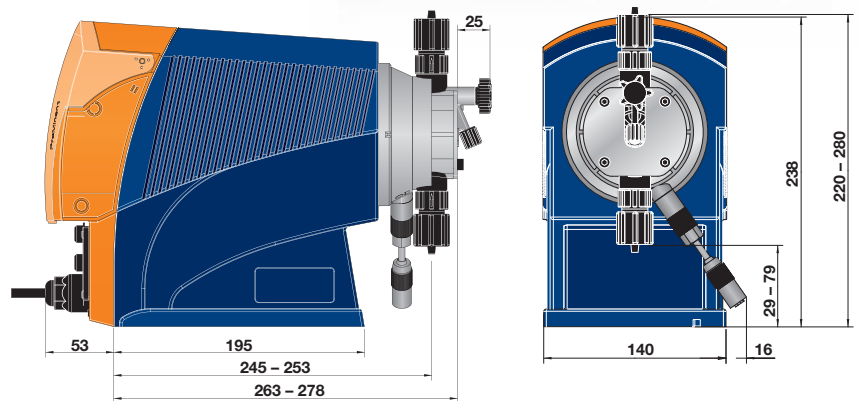
Material	Liquid end	Suction/pressure port	Seals	Valve balls
PPT	Polypropylene	PVDF	PTFE	Ceramic
NPT	Acrylic glass	PVDF	PTFE	Ceramic
PVT	PVDF	PVDF	PTFE	Ceramic
TTT	PTFE with carbon	PTFE with carbon	PTFE	Ceramic
SST	Stainless steel Mat. Nr. 1.4404	Stainless steel Mat. Nr. 1.4404	PTFE	Ceramic

DEVELOPAN® metering diaphragm with PTFE coating for all types.

Solenoid-driven diaphragm metering pump

High-end technology for the most exacting requirements and varied applications. The world's first metering pump with regulated solenoid drive (optoDrive®).

- Capacity range
7.5–75 l/h, 25–2 bar
- Excellent efficiency as no need for accessories, such as pulsation dampers, flow gauges etc.
- Flexible adaptation to the dosing task with excellent precision
- The integral injection point monitoring unit detects hydraulic fault states that can be reported via the optional relays
- Versatile control options for use with almost every application
- Option to connect via PROFIBUS® or CANbus to the central control station
- Suitable for use as a central control unit with the “Process Timer” option, making programmable logic controls (PLC) redundant



delta®

Pump type	Pressure bar	max. delivery rate l/h	stroke volume ml/stroke	Nr. of strokes strokes/min	max. connection size o Ø x i Ø mm	Suction head mWC
DLTA 2508	25	7.5	0.62	200	8 x 4 ¹⁾	5
DLTA 1608	16	7.8	0.65	200	8 x 5 ¹⁾	5
DLTA 1612	16	11.3	0.94	200	8 x 5	6
DLTA 1020	10	19.1	1.59	200	12 x 9	5
DLTA 0730	7	29.2	2.43	200	12 x 9	5
DLTA 0450	4	49.0	4.08	200	G¾–DN10	3
DLTA 0280	2	75.0	6.25	200	G¾–DN10	2

Suction height with primed liquid end and primed suction line.

1) 6 mm inner diameter in stainless steel version.

Materials in contact with medium

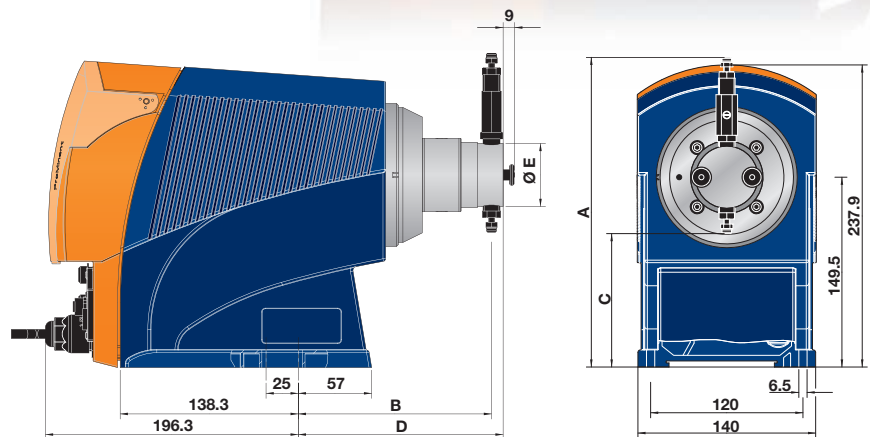
Material	Liquid end	Suction/pressure port	Seals	Valve balls
NPE	Acrylic glass	PVC	EPDM	Ceramic
NPB	Acrylic glass	PVC	FPM	Ceramic
PVT	PVDF	PVDF	PTFE	Ceramic
SST	Stainless steel Mat. Nr.1.4404	Stainless steel Mat. Nr.1.4404	PTFE	Ceramic

mikro delta®

Precision piston metering pump

Continuous, highly accurate and safe dosing of ultra-small volumes – no problem for the latest generation of pump.

- Capacity range
150–1,500 ml/h, 60–20 bar
- Stroke volume of 1–250 µl
- Available in PTFE and stainless steel
- Large illuminated graphic display
- Optional external control via contacts, mA, PROFIBUS® or CANopen (optional)
- Continuous or pulsing operation
- Precisely controlled dosing process by means of regulated solenoid drive



mikro delta®

Pump type	Delivery rate with max. backpressure			Plunger Ø mm	Connection size hose mm	Connection size piping mm	Suction head mWC	Backpressure valve holding pressure bar
	bar	ml/h	µl/stroke					
Version TT								
100150 TT	10	145	24.17	2.5	1.75x1.15	1.59	6	2.5
100600 TT	10	580	96.67	5	1.75x1.15	1.59	6	2.5
101500 TT	10	1480	246.67	8	3.20x2.40	3.18	4	1.5
Version SS								
600150 SS	60	145	24.17	2.5	1.75x1.15	1.90	6	2.5
400600 SS	40	580	96.67	5	1.75x1.15	1.90	6	2.5
201500 SS	20	1480	246.67	8	3.20x2.40	3.18	4	1.5

Suction height with primed liquid end and primed suction line.

Materials in contact with medium

Pump type	Liquid type	Suction/pressure port	Valve balls	Valve seats	Plunger	Valve seal	Plunger seal
TTT	PTFE + Carbon	PTFE + Carbon	Ruby	Ceramic	Ceramic	PTFE	PTFE, white
TTG	PTFE + Carbon	PTFE + Carbon	Ruby	Ceramic	Ceramic	PTFE	PTFE + graphite
SST	Stainless steel 1.4571	Stainless steel 1.4571	Ruby	Ceramic	Ceramic	PTFE	PTFE, white
SSG	Stainless steel 1.4571	Stainless steel 1.4571	Ruby	Ceramic	Ceramic	PTFE	PTFE + graphite

Pneumados

Pneumatically operated diaphragm metering pump

Pneumatically operated diaphragm metering pump. The standard solution for simple dosing tasks wherever there is no electrical power available.

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

Typical applications

- Car washes
- Animal feed handling
- Bottle disinfection in filling plants



Pneumados

Pump type	Delivery rate with max. backpressure			Nr. of strokes strokes/min	Connection size o Ø x i Ø mm	Section head mWC
	bar	l/h	ml/stroke			
PNDb 1000	10	0.76	0.07	180	6 x 4	6.0
PNDb 1601	16	1.00	0.09	180	6 x 4	6.0
PNDb 1602	16	1.70	0.16	180	6 x 4	6.0
PNDb 1005	10	3.80	0.35	180	8 x 5 ¹⁾	5.0
PNDb 0708	7	6.30	0.58	180	8 x 5	4.0
PNDb 0413	4	10.50	0.97	180	8 x 5	3.0
PNDb 0220	2	16.70	1.55	180	12 x 9	2.0

1) 6 x 4 mm in stainless steel version.

Materials in contact with medium

	Liquid end	Suction/pressure port	Seals	Valve balls
PVT	PVDF	PVDF	PTFE	Ceramic
SST	Stainless steel Mat. Nr. 1.4404	Stainless steel Mat. Nr. 1.4404	PTFE	Ceramic

DULCO®flex

Peristaltic pumps



The best solutions are the simplest. The ideal pump series for typical applications in swimming pools, whirlpools and in spa zones.

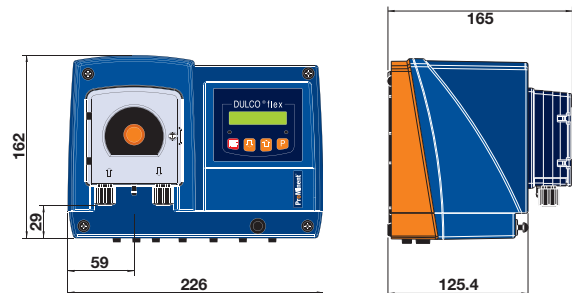
DF2a for private pools

DF3a for the dosing of fragrances in saunas

DF4a for private and public pools and for general dosing of chemicals

- Capacity range
0.4–12 l/h, 4–1.5 bar
- Virtually silent operation
- Simple and safe to operate
- More efficient operation by using “Saver” mode
- Service-friendly design
- Spring-mounted rollers for constant rolling pressure and improved service life of the hose

DULCO®flex DF4a



DULCO®flex

Pump type	Delivery rate bar	l/h	Frequency rpm	Connection size o Ø x i Ø mm	Suction head mWC	Intake head mWC
DULCO®flex DF2a						
0204	1.5	0.4	5	6x4/10x4	4	3
0208	1.5	0.8	10	6x4/10x4	4	3
0216	1.5	1.6	20	6x4/10x4	4	3
0224	1.5	2.4	30	6x4	4	2
DULCO®flex DF3a						
0204	1.5	0.4	5	6x4	4	2
0208	1.5	0.8	10	6x4	4	2
0216	1.5	1.6	20	6x4	4	2
0224	1.5	2.4	30	6x4	4	2
DULCO®flex DF4a						
04004	4.0	0.4	0–85	6x4/10x4	4	3
04015	4.0	1.5	0–85	6x4/10x4	4	3
03060	2.5	6.0	0–85	6x4/10x4	4	3
02120	2.0	12.0	0–85	6x4/10x4	4	3

Hygienic pumps

The EHEDG-certified specialists

These hygienic pumps are fitted with stainless steel liquid ends (to comply with the requirements for EHEDG hygienic design and construction).

Motor-driven or solenoid driven can be used depending on the output required.

Applications

- Dosing of aromas and colourings
- Dosing of additives directly upstream of the filling process
- Dosing of enzyme solutions
- Application of sauces and oils to finished products

Features

- EHEDG-certified liquid end
- Spring-mounted and seal-free suction discharge valve
- Internal surface roughness < 0.8 µm
- CIP-compatible, excellent microbiological safety
- Simple to fit and dismantle thanks to tri-clamp connections



delta®

Diaphragm metering pump delta® with regulated optoDrive® solenoid drive. Output data dependent on pump type.

- Flow rate of up to 70 l/h
- Back pressure of up to max. 7 bar

Sigma

Motor-driven pump series Sigma, output data dependent on pump type.

- Flow rate of up to 1,000 l/h
- Back pressure of up to max. 5 bar

Service



Global service locally

We already offer our service to you even if you are not yet our customer.

Our pre-sales services ensure that you get the optimum solution for your individual needs:

- Advice in choosing the products
- Application and process optimisation
- Project planning

However, our commitment does not end with delivery. We offer you a comprehensive after-sales service, which lasts for the entire service life of your equipment. That maximises your productivity and minimises your operating costs:

- Assembly/installation
- Commissioning
- Maintenance
- Spare parts service
- Repair
- Troubleshooting

Thanks to our worldwide presence in over 100 countries, our service is available wherever you need it.

Worldwide contact



Experts in Chem-Feed and Water Treatment

ProMinent is at home in more than 100 countries of the world. This guarantees worldwide availability of the products and short distances to the customer. We offer you the same high quality

standard in products and services worldwide. For you at your location: experience and knowhow in water treatment and chemical fluid handling are available worldwide.

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