Safe, precise and cost-effective dosing

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

www.prominent.com

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.

- Contents 2
- ProMinent 3
- Overview of technology 4
- Overview of products 6
- Motor-driven metering pumps
  - alpha c 8
  - Vario C 9
  - Sigma/1 Basic Type 10
  - Sigma/2 Basic Type 10
  - Sigma/3 Basic Type 10
  - Sigma/1 Control Type 12
  - Sigma/2 Control Type 12
  - Sigma/3 Control Type 12
- Solenoid metering pumps/Precision piston metering pumps
  - Beta® b 14
  - gamma/ L 15
  - delta® 16
  - mikro delta® 17
- Pneumatically operated metering pumps
  - Pneumados 18
- Peristaltic pumps
  - DULCO®flex DF2a 19
  - DULCO®flex DF3a 19
  - DULCO®flex DF4a 19

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

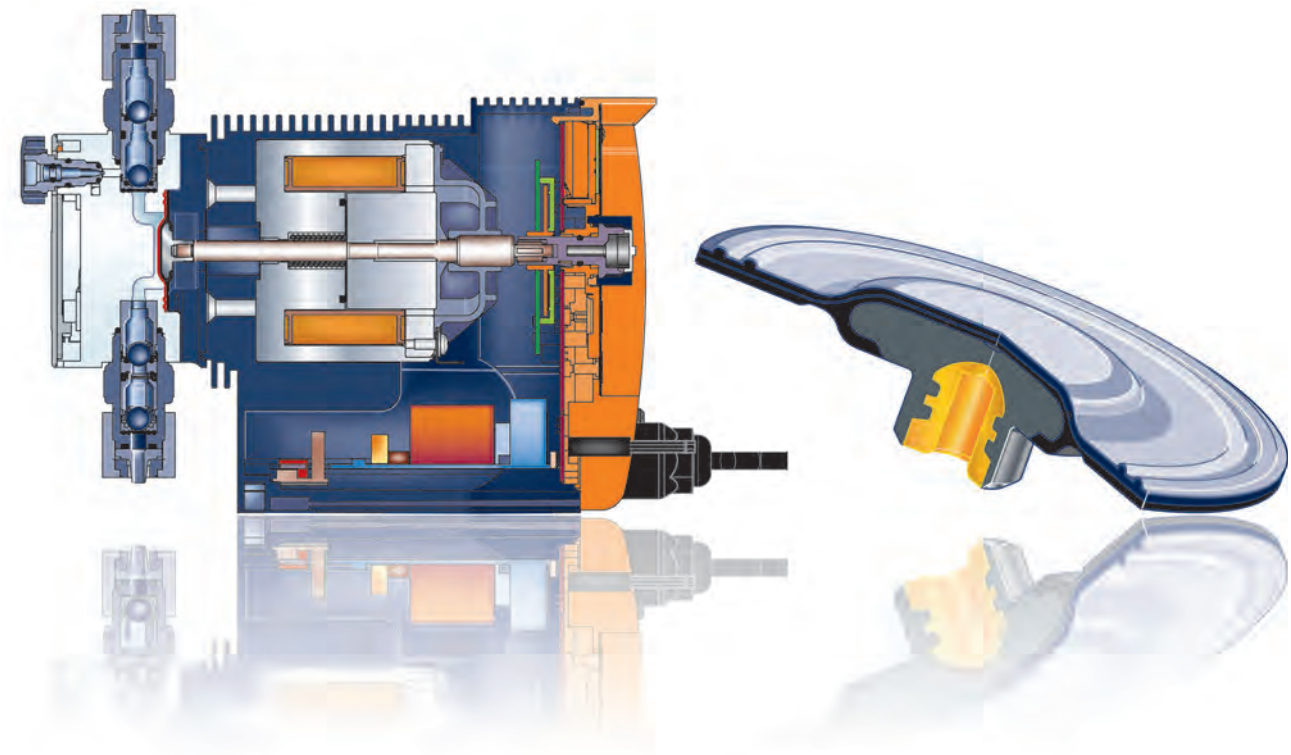
The solenoid armature is moved to and from by switching the solenoid on and off. This stroke movement is transmitted to the diaphragm in the liquid end. Two non-return valves prevent backflow of the feed chemical during the pumping process. The dosing capacity of a solenoid diaphragm metering pump can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

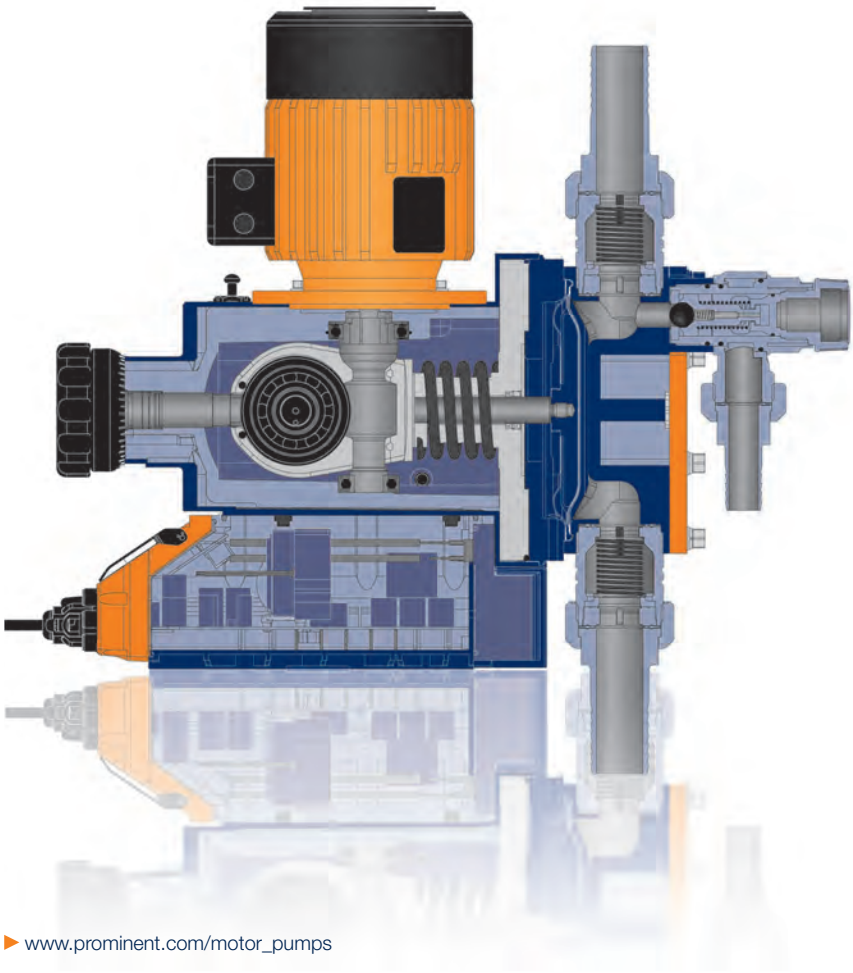
The rotation of an electric motor is transferred through a worm gear and converted to a stroke movement via an eccentric cam. The link rod transmits this stroke movement to the diaphragm in the liquid end. Two non-return valves prevent backflow of the feed chemicals during the pumping process. The capacity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

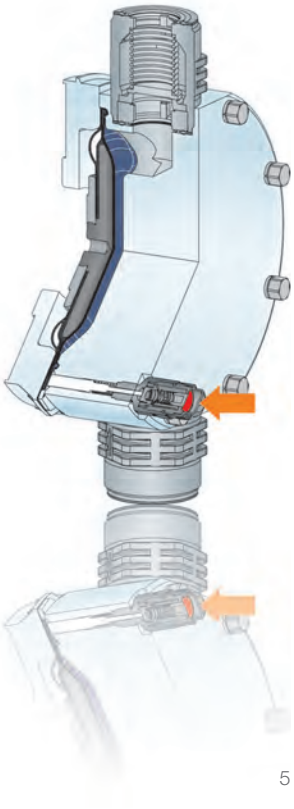
Features

- 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 Basic and Control Type
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

Sigma Control Type

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

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

Sigma/ 2

Sigma/ 3

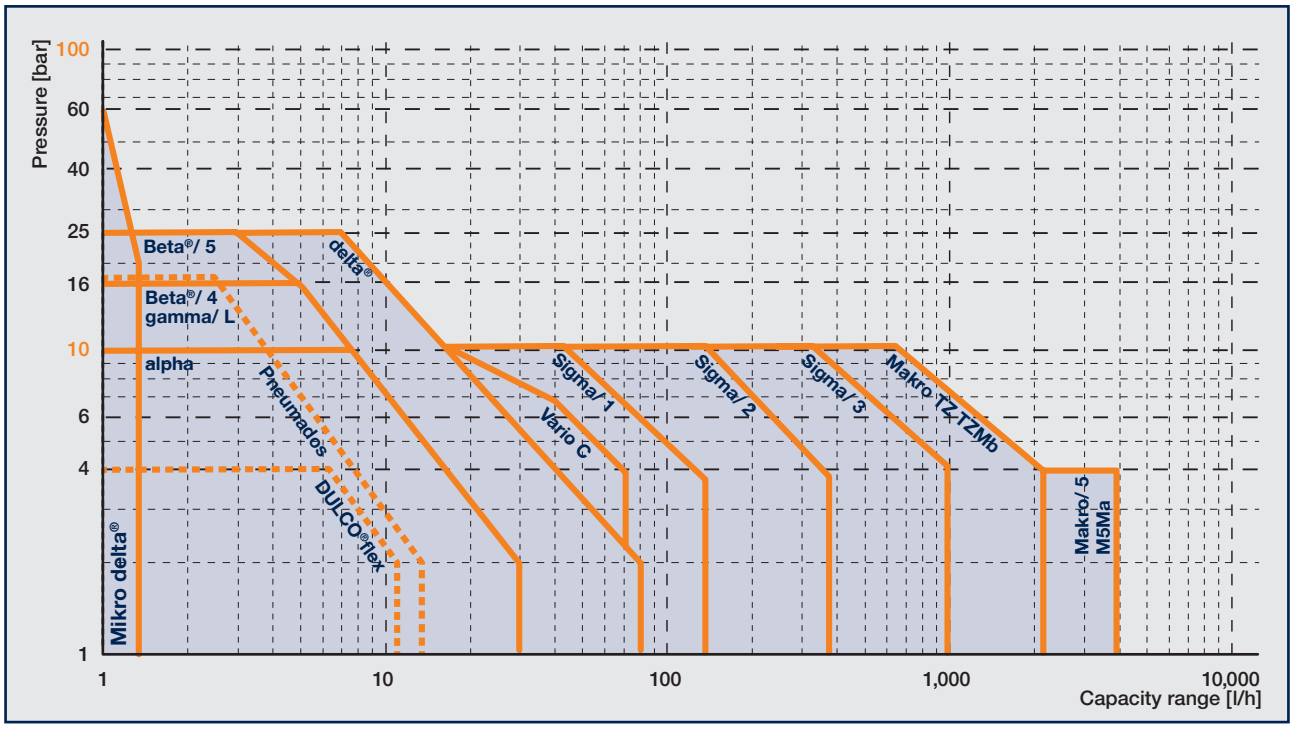
Pneumados
Ultra-simple handling
Capacity range
0.76 – 16.7 l/h
16 – 2 bar

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

Capacity overview of metering pumps

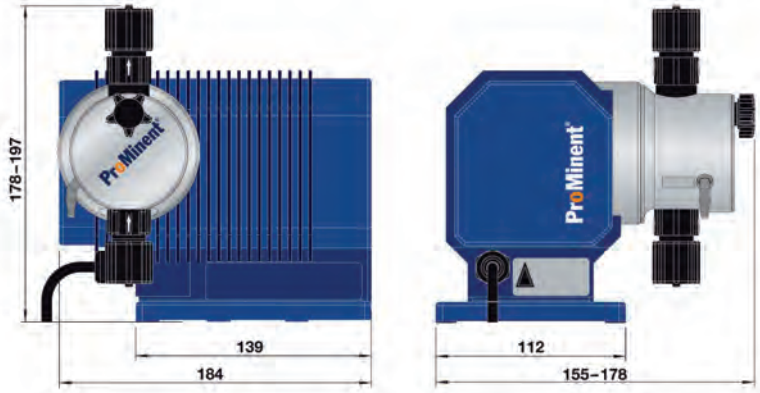


alpha c

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



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

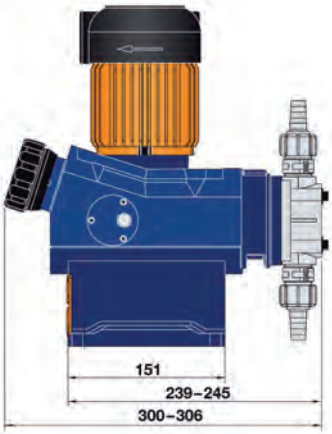
DEVELOPAN® metering diaphragm with PTFE coating for all types.
FPM: fluorine rubber.

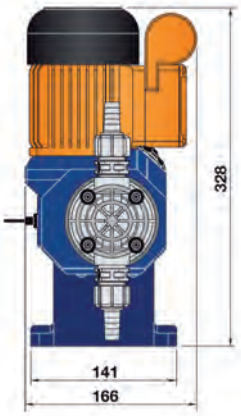
Vario C

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 ±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





Pump type	With motor 1,500 rpm at 50 Hz Delivery rate at max. backpressure bar	l/h	ml/stroke	Stroke rate strokes/min	Suction head mWC	Perm. admiss. pressure suction side bar	Connection suction/pressure side G-DN
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
SST	Stainless steel Mat. Nr. 1.4404	Stainless steel Mat. Nr. 1.4404	PTFE	Stainless steel Mat. Nr. 1.4404	

DEVELOPAN® metering diaphragm with PTFE coating for all types.
FPM: fluorine rubber.

Sigma Basic Type

Motor-driven diaphragm metering pump

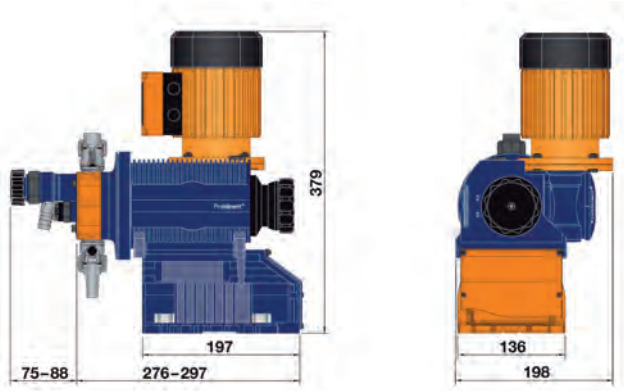
The right capacity for every requirement. Each Sigma pump is available as a basic or as a microprocessor/control type with internal electronics.

The three variants differ in their capacity ranges:

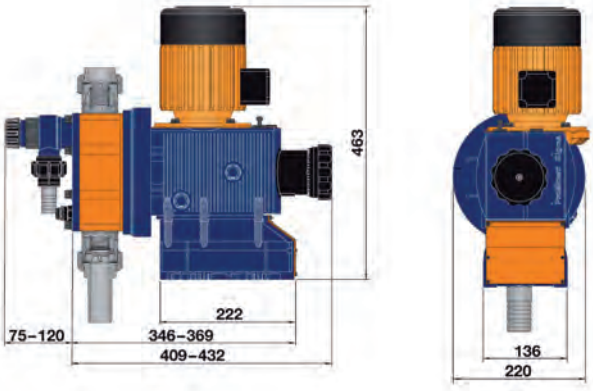
Sigma/ 1 17–144 l/h, 12–4 bar
Sigma/ 2 50–420 l/h, 16–4 bar
Sigma/ 3 145–1,030 l/h, 12–4 bar

- 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

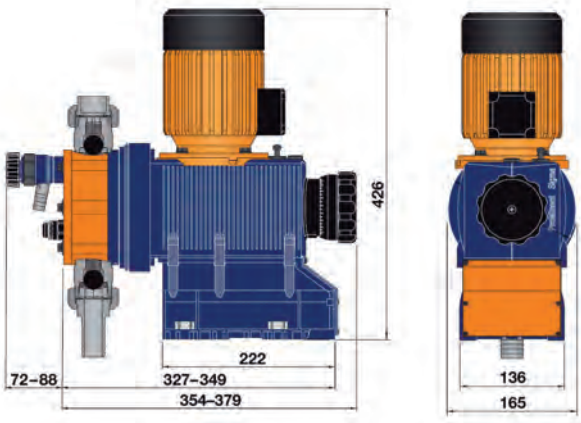
Sigma/ 1



Sigma/ 2



Sigma/ 3



Pump type	Delivery rate at max. backpressure With motor 1,500 rpm at 50 Hz bar	l/h	ml/Hub	With motor 1,800 rpm at 60 Hz psi	l/h	Stroke rate strokes/min	Suction head mWC	Perm. admiss. pressure suction side bar	Connection suction/pressure side G-DN
Sigma/ 1 Basic Type (S1Ba)									
12017	12	17	3.8	174	20	88	7	1	¾ – 10
12035	12	35	4.0	174	42	172	7	1	¾ – 10
10050	10	50	4.0	145	60	246	7	1	¾ – 10
10022	10	22	5.0	145	26	88	6	1	¾ – 10
10044	10	44	5.1	145	53	172	6	1	¾ – 10
07065	7	65	5.2	100	78	246	6	1	¾ – 10
07042	7	42	9.6	100	50	88	3	1	1 – 15
04084	4	84	9.7	58	101	172	3	1	1 – 15
04120	4	120	9.7	58	144	246	3	1	1 – 15
Sigma/ 2 Basic Type (S2Ba)									
16050	16	48	11.4	232	57	87	7	3	1 – 15
16090	16	86	11.4	232	98	158	7	3	1 – 15
16130	16	125	10.9	232	148	238	7	3	1 – 15
07120	7	120	27.4	100	150	87	5	1	1½ – 25
07220	7	220	27.7	100	264	158	5	1	1½ – 25
04350	4	350	29.4	58	420	238	5	1	1½ – 25
Sigma/ 3 Basic Type (S3Ba)									
120145	12	146	33.7	174	174	86	2	5	1½ – 25
120190	12	208	33.7	174	228	124	2	5	1½ – 25
120270	12	292	33.8	174	324	173	2	5	1½ – 25
120330	12	365	33.8	174	–	–	2	5	1½ – 25
070410	7	410	95.1	100	492	86	1	4	2 – 32
070580	7	580	95.1	100	696	124	1	4	2 – 32
040830	4	830	95.1	58	1,000	173	1	3	2 – 32
041030	4	1,030	95.1	58	–	–	1	3	2 – 32

Liquid end in 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

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

DEVELOPAN® metering diaphragm with PTFE coating for all types.

Sigma Control Type

Motor-driven diaphragm metering pump

Control via contact or analogue signals (e.g. 0/4–20 mA) possible with the Sigma Control Type ensures good adaptation, even to different metering tasks.

The control also has the task of recording the movement and speed profile in conjunction with the power demand, resulting in actual limitation to the volume of energy required, and thereby improving efficiency. Furthermore, analysing the energy requirement provides for internal shut-down of the metering pump in the event of overload, i.e. an integrated pressure relief function to protect the pump without additional hydraulic instruments, like relief valves and manometers.

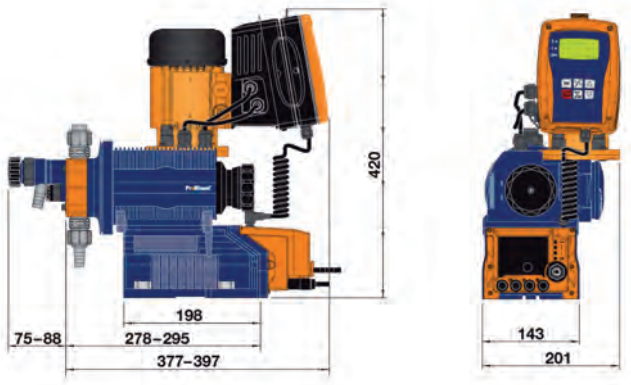
The three versions differ in terms of their capacities:

Sigma/ 1 20–117 l/h, 12–4 bar
Sigma/ 2 56–352 l/h, 16–4 bar
Sigma/ 3 182–1,040 l/h, 12–4 bar

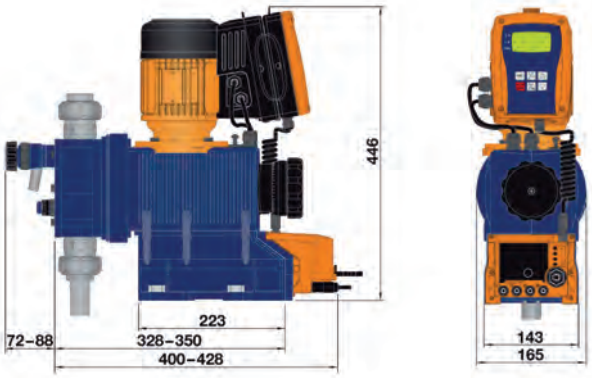
Over and above the properties of the Sigma Basic Type, the Sigma Control Type offers further options for process optimisation:

- Simple operation with large illuminated LC display
- Problem-free integration into bus-networked systems thanks to PROFIBUS® DP or CAN-open interface

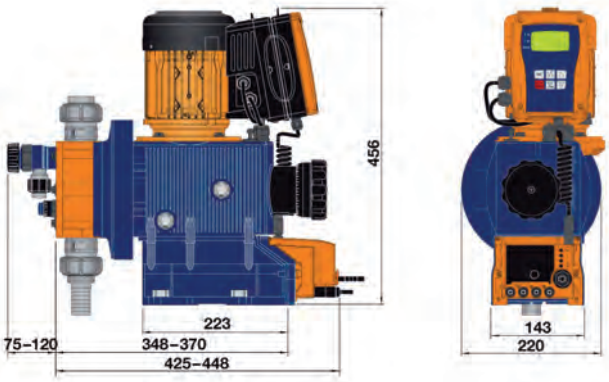
Sigma/ 1



Sigma/ 2



Sigma/ 3



Pump type	Delivery rate at max. backpressure bar	l/h	ml/stroke	Stroke rate strokes/min	Suction head mWS	Perm. admiss. pressure suction side bar	Connection suction/pressure side G-DN
Sigma/ 1 Control Type (S1Cb)							
12017	12	20	3.9	88	7	1	¾ – 10
12035	12	42	4.0	172	7	1	¾ – 10
10050	10	49	4.0	200	7	1	¾ – 10
10022	10	26	5.1	88	6	1	¾ – 10
10044	10	53	5.1	172	6	1	¾ – 10
07065	7	63	5.1	200	6	1	¾ – 10
07042	7	50	9.6	88	3	1	1 – 15
07084	4	101	9.8	172	3	1	1 – 15
04120	4	117	9.7	200	3	1	1 – 15
Sigma/ 2 Control Type (S2Cb)							
16050	16	56	11.4	90	7	3	1 – 15
16090	16	99	11.4	160	7	3	1 – 15
16130	16	125	10.9	200	7	3	1 – 15
07120	7	148	27.4	90	5	1	1½ – 25 [1]
07220	7	271	27.7	160	5	1	1½ – 25 [1]
04350	4	352	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

Liquid end in PVDF design max. 10 bar.

Materials in contact with medium					Integrated
Material	Liquid end	Suction/pressure port	Seals/Ball seat	Valve balls	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

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

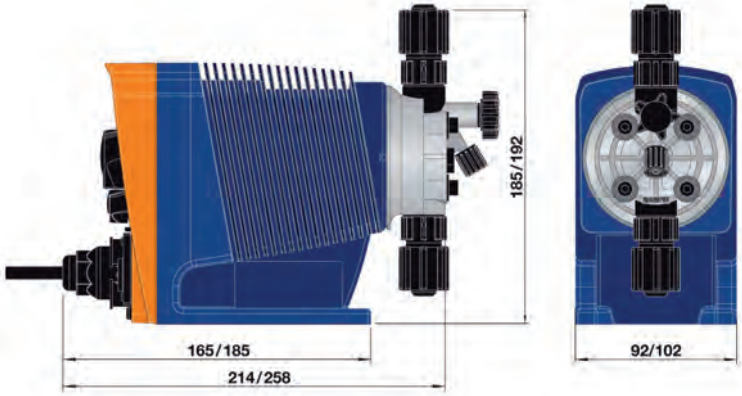
DEVELOPAN® metering diaphragm with PTFE coating for all types.

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



Pump type	Delivery rate at max. backpressure bar	l/h	ml/stroke	Stroke rate strokes/min	Suction head mWC	Connection size o Ø x i Ø mm	Average power consumption W
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	3.80	0.35	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 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 1.4404	Stainless steel 1.4404	PTFE	Ceramic

DEVELOPAN® metering diaphragm with PTFE coating for all types.

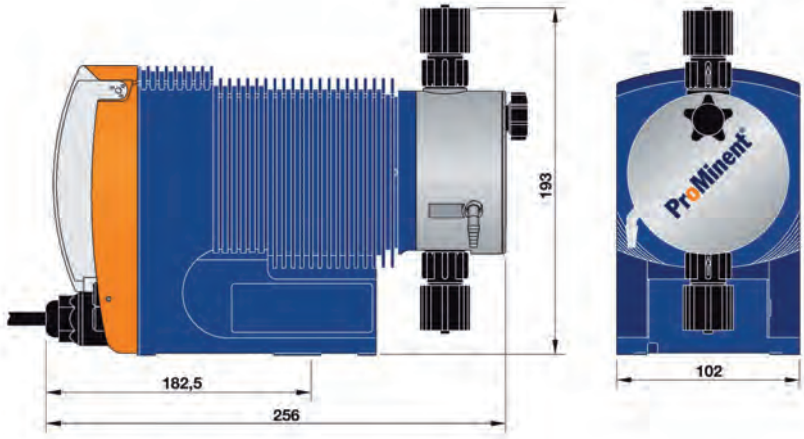
▶ www.prominent.com/solenoid_pumps

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



Pump type	Delivery rate at max. backpressure bar	l/h	ml/stroke	Stroke rate strokes/min	Suction head mWC	Connection size o Ø x i Ø mm	Average power consumption W
GALa 1000	10	0.74	0.07	180	6.0	6x4	17
GALa 1601	16	1.10	0.10	180	6.0	6x4	17
GALa 1602	16	2.10	0.19	180	6.0	6x4	17
GALa 1005	10	4.40	0.41	180	6.0	8x5 1)	17
GALa 0708	7	7.10	0.66	180	6.0	8x5	17
GALa 0413	4	12.30	1.14	180	3.0	8x5	17
GALa 0220	2	19.00	1.76	180	2.0	12x9	17
GALa 1605	16	4.10	0.38	180	6.0	8x5 1)	23
GALa 1008	10	6.80	0.63	180	6.0	8x5	23
GALa 0713	7	11.00	1.02	180	4.0	8x5	23
GALa 0420	4	17.10	1.58	180	3.0	12x9	23
GALa 0232	2	32.00	2.96	180	2.0	12x9	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 1.4404	Stainless steel 1.4404	PTFE	Ceramic

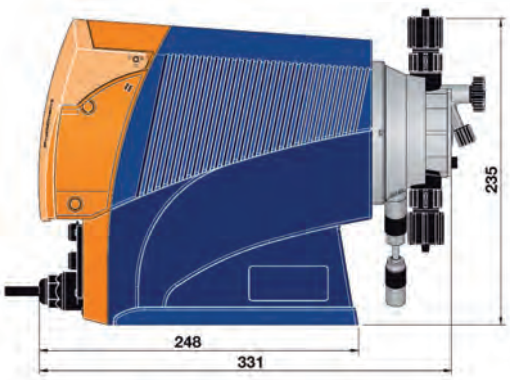
DEVELOPAN® metering diaphragm with PTFE coating for all types.

delta®

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



Pump type	Delivery rate at max. backpressure bar	l/h	ml/stroke	Stroke rate strokes/min	Suction head mWC	Connection size o Ø x i Ø mm
DLTA 2508	25	7.5	0.62	200	5	8x4 [1]
DLTA 1608	16	7.8	0.65	200	5	8x5 [1]
DLTA 1612	16	11.3	0.94	200	5	8x5
DLTA 1020	10	19.1	1.59	200	5	12x9
DLTA 0730	7	29.2	2.43	200	5	12x9
DLTA 0450	4	49.0	4.08	200	3	G¾–DN10
DLTA 0280	2	75.0	6.25	200	2	G¾–DN10

Suction height with primed liquid end and primed suction line.

1) 6 mm inner diameter in stainless steel version.

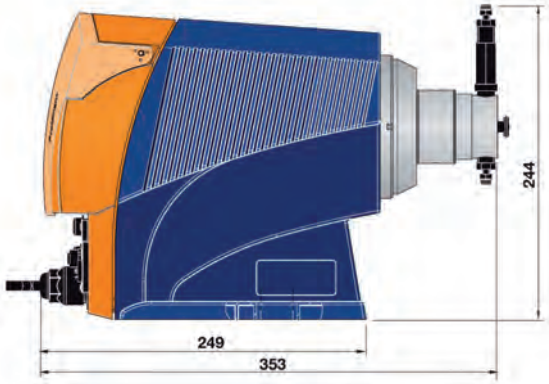
Materials in contact with medium				
Material	Liquid end	Suction/pressure port	Seals	Valve balls
NPE	Acrylic glass	PVC	EPDM	Ceramic
NPB	Acrylic glass	PVC	FPM	Ceramic
PVT	PVDF	PVDF	PTFE	Ceramic
SST	Stainless steel 1.4404	Stainless steel 1.4404	PTFE	Ceramic

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



Pump type	Delivery rate at max. backpressure bar	l/h	ml/stroke	Plunger Ø mm	Connection size hose mm	Connection size piping mm	Suction head mWC	Backpressure valve holding pressure bar
Version TT								
100150 TT	10	145	24.17	2.5	1.75x1.75	1.59	6	2.5
100600 TT	10	580	96.67	5	1.75x1.75	1.59	6	2.5
101500 TT	10	1,480	246.67	8	3.20x2.40	3.18	4	1.5
Version SS								
600150 SS	60	145	24.17	2.5	1.75x1.75	1.90	6	2.5
400600 SS	40	580	96.67	5	1.75x1.75	1.90	6	2.5
201500 SS	20	1,480	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

Material	Liquid end	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

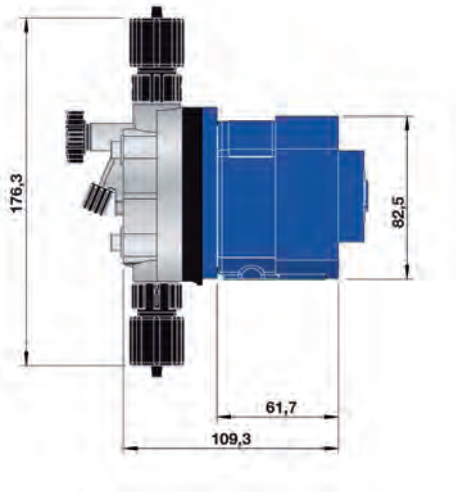
Pneumados

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



	Delivery rate at max. backpressure			Stroke rate	Suction head	Connection size
Pump type	bar	l/h	ml/stroke	strokes/min	mWC	o Ø x i Ø mm
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	126.70	1.55	180	2.0	12x9

1) 6 x 4 mm in stainless steel version.

Materials in contact with medium				
Material	Liquid end	Suction/pressure port	Seals	Valve balls
PVT	PVDF	PVDF	PTFE	Ceramic
SST	Stainless steel 1.4404	Stainless steel 1.4404	PTFE	Ceramic

DULCO®flex

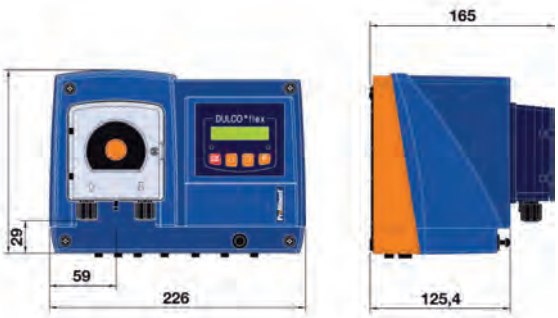
Peristaltic pumps

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



Pump type	Capacity bar	l/h	Frequency rpm	Suction head mWC	Intake head mWC	Connection size o Ø x i Ø mm
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	2	6x4
DULCO®flex DF3a						
0204	1.5	0.4	5	4	2	6x4
0208	1.5	0.8	10	4	2	6x4
0216	1.5	1.6	20	4	2	6x4
0224	1.5	2.4	30	4	2	6x4
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

Worldwide contact

Experts in Chem-Feed and Water Treatment

The ProMinent® Group is at home in over 100 countries across the globe. We supply products, systems and service solutions with the same standards all over the world: quality and reliability. All our experience and expertise in water treatment and metering technology is at your disposal – anytime, anywhere.

ProMinent Dosiertechnik GmbH
Im Schuhmachergewann 5–11
69123 Heidelberg
Germany

Telephone: +49 6221 842-0
Fax: +49 6221 842-617

info@prominent.com
www.prominent.com