

## 1.3 ProMinent® Gamma XL Metering Pumps

### 1.3.1 ProMinent® Gamma XL

#### Gamma/ XL – large output, great features

The new solenoid-driven metering pump gamma/ XL is the enhancement to our proven gamma/ X and covers a capacity range from 8 – 80 l/h at 25 – 2 bar. The gamma/ XL also has other interfaces, for example CAN bus and Wi-Fi connections. This allows the gamma/ XL to network with all systems, devices and platforms. Like the gamma/ X, the gamma/ XL has an intuitive operating concept. The pump is adjusted using a click wheel and 4 additional operating keys.

Pressure detection without wetted parts ensures maximum operational safety. Hydraulic error statuses, like “Gas in the dosing head”, “Overpressure” and “No pressure” can be detected. Pressure fluctuations in the system are detected and compensated for, achieving a high level of dosing precision and reducing chemical consumption to the required level. The last 300 events are retrospectively saved in the integral log book, which permits rapid analysis of the cause and troubleshooting.

Deviations from the metering volume or hydraulic fault statuses are immediately detected and corrected by the gamma/ XL. The pump’s operating menu includes ordering information for the wear parts required.

Designed as a smart product, it can also be connected to our web-based DULCOneX fluid management platform. The user can use this to monitor his metering process in real time, avoid downtimes and generate reports fully automatically.

#### Your benefits

- Simple adjustment of the capacity directly in l/h or in 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)
- Capacity adjustment range 1:40,000
- Direct input of the required final concentration with volume-proportional metering tasks in concentration mode
- Virtually wear-free solenoid drive, overload-proof and economical
- Suitable for continuous micro-metering from approx. 5 ml/h, thanks to the regulated solenoid drive
- Detection of hydraulic malfunctions, such as gas in the dosing head, and no or too high back pressure, ensures smooth processes
- External control via potential-free contacts with pulse step-up and step-down
- External control via 0/4-20 mA standard signal, scalable
- Integrated 1-week/1-month timer
- Guaranteed metering by means of automatic bleeding
- Connection to process control systems via a BUS interface, such as PROFIBUS®, PROFINET®, CANbus or Wi-Fi
- Automatic mode – volume settings only (l/h, ml/contact etc.)
- Non-automatic mode – settings via stroke length and stroke rate

#### Technical Details

- Illuminated 3” LCD and 3-LED display for operating, warning and error messages, visible from all sides
- In non-automatic mode, stroke rate setting 1 stroke/h – 12,000 strokes/h, stroke length electronically continuously variable 0 – 100%, recommended 30 – 100%
- Factor with external contact control 99:1 – 1:99
- Batch operation with max. 99.99 or 99,999 strokes/start pulse
- Connector for 2-stage level switch
- 3 additional ports, switched as digital inputs or outputs
- Optional 0/4 – 20 mA output for remote transmission of stroke length, stroke rate and error messages
- Optional relay module with 1 x switchover contact, 230 V – 8 A
- Optional relay module with 2 x On, 24 V – 100 mA



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## 1.3.2 ProMinent® Gamma XL Technical Data

Pump type Gamma/ XL	Max. pressure bar	Delivery rate	Theor. stroke volume	Max. stroke rate	Nominal diameter	Suction lift	Shipping weight NPE, NPB, PVT / SST
		l/h	ml/stroke	Strokes/min		m WC	
GXLa 2508	25	7.80	0.67	200	8 x 4** mm	5*	10/11
GXLa 1608	16	7.80	0.67	200	8 x 5** mm	5*	10/11
GXLa 1612	16	12	1	200	8 x 5 mm	6*	10/11
GXLa 1020	10	19.6	1.7	200	12 x 9 mm	5*	10/11
GXLa 0730	7	29.4	2.5	200	12 x 9 mm	5*	10/11
GXLa 0450	4	49.0	4.2	200	G 3/4 - DN 10	3*	10/11
GXLa 0280	2	78.5	6.7	200	G 3/4 - DN 10	2*	10/11
<b>gamma/ XL metering pumps with self-bleeding dosing head without bypass*</b>							
GXLa 1608	10	7	0.6	200	8 x 5 mm	1.8	10
GXLa 1612	10	10	0.8	200	8 x 5 mm	1.8	10
GXLa 1020	10	15	1.25	200	12 x 9 mm	1.8	10
GXLa 0730	7	27.5	2.3	200	12 x 9 mm	1.8	10

**Note:** Gamma/ XL metering pumps with dosing heads for higher-viscosity media have a 10 – 20 % lower capacity and are not self-priming. G 3/4 - DN 10 connector with d 16 - DN 10 hose nozzle.

\* Suction lift (m WC) = Suction lift with filled dosing head and filled suction line

\*\* With stainless steel design 6 mm connector width

All data refers to water at 20 °C.

## Materials in Contact With the Medium

Design	Dosing head	Suction/pressure connector	Ball seat	Seals	Valve balls
NPT	Clear acrylic	PVDF	PVDF	PTFE	Ceramic
PVT	PVDF	PVDF	PVDF	PTFE	Ceramic
SST (8 – 12 mm)	stainless steel 1.4404	stainless steel 1.4404	Ceramic	PTFE	Ceramic
SST (DN 10)	stainless steel 1.4404	stainless steel 1.4404	PTFE with carbon	PTFE	Ceramic

## Design of connectors

<b>Plastic</b>	8 - 12mm	Hose squeeze connector
	DN 10	d16 DN 10 hose nozzle
<b>Stainless steel</b>	6 - 12 mm	Swagelok system
	DN 10	Rp 3/8 insert

- Diaphragm with PTFE coating.
- Repeatability of metering  $\pm 2\%$  when used in accordance with the operating instructions.
- Permissible ambient temperature  $-10\text{ °C}$  to  $45\text{ °C}$ .
- Mean power consumption 78 W.
- Degree of protection IP 66, insulation class F.

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## 1.3.3 ProMinent® Gamma XL Identity Code Ordering System

### GXL<sub>a</sub> Regional design

EU Europe

Type	Capacity	bar	l/h	NPB	PVT	SST	bar	l/h	NPB	PVT	SST
2508		25	7.80								
1608		16	7.80								
1612		16	12								
1020		10	19.6								

#### Material of dosing head/valves

- PV PVDF/PVDF, not for pump type 2508
- NP Clear acrylic/PVC, only for pump types 2508, 1608, 1612, 1020 and 0730
- SS stainless steel/stainless steel

#### Material of seals/diaphragm

- T only with PV and SS
- F FDA-compliant design, only for PV and SS
- B VITON only with NP Heads

#### Dosing head design

- 0 without bleed valve, without valve spring, only with material TT and SS
- 1 without bleed valve, with valve spring, only with material TT and SS
- 2 with bleed valve, without valve spring, only with material NP and PV
- 3 with bleed valve, with valve spring, only with material NP and PV
- 4 HV design for higher-viscosity media, only for types 1608, 1612, 1020 and 0730

#### Hydraulic connector

- 0 Standard connection in line with technical data
- F Connector on discharge side for 8/4 hose, standard on suction side, only with material NP 2508 NPB

#### Diaphragm rupture indicator

- 0 without diaphragm rupture indicator
- 1 with diaphragm rupture indicator, optical sensor, electrical sensor

#### Design

- 0 Housing RAL 5003, cover RAL 2003

#### Logo

- 0 with ProMinent® logo

#### Electrical Connection

- U 100- 230 V ±10 %, 50/60 Hz

#### Cable and plug

- C 2 m Australian

#### Relay, pre-set to

- 0 no relay
- 1 1 x changeover contact 230 V – 8 A, fault indicating relay N/C
- 4 2 x N/O 24 V – 100 mA, fault indicating relay N/C + pacing relay
- C 1 x N/O 24 V – 100 mA, fault indicating relay N/C + 4 – 20 mA output
- F with automatic bleed valve, 230 V AC, not for pump type 2508
- G with automatic bleed valve 24 V DC and relay output, not for pump type 2508

#### Accessories

- 0 no accessories
- 1 with foot and injection valve, 2 m suction line, 5 m discharge line

#### Control version

- 0 Manual + external contact with pulse control
- 3 Manual + external contact with pulse control + analogue 0/4 –20 mA
- C as 3 + CANopen
- D as 3 + CANopen, Dulcomarine
- E as 3 + PROFINET® interface, M12
- R as 3 + PROFIBUS® interface, M12

#### Communication

- 0 without interface
- B with Bluetooth
- W with Wi-Fi module

#### Operating menu language

- EN English

GXL<sub>a</sub>EU1020PV T 0 0 0 0 0 0 U C 0 0 0 0 0 EN

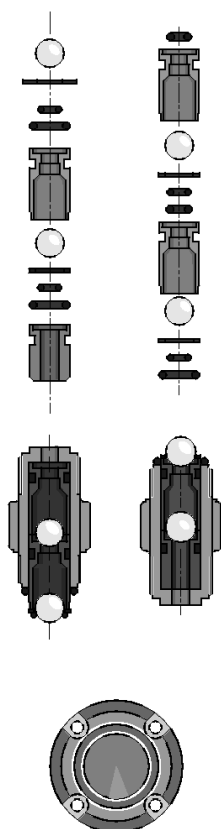
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## 1.3.4 ProMinent® Gamma XL Spare Parts Kits

Spare parts kits for gamma/ XL,  
consisting of:

- 1 x diaphragm
- 1 x suction valve assembly
- 1 x discharge valve assembly
- 1 x connector kit

Stainless steel version without suction valve assembly and without discharge valve assembly, with valve seats, seals and valve balls.



Type	Wetted materials	Part No.
Type 2508	NPT2	1095912
	SST0	1030226
	NPE	1033172
	NPB	1033171
Type 1608	PVT2/NPT2	1030225
	PVF2	1083565
	PVT7	1047831
	SST0	1030226
	NPE	1030620
Type 1612	NPB 1	030611
	PVT2/NPT2	1027081
	PVF2	1083569
	PVT4	1019067
	PVT7	1047832
	SST0	1027086
Type 1020	NPE	1030536
	NPB	1030525
	PVT2/NPT2	1027082
	PVF2	1083570
	PVT4	1019069
	PVT7	1047833
Type 0730	SST0	1027087
	NPE	1030537
	NPB	1030526
	PVT2/NPT2	1095626
	PVF2	1096089
Type 0450	PVT4	1095499
	PVT7	1095503
	SST0	1095501
	NPE	1095701
	NPB	1095700
Type 0280	PVT2	1095502
	PVF2	1096090
	SST0	1095625
	SSF0	1098651
Type 0280	PVT2	1095500
	PVF2	1096088
	SST0	1095624
	SSF0	1098648