

1.1 Solenoid-Driven Metering Pumps

1.1.4 Solenoid-Driven Metering Pump gamma/ XL

gamma/ XL – large output, great features

Capacity range 8 – 80 l/h, 25 – 2 bar

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

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 DULCOnneX 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®, CAN bus 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

Field of application

- Chemical distributors
- Systems engineering
- Food and beverage industry
- Potable water
- Waste water
- Chemical industry



NEW



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- Electroplating
- Bottling processes, e.g. ink cartridges or highlighter pens
- With an integrated process timer, suitable as a control unit for simple processes, e.g. biocide metering in cooling water
- All industrial applications, either as a stand-alone unit or integrated in a complete system

Technical Data

Pump type	Max. pressure bar	Delivery rate l/h	Stroke volume ml/stroke	Max. stroke rate Strokes/min	Nominal diameter	Suction lift m WC	Shipping weight NPE, NPB, PVT / SST kg
gamma/ XL							
GXLa 2508	25	8	0.67	200	8 x 4** mm	5*	10/11
GXLa 1608	16	8	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	20	1.7	200	12 x 9 mm	5*	10/11
GXLa 0730	7	30	2.5	200	12 x 9 mm	5*	10/11
GXLa 0450	4	50	4.2	200	G 3/4 - DN 10	3*	10/11
GXLa 0280	2	80	6.7	200	G 3/4 - DN 10	2*	10/11
gamma/ XL metering pumps with self-bleeding dosing head without bypass*							
GXLa 1608	16	3.8	0.32	200	8 x 5 mm	1.8	10
GXLa 1612	16	6.5	0.54	200	8 x 5 mm	1.8	10
GXLa 1020	10	14	1.17	200	12 x 9 mm	1.8	10
GXLa 0730	7	28	2.33	200	12 x 9 mm	1.8	10



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

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

Diaphragm with PTFE coating.

Repeatability of metering ±2% when used in accordance with the operating instructions.

Permissible ambient temperature –10 °C to 45 °C.

Mean power consumption 78 W.

Degree of protection IP 66, insulation class F.



Scope of supply
Metering pump with mains cable, connector kit for hose/tube connector as per table.



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Identity Code Ordering System for Product Range gamma/ XL

GXLa	Regional design	
	EU	Europe
	US	USA
	Type Capacity	
		bar l/h bar l/h
	2508	25 8 0730 7 30
	1608	16 8 0450 4 50
	1612	16 12 0280 2 80
	1020	10 20
	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
	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
	7	self-bleeding without bypass, only for types 1608, 1612, 1020 and 0730, only for material NP and PV
	Hydraulic connector	
	0	Standard connection in line with technical data
	5	Connector on discharge side for 12/6 hose, standard on suction side, only with material NP and PV
	F	Connector on discharge side for 8/4 hose, standard on suction side, only with material NP
	Diaphragm rupture indicator	
	0	without diaphragm rupture indicator
	1	with diaphragm rupture indicator, optical sensor
	2	with dual diaphragm system and diaphragm rupture indicator, pressure sensor, only with material SS
	Design	
	0	Housing RAL 5003, cover RAL 2003
	Logo	
	0	with ProMinent® logo
	2	without ProMinent® Logo
	Electrical connection	
	U	100 - 230 V ±10%, 50/60 Hz
	Cable and plug	
	A	2 m European
	B	2 m Swiss
	C	2 m Australian
	D	2 m USA/115 V
	1	2 m open end
	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
	2	as 0 + measuring cup, only for types 2508, 1608, 1612, 1020 and 0730
	3	as 1 + measuring cup, only for types 2508, 1608, 1612, 1020 and 0730
	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
	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	
	DE	German
	EN	English
	FR	French
	ES	Spanish
	Certification	
	01	CE
	03	CE + EAC
	07	MET (USA)
	Documentation language	
	DE	German
	EN	English
	FR	French
	ES	Spanish

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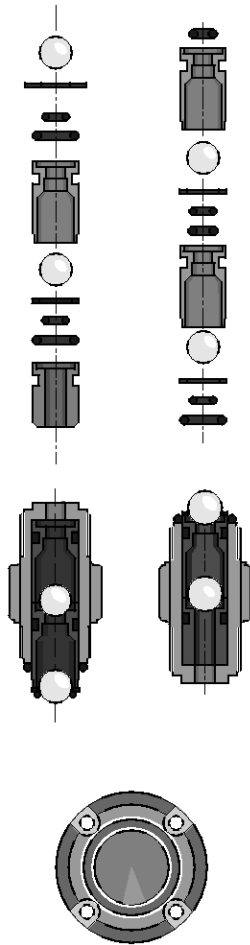
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Spare Parts Kits for Solenoid-Driven Metering Pump gamma/ XL

Spare parts kits for gamma/ XL, consisting of:

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

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



pk_1_008

Type	Wetted materials	Order no.
Type 2508	NPT2	1095912
	SST0	1030226
Type 1608	PVT2/NPT2	1030225
	PVF2	1083565
	PVT7	1047831
	SST0	1030226
Type 1612	PVT2/NPT2	1027081
	PVF2	1083569
	PVT4	1019067
	PVT7	1047832
	SST0	1027086
Type 1020	PVT2/NPT2	1027082
	PVF2	1083570
	PVT4	1019069
	PVT7	1047833
	SST0	1027087
Type 0730	PVT2/NPT2	1095626
	PVF2	1096089
	PVT4	1095499
	PVT7	1095503
	SST0	1095501
Type 0450	PVT2	1095502
	PVF2	1096090
	SST0	1095625
	SSF0	1098651
	Type 0280	PVT2
PVF2		1096088
SST0		1095624
SSF0		1098648

Spare Diaphragms for Solenoid-Driven Metering Pump gamma/ XL

Type	Materials in contact with the medium	Order no.
Type 2508/1608	all materials	1030353
Type 1612	all materials	1000248
Type 1020	all materials	1000249
Type 0730	all materials	1045456
Type 0450	all materials	1045443
Type 0280	all materials	1059691

Accessories

- Foot Valves for Low-Pressure Metering Pumps see page → 1-129
- Injection Valve for Low-Pressure Metering Pumps see page → 1-134
- Hoses and pipework for low-pressure metering pumps see page → 1-157
- Suction Lances, Suction Kit Without Level Switch see page → 1-178
- Connectors, fittings, connector kits, seals see page → 1-160

Spare Parts

- Custom Valve Balls/Valve Springs See page → 1-195

