



QUOTATION

From: Pavol Plecenik
To: **David Richards**
Water Plant Superintendent
Town of Highland Beach
3616 S. Ocean Boulevard
Highland Beach FL 33487
(561) 637-2036 Office
(561) 756-0689 Cell
Re: Turnkey Acid dosing pump skid replacement and related components (93% H2SO4)
Date: December 3, 2024
Pages: 3, including this cover sheet.

Dear David,

Current Situation: The Utility reached out to Odyssey confirming that the subject dosing pumps are leaking and starting to fail. The existing dosing pumps feed two different dosing points, using the 93% H2SO4 for pH adjustment. Currently, the pumps are installed on two side-by-side skids. One skid contains a single pump and doses the permeate water. The other skid houses an active pump and an installed spare pump that dose the raw water for pH adjustment. Additionally, the filter strain started a slow leak and the valves around the dosing skid require replacement due to end of life.

Solution: Odyssey proposes to supply quantity of two skids, each containing two pumps (one active and one installed spare) for the two dosing points. The proposed Prominent pumps are specifically designed for operation with 93% Sulfuric Acid. Two of the skids will be installed by Odyssey mechanically and electrically. Because the current pumps are nearing end of life and leaking, Odyssey will supply, on temporary basis, quantity two (2) loaner pumps for the mean time while the new pump skids are being fabricated. Odyssey will deliver the temporary pumps and will install them for the current dosing application. The temporary pumps may be able to be used with the 4 -20 amp signal for remote operation. If existing controllers do not use 4-20 control, the temporary pumps may need to be operated manually. After installation, we will confirm full operation free of leaks. Next, we will install one of the two filter strains. The second one will be provided to keep on the shelf as a spare. Four o-rings for the cap are provided as that is the most common leak point that determines the filter strain end of life. All items will ship to our HQ and once we have possession we can schedule the installation with the Utility. After installation of the two skids, Odyssey will perform startup and training. O&M manuals will be provided prior to startup.

From the desk of...

Pavol Plecenik
Technologies Manager
pplecekenik@odysseymanufacturing.com

ODYSSEY MANUFACTURING CO.
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BluePlanet scope for the two duplex pump skids is as follows:

- Quantity two (2) Duplex (2-pump) systems for 93% Sulfuric Acid
 - Each of the skids will have two (2) Prominent Gamma/XL Pumps rated for 5.28 gph @ 145 psi
 - The Packaged Chemical Feed System shall be piped in 1/2" PVDF/Viton socket fusion piping and include all standard accessories (i.e. pulsation dampeners, pressure relief valves, back pressure valves, pressure gauges, calibration column, piping, valves, supports, etc.) for the installed pumps.
 - The Packaged Chemical Feed System shall be open design for installation inside customers existing safety spray shields.
 - This system will be designed such that each of the dosing points will have one active pump and one installed spare.
 - System shall include a skid mounted NEMA 4X FRP control panel with standard SCADA I/O:
 - Terminals for 120V power supply with heavy duty surge arrestor
 - HOA selector for each pump
 - AI = SPEED command for each pump
 - DI = RUN command for each pump
 - AO = SPEED feedback for each pump
 - DO = REMOTE status for each pump
 - DO = FAULT status for each pump

The pricing is provided below in accordance with your *Pompano Beach Chemical Systems service & maintenance contract piggy-back*:

Customer Phone	PO No.	Shipping Method	Terms	Due Date	Req. Ship Date	Rep
(561) 243-2084	TBD	Ground	Net 30	3/3/2025	3/3/2025	Odyssey MFG
Item #	Quantity	Item Number	Description	Unit Price	Mark-up	Ext. Price
1	24	Odyssey-Labor-Tec (1Hr.)	Field Service Technician	\$105.00	0.00%	\$2,520.00
2	40	Odyssey-Labor-Eng (1Hr.)	Labor - Eng (PM, Admin, O&M)	\$130.00	0.00%	\$5,200.00
3	24	Odyssey-Labor-Helper (1Hr.)	Field Service Helper	\$60.00	0.00%	\$1,440.00
4	1	Spare Prominent pump	Uninstalled shelf spare pump (Gamma/XL Pumps rated for 5.28 gph @ 145 psi)	\$7,450.00	20.00%	\$8,940.00
5	4	monthly Pump lease	Two Prominent GammaX used pumps for H2SO4, 3.2 gph each; monthly LEASE (per 2 pumps)	\$800.00	20.00%	\$3,840.00
6	2	New H2SO4 Skid	BluePlanet duplex Skid designed for 93% H2SO4 (one for each injection point). Each Gamma/XL Pumps rated for 5.28 gph @ 145 psi	\$43,900.00	20.00%	\$105,360.00
7	2	SB2200F18	2" Strainer basket Simplex FLG, CPVC FPM with 1/18" pref filter basket	\$1,327.49	20.00%	\$3,185.98
8	4	ORX357V70	O-ring - Filter strain	\$38.00	20.00%	\$182.40
9	24	Odyssey-Labor-Eng (1Hr.)	Field Service Electrician (same as ENG)	\$130.00	0.00%	\$3,120.00
10	1	MISC-Mat.	Miscellaneous materials (piping, fittings, fasteners, adhesive, pump mounting)	\$742.00	20.00%	\$890.40
11	3	PPE	PPE materials	\$240.00	20.00%	\$864.00
12	2	TLS/ELEC.	Misc. Tool use / Misc. Electrical materials	\$770.00	20.00%	\$1,848.00
13	1	FRT	Shipping - Freight (all above items)	\$777.00	0.00%	\$777.00
					TOTAL=	\$138,167.78

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Lead time for new skids is 2 to 4 months. Installation lead time for temporary loaner pumps is 7 to 14 days ARO (we will expedite if possible).

Equipment warranty is 2 years for the BluePlanet skids (excludes wear items) and 1 year for all remaining parts. Labor warranty is 1-year on all installation.

SECONDARY OPTION:

In lieu of the above proposed two duplex skids, Odyssey can offer a single Triplex skid for a total of \$112,167.78 per below:

- (1) Triplex (3-pump) system for Sulfuric Acid
 - (3) Prominent Gamma/XL Pumps rated for 5.28 gph @ 145 psi
 - The Packaged Chemical Feed System shall be piped in 1/2" PVDF/Viton socket fusion piping and include all standard accessories (i.e. pulsation dampeners, pressure relief valves, back pressure valves, pressure gauges, calibration column, piping, valves, supports, etc.) for the installed pumps.
 - This system will be designed such that the middle pump is setup as a "swing" pump and can be valved into service to backup either of the two outside pumps.
 - The Packaged Chemical Feed System shall be open design for installation inside customers existing safety spray shields.
 - System shall include a skid mounted NEMA 4X FRP control panel with standard SCADA I/O:
 - Terminals for 120V power supply with heavy duty surge arrestor
 - HOA selector for each pump
 - AI = SPEED command for each pump
 - DI = RUN command for each pump
 - AO = SPEED feedback for each pump
 - DO = REMOTE status for each pump
 - DO = FAULT status for each pump

Including turnkey installation, one extra uninstalled spare pump and ancillary items per above scope.

OPTIONAL PROACTIVE SERVICE CONTRACT:

The recommended maintenance as a general guideline to replace the pump heads is every 12 months, but many of our customers get reliable service beyond that depending on operating conditions and duty cycle and do maintenance less frequently.

Odyssey can offer proactive pre-scheduled periodic 12-month visits with pump head replacements on each pump including replacement of any wear items or failed parts. Such proactive service would be priced at \$47,000 total for a 5-year term.

The Utility can also utilize a reactive service from Odyssey by calling our 800 number and requesting service on as-needed basis per the **Pompano Beach Chemical Systems service & maintenance contract piggy-back**. Utilizing this reactive approach, parts will be billed as required (around \$5000 for parts for the 4-pump system and labor will be assessed per the piggy-back). **Lead times will vary.**

Thank you for your consideration. If you find this offering favorable, please send a PO to:

pplecenik@odysseymanufacturing.com



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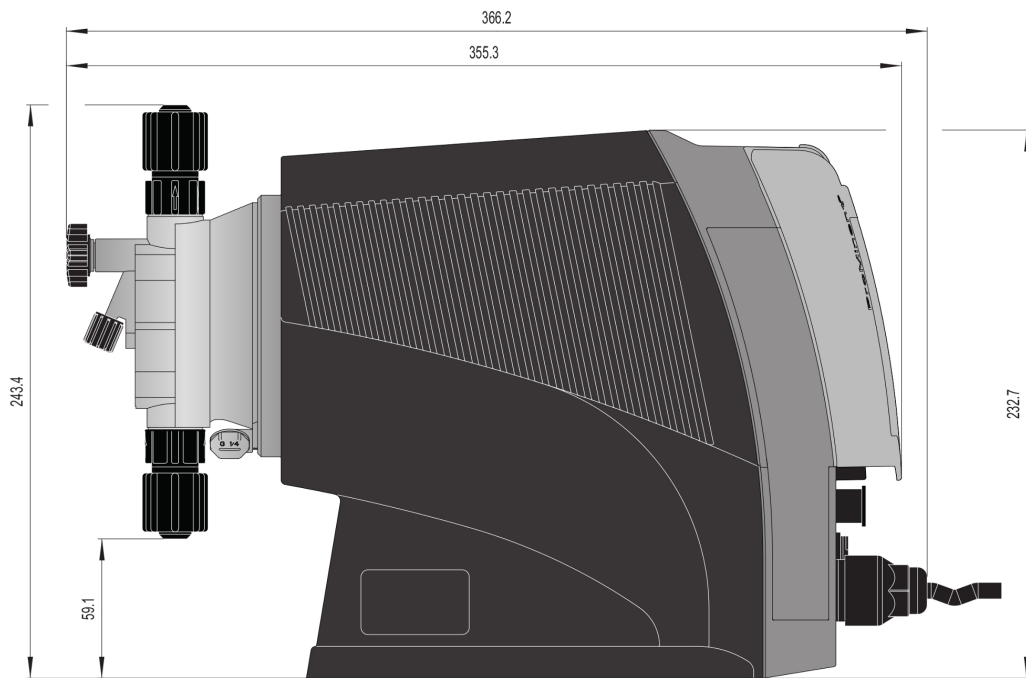
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Solenoid-Driven Metering Pump gamma/ XL

gamma/ XL – large output, great features



Exemplary representation. The dimensions depend on the configuration chosen.

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

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
- In automatic mode, an even finer setting in ml
- Batch operation with max. 99.99 l 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 actual dosing rate and error messages
- Optional relay module with 1 x switch-over contact, 230 V – 6 A
- Optional relay module with 2 x On, 24 V – 100 mA



Solenoid-Driven Metering Pump gamma/ XL

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Technical Data

Pump type	Pump capacity at max. back pressure		Theor. stroke volume	Max. stroke rate	Nominal diameter	Suction lift*	Shipping weight	
	bar	l/h					NPE, NPB, PVT	SS
			ml/stroke	Strokes/min		m WC	kg	kg
Metering pumps with non-self-bleeding dosing head								
GXLa 2508	25 **	7.5	0.63	200	8 x 4 mm ***	5	10	11
GXLa 1608	16	7.8	0.65	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	1.63	200	12 x 9 mm	5	10	11
GXLa 0730	7	29.4	2.4	200	12 x 9 mm	5	10	11
GXLa 0450	4	49	4.08	200	G 3/4 - DN 10	3	10	11
GXLa 0280	2	78.5	6.54	200	G 3/4 - DN 10	2	10	11
Metering pumps with self-degassing dosing head (dosing head design 7)								
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	-

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

** 25 bar variant only available with a NP or SS dosing head material.

*** With stainless steel design, 6 mm connector width.

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

All data calculated with water at 20 °C.

Materials in Contact with the Medium

Identity code of material	Dosing head	Connection on suction/ discharge side	Ball seat	Seals	Balls
PVT	PVDF	PVDF	PVDF	PTFE	Ceramic
NPT	Clear acrylic	PVDF	PVDF	PTFE	Ceramic
NPE	Clear acrylic	PVC	EPDM	EPDM	Ceramic
NPB	Clear acrylic	PVC	FKM A	FKM A	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	Carbon-filled PTFE	PTFE	Ceramic

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Connectors

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

Metering diaphragm with PTFE coating.

Repeatability of metering $\pm 1\%$ when used in accordance with the operating instructions.

Permissible ambient temperature $-10\text{ }^{\circ}\text{C}$ to $45\text{ }^{\circ}\text{C}$.

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.

A new level of intelligence.

The new gamma/ XL with Extended Connectivity

ProMinent®



Our metering pumps in terms of performan



have been enhanced ce and connectivity.

ProMinent's **new gamma/ XL** is the latest addition to the range of smart solenoid-driven metering pump gamma/ X products. The gamma/ XL is just as smart, easy to use and has the same long service life as its smaller sister model. With a **higher capacity range of 8 to 80 l/h at 25 to 2 bar**, the gamma/ XL increases the versatility of the gamma/ X product range and opens up numerous new fields of application.

An additional highlight of the new gamma/ XL is its extended connectivity. As part of our new DULCOnneX solution for digital fluid management, the new solenoid-driven metering pump includes integrated PROFIBUS® and CANopen interfaces for the connecting to process control systems. Thus, the gamma/ XL allows you to monitor, analyse and optimise metering processes with ease.

The new gamma/ XL simply contains added value.



More intelligence

Like the gamma/ X, the new gamma/ XL is an innovative metering pump with predictive intelligence. Thanks to a controlled solenoid drive with integrated pressure measurement, it detects hydraulic error statuses even at minimal deviations – and immediately adapts its output to the pressure conditions and properties of the medium. This ensures greater safety during commissioning and in the process.



More simplicity

Select the mode with the click of a button, use the Click Wheel to adjust settings, confirm with a click - metering with the new gamma/ XL is that simple. The adjustment range is 1:40,000. The capacity can be set directly in l/h or gph. An intuitive and efficient control is virtually pre-programmed.



More reliability

The new gamma/ XL has an almost wear-free solenoid drive, is protected against overload and low-maintenance. Together with an automated venting system and the automated recognition of hydraulic error statuses, this ensures maximum reliability and a long service life, coupled with good cost-effectiveness.



More connectivity

The new gamma/ XL is ready for Industry 4.0. Designed as a smart product, it can be connected to ProMinent's web-based fluid management platform DULCOnneX. You can use this to monitor your metering processes in real time, avoid downtimes and generate fully automated reports.



More versatility

As a standalone pump, or integrated in the overall system, the new gamma/ XL is ideal for any industrial applications and other metering processes. The application options range from the chemical trade and system construction to the food and beverage industry, and from drinking and waste water treatment to the chemical industry and electroplating.

Improved detail, increased performance.

The internal values of the new gamma/ XL



Simple operation via Click Wheel

In combination with the large LCD and 4 buttons, the Click Wheel, presented for the first time with the gamma/ X, enables intuitive operation and programming of the new gamma/ XL. The capacity is stored in the memory every 10 minutes over the past 4 weeks. Editable via the display.

Reliable controlled solenoid drive with increased capacity range

The new gamma/ XL has a highly precise controlled solenoid drive for metering liquid media. Its capacity range extends from 8 to 80 l/h at 25 to 2 bar. The solenoid drive allows a slow prestroke and thus a virtually continuous metering of even the smallest volume streams.

Predictive intelligence for maximum efficiency

The refined electronics of the new gamma/ XL enable precise control. The 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. In addition, pressure fluctuations in the system will be detected and compensated, ensuring a high dosing precision.

New socket for 3 configurable I/Os

As an input for triggering timer programmes and for the switch-over to preset capacities. As an output for error messages and warnings; assigned to the timer for the switching of external devices such as stirrer or solenoid valves.



Highly visible status LEDs

The three-level LED status display for operating, warning and error messages, visible from all sides, provides increased operating safety.

▶ Additional information and product videos can be found at www.prominent.com/gammaXL



High-resolution LCD with back pressure display

The gamma/ XL's 3" high-resolution LCD clearly displays important parameters such as the flow volume. The back pressure is measured without a sensor and is also shown on the display at a resolution of 0.5 bar.

Optional radio connection

The gamma/ XL comes with an optional Bluetooth and Wi-Fi connection for simply configuring parameters and calling up process data.



Continuous level measurement

The new, continuous suction lance allows levels to be monitored with precision of up to 5%.

DULCOnneX – Extended Connectivity

Integrated PROFIBUS® and CANopen interfaces enable connection to process control systems.



Web-based. Networked. Transparent.

DULCOnneX – Extended Connectivity.



DULCOnneX by ProMinent is the smart digital fluid management solution. With DULCOnneX, we network all components of a system, thereby ensuring an optimised interaction of metering pump, controller and sensors. As the user, you benefit from direct access to all information about the devices and systems installed on site. Thus, DULCOnneX allows you to monitor, analyse and optimise metering processes with ease.

The basis for digital fluid management: Products with Extended Connectivity.

DULCOnneX products, such as the new gamma/ XL, come with special features designed to enable digital fluid management. They reduce consumption of raw materials and help to minimise operating errors and downtimes.

- **Robust:** Their construction ensures a long service life and high availability.
- **Adaptive:** They adapt automatically to constantly changing operating conditions.
- **User-friendly:** They are easy to install and start up. Clear, intuitive operation ensures simple parameterisation, calibration and storage.
- **Network-capable:** They communicate at fieldbus level using CANopen, PROFIBUS® and PROFINET or can be connected via DULConnect to our web-based fluid management platform.

Additional information available at
www.prominent.com/dulconnex

Worldwide contacts



Ready for you. Any time, anywhere.

ProMinent is at home in more than 100 countries across the globe. This guarantees the worldwide availability of our products and comprehensive expertise on the ground with short distances to our customers. We offer the same high quality standards for our solutions and services all over the world. And we work day in, day out to keep our promise: Ready for you. Any time, anywhere.

You can find the contact details of local branches and agencies at
www.prominent.com/locations

You can find the ProMinent app for iPad and iPhone
in the iTunes App Store or at
www.prominent.com/app



1 Diagrams for Setting the Capacity

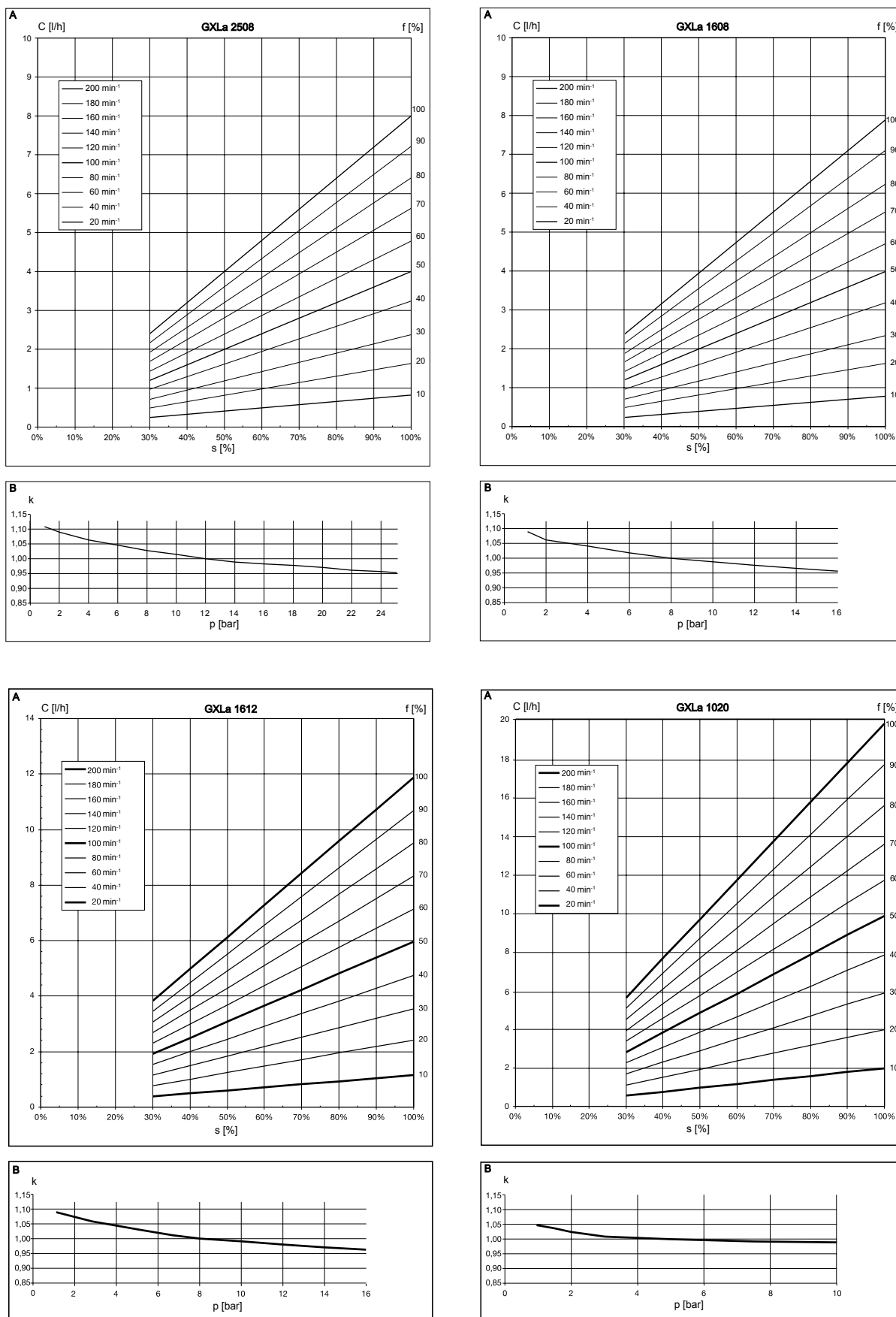


Fig. 1: A) Capacity C at maximum back pressure depending on the stroke length s for different stroke rates f .
 - B) Corresponding correction factors k dependent on back pressure p - at 70 % stroke length, "Automatic"- "Off" and "Compensation"- "Off".

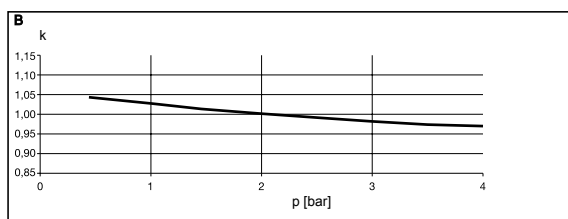
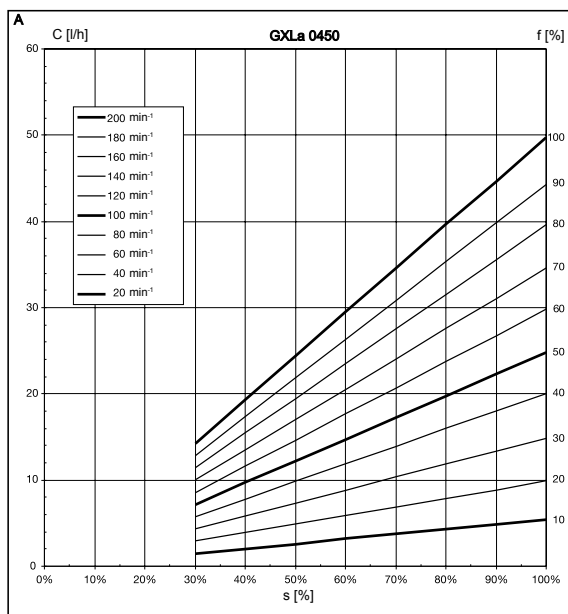
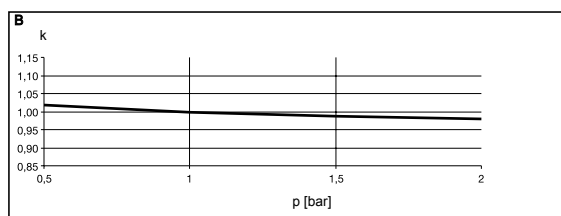
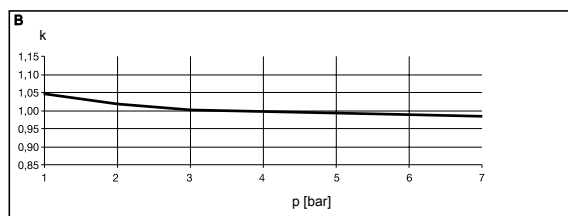
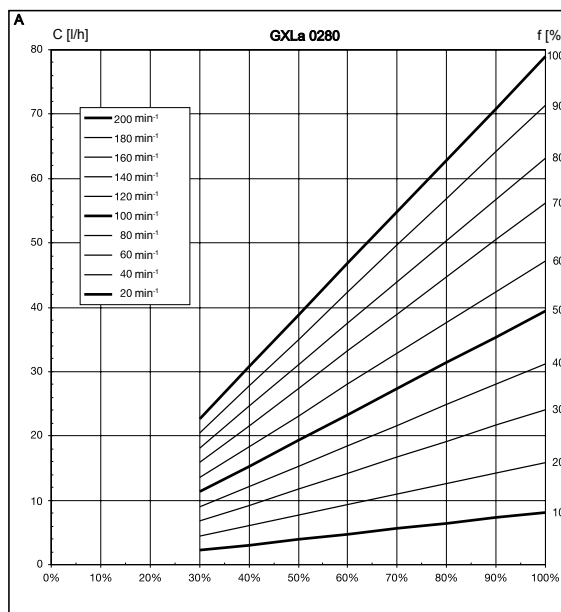
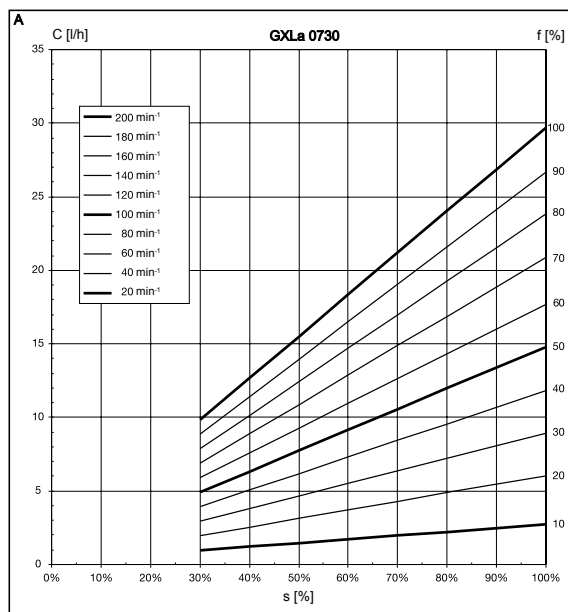


Fig. 2: A) Capacity C at maximum back pressure depending on the stroke length s for different stroke rates f . - B) Corresponding correction factors k dependent on back pressure p - at 70 % stroke length, "Auto-matic"- "Off" and "Compensation"- "Off".