

# The All-rounder series

MAGDOS - solenoid-diaphragm dosing pumps 0.5 – 15 l/h up to 16 bar



## Reliable dosing of chemicals

The solenoid-driven diaphragm dosing pump MAGDOS stands for dosing without compromises. Thanks to a number of the various pump types there is the right individual solution for every application, also for the highest demands.

The power ranges cover from 0.5 – 15 l/h with back pressures up to 16 bar. Double-ball valves ensure exact dosing. The dosing power can be adapted by varying the stroke frequency manually, via an external control contact or using a 0/4 – 20 mA signal.

Several different materials and connections are available for suction and discharge side, depending on the specific applications.

Accessory sets consisting of a hose, injection nozzle and suction line are available to ensure the best outcomes and quick installation.

## Easy handling

Thanks to the sturdy, maintenance free solenoid drive, the media being supplied (acids, alkalis, coagulants and flocculants, for example) are reliably and accurately dosed.

The MAGDOS does not just impress with their elegant design. The MAGDOS is available with a graphic display and multi-language menu. The operation of the dosing pump via the integrated keyboard simplifies their use.

The MAGDOS is also available with an optional Ethernet interface. The stroke frequency, number of strokes, runtime, batch and much more can be controlled via the network interface module. Errors and malfunctions are transmitted from the pump.

The compact structure of the MAGDOS means that it requires a small installation surface. This enables its problem-free integration in smaller compact dosing systems. Depending on the requirements, the pump can be fitted in three different positions: standing, oriented to the left or right and fitted on the wall.

## Overview of functions

MAGDOS	LB	LD	LA	LK	LP
Dosing head ventilation (plastic version)	•	•	•	•	•
Graphic display (*with multi-language menu)	-	•	•	•*	•*
Password protection	-	•	•	•	•
Supply amount displayed in various units	-	-	-	•	•
Calibration function	-	-	-	•	•
Operating modes	LB	LD	LA	LK	LP
Manual control 0 – 100%	•	•	•	•	•
External control with pulse increase and reduction	-	•	-	•	•
External control with pulse water meter, PPM u. PERC	-	- <sup>1</sup>	-	•	•
Batch dosing with interval and *timer functions	-	-	-	•	•*
External control via standard signal 0/4 – 20 mA	-	-	•	-	•
Inputs and outputs	LB	LD	LA	LK	LP
Release input (external start/stop)	•	•	•	•	•
Level input with early warning and *main alarm	•*	•	•	•	•
Stroke feedback output	-	-	-	•	•
Alarm message	-	-	-	•	•
Input for flow control	-	-	-	-	•
Diaphragm rupture detection (optional)	-	-	-	-	•
Ethernet interface (optional)	-	-	-	-	•

All Magdos L series pumps are UL, CSA and WQA certified.

## Technical data

MAGDOS		05	1	2	4	6	10	15
Delivery capacity at max. backpressure	l/h	0.36	0.76	1.9	3.4	6.2	9	13
	ml/stroke	0.05		0.2	0.32	0.57	0.83	0.87
Maximum delivery pressure	bar	16				8	6	3
Delivery capacity at average backpressure	l/h	0.54	1.1	2.3	3.8	6.8	10	15
	ml/stroke	0.08	0.07	0.24	0.35	0.63	0.92	1
Average delivery pressure	bar	8				4	3	1
Nominal stroke frequency	rpm	120	250	160	180		250	
Suction lift for non-gassing media	mWS	5		3		2		
Maximum inflow pressure	mbar	800						
Diameter of diaphragm	mm	24		33		39		
Valve size		DN3			DN4			
Voltage supply	LB, LP	110 – 240 V, +10 % / -5 %, 50/60 Hz						
	LD, LA, LK	230 V ±10 %, 50/60 Hz, IP65 or 115 V ±10 %, 50/60 Hz, IP65						
Power consumption	LB, LP	10	15	21	27	28	29	26
	LD, LA, LK	8	13	19	25	25	25	22
Protection class		IP65 (with covering caps on the connections)						
Insulation class		F						
Materials		PVC, PP, PVDF, 1.4571						
Weight	PVC, PP, PVDF	kg						
	Stainless steel (1.4571)	kg						
Approved ambient temperature	°C	5 – 45 (with PVC components 5 – 40)						
Approved media temperature	°C	80 (with PVC parts, 35; with PP parts 60)						

\* for PVC version

\*\* DN3 only for double ball valves

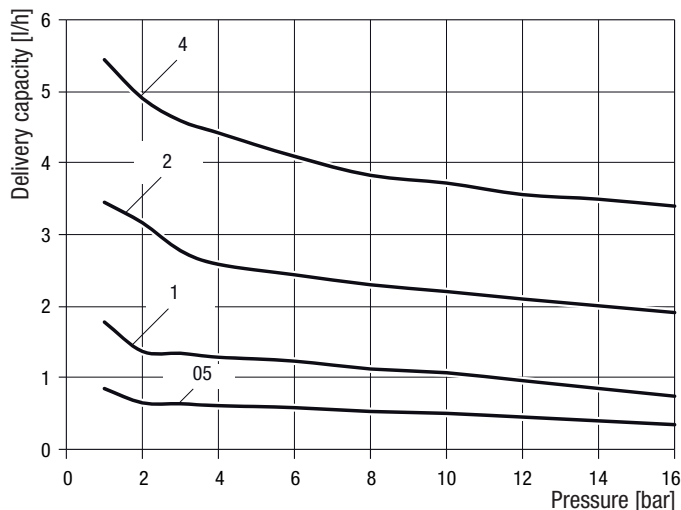
† see online help Calculation program:

<http://www.lutz-jesco.com/en/service/document-download-specialised-information/online-help/magdos-ld-calculation-wizard.html>

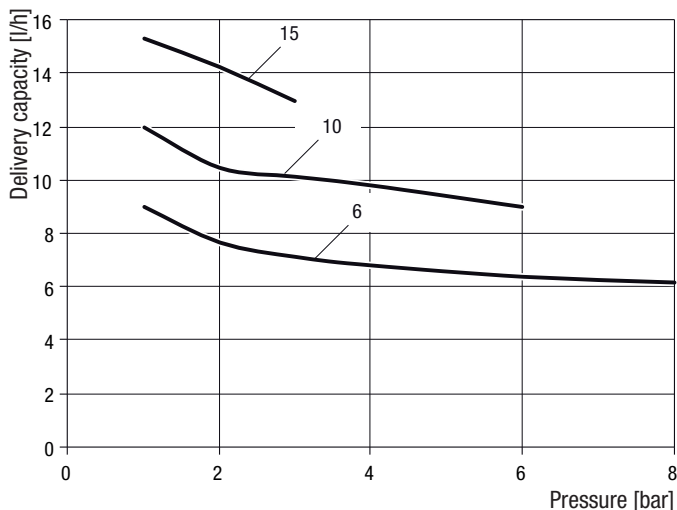
## Delivery characteristic curves

These delivery capacities were determined on the manufacturer's test stands. They apply at 20 °C (68 °F) for water, at 100 % stroke frequency. The delivery capacity depends on the medium (density and viscosity) and temperature. Since these conditions vary at every installation location, you should calibrate the dosing pump.

**MAGDOS 05 – 4**



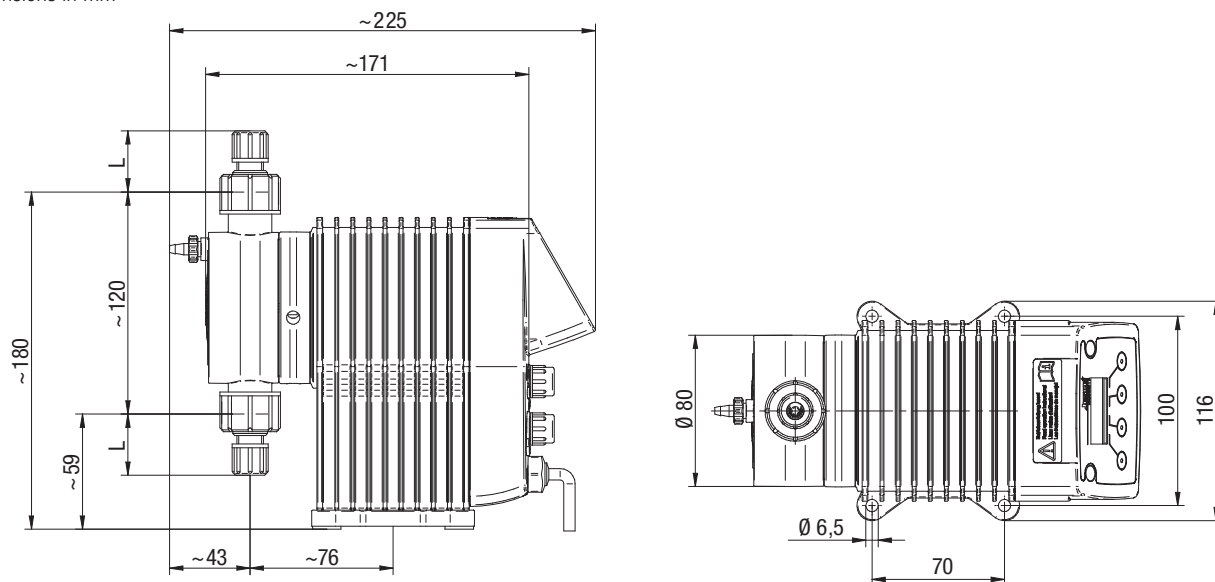
**MAGDOS 6 – 15**



## Dimensions

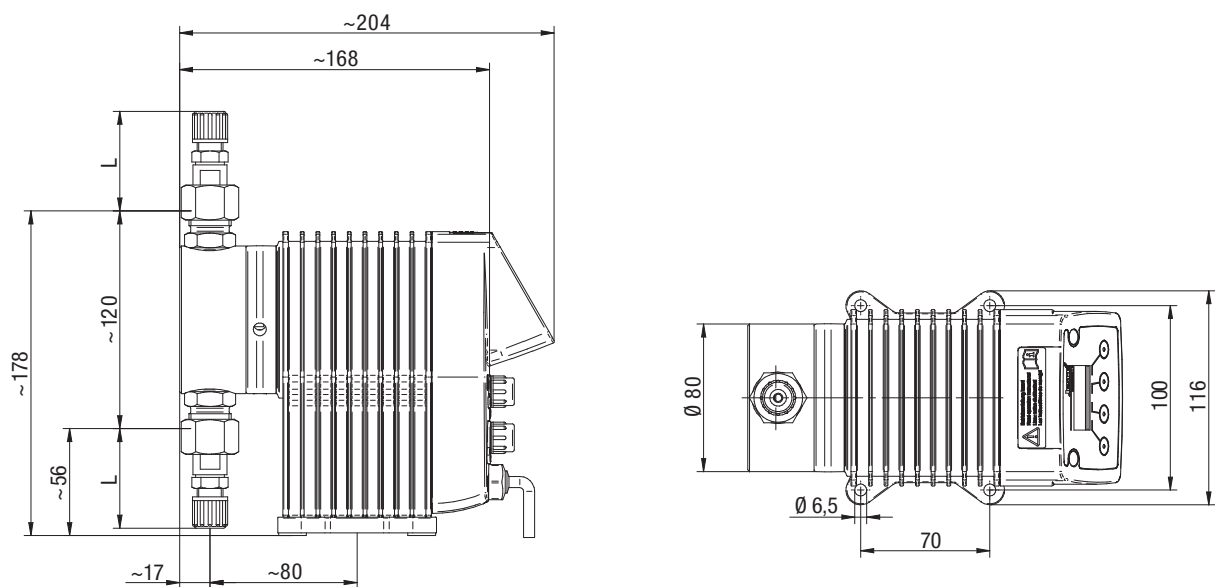
MAGDOS with dosing head made of PVC, PP or PVDF

All dimensions in mm



MAGDOS with dosing head made of stainless steel (1.4571)

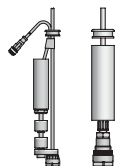
All dimensions in mm



Connection	Material	Scale	Nominal width	L
Hose clamp connection	PVC, PP, PVDF	4/6 mm	DN4	31 mm
		1/4x3/8"	1/4"	34 mm
		6/9 mm	DN6	34 mm
		6/12 mm	DN6	15 mm
	Stainless steel (1.4571), PVDF	4/6 mm	DN4	50 mm
		6/9 mm	DN6	54 mm

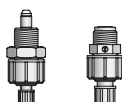
Further connection methods for your dosing pumps are available upon request.

## MAGDOS standard - accessories



### Suction lines

Type SL-2 with ceramic reinforcement piece, cable length 3,000 mm, tube length 2,500 mm. Level monitoring and pre-alarm with 2 switching points, switching distance approx. 50 mm. Switching function: Closer on rising level, electrical connection to dosing pump via plug connector M12x1. Flexible suction line, SA model with foot valve and load part made from ceramic and 2500 mm tube length.



### Injection nozzles

To connect the dosing line to the dosing point.  
Injection nozzle type S, hose loaded, opening pressure 1.1 bar  
Injection nozzle type R, spring loaded, opening pressure 0.1 bar.



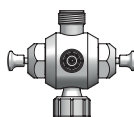
### Suction and pressure tube

Permissible operating pressure at 20 °C in accordance with DIN EN ISO 7751, chemical resistance and correct connection are assumed.



### FLOWCON LP 1

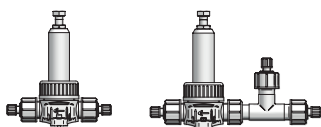
- Efficient monitoring of pulsating volume flows
- Compact design, highly robust product
- Easy handling
- Capacity between 0.36 and 13 l/h
- Electric analysis using MAGDOS LP, or performed externally using SPS



### PENTABLOC

The PENTABLOC multi-function valve is installed directly on the dosing head of the pump and contains the following features:

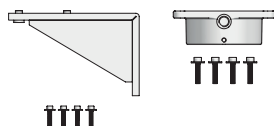
- Back pressure function, opening pressure 3 bar
- Pressure relief function, opening pressure 11 bar
- Antisiphon function
- Dosing monitoring function



### Back-pressure and pressure relief valves

Back-pressure valves to be mounted in the dosing line. Adjustable pressure 1 – 16 bar.

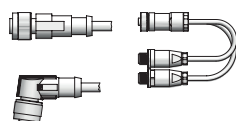
Pressure-relief valves to be mounted in the dosing line. Settable pressure: plastic 1 – 16 bar, stainless steel 1 – 25 bar



### Wall bracket and spacer

Wall console including mounting material for mounting pumps. Material: PP

Spacer and mounting hardware required to fit the pump to a water meter. Material: Cast aluminium, coated



### Various cables, plugs and adapters

Cable for: external release and pulse output A coded, 0/4 – 20 mA and pulse input A coded, fault message B-coded, level control A-coded, Ethernet network connection D coded.

Terminal connection: for retrofitting existing suction lines or level monitors.

Y-cable: for parallel use of FLOWCON LP 1 and a leakage detector in the MAGDOS LP's common socket.

Adapter: when using older suction lines with a 3.5 mm jack plug; when using a suction line with M12x1 plug connector.