

## General Description

The MAGDOS DE/DX line of solenoid driven metering pumps combines the digital technology of state-of-the-art microprocessors with the durability of high-quality mechanics. Its versatility and wide range of external control options make it ideal for a variety of applications. The pump can be supplied with a user-friendly digital display that shows the different operating modes and further technical messages.

The MAGDOS DE and MAGDOS DX are available with the following features:

- Capacities from 0.03 gph 27.7 gph with pressures up to 150 psig (set by manually changing the stroke length via the stroke length adjustment knob).
- Manual control with continuous stroke frequency adjustment from 0 to 100 strokes per minute for sizes 01 - 12 and 0 - 70 strokes per minute for sizes 20 -100.
- Changeover function to external pulse control by water meter or other voltage free contacts.
- Connection for level indication with alarm signal.
- Optional warning alarm relay.

In addition, MAGDOS DX offers:

- Changeover function to external control by 0/4 - 20 mA analog signal.
- Pulse multiplication or division by factors of 2, 4, 8, 16, 32 or 64.
- Digital display.

## Magnetic Drive

The stroke movement of the metering diaphragm is produced by a D.C. solenoid. Due to the infinitely adjustable stroke, the stroke length can be set anywhere between 0 - 0.18 inches, depending on the pump size. The solenoid design eliminates reduction gears or rotating parts, making the MAGDOS DE/DX long-lasting and low-maintenance. The armature runs in a maintenance free bushing with PTFE coating and additional silicone grease lubrication.

## Materials of Construction

Liquid ends of Polypropylene, PVC, PVDF and 316 Stainless Steel. Diaphragms are PTFE coated EPDM. Seals of Viton™, Hypalon™ or PTFE are available.



## Options

- Diaphragm Leak Detection
- Tank Low Level indication and alarm (DX model only)

## Control Unit

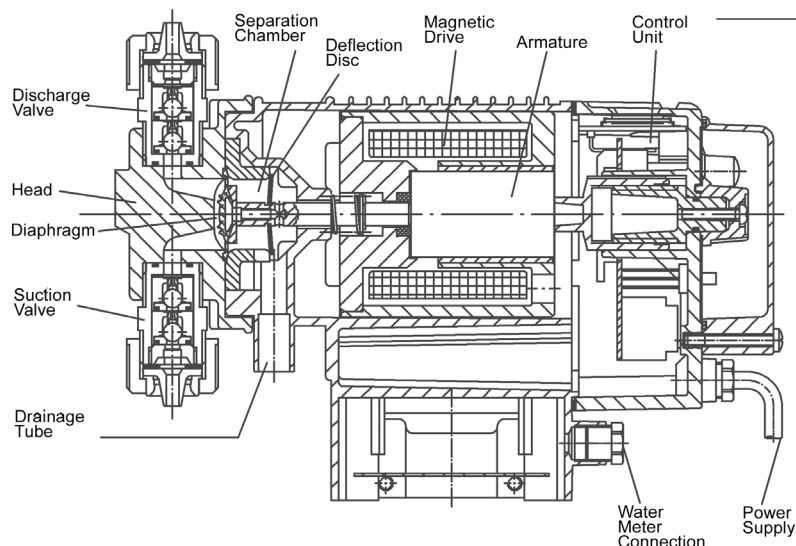
The main part of the control unit is a microprocessor which controls the stroke frequency with digital accuracy. The various control possibilities allow MAGDOS to be adapted to practically all requirements of home water supply, water and waste water treatment as well as industrial processes. The electronic control unit is available in two basic versions with functions described below.

Functions		DE	DX
Level Control with Alarm Signal		x	x
Low Level Indication		x	x
Warning Alarm Relay		o	o
Manual Control 0-100%		x	x
Contact		x	x
External Control	0-20 mA	—	x
	4-20 mA		
Pulse Multiplication/Division		—	x
Stroke Frequency Adjustment		x	x
Digital Display		—	x

— = not available; x = standard; o = optional

# Solenoid Driven Metering Pump - MAGDOS DE/DX

Cross Section of MAGDOS DE/DX



Control Unit

Stroke Frequency Adjustment



Power Supply Cable

Warning Alarm Relay Cable

Level Probe Conn. Jack

Pulse Input Cable

Model		01	03	07	2	4	8	12	20	40	100
Capacity	gph	0.03	0.12	0.20	0.50	1.0	1.6	2.8	4.7	12.7	27.7
Maximum pressure	psig	150	90	150	150	150	150	60	150	60	30
Description				DE/DX 01...12		DE/DX 01...12		DE/DX 20...100		DE/DX 20...100	
Power supply requirement			VAC Hz.	115, 50/60		230, 50/60		115, 50/60		230, 50/60	
Power supply cable (6 ft.)				UL/CSA Plug		2 m with standard plug		UL/CSA Plug		2 m with standard plug	
Maximum speed			SPM	100		100		70		70	
Power consumption at maximum speed			Watts	33		30		66		70	
Current consumption during stroke			Amps	3.6		2.3		7.4		4.1	
Protection class				NEMA 4X							
Insulation class				F							
Input pulse duration				min. 30 ms							
Maximum carrying capacity @ voltage amps				250 VAC, 2.5 A // 30 VDC, 2.5 A							
Solenoid excitation time per pulse			ms	80		80		190		180	
Voltage to low level probe			VDC	5 for potential-free switches							
Voltage to pulse input											
Impedance to 0/4 - 20 mA input			Ohm	150							
Maximum suction lift (water)			ft.	10*		10*		6*		6*	
Maximu ambient temperature			°F	104							
Maximum temperature of process fluid	PVC	°F	95								
	PMMA, PVDF, SS	°F	122								
Pump weight	Plastic	lbs.	6.4					29			
	316SS	lbs.	7.7					33			

\*Maximum lift (water): DE/DX 8 = 6.7 ft.; DE/DX 12 = 4 ft.; DE/DX 20 = 6 ft.; DE/DX 40 = 5 ft.; DE/DX 100 = 4 ft.

## Reliable dosing of chemicals

Solenoid diaphragm dosing pumps play an important role in the reliable and accurate dosing of liquids.

The MAGDOS LB solenoid diaphragm metering pump is a good-value alternative for simple and continuous dosing tasks, particularly suitable for the process industry.

## Wide range of applications

The MAGDOS LB is available in seven sizes for metering applications ranging to 3.96 gph with back pressures up to 232 psig. Double-ball valves ensure accurate, consistent dosing. The dosing rate can be adjusted continuously from 0 to 100% by manually changing the stroke frequency.

The pump is externally controlled by switching the supply voltage of the pump ON and OFF.

Several different materials and connections are available for wetted-end components. By using appropriate and recommended materials, the MAGDOS LB can be used in a wide variety of process applications.

Matching accessory sets with tubing, injection nozzles and suction lines allow quick installation and reliable operation.

## Simple to use and space-saving

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

The combination of the MAGDOS LB's solid design and the easy-to-use control allow for short set up times and efficient operation.

The compact design and the small footprint allow for easy integration into dosing systems even for installations with limited space available.

Wall mounting is possible provided the check valves remain in a vertical orientation by rotating the head.



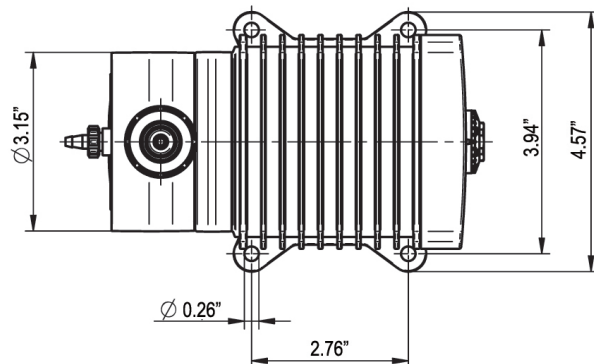
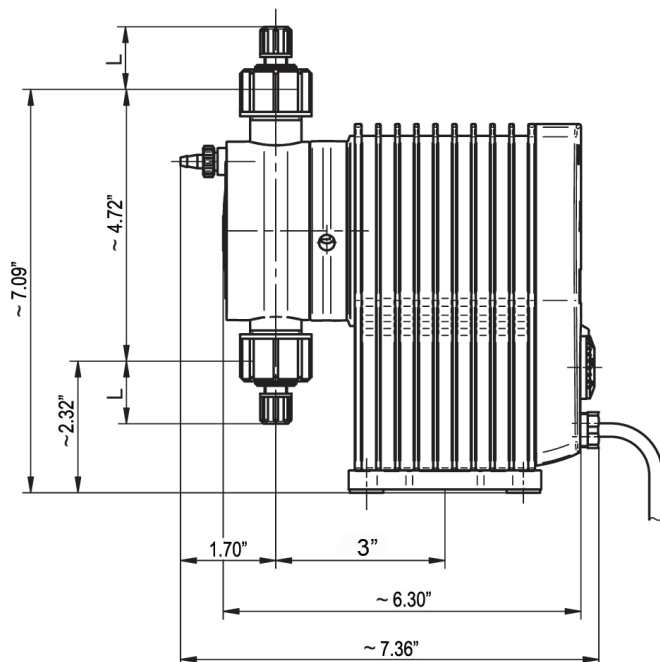
## In Short

- Capacity range to 3.96 gph, up to 232 psig
- Wide range power supply unit 110-240 VAC, 50/60 Hz
- Integrated vented head (standard on plastic version)
- Wall and floor mounting possible without a bracket
- Double-ball valves ensure accurate dosing
- Materials available: PVC (standard), PP, and PVDF
- Material consistency for pumps and accessories
- Dosing heads and valves for high-viscosity media are available

# Solenoid Diaphragm Dosing Pump - MAGDOS LB

MAGDOS LB	05	1	2	4	6	10	15
Max. back pressure (psig)	232	232	232	232	116	87	43
Flow rate at max. pressure (gph)	0.09	0.20	0.50	0.89	1.6	2.40	3.43
Average back pressure (psig)	116	116	116	116	58	43	14
Flow rate at medium pressure (gph)	0.14	0.29	0.61	1.00	1.80	2.64	3.96
Max. stroke frequency (SPM)	120	250	160	180	180	180	250
Suction lift for non-effervescent media (ft H <sub>2</sub> O)	16	16	9	9	6	6	6
Max. inlet pressure (psig)	11 PSI						
Power supply	110...240 V, 50/60 Hz						
Power supply cable	6 feet with mains plug						
Power consumption	18 W						
Max. power consumption during dosing stroke	approximately 4 A						
Protection class	IP 65						
Weight	approximately 6.6 pounds						
Max. ambient temperature	41°F-113°F (with PVC parts 41°F-104°F)						
Max. temperature of the medium	PVDF 176°F (with PVC parts 95°F, with PP parts 140°F)						

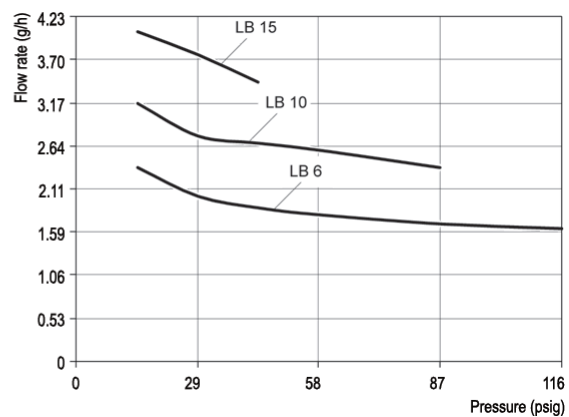
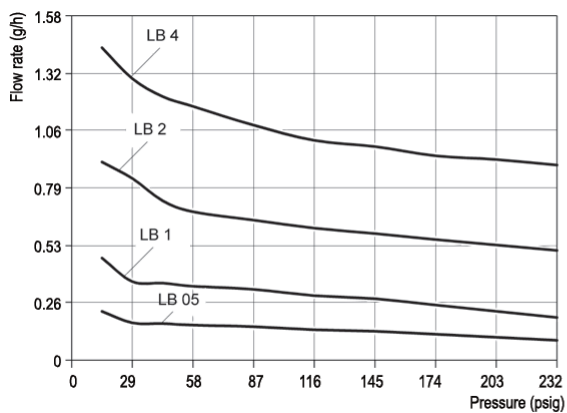
## MAGDOS LB Dimensions



Material	Size	L
PVC, PP, PVDF	1/4" x 3/8"	1.34"
	1/4" x 7/16"	1.34"
	1/4" FNPT	1.34"
PVDF	1/4" FNPT	1.96"
	1/4" FNPT	2.12"

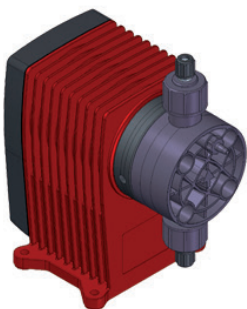
## Flow Curves

The flow curves are valid for ambient temperatures of 68°F (20°C) and dosing water at 100% stroke frequency. The delivery capacities depend on the medium (density and viscosity) and temperature.

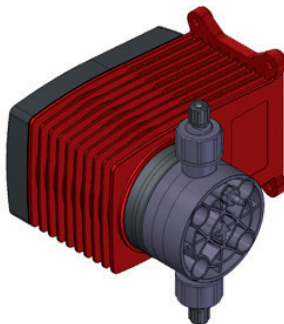


## Installation positions

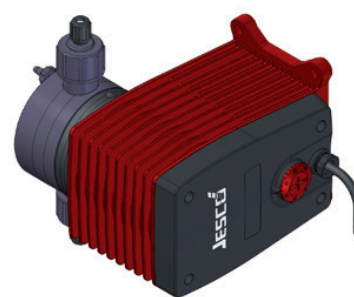
MAGDOS LB can be mounted in three different positions without further auxiliary equipment:



Floor mounting



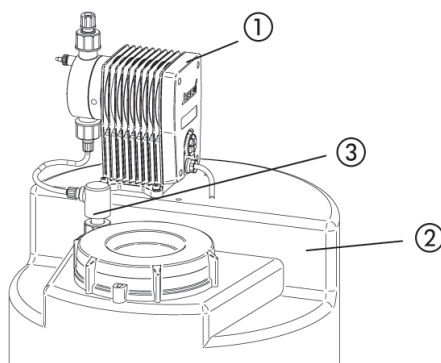
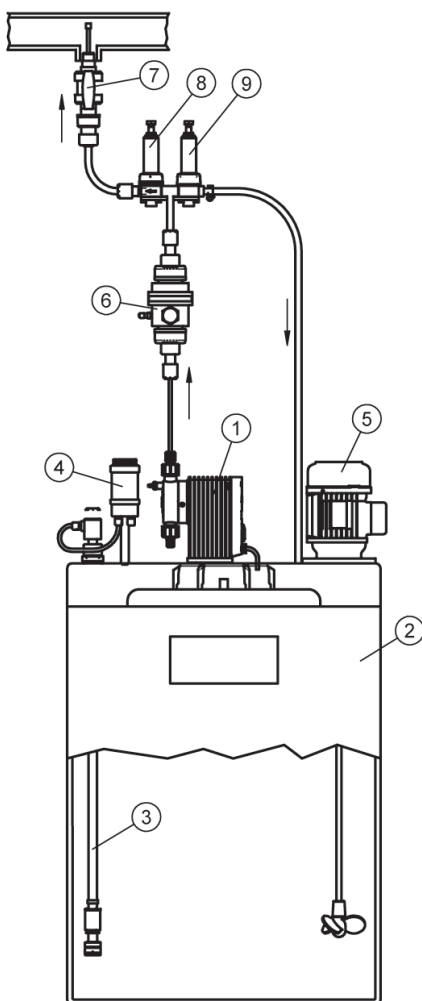
Wall mounting with dosing head on the right-hand side



Wall mounting with dosing head on the left-hand side



### Installation examples



### Legend

- ① MAGDOS LB
- ② Chemical tank
- ③ Suction line
- ④ Priming aid
- ⑤ Electric agitator
- ⑥ Pulsation dampener
- ⑦ Injection nozzle with non-return and shut off valve
- ⑧ Back pressure regulating valve
- ⑨ Pressure relief valve (safety valve)

### Accessories

Even the best pump can be improved – simply by the addition of appropriate accessories.

Suitable sets of accessories, consisting of suction/discharge tubing, foot valve and injection nozzle, are available for the dosing pumps.

To turn your dosing pump into an efficient dosing system, we recommend using the following accessories:

- Injection nozzles - to dose the medium into the main line and to prevent it from flowing back into the pressure line.
- Back pressure and pressure relief valves - to increase dosing accuracy or to protect the system against excessive pressure.

- Pulsation dampener - to dampen supply flow as well as to reduce discharge flow pulsations.
- Priming aids - to significantly ease priming of dosing pumps with low supply volumes per stroke, for large suction heights, highly viscous dosing media, for initial priming or when priming after the system has been idle.
- Suction pressure regulator - to prevent medium flow when the dosing pump is not running or to prevent a vacuum being formed in the event of a pipe failure.

Please contact us for more information on accessories and metering pump systems.

## Reliable dosing of chemicals

Solenoid diaphragm dosing pumps play an important role in the reliable and accurate dosing of liquids.

Lutz-Jesco metering pumps are specifically designed for water treatment and the process industry.

## Wide range of applications

The MAGDOS LD is available in seven sizes for metering applications ranging to 3.96 gph with back pressures up to 232 psig. Double-ball valves ensure accurate, consistent dosing. To adapt the dosing performance, the stroke frequency can be adjusted manually or via an external control contact. You can thus dose with a flick of the wrist.

Several different materials and connections are available for suction and discharge side, depending on the specific applications. By using appropriate and recommended materials, the MAGDOS can be used in a wide variety of process applications.

Matching accessory sets with hoses, injection nozzles and suction lines allow quick installation and reliable operation.

## Simple to use and space-saving

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

The combination of the MAGDOS LD's solid design and the easy-to-use digital controls allow for short set up times and efficient operation.

The compact design and the small footprint allow for easy integration into dosing systems even for installations with limited space available.

Wall mounting is possible provided the check valves remain in a vertical orientation by rotating the head.



## In Short

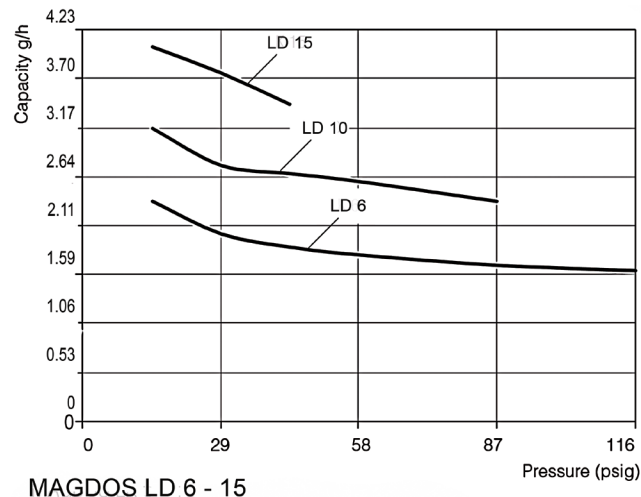
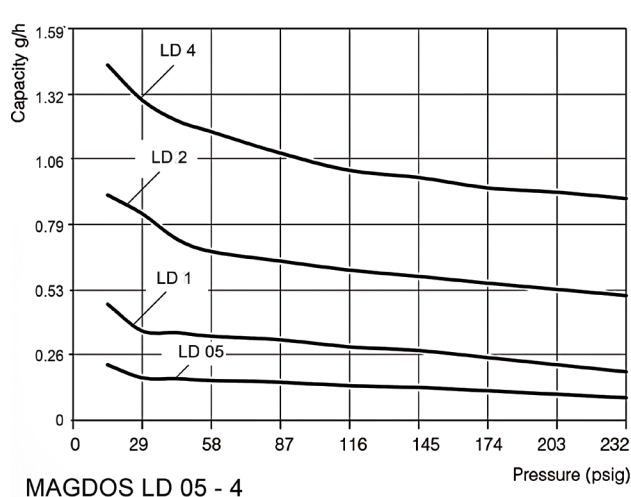
- Capacity range to 3.96 gph, up to 232 psig
- Power supply 230 VAC +/- 10%, 50/60 Hz, IP 65, max. 25 W or 115 VAC +/-10%, 50/60 Hz, IP 65, max. 25 W
- Graphical display
- Materials available: PVC, PP and PVDF
- Material consistency for the pumps and accessories
- Dosing head manual venting
- Wall and floor mounting
- Double-ball valves ensure accurate dosing
- Precise pump settings using the keyboard
- External control via floating contacts with impulse increase and reduction
- Level input with early warning and main alarm
- Release input

## Technical Data

MAGDOS LD		05	1	2	4	6	10	15
Delivery capacity at max. pressure	gph	0.09	0.20	0.50	0.89	1.64	2.40	3.43
	ml/stroke	0.05	0.05	0.2	0.31	0.57	0.83	0.86
Max. supply pressure	psig	232				116	87	43
Delivery capacity at medium pres- sure	gph	0.14	0.29	0.61	1.00	1.80	2.64	3.96
	ml/stroke	0.08	0.07	0.24	0.35	0.63	0.92	1.0
Average back pressure	psig	116				58	43	14
Max. stroke frequency	SPM	120	250	160	180			250
Suction head for non-gassing media	ft H <sub>2</sub> O	16		9		6		
Max. supply pressure	psig	11 PSI						
Nominal valve width		DN3		DN4				
Voltage supply		230 V AC +/- 10%, 50/60 Hz or 115 V AC +/- 10%, 50/60 Hz						
Power consumption	W	8	13	19	25			22
Protection class		IP 65 (with covering caps on the connections)						
Insulation class		F						
Weight	PVC, PP, PVDF	lb	~ 7.0					
	Stainless Steel		~ 9.5					
Max. ambient temperature	°F	PVDF 113° (104° with PVC parts)						
Max. temperature of the medium	°F	PVDF 176° (with PVC parts 95°; with PP parts 140°)						

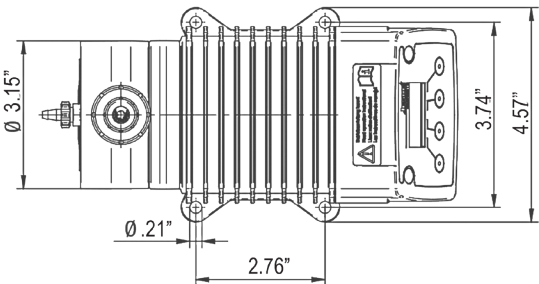
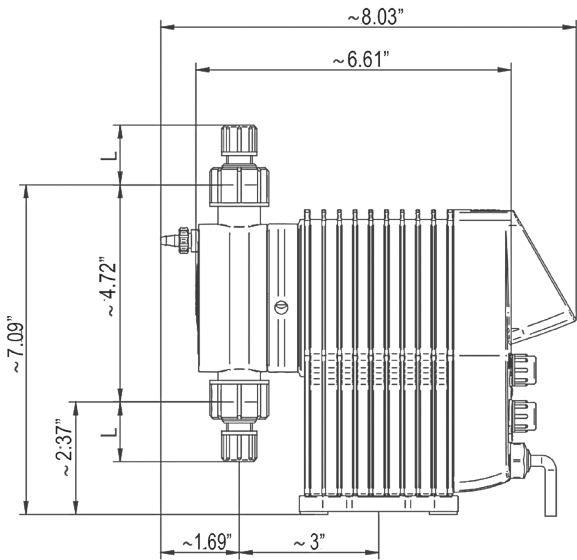
## Flow Curves

The flow curves are valid for ambient temperatures of 68°F (20°C) and dosing water at 100% stroke frequency. The delivery capacities depend on the medium (density and viscosity) and temperature.





**Dimensions**



Material	Size	L
PVC, PP, PVDF	1/4" x 3/8"	1.34"
	1/4" x 7/16"	1.34"
	1/4" FNPT	1.34"

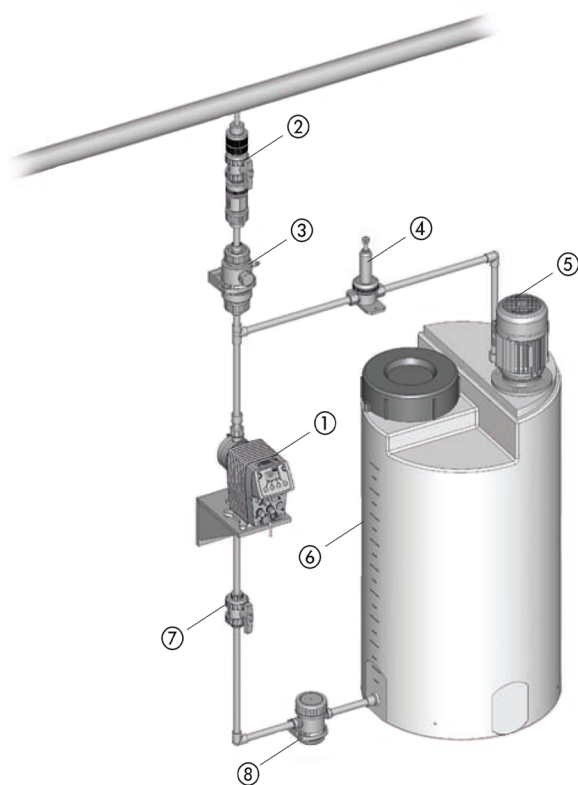
**Solenoid Diaphragm Dosing Pump - MAGDOS LD**

## Accessories

Even the best pump can be improved – simply by the addition of appropriate accessories.

Suitable sets of accessories, consisting of suction/discharge tubing, foot valve and injection nozzle, are available for the dosing pumps.

To turn your dosing pump into an efficient dosing system, we recommend using the following accessories:



### Legend

- |  |                              |
|--|------------------------------|
| ① MAGDOS LD                            | ⑤ Electrical agitator        |
| ② Injection nozzle with shut-off valve | ⑥ Dosing tank                |
| ③ Pulsation dampener                   | ⑦ Shut-off valve             |
| ④ Pressure relief valve                | ⑧ Suction pressure regulator |

- Injection nozzles - to dose the medium into the main line and to prevent it from flowing back into the pressure line
- Back pressure and pressure relief valves - to increase dosing accuracy or to protect the system against excessive pressure
- Pulsation dampener - to dampen supply flow as well as to reduce discharge flow pulsations
- Priming aids - to significantly ease priming of dosing pumps with low supply volumes per stroke, for large suction heights, highly viscous dosing media, for initial priming or when priming after the system has been idle
- Suction pressure regulator - to prevent medium flow when the dosing pump is not running or to prevent a vacuum being formed in the event of a pipe failure

Please contact us for more information on accessories and metering pump systems.

## Reliable dosing of chemicals

Solenoid diaphragm dosing pumps play an important role in the reliable and accurate dosing of liquids.

Lutz-Jesco metering pumps are specifically designed for water treatment and the process industry.

## Wide range of applications

The MAGDOS LK is available in seven sizes for metering applications ranging to 3.96 gph with back pressures up to 232 psig. Double-ball valves ensure accurate, consistent dosing. The dosing rate can be adjusted by changing the stroke frequency manually or via external control contact.

Several different materials and connections are available for wetted-end components. By using appropriate and recommended materials, the MAGDOS LK can be used in a wide variety of process applications.

Matching accessory sets with tubing, injection nozzles and suction lines allow quick installation and reliable operation.

## Simple to use and space-saving

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

The combination of the MAGDOS LK's solid design and the easy-to-use digital controls allow for short set up times and efficient operation.

The compact design and the small footprint allow for easy integration into dosing systems even for installations with limited space available.

Wall mounting is possible provided the check valves remain in a vertical orientation by rotating the head.



## In Short

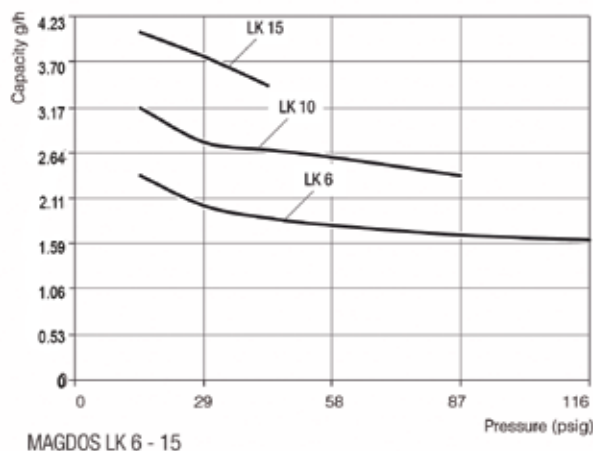
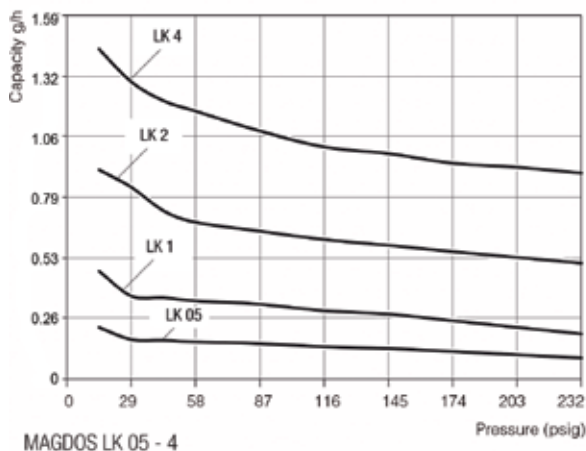
- Capacity range to 3.96 gph, up to 232 psig
- Power supply 110 VAC or 230 VAC, 50/60 Hz
- Multi-language menu support
- Easy-logic menu controls with graphical display guidance
- Calibration functionality
- Multi-unit capacity indication
- Eco-operation settings
- Integrated vented head (standard on plastic version)
- Wall and floor mounting possible without a bracket
- Double-ball valves ensure accurate dosing
- Materials available: PVC (standard), PP, PVDF and Stainless Steel
- Material consistency for pumps and accessories
- Dosing heads and valves for high-viscosity media are available

## Technical Data

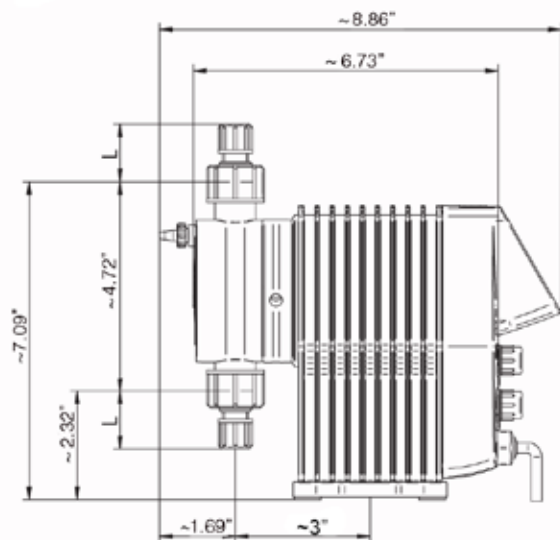
MAGDOS LK			05	1	2	4	6	10	15
Delivery capacity at max. pressure	gph		0.09	0.20	0.50	0.89	1.64	2.40	3.43
	ml/stroke		0.05	0.05	0.2	0.31	0.57	0.83	0.86
Max. supply pressure	psig		232				116	87	43
Delivery capacity at medium pressure	gph		0.14	0.29	0.61	1.00	1.80	2.64	3.96
	ml/stroke		0.08	0.07	0.24	0.35	0.63	0.92	1.0
Average back pressure	psig		116				58	43	14
Max. stroke frequency	SPM		120	250	160	180			250
Suction head for non-gassing media	ft H <sub>2</sub> O		16		9		6		
Max. supply pressure	psig		11 PSI						
Nominal valve width			DN3		DN4				
Voltage supply			230 V AC +/- 10%, 50/60 Hz or 115 V AC +/- 10%, 50/60 Hz						
Power consumption	W		8	13	19	25			22
Protection class			IP 65 (with covering caps on the connections)						
Insulation class			F						
Weight	PVC, PP, PVDF	lb	~ 7.0						
	Stainless Steel		~ 9.5						
Max. ambient temperature	°F		Stainless Steel/PVDF 113° (104° with PVC parts)						
Max. temperature of the medium	°F		Stainless Steel/PVDF 176° (with PVC parts 95°; with PP parts 140°)						

## Flow Curves

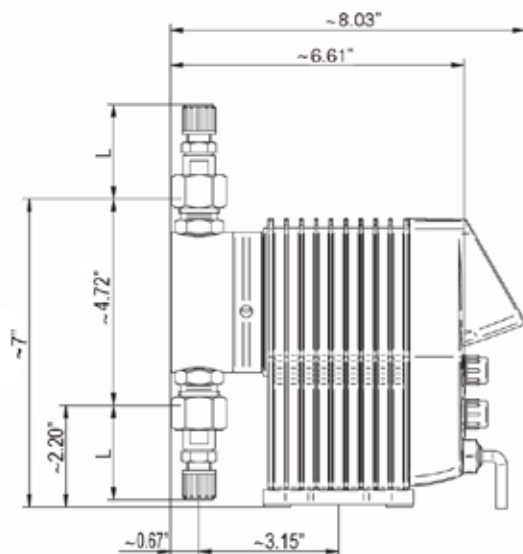
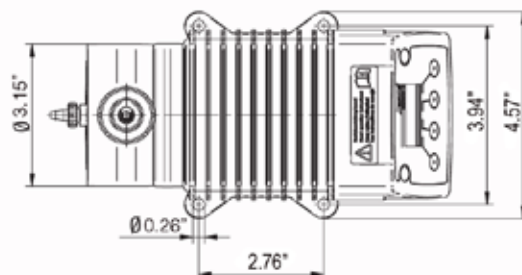
The flow curves are valid for ambient temperatures of 68°F (20°C) and dosing water at 100% stroke frequency. The delivery capacities depend on the medium (density and viscosity) and temperature.



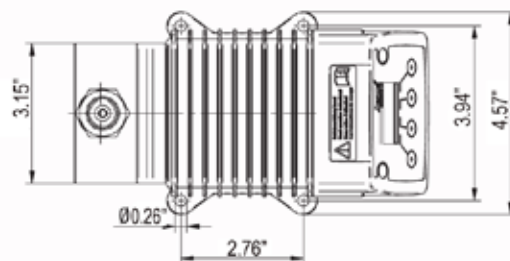
## Dimensions



MAGDOS LK with dosing head made of PVC, PP or PVDF



MAGDOS LK with dosing head made of stainless steel



Material	Size	L
PVC, PP, PVDF	1/4" x 3/8"	1.34"
	1/4" x 7/16"	1.34"
	1/4" FNPT	1.34"
1.4571 / PVDF	1/4" FNPT	1.96"
	1/4" FNPT	2.12"

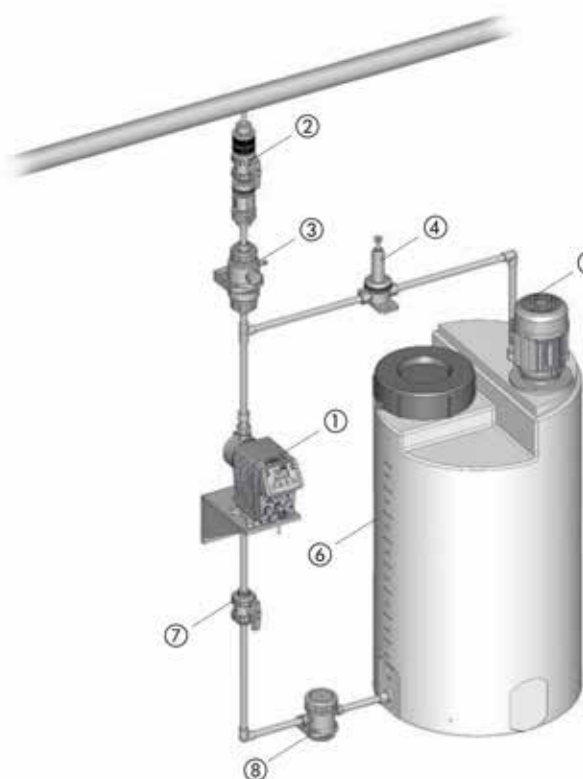
## Accessories

Even the best pump can be improved – simply by the addition of appropriate accessories.

Suitable sets of accessories, consisting of suction/discharge tubing, foot valve and injection nozzle, are available for the dosing pumps.

To turn your dosing pump into an efficient dosing system, we recommend using the following accessories:

- Injection nozzles - to dose the medium into the main line and to prevent it from flowing back into the pressure line
- Back pressure and pressure relief valves - to increase dosing accuracy or to protect the system against excessive pressure
- Pulsation dampener - to dampen supply flow as well as to reduce discharge flow pulsations
- Priming aids - to significantly ease priming of dosing pumps with low supply volumes per stroke, for large suction heights, highly viscous dosing media, for initial priming or when priming after the system has been idle
- Suction pressure regulator - to prevent medium flow when the dosing pump is not running or to prevent a vacuum being formed in the event of a pipe failure



Please contact us for more information on accessories and metering pump systems.

### Legend

- |  |                              |
|--|------------------------------|
| ① MAGDOS LK                            | ④ Pressure relief valve      |
| ② Injection nozzle with shut-off valve | ⑤ Electrical agitator        |
| ③ Pulsation dampener                   | ⑥ Dosing tank                |
|  | ⑦ Shut-off valve             |
|  | ⑧ Suction pressure regulator |



## Reliable dosing of chemicals

Solenoid diaphragm dosing pumps play an important role in the reliable and accurate dosing of liquids.

Lutz-Jesco metering pumps are specifically designed for water treatment and the process industry.

## Wide range of applications

The MAGDOS LP is available in seven sizes for metering applications up to 3.96 gph with back pressures up to 232 psig. Double-ball valves ensure accurate, consistent dosing. The dosing rate can be adjusted by changing the stroke frequency manually, via external control contact or by using a 0/4 - 20 mA signal.

Several different materials and connections are available for wetted-end components. By using appropriate and recommended materials, the MAGDOS LP can be used in a wide variety of process applications.

Matching accessory sets with tubing, injection nozzles and suction lines allow quick installation and reliable operation.

## Simple to use and space-saving

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

The combination of the MAGDOS LP's solid design and the easy-to-use digital controls allow for short set up times and efficient operation.

The compact design and the small footprint allow for easy integration into dosing systems even for installations with limited space available.

Wall mounting is possible provided the check valves remain in a vertical orientation by rotating the head.

The MAGDOS LP is also available with an optional Ethernet interface. This network connection enables you to control stroke frequency. In addition, all error messages can be transmitted back to the external controller.



## In Short

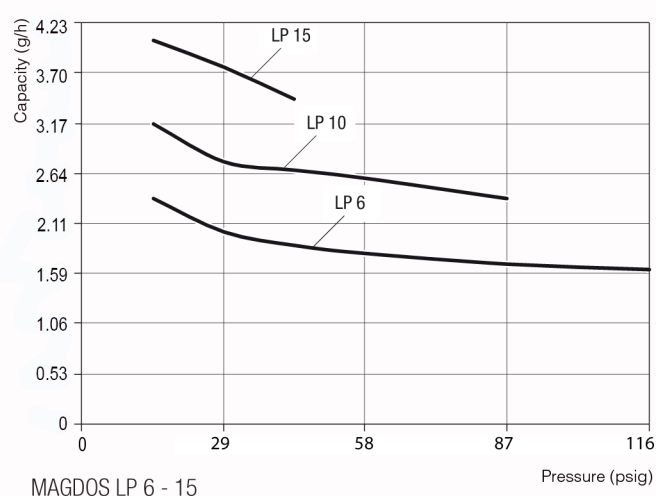
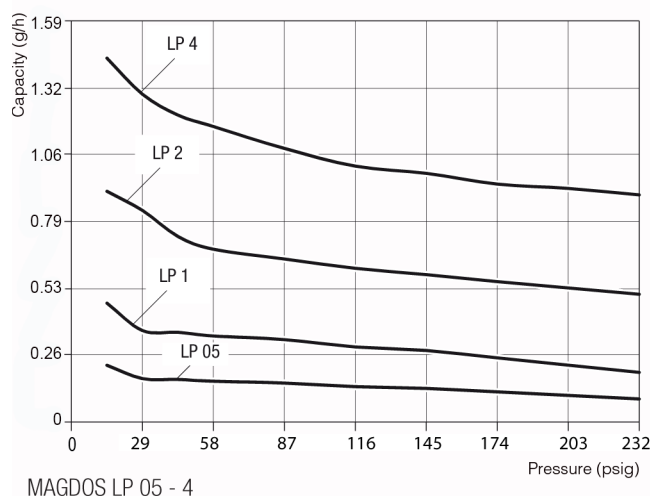
- Capacity range to 3.96 gph, up to 232 psig
- Wide range power supply unit 110-240 VAC, 50/60 Hz
- Multi-language menu support
- Easy-logic menu controls with graphical display guidance
- Calibration functionality
- Multi-unit capacity indication
- Two Eco-operation settings
- External control via standard signal 0/4 - 20 mA
- External control via floating contacts with impulse increase and reduction
- Batch dosing with both interval and timer functions
- Integrated vented head (standard on plastic version)
- Wall and floor mounting possible without a bracket
- Double-ball valves ensure accurate dosing
- Materials available: PVC (standard), PP, PVDF and Stainless Steel
- Material consistency for pumps and accessories
- Dosing heads and valves for high-viscosity media are available

## Technical Data

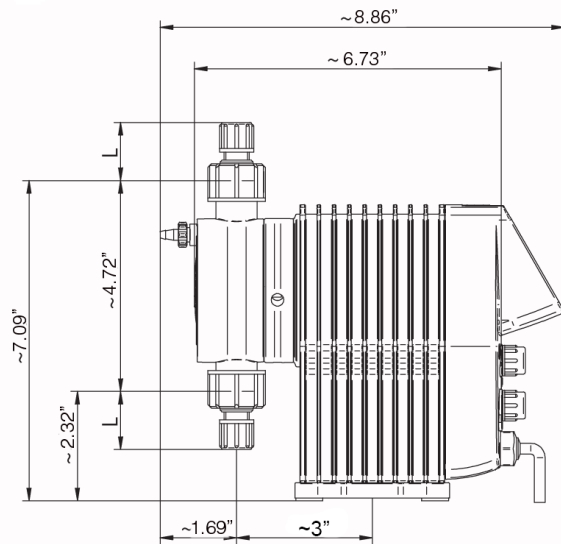
MAGDOS LP			05	1	2	4	6	10	15
Delivery capacity at max. pressure	gph		0.09	0.20	0.50	0.89	1.60	2.40	3.43
	ml/stroke		0.05	0.05	0.2	0.31	0.57	0.83	0.86
Max. supply pressure	psig		232				116	87	43
Delivery capacity at average pres- sure	gph		0.14	0.29	0.61	1.00	1.80	2.64	3.96
	ml/stroke		0.08	0.07	0.24	0.35	0.63	0.92	1.0
Average back pressure	psig		116				58	43	14
Max. stroke frequency	SPM		120	250	160	180			250
Suction head for non-gassing media	ft H <sub>2</sub> O		16		9		6		
Max. inlet pressure	psig		11 PSI						
Nominal valve width			DN3		DN4				
Voltage supply			110 to 240 V AC, -10% / +5%, 50/60 Hz						
Power consumption	W		10	15	21	27	28	29	26
Protection class			IP 65 (with covering caps on the connections)						
Insulation class			F						
Weight	PVC, PP, PVDF	lb	7						
	Stainless Steel	lb	9.5						
Ambient temperature range	°F		Stainless Steel/PVDF 41°F - 113°F (41°F - 104°F with PVC parts)						
Max. temperature of the medium	°F		Stainless Steel/PVDF 176°F (with PVC parts 95°F; with PP parts 140°F)						

## Flow Curves

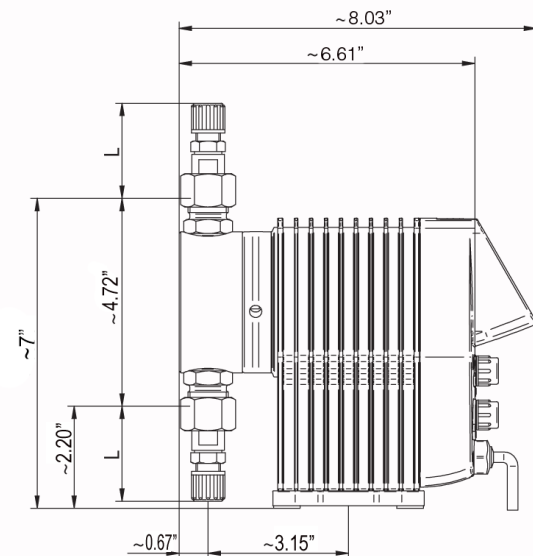
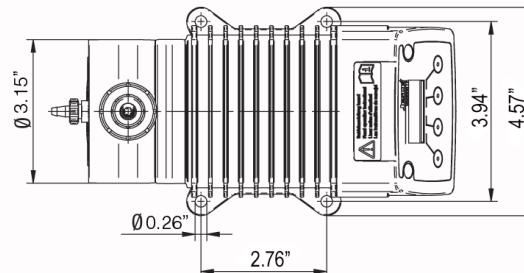
The flow curves are valid for ambient temperatures of 68°F (20°C) and dosing water at 100% stroke frequency. The delivery capacities depend on the medium (density and viscosity) and temperature.



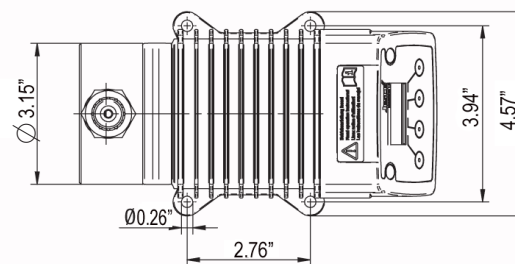
## MAGDOS LP Dimensions



MAGDOS LP with dosing head made of PVC, PP or PVDF



MAGDOS LP with dosing head made of stainless steel



Material	Size	L
PVC, PP, PVDF	1/4" x 3/8"	1.34"
	1/4" x 7/16"	1.34"
	1/4" FNPT	1.34"
Stainless Steel/ PVDF	1/4" FNPT	1.96"
	1/4" FNPT	2.12"

## Accessories

Even the best pump can be improved – simply by the addition of appropriate accessories.

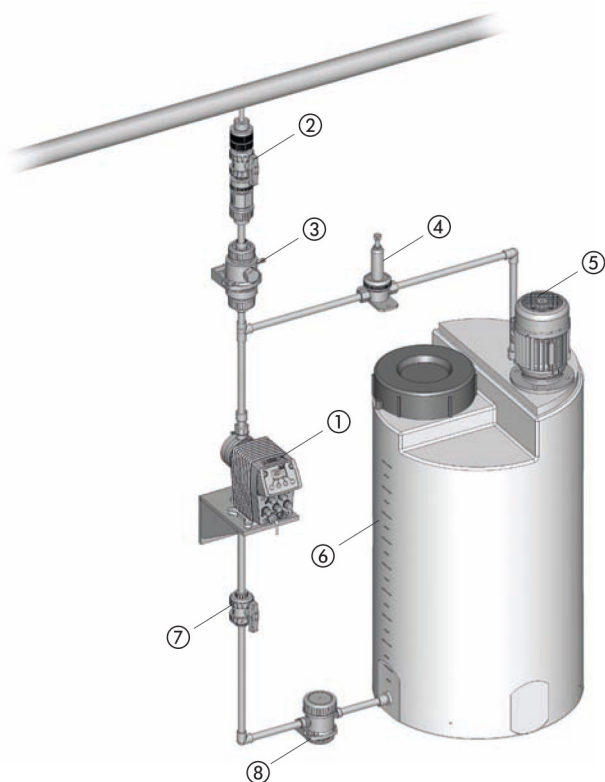
Suitable sets of accessories, consisting of suction/discharge tubing, foot valve and injection nozzle, are available for the dosing pumps.

To turn your dosing pump into an efficient dosing system, we recommend using the following accessories:

- Injection nozzles - to dose the medium into the main line and to prevent it from flowing back into the pressure line
- Back pressure and pressure relief valves - to increase dosing accuracy or to protect the system against excessive pressure

- Pulsation dampener - to dampen supply flow as well as to reduce discharge flow pulsations
- Priming aids - to significantly ease priming of dosing pumps with low supply volumes per stroke, for large suction heights, highly viscous dosing media, for initial priming or when priming after the system has been idle
- Suction pressure regulator - to prevent medium flow when the dosing pump is not running or to prevent a vacuum being formed in the event of a pipe failure

Please contact us for more information on accessories and metering pump systems.



### Legend

- |  |                              |
|--|------------------------------|
| ① MAGDOS LP                            | ⑤ Electrical agitator        |
| ② Injection nozzle with shut-off valve | ⑥ Dosing tank                |
| ③ Pulsation dampener                   | ⑦ Shut-off valve             |
| ④ Pressure relief valve                | ⑧ Suction pressure regulator |

## General Description

The MAGDOS LT line of solenoid driven metering pumps combines state-of-the-art microprocessor technology with the durability of high quality mechanics. Chemical resistant materials make the pump suitable for many municipal and industrial applications. A microprocessor-based control unit allows for flexible adaptation to changing system pressure requirements, allowing the pump to continually operate in an optimum power range. By optimizing the power consumption, excess heat generated by the solenoid is reduced, letting the pump operate economically and reliably.

The MAGDOS LT is available with the following features:

- Capacity range from 0.03 to 4.49 gph with pressures up to 232 psig.
- Manual stroke length adjustment with a 5:1 turndown ratio.
- Manual speed control to set the pump at 25%, 50%, and 100% of its maximum stroke frequency.
- External speed control for proportional feeding that provides one stroke per switch closure by contact (i.e. water meter or PLC).
- Simple one push button operation mode selection.
- LED operation mode indication.
- Selectable energy supply to stroke solenoid resulting in lower energy consumption and reduction in operation noise.
- Adjustable overload protection for various pressure levels.
- Double-ball check valves guarantee the highest accuracy and reliable feeding for viscosities up to 400 cps. Spring-loaded check valves are available for process fluids with viscosities up to 1,000 cps.
- Level control indicates low chemical, allowing the pump to stop operation before losing prime.
- Electrical Data: 115 VAC, 50/60 Hz, NEMA 4X/IP65 (optional: 230 VAC, 24 VDC)

## Materials of Construction

Standard liquid end in PVC with options in PP, PVDF and 316 Stainless Steel. Diaphragms are PTFE-coated EPDM. Seals of Viton™, EPDM or PTFE are available.



## Options

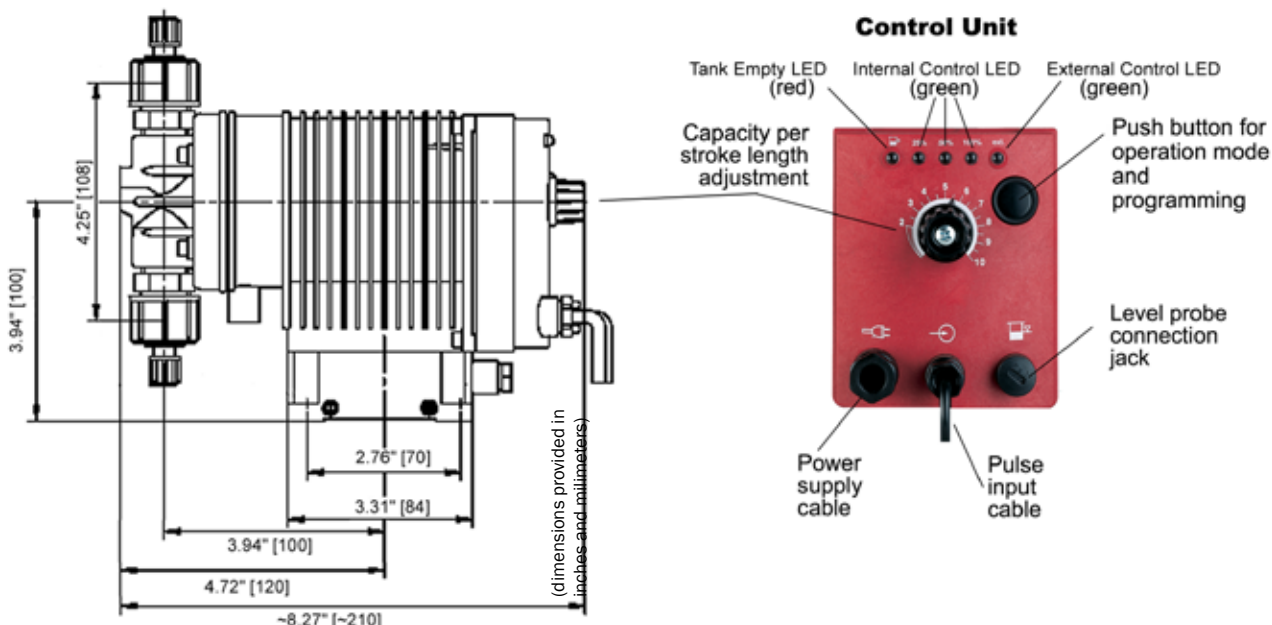
- Vented head
- Diaphragm leak detection
- Tubing accessory kit (includes a foot valve, tubing, and injection nozzle)
- Five function valve - PENTABLOC
- Mounting brackets

## Control Unit

The control unit contains a microprocessor, which controls the stroke frequency and pressure generation. The MAGDOS LT can be adapted to practically all requirements of home water supply, water and wastewater treatment, as well as industrial processes. The electronic control unit features the functions described below.

Functions	LT
Internal operation control (% of maximum stroke frequency)	25/50/100
External operation control by pulse (i.e. water meter/relay contact)	X
Energy adjustment	X
Low level indication of supply tank*	single

\*in conjunction with optional suction line with integrated level switch.



## Technical Data

Model		02	06	1	3	4	6	8	10
Capacity at maximum pressure	gph	0.03	0.12	0.23	0.42	0.87	1.37	2.08	3.56
Maximum pressure	psig	174	232	232	232	174	145	116	43.5
Capacity @ medium pressure	gph	0.07	0.18	0.37	0.74	0.98	1.45	2.67	4.49
Medium pressure	psig	87	116			87			29
Capacity stroke @ maximum pressure	ml	.023	.095	.18	.33	.686	.72	1.04	1.87
Maximum stroke frequency	SPM	80					120		
Diaphragm diameter	in.	1.26						1.5	2.0
Suction lift (for non-effervescent media)	ft H <sub>2</sub> O	10.0						6.6	4.0
Maximum positive static suction head	ft H <sub>2</sub> O	26.2						22.9	13.0
Voltage		115 VAC +/-10% (optional: 230 VAC +/-10%; 24 VDC +/-10%)							
Length power cord	ft.	6 (115 VAC w/UL/CSA Plug) (230 VAC w/Schuko Plug)							
Power consumption	watts	30 (115 VAC, 230 VAC)							
Maximum current consumption during stroke	amps	115 VAC : 4.3, 230 VAC : 2.9							
Soldered fuse	amps	3.15 (slowly reacting)							
Protection class		NEMA 4X/IP65							
Insulation class		F							
Voltage to low level probe	VDC	5, for potential-free switches							
Voltage to pulse input	VDC	5, for potential-free switches							
Maximum ambient temperature	°F	PVC: 104° (optional: SS, PP, PVDF: 113°)							
Maximum temperature of process fluid	°F	PVC: 95° (optional: SS, PP, PVDF: 122°)							
Pump weight	lbs.	Plastic head approximately 6.0 (optional: SS head approximately 7.3)							
Connection type (standard)		4 mm x 6 mm PE tubing			1/4" x 3/8" PE tubing*				

\*optional - 1/4" FNPT Pipe, 1/4" x 7/16" PVC tubing, 3/8" x 1/2" PE tubing