

Reliable dosing of chemicals

Stepper motor driven diaphragm pumps are particularly suitable for highly accurate, reproducible applications due to their design. Most chemicals can be safely fed into the respective processes using these pumps.

Precision that inspires

The MEMDOS SMART LP is available in five sizes for metering applications ranging to 5.20 gph against pressures of up to 290 psig.

The compact stepper-motor pump, coupled with its intelligent drive concept, combines the big advantages of a solenoid-driven diaphragm dosing pump with the precision of a motor-driven diaphragm dosing pump.

A wide range of materials and connections are available to comply with specific applications. By using appropriate and recommended materials, the MEMDOS SMART LP can be used in many process applications.

A matching accessory kit with hoses, injection nozzles and suction lines from our comprehensive accessory range means that nothing stands in the way of a quick installation, and you get the best results.

Wide range of applications

The drive of MEMDOS SMART LP's is fully adjustable. The stepper-motor with its wear-free tooth belt drive, ensures a particularly homogeneous and gentle dosing process. Pressure and suction strokes can be performed at different speeds. This produces a constant supply stream, which gives you low-pulsation dosing.

In addition, the MEMDOS SMART LP gives you the ability to reduce the suction speed in two steps to easily and more precisely supply even viscous dosing media.

The MEMDOS SMART LP doesn't just impress with its elegant design; its multilingual graphical display as well as integrated keypad simplifies its use.

If required, the dosing pump can be controlled via an analogue or pulse input. For integration into demanding automation networks, a version with an Ethernet-based MODBUS interface is available.

Using position detection in the pump, after an unexpected shut down of the pump, overdosing can be prevented and downtime resulting from this can be excluded.



In Short

- Capacity range to 5.20 gph, up to 290 psig
- Wide-range power supply 110 - 240 V AC, -10% / +5%, 50/60 Hz, 25 W
- Multilingual, high-resolution graphical display
- Precise pump adjustments using the keypad
- Flow rate displayed in various units
- Infinitely variable stroke frequency from 0 to 100%
- Calibration functionality
- External control via standard signal 0/4 – 20 mA
- External control with impulse increase and reduction
- Fully controllable stepper-motor drive
- Accurate dosing thanks to the double-ball valves
- Materials: PVC, PP, PVDF and Stainless Steel
- Automatic diaphragm change program
- Compact design, low space requirement
- Integrated dosing head venting device (only MEMDOS SMART LP 2, LP 5 and LP 10 with dosing head made of plastic)
- Wall and floor mounting without a bracket
- Supplied with connection sets (plastic version)
- Material consistency from pumps to accessories
- Batch dosing with interval and timer functions
- Ethernet interface (optional)
- CSA and UL certified

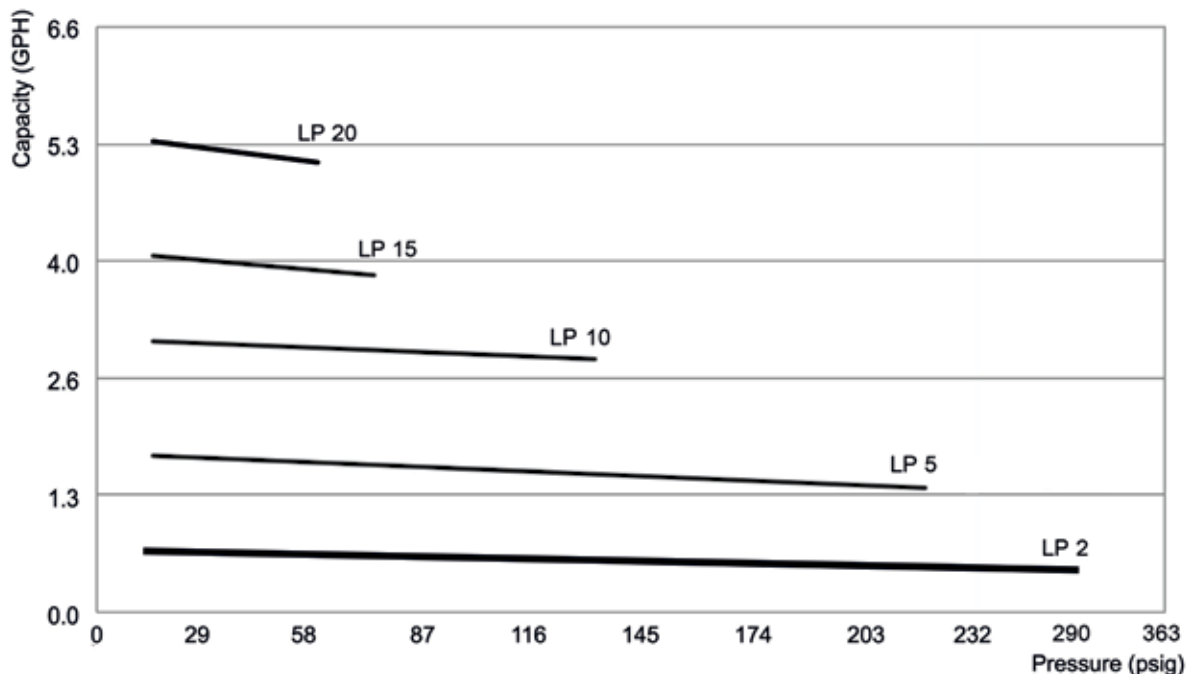
Technical Data

MEMDOS SMART LP		2	5	10	15	20
Delivery capacity at max. pressure	gph	0.6	1.4	2.85	3.75	5.07
Max. supply pressure	psig	290 (232)*	232	145	72	58
Delivery capacity at medium pressure	gph	0.7	1.59	2.98	3.88	5.20
Average back pressure	psig	145	116	72	44	29
Max. stroke frequency	SPM	150				
Suction head for non-gassing media	ft. H ₂ O	9.8				
Max. supply pressure	psig	11.6 PSI				
Nominal valve width		DN4				
Voltage supply		110 to 240 V AC, - 10%/+5%, 50/60 Hz				
Power consumption	W	25				
Protection class		IP 65 (with covering caps on the connections)				
Insulation class		F				
Weight	PVC, PP, PVDF	~ 4.85				
	1.4571	~7.27				
Max. ambient temperature	°F	with 316SS/PVDF 113° (104° with PVC parts)				
Max. temperature of the medium	°F	with 316SS/PVDF 176° (with PVC parts 95°; with PP parts 140°)				

*PVC version

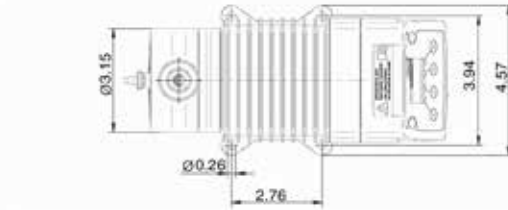
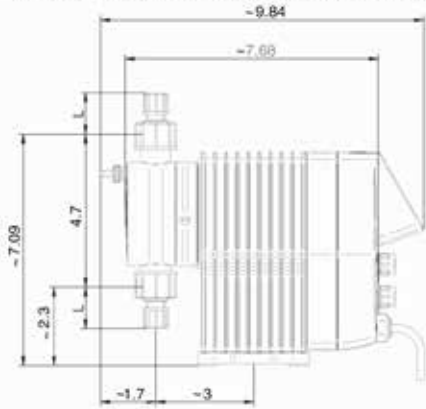
Flow curves

The flow curves are valid for 68°F (20°C) for water at 100% stroke frequency. The delivery capacity depends on the medium (density and viscosity) and temperature.

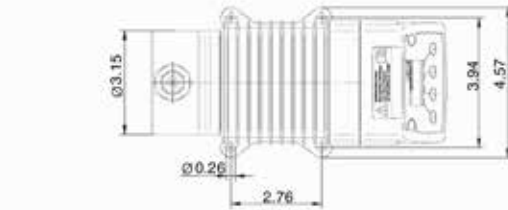
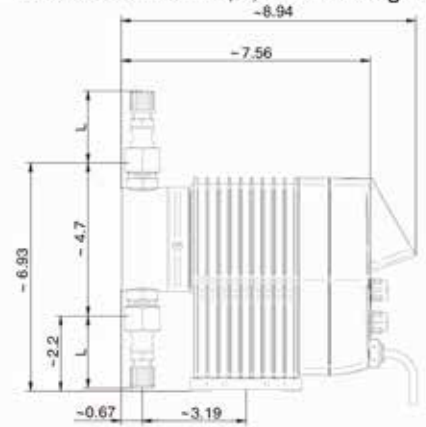


Dimensions

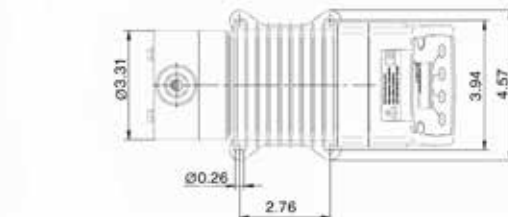
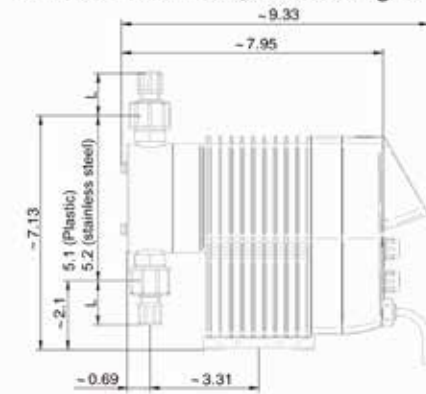
MEMDOS SMART LP 2, 5, 10 with dosing head made of PVC, PP or PVDF



MEMDOS SMART LP 2, 5, 10 with dosing head made of stainless steel 1.4571



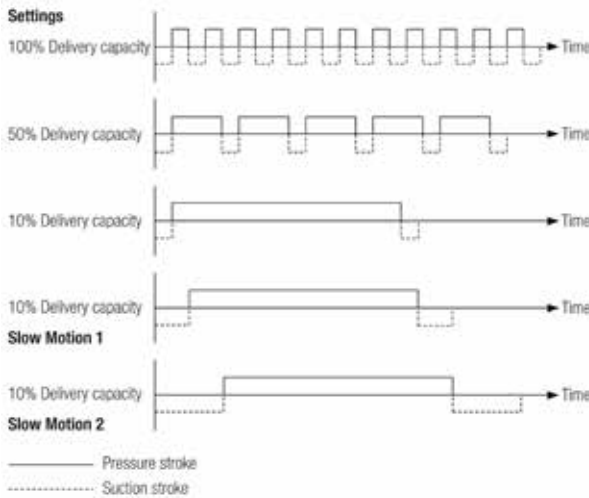
MEMDOS SMART LP 15, 20 with dosing head made of PVC, PP, PVDF or stainless steel 1.4571



All dimensions in inches

Material	Size	Nominal diameter	L
PVC, PP, PVDF	4/6 mm	DN4	1.22"
	1/4" x 3/8"	1/4"	1.34"
	1/4" x 7/16"	DN6	1.34"
316 SS / PVDF	1/4" FNPT	DN4	1.96"
	1/4" FNPT	DN6	2.12"

Conveying Characteristics



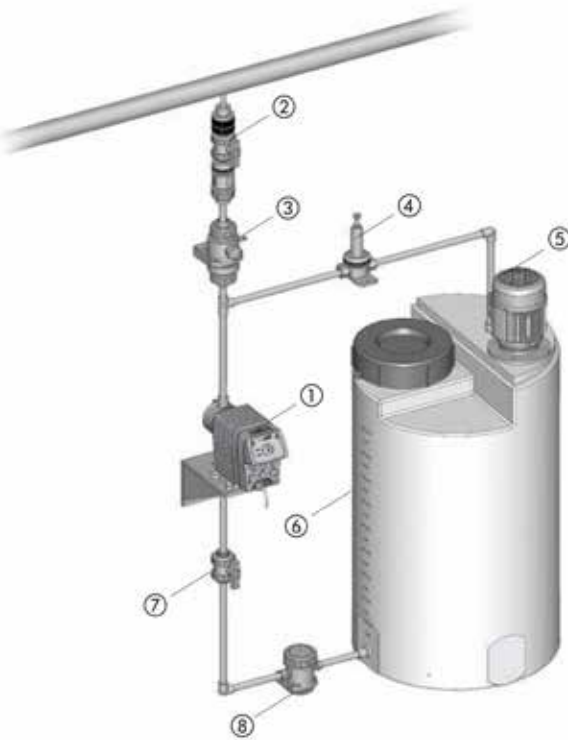
The MEMDOS SMART LP dosing pump is designed to run the pressure stroke and suction stroke at different speeds. For low supply rates, for example, the dosing pump performs the suction stroke at the maximum speed and adjusts the speed of the pressure stroke to match the desired supply rate. This produces a constant supply stream, which gives you low-pulsation, smooth dosing.

In Slow Motion mode, the dosing pump has the ability to reduce suction speed in two steps. Viscous dosing media can be conveyed easily and more accurately.

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 MEMDOS SMART LP	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