

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 LB series is available in six sizes for metering applications ranging to 8.10 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 variety of materials and connections are available depending on the specific applications. By using appropriate and recommended materials, the MEMDOS SMART LB 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 MEMDOS SMART LB's drive 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. To adapt the dosing performance, the stroke frequency can be manually adjusted across the range from 0 to 100%.

As a Plug & Play dosing pump with a universal power supply unit, the pump is ready for immediate, unlimited, and international application.

MEMDOS SMART LB can be mounted on the wall in three different positions - upright, left-oriented or right-oriented - without further auxiliary equipment.



In Short

- Capacity range to 8.10 gph, up to 290 psig
- Wide range power supply 110 ... 240 V AC, -10% / +5%, 50/60 Hz, 25 W
- Infinitely variable stroke frequency from 0 to 100%
- Calibration functionality
- Fully controllable stepper-motor drive
- Accurate dosing thanks to the double-ball valves
- Materials: PVC, PP, PVDF and Stainless Steel
- Compact design, low space requirement
- Integrated dosing head venting device (only MEMDOS SMART LB 2, LB 5 and LB 10 with dosing head made of plastic)
- Wall and floor mounting possible without a bracket
- Supplied with connection sets (plastic version)
- Material consistency from pump to accessories
- CSA and UL certified

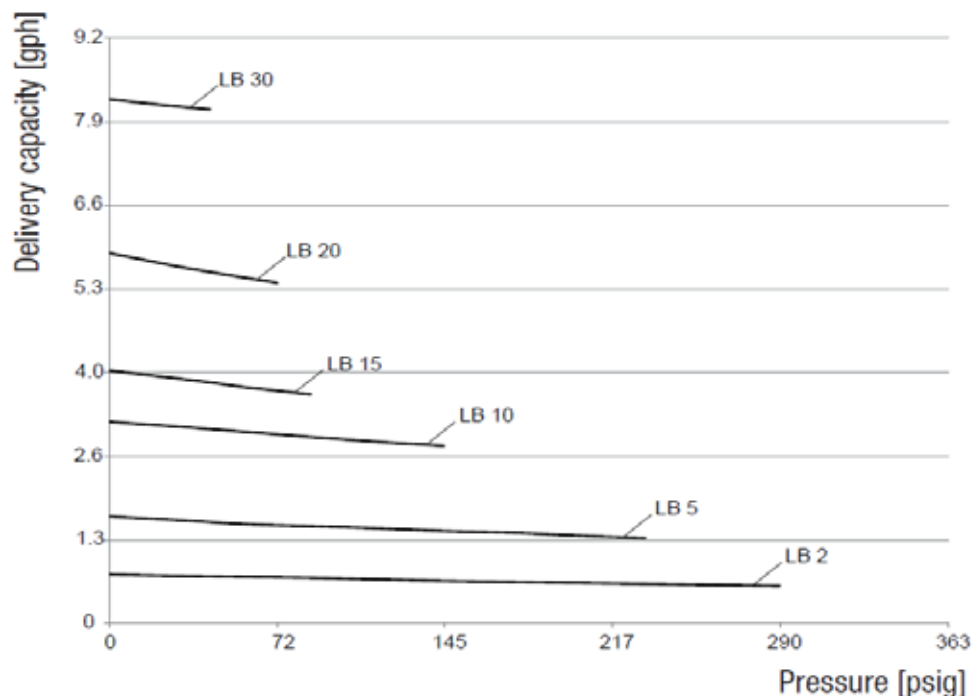
Technical Data

MEMDOS SMART LB		2	5	10	15	20	30
Delivery capacity at max. pressure	gph	0.68	1.4	2.85	3.75	5.4	8.10
Max. supply pressure	psig	290 (232)*	232	145	88	74	44
Delivery capacity at medium pressure	gph	0.7	1.59	2.98	3.88	5.6	8.2
Average back pressure	psig	145	116	72	44	36	22
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

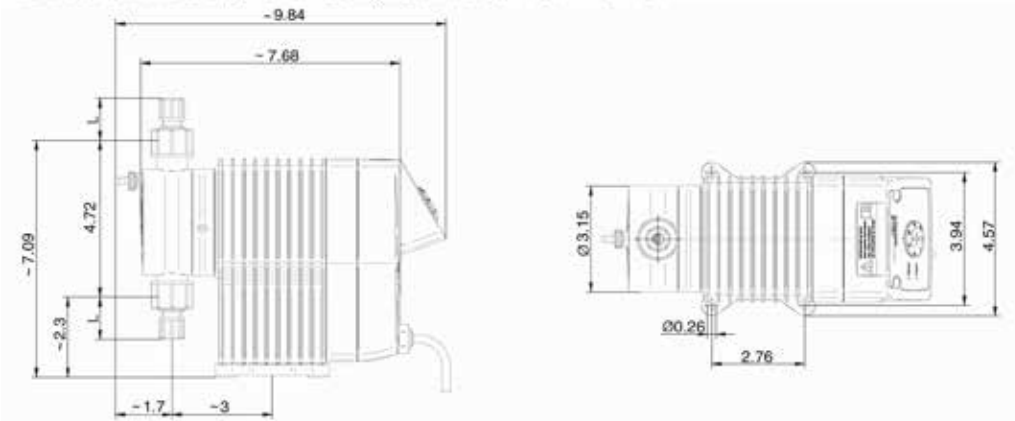
Delivery characteristic curves

The delivery characteristic 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. Dosing pumps must therefore be calibrated in gph during application.

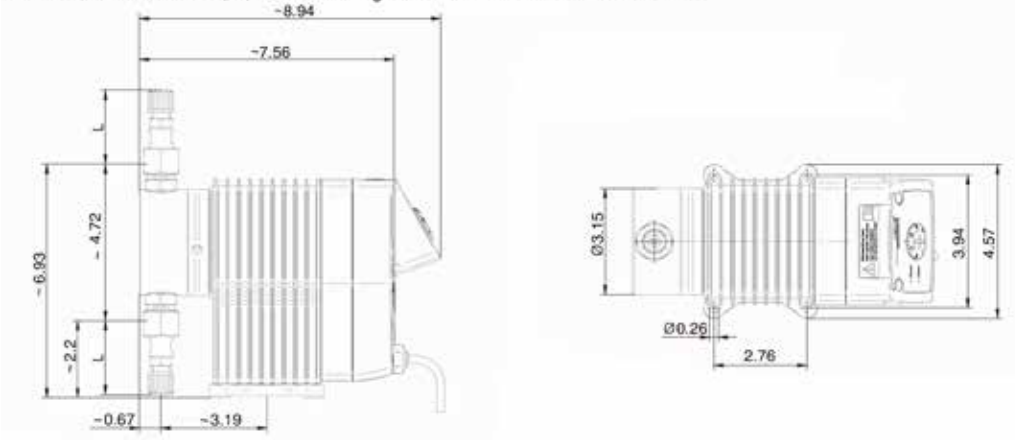


Dimensions

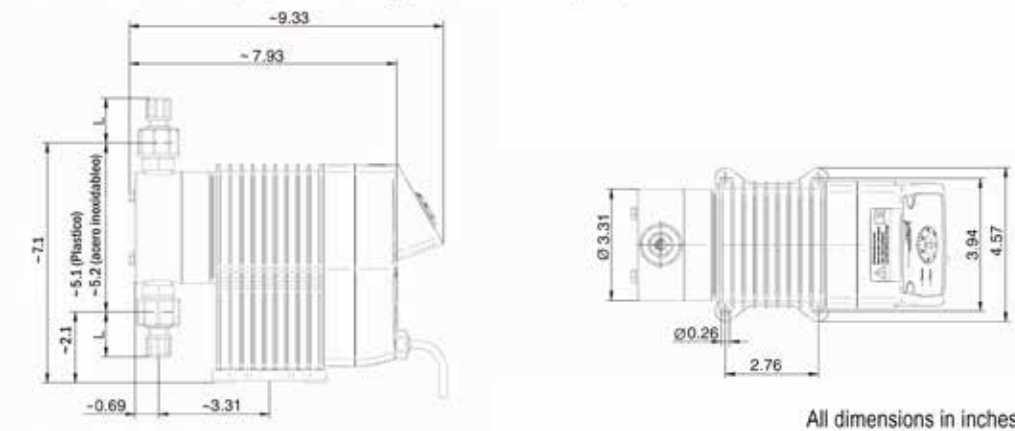
MEMDOS SMART LB 2, 5, 10 with dosing head made of PVC, PP or PVDF



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



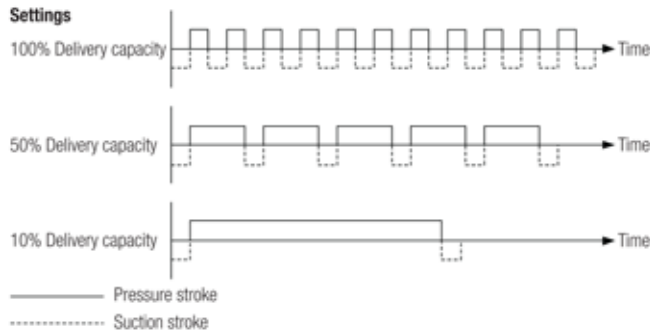
MEMDOS SMART LB 15, 20, 30 with dosing head made of PVC, PP, PVDF or stainless steel 1.4571



All dimensions in inches

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

Conveying characteristics



The MEMDOS SMART LB 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.

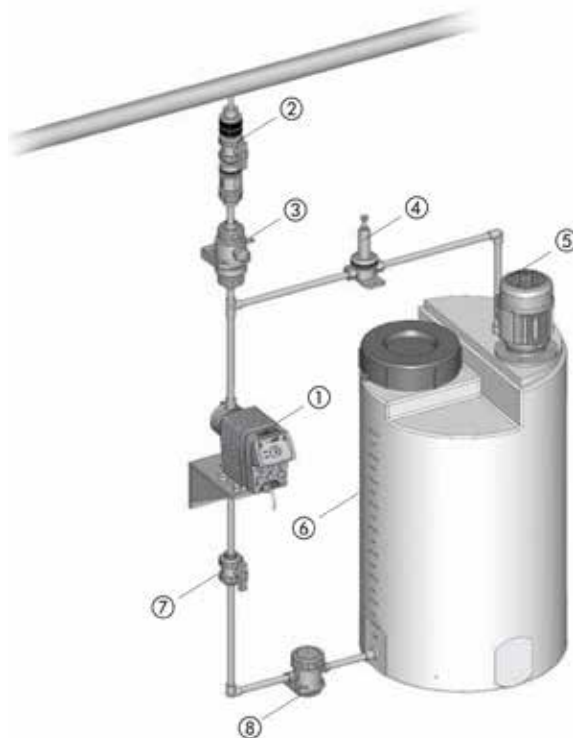
Accessories

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 LB
- ② Injection nozzle with shut-off valve
- ③ Pulsation dampener

- ④ Pressure relief valve
- ⑤ Electrical agitator
- ⑥ Dosing tank
- ⑦ Shut-off valve
- ⑧ Suction pressure regulator