

Reliable dosing of chemicals

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.

The MEMDOS SMART LK series is available in five sizes for metering applications ranging to 5.2 gph against pressures of up to 290 psig.

Several different materials and connections are available for suction and discharge side, depending on the specific applications. A coordinated accessory set consisting of hoses, injection nozzles and suction lines enables fast installation, while achieving optimum results.

Wide range of applications

The MEMDOS SMART LK's drive is fully adjustable. The stepper motor with its wear-free tooth belt drive, ensures a particularly homogeneous and gentle dosing process. This produces an almost constant supply stream, which gives a low-pulsation dosing.

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

The MEMDOS SMART LK doesn't just impress with its elegant design; the graphical display with a multi-language menu as well as the dosing pump's operation using the integrated keyboard simplifies its use.

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.



Functions

- 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
- Microprocessor controlled drive
- Integrated dosing head venting facility (only MEMDOS SMART LK 2, LK 5 and LK 10 with dosing head made of plastic)
- Suitable for wall and floor mounting
- Materials: PVC, PP, PVDF and Stainless Steel
- Stroke frequency can be precisely adjusted via the keyboard
- Multilingual, high-resolution graphical display
- Pulse input (increase and reduction)
- Level input with early warning and main alarm
- Release input for external start/stop
- Supply amount displayed in various units
- Maximum delivery rate can be limited
- Diaphragm replacement programme
- One Slow Motion setup possible
- Stroke feedback output
- Alarm relay output
- CSA and UL certified

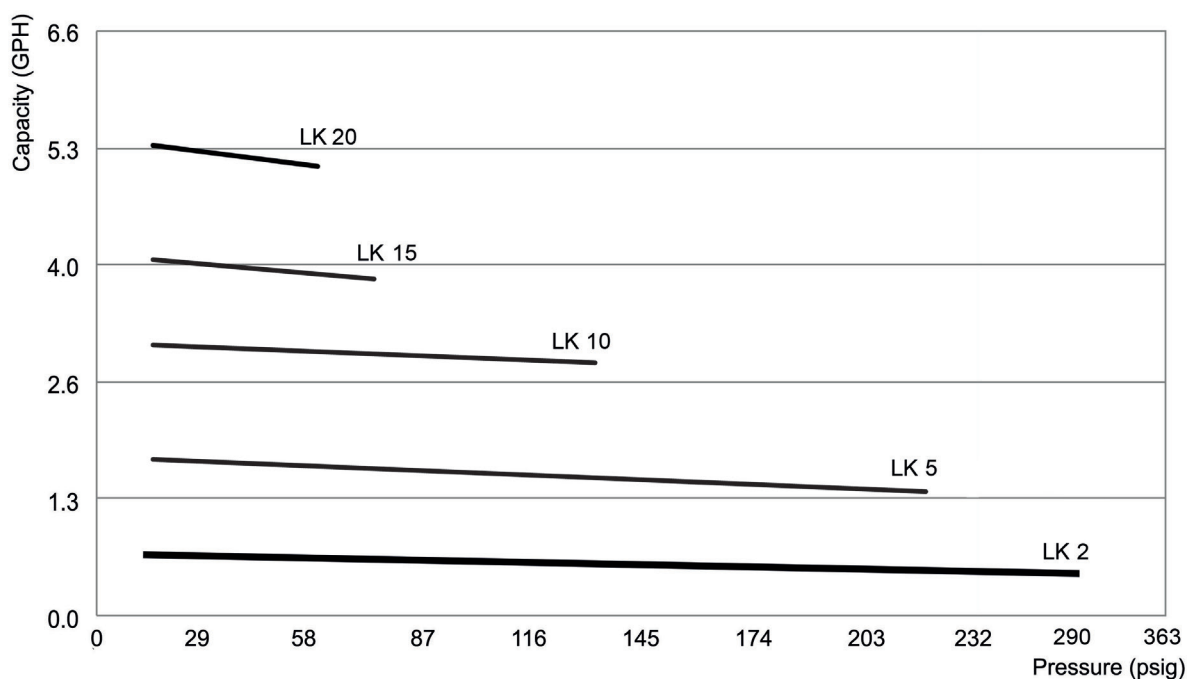
Technical Data

| MEMDOS SMART LK | | | 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 | lb | ~ 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

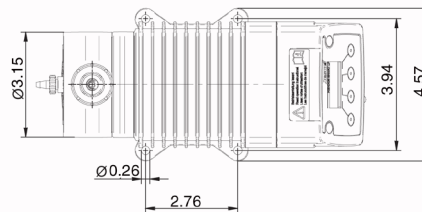
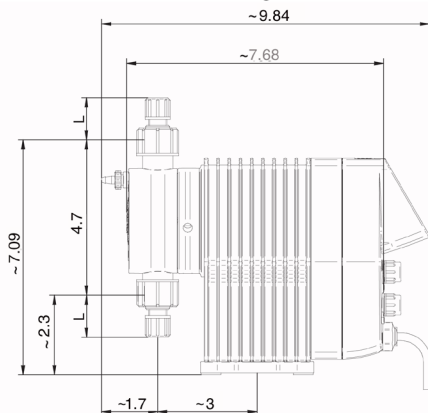
Flow curves

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.

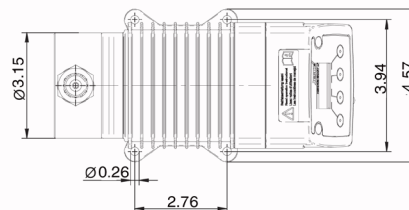
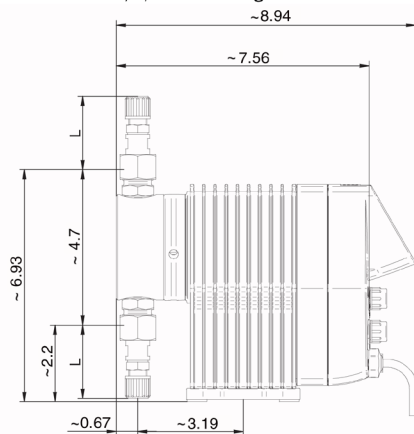


Dimensions

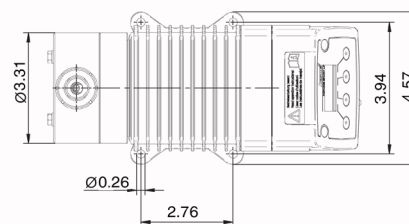
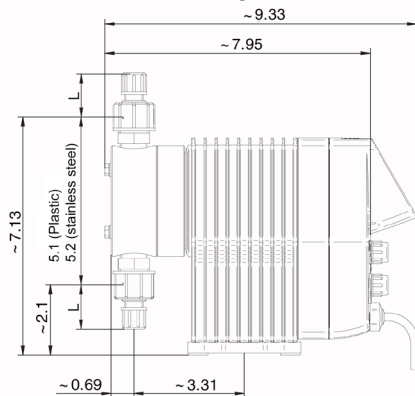
MEMDOS SMART LK 2, 5, 10 with dosing head made of PVC, PP or PVDF



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



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

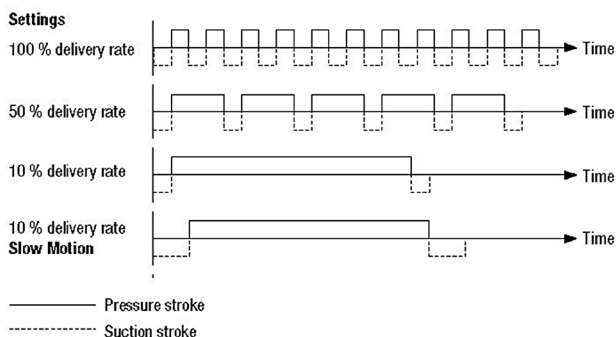


All dimensions in inches

| 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 LK 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.



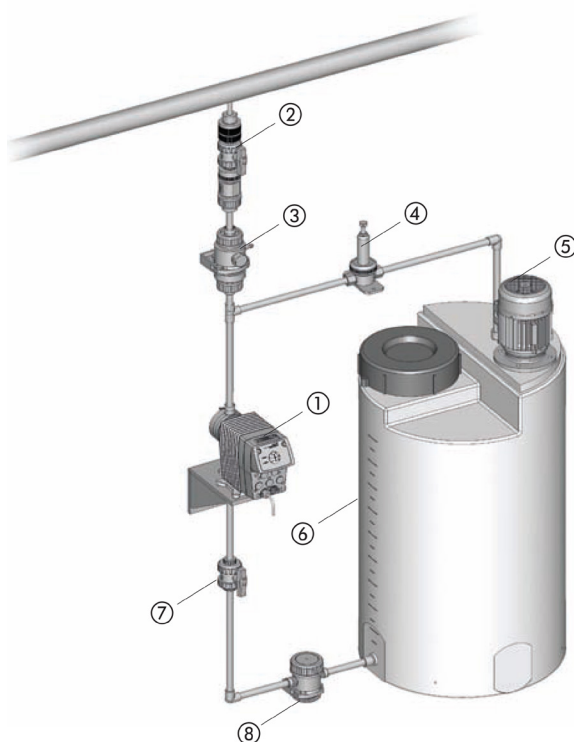
Accessories

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 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 |