

# Product Information Motor-driven Diaphragm Dosing Pump MEMDOS LP

## Reliable dosing of chemicals

Motor-driven diaphragm dosing pumps play an important role in the reliable and accurate dosing of liquids in process cycles. They are appropriate for low-pressure applications and high dosing quantities.

## Riding on the crest of the waves

Two sizes of the MEMDOS LP series are available. A large coverage in terms of performance and resistance is available, thanks to the variety of dosing heads, combined with a wide range of dosing head materials.

The performance ranges from 0 – 4 up to 0 – 156 l/h for the first size, and 0 – 114 up to 0 to 1020 l/h for the second size. The maximum permitted pressure, depending on the size, is between 3 and 16 bar.

Thanks to the sturdy tappet drive with manual or automatic capacity adjustment, the conveyed media such as acids, lyes, coagulants and flocculants are dosed reliably and precisely.

On request, the MEMDOS LP pumps can also be supplied with a double-diaphragm system. Then uncontrolled leakage of media is avoided even if the dosing diaphragm wears out.

## Versatile and flexible

The MEMDOS LP is used when the integration of the pump into controls or control circuits is required. For integration into demanding automation networks, a version with an Ethernet-based MODBUS interface is available.

If required, the dosing pump can be controlled via an analogue or pulse input. To react to any variations in the control circuit, the pump has many additional functions; stroke remote reporting, external operation consent, level monitoring, fault reporting via a relay as well as diaphragm rupture monitoring.

## In Short

- Capacity range 4 to 1020 l/h, up to 16 bar
- Power supply 230 V AC,  $\pm 5\%$ , 50/60 Hz
- Motor efficiency > 90% (IE4)
- Suitable for aggressive media
- Graphical display with multi-language menu
- Materials available: PVC, PP, PVDF and stainless steel
- Material consistency for the pumps and accessories
- Precise pump settings using the keyboard
- Infinitely adjustable stroke frequency from 0 to 100%
- Calibration function
- Delivery rate displayed on various units
- Manual mode possible
- External control via standard signal 0/4 ... 20 mA
- External control with pulse increase and reduction
- Level input with early warning and main alarm
- Release input
- Dosing control input
- Diaphragm rupture input
- Stroke feedback output
- Alarm relay output
- Batch dosing with interval and timer functions
- Ethernet interface (optional)
- Double-diaphragm system (optional)



## Model variants

MEMDOS	Material			
	PVC	PP	PVDF	Stainless steel
LP 4	10417017	10417001	10417033	10417049
LP 4-HP	10417132	10417129	10417135	10417138
LP 10	10417018	10417002	10417034	10417050
LP 10-HP	10417133	10417130	10417136	10417139
LP 20	10417019	10417003	10417035	10417051
LP 20-HP	10417134	10417131	10417137	10417140
LP 35	10417020	10417004	10417036	10417052
LP 60	10417021	10417005	10417037	10417053
LP 80	10417022	10417006	10417038	10417054
LP 150	10417023	10417007	10417039	10417055
LP 110	10417024	10417008	10417040	10417056
LP 160	10417025	10417009	10417041	10417057
LP 210	10417026	10417010	10417042	10417058
LP 260	10417027	10417011	10417043	10417059
LP 310	10417028	10417012	10417044	10417060
LP 400	10417029	10417013	10417045	10417061
LP 510	10417030	10417014	10417046	10417062
LP 760	10417031	10417015	10417047	10417063
LP 1010	10417032	10417016	10417048	10417064

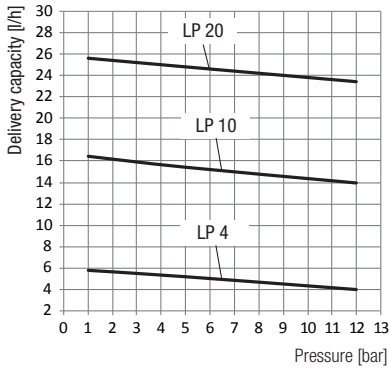
## Technical data

MEMDOS LP		4	4-HP	10	10-HP	20	20-HP	35	60	80	150	
Delivery capacity at max. pressure	l/h	4.0	8.4	14.0	22.6	22.0	36.2	36.0	63.0	90.0	156.0	
Max. supply pressure	bar	12	16	12	16	12	16	10		5		
Max. stroke frequency	min <sup>-1</sup>	26		72		120		72	120	72	120	
Suction head for non-gassing media	mWS	9					8		7			
Max. inlet pressure	mbar	500										
Stroke length	mm	7.5						10.0				
Nominal valve width		DN4						DN6		DN10		
Voltage supply		230 V										
Motor efficiency		Larger than 90% (energy efficiency class IE4)										
Protection class		IP 55										
Insulation class		F										
Weight	PVC	kg	10.5							11.9		
	PP		10.5							11.9		
	PVDF		10.8							13.5		
	1.4571		12.0							17.2		
Max. ambient temperature	°C	5 - 45 (5 - 40 with PVC parts)										
Max. temperature of the medium	°C	80 (with PVC parts 35; with PP parts 60)										

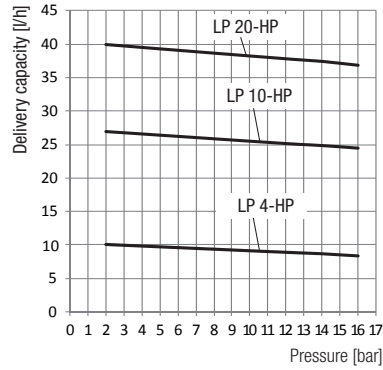
MEMDOS LP		110	160	210	260	310	400	510	760	1010	
Delivery capacity at max. pressure	l/h	114	144	210	264	294	390	504	744	1020	
Max. supply pressure	bar	10		8	7	6	4.5	4		3	
Max. stroke frequency	min <sup>-1</sup>	96	120	96	120	96	120	53	76	107	
Suction head for non-gassing media	mWS	7.0		6.0		4.5		1.0			
Max. inlet pressure	mbar	500									
Stroke length	mm	10.0							12.5		
Nominal valve width		DN10		DN15				DN25			
Voltage supply		230 V									
Motor efficiency		Larger than 90% (energy efficiency class IE4)									
Protection class		IP 55									
Insulation class		F									
Weight	PVC	kg	17.8		18.6		20.3		24.76		
	PP		17.8		18.6		20.3		24.76		
	PVDF		18.4		19.5		21.8		27.36		
	1.4571		23.1		26.2		32.0		47.16		
Max. ambient temperature	°C	5 - 45 (5 - 40 with PVC parts)									
Max. temperature of the medium	°C	80 (with PVC parts 35; with PP parts 60)									

### Delivery characteristic curves

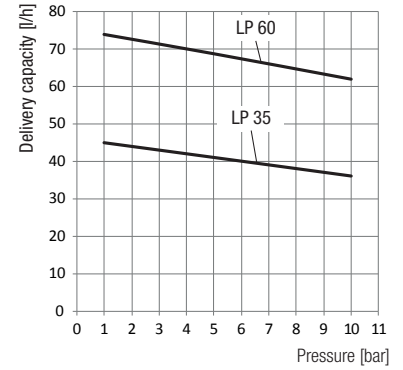
These delivery capacities were determined on the manufacturer's test stands. They apply at 20 °C (68 °F) for water, at 100 % stroke frequency. The delivery capacity depends on the medium (density and viscosity) and temperature. Since these conditions vary at every installation location, you should calibrate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



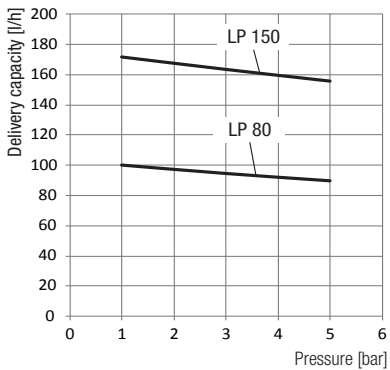
MEMDOS LP 4 - 20



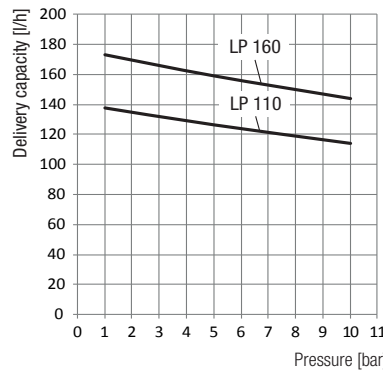
MEMDOS LP 4-HP - 20-HP



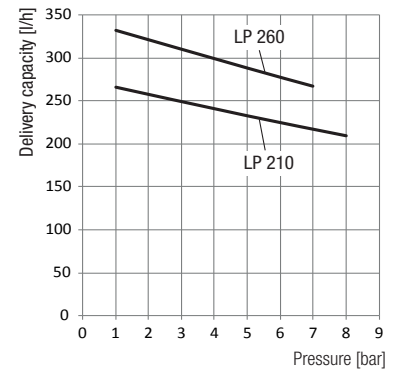
MEMDOS LP 35 - 60



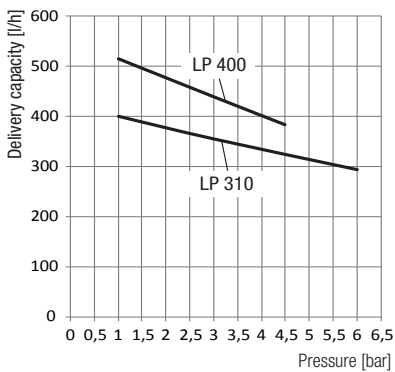
MEMDOS LP 80 - 150



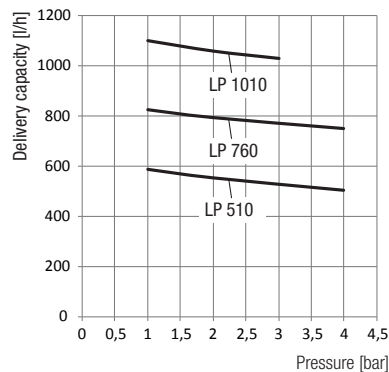
MEMDOS LP 110 - 160



MEMDOS LP 210 - 260



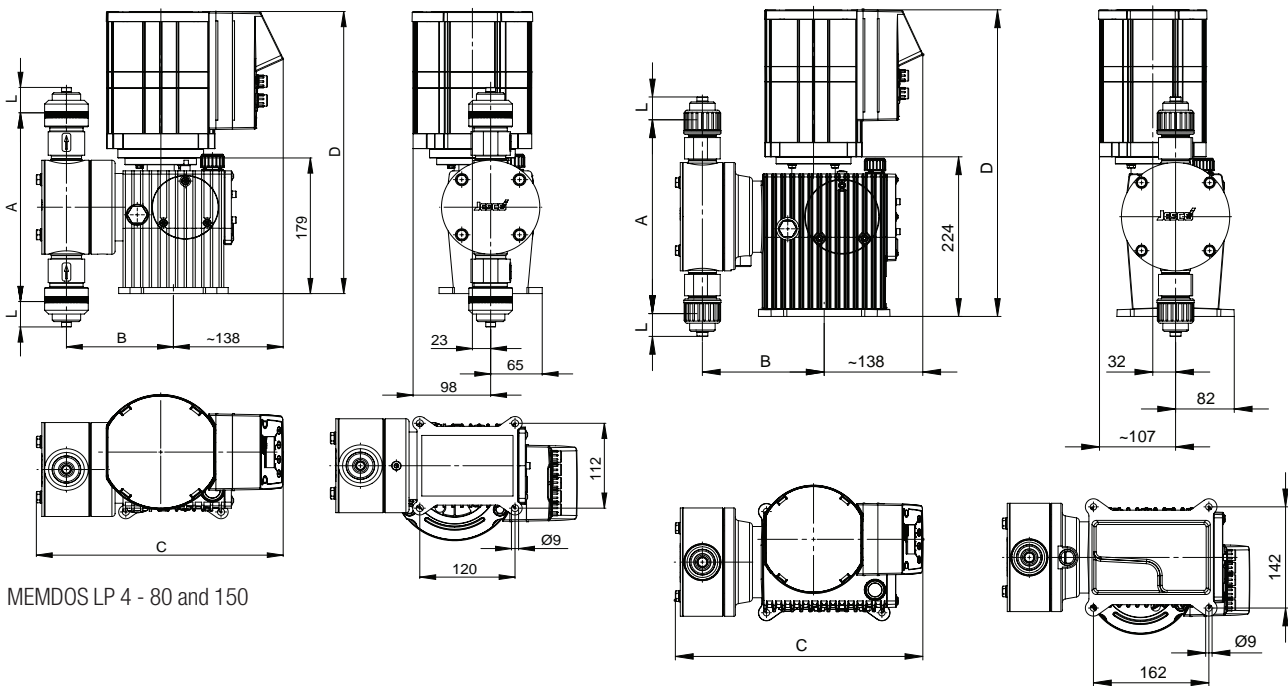
MEMDOS LP 310 - 400



MEMDOS LP 510 - 1010

# Product Information Motor-driven Diaphragm Dosing Pump MEMDOS LP

## Dimensions



MEMDOS LP 4 - 80 and 150

MEMDOS LP 110, 160 - 1010

Size	4 - 20	35 - 60	80, 150	110, 160	210 - 260	310 - 400	510 - 1010
A	126	149	249	249	268	312.5	352
B	116	121.5	133	160	170	175	208 (*194.3)
C	276	283	307	325	335	340	402 (*375.5)
D	372	372	372	430	430	430	466
L	Depends on the connection type and size						

\*) Dosing head of stainless steel

All dimensions in mm

## Accessories

Suitable sets of accessories, which consists of a suction line, a pressure line and an injection nozzle, are available for the dosing pumps.

Even the best pump can still be improved - namely by the right technical periphery. To make your dosing pump into an efficient dosing system, we recommend using the following accessories:

- Injection nozzles – to dose the medium in the main line and to prevent it flowing back into the pressure line
- Pressure loading and relief valves – to increase dosing accuracy or to protect the system against too high a pressure
- Pulsation dampener – to damp supply currents as well as to reduce the flow resistance in long pipelines.

- Priming aids – to significantly ease priming of dosing pumps with low supply volumes per stroke, for large suction heights, for highly-viscous dosing media or for initial priming or when priming after the system has been laying 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 burst

For further accessories for your dosing pump, please refer to our dosing pump brochure.