

The Revolutionary series

MEMDOS - Motor-driven diaphragm dosing pumps 4 – 1020 l/h up to 16 bar



Reliable dosing of chemicals

The motor-driven diaphragm dosing pump MEMDOS stands for robust quality and reliable dosing results.

The wide range of different motors available means that it can be deployed in nearly any area.

We provide pumps for a range of contexts ranging from simple applications to integration in complex plant systems. The MEMDOS series also contains a number of different versions which can be deployed in explosive atmospheres.

Two sizes of the MEMDOS series are available. The possible performances range from 0 – 156 l/h for the first size, and 0 – 1020 l/h for the second size. 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. The MEMDOS can also be fitted with a double-diaphragm system. This prevents any uncontrolled leakage of media, even if the dosing diaphragm is worn.

Versatile and flexible

The MEMDOS LP can optionally be fitted with a MODBUS Ethernet interface. It is deployed if integration of the pump in controls or control circuits or integration in a sophisticated automation network is required.

Overview of functions

MEMDOS	LB	LA	LP
Graphic display with multi-language menu	-	-	•
Password protection	-	-	•
Supply amount displayed in various units	-	-	•
Calibration function	-	-	•
Operating modes	LB	LA	LP
Manual with stroke length adjustment 0 – 100 %	•	-	-
Manual speed control 0 – 100 %	-	•	•
External control via standard signal 0/4 – 20 mA	-	•	•
External control with pulse increase and reduction	-	-	•
External control with pulse water meter, PPM u. PERC	-	-	•
Batch dosing with interval and timer functions	-	-	•
Inputs and outputs	LB	LA	LP
Release input (external start/stop)	-	•	•
Level input	with pre-alarm		•
	with main alarm		•
Stroke feedback output	-	•	•
Alarm relay output	-	•	•
Analogue output with standard signal 0/4 – 20 mA	-	•	•
Input for flow control	-	-	•
Diaphragm rupture detection (optional)	-	-	•

Technical data

MEMDOS			4	4-HP	10	10-HP	20	20-HP	35	60	80	150
Delivery capacity at max. backpressure		l/h	4	8.4	14	24	22	36		63	90	156
max. delivery pressure		bar	12	16	12	16	12	16	10		5	
Max. stroke frequency		rpm	26		72		120		72	120	72	120
Suction lift for non-gassing media		mWS	9						8		7	
Max. supply pressure		mbar	500									
Diameter of diaphragm		mm	52						64		90	
Valve size			DN4						DN6		DN10	
Voltage supply	LB		400/230 V 3ph or 460/270 V 3ph or 230 V 1ph or 120 V 1ph									
	LA		230 V 1ph or 120 V 1ph or 208 V 1ph									
	LP		230 V 1ph									
Protection class			IP55									
Materials			PVC, PP, PVDF and stainless steel (1.4571)									
Weight	PVC, PP, PVDF	kg	9.3 – 14.5*						9.5 – 14.6*		11.3 – 17.1*	
	Stainless steel (1.4571)	kg	10.6 – 15.9*						11.2 – 16.4*		15.7 – 21.7*	
Approved ambient temperature	PVC	°C	5 – 40									
	PP, PVDF, stainless steel (1.4571)	°C	5 – 45									
Approved media temperature	PVC	°C	35									
	PP, PVDF	°C	60									
	Stainless steel (1.4571)	°C	80									

* The weight is dependent on the respective pump type and the motor installed.

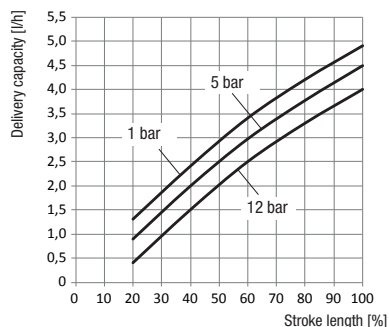
MEMDOS			110	160	210	260	310	400	510	760	1010
Delivery capacity at max. backpressure		l/h	114	144	210	264	294	390	504	744	1020
max. delivery pressure	LB		10				8	6	4		3
	LA and LP	bar	10		8	7	6	4.5	4		3
Max. stroke frequency		rpm	96	120	96	120	96	120	53	76	107
Suction lift for non-gassing media		mWS	7		6		4.5		1		
Max. supply pressure		mbar	500								
Diameter of diaphragm		mm	90		120		150		185		
Valve size			DN10		DN15				DN25		
Voltage supply	LB		400/230 V 3ph or 460/270 V 3ph or 230 V 1ph or 120 V 1ph								
	LA		230 V 1ph or 120 V 1ph or 208 V 1ph								
	LP		230 V 1ph								
Protection class			IP55								
Materials			PVC, PP, PVDF and stainless steel (1.4571)								
Weight	PVC, PP, PVDF	kg	22.3 – 26.3*		22.6 – 26.5*		24.9 – 28.7*		31.7 – 39.5*		
	Stainless steel (1.4571)	kg	26.7 – 30.7*		29.2 – 33.2*		32.6 – 39.0*		51.2 – 59.1*		
Approved ambient temperature	PVC	°C	5 – 40								
	PP, PVDF, stainless steel (1.4571)	°C	5 – 45								
Approved media temperature	PVC	°C	35								
	PP, PVDF	°C	60								
	Stainless steel (1.4571)	°C	80								

* The weight is dependent on the respective pump type and the motor installed.

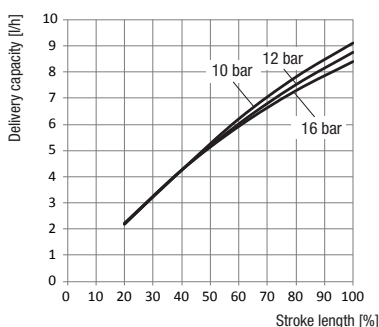
Delivery characteristic curves MEMDOS LB

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. At 60 Hz operation, values are increased by a factor of 1.2.

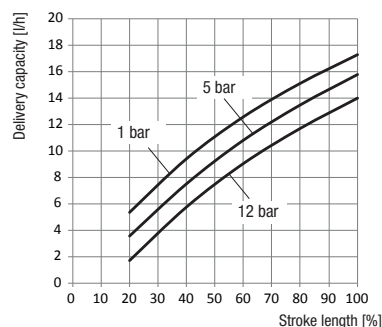
MEMDOS LB 4



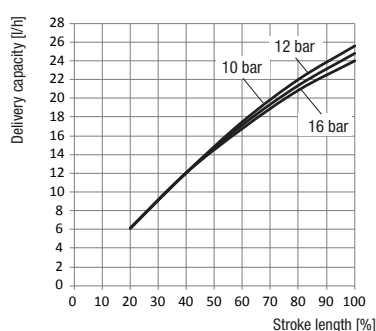
MEMDOS LB 4-HP



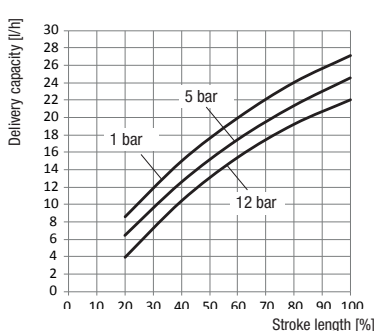
MEMDOS LB 10



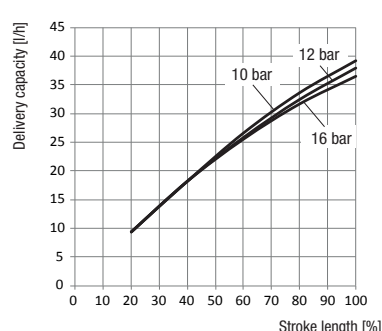
MEMDOS LB 10-HP



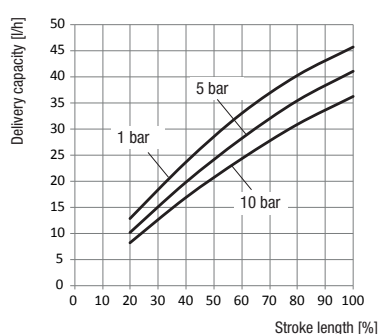
MEMDOS LB 20



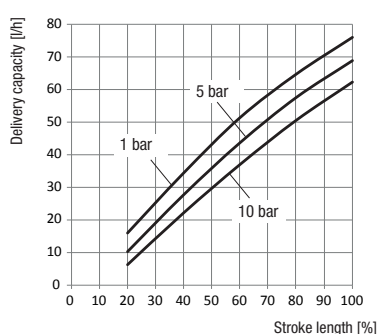
MEMDOS LB 20-HP



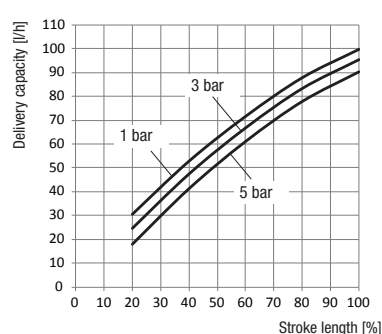
MEMDOS LB 35



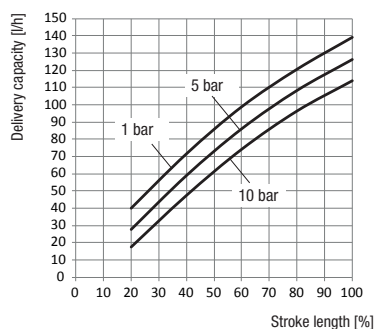
MEMDOS LB 60



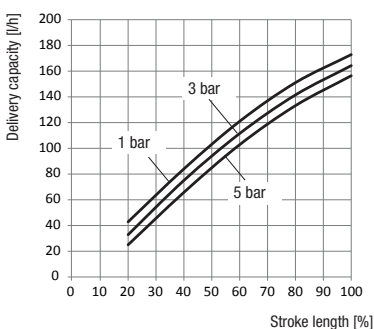
MEMDOS LB 80



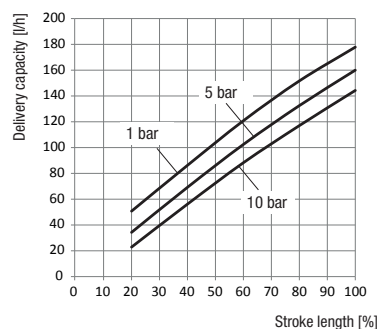
MEMDOS LB 110



MEMDOS LB 150



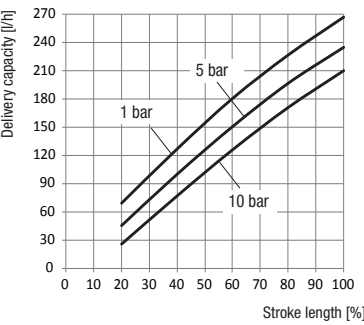
MEMDOS LB 160



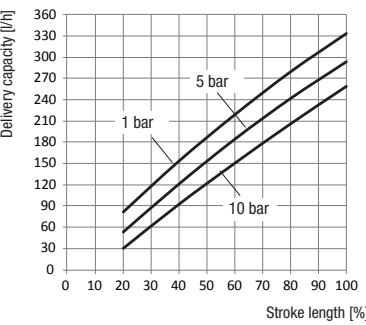
Delivery characteristic curves MEMDOS LB

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. At 60 Hz operation, values are increased by a factor of 1.2.

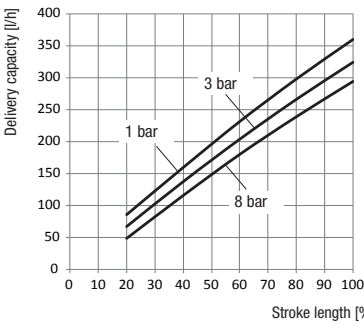
MEMDOS LB 210



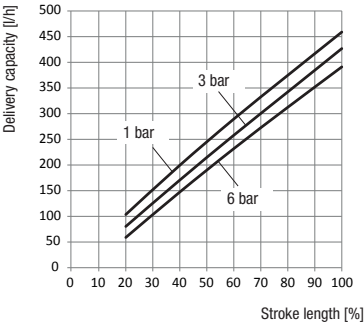
MEMDOS LB 260



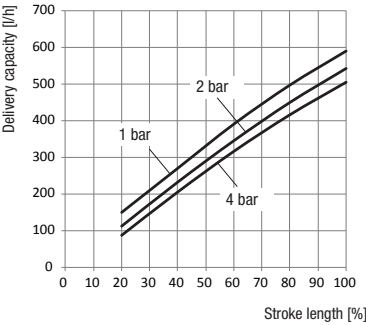
MEMDOS LB 310



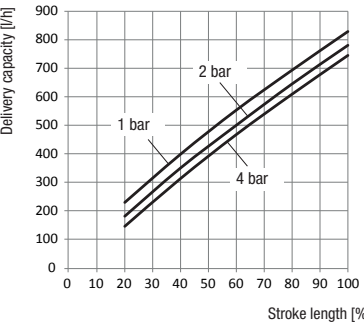
MEMDOS LB 400



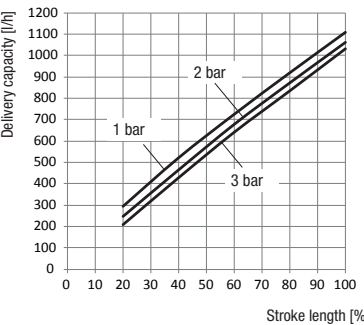
MEMDOS LB 510



MEMDOS LB 760



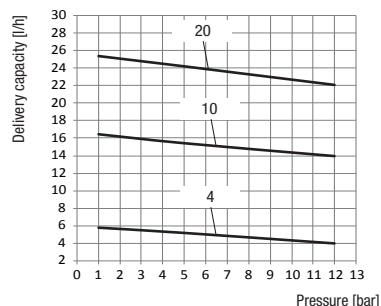
MEMDOS LB 1010



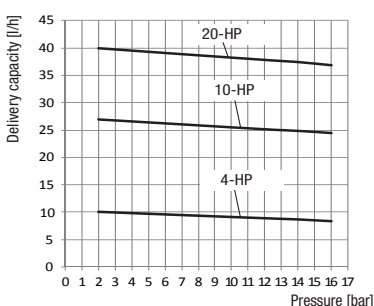
Delivery characteristic curves MEMDOS LA and LP

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.

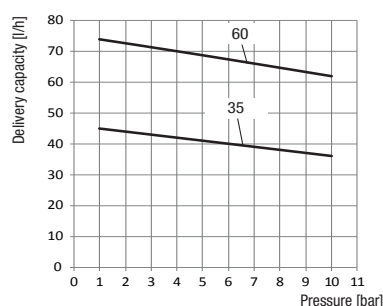
MEMDOS LA and LP 4 – 20



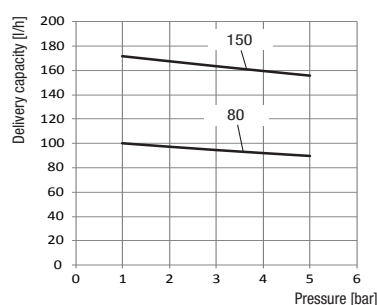
MEMDOS LA and LP 4-HP – 20-HP



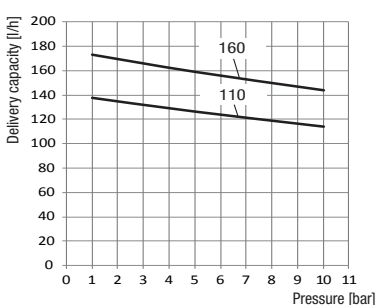
MEMDOS LA and LP 35 – 60



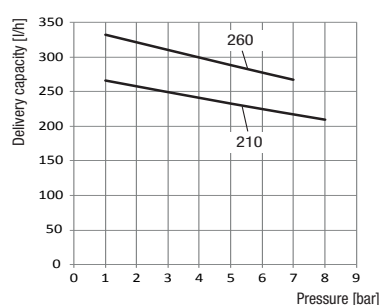
MEMDOS LA and LP 80 – 150



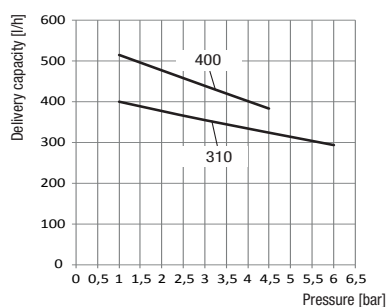
MEMDOS LA and LP 110 – 160



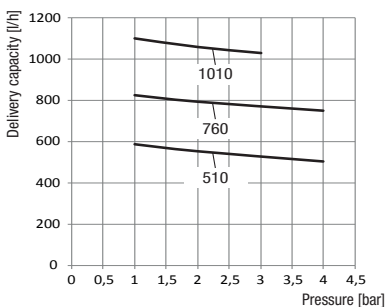
MEMDOS LA and LP 210 – 260



MEMDOS LA and LP 310 – 400



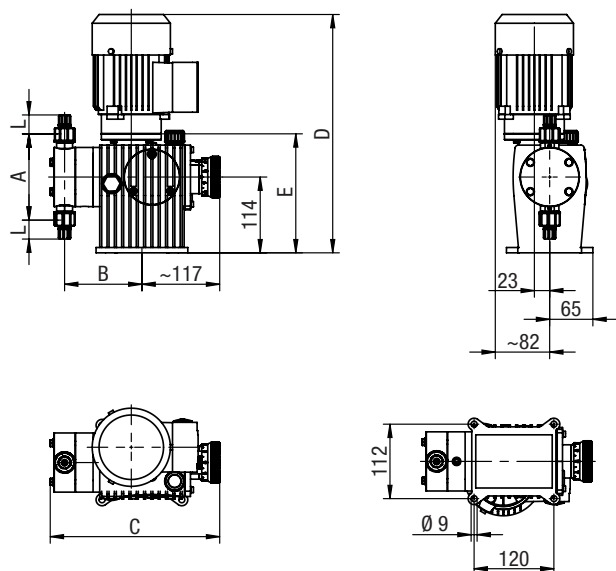
MEMDOS LA and LP 510 – 1010



Dimensions

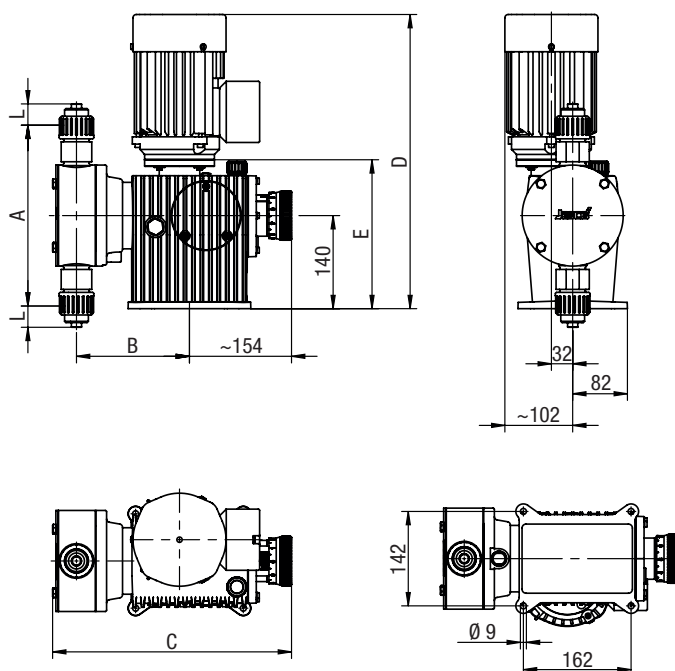
MEMDOS LB 4 – 80 and 150

All dimensions in mm



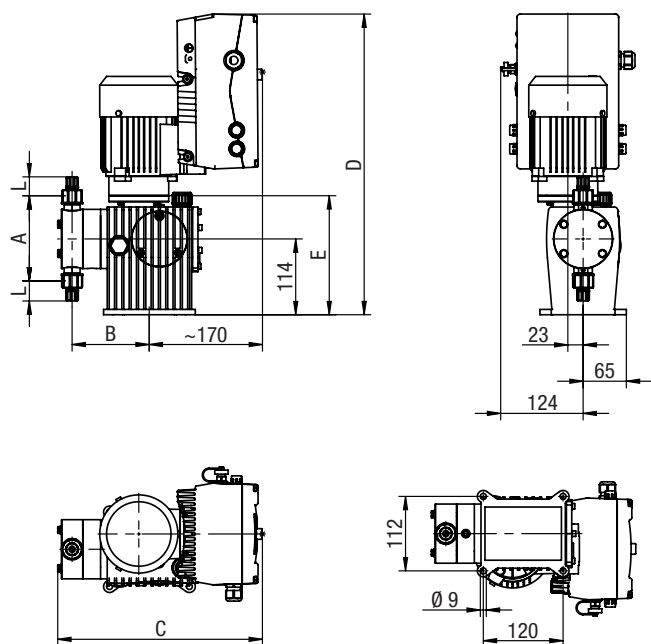
MEMDOS LB 110 and 160 – 1010

All dimensions in mm



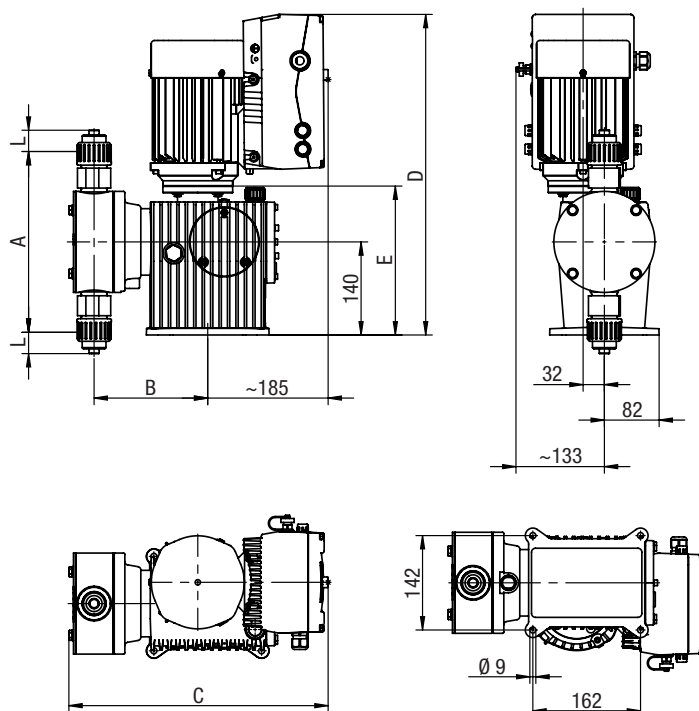
MEMDOS LA 4 – 80 and 150

All dimensions in mm



MEMDOS LA 110 and 160 – 1010

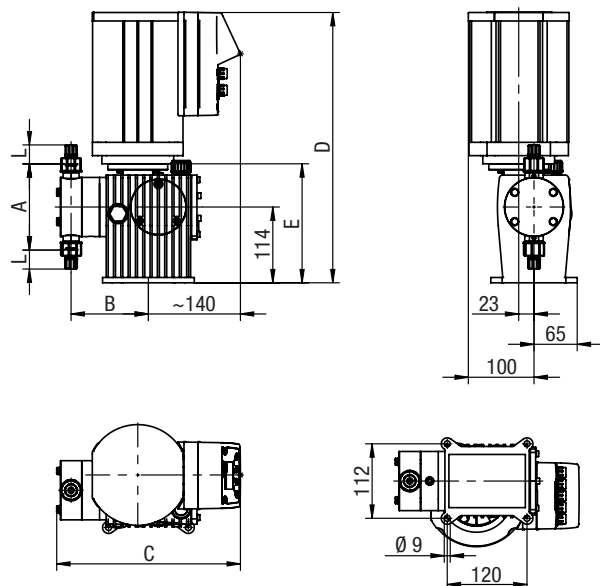
All dimensions in mm



Dimensions

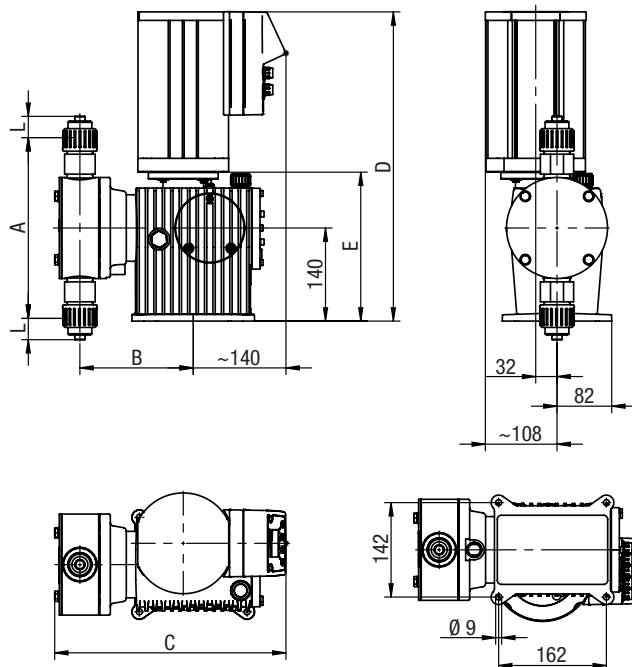
MEMDOS LP 4 – 80 and 150

All dimensions in mm



MEMDOS LP 110 and 160 – 1010

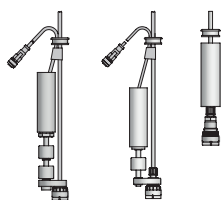
All dimensions in mm



Scale		4 – 20	35 – 60	80, 150	110, 160	210 – 260	310 – 400	510 – 1010
A		126	149	249		268	313	352
B		116	122	133	160	170	175	208 (*194)
C	MEMDOS LB	249	256	280	346	357	362	402 (*376)
	MEMDOS LA	307	312	324	375	385	390	455 (*429)
	MEMDOS LP	276	283	307	325	335	340	402 (*376)
D	MEMDOS LB	389			437			510
	MEMDOS LA	440			560			538
	MEMDOS LP	406			465			543
E		179			224			267
L		Depends on the connection type and size						

*) dosing head made of stainless steel

MEMDOS standard accessories



Suction lines

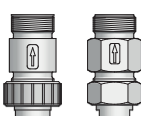
Type SL-2 with ceramic weighting piece, cable length 3,000 mm, hose length 2,500 mm. Level monitoring and pre-alarm with 2 switching points, switching distance approx. 30 mm. Switching function: Closer on rising level, electrical connection to dosing pump via plug connector M12x1.

Flexible suction line, SA model with foot valve and load part made from ceramic and 2500 mm tube length.



Base valves

Foot valves prevent return flow of the medium and protect the dosing pump from impurities



Injection nozzles

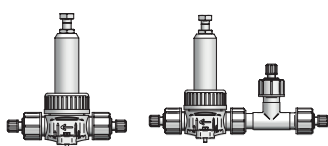
To connect the dosing line to the dosing point.

Injection nozzle type R, spring loaded, opening pressure 0.1 bar.



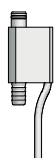
Suction and pressure tubes

The stated operating pressure applies at 20 °C in accordance with DIN EN ISO 7751; chemical resistance and correct connection are assumed.



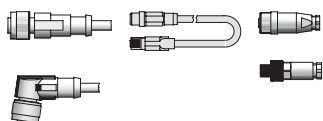
Back-pressure and pressure relief valves

- Back-pressure valves to be mounted in the dosing line.
Nominal pressure PN 16
- Pressure-relief valves to be mounted in the dosing line.
Nominal pressure PN16 (plastic versions) / PN25 (stainless steel versions)



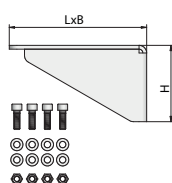
Diaphragm rupture monitoring LP

The diaphragm monitoring is for reporting leaks with diaphragm pumps about the conductivity of the medium. The diaphragm monitoring is inserted into the existing leakage connection of the dosing pump. Notification is performed via the integrated software of the Memdos LP



Various cables, plugs and adapters

- Cable for external release, pulse output 0/4 – 20 mA, pulse input and level control (A-coded)
- Cable for alarm (B-coded)
- Ethernet cable for the network connection (D-coded)
- Plug connector for retrofitting existing suction lines or level monitors (A-coded)
- Plug for retrofitting with 0/4 – 20 mA outputs (A-coded)
- Adapter, required when using older suction lines with 3.5 mm jack plug (A-coded)



Wall bracket

Wall bracket including mounting material for fixing the dosing pump to the surface of a wall.