

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.

Dosing pumps are used in many branches of industry that work with liquid chemicals - not excluding toxic and highly-aggressive media.

Durable Design and Wide Performance Range

Two sizes of the MEMDOS LB 56 C series are available. A large coverage in terms of performance and chemical resistance is available, thanks to the variety of dosing heads, combined with a wide range of dosing head materials.

The performance ranges from 0 - 324 gph. The maximum permitted pressure, depending on the size, is between 58 and 232 psig.

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 LB 56 C pumps can also be supplied with a double diaphragm system, therefore avoiding uncontrolled leakage of media if the dosing diaphragm wears out.

Versatile and flexible

The MEMDOS LB 56 C can be used when the integration of the pump into external controls or control circuits is required.

For constant dosing without a controller, the power-cord of the MEMDOS LB 56 C is directly connected to the terminal box. A variety of three-phase and single-phase motors is available for this purpose.

To adjust the dosing capacity, either the stroke length can be adjusted mechanically/automatically or the speed of the three-phase motor can be regulated by means of a separate variable frequency drive.



In Short

- Easy to use
- Capacity range up to 324 gph, up to 232 psig
- Minor dependence of the backpressure
- Infinitely variable stroke frequency from 0 to 100%
- Tappet drive with manual and automatic capacity adjustment
- Non-leaking
- Materials available: PVC, PP, PVDF and stainless steel
- Standard NEMA 56 C motor flange
- Optional metric motor flange
- Compact design, low space requirement
- Material consistency for the pumps and accessories
- A variety of three-phase and single-phase motors are available
- Double-diaphragm system (optional)
- XP versions for Zones 1 and 2 are available
- Also suitable for variable frequency drive operation
- NSF61 certified (PVDF material only)

Technical Data

MEMDOS LB 56 C			4	4-HP	10	10HP	20	20HP	35	60	80	150		
Delivery capacity at max. pressure	50 Hz	gph	1.06	2.22	3.70	6.35	5.82	9.52	9.52	16.67	23.81	41.27		
	60 Hz		1.3	2.7	4.4	7.6	7.0	11.4	11.4	20	29	49.4		
Max. supply pressure		psig	174	232	174	232	174	232	145		72			
Max. stroke frequency	50 Hz	SPM	26		72		120		72	120	72	120		
	60 Hz		32		86		144		86	144	86	144		
Suction head for non-gassing media		ftH ₂ O	29				26			23				
Max. supply pressure		psig	7.3											
Stroke length		inch	0.3"					0.4"						
Nominal valve width			DN4					DN6			DN10			
Connection size			1/4" FNPT							1/2" FNPT				
Motor Frame			NEMA 56C											
Motor HP			1/3 HP							1/2 HP				
Weight (without motor)	PVC	lb	11.1					14.1						
	PP		11.5					15						
	PVDF		11.9					15.9						
	Stainless Steel		17.6					26.5						
Max. ambient temperature		°F	41-113° (104° with PVC parts)											
Max. temperature of the medium		°F	176 °F (with PVC parts 95 °F; with PP parts 140 °F)											

MEMDOS LB 56 C			110	160	210	260	310	400	510	760	1010		
Delivery capacity at max. pressure	50 Hz	gph	30.2	38.1	55.6	69.8	77.8	103.2	133.3	196.8	269.8		
	60 Hz		36	45.6	67	84	93	124	160	236	323.3		
Max. supply pressure		psig	145				116	87	58		44		
Max. stroke frequency	50 Hz	SPM	96	120	96	120	96	120	53	76	107		
	60 Hz		115	144	115	144	115	144	64	92	128		
Suction head for non-gassing media		ftH ₂ O	23		19		14			3			
Max. supply pressure		psig	7.3										
Stroke length		inch	0.4"							0.5"			
Nominal valve width			DN10			DN15				DN25			
Connection size			1/2" FNPT			3/4" FNPT				1" FNPT			
Motor Frame			NEMA 56C										
Motor HP			1/2 HP			3/4 HP				1 HP			
Weight (without motor)	PVC	lb	25.3			27.5		31.7			45.8		
	PP		25.3			27.5		31.7			45.8		
	PVDF		26.0			28.6		33.5			49.6		
	Stainless Steel		36.8			46.5		57.7			93.2		
Max. ambient temperature		°F	41-113 °F (104 °F with PVC parts)										
Max. temperature of the medium		°F	176 °F (with PVC parts 95 °F; with PP parts 140 °F)										

K4 Series Drives

Digital AC Variable Frequency Drive

Designed to meet the demanding requirements of chemical feed systems.

Features

- Multiple inputs and outputs to interface to SCADA or PLC
- Horsepower 1/8 to 3 HP
- 1Ø & 3Ø Input 115/230 VAC, 50/60 Hz
- 3Ø Output 230 VAC
- 200% Starting Torque
- Digital Display with LED Status Indicators

Benefits

Saves Time

Easy to install and Simple to Operate

Does not require commissioning

Motors Last Longer

Proprietary software

Provides overload protection, prevents motor burnout and eliminates nuisance tripping. UL approved as electronic overload protector for motors.

Energy Saving

Uses only the power the application requires

Replacing constant speed with variable speed will significantly reduce energy costs.

Economical to Use: Indoors or Out

Eliminates secondary enclosures

No holes to drill, no switches to install. No need to de-rate drive for high starting torque applications.



Combines Soft Start with Variable Speed

Adjustable Soft Start.

GFCI Software

allows the equipment to operate with Ground Fault Circuit Interruption circuit breakers or outlets.



K4 SERIES DRIVES ENGINEERING SPECIFICATIONS

Enclosure

- Wall mount or compact mount with LED display
- Integral 8 button keypad
- Forward/Reverse capability
- NEMA 4X enclosure
- Integral Power Disconnect (opt.)

Interfacing

- Remote or manual speed control input (4-20mA, DC voltage or frequency)
- Start/Stop control input
- Local/Remote Select input
- Tubing Rupture Fault input
- Pump Running output (running/stopped)
- Speed Feedback output (4-20mA)
- Status output (auto/manual)
- Fault output

Ratings

115/230 VAC 1-Phase Input
230 VAC 3-Phase Output

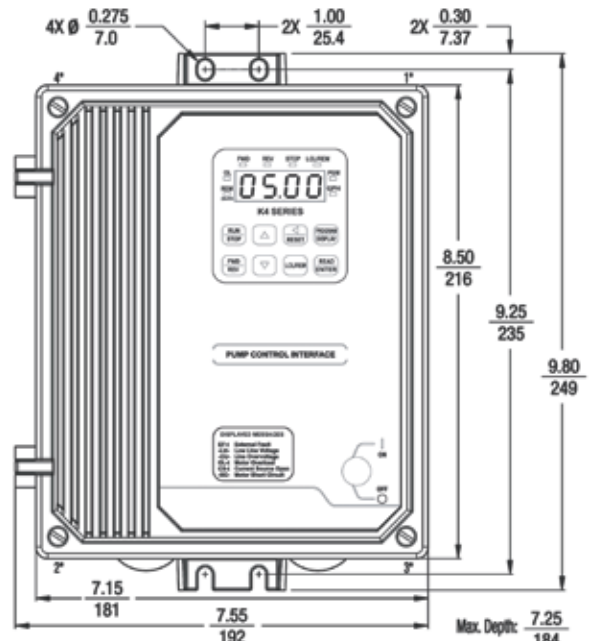
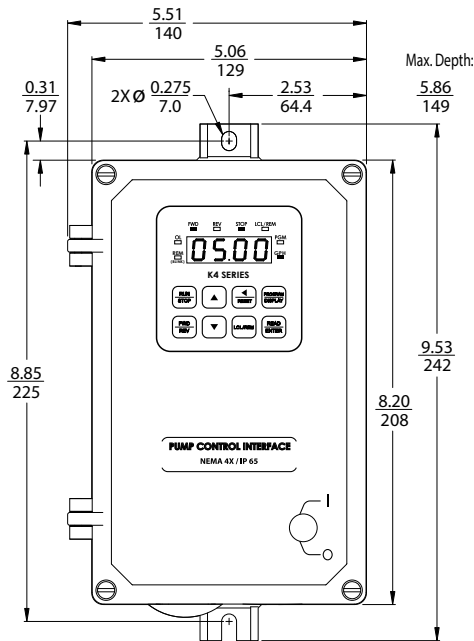
Model	Ratings		Net Wt. (lbs)
	HP. (kW)	Amps	
K4-24	1, (0.75)	3.6	5.9

230 VAC 3-Phase Input
230 VAC 3-Phase Output

Model	Ratings		Net Wt. (lbs)
	HP. (kW)	Amps	
K4-29	3, (2.25)	9	10.3

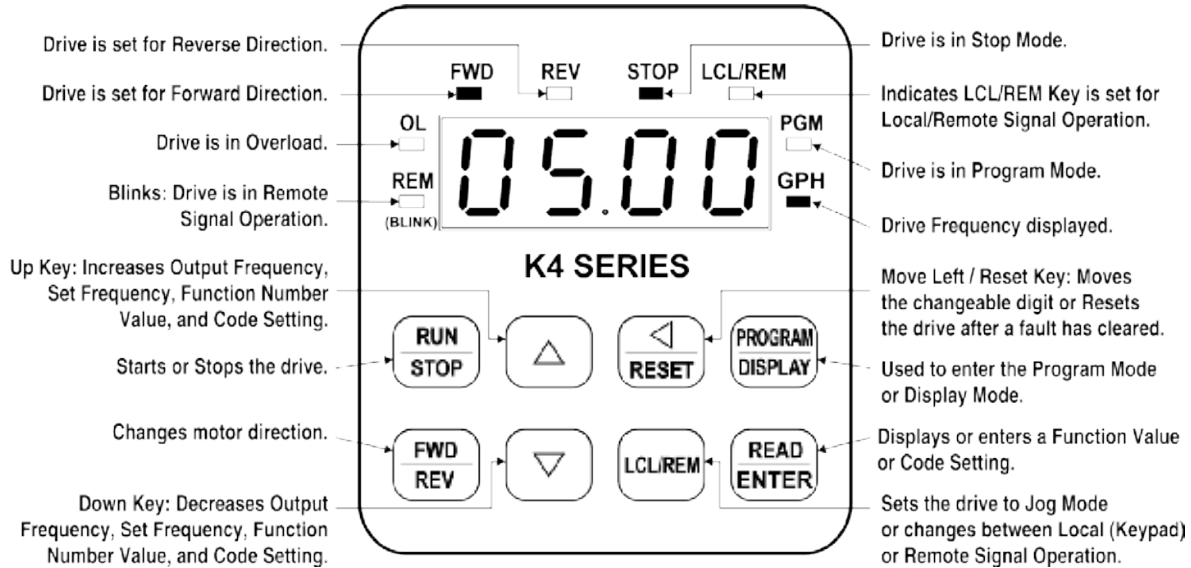


Dimensions



All dimensions in inches (mm)

K4 SERIES Keypad / Display

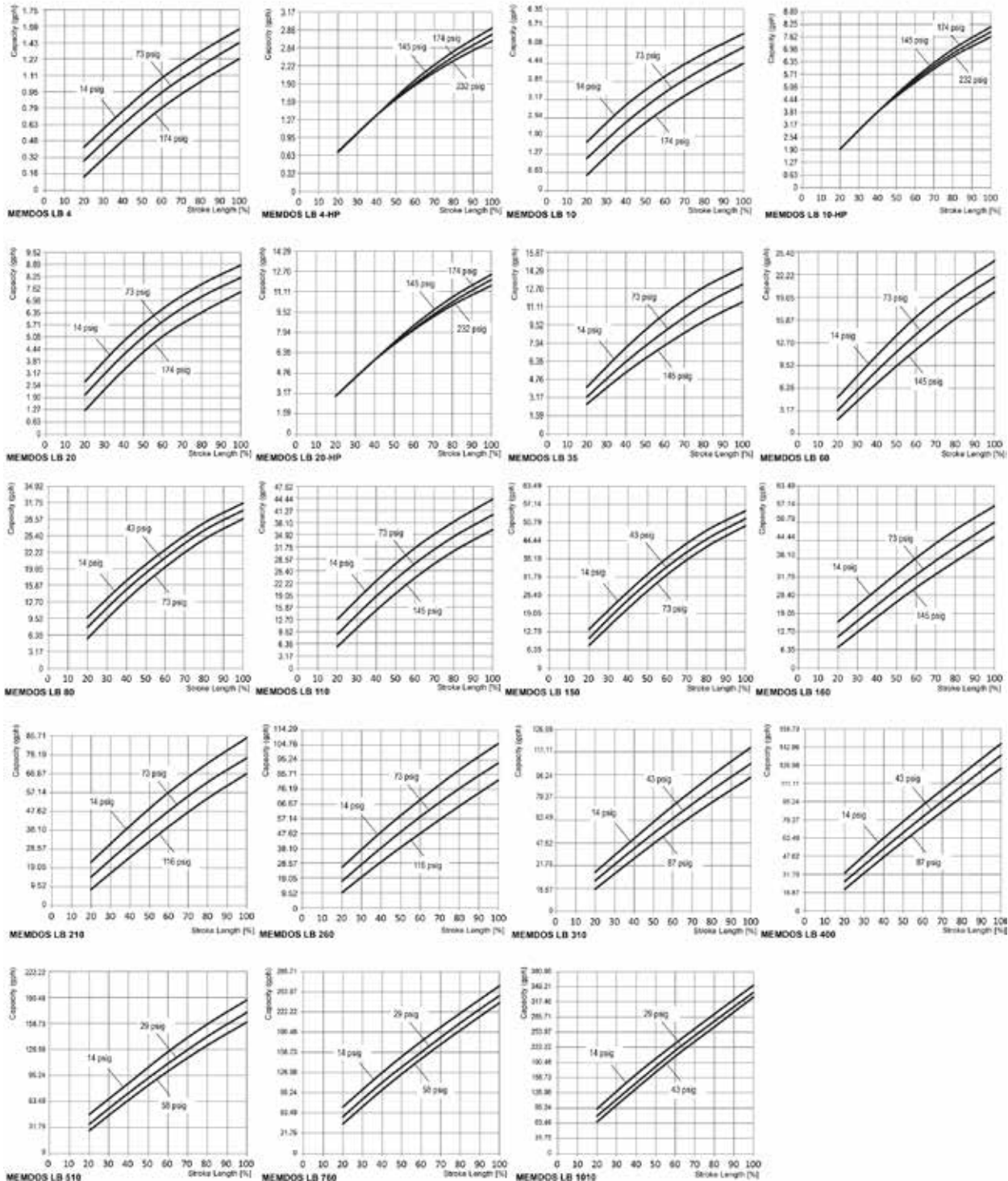


Electrical Ratings							
Model	AC Line Input			Fuse or Circuit Breaker Rating (Amps AC)	Output		
	Volts AC ² (50/60 Hz)	Phase (Φ)	Maximum Current (Amps AC)		Voltage Range (Volts AC)	Maximum Continuous Load Current ³ (RMS Amps/Phase)	Maximum Horsepower (HP (kW))
KBDA-24D ⁴	115	1	14	20	0 - 230	3.6	1 (.75)
	208/230	1	8.1	15			
KBDA-29 ^{6,7}	208/230	1	20.5	20	0 - 230	6.7	2 (1.5)
		3	11.7	15	0 - 230	9 ³	3 (2.25)

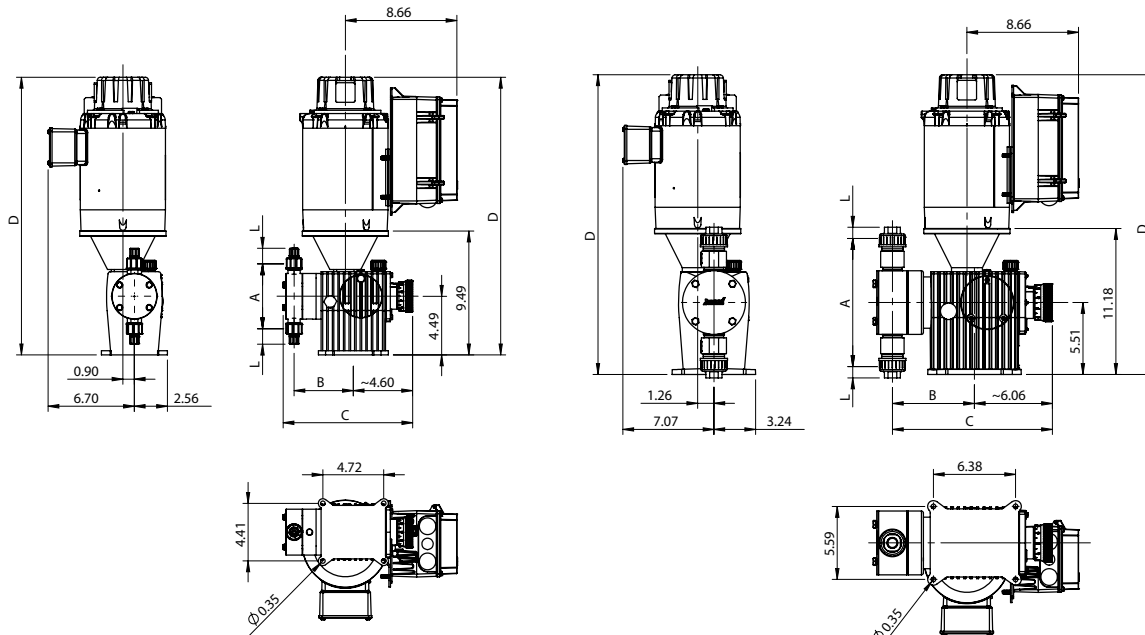
Notes: **1.** White FDA approved finish. **2.** Bold indicates factory setting of AC line input voltage for Models KBDA-24D, 27D. **3.** Factory setting of motor current (Function No. 0.01). **4.** Models KBDA-24D, 27D contain an AC line input voltage selection jumper. **6.** Model KBDA-29 is rated 2 HP (1.5 kW) with single-phase AC line input and 3 HP (2.25 kW) with 3-phase AC line input. **7.** Also contain AC Line Phase Loss Detection (Model KBDA-29: when used on 3-phase AC line input set for 7.0 Amps or higher (3 HP (2.25 kW))).

Delivery Characteristic Curves

The supply performance graph is valid for 20°C (68°F) for water at 100% stroke frequency. The delivered capacity depends on the medium (density and viscosity) and temperature. Dosing must therefore be calibrated during practical use.



Dimensions



MEMDOS LB4 - 80, 150

MEMDOS LB110, 160 - 1010

Size	4-20	35-60	80, 150	110, 160	210-260	310-400	510-1010
A	4.96	5.87	9.80	9.45	10.55	12.30	13.86
B	4.57	4.78	5.24	6.30	6.70	6.89	7.28
C	9.96	10.24	11.18	12.80	13.19	13.39	14.37
D (NEMA 56 C motor)	19.8	19.8	19.8	21.5	21.5	21.5	21.5
L	Depends on the connection type and size						

All dimensions in inches

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 accessories. 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 excessive pressure

- Pulsation dampener - to dampen 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.