General Description

The MAGDOS DE/DX line of solenoid driven metering pumps combines the digital technology of state-of-the-art microprocessors with the durability of high-quality mechanics. Its versatility and wide range of external control options make it ideal for a variety of applications. The pump can be supplied with a user-friendly digital display that shows the different operating modes and further technical messages.

The MAGDOS DE and MAGDOS DX are available with the following features:

- Capacities from 0.03 gph 27.7 gph with pressures up to 150 psig (set by manually changing the stroke length via the stroke length adjustment knob).
- Manual control with continuous stroke frequency adjustment from 0 to 100 strokes per minute for sizes 01 - 12 and 0 - 70 strokes per minute for sizes 20 -100.
- Changeover function to external pulse control by water meter or other voltage free contacts.
- Connection for level indication with alarm signal.
- Optional warning alarm relay.

In addition, MAGDOS DX offers:

- Changeover function to external control by 0/4 - 20 mA analog signal.
- Pulse multiplication or division by factors of 2, 4, 8, 16, 32 or 64.
- Digital display.

Magnetic Drive

The stroke movement of the metering diaphragm is produced by a D.C. solenoid. Due to the infinitely adjustable stroke, the stroke length can be set anywhere between 0 - 0.18 inches, depending on the pump size. The solenoid design eliminates reduction gears or rotating parts, making the MAGDOS DE/DX long-lasting and low-maintenance. The armature runs in a maintenance free bushing with PTFE coating and additional silicone grease lubrication.

Materials of Construction

Liquid ends of Polypropylene, PVC, PVDF and 316 Stainless Steel. Diaphragms are PTFE coated EPDM. Seals of Viton®, Hypalon® or PTFE are available.

Options

- Diaphragm Leak Detection
- Tank Low Level indication and alarm (DX model only)

Sizes 20, 40, 100

Sizes 01-12

Control Unit

The main part of the control unit is a microprocessor which controls the stroke frequency with digital accuracy. The various control possibilities allow MAGDOS to be adapted to practically all requirements of home water supply, water and waste water treatment as well as industrial processes. The electronic control unit is available in two basic versions with functions described below.

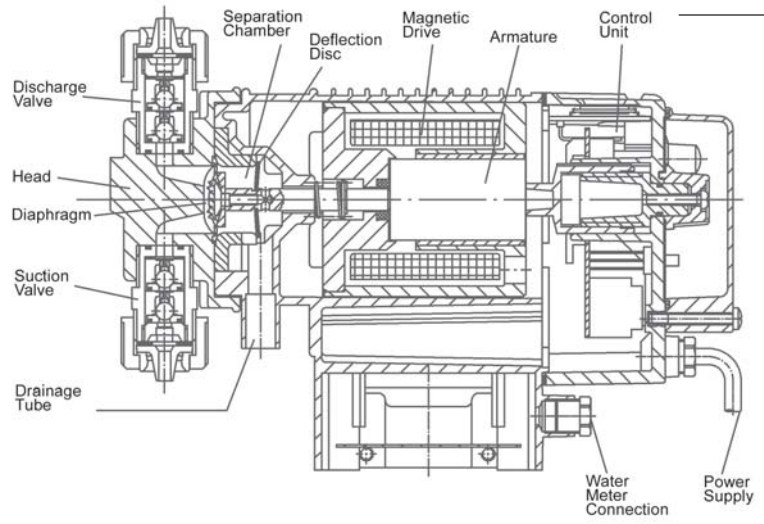
Functions		DE	DX
Level Control with Alarm Signal		x	x
Low Level Indication		x	x
Warning Alarm Relay		o	o
Manual Control 0-100%		x	x
External Control	Contact	x	x
	0-20 mA	--	x
	4-20 mA	--	x
Pulse Multiplication/Division		--	x
Stroke Frequency Adjustment		x	x
Digital Display		--	x

--: not available; x: standard; o: optional

Lutz-JESCO America Corp.

Solenoid Driven Metering Pumps ■ MAGDOS DE/DX

Cross Section of MAGDOS DE/DX



Model		01	03	07	2	4	8	12	20	40	100
Capacity	gph	0.03	0.12	0.20	0.50	1.0	1.6	2.8	4.7	12.7	27.7
Maximum pressure	psig	150	90	150	150	150	150	60	150	60	30
Description				**DE/DX 01...12**		**DE/DX 01...12**		**DE/DX 20...100**		**DE/DX 20...100**	
Power supply requirement			VAC, Hz	115, 50/60		230, 50/60		115, 50/60		230, 50/60	
Power supply cable (6 ft.)				UL/CSA plug		2 m with standard plug		UL/CSA plug		2 m with standard plug	
Maximum speed			spm	100		100		70		70	
Power consumption at max. speed			Watts	33		30		66		70	
Current consumption during stroke			Amps	3.6		2.3		7.4		4.1	
Protection class				NEMA 4X							
Insulation class				F							
Input pulse duration				min. 30 ms							
Maximum carrying capacity @ voltage amps				250 VAC, 2.5 A // 30 VDC, 2.5 A							
Solenoid excitation time per pulse			ms	80		60		190		160	
Voltage to low level probe			VDC	5 for potential-free switches							
Voltage to pulse input											
Impedance to 0/4 - 20 mA input			Ohm	150							
Maximum suction lift (water)			ft.	10*		10*		6*		6*	
Maximum ambient temperature			°F	104							
Maximum temperature of process fluid	PVC		°F	95							
	PMMA, PVDF, SS		°F	122							
Pump weight	Plastic		lbs.	6.4		6.4		29		29	
	316SS		lbs.	7.7		7.7		33		33	

*__Maximum lift (water)__: DE/DX 8 = 6.7 ft., DE/DX 12 = 4 ft., DE/DX 20 = 6 ft., DE/DX 40 = 5 ft., DE/DX 100 = 4 ft.

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