

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 4.7 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 - 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 20 - 100%, 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)

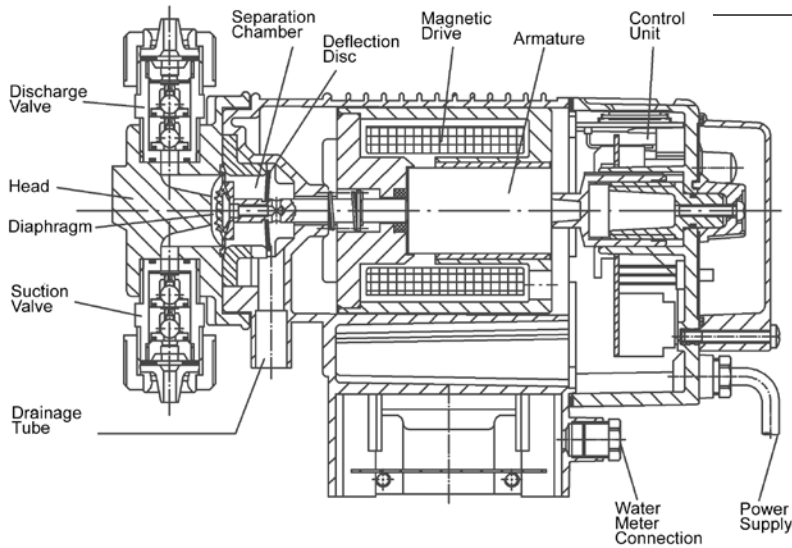
Control Unit

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
Contact		x	x
External Control	0-20 mA	--	x
	4-20 mA		
Pulse Multiplication/Division		--	x
Stroke Frequency Adjustment		x	x
Digital Display		--	x

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

Cross Section of MAGDOS DE/DX



Control Unit



- Power Supply Cable
- Warning Alarm Relay Cable
- Level Probe Conn. Jack
- Pulse Input Cable
- Stroke Frequency Adjustment

Model			20	40	100
Capacity	gph		4.7	12.7	27.7
Maximum pressure	psig		150	60	30
Description			DE/DX20_100		
Power supply requirement	VAC Hz.		115, 50/60	230, 50/60	
Power supply cable (6 ft.)			UL/CSA Plug	2 m with standard plug	
Maximum speed	SPM		70	70	
Power consumption at maximum speed	Watts		66	70	
Current consumption during stroke	Amps		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		190	180	
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.		6*		
Maximum ambient temperature	°F		104		
Maximum temperature of process fluid	PVC	°F	95		
	PMMA, PVDF, SS	°F	122		
Pump weight	Plastic	lbs.	29		
	316SS	lbs.	33		

*Maximum lift (water): DE/DX 20 = 6 ft.; DE/DX 40 = 5 ft.; DE/DX 100 = 4 ft.