



MX series

SOLENOID DRIVEN DOSING PUMPS

INTRODUCING MX SERIES

FWT is pleased to introduce MX solenoid driven dosing pumps, a new series which will enable to widen the product range covering the market sectors where there is a request for wall mounting and competitive price.

MX main characteristics are:

- **WALL MOUNTING HOUSING:** PP reinforced plastic housing, it includes a support bracket for easy quick mounting.
- **SMALL DIMENSIONS:** ready also for mounting into small cabinets and small environments.
- **PRICE AND QUALITY:** the new design allows a more competitive price but keeping the same quality of FX series.

Two versions are available:

MX series mounts the same solenoid as FX series plus the most important improvement which is CERAMIC ball check valves. Ceramic is widely known for its great chemical resistance to aggressive chemicals and excellent sealing performance

MXE series mounts a smaller type of solenoid with limited performances but good enough for applications such as cooling towers, small RO systems, swimming pools, small water treatment process. MXE series mounts LIP type valves in order to reduce price, however they are very efficient for the above mentioned applications:

PUMPS MAIN FEATURES

Power supply: **230 Vac - 1 phase - 50/60 Hz $\pm$ 10%**
 Reproducibility under standard conditions: **$\pm$ 5%**
 Plastic housing and support: **PP reinforced, IP65**
 Connectors: **4 pole IP66**
 Upon request: **110 Vac/60 Hz; 12÷24 Vdc** (limited range)
 Ambient working temperature: **45°C**
 Voltage working range: **min.207V ÷Max 253 V**
 Voltage Peak: **Max 270 V**

Pumps are provided with **Standard Accessories Kit:**

- 1 - Injection valve;
- 2 m - Discharge Hose PE semi-rigid (white);
- 2 m - Suction Hose PVC flexible (transparent);
- 1,5 m - Air Bleed Hose PVC flexible (transparent);
- 1 - Foot Valve / Filter

Pumps are also provided upon request with **Level control switch** (except C/A models)

MX series feature two operating controls versions: - **Analog with L.E.D. indicators** and **Digital with display**
 All the products are manufactured according **CE regulations**

COMMON CHARACTERISTICS TO ALL MX RANGES

- Ball CERAMIC checks type valves for MX version
- Reed “LIP” type valves for MXE version
- Plastic housing PP reinforced IP65 rating
- “Sleeve” type no-return injection valve FPM (avail. EPDM)
- PTFE diaphragm / Manual Air Bleed valve for priming
- Quick wall mounting support

AVAILABLE UPON REQUEST: Hastelloy Spring return Injection and Foot ball Valve

LIQUID ENDS

PARTS IN CONTACT WITH THE LIQUID	STANDARD VERSION	UPON REQUEST
Pump head	PP NOTE 1-NOTE 2	PVC; AISI 316; PVDF; PTFE
Diaphragm	PTFE	-----
Ball check valves MX version	CERAMIC	AISI 316;
Reed type “Lip” valve MXE version	FPM	EPDM
Pump head Nipples / Hose Nut	PP	AISI 316
Seals / O-rings	FPM (Viton ®)	EPDM (Dutral®)
Injection Fitting	PP	AISI 316; PTFE
Foot Valve (Lip type) / Filter body / Filtering media	FPM / PP / Glasswool	EPDM; AISI 316; PTFE
Suction Hose / Air Bleed hose	PVC	-----
Discharge Hose	PE	-----
Injection NO-Return Valve (sleeve type)	FPM (Viton ®)	EPDM
UPON REQUEST:		
Hastelloy Spring Foot ball Valve / Fitting	Hastelloy-Ceramic / PP-PVC	AISI 316; PVDF
Hastelloy Spring Injection ball Valve / Fitting	Hastelloy-Pyrex / PP-PVC	AISI 316; PVDF
Automatic self-bleed pump head NOTE 3	PVC	-----

NOTE 1: pump type 22-02 pump head do not feature Air bleed valve

NOTE 2: type 03-20 mounts PVC pump head

NOTE 3: when using a self-bleed pump head, either flow rate and/or pressure decreases consequently of about 10/15%.

OPERATING MODES

model C/A	Constant / ON-OFF mode, Analog controls	Pump flow rate is obtained by adjusting pulse frequency percentage (%). It also features reduction frequency scale range 1/5 reducing range from 100% to 20%.
model C/AL	Constant / ON-OFF with level control, Analog controls	Same features as C/A with level control switch. Available with double level.
model C/D	Constant / ON-OFF mode, Digital controls with display	Pump flow rate is obtained by adjusting pulse frequency percentage (%) by digital controls.
model P/D	Proportional to external free contact	Proportional dosing pump to external digital pulses, (e.g. pulse water meters or equipment releasing voltage free pulse contacts). Proportional operations modes: Divider 1:N; Multiplier 1xN;
model CS/D	Proportional to remote mA signal	Proportional dosing pump to remote mA signal Selection range 0/4...±20mA or reverse Proportional operations modes: Direct Or Reverse
model MF/D	Multifunction dosing modes	Multifunction dosing pumps including most of dosing operations modes. Proportional to external digital pulses; Proportional to remote signal 0...4 mA±20mA or reverse; PPM dosing mode; Constant mode with digital adjustment : imp/min; imp/hour; imp/day
model CTRL3	Dosing pumps with built-in proportional pH – RX- Cl₂ chlorine controller, all in one enclosure.	Three different controllers and a dosing pump into one enclosure with great advantage to stock only one model for 3 measuring parameters. Advanced menu and Basic menu available
model CTRL2	Dosing pumps with built-in proportional pH – RX all in one enclosure with competitive price advantage.	Two different controllers and a dosing pump into one enclosure with great advantage to stock only one model for 2 measuring parameters. Basic menu
model CD/D	Dosing pumps with built-in proportional conductivity controller, all in one enclosure.	Proportional Conductivity range: 0±20.000 µS (resolution 0,1mS); 20mS=20000µS (other ranges upon request. Provided with conductivity probe according to the controller measuring range.

LEVEL SWITCH WITH FIXING BRACKET



ACCESSORIES KIT

- ⇒ 1 - Injection valve;
- ⇒ 2 m - Discharge Hose PE semi-rigid;
- ⇒ 2 m - Suction Hose PVC flexible;
- ⇒ 1,5 m - Air Bleed Hose PVC flexible;
- ⇒ 1 - Foot Valve/Filter

TECHNICAL CHARACTERISTICS MX

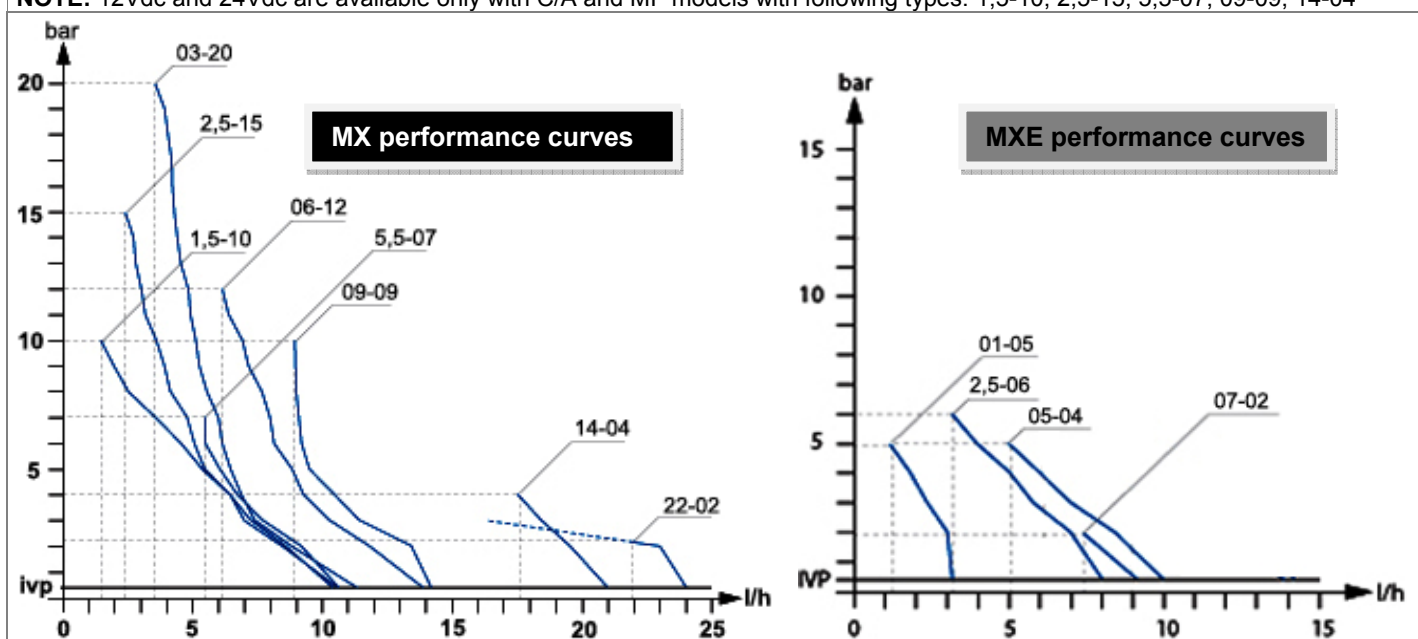
Pump type range	Max Flow / Max Pressure		Start up* performance		Frequency imp/min	Stroke volume cc(ml) / stroke	Valves types	Hose Ø mm
	l/h	bar	l/h	bar				
MX 1,5-10	1,5	10	1,5	10	120	0,14	Ball checks	4x6
MX 2,5-15	2,5	15	2,4	15	120	0,28	Ball checks	4x6
MX 03-20	3	20	3,6	20	120	0,28	Ball checks	4x6
MX 5,5-07	5,5	7	6	7	120	0,69	Ball checks	4x6
MX 06-12	6	12	6,2	12	120	0,69	Ball checks	4x6
MX 09-09	9	9	9	9	120	1,11	Ball checks	4x6
MX 14-04	14	4	17,6	4	120	2,08	Ball checks	4x6
MX 22-02	22	2	23	2	120	2,77	Ball checks	4x6

TECHNICAL CHARACTERISTICS MXE

MXE 01-05	1	5	1,2	5	120	0,14	"Lip" types	4x6
MXE 2,5-06	2,5	6	3,2	6	120	0,35	"Lip" types	4x6
MXE 05-04	5	4	5	5	120	0,69	"Lip" types	4x6
MXE 07-02	7	2	7,4	2	120	0,97	"Lip" types	4x6

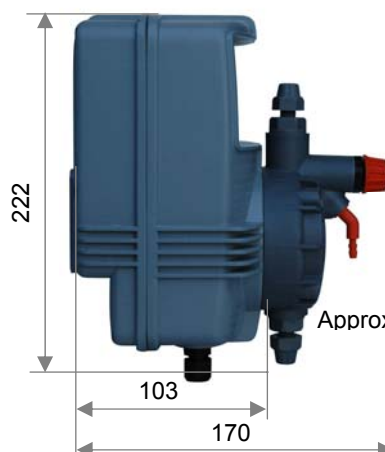
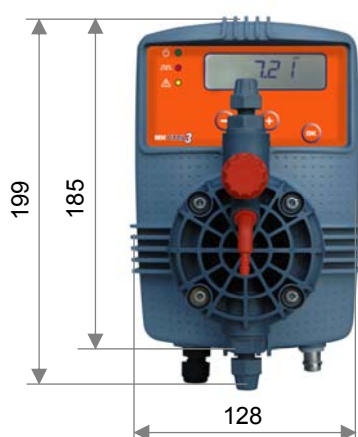
*NOTE: Start up performances are available when the pump starts the operations and are constant only if duties are not continuous (working for time periods not over 30/40 min and 15 min rest)

NOTE: 12Vdc and 24Vdc are available only with C/A and MF models with following types: 1,5-10; 2,5-15; 5,5-07; 09-09; 14-04



NOTE: flow rates obtained testing the pump with medium hardness water at rated pressure, 1,5 m suction lift, room temperature. The diagrams indicate max metering pump flow variation in relation to the working pressure in the plant; the diagrams also include injection valve losses. I.V.P.

MX series overall dimensions (mm)



Approximate net weight kg 1.9÷2.7

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