

# ORLANDO srl



PD E ONE MF...

- Multifunction Pump**
- Manual Control**
- Proportional Dosing**
- Pulse Multiplier [I x n]**
- Pulse Multiplier with Memory [I x n (M)]**
- Pulse Divider [I/n]**
- Millilitres per pulse [ml x I]**
- Litres per pulse [l x I]**
- Millilitres per m3 pulse [ml x m3]**
- PPM Control**
- 4-20 mA Control**
- Flow Alarm**
- Level Switch (probe not included)**
- Relay Output**
- Underload & Overload Alarm**

Max Flow Rate (L/H)	Max Pressure (Bar)	Standard Power Supply	Net Weight (Kg)
1	10	100 - 250 V 50 - 60 Hz	2.3
3	10		
5	20		
5	7		
8	10		
10	10		
15	4		
20	5		
30	5		

Chart for eOne MA, MF and PLUS only

## The eOne Energy Efficient Solenoid Metering Pump

- Underload and Overload feedback; Alert and shuts off if the dosing system is underdosing or if it detects a blockage.
- Max 300 strokes per minute ensures accurate dosing.
- Double ceramic ball valve head to increase dosing accuracy.
- Energy consumption of 26 W at maximum pressure setting.
- Range of functions
- Reliable and accurate dosing in the event of changes to the pressure ( $\pm 5\%$  dosing tolerance for each 1 bar variation)
- Reduced operating temperatures.
- Power supply autodetection, between 100 and 250 Vac 50/60Hz.
- Data transmission via RS 232 or RS 485 interface.

### Technical Specifications:

Power supply 100-250 Vac, 26 W • Electronic Flow Control Manual and Multi-Function • Remote control or manual operation between 0 and 100% (MA) • Dual scale adjustment 0 to 20%, 0 to 100% (MA) • Improved graphical display • Multiple languages • RS485 serial output • Current output 4-20 mA (MF & PLUS) • Galvanic isolation (MF & PLUS) • Pulse Input (MF & PLUS) • PPM control (MF & PLUS) • Alarm Output (MF & PLUS) • Flow Sensor (MF & PLUS) • Manual, 4-20 mA and reed contact control • Relay output alarm Underload – Overload blockage alerts • Weekly Timer 16 cycles per day (MF & PLUS)

### eOne MA

- Energy efficient
- Manual Flow Control
- High dosing frequency (300 strokes/min)
- Dual scale adjustment
- Underload & Overload blockage alerts

### eOne PLUS

- Energy efficient
- All eOne MF functionality
- Built in Cl, pH, CD or Redox control
- High dosing frequency (300 strokes/min)
- Adjustable set points
- Underload & Overload blockage alerts

### eOne MF

- Energy efficient multifunction pump
- Perfect for proportional dosing
- Water meter input
- 4-20 mA input
- High dosing frequency (300 strokes/min)
- Underload & Overload blockage alerts

### eOne BASIC

- Energy efficient
- 180 Strokes per Minute
- Manual Flow Control
- Fixed flow rates and pressure
- 32 W Max energy consumption



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## MA/AD

(UK) Analogic dosing pump, flow rate adjusted manually by twin-scale stroke rate knob, 0=20% - 0=100%.

## MA/M

(UK) High accurate manually-controlled pumps frequency. The user can select the stroke frequency percentage (and thus flow rate) from the control panel. Service connectors for low alarm and level setting outputs. MA at 120V is CSA certified.

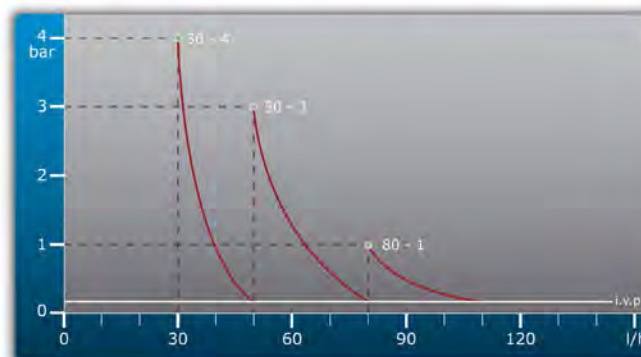
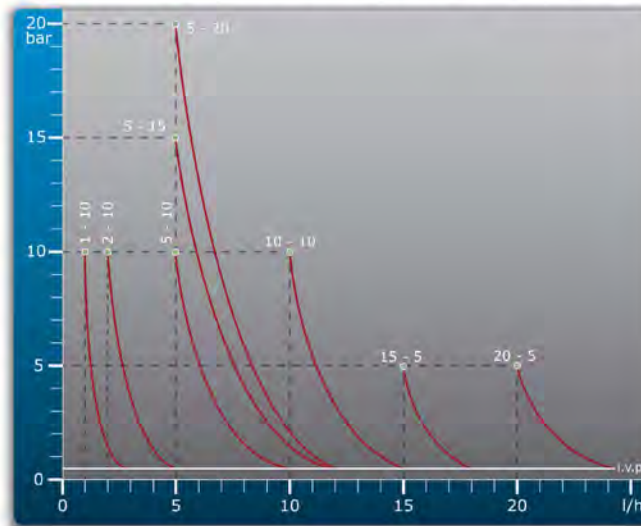
## VFT

(UK) Microprocessor based model having proportional/ manual modes: Manual mode; Pulse multiplier with memory (1xnM); Pulse multiplier (1xn); Pulse divider (1:n). Predisposed for level switch.



Flow rate Portata Débit	Pressure Pressione Pression	Max imp./min.	Output for stroke Dosaggio per impulsi	Stroke Corsa	Suction height	Standard power supply Alim. elettr. standard	Power comp. Potenza ass. Puissance absor.	Current comp. Corrente ass. Courant absor.	Net weight Peso netto Poids net					
					Hauteur d'aspirat. Altezza aspiraz									
I/h - GPH	Bar - PSI		ml	mm	m	Volts - Hz	Watts	Ampere	Kg					
1 - 0,26	10 - 145	160	0,10	0,80	1,5	230 V 50-60 Hz	60	0,26	4,2					
2 - 0,53	10 - 145		0,21	0,70	2,0									
5 - 1,32	10 - 145		0,52	1,00										
5 - 1,32	15 - 217		0,52	1,80										
5 - 1,32	20 - 290		0,52	1,50										
10 - 2,64	10 - 145		1,04	1,10										
15 - 3,69	5 - 72		1,56	2,20										
20 - 5,26	5 - 72		2,08	2,20										
30 - 7,92	4 - 58		2,80	1,40						1,5				
50 - 13,20	3 - 43		4,60	1,70						1,5				
80 - 21,12	1 - 14		7,40	2,40						1,5				
												110	0,48	5,2
												90	0,39	5,4
												110	0,48	5,4
							110	0,48	5,7					
						124	0,54	5,7						
						124	0,54	5,7						
						124	0,54	5,7						

Curves flow rate vs. pressure/Curve Caratteristiche portata-pressione /Caractéristiques débit/pression





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## PH-RX-CL/M

(UK) Microcontroller dosing pump with pH, RX(mV), free Chlorine control and regulation instrument • Backlight LCD display; ON/OFF – proportional operation modes; 0÷14pH; -1000 ÷ +1400mV; 0÷2, 0÷20, 0÷200ppm measuring range; 4÷20mA output; pH, Manual/automatic temperature compensation 0÷100°C; Hysteresis programming of Set point • Delay of Set point Activation; Display resolution: 0,01pH; ±1mV; 0,01ppm; 0,1°C. Level switch input • Relay output.



## PH-RX/MBB

(UK) Microcontroller dosing pump with pH, RX (mV), control and regulation instrument • Backlight LCD display, ON/OFF-proportional operation modes, 0÷14pH; -1000÷+1400mV measuring range • Level switch input.

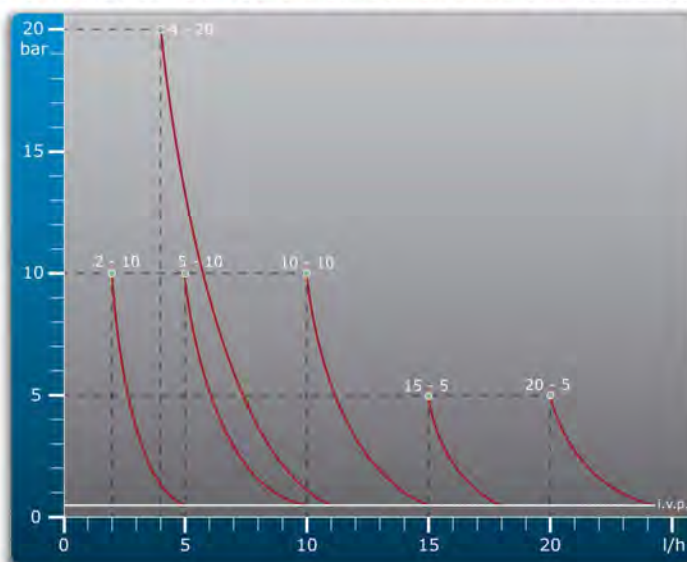
## MF

(UK) Multifunctions metering pump • Operating functions: Manual; 1xN; 1xN (M); 1:N; ppm e mA • Additional features: flow alarm; level control (probe supplied separately); relay output; buzzer; clock; timer; language italian/english • MF at 120V is CSA certified.



BTB	Flow rate Portata Débit	Pressure Pressione Pression	Max imp./min.	Output for stroke Dosaggio per imp.	Stroke Corsa	Suction height Hauteur aspir. Altezza aspirat.	Standard power supply Alim. elettr. standard	Power comp. Potenza ass. Puissance absor.	Current comp. Corrente ass. Courant absor.	Net weight Peso netto Poids net
	l/h - GPH	Bar - PSI		ml	mm	m	Volts - Hz	Watts	Ampere	Kg
	2 - 0,53	10 - 145	120	0,28	0,80	2,0	230 V 50-60 Hz	35	0,15	3,4
	4 - 1,06	20 - 290		0,55	1,50			5,4		
	5 - 1,32	10 - 145		0,70	1,80			4,4		
	10 - 2,64	10 - 145		1,40	1,10			5,2		
	15 - 3,69	5 - 72		2,10	2,20			5,2		
	20 - 5,26	5 - 72		2,80	2,20			5,2		

Curves flow rate vs. pressure / Curve Caratteristiche portata-pressione / Caractéristiques débit/pression



Hydraulic Parts/Configurazione Idraulica/ Configuration hydraulique

Wetted Parts Parti a Contatto con il Liquido	Standard Materials Versione Standard	Upon Request A Richiesta
Pump Head/Corpo pompa	PP	PVDF/AISI 316/ PTFE
Diaphragm/Diaframma	PTFE	
Valves/Valvola	FPM (Viton®)	EPDM (Dutral®); Silicone; NBR; Ceramic
Sealings/Guarnizioni	FPM (Viton®)	EPDM (Dutral®); Silicone; NBR; PTFE
Injection Valve Valvola Iniezione	PP/FPM (Viton®)	PVDF/EPDM (Dutral®); Silicone; NBR Ceramic
Foot Filter/Filtro di Fondo		
Suction/Bleeding Tubings Tubi aspirazione/Spurgo	PVC	PVDF/PTFE/PE
Delivery Tubing/Tubo Mandata	PE	

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## (UK) SAMPLE INSTALLATION

- A - Main Pipeline
- B - New Injection Valve
- C - Backpressure Valve
- D - Pressure Gauge
- E - Relief Valve
- F - Dosing Pump
- G - Tank
- H - New Foot Filter
- I - Level Switch

## (IT) INSTALLAZIONE TIPO

- A - Tubazione Principale
- B - Nuova Valvola d'iniezione
- C - Valvola di Contropressione
- D - Manometro
- E - Valvola di Sfiato
- F - Pompa Dosatrice
- G - Serbatoio
- H - Nuova Valvola di Fondo
- I - Sonda di Livello

## (FR) INSTALLATION

- A - Conduite principale
- B - Nouvelle canne d'injection
- C - Clapet de contre pression
- D - Manomètre
- E - Soupape de decharge
- F - Pompe doseuse
- G - Réservoir
- H - Nouvelle crepine
- I - Sonde de niveau

## (SP) INSTALACIÓN

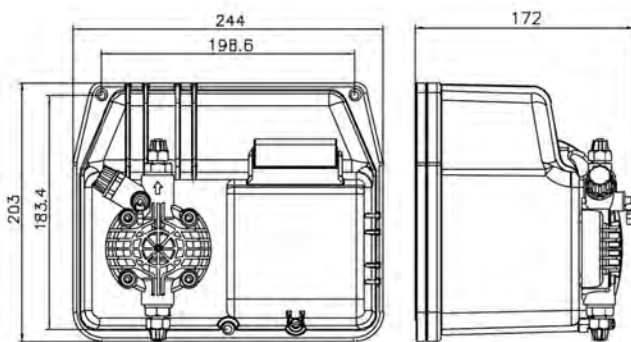
- A - Tubería principal
- B - Nueva válvula de inyección
- C - Válvula de contrapresión
- D - Manómetro
- E - Válvula de alivio
- F - Dosificación de la bomba
- G - Tanque
- H - Nueva válvula de fondo
- I - Sonda de nivel

## (PR) INSTALAÇÃO

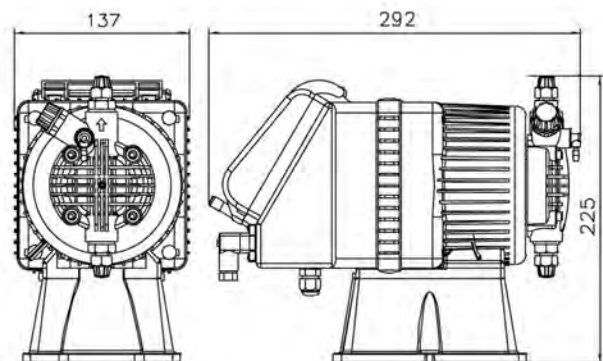
- A - Tubulação principal
- B - Nova Válvula de injeção
- C - Válvula de contrapressão
- D - Manômetro
- E - Válvula de Alívio
- F - Bomba dosadora
- G - Reservatório
- H - Nova Válvula de Pé/Filtro
- I - Sensor de Nível

## (RU) ВАРИАНТ УСТАНОВКИ

- A - Система
- B - Клапан впрыска нового образца
- C - Предохранительный клапан
- D - Манометр
- E - Перепускной клапан
- F - Насос-дозатор
- G - Емкость
- H - Клапан забора нового образца
- I - Датчик уровня



BT



BTB





# The eControl

The new eControl Series are energy efficient microprocessor based controllers designed to measure and control one electrochemical parameter from pH value, Redox potential, Chlorine Concentration or Conductivity. The eControl controllers are extremely flexible and can be configured to measure any of the above parameters, with the use of an Etatron probe.

## Microprocessor based Dosing Controller

Dual Set point control

4-20 mA Output

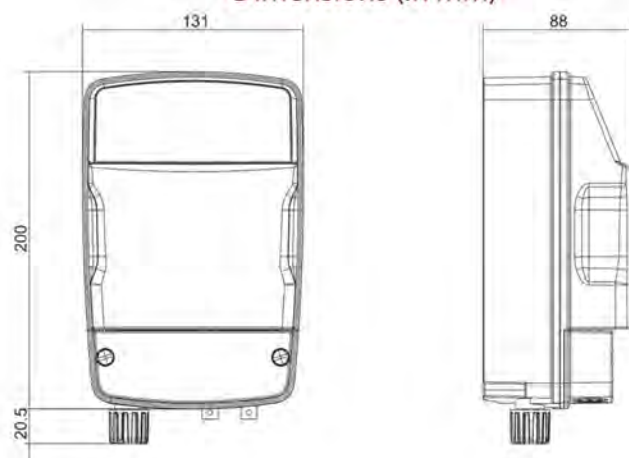
Min/Max Alarms

- Overdose alarm
- Can measure Cl, pH, Rx and other electrochemical parameters
- Ensures accurate dosing
- Temperature Control
- Hysteresis
- Suitable for all dosing systems

## Product Information:

- Available with Single or Dual channels
- Measuring Ranges:
  - pH: 0.00 - 14.00
  - Redox: -1000 - +1400 mV
  - Chlorine: 0-2, 0-20, 0-200 ppm
- Temperature control options:
  - Automatic (connection to PT100 sensor)
  - Manual (default 25°C)
- 2 set points for each input
- Direct or Inverse intervention
- Hysteresis
- ON/OFF or proportional activation mode
- Pump activation delay
- Overdose alarm, activated when a defined set point value is not reached in a predetermined time
- Optional relay output for signalled alarm status
- Optional MAX alarm, for maximum measure
- Optional MIN alarm, for minimum measure

Dimensions (in mm)



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## MA-A & MA-AL

○ Analogic dosing pump, manual flow rate adjustment from 0÷100%. Available with low tension power supply, ask for 48V version. The 12Vdc model is also available for solar panels use having very low power consumption with peak current 8A, nominal current 1.4A and nominal power 17W. Standard model 12Vdc has peak current 12A, nominal current 2A and nominal power 24W. Model MA/AL has same characteristics as MA/A model with level control setting. MA/A and MA/AL at 120V are CSA certified.

## PD PKX MA/A 01 05:



This new range of solenoid dosing pumps distinguishes this new product from competitor copies in the market thanks to its simplicity of use, high reliability and quality and its overall compact dimensions. The PKX range, thanks to its characteristics and for its versatility is the ideal pump for the dosing of chemical products in many application sectors among which: swimming pools, car washing, water treatment, wash-ware, etc...

### The main characteristics of the PKX range are:

- IP65 protection, PP reinforced housing
- Manual air bleed pump head
- Floating level switch (upon request for MA/A model)
- Small size
- Wall or foot mounting option
- Flashing LED under working conditions
- Extra silent version available upon request

### SAMPLE INSTALLATION INSTALLAZIONE TIPO

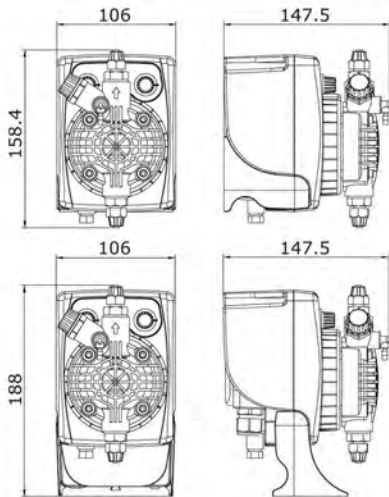
- A - Main Pipeline  
- Tubazione Principale
- B - Injection Valve  
- Valvola d'iniezione
- C - Backpressure Valve  
- Valvola di Contropressione
- D - Pressure Gauge  
- Manometro
- E - Relief Valve  
- Valvola di Sfiato
- F - Dosing Pump  
- Pompa Dosatrice
- G - Tank  
- Serbatoio
- H - Foot Filter  
- Valvola di Fondo
- I - Level Switch  
- Sonda di Livello



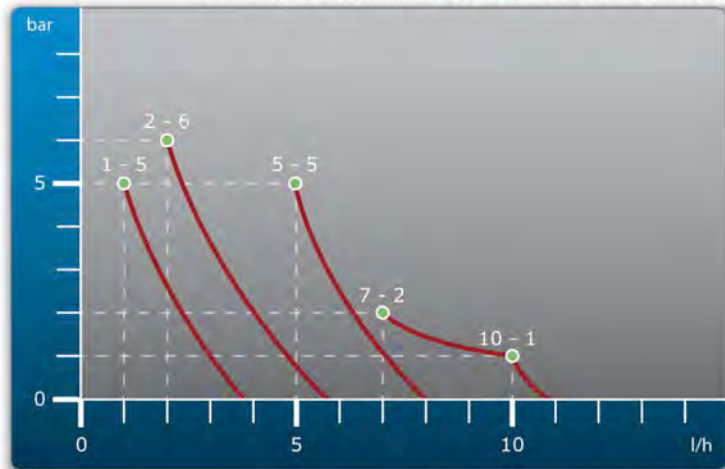


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Serie PKX		Modello Modello	Flow rate Portata l/h - GPH	Pressure Pressione Bar - PSI	Max imp./min.	Output for stroke Dosaggio per imp. ml	Stroke Corsa mm	Suction height Altezz. aspiraz. m	Standard power supply Alim. elettr. standard Volts - Hz	Power comp. Potenza ass. Watts	Current comp. Corrente ass. Ampere	Net weight Peso netto Kg
A	1 - 0,26		5 - 72	120	0,14	0,80	2,0	220/240 V 50-60 Hz	32	0,14	1,9	
B	2 - 0,53		6 - 87	120	0,28	0,80						
C	3 - 0,78		3 - 43	120	0,69	1,10						
D	5 - 1,32		5 - 72	120	0,97	1,30						
E	7 - 1,84 10 - 2,64		2 - 29 1 - 14	120	0,97 1,39	1,30						



Curves flow rate vs. pressure/Curve Caratteristiche portata-pressione



- Wall mounting  
Montaggio a Parete
- Foot mounting  
Montaggio a Basamento



Hydraulic Parts/Configurazione Idraulica

Wetted Parts Parti a Contatto con il Liquido	Standard Materials Versione Standard	Upon Request A Richiesta
Pump Head/Corpo pompa	PP	PVDF; AISI 316
Diaphragm/Diaframma	PTFE	PTFE
Lip Valves/Valvola a Labbro	FPM (Viton®)	
Sealings/Guarnizioni	FPM (Viton®)	EPDM (Dutral®); Silicone; NBR
Injection Valve Corpo Valvola Iniezione	PP/Ceramic	EPDM (Dutral®); Silicone; NBR
Foot Filter/Filtro di Fondo	PP/Ceramic	PVDF/Ceramic
Suction/Bleeding Tubings Tubi aspirazione/Spurgo	PVC	PVDF/Ceramic
Delivery Tubing/Tubo Mandata	PE	EPDM (Dutral®)

Upon Request/A Richiesta

Wetted Parts Parti a Contatto con il Liquido	Standard Materials Versione Standard	Upon Request A Richiesta
Corpo Pompa con Valvola a Sfera Gravità Pump Head with Gravity Balls	Ceramic	PTFE

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## UK - Common Features

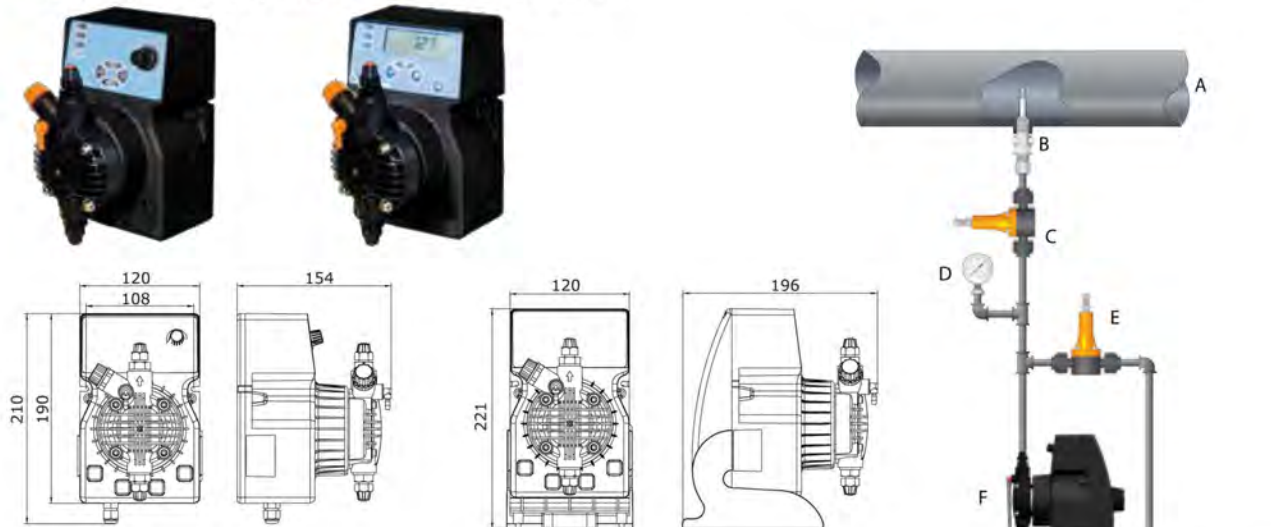
Wall mounted DLX or foot mounted DLXB dosing pumps • Anti-acid plastic casing IP65 protection • Pump supplied with manual air bleed pump head • Level control setting (supplied without probe): -/M Series (-/AD Series upon request) • Suction height: 2 m • Max pulse/minute: 120 • Standard power supply: 230V - 50/60Hz • Optional 110V - 50/60 Hz, 24V 50/60Hz, 24Vdc, 12Vdc.

## UK - Materials

Pump Head: PP, upon request PVDF, PVC and PTFE • Diaphragm: PTFE • Valves: FPM (Viton) lip valve, upon request other elastomers as EPDM (Dutral), NBR (Nitril) and Silicone. Available ball ceramic valves • Connections: 4x6 mm • Foot filter: PP-FPM (Viton) • Injection valve: PP-FPM (Viton) • Tube Kit: 2m + 2m PVC crystal suction and bleeding hose ; 2m PE delivery hose.

## MA/MB

(UK) Microcontroller dosing pump • 3 digit display • Manually adjustable flow rate from 0÷100% • Level control and Flow Sensor setting (supplied without probe) • Available without flow sensor.



## UK - Stroke length adjustment

Upon request manual adjustment of stroke length for DLXB version



## (UK) SAMPLE INSTALLATION

- A - Main Pipeline
- B - New Injection Valve
- C - Backpressure Valve
- D - Pressure Gauge
- E - Relief Valve
- F - Dosing Pump
- G - Tank
- H - New Foot Filter
- I - Level Switch

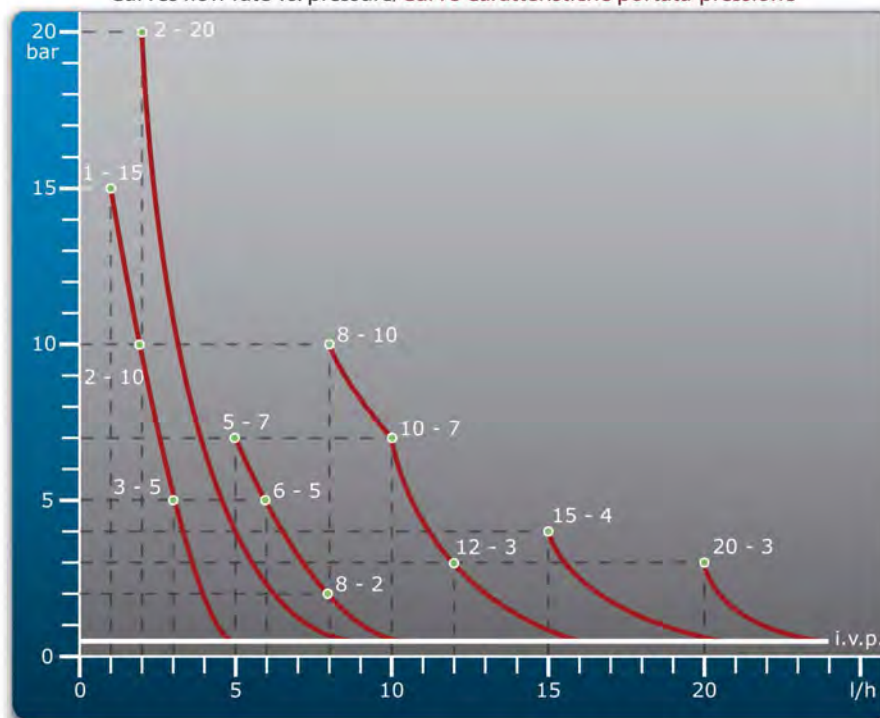




# DLX

Model Modello	Flow rate Portata l/h - GPH	Pressure Pressione Bar - PSI	Max imp./min.	Output for stroke Dosaggio per imp. ml	Stroke Corsa mm	Suction height Altezza aspirazione m	Standard power supply Alim. elettr. standard Volts - Hz	Power comp. Potenza ass. Watts	Current comp. Corrente ass. Ampere	Net weight Peso netto Kg
0115	1 - 0,26	15 - 217	120	0,14	1,10	2,0	230 V 50-60 Hz	37	0,16	2,3
	2 - 0,53	10 - 145		0,28						
	3 - 0,78	5 - 72		0,42						
0220	2 - 0,53	20 - 290		0,28	1,10			37	0,16	2,3
	5 - 1,32	7 - 101		0,69	1,10					
0507	6 - 1,59	5 - 72		0,83				1,40	58	0,25
	8 - 2,12	2 - 29		1,11						
0810	8 - 2,12	10 - 145		1,11	2,00			58	0,25	2,9
	10 - 2,64	7 - 101		1,39						
	12 - 3,17	3 - 43		1,67						
1504	15 - 3,69	4 - 58	2,08	1,80	58	0,25	2,9			
2003	20 - 5,26	3 - 43	2,60							

Curves flow rate vs. pressure/Curve Caratteristiche portata-pressione



Hydraulic Parts/Configurazione Idraulica

Wetted Parts Parti a Contatto con il Liquido	Standard Materials Versione Standard	Upon Request A Richiesta
Pump Head/Corpo pompa	PP	PVDF/AISI 316/ PTFE
Diaphragm/Diaframma	PTFE	
Valves/Valvola	FPM (Viton®)	EPDM (Dutral®); Silicone; NBR; Ceramic
Sealings/Guarnizioni	FPM (Viton®)	EPDM (Dutral®); Silicone; NBR; PTFE
Injection Valve Valvola Iniezione	PP/FPM (Viton®)	PVDF/EPDM (Dutral®); Silicone; NBR Ceramic
Foot Filter/Filtro di Fondo		
Suction/Bleeding Tubings Tubi aspirazione/Spurgo	PVC	PVDF/PTFE/PE
Delivery Tubing/Tubo Mandata	PE	

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## PROBES

- pH and Redox Probes suitable for all dosing systems
- Ceramic Diaphragms
- Operating Temperatures of -5°C to 60°C
- Plastic Body
- Coaxial Cable
- Available with 0.5, 1 or 5 m cables
- Available with no cable



### pH Probe

pH range of 0 to 12  
Available with 0.5, 1 or 5 m cables  
Available with no cable



### ORP Probe

ORP range of  $\pm 2000$   
Available with 0.5, 1 or 5 m cables  
Available with no cable



### GLASS BODY ELECTRODE

Glass body pH or Rx screw connector electrodes, head PG 13,5. Measuring range:  
pH: 0÷14 pH - Rx:  $\pm 1.000$  mV. Other electrodes types or other cables length upon request.

6 bar - 60°C

\*10 bar - 80°C

\*10 bar - 130°C/16 bar - 25°C

\*with screwable connector - no cable supplied