



# Electronic Dosing Systems Ltd

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Solutions For All Metering & Measurement Processes

## HR Series Metering Pumps

**Integrated (pH/Redox) Instruments**

**Multi-Level Programming**

### Dosing Precision with Integrated Intelligence

The next generation in dosing technology where precision is non-negotiable.

Intelligent dosing system that delivers unparalleled control and chemical efficiency featuring fully integrated digital pH and Redox (orp) instrumentation coupled by our patented high-efficiency algorithm, continuously measures and automatically adjusts the dosing rate based on in real-time sensor readings to maintain the system balance.

### Features

- » Flow rates: 0.4 - 110 l/Hr
- » Max backpressure: up to 20 bar
- » Power Supply: 100÷240 Vac - 50/60 Hz
- » Stroke rate: 120 - 300 strokes/minute
- » Pump Head: PVDF (Viton Seals)
- » Diaphragm: PTFE
- » External enclosure: PP reinforced with IP65-rated fibreglass
- » Manual priming bleed valve
- » Installation kit Includes:  
PVDF Injection Fitting - PVDF Footfilter  
PVC Hose – Polythene Delivery Hose



## Key Functions & Control Features

The HR instrument pump with smart dosing technology ensures chemical parameters are maintained precisely at the desired set-point eliminating the need for multiple control systems simplifying installation, engineered for demanding high-precision process control applications these pumps can seamlessly integrated into the most sophisticated systems with operational parameters adapted to ensure process parameters are consistently maintained regardless of working conditions critical to optimising chemical consumption and system performance.

### Operating Modes

**Redox/pH Regulation:** Real-time monitoring and control of pH or redox levels with automatic regulation of dosing based on sensor measurements and user-defined set-point parameters for precise chemical balance in system.

**Measurements:** pH 0-14 - Redox  $\pm 2000$  mV

**Proportional Function:** The set-point can be configured to automatically adapt the pumps flow rate according to the real-time sensor readings reducing the dosage rate until the desired set-point has been achieved.

**On/Off Regulation:** The set-point can be configured for simple to operate in on/off mode where the pump activates when the measurement exceeds or drops below the desired set-point according to the real-time sensor readings.

**Manual Flow Regulation:** The pumps dosing rate output can be set for increased accuracy and chemical efficiency

**Set-Point Program Functions:** Start Delay – Hysteresis Band – Max Dosing Time – Alarm Relay

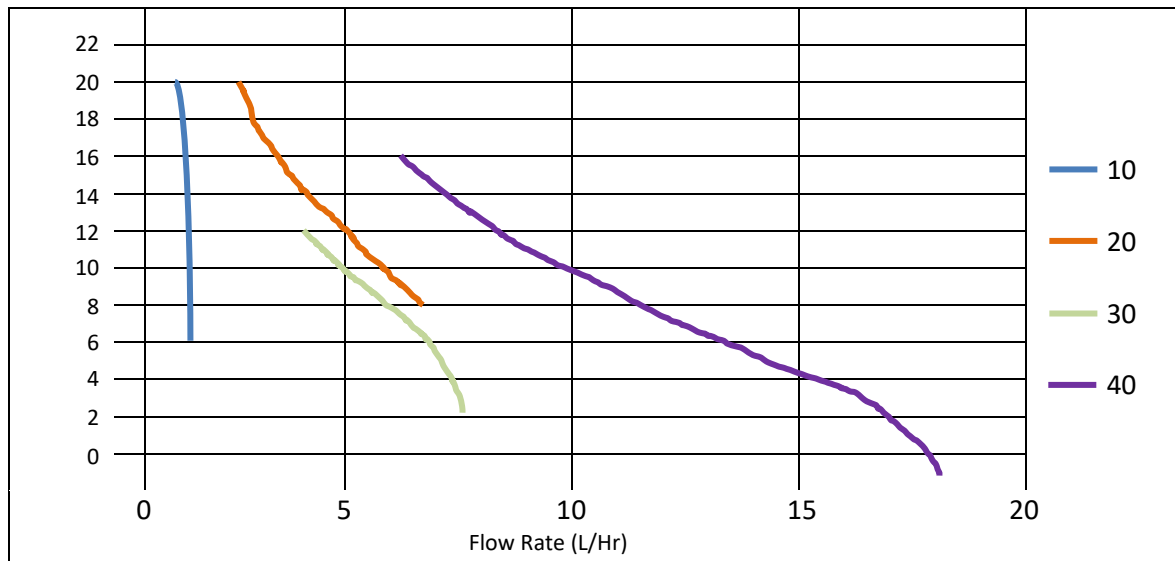
**Safety/Control Inputs:** Flow/Level Sensors – Temp Sensor (PT100) - Remote Start/Stop Function – Password

**Pump Statistics:** Pump Starts – Chemical Dosed – Number of Pump Strokes – Reset Counters

Pump Models					
HS	Analogue Interface: - Constant operation flow rate manually adjustable				
HL	Analogue Interface: - Constant operation flow rate manually adjustable / Level control input				
HK	Digital Interface: - Flow rate manually adjustable. Timed dosing through weekly programmable timer. Programmable timed relay by activating a dry contact input				
HG	Multifunction: - Constant Operation - Proportional flow rate according to external (4-20 mA) current signal - water meter: - (1:n or n:1). Timed dosing with a weekly programmable timer; Dosage in ppm; Dosage batch; Statistics; Password; - Input ON-OFF (remote switch)				
HR	Digital interface - Flow rate manually adjustable. Proportional dosing according the measured pH or Redox value. Temperature compensation input: - PT100 probe - Repetition alarm relay. Remote control On-Off input signal Current 4÷20 mA output for measure transmission. Available with remote communication via ModBus protocol.				
	Pressure (Bar)	Flow Rate (l/hr)	Capacity (cc/stroke)	Frequency Stroke/min	Ø Hydraulic Connections IN / EXT.(mm)
	12	4	0.42	160	4x6
	10	3	0.52	160	4x6
	8	6	0.63	160	4x6
	2	8	0.83	160	4x6
	16	7	0.38	300	4x6
	10	10	0.55	300	4x6
	5	15	0.83	300	4x6
	1	18	1.00	300	4x6
	5	20	1.11	300	8x12
	4	32	1.78	300	8x12
	2	62	3.44	300	8x12
	0.1	110	6.11	300	8x12
	Power Supply				
	All Models	Stabilised Power Supply 110÷240 Vac 50/60Hz		Ambient Temperature: 40° Max	Humidity: 90° Max
	Only HS & HG	12 Vdc 50/60Hz			
	Pump Body		Liquid End's		
	PVDF	PVDF – Stainless Steel (316L) – PVDF (automatic degassing)			
	Installation Kit				
	PVDF	Standard			
	Pump Seals				
	FKM-B (Viton)	PTFE	EPDM (Ethylene Propylene Diene Monomer)		FFKM (Perfluoroelastomer)
	Note: - Guidance purposes only manufacturer reserves right to amend specifications				

- In order satisfy various chemical demands four models are available each offer three different dosing flow rates according to the process working conditions allows the operator to maximise chemical accuracy .
- Delivers reduced energy consumption courtesy of the patented stabilised multi-range power supply algorithm.

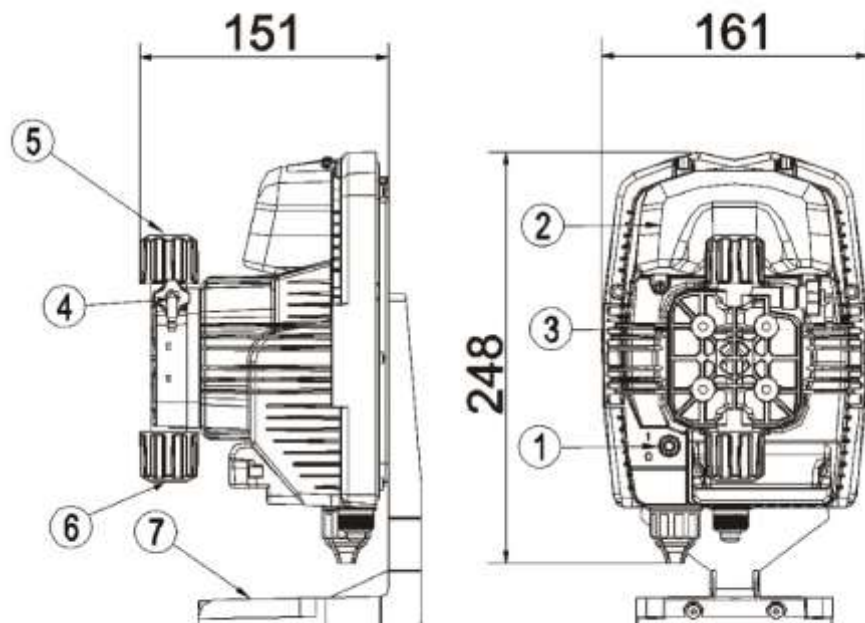
## HR Series Performance Curves



N.B. Flow rates are guild only and subject to manufacturer changes

## Dosing Pump Overall Dimensional Drawing

- 1 Power Switch\*
- 2 Control Panel
- 3 Dosing Head
- 4 Priming Valve
- 5 Delivery Connector
- 6 Suction Connector
- 7 Base Support (optional)



N.B. Wall and tank brackets mounted firmly rear of housing

Dosing heads and seals are manufactured from premium grade materials to meet today's constantly evolving demands providing years of service, chosen to guarantee perfect compatibility with most chemical agents used in domestic, commercial and industrial water treatment markets.

N.B Some pump models aren't equipped with on/off power switch by pressing the SEL key for at least 5 seconds the pump will stop functioning pressing again the SEL key the pump returns to its working state.

# H Series

## WALL-MOUNTED SOLENOID DOSING PUMPS

The multi-model H Series metering pumps delivers accurate consistent chemical dosing for a wide range of commercial & industrial applications including complex high-end processes. Built with premium-grade mechanical & electronic components the H series pumps are the solution of choice for discerning professional responsible for maintaining chemical efficiency. Commitment to continuous refinement of these systems meaning they always meet up-to-date legislation.



## APPLICATIONS

- Commercial swimming pools
- Industrial water treatment
- Cooling water treatment
- Potable water treatment
- Wastewater treatment
- Power generation
- Food & beverage

## PUMP MODELS

- HS Model: - Manually Adjustable - Selectable Frequency Ranges
- HL Model: - Manual Adjustment - Low Level Interface
- HP Model: - 4-20mA input signal - Low Level Interface
- HG Model: - Multifunction Software Programs  
| 4-20mA | water meter | n:1 & 1:n | PPM |  
Timed: - Day-Weekly batch program
- HR Model: - Integrated pH-redox instruments  
N.B. (pH-redox mode selectable in menu)

Remote Wi-Fi interface available  
With full programming authority

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