Chemical Metering Systems Combine Controller and Pump in One Unit

PHP-192-PP

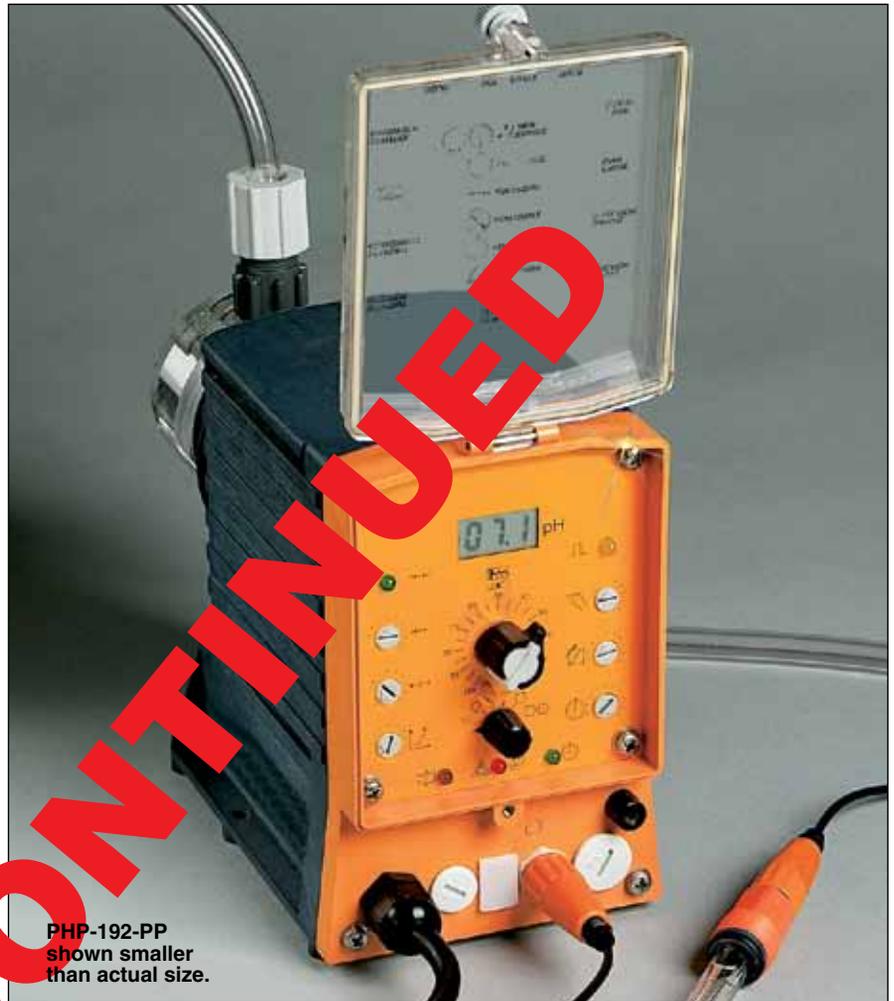**1 YEAR WARRANTY** | **RoHS**

- ✔ Combines Controller and Pump in One Unit
- ✔ Proportional Control
- ✔ LCD Readout of Process pH or Setpoint
- ✔ Reverse Direction Control
- ✔ Control Bandwidth Manually Adjustable, 1 to 3 pH Units
- ✔ NEMA 4X (IP65) Enclosure
- ✔ Choice of PP, PTFE or 316 SS Liquid Ends

The PHP-190 Series of chemical metering systems are unique instruments that combine a pulse frequency controller with a diaphragm-type pump in one compact unit. In the control mode, deviations from setpoint are converted to pulses which vary the stroke rate of the metering pump. As the setpoint is approached, the pump feed slows down to minimize chemical loss and overshoot of the endpoint. Variation of the stroke rate is controlled by a front panel potentiometer or through process controlled operation by external electric or mechanical pacing or by closed loop control. The units are supplied with foot valve, injection valve, power cord, and a float level switch made of polypropylene with a 1.8 m (6') polyethylene-coated cable. Polypropylene (-PP) models include a 3 and 1.5 m (10 and 5') length of polyethylene tubing, and operators manual. For proper control, a holding tank with a minimum 10-minute residence time is required.

PHP-192-PP shown smaller than actual size.

Specifications

Range: pH control 0 to 14 pH
Electrode Connector: BNC (includes SN6-to-BNC adaptor)
Input Impedance: >10^{12} Ω
Zero Point Adjustment: ±3 pH
Slope Adjustment: 85 to 102%
Setpoint Adjustment: 0 to 100%
Display: 3-digit LCD
Control Bandwidth: 1 to 3 pH units, adjustable
Control Direction: Reversible
Linearity: Better than ±1% range
Reproducibility: Better than ±0.5% range
Operating Temperature: -10 to 45°C (14 to 113°F)
Power: 115 Vac
Wetted Parts:
 -PP: Polypropylene and EPDM
 -T: PTFE
 -S: 316 SS and PTFE
All versions have ceramic valve balls

Connections:
-S Models: ¼ FNPT
-T and -PP Models: ¼ x ³⁄₁₆" tubing for PHP-192, PHP-193 or PHP-194; ½ x ³⁄₈" tubing for PHP-195 or PHP-196

Ship Weight [kg (lb)]:
 PHP-192 thru 194: -S: 0.7 (1.6); -PP and -T: 0.3 (0.7)
 PHP-195 and 196: -S: 1.5 (3.3); -PP: 0.3 (0.7); -T: 0.5 (1.1)

To Order

Model No.	Ratings at Maximum Back Pressure	
	bar (psi)	l/h (USGPH)
PHP-192-(*)	16 (232)	0.75 (0.20)
PHP-193-(*)	12 (174)	1.29 (0.34)
PHP-194-(*)	7 (101)	2.82 (0.75)
PHP-195-(*)	3 (43.5)	6.48 (1.71)
PHP-196-(*)	1.5 (22)	12.3 (3.25)

* To order, specify "-PP" for polypropylene, "-T" for PTFE, or "-S" for 316 stainless steel. Comes complete with foot and injection valves, power cord and operator's manual.
For automatic temperature compensation add suffix "-ATC" to model number and consult sales department for pricing.
***Ordering Examples**: PHP-192-S, PHP-192 pump with 316 stainless steel liquid end.*
***PHP-193-PP**, PHP-193 pump with polypropylene liquid end.*