

# CHEMICAL METERING PUMPS

Microprocessor Based, High Performance

PHP-200B Series  
Starts at

**\$850**



PHP-202B-P with included foot and injection valves, \$850, shown smaller than actual size.

- ✓ Continuous Stroke-Length Adjustment Measured
- ✓ Direct Calibration and Built-In Warning
- ✓ Adjustable Backpressure Control
- ✓ Totalized Output in U.S. Gallons or Liters
- ✓ Bleed Valve Standard
- ✓ Control Options: Manual or Analog
- ✓ Relay Output Option
- ✓ Available in Polypropylene, PTFE, or Stainless Steel Liquid Ends

The PHP-200B Series consists of diaphragm-type, solenoid-driven, microprocessor-based metering pumps with maximum capacities to 4.5 GPH and maximum backpressures to 253 psig. The housing is constructed of fiberglass-reinforced PPE plastic, with a NEMA 4X (IP66) enclosure rating to protect against corrosion, dust, and water. A removable hood covers the faceplate. The drive unit houses a short-stroke solenoid with a maximum stroke length of 1.25 mm (0.05"). It is equipped with a noise-suppressing mechanism for quiet operation and has only one moving part, the armature. The diaphragm is constructed of fabric-reinforced EPDM elastomer with a plastic core and PTFE facing. It is chemically resistant against virtually all process fluids and can be used over a wide temperature range. Suction and discharge ports are equipped with double-ball check valves for maximum repeatability. Feed rate is determined by stroke length and stroke rate. Stroke length is manually adjustable from 1 to 100% in increments of 1% via the stroke length knob. Two control modes are available for the PHP-200B Series: manual or analog control.

## Capacities and Specifications

Model Number	Capacity at Maximum Backpressure <sup>†</sup>			Capacity at ½ Max Backpressure <sup>†</sup>		Suction/Discharge Line OD x ID (-P, -T)*	Pre-Primed Suction Lift (ft) <sup>†</sup>	Shipping Wt (lb)
	psi	US GPH (LPH)	cm <sup>3</sup> /Stroke	USG PH (LPH)	cm <sup>3</sup> /Stroke			
PHP-201B/ PHP-211B	145	0.19 (0.719)	0.09	0.21 (0.82)	0.076	¼ x ⅜"	16.4	8.6 (3.9)
PHP-202B/ PHP-212B	253	0.29 (1.10)	0.13	0.37 (1.40)	0.13	¼ x ⅜"	16.4	8.6 (3.9)
PHP-203B/ PHP-213B	253	0.55 (2.08)	0.24	0.66 (2.50)	0.24	¼ x ⅜"	16.4	8.8 (4.0)
PHP-204B/ PHP-214B	145	1.10 (4.16)	0.45	1.32 (5.00)	0.46	½ x ⅜"	16.4	9.0 (4.1)
PHP-205B/ PHP-215B	253	1.10 (4.16)	0.38	1.29 (4.90)	0.45	½ x ⅜"	13.1	10.8 (4.9)
PHP-206B/ PHP-216B	101	2.90 (10.58)	1.02	3.46 (13.10)	1.21	½ x ⅜"	9.8	12.8 (5.8)
PHP-207B/ PHP-217B	58	4.50 (17.0)	1.58	5.04 (19.10)	1.77	½ x ⅜"	9.8	12.8 (5.8)

Comes complete with foot and injection valves, 1.8 m (6') of contact cable for pulse input, and level connector, and operators manual. Polypropylene models are supplied with 3 m (10') or 1.5 m (5') of polyethylene tubing.

<sup>†</sup> Capacities and suction lifts are for waterlike fluids. Higher-specific-gravity fluids reduce suction lift, while higher-viscosity fluids reduce capacity.

\* "S" pumps have ¼ FNPT connections. See ordering information on page L-20.



PHP-202B-P, \$850, front view without cover.



PHP-202B-P, \$850, complete with included foot and injection valves, 1.8 m (6') contact cable for pulse input, level connector, and operator's manual, shown smaller than actual size.



Recommended Reference Book:  
Chemical Engineering,  
**CM-4226, \$60.**  
See Section Y  
For Additional Books



The PHP-210B Series has all the features of the PHP-200B Series, as well as current input. This allows the stroking rate to be controlled by standard process signals. Multiple functions can be programmed through the front keypad, including step-up or step-down ratios and the predetermining counter mode, which allows a preset number of strokes to be counted.

### SPECIFICATIONS

**Maximum Stroke Length:** 1.25 mm (0.05")

**Materials of Construction:**

**Housing:** Fiberglass-reinforced PPE

**Diaphragm:** PTFE-faced EPDM with plastic core

**Liquid-End Options:** Polypropylene (P), PTFE (T), 316 SS (S)

**Seal:** FKM for P models, PTFE for T and S models

**Enclosure Rating:** NEMA 4X (IP66)

**Power Supply:** 100 to 230 Vac, 1 phase, 50/60 Hz  $\pm 10\%$

**Repeatability of Metering:**  $\pm 2\%$  under constant conditions and at minimum 30% stroke length

**Ambient Temperature Range:** -10 to 45°C (14 to 113°F)

**Max Fluid Operating Temperature:** 50°C (122°F)

**Power Cord:** 2 m (6')

**MOST POPULAR MODELS HIGHLIGHTED!**

<b>To Order (Specify Model Number)</b>							
<b>Pulse Frequency Input Models</b>				<b>Frequency/Current Input Models</b>			
	<b>Price</b>				<b>Price</b>		
<b>Model Number</b>	<b>Polypropylene</b>	<b>PTFE</b>	<b>316 SS</b>	<b>Model Number</b>	<b>Polypropylene</b>	<b>PTFE</b>	<b>316 SS</b>
PHP-201B-[*]	\$850	\$1450	\$1700	PHP-211B-[*]	\$925	\$1500	\$1750
PHP-202B-[*]	850	1450	1700	PHP-212B-[*]	925	1500	1750
PHP-203B-[*]	850	1450	1700	PHP-213B-[*]	925	1500	1750
PHP-204B-[*]	875	1550	1950	PHP-214B-[*]	950	1600	2000
PHP-205B-[*]	1150	1750	2100	PHP-215B-[*]	1200	1800	2150
PHP-206B-[*]	1150	1750	2100	PHP-216B-[*]	1200	1800	2150
PHP-207B-[*]	1150	1750	2100	PHP-217B-[*]	1200	1800	2150

\* Insert "P" for polypropylene, "T" for PTFE or "S" for 316 SS.

Comes complete with foot and injection valves, 1.8 m (6') contact cable for pulse input, level connector, and operator's manual.

**Ordering Examples:** PHP-211B-P, frequency/current input, 0.19 GPH max polypropylene pump, \$925.

PHP-202B-P, frequency input, 0.19 GPH max polypropylene pump, \$850.



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