

#### Configuration Data

Model HH **9** **3** **1** - **987**

##### Control Code

- 1 --- **Manual Control:** Speed (stroking frequency) and stroke length manually adjustable.
- 7 --- **Instrument Responsive/Manual Control:** Manual adjustment features of Control Code 1 plus switch conversion to external control for automatic systems.
- 9 --- **Microprocessor/Instrument Responsive:** External 4-20mA or pulse + or x direct; manual stroke length control.

##### Output/Size Code

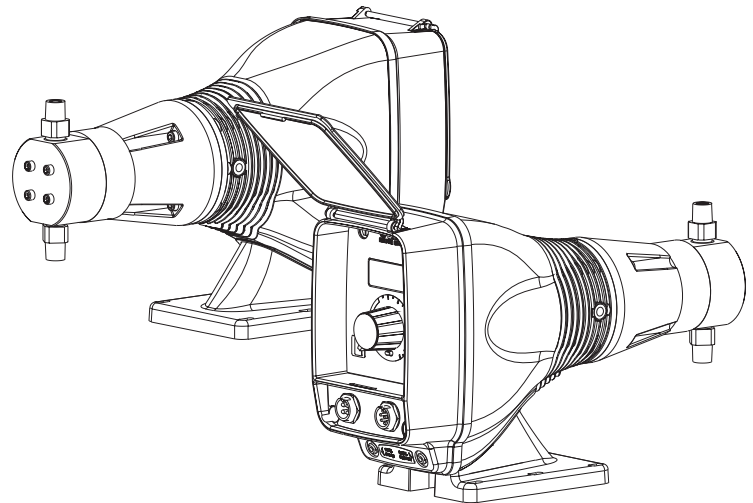
- 1 --- 0.14 GPH (0.50 l/h) ---300 psi---(21 Bar)
- 2 --- 0.10 GPH (0.38 l/h) ---600 psi---(42 Bar)
- 3 --- 0.07 GPH (0.25 l/h) ---1000 psi---(70 Bar)

##### Voltage Code

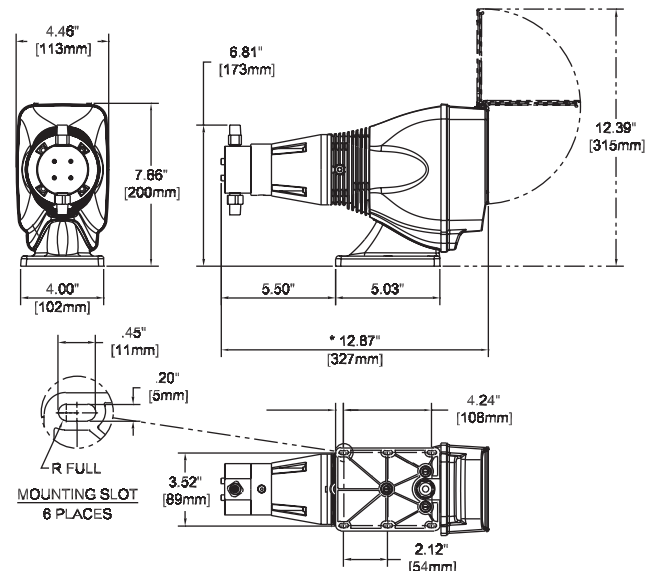
- 1 --- 120 VAC, US Plug, UL
- 2 --- 240 VAC, US Plug, UL
- 3 --- 220-240 VAC, DIN Plug, CE
- 5 --- 240-250 VAC, UK Plug, CE
- 6 --- 240-250 VAC, Aust./NZ Plug
- 7 --- 220-240 VAC, Swiss Plug
- 8 --- 120 VAC, No Plug, CE

##### Liquid End

- 987 --- High Pressure 316 SS Liquid Handling System.



#### Dimensions



*Series HH9 electronic metering pumps combine the accuracy of microprocessor control with 1000 psi injection pressure capability. These high-pressure, programmable pumps are ideal for applications requiring precise injection of concentrated boiler feed chemicals (Max. Output to 3.2 GPD, Max. Pressure to 1000 psi).*

**\*\*Minimum System Pressure 200 psi.**

## Keypad Adjustable Pressure Capacity

An LMI exclusive, the Series HH9 features adjustable pressure control that allows for pressure calibration to your system.

## Unique V-Seal Design

LMI's spring-loaded V-Seals prevent leakage and reduce pump maintenance. This design feature eliminates the need for packing nuts normally used on packed plunger pumps.

## High-Pressure Module

LMI's precision-engineered, high-pressure module includes a 316 S.S. liquid handling assembly.

The cartridge valves are easily serviced and feature closely-guided Stainless Steel balls and seats for accurate, repeatable output.

## Manual Mode Select

The manual stroke rate of the HH9 is adjustable from 1 stroke per hour to 100 strokes per minute, allowing for extreme output flexibility. The HH1 and HH7 can be adjusted for one stroke per minute to 100 strokes per minute.

## Corrosion Resistant Nema 4X (IP65)

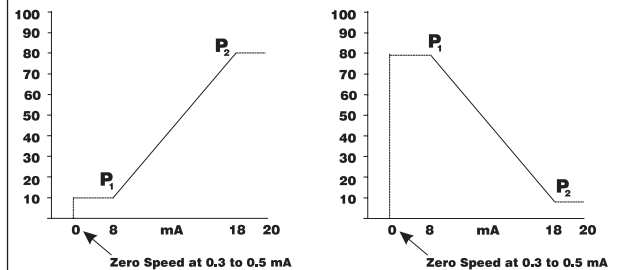
Corrosion resistant, sealed enclosure of glass-fiber reinforced polypropylene protects the pump from harsh chemicals and tough environments.

The electronic controls and circuitry are fully and permanently encapsulated from protection from moisture and corrosive atmospheres.

## External Mode Select

Three external control modes are available to choose from:  
HH9 Only

- **Pulse Divide**  
(÷) incoming pulses  
(reed switch, transistor, opto-coupler, or hall effect sensor)  
From 1 to 999
- **Pulse Multiply (Batch Accumulate)**  
(x) incoming pulses  
(reed switch, transistor, opto-coupler, or hall effect sensor)  
From 1 to 999
- **4 - 20 mA (Slope Adjustable)**  
Programmable 4 - 20 mA or  
0 - 20 mA response direct or inverse



## Rugged Construction

The Series HH9 features a thick-wall, glass-fiber reinforced thermoplastic housing. The integrated plastic and metal structural and magnetic components result in a vibration and shock resistant design not found in competitive products.

Encapsulated ribbon-cable ends provide additional connection strength and corrosion resistance not found in most programmable, electronic-metering pumps.

## Specifications

Series	Maximum Output Capacity	Maximum Injection Pressure	Volume/Stroke (ml) (Min - Max)	Liquid Handling Assembly	Connections
HHX1X-987	0.14 GPH (0.50 l/h)	300 psi (21 Bar)	.030 - .080	316 S.S.	1/4" NPT M
HHX2X-987	0.10 GPH (0.38 l/h)	600 psi (42 Bar)	.015 - .060	316 S.S.	1/4" NPT M
HHX3X-987	0.07 GPH (0.25 l/h)	1000 psi (70 Bar)	.010 - .040	316 S.S.	1/4" NPT M