

## INERT SOLENOID OPERATED SELF PRIMING MICRO PUMPS

### FEATURES

- Fixed displacement diaphragm pumps, capable of fixed outputs from 8µl to 250 µl
- Factory set for discrete output
- Positive shut-off
- Low Internal Volume
- Custom materials available
- Fully isolated solenoid
- Low power consumption
- Wetted parts are available in PPS, PEEK EPDM, Teflon®, Chemraz®, and Viton<sup>1</sup>

### SPECIFICATIONS

Series	090SP		120SP		150SP	
Voltage(VDC) <sup>2</sup>	12	24	12	24	12	24
Power (Watts)	2.6	2.6	4	4	8	8
Currents Amps @ 70°F	.22	.11	.32	.16	.67	.33
Ports <sup>3</sup>	1/4-28 Flat Bottom		1/4-28 Flat Bottom		5/16-24 Flat Bottom	
Lead Wires	15" 26 AWG, TFE Coated		15" 26 AWG, TFE Coated		15" 22 AWG, TFE Coated	

<sup>1</sup> 150SP is available in PPS and EPDM only. 090SP is not available in Chemraz or Viton

<sup>2</sup> 115 and 220 VAC also available.

<sup>3</sup> Other ports available, consult factory.

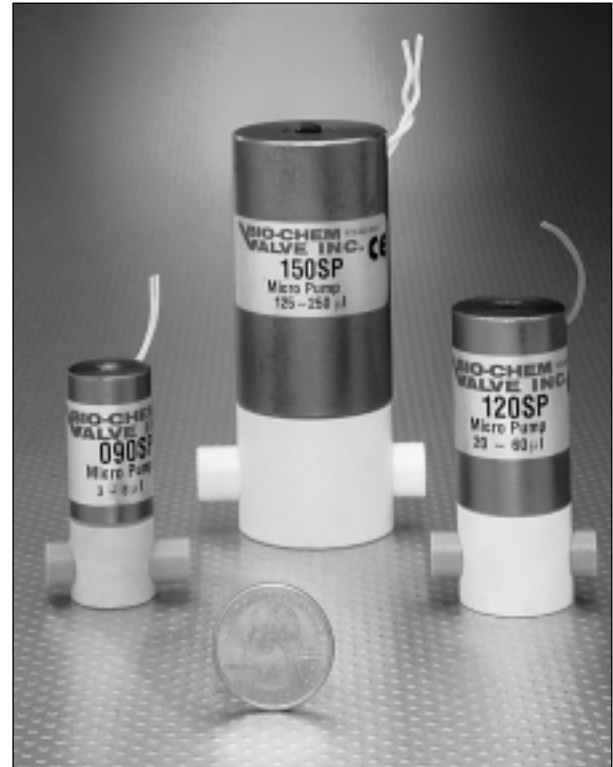
® Teflon is a registered trademark of DuPont Co.

® Chemraz is a registered trademark of Green Tweede & Co.

### PERFORMANCE

Series	Discrete Output Setting Range(µl)	Set-point Accuracy/Dispense Repeatability	Maximum Actuation Rate (cycles/min)	Maximum Flow Rate (ml/min)
Consult factory				
090SP	8	/ ±2µl	250	2
120SP	20-60	±3% / ±2%	250	15
120SPI	20-60	±3% / ±2%	250	15
150SP	100-250	±3% / Consult factory	120	30

All performance tests use distilled water



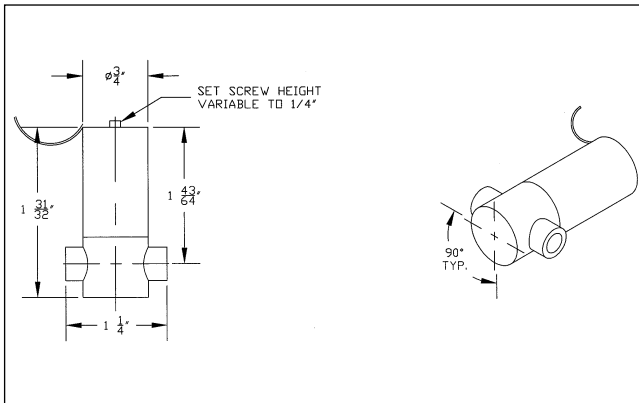
The series 090SP, 120SP, 120SPI, and 150SP are self priming, micro-dispensing, solenoid actuated micro pumps, designed for the OEM market to provide a non-metallic, inert fluid path for the dispensing of high purity or aggressive fluids. They can be factory set for discrete outputs between 8µl and 250µl per solenoid actuation. Pumps are capable of actuation rates up to 250 cycles per minute providing a maximum flow rate up to 30ml/min.

Pumps of this design are well suited for any precise dispense application. They permit replacement of pump and valve combinations with a more compact, reliable, accurate and cost effective solution. Applications include reagent dispensers, wash pumps, diluters, and drain pumps.

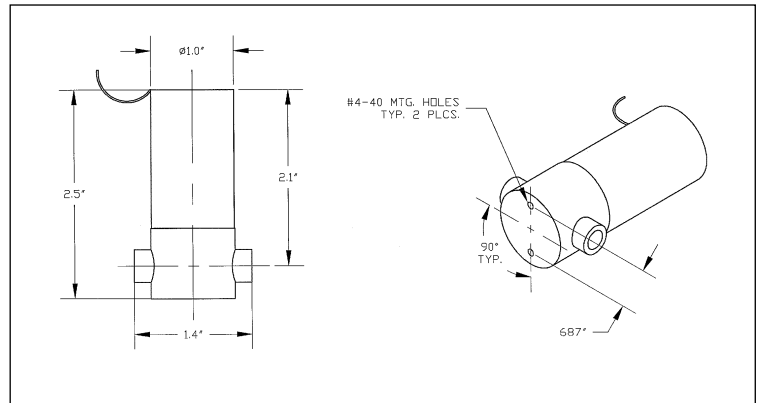
Note: Pump requires energize and de-energize cycle to provide dispense.

# INSTALLATION DIMENSIONS

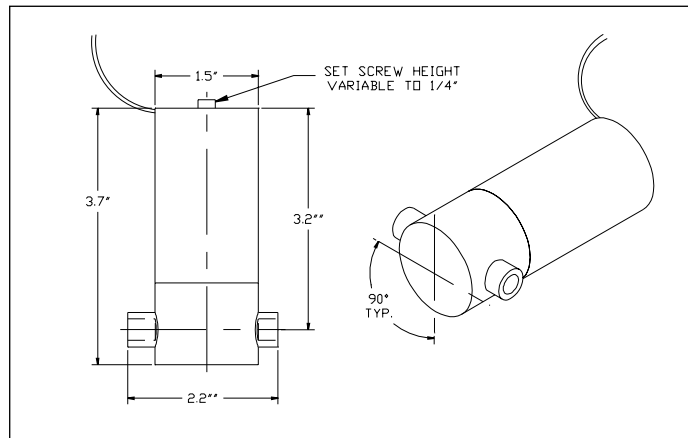
## Series 090SP Micro Pump



## Series 120SP & 120SPI Micro Pump



## Series 150SP Micro Pump



## ORDERING INFORMATION

Series	Voltage	Dispense Volume <sup>2</sup>
090SP	12 VDC 24 VDC 115 VAC 220 VAC	8 $\mu$ l
120SP 120SPI	12 VDC 24 VDC 115 VAC 220 VAC	25 $\mu$ l 40 $\mu$ l 50 $\mu$ l
150SP	12 VDC 24 VDC 115 VAC 220 VAC	125 $\mu$ l 250 $\mu$ l

<sup>2</sup> Select one of these volumes or consult factory for custom volumes.

Example: P/N **090SP** **12** - **8**  
Series Voltage  $\mu$ l