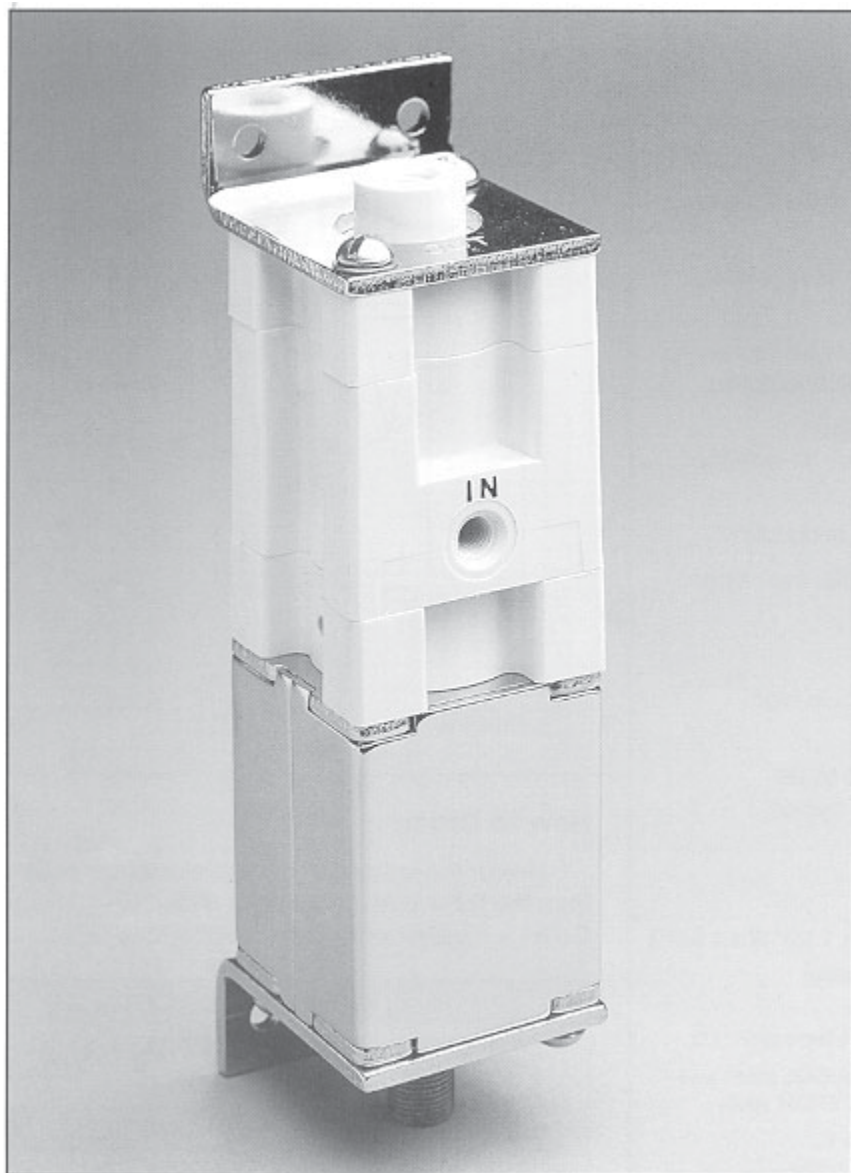


# Dispensing Pump

High Purity, Solenoid Operated, Piston Design  
Model: SV653



## INTRODUCTION

For over 50 years, Valcor Scientific, a Division of Valcor Engineering Corporation has designed and provided solenoid operated pumps to handle high purity and aggressive media. The SV653 Series pumps are rugged, reliable, precision devices, capable of operating through one million cycles without the need of maintenance

Recommended for a wide range of

liquid dispensing and metering applications, the SV653 Series offers distinct advantages over other pumps in terms of durability, cost, size and accuracy.

The SV653 pump provides an output range, graduating from 50 to 350 microliters per dispense.

## DESCRIPTION

The SV653 is a piston-pump activated by the electrical energization

of a solenoid coil. As the coil is energized and de-energized, a piston moves up and down to dispense liquids.

The SV653 pump employs Valcor's field-proven patented o-ring pumping system. This seals the piston while allowing the pump chamber to refill.

A flexible diaphragm isolates the liquid from any metal operating parts. Wetted surfaces are polypropylene and either Viton® or EPDM elastomers.

## APPLICATIONS

The SV653 pump is well suited to applications requiring repeatable precision dispensing of small volumes over time to create a total volume of liquid.

This pump is designed for applications where liquids can be affected by or deteriorate metal in the fluid path, as in medical and hazardous environment applications.

Typical SV653 applications include:

### Dispensing

- Adhesives
- Reagents in clinical instrumentation
- Diluent in analytic instrumentation
- Lubricants

### Adding

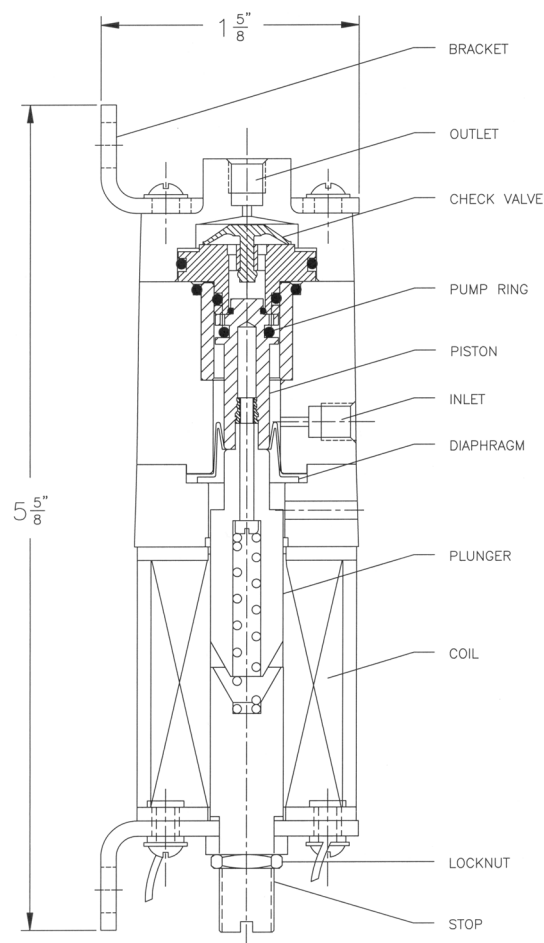
- Syrup to carbonated water in soda machines
- Fragrance to personal products

- Adjustability over a wide range of operating conditions is a function of two variables:
  - Volume output per stroke is adjustable mechanically by setting piston stroke (Adjustable screw)
  - Flow rate per minute is adjusted by frequency of coil energization
- High precision, repeatability within 2%
- Self-priming, can start from dry condition and capable of lifting five feet of water
- Compact, smaller than peristaltic and syringe pumps
- Long life, operates over a million cycles without maintenance
- High viscosity compatibility, dispense liquids with viscosities as high as 10,000 centistokes, by adjusting coil "on-time"
- Choice of elastomeric seal materials for application compatibility
- Custom mounting configurations available
- Custom inlet/outlet fittings available, including barb, lure and threaded
- Custom electrical terminations
- Low cost, one of the most affordable high precision metering pumps
- Easily maintained, while designed to be maintenance free over a million cycles, refurbishment kits are available

## PHYSICAL SPECIFICATIONS

Size: .....	5 5/8" H x 1 1/2" W x 1 5/8" D
Weight: .....	15.5 oz (439g)
Port Connection: .....	1/4" - 28 Thread
	Min. Inlet Tube 1/8" I.D.
	Min. Outlet Tube 1/16" I.D.
Wetted Surfaces: .....	Polypropylene, glass and Viton® or EPDM seals
Coil Construction: .....	UL Class B
	with 18" leads
Power: .....	21 watts
	(115 AC or 12, 24VDC)
Output/Stroke: .....	50 to 350 µl
Maximum Strokes/Min: .....	120 on H <sub>2</sub> O
Maximum Dispensing Rate: .....	42cc/minute
Maximum In-Take Lift: .....	60" H <sub>2</sub> O
Minimum On-Time: .....	250 Milliseconds
Maximum On-Time: .....	6.0 Seconds
Repeatability: .....	+/-2%
Special Requirements: .....	Consult Factory

**MODEL: SV653**



## HOW TO ORDER

Select the *enclosure*, *voltage* and *elastomer* codes from the table below. **Example:** SV653 + [Enclosure] + [Voltage] + P + [Elastomer] + 1 = SV653C115PE

Enclosure Code	
Conduit = C	Pigtail = P
Voltage Code	
115/60 Hz AC = 115	24VDC = 24
12VDC = 24	
Elastomer Code	
Viton® = V	EPDM = E

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