

# Dispensing/Metering Pump

Solenoid Operated, Piston Design

Model: SV525



## INTRODUCTION

For more than 40 years, Valcor Scientific, a Division of Valcor Engineering Corporation has designed and provided solenoid operated pumps. The SV525 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 applications, the SV525 Series offers distinct advantages over other pumps in terms of durability, cost, size and accuracy.

The SV525 pump provides an output

range, ranging from 10 to 40 microliters per dispense.

## DESCRIPTION

The SV525 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.

Wetted parts are stainless steel and elastomeric seals, making the SV525 suitable for most non-corrosive liquids.

The volume of liquid dispensed per piston stroke depends on the stroke

length, which is easily adjustable. To dispense at a specific flow rate, the solenoid coil is pulsed at an appropriate cycle rate.

## APPLICATIONS

The SV525 pump is well suited to applications requiring repeatable precision dispensing of small volumes over-time to create a total volume of liquid.

It performs well in a wide range of industrial and laboratory applications, including high viscosity fluids.

To meet individual requirements, Valcor can modify elastomer materials, mountings, inlet and outlet fittings, voltage, and other features.

Typical SV525 applications include:

### Dispensing:

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

### Metering:

- Reagents in analyzers
- Concentrated liquids in a flow of aqueous spray

### Adding:

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

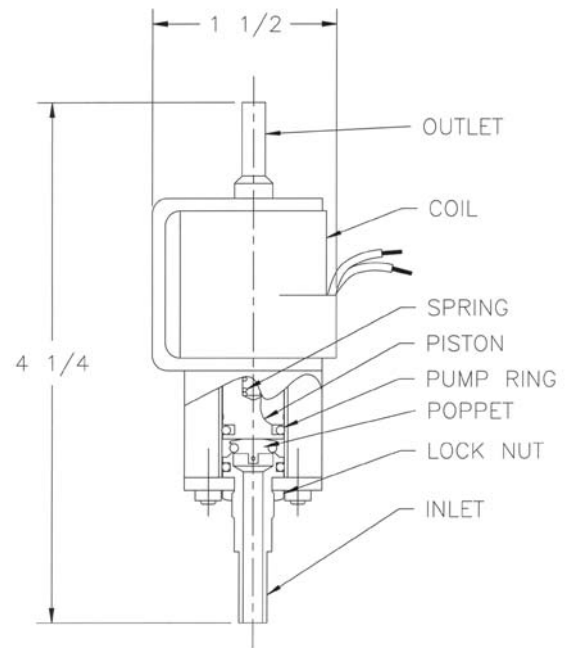
## FEATURES

- 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:** ..... 4 1/4"H x 1 1/4"W x 1 1/2"D  
**Weight:** ..... 8 oz (227g)  
**Tube Connection:** ..... For 3/16" I.D. Flex Tubing  
**Material in Contact**  
**With Fluid:** ..... Stainless Steel, EPDM or Viton®  
**Coil Construction:** ..... UL Class B, with 18" leads.  
**Power:** ..... 7 watts (24 VDC)  
**Output/Stroke:** ..... 10 to 40 µl  
**Maximum Strokes/Min:** ..... 300 on H<sub>2</sub>O  
**Maximum Dispensing Rate:** ..... 12cc/minute  
**Maximum Priming Height:** ..... 36 in H<sub>2</sub>O  
**Minimum On-Time:** ..... 150 Milliseconds  
**Maximum On-Time:** ..... 6.0 Seconds  
**Repeatability:** ..... +/-2%  
**Special Requirements:** ..... Consult Factory

## MODEL: SV525



## HOW TO ORDER

Select the elastomer code from the table below.  
**Example:** SV525A197 - [Elastomer Code] = SV525A197 - 2

Elastomer Code	
Viton® = 2	EPDM = 7

# 1

**Valcor Scientific**

**Valcor Engineering Corporation®**

2 Lawrence Road • Springfield, New Jersey 07081  
 973-467-8400 • Fax: 973-467-9592  
<http://www.valcor.com>