

New SP100 Variable-Flow Stepper OEM Pumps

These low cost peristaltic pumps are among the smallest variable-flow stepper-driven pumps in the market. Flow rates are available from 0.01 to 56 ml/min. They adapt easily to almost any instrument application. Enjoy the precise control of stepper peristaltic pumps in your fluid transfer application.

Select from three different tubing sizes and a variety of tubing materials. Tygon A60 tubing offers the longest pump life, Silicone is the softest with higher flow rates. Viton provides excellent chemical resistance. Other custom tubing options available - inquire for details. New models available with optional ABS housing, power jack and on/off power switch.

All pumpheads have SAN plastic housings, POM rotor assembly with four stainless steel rollers. These Vdc motors are reversible. Silicone and Tygon A60 pump systems are supplied with polypropylene fittings. Viton systems are supplied with PVDF fittings. One year warranty.

Quick change pump head
Stepper Control
Reversible



Compact, variable-flow
SP100VOST pump.

SPECIAL FEATURES

Fluid only contacts the tubing
Pump viscous fluids and slurries
Quiet, long-life motor operation
Wide flow control range
Compact design

SPECIFICATIONS

	Tygon, Viton	Silicone
Max. Fluid Pressure:	30 psig (2 bar)	10 psig (0.7 bar)
Max. Suction Lift:		
0.8 and 1.6 mm ID	12-ft (3.6 m) H ₂ O	12-ft (3.6 m) H ₂ O
3.0 mm ID	25-ft (7.5 m) H ₂ O	20-ft (6 m) H ₂ O
Measurement Range:	See ordering table (page 2)	
Accuracy:	±1% full scale	
Repeatability:	±1% full scale	
Max. Fluid Temp.:	93°C (200°F)	
Duty Cycle:	Continuous	
Operating Temp.:	0 to 50°C (32 to 122°F)	
Enclosure:	open motor systems; ABS optional	
Wetted parts:	Silicone, Tygon® A60 or Viton®	
Power:	24Vdc; 75 to 400 mA	
Dimensions (W x H x D):	60 x 47 x 74 mm; (2.4 x 1.9 x 2.9 in.)	
Weight:	235 g (8.2 oz); 570 g (20 oz.)	
Shipping Wt:	0.45 kg (1 lbs); 0.9kg (2 lbs)	

APPLICATIONS

Chemical metering
Fluid dispensing
Proportional control
Analytical instruments
Research & Development

SP100VOST Max Flowrates (ml/min)

Motor	Tubing ID (mm)					
RPM	Vdc	Amps	3.0	1.6	0.8	
150	24	2 A	28	7.8	3	
300*	24	2 A	56	15.6	6	

Flow rates listed are nominal and will vary depending upon fluid viscosity and back pressure. Specifications listed are for Tygon A60 (formerly Norprene) tubing. Silicone flow rates are approx 10-20% higher. Viton flow rates slightly lower.. *The 150 rpm limit is with one of the controllers on page 2.

SP100VOST-Peri Pumps

SP100VOST Ordering Information – (Flow rates listed are for Tygon A60G tubing; Silicone is slightly higher).

<u>Flow Rate</u>	<u>Tubing</u>		<u>Pump Part No. (does not include controller)</u>		
<u>ml/min</u>	<u>ID</u>	<u>RPM Range</u>	<u>Tygon® A60G/F</u>	<u>Silicone</u>	<u>Viton®</u>
24Vdc Pumps - Variable-flow; Standard Tubing					
0.1 to 28	3.0 mm (1/8")	0.15 to 150*	SP101-259ST	SP100-259ST	SP102-259ST
0.05 to 7.8	1.6 mm (1/16")	0.15 to 150*	SP101-256ST	SP100-256ST	SP102-256ST
0.01 to 3	0.8 mm (1/32")	0.15 to 150*	SP101-253ST	SP100-253ST	SP102-253ST

Flow rates listed are nominal and will vary depending upon fluid viscosity and back pressure. *The 150 rpm limit is with one of the controllers below. Maximum operating speed recommended for this pump is 300 rpm. Other special tubing options are available on special order. Call for details.

Add a controller to your stepper pump!

Select from two different controllers. Option A for built-in control, Option B for 0-5Vdc speed control with a remote potentiometer. Both allow control of motor speed from 0.15 to 150 rpm. Controllers mount easily to back of motor or on panel.

- A Stepper Controller, 24-30Vdc w/ built-in speed control.
- B Stepper Controller, 24-30Vdc w/ 0-5Vdc input for remote potentiometer or speed control..

Customize your OEM pumps!

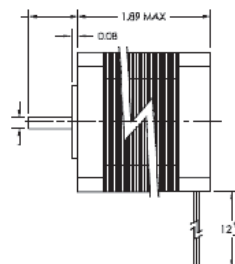
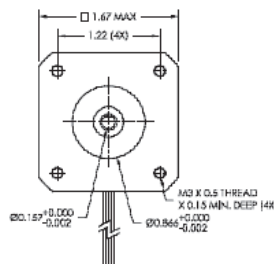
Order your OEM pump with an optional protective ABS plastic housing and control knobs/switches. All cased and switched models include a 5.5 x 2.5 mm jack for quick power connection. Driver controls are mounted in the housing. For completely cased pumps, inquire for details.

MOTOR SPECIFICATIONS

Full Step Angle:	1.8°
Step Angle Accuracy:	5%
Rated Current/Phase:	1.5A
Resistance/Phase:	2 ohm \pm 10%
Inductance/Phase:	3.85 mH \pm 20%
Detent Torque:	2.4 N-cm
Rotor Inertia:	82 g/cm. ²
Di-electric Strength:	500V
Motor Frame Size:	NEMA Size 17
Lead Wires:	four 22AWG, Class B
A- Red, A+ Blue, B+ Green, B- Black	



Optional Dual channel pumps -
Inquire for details.



Specifications subject to change.

APT Instruments provides no warranty on usage of pumps or life of tube.
Immersion and life tests are recommended prior to use.
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Tygon—Reg TM Saint-Gobain Performance Plastics
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