

New SP100VCHD Variable-Flow OEM Pumps

These low-cost peristaltic pumps are among the most compact, most powerful variable-flow pumps in the market. Flow rates are available from 0 to 47 ml/min. They adapt easily to almost any instrument application. Enjoy the benefits of peristaltic pumps in your fluid transfer application.

Select from 2 different Vdc motor speeds, three different tubing sizes and a variety of tubing materials. Tygon® A60G tubing offers the longest pump life, Silicone is the softest with higher flow rates. Viton® provides excellent chemical resistance. Modular power supplies and battery packs are available.

The pumpheads have ABS plastic housings, acetal rotor assembly with four stainless steel rollers. These heavy-duty, brushless Vdc motors are reversible and rated for continuous-duty. Silicone and Tygon® A60G pump systems are supplied with polypropylene fittings. Viton® systems are supplied with PVDF fittings. One year warranty.

Installation Note: These heavy-duty DC motors are rated for continuous-duty applications. Consider the BLDC motor long-term continuous-duty applications.

SPECIAL FEATURES

*Fluid only contacts the tubing
Rated for continuous-duty
Self-priming, run dry without damage
Variable-flow 12Vdc motors
Consistent metering capability*

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	16-ft (4.8 m) H ₂ O	16-ft (4.8 m) H ₂ O
3.0 mm ID	25-ft (7.5 m) H ₂ O	25-ft (7.5 m) H ₂ O
Flow Range:	See ordering table (page 2)	
Accuracy:	±2% full scale	
Repeatability:	±2% full scale	
Max. Fluid Temp.:	93°C (200°F)	
Duty Cycle:	Continuous	
Operating Temp.:	0 to 50°C (32 to 122°F)	
Enclosure:	PVC	
Wetted parts:	Various tubing materials	
Power:	12Vdc; 150 to 800 mA (24Vdc models available)	
Dimensions (W x H x D):	100 x 100 x 132 mm; (4 x 4 x 5.2 in.)	
Shipping Wt:	1.4 kg (3 lbs)	

**Variable-flow
Reversible
Heavy-duty, BLDC motors**



*Compact, variable-flow
SP100 Vdc HD pumps.*

Multi-channel
options available.

APPLICATIONS

*Chemical metering
Reagent dispensing
Chemical waste removal
Analytical instruments
Research & Development*

SP100VCHD Max Flowrates (ml/min)

Motor	Tubing ID (mm)				
	RPM	Vdc	Amps	3.0	1.6
250	12	800 mA	47	13	5
35	12	150 mA	7.7	2.1	0.7

Flow rates listed are nominal and will vary depending upon fluid viscosity and back pressure. Specifications listed are for Tygon A60G (formerly Norprene) tubing. Silicone flow rates are approx 10-20% higher. Viton flow rates slightly lower.

SP100VCHD-Peri Pumps

SP100VCHD Ordering Information – (Flow rates listed are for Tygon® A60G tubing; Silicone is 10-20%)

Flow Rate ml/min	Tubing ID	RPM Range	Pump Part No.		
			V-Flow,I/O	V-Flow,I/O/R	V-Flow,I/O/R,Rem
12Vdc Pumps - Variable-flow; up to 500 mA current draw; Select Tubing Material below.					
0 to 47	3.0 mm (1/8")				
0 to 13	1.6 mm (1/16")	0 to 250	SP10XV1-415	SP10XV1R-415	SP10XV3R-415
0 to 5	0.8 mm (1/32")				
0 to 7.7	3.0 mm (1/8")				
0 to 2.1	1.6 mm (1/16")	0 to 35	SP10XV1-406	SP10XV1R-406	SP10XV3R-406
0 to 0.7	0.8 mm (1/32")				

V-Flow=Variable-flow; I/O=On/Off Switch; I/O/R=On/Off/Reverse Switch; Rem=Remote Speed (0-5Vdc); Rem Start/Stop: Remote Direction.

Flow rates listed are nominal and will vary depending upon fluid viscosity and back pressure.

24 Vdc systems are available. Other motor rpms and special tubing options are available on special order. Call for details.

Tubing Set Material Selection

Part No:	Description	Sizes Incl.(mm)	Fitting	Application Recommendations
SP101-980AF	Tygon® A60G	3, 1.6, 0.8 ID	PP	Longest flex life, Black, Good with Acids/Bases
SP101F-980AF	Tygon® A60F	3, 1.6, 0.8 ID	PP	Longest flex life, Beige, Food-Grade
SP104L-980AF	Tygon® LFL	3, 1.6 ID	PP	Long flex life, Clear, USP, FDA
SP100-980AF	Silicone	3, 1.6, 0.8 ID	PP	Good flex life, Translucent, General Purpose
SP100P-980AF	Tygon® 3350 (Sil)	3, 1.6 ID	PP	Good flex life, Translucent, USP, ultra smooth
SP104P-980AF	Tygon® F-4040	3, 1.6 ID	PP	Good flex life, Yellow Transl, Fuel/Lubricant
SP104X-980AF	Tygon® XL-60	3, 1.6 ID	PP	Good flex life Clear, General Purpose
SP101R-980AF	Tygon® Chemical	3, 1.6 ID	PP	Long flex life, Beige, Chem Resistant liner
SP102-980AF	Viton®	3, 1.6, 0.8 ID	PVDF	Good flex life, Black, FDA, Chem Resist-Organics

VAC power supply

Convert these compact drives to VAC models with a compact power supply. 5.5 OD x 2.5mm ID (center +) connector.

Order the optional power supply.

PS100.015 Power supply, 115Vac/12Vdc, 2.1A; US Std plug.

PS100.015E Power supply, 230Vac/12Vdc, 2.1A; Europ. plug.

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.

SmallPumps—TM Advanced Product Technology, LLC Viton—Reg TM DuPont Dow Elastomers LLC

Tygon—Reg TM Saint Gobain Performance Plastics Corp.

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