

## New SmallPumps™ SP200 Variable-Flow Pumps

These low-cost peristaltic pumps provide variable flow and exceptional life performance in a small attractive package. Flow rates are available from 0 to 38 ml/min. Select the model with the type of control that you require—manual or remote control. Enjoy the benefits of peristaltic pumps in your fluid transfer application.

Select from 2 different motor speeds and a variety of tubing materials. Three different tubing sizes are provided with each pump. Tygon® A60G tubing offers the longest pump life, Silicone is the softest with higher flow rates. Viton® provides excellent chemical resistance.

These all-plastic pumps have SAN plastic housings, acetal rotor assembly with three nylon rollers. The rugged ABS plastic housing provides protection for the motor and PCB controls. The pumps are reversible. Remote control connections through DB9F connector. Silicone and Tygon® A60G pump systems are supplied with polypropylene fittings. Viton® systems are supplied with PVDF fittings. One year warranty.

**Installation Note:** These brush-type Vdc motors are rated for intermittent duty. Request information on our heavy-duty or brushless dc motors for continuous-duty applications.

**All-plastic pump head**  
**Variable-flow**  
**Reversible**  
**Remote Control**



Compact, variable-flow  
SP200VC pumps

### SPECIAL FEATURES

*Fluid only contacts the tubing*  
*Self-priming, run dry without damage*  
*Variable-flow 12Vdc motors*  
*Pump viscous fluids and slurries*  
*Compact size*

### SPECIFICATIONS

	Norprene	Silicone
Max. Fluid Pressure:	30 psig (2 bar)	10 psig (0.7 bar)
Max. Suction Lift:		
1.6 mm ID	16-ft (4.8 m) H <sub>2</sub> O	16-ft (4.8 m) H <sub>2</sub> O
3.0 and 5.0 mm ID	25-ft (7.5 m) H <sub>2</sub> O	25-ft (7.5 m) H <sub>2</sub> O
Flow Range:	See ordering table (page 2)	
Accuracy:	±5% full scale	
Repeatability:	±5% full scale	
Max. Fluid Temp.:	93°C (200°F)	
Duty Cycle:	Intermittent	
Operating Temp.:	0 to 50°C (32 to 122°F)	
Enclosure:	ABS plastic	
Wetted parts:	Various tubing materials	
Power:	12Vdc; up to 500 mA (24Vdc avail)	
Dimensions:	84 x 140 x 97 mm (3.3 x 5.5 x 3.8 in.)	
Weight (pump):	approx 650 g (23 oz)	
Shipping Wt:	approx 0.9 kg (2 lbs)	

### APPLICATIONS

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

### SP200VC Max Flowrates (ml/min)

Motor RPM	Vdc	Amps	Tubing ID (mm)		
			5.0	3.0	1.6
35	12	200 mA	38	22	5.5
5	12	100 mA	5.3	3	0.7

Flow rate listed are nominal and will vary depending upon fluid viscosity and back pressure. Specifications listed are for Tygon® A-60G (formerly Norprene®) tubing. Silicone flow rates are approx 10-20% higher. Viton® flow rates slightly lower.  
*Other RPMs and 24Vdc Systems available on special order.*

# SP200VC-Tubing Pumps

## SP200VC Ordering Information – (Flow rates listed are for Tygon® A60G tubing; Silicone is 10-20% higher).

Flow Rate	Tubing			Pump Part No.	
ml/min	ID	RPM Range	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 38	5.0 mm (3/16")	0 to 35	SP20XV1-003	SP20XV1R-003	SP20XV3R-003
0 to 22	3.0 mm (1/8")				
0 to 5.5	1.6 mm (1/16")				
0 to 5.3	5.0 mm (3/16")	0 to 5	SP20XV1-020	SP20XV1R-020	SP20XV3R-020
0 to 3	3.0 mm (1/8")				
0 to 0.7	1.6 mm (1/16")				

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.

Other RPMs and 24Vdc Systems available on special order. Other special tubing options are available on special order. Call for details.

## Tubing Set Material Selection

Part No:	Description	Sizes Incl.(mm)	Fitting	Application Recommendations
SP201-980AF	Tygon® A60G	5, 3 ID	PP	Longest flex life, Black, Good with Acids/Bases
SP201F-980AF	Tygon® A60F	5, 3, 1.6 ID	PP	Longest flex life, Beige, Food-Grade
SP204L-980AF	Tygon® LFL	5, 3, 1.6 ID	PP	Long flex life, Clear, USP, FDA
SP200-980AF	Silicone	5, 3, 1.6 ID	PP	Good flex life, Translucent, General Purpose
SP200P-980AF	Tygon® 3350 (Sil)	5, 3, 1.6 ID	PP	Good flex life, Translucent, USP, ultra smooth
SP204P-980AF	Tygon® F-4040	5, 3, 1.6 ID	PP	Good flex life, Yellow Transl, Fuel/Lubricant
SP204X-980AF	Tygon® XL-60	5, 3, 1.6 ID	PP	Good flex life Clear, General Purpose
SP201R-980AF	Tygon® Chemical	5, 3 ID	PP	Long flex life, Beige, Chem Resistant liner
SP202-980AF	Viton®	5, 3, 1.6 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 by adding the suffix to part number.

-U Power supply, 110-240Vac/12Vdc, 1A; US Std plug.

-E Power supply, 110-240Vac/12Vdc, 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.

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**For more information contact:**

**APT Instruments**

**Omaha, NE 68144 USA**

**877.324.5444 Toll-free**

**217.498.0342 \* 217.498.0352Fx**

**[www.aptinstruments.com](http://www.aptinstruments.com)**

**[sales@aptinstruments.com](mailto:sales@aptinstruments.com)**