

## New SmallPumps™ SP200VC Variable-Flow Pumps

These new low-cost peristaltic pumps provide variable-flow and exception pump performance in a small, attractive package. Flow rates are available from 0.06 to 62 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 5 different motor speeds, four different tubing sizes and a variety of tubing materials. Norprene® tubing offers the longest pump life, Silicone is the softest with higher flow rates. Viton® provides excellent chemical resistance. For greater chemical resistance, check out the new Chem\*sure® tubing @ [www.aptinstruments.com/goretube.htm](http://www.aptinstruments.com/goretube.htm) or call.

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. Most of the pumps are reversible. Remote control connections through DB15F connector. Silicone and Norprene 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 brushless dc motors for continuous-duty applications.

### 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:		
0.8 and 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
Measurement 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:	Silicone, Norprene® or Viton®	
Power:	12Vdc; 75 to 150 mA (2.5x5.5mm)	
Dimensions:	84 x 140 x 97 mm	
(W x H x D)	(3.3 x 5.5 x 3.8 in.)	
Weight (pump):	approx 650 g (23 oz)	
Shipping Wt:	approx 0.9 kg (2 lbs)	

**All-plastic Pump Head**  
**Variable-Flow**  
**Reversible**  
**Remote Control**



*Compact, variable-flow  
SP200VC pumps with optional  
remote control.*

### APPLICATIONS

*Chemical metering*  
*Salt water aquariums*  
*Fermentation*  
*Analytical instruments*  
*Research & Development*

### SP200VC Max Flowrates (ml/min)

Motor	Tubing ID (mm)					
RPM	Vdc	Amps	5.0	3.0	1.6	0.8
70	12	150 mA	62	38	9.4	2.8
35	12	100 mA	38	22	5.5	1.6
20	12	75 mA	21	12	2.8	0.8
10	12	75 mA	10	6	1.3	0.38
5	12	75 mA	5.3	3	0.7	0.2

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

# SP200VC-Tubing Pumps

NA - Not Available at this time  
NR- Not Recommended

## Control Module Features

Manual flow control, on/off switch  
Manual reversible switch (CW/CCW)  
Remote analog start/stop  
Remote flow control (0-5Vdc), flow direction.

V1X	V1R	V2R	V3R
•	•	•	•
	•	•	•
		•	•
			•

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

Flow Rate ml/min	Tubing ID	RPM Range	Model No.	Norprene®	Pump Part No. Silicone	Viton®
12Vdc Pumps - Variable-flow; reversible; up to 150 mA current draw						
Standard Pump Range						
0.5 to 1.6	0.8 mm (1/32")	12 to 43	SP20X.008.BVXX.S1X	SP201VXX.005	SP200VXX.005	SP202VXX.005
1 to 2.8	0.8 mm (1/32")	20 to 77	SP20X.008.AVXX.S1X	SP201VXX.006	SP200VXX.006	SP202VXX.006
1.6 to 5.5	1.6 mm (1/16")	12 to 40	SP20X.016.BVXX.S1X	SP201VXX.007	SP200VXX.007	SP202VXX.007
3.2 to 9.4	1.6 mm (1/16")	20 to 77	SP20X.016.AVXX.S1X	SP201VXX.008	SP200VXX.008	SP202VXX.008
6.6 to 22	3.0 mm (1/8")	12 to 40	SP20X.030.BVXX.S1X	SP201VXX.001	SP200VXX.001	SP202VXX.001
13 to 38	3.0 mm (1/8")	20 to 77	SP20X.030.AVXX.S1X	SP201VXX.002	SP200VXX.002	SP202VXX.002*
15 to 38	5.0 mm (3/16")	16 to 39	SP20X.050.BVXX.S1X	SP201VXX.003	SP200VXX.003	SP202VXX.003
35 to 62	5.0 mm (3/16")	38 to 64	SP20X.050.AVXX.S1X	SP201VXX.004*	SP200VXX.004	NR
Low Flow Pump Range						
0.06 to 0.2	0.8 mm (1/32")	1.5 to 5.5	SP20X.008.EVXX.S1X	SP201VXX.013	SP200VXX.013	SP202VXX.013
0.12 to 0.38	0.8 mm (1/32")	3.3 to 10.5	SP20X.008.DVXX.S1X	SP201VXX.014	SP200VXX.014	SP202VXX.014
0.2 to 0.7	1.6 mm (1/16")	1.5 to 5.5	SP20X.016.EVXX.S1X	SP201VXX.015	SP200VXX.015	SP202VXX.015
0.3 to 0.8	0.8 mm (1/32")	8 to 22	SP20X.008.CVXX.S1X	SP201VXX.016	SP200VXX.016	SP202VXX.016
0.45 to 1.3	1.6 mm (1/16")	3.3 to 10.5	SP20X.016.DVXX.S1X	SP201VXX.017	SP200VXX.017	SP202VXX.017
1 to 2.8	1.6 mm (1/16")	8 to 22	SP20X.016.CVXX.S1X	SP201VXX.018	SP200VXX.018	SP202VXX.018
0.8 to 3	3.0 mm (1/8")	1.5 to 5.5	SP20X.030.EVXX.S1X	SP201VXX.019	SP200VXX.019	SP202VXX.019
1.4 to 5.3	5.0 mm (3/16")	1.5 to 5.5	SP20X.050.EVXX.S1X	SP201VXX.020	SP200VXX.020	SP202VXX.020
1.5 to 6	3.0 mm (1/8")	3.3 to 10.5	SP20X.030.DVXX.S1X	SP201VXX.021	SP200VXX.021	SP202VXX.021
3 to 10	5.0 mm (3/16")	3.3 to 10.5	SP20X.050.DVXX.S1X	SP201VXX.022	SP200VXX.022	SP202VXX.022
4.2 to 12	3.0 mm (1/8")	8 to 22	SP20X.030.CVXX.S1X	SP201VXX.023	SP200VXX.023	SP202VXX.023
7.5 to 21	5.0 mm (3/16")	8 to 22	SP20X.050.CVXX.S1X	SP201VXX.024	SP200VXX.024	SP202VXX.024

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

\*3 and 5 mm Viton tubing with 70 rpm motor operates at approx 10% less than ratings. Flow is reduced. See SP200HDVC pumps for higher torque and higher flow rate systems. Other special tubing options are available on special order. Call for details.

## VAC power supply

Convert these compact drives to VAC models with a compact power supply. 5.5 OD x 2.5mm ID (center + ) connector. Add the suffix to the part no. to include the power supply.

- U Power supply, 115Vac/12Vdc, 0.5mA; US Std plug.
- E Power supply, 230Vac/12Vdc, 0.5mA; 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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