

New SmallPumps™ SP100FC Fixed-Flow Pumps

These new low cost peristaltic pumps provide fixed-flow with higher torque performance in a small attractive package. Flow rates are available from 0.09 to 13 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, three 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.

All pumpheads have ABS plastic housings, acetal rotor assembly with four stainless steel 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. Also see our continuous-duty synchronous motors in our SP100FO series.

**Four-roller pump head
Reversible
Remote Control**



Compact, fixed-flow SP100FC pumps with optional remote control.

SPECIAL FEATURES

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

APPLICATIONS

*Chemical metering
Detergent dispensing
Condensate removal
Analytical instruments
Research & Development*

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 | 12-ft (3.6 m) H ₂ O | 12-ft (3.6 m) H ₂ O |
| 3.0 and 5.0 mm ID | 25-ft (7.5 m) H ₂ O | 25-ft (7.5 m) H ₂ 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: | 115 Vac or 230Vac; 23W max. | |
| 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) | |

SP100FC Flowrates (ml/min)

| Motor RPM | Watts | Tubing ID (mm) | | |
|--------------|-------|----------------|------|------|
| | | 3.0 | 1.6 | 0.8 |
| 70 | 23 | 13 | 3.8 | 1.3 |
| 35 | 18 | 7.7 | 2.1 | 0.7 |
| 20 | 15 | 4 | 1.1 | 0.38 |
| 10 | 15 | 1.9 | 0.54 | 0.18 |
| 5 | 15 | 1 | 0.28 | 0.09 |

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.

SP100FC-Tubing Pumps

NA - Not Available at this time
NR - Not Recommended

Control Module Features

Manual on/off switch.

Manual reversible switch (CW/CCW).

Remote start/stop (via contact closure).

Remote flow direction change (via contact closure).

| | F1X | F1R | F2X | F2R | F3R |
|---|-----|-----|-----|-----|-----|
| Manual on/off switch. | • | • | • | • | • |
| Manual reversible switch (CW/CCW). | | • | | • | |
| Remote start/stop (via contact closure). | | | • | • | • |
| Remote flow direction change (via contact closure). | | | | | • |

SP100FC Ordering Information – (Flow rates listed are for Norprene tubing; Silicone is 10-20% higher).

| Flow ml/min | Tubing ID | RPM Range | Model No. | Pump Part No. | | |
|---|----------------|-----------|---------------------|---------------|--------------|--------------|
| | | | | Norprene® | Silicone | Viton® |
| 115 Vac and 230 Vac Pumps - Fixed-flow; optional controls selected from table on top of page. Select power cord at bottom of page. | | | | | | |
| Standard Pump Range | | | | | | |
| 0.7 | 0.8 mm (1/32") | 35 | SP10XX.008.BFXX.S1_ | SP101FXX.100 | SP100FXX.100 | SP102FXX.100 |
| 1.3 | 0.8 mm (1/32") | 70 | SP10XX.008.AFXX.S1_ | SP101FXX.101 | SP100FXX.101 | SP102FXX.101 |
| 2.1 | 1.6 mm (1/16") | 35 | SP10XX.016.BFXX.S1_ | SP101FXX.102 | SP100FXX.102 | SP102FXX.102 |
| 3.8 | 1.6 mm (1/16") | 70 | SP10XX.016.AFXX.S1_ | SP101FXX.103 | SP100FXX.103 | SP102FXX.103 |
| 7.7 | 3.0 mm (1/8") | 35 | SP10XX.030.BFXX.S1_ | SP101FXX.104 | SP100FXX.104 | SP102FXX.104 |
| 13 | 3.0 mm (1/8") | 70 | SP10XX.030.AFXX.S1_ | SP101FXX.105 | SP100FXX.105 | NR |
| Low Flow Pump Range | | | | | | |
| 0.09 | 0.8 mm (1/32") | 5 | SP10XX.008.EFXX.S1_ | SP101FXX.106 | SP100FXX.106 | SP102FXX.106 |
| 0.18 | 0.8 mm (1/32") | 10 | SP10XX.008.DFXX.S1_ | SP101FXX.107 | SP100FXX.107 | SP102FXX.107 |
| 0.28 | 1.6 mm (1/16") | 5 | SP10XX.016.EFXX.S1_ | SP101FXX.108 | SP100FXX.108 | SP102FXX.108 |
| 0.38 | 0.8 mm (1/32") | 20 | SP10XX.008.CFXX.S1_ | SP101FXX.109 | SP100FXX.109 | SP102FXX.109 |
| 0.54 | 1.6 mm (1/16") | 10 | SP10XX.016.DFXX.S1_ | SP101FXX.110 | SP100FXX.110 | SP102FXX.110 |
| 1 | 3.0 mm (1/8") | 5 | SP10XX.030.EFXX.S1_ | SP101FXX.111 | SP100FXX.111 | SP102FXX.111 |
| 1.1 | 1.6 mm (1/16") | 20 | SP10XX.016.CFXX.S1_ | SP101FXX.112 | SP100FXX.112 | SP102FXX.112 |
| 1.9 | 3.0 mm (1/8") | 10 | SP10XX.030.DFXX.S1_ | SP101FXX.113 | SP100FXX.113 | SP102FXX.113 |
| 4 | 3.0 mm (1/8") | 20 | SP10XX.030.CFXX.S1_ | SP101FXX.114 | SP100FXX.114 | SP102FXX.114 |

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

NR-3 mm ID Viton tubing is not recommended with 70 rpm motor. See SP100FOHD systems for higher torque and flowrates.

Other special tubing options are available on special order. Call for details.

VAC power cords

Complete your selection of these compact drives by selecting a power cord for the IEC320 connector. Add the suffix to the p/n to indicate the voltage and include the correct 1.8m (6 ft) power cord.

“U” Power cord, 115Vac, US Std plug.

“E” Power cord, 230Vac, 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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Norprene—Reg TM Norton Co. Chemsure—Reg TM W.L. Gore & Associates, Inc.

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For more information contact:

JDfcWgGa UfHwta

USA

HY. :- & !+ \$* !+(' '

Fax: 925-706-2583

www.iprocessmart.com

sales@iprocessmart.com