**A-100NE**

**Fixed Speed**

**Digital Timer Control**

**Pulse Input Batch**

**4-20mA on-time cycle control**

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### Features:

- Peristaltic pump design does not have valves that can clog requiring maintenance.
- Self priming - even against maximum line pressure. By-pass valves are not required. Cannot vapor lock or lose prime.
- Outputs to 5.17 GPH (19.56 LPH).
- Output pressures to 100 PSI (69.9 bar).
- Output volume is not effected by changes in back pressure.
- Patented pump tube design installs easily and stays centered on the rollers without manual adjustment.
- Two pump tubes supplied with each pump. No extra tubing required.
- 4 operating modes; manual on time per cycle adjustment, pulse input batching, 4-20mA on time per cycle adjustment, and 0-10v DC on time per cycle adjustment.
- Repeating interval on-time cycle timer is programmable in seconds, minutes, hours and days resulting in near infinite turndown ratio. Example: 5 seconds on per 10 day cycle.
- On time per cycle can be controlled via 4-20mA signal. Note: 20mA must equal maximum pump output.
- Digital interval timer results in a high frequency of small injections per minute.
- Durable housing of chemical resistant Valox (PBT) plastic.

### Specifications:

- **Max. working pressure**: 100 psig (6.9 bar)
- **Max. fluid temperature**: 130°F (54°C)
- **Max. ambient temperature**: -14°F to 110°F (-10°C to 43°C)
- **Output adjustment range**: Adjustable 0.1 - 99 seconds
- **Duty cycle**: Continuous
- **Maximum viscosity**: 5,000 Centipoise
- **Maximum suction lift**: 30 ft. Water 0 psig
- **Maximum Solids**: 50% by volume
- **Enclosure**: NEMA 3R, (IP23)
- **Approximate shipping wt**: 10 lb. (4.5 kg)

### Materials of Construction:

#### Wetted components:

- **Pump Tube Assembly**: Norprene®, Tygothane® or FKM tubing
- **PVDF tube assembly connection fittings**
- **Suction Tubing**: Clear PVC
- **Suction Strainer**: Natural Polypropylene
- **Discharge Tubing**: Natural Polyethylene (LLDPE)
- **Injection/Check valve**: Polypropylene (optional PVDF)
- **Body & insert**: Ceramic
- **Spring**: Hastelloy C-276
- **Ball Seat O-ring**: TFE/P (optional EP)
- **Static Seal O-ring**: FKM (optional EP)
- **Duckbill Valve**: Santoprene®

### Non-Wetted components:

- **Pump Head & Enclosure**: Valox® (PBT) thermoplastic
- **Pump Head Cover**: Clear Acrylic
- **Cover Screws**: 300 Stainless, Polypropylene cap
- **Roller Assembly**:
  - **Rotor**: Valox® (PBT)
  - **Rollers**: Nylon
  - **Roller Bearings**: Bronze
  - **Motor Shaft**: Nickel plated steel
  - **TFD System Sensor pins**: Hastelloy C-276
- **Power Cord**: 3 conductor, SJTW-A Water-resistant

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**Voltage (max amp):**

<table>
<thead>
<tr>
<th>Voltage/Hz</th>
<th>115V/60Hz</th>
<th>230V/60Hz</th>
<th>220V/50Hz</th>
<th>230V/50Hz</th>
<th>240V/50Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 &amp; 30 rpm</td>
<td>1.37 amp</td>
<td>1.87 amp</td>
<td>0.64 amp</td>
<td>1.44 amp</td>
<td>0.66 amp</td>
</tr>
<tr>
<td>45 &amp; 60 rpm</td>
<td>0.74 amp</td>
<td>0.74 amp</td>
<td>0.68 amp</td>
<td>1.14 amp</td>
<td>0.66 amp</td>
</tr>
<tr>
<td>45 &amp; 60 rpm</td>
<td>1.04 amp</td>
<td>1.04 amp</td>
<td>0.66 amp</td>
<td>1.14 amp</td>
<td>0.66 amp</td>
</tr>
</tbody>
</table>

**Power Cord Plug Type:**

- NEMA 5/15 (USA)
- NEMA 6/15 (USA)
- CEE 7/7 (EUROPE)
- CEE 7/7 (EUROPE)
### Model Number Matrix:

**Dimensions:**
- **Base Mounting**
  - .200" Dia., 5mm 4 places
  - 7.625" 194mm
  - 3.500" 89mm
  - 7.375" 187mm
- **Rear Panel Mounting**
  - .200" Dia., 5mm 4 places
  - 8.187" 208mm

**Model Number Matrix:**

<table>
<thead>
<tr>
<th>Maximum Motor RPM</th>
<th>MODEL A1N E - E -</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = 14 RPM</td>
<td></td>
</tr>
<tr>
<td>1 = 30 RPM</td>
<td></td>
</tr>
<tr>
<td>2 = 45 RPM</td>
<td></td>
</tr>
<tr>
<td>3 = 60 RPM</td>
<td></td>
</tr>
</tbody>
</table>

**Power Supply**
- 0 = 115V/60Hz
- 1 = 220V/50Hz
- 2 = 230V/60Hz
- 8 = 240V/50Hz AS 3112 (Australia/New Zealand)
- 9 = 230V/50Hz BS 1363 (UK)

**Output Control**
- V = Digital speed control with external input
- F = Analog speed control
- E = Digital batch timer with external input
- A = Analog timer, 60 sec. Cycle - 100% duty
- C = Analog timer, 5 sec. Cycle - 100% duty
- S = Analog timer, 60 sec. Cycle - 10% duty
- X = No output control - fixed feed rate

**Miscellaneous Options (not required):**
1. 1/4" OD Flex-A-Thane®
2. 3/8" OD Flex-A-Thane®
3. 7/16" OD Flex-A-Thane®
4. 1/4" OD Flex-A-Prene®
5. 5/16" OD FKM
6. 3/8" OD Flex-A-Prene®
7. 7/16" OD Flex-A-Prene®
8. 7/16" OD Flex-A-Chem®

**Tubing Connection Type**
- T = Compression tube nuts

**Pump Tube Size and Material**
- 1 = 1/4" OD Flex-A-Thane®
- 2 = 3/8" OD Flex-A-Thane®
- 3 = 7/16" OD Flex-A-Thane®
- 4 = 1/4" OD Flex-A-Prene®
- 5 = 5/16" OD FKM
- 6 = 3/8" OD Flex-A-Prene®
- 7 = 7/16" OD Flex-A-Prene®
- 8 = 7/16" OD Flex-A-Chem®

**Maximum Flow rate and pressure capacities:**

<table>
<thead>
<tr>
<th>Tube no.</th>
<th>Tubing Material</th>
<th>14 RPM MODELS</th>
<th>30 RPM MODELS</th>
<th>45 RPM MODELS</th>
<th>60 RPM MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mili/minute</td>
<td>oz/min</td>
<td>lph/minute</td>
<td>gph/psi/bar</td>
<td>lph/minute</td>
</tr>
<tr>
<td>1</td>
<td>Flex-A-Thane®</td>
<td>15</td>
<td>0.51</td>
<td>0.90</td>
<td>0.24</td>
</tr>
<tr>
<td>2</td>
<td>Flex-A-Thane®</td>
<td>32</td>
<td>1.08</td>
<td>1.92</td>
<td>0.51</td>
</tr>
<tr>
<td>3</td>
<td>Flex-A-Thane®</td>
<td>73</td>
<td>2.47</td>
<td>4.37</td>
<td>1.16</td>
</tr>
<tr>
<td>4</td>
<td>Flex-A-Prene®</td>
<td>6</td>
<td>0.20</td>
<td>0.36</td>
<td>0.10</td>
</tr>
<tr>
<td>5</td>
<td>FKM</td>
<td>11</td>
<td>0.37</td>
<td>0.66</td>
<td>0.17</td>
</tr>
<tr>
<td>6</td>
<td>Flex-A-Prene®</td>
<td>18</td>
<td>0.61</td>
<td>1.08</td>
<td>0.29</td>
</tr>
<tr>
<td>7</td>
<td>Flex-A-Prene®</td>
<td>57</td>
<td>1.92</td>
<td>3.42</td>
<td>0.90</td>
</tr>
<tr>
<td>8</td>
<td>Flex-A-Chem®</td>
<td>40</td>
<td>1.35</td>
<td>2.40</td>
<td>0.63</td>
</tr>
</tbody>
</table>

**Replacement Pump Tubes:**

<table>
<thead>
<tr>
<th>Pump Model Number Suffix</th>
<th>Pump Tube Part Number</th>
<th>Pump Tube Material</th>
<th>Nominal Pump Tube OD</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1T</td>
<td>A1-1T</td>
<td>Flex-A-Thane®</td>
<td>1/4&quot; (6.4mm)</td>
</tr>
<tr>
<td>-2T</td>
<td>A1-2T</td>
<td>Flex-A-Thane®</td>
<td>3/8&quot; (9.5mm)</td>
</tr>
<tr>
<td>-3T</td>
<td>A1-3T</td>
<td>Flex-A-Thane®</td>
<td>7/16&quot; (11.1mm)</td>
</tr>
<tr>
<td>-4T</td>
<td>A1-4T</td>
<td>Flex-A-Prene®</td>
<td>1/4&quot; (6.4mm)</td>
</tr>
<tr>
<td>-5T</td>
<td>A1-5T</td>
<td>FKM</td>
<td>5/16&quot; (7.9mm)</td>
</tr>
<tr>
<td>-6T</td>
<td>A1-6T</td>
<td>Flex-A-Prene®</td>
<td>3/8&quot; (9.5mm)</td>
</tr>
<tr>
<td>-7T</td>
<td>A1-7T</td>
<td>Flex-A-Prene®</td>
<td>7/16&quot; (11.1mm)</td>
</tr>
<tr>
<td>-8T</td>
<td>A1-8T</td>
<td>Flex-A-Chem®</td>
<td>7/16&quot; (11.1mm)</td>
</tr>
</tbody>
</table>

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