Ultra-Pure Multi-Port Electronic Metering Pumps

PEM electronic metering pumps accurately dispense 1-50 ml of corrosive media. They feature an adjustable stroke. Their fully supported rolling diaphragm offers 80 psi discharge pressures. They have PTFE flow paths and no exposed metals to prevent corrosion and contamination.

Features & Benefits

- Electronically controlled adjustable stroke dispense volume up to 50ml
- Fully adjustable stroke speed
- Highly accurate; ±0.01% repeatable
- 2 to 6 port configurable
- No exposed metalics prevents corrosion and contamination
- PTFE wetted surfaces with fully-swept flow path for ultra-pure applications
- PTFE rolling diaphragm for linear dispense
- Visual position reference for easy setup and monitoring
- Leak detection available
- Easy to install and service with quick-change mount
- Install in any orientation
- Clean room assembly, testing and packaging
- Self-priming
- Compact footprint
- Minimal hold-up volume
- 80 PSI discharge capable
- Positive inlet/outlet valving prevents flow through
- Programmable system logic
- Programmable suckback

See online animation.

https://wkfluidhandling.com/pem050/
Operation
As the motor moves the piston downward, fluid is drawn through a port into the chamber. As the motor moves the piston upward, fluid is forced out of the chamber, and valves control the flow through the outlet ports. Fluid may be dispensed via one port or alternated between ports. Fluid may also remain in the chamber to be dispensed as needed.

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Dispense Range</th>
<th>Repeatability (at Full Scale)</th>
<th>Max Cycles Per Minute</th>
<th>Air Consumption</th>
<th>Communication</th>
<th>Valve Actuation Air Pressure</th>
<th>Max Discharge Pressure</th>
<th>Fluid Path Materials</th>
<th>Temperature Capability</th>
<th>Weight</th>
<th>Suction Lift *</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEM050</td>
<td>1 - 50 ml per Stroke</td>
<td>± 0.01% *</td>
<td>6 CPM</td>
<td>1 - 3 SCFM</td>
<td>Serial, Ethernet, or Digital (0-5 V, 0-10 V, 4-20 mA)</td>
<td>4.14 - 5.86 bar (60 - 85 psi)</td>
<td>5.51 bar (80 psi)</td>
<td>PTFE</td>
<td>0 - 100°C (32 - 212°F)</td>
<td>2.95 kg (6.5 lb)</td>
<td>4.6 m (15 ft)</td>
</tr>
</tbody>
</table>

*Optimized parameters can improve repeatability (up to ± 0.01%). Minimize suction lift to maximize repeatability. Contact White Knight for details. Tests conducted with water at ambient temperature. Dispense measured at full stroke with maximum and minimum supply pressures at 80 psi and 60 psi.

Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>&quot;A&quot;</th>
<th>&quot;B&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEM050-02</td>
<td>2.7 (69)</td>
<td>11.0 (279)</td>
</tr>
<tr>
<td>PEM050-03</td>
<td>4.2 (107)</td>
<td>12.5 (318)</td>
</tr>
<tr>
<td>PEM050-04</td>
<td>4.2 (107)</td>
<td>12.5 (318)</td>
</tr>
<tr>
<td>PEM050-05</td>
<td>5.7 (145)</td>
<td>14.0 (356)</td>
</tr>
<tr>
<td>PEM050-06</td>
<td>5.7 (145)</td>
<td>14.0 (356)</td>
</tr>
</tbody>
</table>

Dimensions in inches (mm)

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