Ultra-Pure High-Pressure Pneumatic Metering Pumps

PPM pneumatic metering pumps accurately dispense up to 100 ml of corrosive chemicals. They feature an adjustable stroke. Their fully supported rolling diaphragm offers 85 psi discharge. They have PTFE flow paths and no exposed metals, which prevents corrosion and contamination.

Advances in Pump Technologies

±0.1% Repeatability
85 psi Discharge
Fully-swept PTFE flow path
PTFE rolling diaphragm
Leak-free operation
No exposed metals
Positive control valves
Install in any orientation
Adjustable stroke speeds

Features & Benefits

• Manually controllable stroke limiter for adjustable dispense volume up to 100ml
• Fully adjustable stroke speed
• Highly accurate; ±0.1% repeatability
• No exposed metallics prevents corrosion and contamination
• 100% PTFE fully-swept fluid path for ultra-high purity applications
• PTFE rolling diaphragm with PP housing
• Position reference for easy setup and monitoring
• Leak detection port

• Easy to install and service with snap-in/out mount
• Install in any orientation
• Class 100 clean room assembly, testing and packaging
• Self-priming
• Compact footprint
• Minimal hold-up volume
• 60 - 85 PSI capability
• Positive inlet/outlet valving prevents flow through

Industries

Semiconductor
LEDs & Electronics
Flat-Panel Displays
Photovoltaic / Solar

Applications

Chemical Dispense
Chemical Replenish
Chemical Dosing
Chemical Blending
Chemical Spiking
Premix Vessels
Single-Wafer Tools

https://wkfluidhandling.com/ppm
PPM METERING PUMPS

Operation

Diagram shown with 3-Port 2-way pneumatic valves.

1. End-shift, stroke up
2. Mid-shift, stroke up
3. End-shift, stroke up
4. Mid-shift, stroke down

Diaphragm Operation

The diaphragm ends are fixed to the piston (1) and internal cylinder (2). As the piston moves, the end of the diaphragm connected to it moves and the end connected to the cylinder remains stationary. The center of the diaphragm rolls, forcing liquid in/out.

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>PPM100</th>
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</thead>
<tbody>
<tr>
<td>Dispense Range</td>
<td>10 - 100 ml per stroke</td>
</tr>
<tr>
<td>Repeatability (at Full Scale)</td>
<td>± 0.1%</td>
</tr>
<tr>
<td>Max Cycles Per Minute</td>
<td>12 CPM</td>
</tr>
<tr>
<td>Air Consumption</td>
<td>0.048 SCF Max 0.038 SCF Min</td>
</tr>
<tr>
<td>Valve Actuation Air Pressure</td>
<td>4.14 - 5.86 bar (60 - 85 psi)</td>
</tr>
<tr>
<td>Max Discharge Pressure</td>
<td>5.86 bar (85 psi)</td>
</tr>
<tr>
<td>Fluid Path Materials</td>
<td>PTFE</td>
</tr>
<tr>
<td>Temperature Capability</td>
<td>0 - 100°C (32 - 212°F)</td>
</tr>
<tr>
<td>Weight</td>
<td>1.6 kg (3.5 lb)</td>
</tr>
<tr>
<td>Suction Lift *</td>
<td>4.6 m (15 ft)</td>
</tr>
</tbody>
</table>

Dimensions

Dimensions in millimeters (inches)

*Suction lift diminishes over time. Recommended installation level less than 4.6 m (15 ft) above source.

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