



WHITE KNIGHT®

PPM METERING PUMPS

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.

ADVANCED PUMP TECHNOLOGIES

±0.1% Repeatability

85 psi Discharge

Fully-swept PTFE flow path

PTFE rolling diaphragm

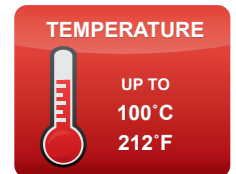
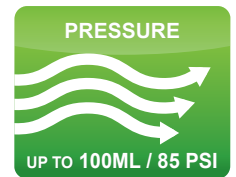
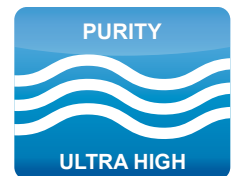
Leak-free operation

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 metal 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>

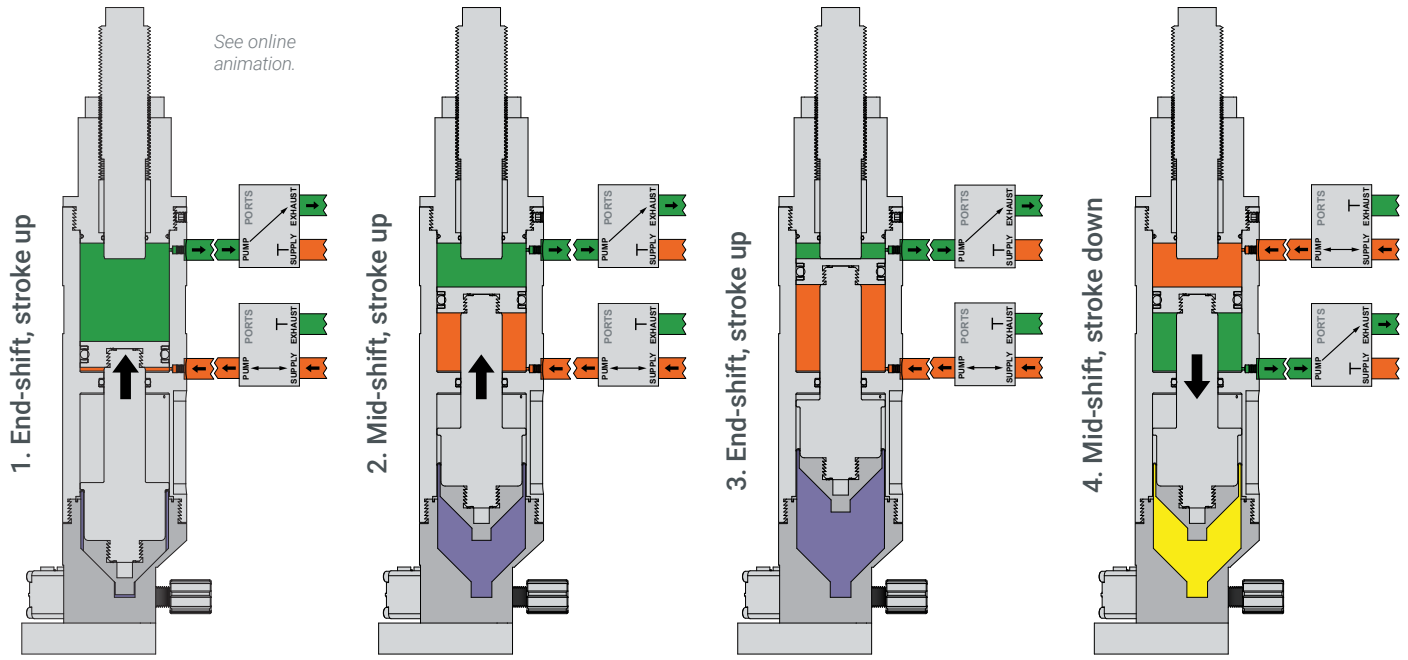




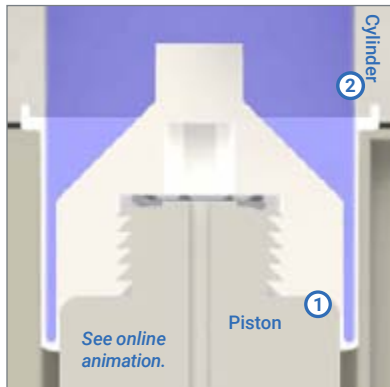
Operation

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

■ Supply Air ■ Liquid Suction
■ Exhaust Air ■ Liquid Discharge



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.

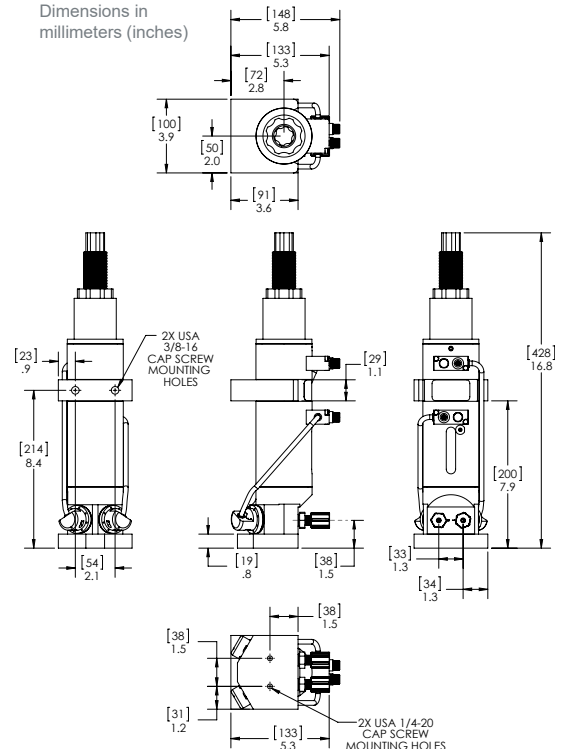
Specifications

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

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

Dimensions

Dimensions in millimeters (inches)



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