

Series PF

Valveless Piston Pump

MICROPUMP®

Achieve a new level of accuracy and reproducibility with the Micropump® Series PF Valveless Piston Pump. Designed for highly viscous fluids, the Series PF pump maintains high-volumetric efficiency at elevated pressures for precise dispensing and/or continuous metering in a compact package. With no valves, the Series PF virtually eliminates clogging and maintenance.

Flow and Pressure Performance

Series PF maintains accurate flow throughout the entire pressure range.

Valveless Design

Series PF is designed with integral active valving, resulting in the ability to pump thick and abrasive media while eliminating check valve failures.

Reciprocating and Rotating Piston

This piston design offers precise and reproducible dispensing and metering.

Easy To Control

Controllability and precise fluid delivery are assured using a stepper motor control card or electronic controller.

Chemically Resistant

Series PF has a long-life in aggressive environments.



Wide Range of Options and Configurations

Series PF can be customized to meet your individual requirements.

Innovative Designs

Micropump uses the latest engineering tools and manufacturing equipment to produce the most innovative pumping solutions available. Products are developed using state-of-the-art CAD, Finite Element Analysis (FEA), and rapid prototyping tools to ensure the highest level of product quality and reliability.

Enhanced Efficiency

As part of the IDEX Health & Science Group, Micropump now offers fully-integrated liquid subassemblies, gas management systems, and precision components. Products include pumps, valves, manifolds, tubing, fittings, degassing/debubbling systems, air compressors, vacuum generators, and HPLC columns. Additional services are custom fluidic engineering and development, contract manufacturing, extrusion, molding, machining, and diffusion bonding.



Precision Engineered Fluidics™

Performance Summary

Flow Rate at 1,000 rpm

- ▶ 940 mL/min (0.248 gpm)

Displacement

- ▶ 0.94 mL/rev

Maximum Rated Differential Pressure

- ▶ 100 psi (6.89 bar)

Temperature Range

- ▶ Dependent upon material

Viscosity Range

- ▶ min. 100 cps tested to 5,000 cps

Self Prime (Dry Lift)

- ▶ Not Recommended

Coefficient of Variation (CV)

- ▶ CV is a measure of repeatability of dispersed volume per revolution
±2%

DC Voltage Input

- ▶ 24–72 V

Current Input

- ▶ 3 A maximum

Wetted materials

Piston material

- ▶ Alumina Oxide
- ▶ 440C

O-ring material

- ▶ Viton®

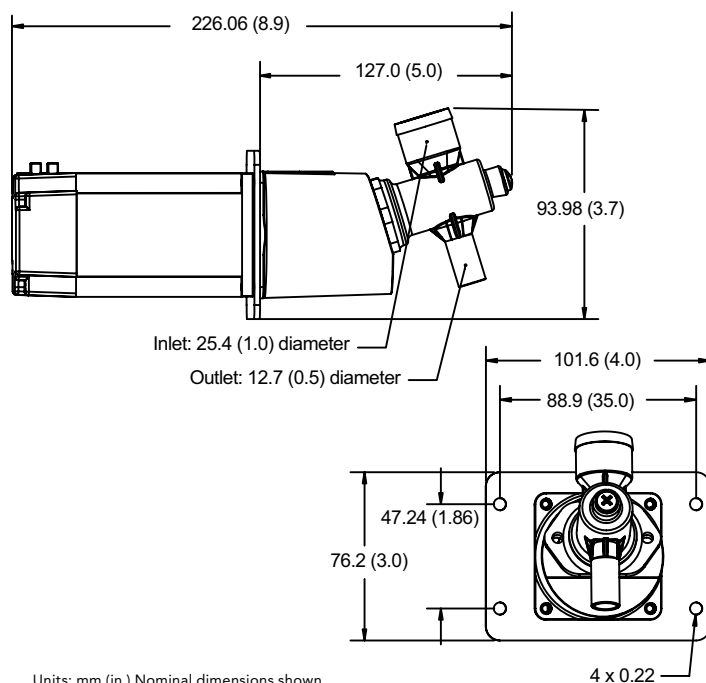
Base material

- ▶ Nylon

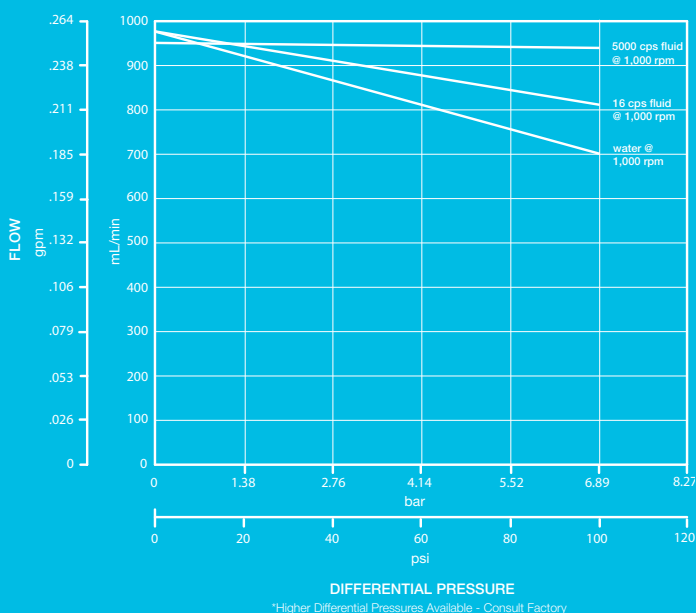
Power Requirement

- ▶ 24–72 V
- ▶ Requires stepper motor controller. Micropump offers a separate controller board with Velocity modulation (patent pending) for extremely low pulsations.

Dimensions



Pump Performance



ACTUAL PERFORMANCE MAY VARY.

Specifications are subject to change without notice.

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