

RESOLUTION AIR

Miniature Proportional Pinch Valve
M-Series

LTD

Precision Flow Control Pinch Valve Providing Sanitary Fluid Separation & Flow Metering

Resolution Air's patented valve design allows the benefits of pinch valve fluid separation to be combined with proportional valve control for sanitary processes that require highly accurate incremental flow regulation where cleanliness and sterility is required. Previously, this could only be accomplished with a manually operated control valve. The newly developed Miniature Proportional Pinch Valve series has been engineered to meet the needs of the most challenging precision flow applications in industries such as bio-chemical, food and beverage, and healthcare.

Miniature Proportional Pinch Valve Design

The MPPV series allows physical separation between the valve from corrosive or high purity process fluids, while providing the incremental flow control offered in a conventional proportional valve. The MPPV pinches a fluid filled, pressurized, low durometer tube to regulate the flow of the liquid or gas through the tube. The design incorporates a stepper linear actuator and custom piston, which provide precision proportional control functioning in the valve. In addition, with the actuator's non-back driveable lead screw, power is only required when changing position.

Available in a variety of size configurations to meet a wide range of needs, Resolution Air Miniature Proportional Pinch Valves are ideally suited for use in portable and handheld equipment designed for analytical and diagnostic processes.

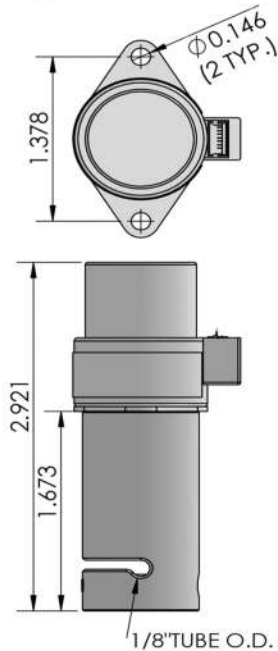


Miniature Proportional Pinch Valve Advantages

- Automated control
- No physical contact with process fluid
- High resolution flow control
- Maintains position with power loss
- Home switch indicates full open position
- Durable construction
- Tested performance
- High repeatability
- Low power consumption
- No leakage
- Long performance life
- Light weight, low profile design
- 5x pinch force (15lb.) of solenoid pinch valve

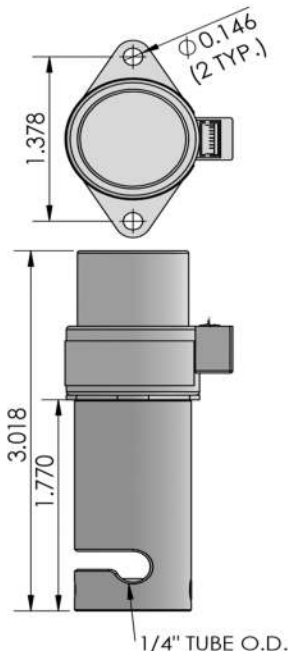
MPPV-2

Tube Size O.D. **0.125"**
 Max. Inline PSI **100**
 Travel Rate* **.5 sec.**
 Weight **2.7 oz.**
 Valve Dim. **0.875 O.D. x 2.921"L**
 *full open to full close



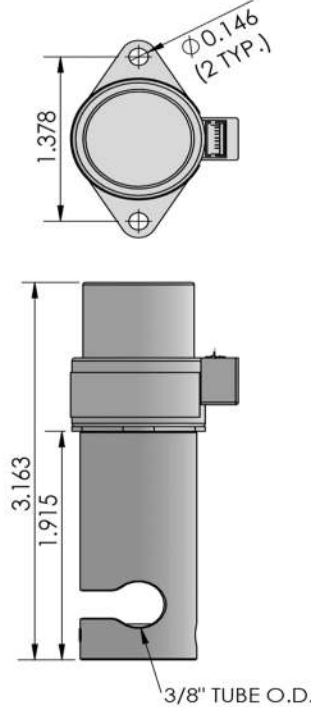
MPPV-4

Tube Size O.D. **0.250"**
 Max. Inline PSI **50**
 Travel Rate* **1 sec.**
 Weight **2.8 oz.**
 Valve Dim. **0.875 O.D. x 3.018"L**



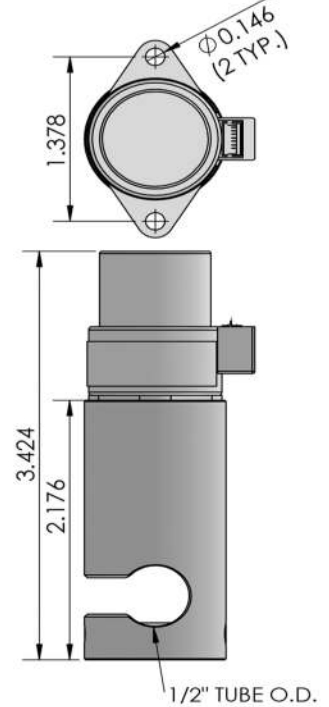
MPPV-6

Tube Size O.D. **0.375"**
 Max. Inline PSI **25**
 Travel Rate* **1.5 sec.**
 Weight **2.8 oz.**
 Valve Dim. **0.875 O.D. x 3.163"L**



MPPV-8

Tube Size O.D. **0.500"**
 Max. Inline PSI **17**
 Travel Rate* **2 sec.**
 Weight **3.3 oz.**
 Valve Dim. **0.875 O.D. x 3.424"L**



Performance Characteristics

Standard Tube Sizes (O.D.) 1/8", 1/4", 3/8", 1/2"

Recommended Tubing Durometer 50-60 Shore A

Max. Temp. 180° F

Motor Type Bi-Polar Stepper Motor

Position Resolution .0005"/step

Power Consumption 3.85 Watts

Motor Supply Voltage 24-40 VDC Unregulated Power Supply

Max. Current/Phase 385 mA

Electrical Connection 12" Wiring Harness (included)

Driver Requirements Bi-Polar Chopper Drive

Home Switch Hall Effect- Full Open Position

Home Switch Supply Voltage 3.8-24 VDC

Max. Pinch Force 16.25 lbs. @100 steps/sec.

Applications Include

- Chemical Mixing / Dispensing
- Dosage Systems
- Clinical or Chemical Analysis
- Vending Machines
- Blood Handling/Analysis
- Lab Analysis