



Miniature Proportional Pinch Valve  
MPPV-PS Series

## Proportional Pinch Valves with Position Sensing

**Resolution Air, Ltd.** expands its innovative portfolio of patented Proportional Pinch Valves with their MPPV-PS Position Sensor Series. This advanced feature integrates a compact position sensor, offering precise linear position feedback for critical fluid handling applications. The new technology replaces traditional home sensors and encoder combinations, providing a streamlined solution with numerous benefits for industries requiring precision, reliability, and continuous position feedback.

### Key Benefits of the Position Sensor Series

#### Real-Time Position Feedback

Gain enhanced monitoring capabilities for your valve and control system. Real-time data on valve position ensures that you can track and adjust performance instantly, leading to higher accuracy and control.

#### Optimized Valve Control and Performance

Positional accuracy feedback helps fine-tune the valve's operation, ensuring optimal performance and better management of fluid flow in any process.

#### Position Memory During Power Loss

One of the key innovations is the ability to retain position data even in the event of a power loss, removing the need for valve rehoming and ensuring smooth, uninterrupted operation.

#### Simplified System Integration

With a 4-20 mA output signal, integrating real-time position feedback into your control system is straightforward, eliminating the complex setup and maintenance associated with traditional home sensors and encoders.



### Miniature Proportional Pinch Valve Advantages

- Automated control
- No physical contact with process fluid
- High resolution flow control
- High repeatability
- Low power consumption
- Light weight, low profile design
- 5x pinch force of solenoid pinch valve
- Real time position feedback with position sensor

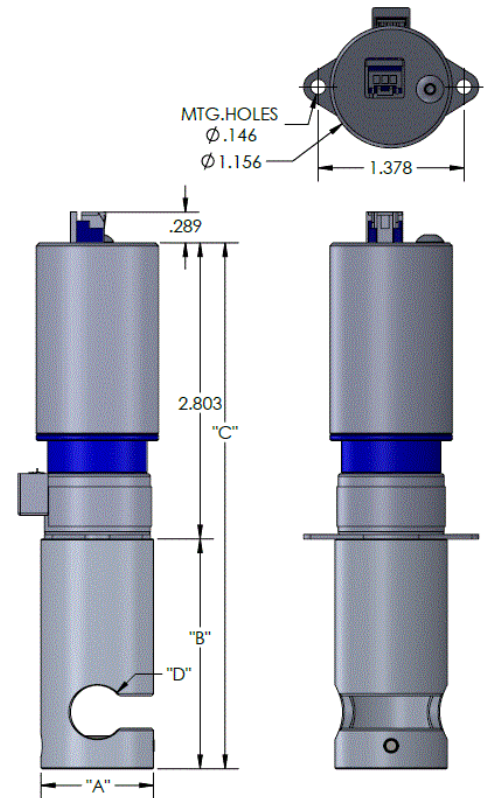
### Applications Include

- Laboratory equipment
- Medical research
- Tangential flow filtration (TFF)
- Biopharmaceutical manufacturing
- Pharmaceutical manufacturing



# Miniature Proportional Pinch Valve MPPV-PS Series

VALVE DIMENSIONS				
	Dim. A (in.)	Dim. B (in.)	Dim. C (in.)	Dim. D (in.)
<b>MPPV-2-PS</b>	0.875	1.675	4.478	0.125
<b>MPPV-3-PS</b>	0.875	1.685	4.488	0.187
<b>MPPV-4-PS</b>	0.875	1.775	4.578	0.250
<b>MPPV-6-PS</b>	0.875	1.923	4.726	0.375
<b>MPPV-8-PS</b>	1.063	2.176	4.979	0.500



PERFORMANCE CHARACTERISTICS	
Standard Tube Size	1/8", 3/16", 1/4", 3/8", 1/2"
Recommended Tubing Durometer	50-65 Shore A
Max. Temp.	180° F
Motor Type	Bi-Polar Stepper Motor
Position Resolution	0.0005"/Full Step
Max. Pinch Force	16.25 lbs. @ 100 steps/sec
Recommended Travel Rate	500 steps/sec
Power Consumption	3.85 Watts
Motor Voltage Supply Voltage	24-20 VDC Unregulated Power Supply
Max. Current/Phase	385 mA
Electrical Connection-Motor	12" Wire Harness included
Driver Requirement	Bi-Polar Chopper Drive
Certifications	RoHS, CE, IP65
POSITION SENSOR PERFORMANCE CHARACTERISTICS	
Supply Voltage	8-24 VDC
Output Smoothness	0.1% max. at 10" to 18" per minute
Backlash	0.003" maximum
Sensor Output	4-20 mA (2 wire)
Sensor Resolution	Essentially infinite
Valve Position Resolution	0.0005"/Full Step
Electrical Connection-Sensor	18" Wire Harness included