

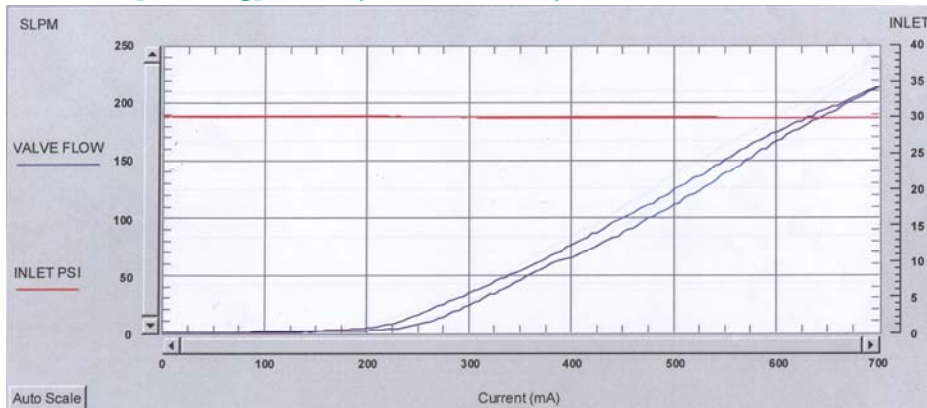
# 4000-SERIES PSV-LP™ AND PSV-HF™ PROPORTIONAL SOLENOID VALVES

2 WAY NORMALLY CLOSED FOR GASEOUS MEDIA (PATENT PENDING)

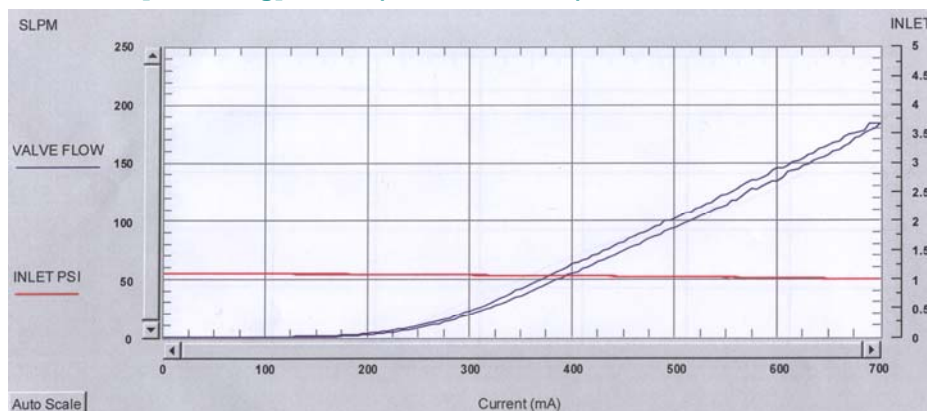
## COMPONENT FEATURES

- **PSV-HF:** Maximum flow rate: **0-170 slpm @ 30 psid** [2.0 bar]
- **PSV-HF:** Maximum input pressure: **35 psig** [2.4 bar]
- **PSV-LP:** Maximum flow rate: **0-160 slpm @ 1 psid** [0.07 bar]
- **PSV-LP:** Maximum input pressure: **2.5 psig** [0.17 bar]
- Designed specifically for Medical applications
- Inert gases compatible with aluminum and Silicone or Nitrile materials
- Special elastomeric seal
- Fast response time - **20 msec** typical
- Turn-down ratios in excess of **1,000:1**
- Manifold mounted design allows maximum flexibility
- Robust design with computerized calibration insures reliability & repeatability for millions of cycles
- Cycle-Life: **20 million cycles** minimum

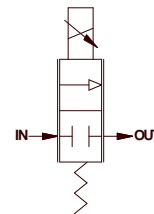
### PSV-HF (HIGH FLOW) TYPICAL FLOW CURVE 30 PSIG [2.0 bar g] INLET (ACTUAL DATA)



### PSV-LP (LOW PRESSURE) TYPICAL FLOW CURVE 1.0 PSIG [0.07 bar g] INLET (ACTUAL DATA)



PSV-LP™ and PSV-HF™  
Valve



FLOW SCHEMATIC

HIGH FLOW PROPORTIONAL SOLENOID VALVES

TECH DATA

**SOUTH BEND CONTROLS**

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BULLETIN PV-231

## HIGH FLOW PROPORTIONAL SOLENOID VALVE TECHNOLOGY

The 4000 Series' current-driven, proportional DC solenoid driver responds to either analog or digital (1 kHz pulse-width-modulated) signals. Input current is translated into a specific displacement with infinite resolution. The displacement is applied to a metering orifice with resulting flow control.

- Utilizes suspended armature design with no sliding friction to minimize hysteresis
- Based upon proven technologies with high accuracy and long term repeatability
- Factory calibrated to meet your exact application requirements

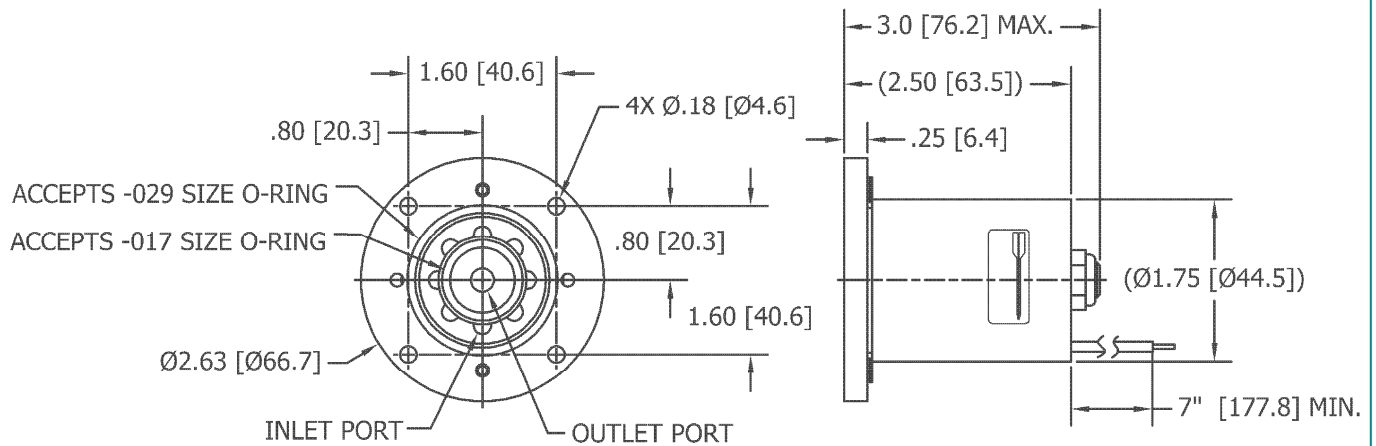
PSV-HF Specific Features:

- Linear & Proportional flow control in OEM devices such as ventilators, gaseous fuel systems, etc.
- Available with soft seats sized for medium pressure applications

PSV-LP Specific Features:

- Designed for very low inlet pressure applications
- Linear & Proportional flow control in blower-driven devices
- Available with soft seats sized for low pressure applications

This valve can be used with gaseous media in any system which requires proportional flow control with high accuracy and repeatability. Common use is in life or health support systems where air and oxygen or anesthetic gases must be independently controlled and blended in varying ratios to suit the patients' needs.



## VALVE PART NUMBER SYSTEM

**4 0 0 - 1 - 0 0**

**Valve Configuration:**

- 3. HF High Flow
- 4. LP Low Pressure

**Interface:**

- 1. Manifold Mount  
(Basic test manifolds are available, contact factory)

**Voltage:**

- 1. 5 VDC
- 2. 12 VDC (std)
- 3. 24 VDC

**Calibration Code:**

(Factory Assigned)

Other Valves in the 4000-Series Family:

- 4001xxxx PSV-HS Hard Seat Valve
- 4002xxxx PSV-SS Soft Seat Valve
- 4005xxxx PSV-UL Ultra-Linear Performance Valve



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