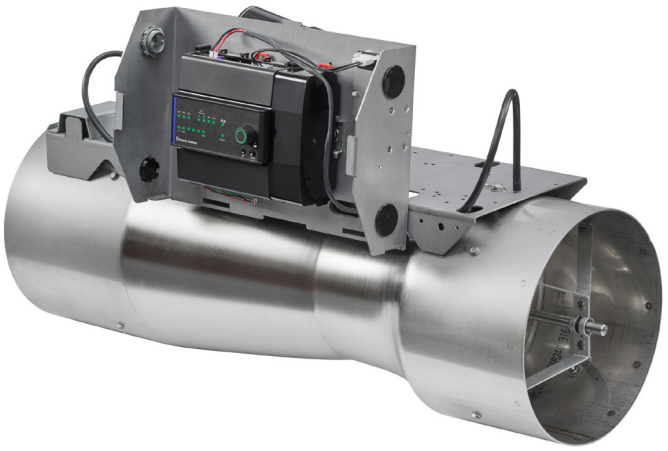
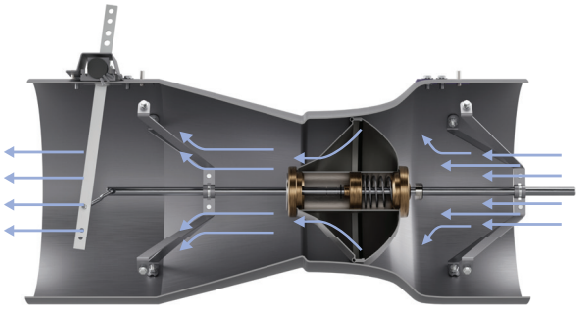
Phoenix Controls

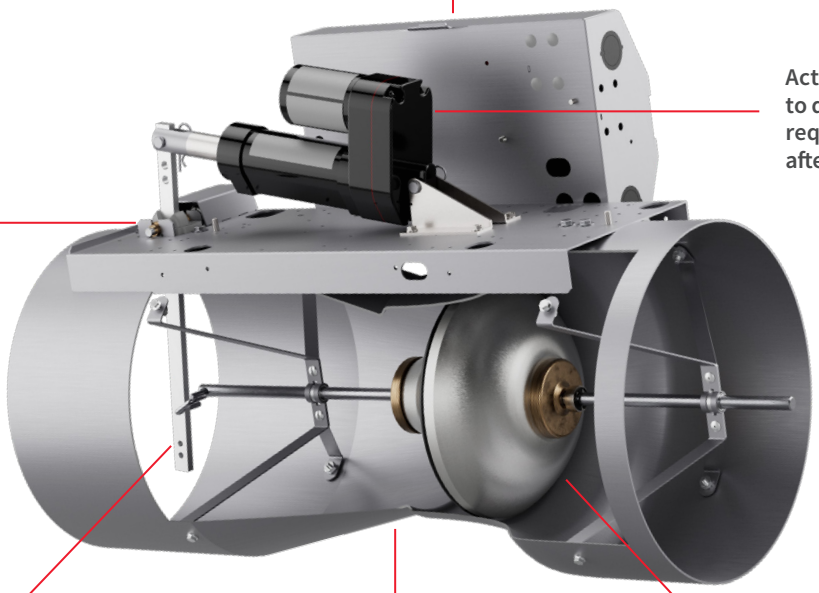
PRECISION AIRFLOW CONTROL WHERE IT MATTERS MOST

Phoenix Controls has earned its customers' trust through an exclusive focus on the critical demands of specialized environments where pressure control tolerances are more exacting. Phoenix venturi valves are meticulously engineered, tested, and integrated to provide a level of precision, repeatability, and reliability beyond the capabilities of commodity air control solutions.



The Phoenix Controls venturi valve lies at the heart of air pressure control for critical spaces requiring strict tolerances in pressure setpoints. It does this with a unique spring-controlled restrictor allowing it to constantly react to static pressure changes in the ductwork. Virtually maintenance-free, Phoenix Controls venturi valves arrive pre-characterized for your application. No measuring or balancing required.



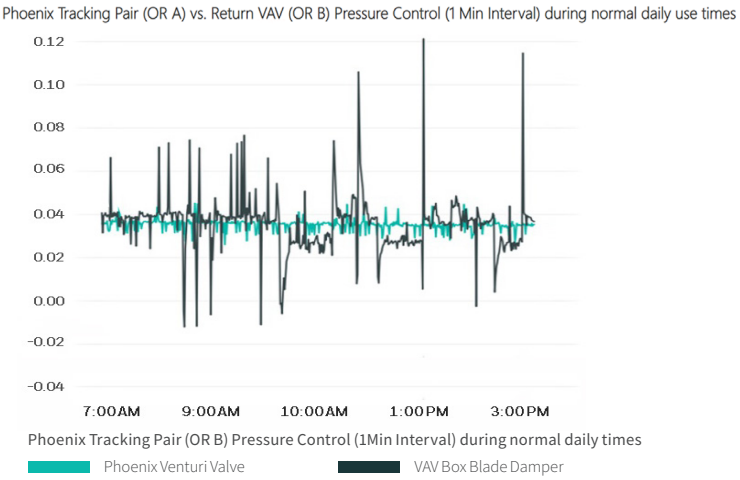


- Mechanically pressure independent airflow
- Accuracy of +/-5% of the set value over the entire flow range, even at lower flow levels
- Inlet and exit insensitivity. No straight ductwork needed
- No maintenance required. No cleaning, no rebalancing
- Up to 20:1 turndown ratio. Demand-controlled ventilation and energy management
- Stable airflow. No over or under-shooting airflow setpoints

A PHOENIX CONTROLS VENTURI VALVE SHOULD BE YOUR ANSWER

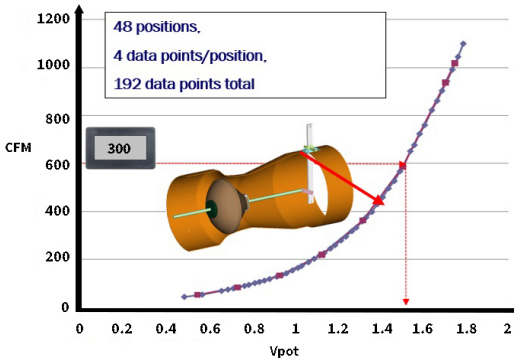
WHEN YOU HAVE A PRESSURE-CONTROLLED ENVIRONMENT EXPERIENCING PRESSURE FLUCTUATIONS OR LOSS

Doors, extraction systems, and supply ducts can contribute to pressure fluctuations. Traditional damper solutions result in delayed actuator-driven blade adjustments. A venturi valve mechanically pressure independent, meaning that it can maintain pressure independent of actuator control.



WHEN YOUR GOALS INCLUDE MINIMIZING MAINTENANCE AND DOWNTIME

Contaminations in exhaust air can pollute measuring units when classical dampers are used. Clogged flow meters can cause overventilation and delays in the PID Loop. The Phoenix venturi valve can eliminate the frequent cleaning and rebalancing necessary to avoid loss of accuracy. They arrive factory-characterized with the cone position for the specified setpoint. When the setpoint is changed, the actuator motor drives the cone to the corresponding position. Fluctuations in pressure are regulated independently by the mechanical spring.

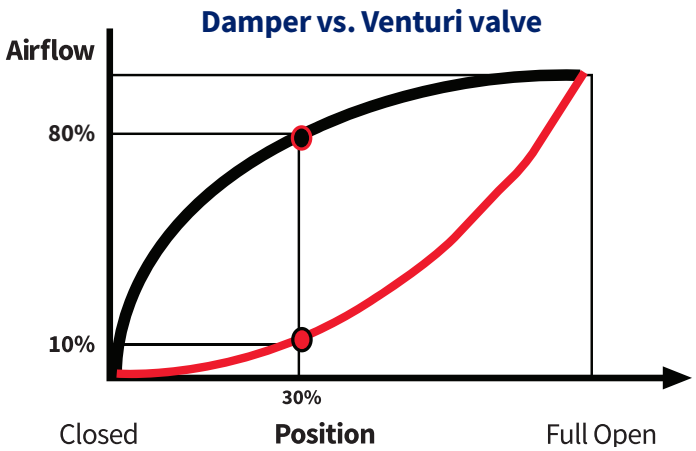


Valve calibration curve :
Valves come pre-characterized with individual flow curves, meaning no flow measurement.

WHEN YOU SEEK TO REDUCE ENERGY CONSUMPTION WITHOUT COMPROMISING HVAC SYSTEM PERFORMANCE

Typical damper systems can't maintain the needed pressure tolerance at very low air change rates, such as during periods where the space is unoccupied. This can result in overventilation causing increased cost.

Phoenix venturi valves are designed for high turndown ratios of up to 20:1 and exceptional accuracy at low air change rates, maintaining accuracy of +/- 5% of the setpoint across the entire flow range. Combined with a variety of sensors, Phoenix ensures demand-controlled ventilation. Depending on your existing facility, you can achieve up to 30% energy savings without compromising safety.



Flow curves, flows at 30% open:
Damper (5:1), 80% flow vs **Venturi valve (20:1), 10% flow**

Phoenix Venturi Valve

- Various sizes for single and dual valves
- Coating options for chemical resistance
- Fail safe setpoints in case of electricity outage
- Several actuation options of 1-15 seconds full open-close

Programmable BACnet controller (PBC)

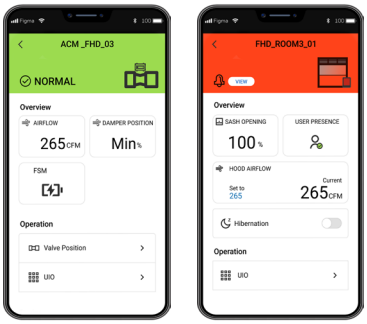
- Actuator control network BACnet MS/TP(RS485)
- Bluetooth enabled
- Free programming within Niagara 4 environment
- Installed on valve or in panel
- Power failure detection and data recovery

High-speed actuator control module (ACM)

- Control network BACnet MS/TP (RS485)
- Supports optional differential pressure sensor or pressure switch
- Optional fail-safe module (FSM)
- Supports 24 VDC HISEA linear actuator

Digital Fume Hood Display (FHD500)

- Actuator control network BACnet MS/TP(RS485)
- Bluetooth enabled
- Display only or full function configuration
- Supports analog setup for CVV, 2-state, drive, and network connection to ACM/PBC
- Displays alarm status and fume hood position



Flow Manager app

- Available on iOS and Android
- For technicians and end users
- Control setpoints remotely
- Quickly diagnose alarms or issues
- View real-time system data
- Connect to multiple points on the system over Bluetooth Low Energy (BLE)

Vision CE – HVAC Control

- Pre-loaded with templates and widgets commonly used for critical environments
- Monitor, log, trend, and report energy use
- Track safety
- Simplify compliance
- Increase operational efficiency

Contact a Phoenix Controls representative to learn how to ensure precision airflow control.

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