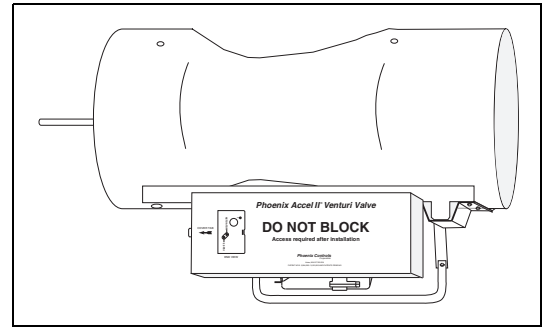


Phoenix Controls Accel® II Venturi Valves combine a mechanical, pressure-independent regulator with a high-speed position/airflow controller to meet the unique requirements of airflow control. These valves can be used in constant volume, two-position, or VAV applications—all designed to maximize flow performance while reducing related noise. Valves for VAV applications may be either electrically or pneumatically actuated.

- **Pressure-independent operation**—All valve types include an immediate response mechanical assembly to maintain airflow set point as duct static pressure varies.
- **Airflow control**—By positioning the flow rate controller assembly, the airflow can be adjusted.

Accel II valves are available in:

- **VAV (EXV/MAV series, Theris and Tracel)** with VAV closed-loop feedback control with high-speed electric or pneumatic actuation for fume hood applications or low-speed electric actuation for tracking pair applications
- **Constant volume (CVV series)** for maintaining an airflow set point under variable static pressure conditions
- **Two-position (PEV/PSV series)** for high/low flow control (pneumatic only)
- **Base upgradable (BEV/BSV series)** for pneumatic or fixed flow control with feedback option and upgradability to VAV (pneumatic only)



Accel® II valve (VAV pneumatic unit shown).

OPERATION

Airflow Volume Controller Types

Variable Air Volume (EXV/MAV series, Theris and Tracel)

For VAV closed-loop feedback control of fume hood and modulating airflow applications. Available with Celeris, Theris, Tracel, and analog systems.

- **Celeris**—The Celeris LonWorks based valve controller (LVC) utilizes distributed control architecture to perform all critical room control functions. This LVC offers the power and flexibility of a conventional room control system but in a more streamlined, cost-effective manner. Celeris can operate as either a standalone or fully integrated control system. Available in pneumatic, high-speed or low-speed electric actuation.
- **Theris**— Low maintenance, energy saving ventilation for critical spaces in healthcare facilities. Constant volume (CV) and variable air volume (VAV) solutions for directional airflow, climate control, and overall ventilation balance.
- **Tracel**— A unique ventilation control solution providing zone control, energy savings, and reduced maintenance for life sciences labs with open spaces or fume hood alcoves. Airflow turndown and configuration options make this valve ideal for modular and mixed-use facilities.
- **Analog**—The analog-based valve controller provides the conventional control solution for critical environments. Available with either pneumatic or high-speed electric actuation.

Constant Volume, Two-Position, and Base Upgradable

For two-position and fixed, field adjustable flow controls. Base upgradable includes optional electric flow verification and upgrading to VAV type valve.

- **Constant volume**—The valve’s shaft/cone assembly is locked into the specific position required to provide the scheduled airflow via factory calibration.
- **Pneumatic**—Switched pneumatic air is applied to the valve’s actuator. This positions the shaft/cone assembly to two distinct airflows. Mechanical clamps assure precise minimum and maximum airflows via factory calibration.
- **Base upgradable/pneumatic**—Switched or varying pneumatic air is applied to the valve’s actuator. A feedback potentiometer linked to the shaft is provided for optional flow verification and upgrading to a VAV-type valve.

Pressure-Independent Controller

All valves maintain a fixed flow of air by adjusting to changes in static pressure. Each valve has a cone assembly with a spring designed to compensate for changes in duct pressure.

