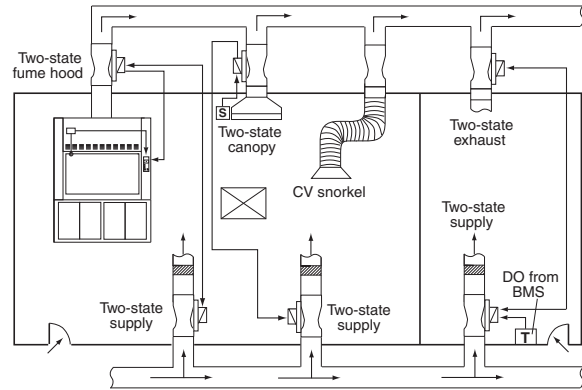


Constant volume, 2-position, and base upgradeable Low-Pressure Accel[®] II Valves provide essential airflow control solutions.

Constant volume (CV) valves are typically used for snorkels, biosafety cabinets, CV fume hoods, ventilated cabinets, and outside air regulation. Control Type C in the Ordering Guide.

Two-position pneumatic valves are typically used for canopy hoods and two-position fume hoods. Control Type P in the Ordering Guide.

Base upgradeable valves can be substituted when flow feedback is required or upgradability to VAV is desired. Control Type B in the Ordering Guide.



FEATURES

Feature/Option	Constant Volume (CEV/CSV)	2-Position (PEV/PSV)	Base Upgradeable (BEV/BSV)
Control Type	C Constant Volume	Pneumatic	B Base Upgradeable
Actuator Type	—	Pneumatic	Pneumatic or CV
Flow Feedback Signal	—	—	Option*
Fail-Safe	Fixed	NO/NC	NO/NC**
Factory Insulated Supply Valve Body	Option	X	X
Field-Adjustable Flow	X	X	X
Flow Alarm via Feedback Circuit	—	—	—
Flow Alarm via Pressure Switch	Option	Option	Option
Low Noise Diffuser Construction	X	X	X

All valves include pressure-independent controller.

+ Accel II valves are designed to reduce sound over all frequencies, but significantly target the lower bands (125-500 Hz) to help eliminate the need for silencers.

* Not available with the 14-inch valve at this time.

** Fixed fail-safe for CV actuation.

OSHPD Certified*

This device is certified for OSHPD Seismic Certification Preapproval per 2013 CBC, 2012 IBC, ASCE 7-10, and IEC-ES-AC-156. OSHPD Special Certification number OSP-0290-10.

*Vertical applications approval pending.

NVLAP Accreditation

All venturi valves are characterized on NVLAP Accredited Airstations, Lab Code 200992-0. NVLAP is administered by the National Institute of Standards and Technology (NIST).

ISO

Phoenix Controls Designs, Develops, Manufactures, and sells products, systems, and service to control the environment and airflow of critical spaces. Phoenix Controls is registered to ISO 9001:2008.

Warranty

Phoenix Controls Warrants all venturi valves against defects in material and workmanship for a period of 5 years. In addition, all other equipment manufactured by Phoenix Controls, such as sash sensors, fume hood monitors, and equipment supplied but not manufactured by Phoenix Controls is covered by a 3 year warranty.

SPECIFICATIONS

Construction

- 16 ga. spun aluminum valve body with continuous welded seam
- Valve bodies available as uncoated aluminum; or with corrosion-resistant baked-on phenolic coating, or PVDF (Polyvinylidene fluoride) coating
- Composite Teflon® shaft bearings
- Spring grade stainless steel spring and polyester or PPS slider assembly
- Supply valves insulated with 3/8" (9.5 mm) flexible closed-cell polymer-based foam:
flame/smoke rating 25/50; density is 1.5 lb/ft³ (24.0 kg/m³)

Operating Range

- 32-122 °F (0-50 °C) ambient
- 10-90% non-condensing RH

Sound

Designed for low sound power levels to meet or exceed ASHRAE noise guidelines.

Performance

- Pressure independent over a 0.3"-3.0" WC (75-750 Pa) across valve
- Pressure independent airflow accuracy to ± 5% of airflow feedback signal
- No additional straight duct runs needed before or after valve
- Available in flows from 35-5600 CFM (9514 m³/hr)
- Response time to change in duct static pressure: <1 second

Pneumatic Actuation

- Only applicable to PEV, PSV and BEV/BSV
- 20 psi (-0/+2 psi) with a 20 micron filter main air required
- Compressor sizing: Accel II Valves are not continuous air-consuming devices. For compressor sizing, use:
 - single and dual valves: 10 scim
 - triple and quad valves: 20 scim

Electric Actuation

Control Types I and Z only

Single I:

24 Vac ± 20% or 24 Vdc ± 10%, 50/60 Hz @ 4 VA

Dual I:

24 Vac ± 20% or 24 Vdc ± 10%, 50/60 Hz @ 5.5 VA

Single and Dual Z:

24 Vac ± 20% or 24 Vdc ± 10%, 50/60 Hz @ 5 VA

Flow Feedback Card

Mounting

The flow feedback card is factory installed in a ABS flame retardant black box enclosure.

Enclosure (*Valve Controller Designation F*)

Dimensions: 6 x 3.2 x 1.9 inches

Color: Black

Power

±15 Vdc, ± 15%, 35 mA

Or

24 Vac, ± 15%, 50/60 Hz, 1.5 VA

Regulatory Compliance



- RoHS
- FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

- EU Contact Address:

Honeywell GmbH
Boebling Str. 17
71101 Schoenaich
Germany



See wiring diagrams

Teflon is a registered trademark of DuPont Company.

ORDERING GUIDE

BSV A 1 10 L - A B F H C - PSL

VALVE FAMILY

Note: Supply valves come standard with insulation.
CSV = Constant volume supply valve
CEV = Constant volume exhaust valve
PSV = Pneumatic supply valve (*no feedback*)
PEV = Pneumatic exhaust valve (*no feedback*)
BSV = Base upgradable supply valve
BEV = Basic upgradable exhaust valve;

VALVE CONSTRUCTION

A = Body and cone uncoated aluminum; uncoated 316 stainless steel shaft
B = Body and cone with baked phenolic coating, PFA-coated 316 stainless steel shaft
C = Body and cone with baked-on phenolic coating, hardware with titanium or baked-on phenolic coating, PFA-coated 316 stainless steel shaft
D = Body and cone with a PVDF-coating, hardware with baked-on corrosion-resistant epoxy phenolic coating or PVDF-coating, and a PFA-coated 316 stainless steel shaft; only available for 8-, 10-, and 12-inch Design A single-body valves no flanges

NUMBER OF VALVE BODIES

see Note 1
F = Single valve with a welded circular flange
1 = One valve body, no flange
2 = Two valve bodies (dual); for PxV and BxV - only 10" and 12" valves
3 = Three valve bodies (triple); for PxV and BxV - only 12" valves
4 = Four valve bodies (quad); for PxV and BxV - only 12" valves

VALVE SIZE

08 = 8" valve (7.88"/200mm actual diameter)
10 = 10" valve (9.67"/246mm actual diameter)
12 = 12" valve (11.84"/301mm actual diameter)
14 = 14" valve (13.88"/352mm actual diameter); see Notes 1, 6

FLOW/PRESSURE OPERATING RANGE

L = Low pressure operation; pressure independent over a range of 0.3 to 3.0" WC (75 to 750 Pa), associated pressure switch trips at 0.2" WC See Standard Valve Flow/Pressure Operating Range table below

VALVE DESIGN

A = Conical shape diffuser (Accel II); this valve is not available as a shut-off valve

VALVE OPTIONS

EVI = Exhaust valve with insulation blocks and insulation
IBO = Valve with insulation blocks only (no insulation provided)
PSL = Pressure switch, low limit (0.2" WC); one per each valve body
REI = Remote electronics, indoor (*BxV only*) - see Notes 2, 3
REO = Remote electronics, outdoor, pneumatic actuator only (*BxV only*) - see Notes 4, 5
SFB = Square flanges on both ends of single body valves
SFX = Single square flange mounted on either the exhaust inlet or supply discharge
SHA = High wattage 24 Vac solenoid valve, controlled by non-Phoenix device (*for BxV - Control Type B only*)
SHD = High wattage 24 Vdc solenoid valve, controlled by FHM530 monitor (*for BxV - Control Type B only*)
VPO = Power supply valve-mounted, 120 Vac to +/- 15 Vdc (*BxV Control Types B and F only; not available in conjunction with REO, REI*)
VPT = Power supply valve-mounted, 230 Vac to +/- 15 Vdc (*BxV Control Types B and F only; not available in conjunction with REO, REI*)

FAIL SAFE POSITION

C = Normally closed valve; *Control Types P and B only*
O = Normally open valve; *Control Types P and B only*
Z = Fails to last position (*not available for PxV*)

VALVE ORIENTATION

H = Horizontal
U = Vertical upflow
D = Vertical downflow

VALVE CONTROLLER DESIGNATION

N = No electronics
T = Two-state controller and high wattage 24 Vdc solenoid valve - no feedback; *Control Type B only*
F = Flow feedback in a small black plastic enclosure
G = Two-state controller, flow feedback and high wattage 24 Vdc solenoid valve; *Control Type B only*
S = Flow feedback in a standard metal enclosure (*BxV only*)

CONTROL TYPE

C = Constant volume (*field adjustable with hex head driver*)
P = Pneumatic (*PxV only*)
B = Base upgradable - pneumatic (*BxV only*)
F = Fixed, field adjustable with knob and increase/decrease flow label (*BxV only*)
I = Floating point IP54 electric actuator with fail-to-last position (*BxV only*)
Z = Proportional electric actuator with fail-to-last position (*BxV only*)

STANDARD ANALOG VALVE FLOW/PRESSURE OPERATING RANGE

Designation	Size	Operating Range in CFM (m3/hr)				Pressure Drop Across Valve
		Single	Dual	Triple	Quad	
L = Low Pressure	08"	35-500 (60-845)	—	—	—	0.3-3.0" WC (75-750 Pa)
	10"	50-550 (85-930)	100-1100 (170-1860)	—	—	
	12"	90-1050 (155-1780)	180-2100 (310-3560)	270-3150 (465-5340)	360-4200 (620-7120)	
	14"	200-1400 (340-2375)	400-2800 (680-4750)	600-4200 (1020-7125)	800-5600 (1360-9500)	

NOTES:

- BxV 14-inch Pneumatically actuated and Fixed, Field-Adjustable valves are only available in single-body units without flow feedback.
- Option REI: Remote Electronics, Indoor installations only.
 - * For low-speed electric actuators (Control Type = I or Z): the distance to the valve controller is limited to 150 feet (45.7 meters) of 22 gauge cable.
 - * For pneumatic actuators (Control Type = B): the distance to the valve controller is limited to 75 feet (22.8 meters) of pneumatic tubing.
- Option REI with BXV valves must have flow feedback (Controller Designation = F, G, or S).
- Option REO: Remote Electronics, Outdoor installations only. Limited to Pneumatically actuated valves only (Control Type = B). Horizontal orientation only. Includes sealed Vpot, small weather-resistant TP34 box mounted on base channel for others to connect Vpot cables, and a valve controller in an enclosure that has been disconnected from the base channel and shipped in the same box as the valve.
 - * Maximum distance between remote mounted enclosure and valve is 75 feet (22.8 meters) (maximum allowable length of pneumatic tubing).
 - * Requires use of a dog house enclosure, provided by others, to protect valve from the elements and maintain temperature and humidity conditions within Phoenix specifications.
- Option REO with BXV valves is only available with Pneumatic actuation (Control Type = B) and must have flow feedback (Controller Designation = F or S).
- 14" Dual, Triple, Quad available for CxV only.