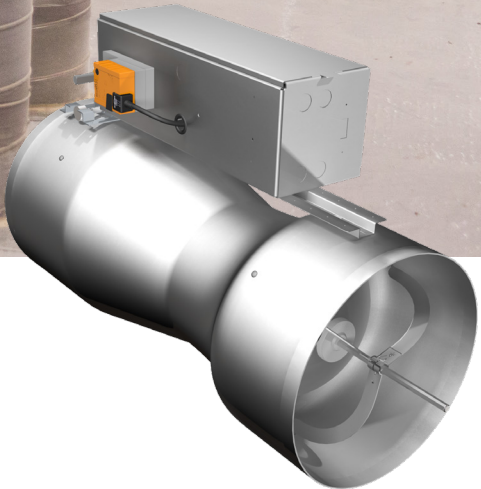




VENTURI VALVE

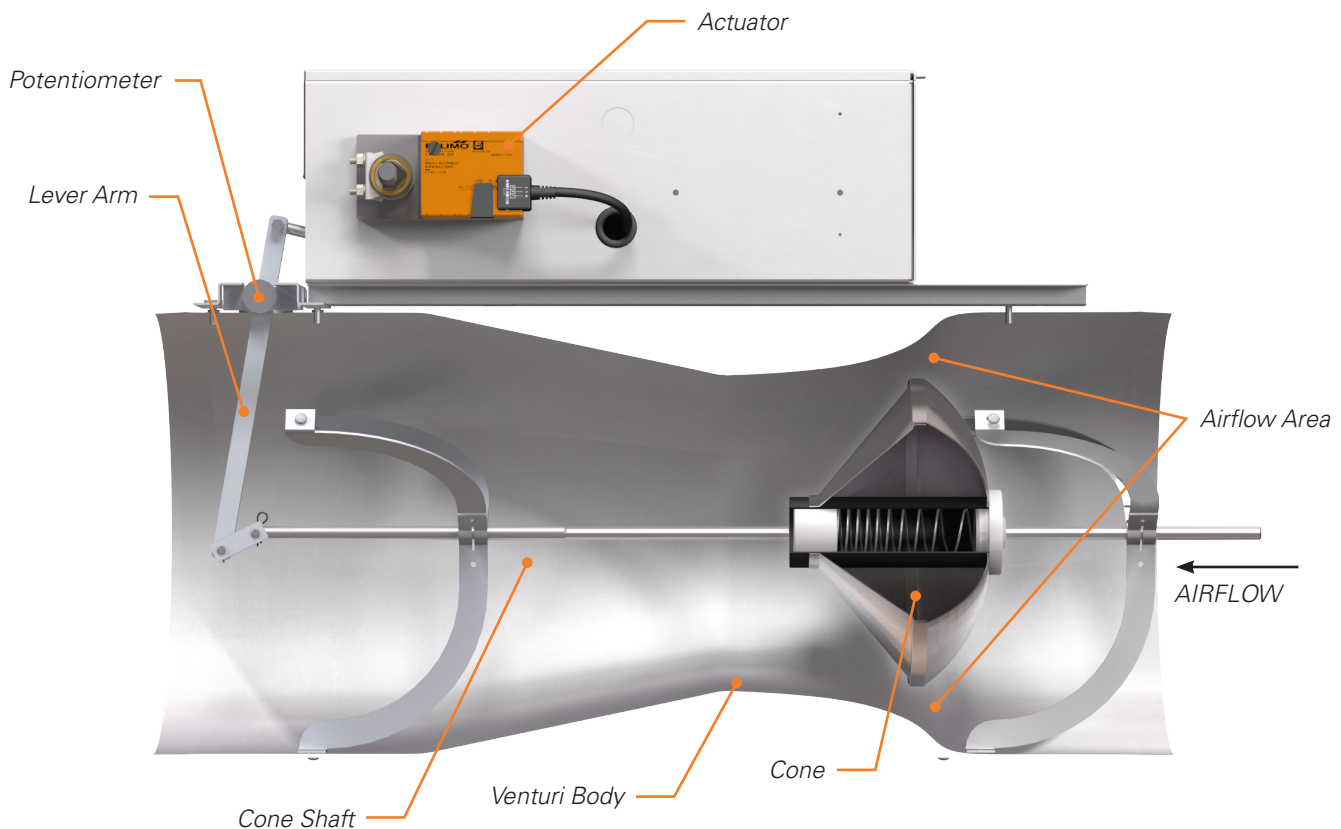


VV Venturi Valve

Available in constant or variable air volume configurations, the venturi valve is able to control flow without the need for airflow measuring devices in the airstream. The device eliminates the possibility of lint or other airborne particulates interfering with the control or accuracy of the valve. The valve provides electronic flow feedback using a precision potentiometer to output a signal proportional to airflow.

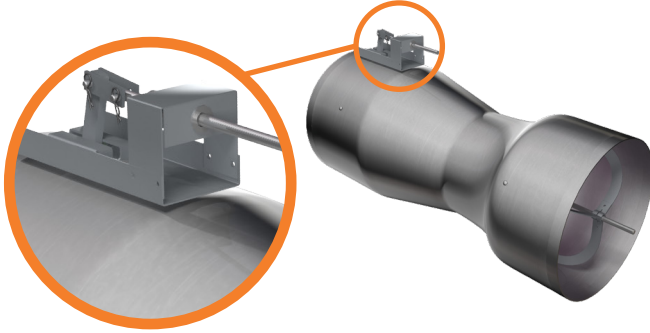
Each valve is factory characterized on NVLAP accredited airflow calibration stations (NVLAP Lab Code 201067-0 complying with ISO/IEC 17025:2005) using N.I.S.T traceable equipment to ensure dependable and repeatable valve accuracy. Antec Controls venturi valves are accurate to $\pm 5\%$ of flow when operated within the designed pressure range. Valve accuracy is unaffected by inlet conditions and does not require any minimum distance of straight duct on the inlet or outlet of the valve.

Mechanical pressure independence is achieved through the highly engineered internal plunger assembly. The plunger assembly ensures the valve responds instantaneously to changes in duct static pressure. Turndown ratios reaching up to 20:1 maximize energy savings when space unoccupied or when at minimum flow set point.



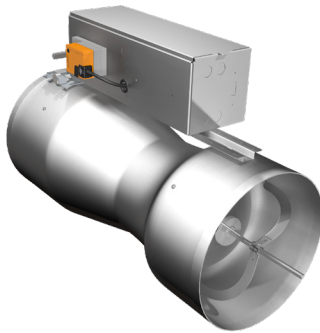
CONSTANT VOLUME

The valves are built to operate within a specified duct pressure range. Constant Volume (CAV) valves are designed with the linkage locked at a specified flow from the factory but can be manually adjusted in the field.



VARIABLE VOLUME

Variable volume (VAV) or 2 position (2P) valves are designed to be controlled using direct digital controls (DDC) based on the electronic flow feedback. All VAV and 2P valves will be shipped with a control enclosure and the actuator mounted and calibrated.



SPECIFICATIONS

Construction	
Valve Body	14 Ga. Aluminum
Cone	16 Ga. Aluminum
Shaft	Teflon-coated 316 Stainless Steel
Shaft Supports	316 Stainless Steel
Shaft Bearings	Wear-resistant with Teflon Additive
Internal Hardware	316 Stainless Steel
Operation	
Temperature Rating	0 – 50°C (32 – 120°F)
Humidity Rating	10 – 95% RH non-condensing
Low Pressure	0.3 – 3.0 in.w.c. measured across the valve
Medium Pressure	0.6 – 3.0 in.w.c. measured across the valve

Specifications subject to change without notice

TYPICAL APPLICATIONS

Venturi Valves are mechanically pressure independent control valves designed specifically for room pressure and fume hood control applications.

FEATURES

- + Electronic airflow feedback prevents dust/lint contamination from deteriorating airflow reading
- + Characterized and calibrated using NVLAP accredited airflow stations
- + Medium or low pressure operation
- + Operating pressure feedback

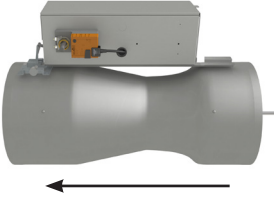
OPTIONS & ACCESSORIES

See Valve & Accessories Section for details


- + Actuator Options
- + Insulation Options
- + Connection Options
 - Slip
 - Flanged
- + Connection Accessories
 - Drawband Clamps
 - Companion Flanges
- + Hot Water Coils
- + Electric Coils
- + Silencers

CONFIGURATIONS

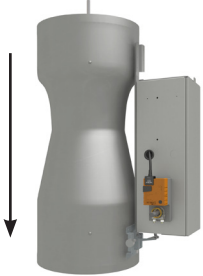
Horizontal Configuration

AIRFLOW DIRECTION	Flow Range		
	Size	Low Pressure (cfm)	Medium Pressure (cfm)
	108	35-500	35-700
	110	50-550	50-1000
	112	90-1200	90-1500
	114	200-1400	200-2500
	210	100-1100	100-2000
	212	180-2400	180-3000
	214	400-2800	400-5000
	312	270-3600	270-4500
	314	600-4200	600-7500
	412	360-4800	360-6000
	414	800-5600	800-10000

Vertical Up Configuration

AIRFLOW DIRECTION	Flow Range		
	Size	Low Pressure (cfm)	Medium Pressure (cfm)
	108	35-500	35-700
	110	50-550	50-1000
	112	90-1200	90-1500
	114	200-1400	200-2500
	210	100-1100	100-2000
	212	180-2400	180-3000
	214	400-2800	400-5000
	312	270-3600	270-4500
	314	600-4200	600-7500
	412	360-4800	360-6000
	414	800-5600	800-10000

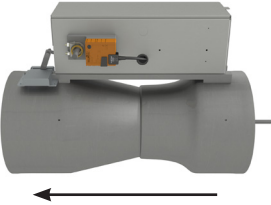
Vertical Down Configuration

AIRFLOW DIRECTION	Flow Range		
	Size	Low Pressure (cfm)	Medium Pressure (cfm)
	108	35-500	35-700
	110	50-550	50-1000
	112	90-1200	90-1500
	114	200-1400	200-2500
	210	100-1100	100-2000
	212	180-2400	180-3000
	214	400-2800	400-5000
	312	270-3600	270-4500
	412	360-4800	360-6000
	414	800-5600	800-10000

Horizontal Shutoff Configuration

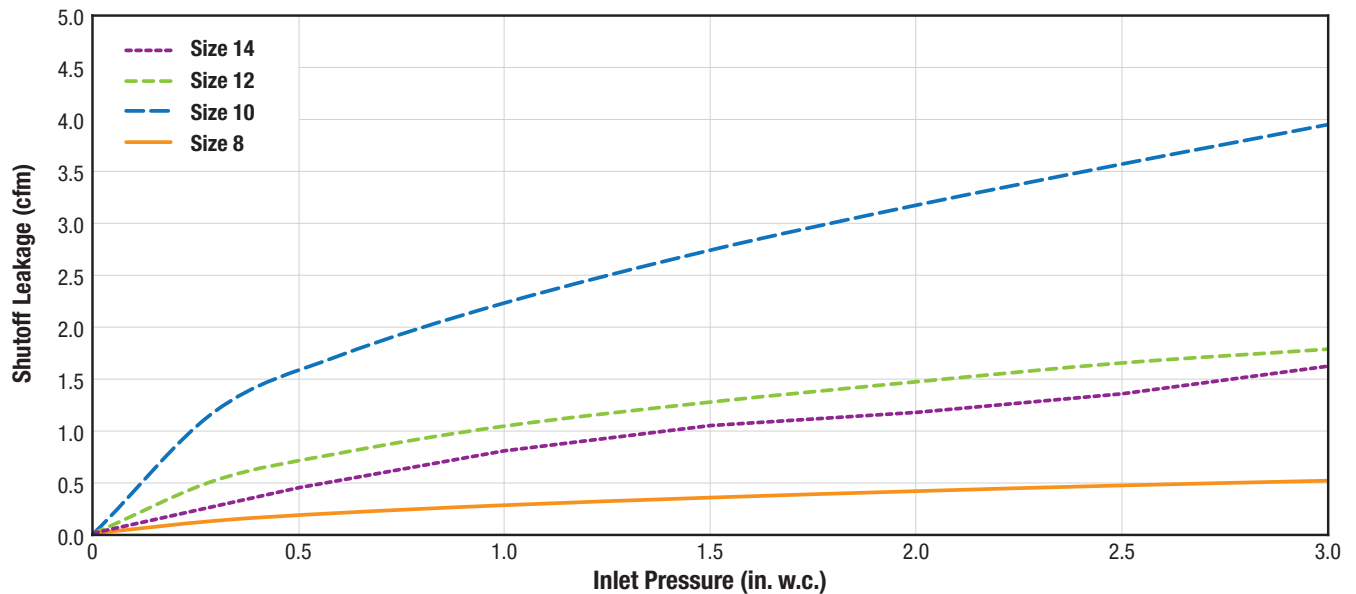
VV-SSO will operate in the same way as a Antec Controls Venturi Valve when used in normal operating conditions. The highly engineered internal plunger assembly ensures the valve will respond to changes in duct static pressure instantaneously. When zero airflow is required, the valve will close to restrict airflow from passing through. Shutoff valves can be used as an energy saving option in areas with non-critical airflow, such as canopy hoods and snorkels.

The shutoff leakage rate is defined as the maximum amount of airflow that may pass through the valve when in the shutoff position.

AIRFLOW DIRECTION	Optional Flow Range		
	Size	Low Pressure (cfm)	Medium Pressure (cfm)
	108	35-400	35-600
	110	50-550	50-850
	112	90-900	90-1300
	114	-	200-1500
	210	100-1100	100-1700
	212	180-1800	180-2600
	214	-	400-3000
	312	270-2700	270-3900
	314	-	600-4500
	412	360-3600	360-5200
	414	-	800-6000

Note: All sizes have the ability to shutoff (zero cfm)

Leakage Rates



PROTECTIVE COATINGS

Depending on the application, various coatings can be applied to protect the operation of the valve.

Aluminum

Aluminum valves are used in clean air or non-corrosive applications. Features include:

- + Aluminum valve body and cone construction
- + Stainless steel internal hardware and support brackets

Phenolic Coating – Class 1

Most fume hoods require a class 1 phenolic coating.

Features include:

- + Aluminum valve body and cone construction
- + Phenolic coated venturi body and cone
- + Stainless steel internal hardware and support brackets

Phenolic Coating – Class 2

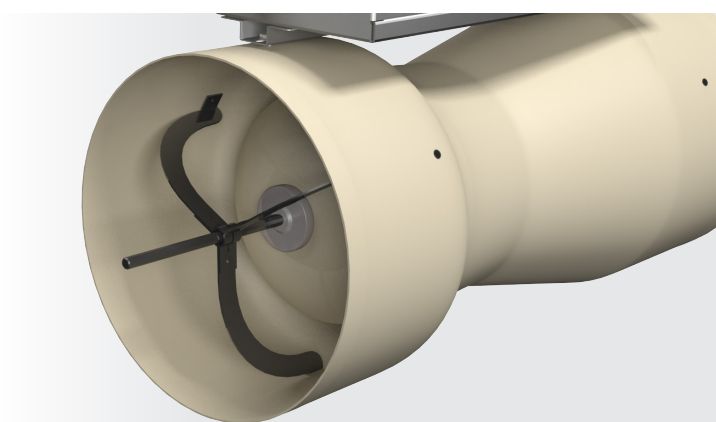
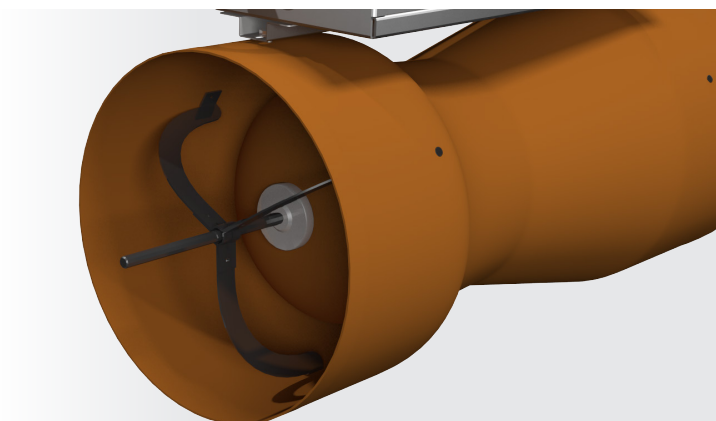
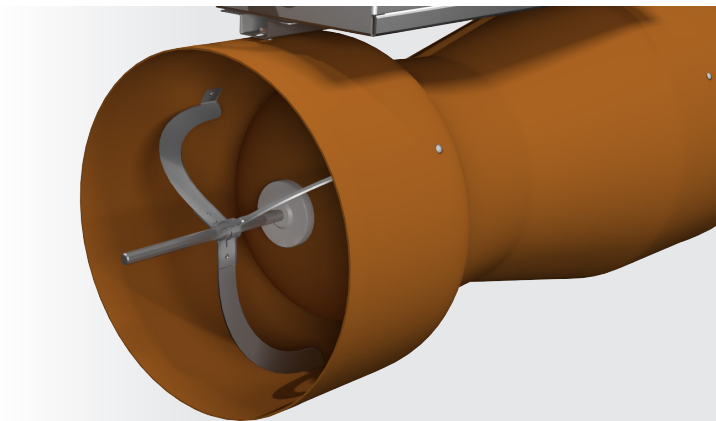
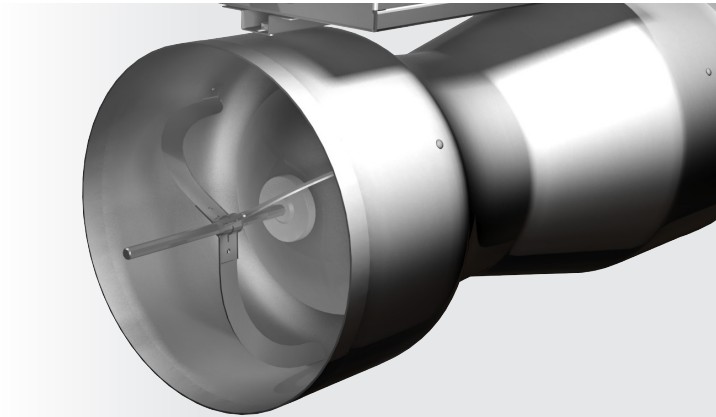
Class 2 phenolic coating is required when the valve is exhausting corrosive gases such as chloric acids, bromine and sodium bisulfate. Features include:

- + Aluminum valve body and cone construction
- + Phenolic coated venturi body, and cone
- + PFA Teflon coated stainless steel internal hardware
- + PFA Teflon coated center shaft and support brackets
- + No exposed metal

PVDF Kynar® Coating

PVDF Kynar® coating is required when the valve is exhausting extremely corrosive gases such as nitric acid, hydrofluoric acid, and sodium hydroxide. Features include:

- + Aluminum valve body and cone construction
- + Kynar® coated venturi body, and cone
- + PFA Teflon coated stainless steel internal hardware
- + PFA Teflon coated center shaft and support brackets
- + No exposed metal



DIMENSIONAL DATA

Single Valve

Unit Size	D	L	Weight	
	in.	in.	lb.	
108	8	23.5	19	
110	10	21.75	20	
112	12	27	22	
114	14	30	24	

Dual Valve

Unit Size	L*	H	W	Weight	
	in.	in.	in.	lb.	
210	21.75	11.25	22.25	34	
212	27	13.25	26.25	40	
214	30	15.25	30.25	45	

Triple Valve

Unit Size	L*	H	W	Weight	
	in.	in.	in.	lb.	
312	27	13.25	39.25	58	
314	30	15.25	45.25	65	

Quad Valve

Unit Size	L*	H	W	Weight	
	in.	in.	in.	lb.	
412	27	13.25	52.5	80	
414	30	15.25	60.5	95	

*Add an extra 1.5 in. on each end for slip connection on dual, triple and quad valves.

See current submittals on www.AntecControls.com for complete dimensional data.

PERFORMANCE DATA

See current information on www.AntecControls.com



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