



# TRIA TEK VENTURI VALVE

## **INSTALLATION & MAINTENANCE GUIDEBOOK**



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# General

TRIATEK makes every effort to inform our customers of any product improvements or changes through its website: [www.triatek.com](http://www.triatek.com) and/or customer notices. However, due to continuous product improvement and development, TRIATEK reserves the right to change product specifications without notice. Therefore, please contact TRIATEK Technical Support for any questions or concerns you may have on the latest product improvements.

## LEGAL NOTICE:

This Installers Guide is provided as an industry service by TRIATEK to aid installers in the installation of its products in the field. While every effort has been made to ensure the accuracy of the contents of this manual TRIATEK disclaims any warranty or liability for any damages, injury or harm resulting from the installation of its products in the field resulting from any errors in this guidebook. By using this guidebook, installer agrees to indemnify and hold harmless TRIATEK for any damages including incidental or consequential that occur as a result of utilizing this guidebook. Installer accepts complete responsibility for the safety of its employees during installation and agreed to take every reasonable precautionary safety measure for its employees and persons under its control.

TRIATEK makes no warranty of any kind with regard to this publication, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

TRIATEK reserves the right to change product, system options or features, or the information contained in this publication. This publication contains proprietary information, which may not be reproduced without the written consent of TRIATEK.

Deviation from the specifications contained in this manual can result in product damage, additional site work, delays in system installation and additional installation charges.

Contractors are advised to contact TRIATEK Technical Support for any questions or concerns it may have concerning site specific conditions or anomalies that may preclude using the specifications contained in this manual.

Contractor agreed to comply with all applicable local, state, federal and administrative laws and regulations and to ensure that all OSHA, NFPA and other agency recognized safety codes are followed.

# About TRIATEK

## Company Background

Founded in 1985, TRIATEK of Norcross GA has grown to become one of the preeminent manufacturers of Building Automation Systems (BAS) in the world. The founding partners of TRIATEK have combined experiences in the industry of over 75 years and have used such expertise to conceive, develop and produce products that are state of the art, forward thinking, patentable, and highly relevant to solving and addressing many of the safety and energy management issues prevalent in the industry today.

TRIATEK was among the first, and continues to be a pioneer, in developing products that are interoperable with other building automation systems and products and, as such, has positioned itself at the forefront of the industry's inexorable move towards integrated systems. As part of its continuous improvement process, TRIATEK continues to innovate existing products and develop new products that will add to its core business and fulfill its mission to be the preeminent supplier of airflow controls for laboratory and medical applications.

## Nature of Business

Based in Norcross, GA, TRIATEK has been manufacturing laboratory airflow controls since 1989 and has over 1500 laboratory and hospital installations throughout the world. TRIATEK offers the most comprehensive line of laboratory airflow control products in the marketplace including: fume hood airflow controllers, sash position controllers, volumetric offset controllers, room pressure controllers, venturi valves, blade dampers, electric actuators, pneumatic actuators, lighting controls, and the most integration options with BAS companies through LON, BACnet, Modbus, Johnson Controls N2 direct connect, and other custom drivers. These options enable TRIATEK to supply its customers with a unique solution configured for the specific needs of its facility and customer needs rather than attempting to "force" a particular method of control on the customer. TRIATEK manufactures all of its products from its headquarters facility in Norcross, GA and goes to market through exclusive manufacturer's agents, BAS contractors, and other entities worldwide.

Most TRIATEK products can be integrated with all of the major BAS manufacturers to provide facility managers, specifiers, contractors and end users with maximum design flexibility to meet their own unique needs and applications. With over 3000 installations worldwide and comprehensive experiences in providing solutions and applications for every conceivable kind of environment, TRIATEK has made a name for itself as the one-stop shop for any building owner or facility manager that needs building automation products for their facility.

## Warranty

All TRIATEK products are fully warranted for two years (third year available) and are factory tested and programmed before they are shipped (unless required in the field) worldwide from the TRIATEK manufacturing facility. TRIATEK supports its products through its home office and authorized distributors worldwide.

## Technical Support

Factory telephone support for all TRI-ATEK products are provided from 8AM-5PM EST Monday through Friday at 888-242-1922. Complete product information is available from our web site 24 hours a day at: [www.triatek.com](http://www.triatek.com).

# NOTICE

## **Damage Claims**

1. Thoroughly examine all components and units as soon as they are received. If damaged, write a complete and detailed description of the damage on the face of the freight bill. The carrier's agent must verify the inspection and sign the description.
2. Immediately notify the delivering carrier of damage or loss. This notification may be given either in person or by telephone. Written confirmation must be mailed within 48 hours. Carriers are reluctant to make adjustments for damaged merchandise unless inspected and reported promptly.
3. Risk of loss, or damage to merchandise remains with the buyer. It is the buyer's responsibility to file a claim with the carrier involved.

## **Return Shipping**

For the parts return procedure, please contact TRIATEK Technical Support or Customer Service for Return Authorization and assistance.

## **Wiring**

If controls have been factory mounted, a wiring diagram will be included with the unit indicating the factory mounted components. For field wiring of sensors and other components or accessories please refer to the controls contractor's documentation for all wiring information.

## **Controls**

For information concerning controls, components sequence of operation or otherwise; please refer to the documentation provided by the controls contractor.

## **Product Modification**

No field modifications are to be made to any TRIATEK valve body or assembly at any time without prior written consent of TRIATEK. Contact TRIATEK Technical support regarding any questions on this issue. Changes or modifications will void the warranty as well as the user's authority to operate the equipment.

## **Product Removal from Ductwork**

Due to the variety of site designs and methods of field installation; removal of any TRIATEK Venturi Valve from a site that is engaged in active site operation must have prior approval from TRIATEK. Contact TRIATEK Technical support for guidance and methods of removal.

## **Application**

TRIAATEK Venturi Valves are intended for indoor installation only.

## **FCC Compliance for Digital Valves**

This equipment complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual (product data sheets and wiring diagrams), may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

# Contractor Recommendations

## Installation Checklist

### Data

- Project Information
- Submittals
- Manuals for Product

### Tools

- Wire Strippers
- Flat Screw Driver Set with Various Size Larger Drivers
- Phillips Screw Driver with Various Size Larger Drivers
- Small Vise Grips
- Channel Locks
- Needle Nose Pliers
- Crescent Wrench
- Pocket knife
- Nut Driver Set
- Butane or Electric Soldering Iron
- Fine Tip Markers

### Adherents

- Solder
- Electrical tapes
- Duct tape
- Foil Tape
- ASHRAE approved duct sealant

### Electronics & Components

- Cell Phone
- Digital Camera
- Flashlight
- Digital Volt Meter
- DC and AC Voltmeter
- DC and AC Ameter
- Resistance Measurement with Tone
- Extra Terminal Connectors
- Wire Labels

### Safety

- Ladder(s)
- Arrest Harness
- Safety Glasses
- Hardhat
- Steel Toed Shoes

# Product Descriptions

## **VV Series Venturi Air Valves Fume Hood & Room Pressure Control Applications**

The TRIATEK Venturi valve is pressure independent. The variable volume valve maintains a desired air volume independent of the static pressure in the duct. As the static pressure increases, the internal spring compresses to maintain a constant volume of air. Likewise, as the static pressure decreases, the internal spring expands and moves the cone to increase the annular area, thus maintaining a constant volume.

The Venturi Valve will control air flow for supply and return or exhaust ducts based on CFM of flow set by the positioning lever. This valve flow is constant based on specific lever positions. Flow control using the Venturi is linear over most of its control range.

The VV Series Venturi Air Valves come in several standard sizes from 6 inches to 12 inches in diameter. Venturi valves can be ganged to meet additional flow requirements.

Where sound is an issue in high pressure conditions, TRIATEK has a model available with sound attenuation.

Horizontal and vertical applications are available; vertical applications and flow direction must be confirmed and verified at time of order.

## **Micro Precision Venturi Valves Cage Rack Applications**

Combines a factory- calibrated, field adjustable flow rate setting with a mechanical, pressure-independent flow regulator to meet the unique requirements of ventilated cage rack connections to building ventilation systems. Flow rate controller assembly is factory-calibrated to a precise constant volume flow setpoint.

Easy-to-use manual setting mechanism allows simple field adjustments of the airflow setpoint to modify the cage rack flows as required. Self-balancing pressure independent operation the cage rack valve automatically compensates for system static pressure fluctuations to maintain airflow at the setpoint. Simple operation the valve requires no electrical power or pneumatics to operate, nor any flow probes.

TRIAATEK valves maintain a constant airflow over a range of 0.6 to 3 inches of water gauge static pressure across the valve.

# Product Specifications

## Construction

- Spun Aluminum or Stainless Steel valve body with continuous welded seam  
Aluminum Thickness: 0.060"  
Stainless Steel Thickness: .040"
- Valve bodies  
Uncoated Aluminum  
316 Stainless Steel  
Aluminum with Corrosion-resistant Baked Phenolic Coating
- Composite Teflon® shaft bearings
- Spring grade stainless steel spring
- Supply valves are insulated with 3/8" (9.5 mm) flexible closed-cell polyethylene.  
Flame/smoke rating 25/50. Density is 2.0 lb/ft<sup>3</sup> (32.0 kg/m<sup>3</sup>)

## Operating Range

- 32-125° F (0-50° C) ambient
- 10-90% non-condensing RH
- Valve Stroke Range approximately 35°

## Sound

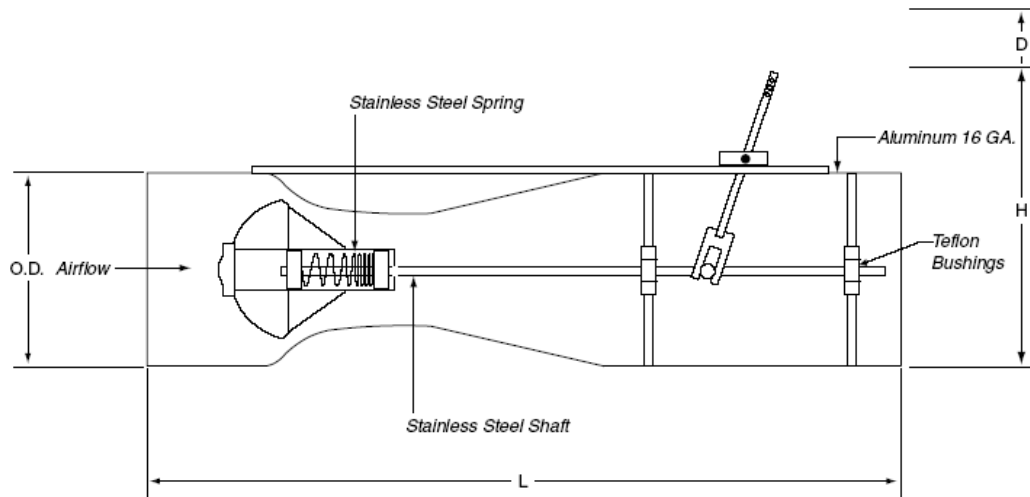
- Designed for low sound power levels to meet or exceed ASHRAE (ANSI) noise guidelines.

## Performance

- Pressure independent over a 0.6"-3.0" w.c (150-750 Pa) drop across the valve on VV Series Venturi Air Valve and VVCR Series Cage Rack Venturi Air Valve.
- Volume control accurate to ±5% of airflow command signal
- No additional straight duct runs needed before or after valve
- Response time to change in command signal: <1 second
- Response time to change in duct static pressure: <1 second



# Single Valve Dimensions and Flow Data

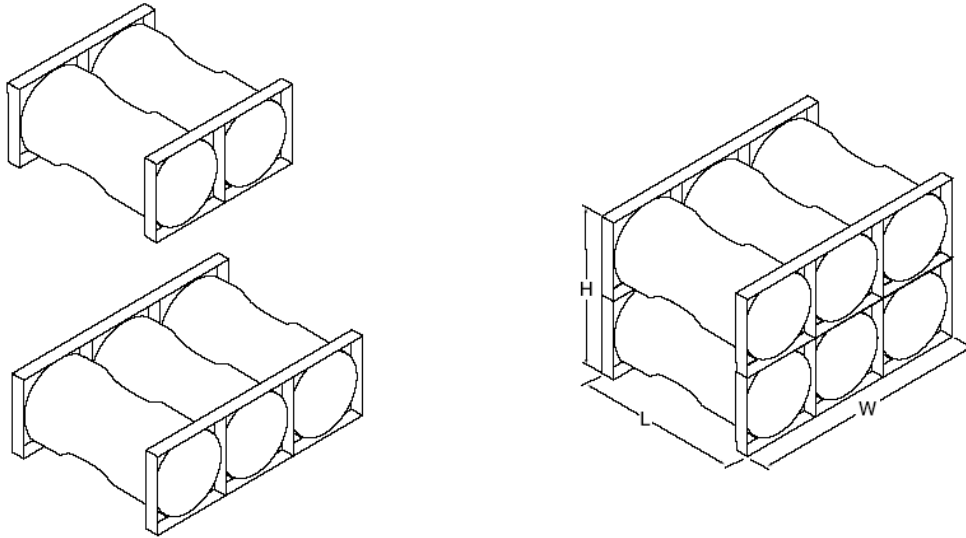


**Venturi Valve Illustration**

## Partially Closed Valve Dimensions

Unit Size	Airflow Range		Inlet Size	Dimensions (inches)			Inlet (mm)	Dimensions (mm)		
	CFM	L/S		OD	L	H		OD	L	H
6	30 - 250	14 - 117	6	5.89	19.50	10.89	152	150	495	277
8	35 - 700	17 - 329	8	7.875	23.0	12.875	203	200	584	327
10	50 - 1000	24 - 472	10	9.88	26.0	14.88	254	251	660	378
12	90 - 1500	42 - 705	12	11.875	27.12	16.875	305	302	688	429

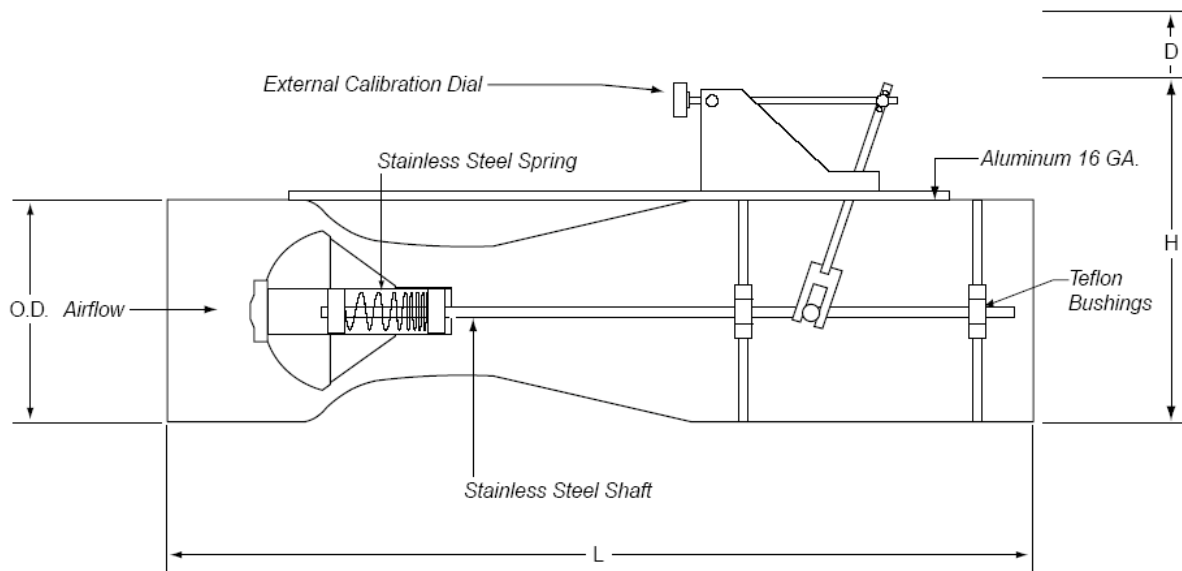
# Ganged Valve Dimensions and Flow Data



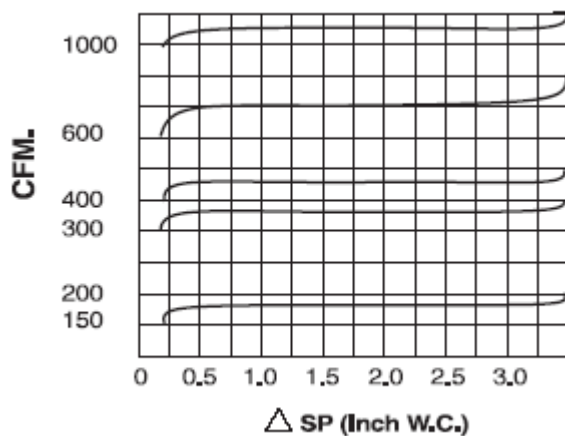
Partially Closed Ganged Valve Dimensions

Unit Size	Number of Modules	Airflow Range		Dimensions (inches)			Inlet (mm)	Dimensions (mm)		
		CFM	L/S	L	W	H		L	W	H
10	2	100 - 2000	47 - 944	30.00	22.625	11.50	254	762	575	292
	3	150 - 3000	71 - 1416	30.00	33.75	11.50		762	857	292
	4	200 - 4000	94 - 1888	30.00	22.625	23.0		762	575	584
	6	300 - 6000	141 - 2832	30.00	33.75	23.0		762	857	584
Unit Size	Number of Modules	Airflow Range		Dimensions (inches)			Inlet (mm)	Dimensions (mm)		
		CFM	L/S	L	W	H		L	W	H
12	2	180 - 3000	85 - 1410	31.12	26.75	13.50	305	791	680	343
	3	270 - 4500	127 - 2115	31.12	40.0	13.50		791	1016	343
	4	360 - 6000	170 - 2820	31.12	26.75	27.12		791	680	689
	6	540 - 9000	254 - 4230	31.12	40.0	27.12		791	1016	689

# Cage Rack Valve Dimensions and Flow Data



**Cage Rack and Constant Volume Valve Illustration**



# Actuation Choices

## ACT-FA-8001 Fast Acting Damper Actuator

The TRIATEK ACT-FA-8001 is a microprocessor based actuator with conditioned feedback. The unit utilizes brushless DC motor technology and operates on a 24 VAC nominal power supply. These models deliver a minimum of 50 in. lb. or 5.6 Nm. torque at rated voltage and are designed for fume hood applications. The ACT-FA-8001 motor is equipped with auto stroking and zero & span features. Auto stroking means that the maximum stroke of the actuator may be field limited to anywhere between 45 and 90 degrees while still maintaining a full throttling range of 2- 10 VDC. The zero and span may also be field set to adjust the control response of the motor to a portion of the 2-10 VDC input signal. This allows for the sequencing of the several motors off the same input signal.

Once the actuator has been programmed with the required parameters, the information is permanently stored in the unit's memory. Due to the fact that the microprocessor is supported by nonvolatile memory (E square prom) and internal feedback, the motor will not have to re-stroke to "find itself" on start up or following a power outage or following subsequent repositioning with the clutch. The 2-10 VDC analog signal may be externally wired with a 500 ohm resistor to respond to 4- 20 mA. Similarly, the feedback signal which is 4-20 mA may be externally wired to produce a 2-10 VDC signal. A 500 ohm resistor is supplied with each unit to accomplish this if required. The ACT-FA-8001 is equipped with an emergency operating device that powers the actuator at its full rated torque to its selected safety position when power fails.

### Electrical

Power Supply	22-26 VAC or 28-32 VDC
Maximum Power Consumption	10.0 VA at 26 VAC
Wire Size	18 AWG Minimum
Electrical Connections	One 5/8 in./ 15.9 mm. Knock Out One 7/8 in./ 22.2 mm. Knock Out Screw Terminals
Feedback Potentiometer	4-20 mA Output 2-10 VDC When Externally Wired with a 500 ohm Resistor (Supplied)
Control Signal	2-10 VDC 4-20 mA When Externally Wired with a 500 ohm Resistor (Supplied) Zero & Span Adjustable

### Mechanical

Torque	50 in. lb. or 5.6 Nm. at Rated Voltage
Angle of Rotation	0-90 Degrees, Mechanically Adjustable
Direction of Rotation	Reversible
Stroke Time	~33ms/Degree of Rotation
Typical Control 10° to 30° Stroke	.0.3 to 0.6 seconds
Shipping Weight	Approximately 3 lb. or 1.4 kilos
Enclosure	
Electronics	UL Recognized QMFZ2 Fire Rated 94V-0
Gear Train	Die Cast Zinc with a Steel Base

### Environmental

Ambient Temperature	0° to 140° F or -18° to 60° C
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# Actuation Choices

## TCP-3153 Pneumatic Actuator

The TCP-3153 Pneumatic Actuator is a multipurpose positioning device used primarily for operating ventilating dampers in response to the output signals of a pneumatic controller or electro-pneumatic transducer. The TCP-3153 can be used with dampers up to a maximum area of 16 square feet for proportional volume control and 25 square feet for two position actuation provided that the torque requirements are compatible with the specific application.

The TCP-3153 is UL component recognized for use on UL classified 555/555S smoke and combination fire/ smoke dampers which have been tested and approved to a degradation temperature of 250°F (121°C).

### Materials

.....Body Die-cast Aluminum, Diaphragm - Synthetic elastomer  
Stroke ..... 3 inches (76 mm)

### Control Air Pressure

.....0-20 psig for HVAC  
.....20 psig (137 kPa) minimum for safety damper functions  
.....30 psig (205 kPa) maximum w/o pilot

### Air Connections

1/8 inch NPT straight barbed fitting for 5/32 or 1/4 inch O.D. polytubing (furnished) compression fitting for 1/4 inch O.D. copper tubing (optional)

Ambient Operating Conditions ..... -20 to 150°F (-29 to 66°C)  
Effective Diaphragm Area ..... 15 inch<sup>2</sup> (97 cm<sup>2</sup>)  
Dimensions ..... (H x W x D) See Figures 2 through 4.  
TCP-3153-5 ..... 8.5 lbs

## TCP-1030 Pneumatic Actuator

The TRIATEK TCP-1030 and TCP-1130 Series 3" Pneumatic Damper Actuators are designed to position automatic air dampers in pneumatically controlled systems. The units may be used for gradual or two position applications. Models are available with either post or right angle bracket mounting. Right angle models are shipped with crank arms for either 1/2" or 3/8" damper shafts. Either style is available with a factory mounted positive positioner. Actuators with positive positioners include an 8 to 13 psi internal spring and a 5 psi span spring. A 10 psi spring may be ordered separately.

### Material

Body .....Glass-filled nylon, UL 94 HB (Nylatron GS63-13)  
Diaphragm .....Neoprene  
Piston .....Glass-filled nylon, UL 94 HB (Nylatron GS63-13)  
Shaft .....CRS with nickel plating  
Bearings .....Glass-filled nylon, UL 94 HB (Nylatron GS63-13)  
Weight .....3.5 lbs. (1.58 kg)  
Effective .....Area 7 sq. inches (45 sq. cm)  
Stroke .....3 inches (76 mm)

### Control Signal Connection

.....3/16" (5 mm) fitting for 1/4" (6 mm) O.D. polyethylene tubing

### Control Signal Pressure Input

.....0-20 psig (138 kPa) operating  
.....30 psig (207 kPa) maximum

See note under Temperature Limits

### Temperature Limits

Operating -20° to 180° F (-29° to 82° C)  
Shipping -40° to 180° F (-40° to 82° C)

NOTE: If application requires operation near maximum temperature AND maximum pressure, install a tubing restraint at the actuator connection.

# Installation Procedures

1. Read complete guidebook and all installation procedures prior to installation.
2. Unpack the valve from the shipping container in the area where it will be mounted.
3. **Verify that the tag number on the valve matches schedule.**
4. **Never carry a valve by the linkage, cone bracket, or any other control component that is mounted onto or into the valve body.**
5. The central cone shaft extends out of the valve body inlet opening when in its full open position. **Do not stand a Venturi Valve on inlet opening side when it is in the full open position.**
6. Verify the size and flow range of the valve by comparing the data on the valve label to the specifications listed on the schedule or architectural drawings. Valve O.D. dimensions are sized to fit inside standard spiral and flexible duct.

**TRIATEK™**


2976 Pacific Drive - Norcross, GA 30071 770-242-1922 Fax 770-242-1944 <http://www.triatek.com>

Part No            **VV-006-H-N-FA-PC**                      Date            **5/15/2006**  
 Serial Number            **8514-006-3**                      Test Str            **1**  
 Tag Num            **34505-EAV-61**                      Typical Pressure            **1.5**  
 Calibration Range                                 A/D Count Range            **0-4095 = 0.5V**

**Warning: This Valve is Calibrated for**                      **Horizontal**                      **use ONLY**

Position	0	20	30	40	50	60	70	80	90	100
<b>Voltage</b>	2	3.6	4.4	5.2	6	6.8	7.6	8.4	9.2	10
<b>CFM</b>	66	82	94	112	136	167	216	296	433	560
<b>A/D</b>	252	658	917	1169	1442	1685	1932	2201	2452	2707

TO CHANGE MOTOR SETTING: Adjust minimum and maximum stops so that center of control rod is aligned with dial number corresponding to the minimum and maximum CFM required



Air Flow

7. Install all Pressure Independent valves horizontally or vertically based on submittals, drawings and specifications.
8. Be sure to install valve so that air flow direction corresponds to the arrow on valve, i.e., from short cylindrical section to longer cylindrical section. **Verify the cone direction by checking the label mounted on the valve and comparing the arrow on the label to the direction of cone.** The cone should move freely forward and back in the direction that the arrow is pointing.
9. **Before mounting the valve to the ductwork, once again verify the direction of flow within the duct and align the valve accordingly.**
10. Install a hanger stock to support the ductwork within 12 in. (305 mm) of the valve connection. Install valve into duct after hanger stock is in place.
11. **Ensure the valve is level as it must be level when mounted in the ductwork to operate precisely.**

## Installation Procedures

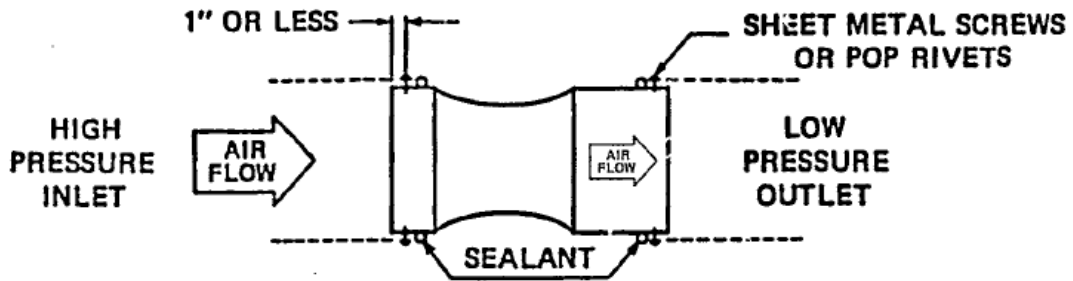
12. Allow a minimum of 14 in. (356 mm) of free unobstructed space around the valve for access. In general, the valve may be installed in a 360° rotation within the duct; the actuator and linkage position is not affected whether it is up, down or sideways. However, for future maintenance, adjustment or potential condensation issues it is recommended that the linkage be positioned facing down.
13. Single body horizontal hood valves should be installed so that the pivot arm is located between 8 and 4 o'clock (not within 4 to 8 o'clock).
14. Access to the valve must be provided for possible future changes requiring re-setting of air flow. Allow 5.75" (146 mm) of unobstructed space in the duct on valve's inlet side for the shaft to reach the maximum flow position.
15. When equipped with an electric actuator, 24VAC is needed to power it. See wiring instructions provided for the actuator.
16. Sheet metal screws should not exceed 3/4" length and should not be located more than 1" from either end of valve.
17. Air at inlet is high pressure and care should be taken to assure a tightly sealed duct connection. The outlet air is low pressure and the sealing procedure should conform to that used on low pressure ductwork.
18. Use ASHRAE approved duct sealant on all valve / duct connections (or flange gaskets for circular flanges). Do not use a sealant that prevents valve removal.
19. I.D. and calibration tags should not be removed.

# Installation Procedures

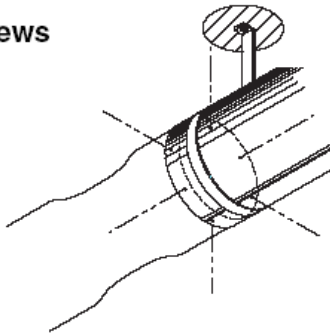
Follow the appropriate installation diagram.

**NOTE:**

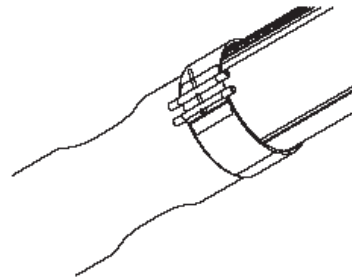
Unless specifically ordered for a particular job TRIATEK, Inc. does not provide screws, fasteners, duct sealant, hanger stocks, companion flanges, or gaskets.



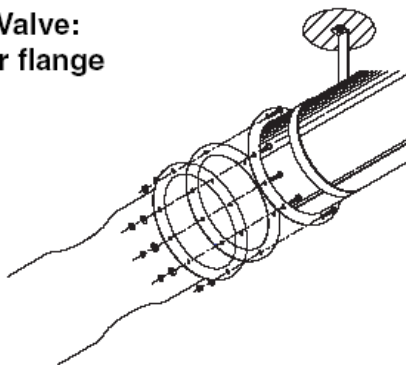
Single Valve:  
Sheetmetal screws



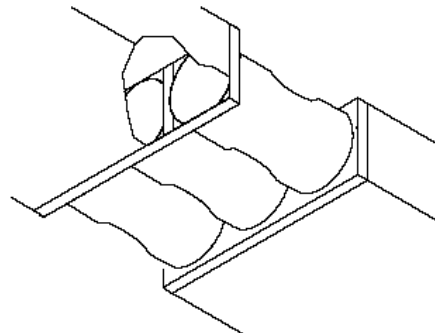
Single Valve:  
Drawband\*\*



Single Valve:  
Circular flange



Multiple Valve Body:  
Slip-type flange





# Troubleshooting

The following is to be used as a guide for potential resolution of a site issue. Please contact TRIATEK Technical Support for additional assistance should the solution not be obtained from this guide.

**Problem 1:** **Fume hood monitor in alarm; Room pressurization problem.  
Low static pressure across valve (<0.6"wc; 150Pa)**

**Possible Causes A:**

1. Too many sashes open at one time.
2. Sash open beyond maximum allowable position.
3. Blocked or kinked pressure switch tubing.

**Possible Solutions A:**

- a. **Contact HVAC service maintenance contractor to inspect, verify and correct.**
- b. **Review operator sash movement.**

---

**Possible Causes B:**

1. Incorrect valve position.
2. Valve is not responding to input signal.
3. Loss of pneumatics.
4. Mechanical linkage is disconnected.
5. Loss of power or electrical control signal.
6. Broken sash cable.
7. Monitor calibrated incorrectly.
8. Incorrect wiring terminations.

**Solutions B:**

- a. **Contact HVAC service maintenance contractor to inspect, verify and correct.**
- b. **Contact TRIATEK Technical Support for assistance.**

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**Problem 2:** **Temperature control issues.**

**Possible Causes A:**

1. Reheat system issues.
2. Thermostat malfunction.
3. Air handler malfunction.
4. Water valve response issues.

**Solutions B:**

- a. **Contact HVAC service maintenance contractor to inspect, verify and correct.**

---

**Problem 3:** **Valve Banging**

**Possible Cause A:**

1. Fluctuation in pressure that is out of acceptable design range.
2. Lack of Bypass damper control.
3. Slow response to duct pressure control.

**Solutions A:**

- a. **Adjust Bypass damper control.**
- b. **Install fast acting actuators; flow probes and VAV control; integrate into stand alone lab control.**
- c. **Contact HVAC service maintenance contractor for inspection, verification and correction.**

**NOTE:** **Exposing ANY Venturi Valve to excessive pressures that are outside of the range of specification may require the valve to be recalibrated and recertified at factory; potential damage to the valve may also occur.**

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**Problem 4:** **Monitor indicates normal operation, but actual face velocity or flow has been measured high or low.**

**Possible Cause A:**

1. Low or high static pressure.

**Solutions A:**

- a. **Verify at least 0.6" w.c (150Pa) across valve.**
- b. **Connect a Magnahelic gauge across the valve taps.**
- c. **For hood valves, check voltage at TB-16 at fume hood monitor (>10V=low static).**
- d. **Contact TRIATEK Technical Support for assistance.**

# Service and Maintenance

## Manual Setting Changes

1. Whenever possible shut down the fan. High pressure systems exert considerable force on a control rod, making adjustments with a system running is difficult.
2. Use an NIST traceable flow measuring device to determine flow for valve adjustment.
3. Loosen locking nut and move control rod to the new position relative to the desired flow adjustment.
4. Retighten locking nut.

## Electronic or Pneumatic Operator Setting Changes

1. Contact TRIATEK Technical Support for Assistance.

## Routine Maintenance

1. Periodic servicing such as lubrication or parts replacement is not required. Proper installations and field startup will ensure that the valves will provide years of ongoing operation.
2. In light of the occupational hazards involved with treating patients confined to isolation rooms, or bio hazardous laboratories although not required it is recommended that a hospital or research lab room be inspected, re-certified, maintained and recalibrated if necessary, at least once per year.
3. Ensure compliance with any owner or regulatory requirements that may mandate specified periods of inspection, maintenance and/or re-calibration.

## Replacement Parts

Replacement parts are available; please be aware that replacement of some components may require factory recalibration and certification prior to installation. Contact TRIATEK Technical Support or Customer Service for assistance in ordering.



TRIA TEK supports its products through its home office and authorized partners worldwide. Factory telephone support for all TRIA TEK products is provided from 8AM to 7PM EST Monday through Friday.

**WEB**

Complete product information is available from our web site 24 hours a day at: [www.triatek.com](http://www.triatek.com)

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**FAX** 770-242-1944

**CUSTOMER SERVICE & SALES** 888-242-1922

**TECHNICAL SUPPORT 8AM-7PM EST**

**Eastern U.S.** 888-242-1922

**Western U.S.** 888-242-1922