ACCUTROL LLC

Manufacturer of the Award Winning AccuValve
the World's Most Advance Air Flow Control Valve

Laboratories

Life Science

Healthcare

Jana Tanmia Resources
ASSET, FACILITY & ENERGY MANAGEMENT

www.jtr.my

Our Products

1.0 Accuvalve Airflow Control Valve

2.0 Accutrol AVC Fume Hood Control System

3.0 Room Airflow and Temperature Controllers

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5.0 Room Pressure Monitors

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1.0 Accuvalve Airflow Control Valves

The AccuValve is an electronically operated airflow control valve for critical environments such as laboratories and clean rooms. The AccuValve AV3000 is designed for 21st Century sustainability building control. The AccuValve incorporates high accuracy airflow sensing with a revolutionary design based upon proven technologies. The valve was created for sustainable "green" design, low pressure drop for energy reduction and safety through true airflow measurement.

The award winning AccuValve is designed for sustainable critical environments with very low pressure drop for energy savings and safety through true airflow measurement. The AccuValve was introduced as the first critical environments airflow control valve designed for use with electronic actuation.

Low Pressure Drop

The AccuValve incorporates a streamlined compression section and a carefully designed static regain section. These features provide lower pressure drop, lower noise level and better flow measurement conditions than all other available technologies.

True Air Flow Measurement

The integral high accuracy vortex airflow sensing provides high turndown while maintaining accuracies of 5% of reading over the flow range, ensuring precise airflow control.

No Straight Run Requirements

There are no straight duct runs required before or after the valve, making application of the valve very simple. The air compression in the valve provides laminar airflow throughout the airflow range providing repeatable airflow measurement regardless of inlet or outlet conditions.

Simple Layout and Installation

All parts of the AccuValve are accessible from the front of the valve simplifying installation requirements. In addition, the actuator can be completely inverted should field conditions require such.

ASHRAE Standard 90.1 Compliant Without Additional Hardware

ASHRAE Standard 90.1 calls for the reset of the static pressure setpoint in VAV systems equipped with DDC controls. The AccuValve design allows the building automation system to provide this benefit to the owner without the requirement of any additional hardware cost. This is unique to the AccuValve for critical environments.

1.0 Accuvalve Airflow Control Valves

For Fast Speed of Response

AccuValve Model AV3000

- Fast Speed of Response (lab and critical Spaces)
- Supply, General Exhaust, Specialized Exhaust
- Universal I/O (for closed loop control through Accutrol controller or BAS controller)

AccuValve Model AVC5000
(AccuValve with ePI)

- Fast Speed of Response (lab and critical Spaces)
- Fume Hoods
- Supply, General Exhaust, Specialized Exhaust
- Constant Volume. Multi-position Constant Volume
- Stand-Alone Closed Loop Control (or set point control through Accutrol controller or BAS controller)
- Native BACnet® Communication

For Standard Speed Actuation

AccuValve Model H-AV3000

- Standard Speed (healthcare and life science support spaces)
- Supply, Return, General Exhaust, Specialized Exhaust
- Universal I/O (for closed loop control through Accutrol controller or BAS controller)

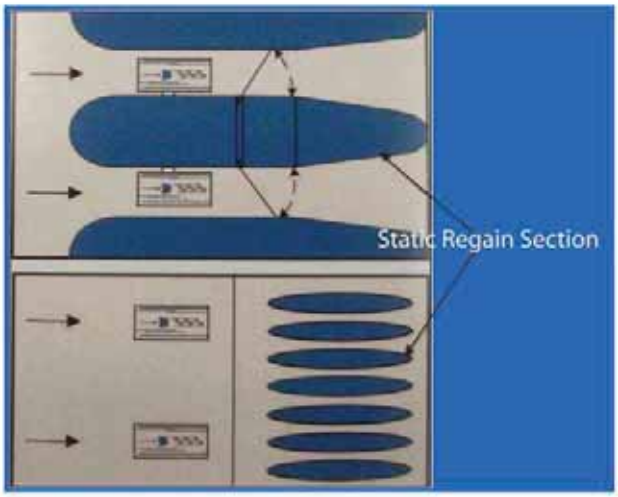
AccuValve Model H-AVC5000
(AccuValve with ePI)

- Standard Speed (healthcare and life science support spaces)
- Supply, Return, General Exhaust, Specialized Exhaust
- Constant Volume. Multi-position Constant Volume
- Stand-Alone Closed Loop Control (or set point control through Accutrol controller or BAS controller)
- Native BACnet® Communication

1.0 Accuvalve Airflow Control Valves

Critical Ventilation Control Valves

The Accuvalve is designed to handle Critical Ventilation requirements of Accuracy, Speed and Durability. It modulates the air flow in a linear fashion, and the volume of the air flow with VorTek air flow sensors. The combined use of the VorTek sensors, along with a Valve designed for low pressure drop and linear control, make these valves the best available in the market for your critical ventilation requirement in the laboratory, clean room, or animal care facility.

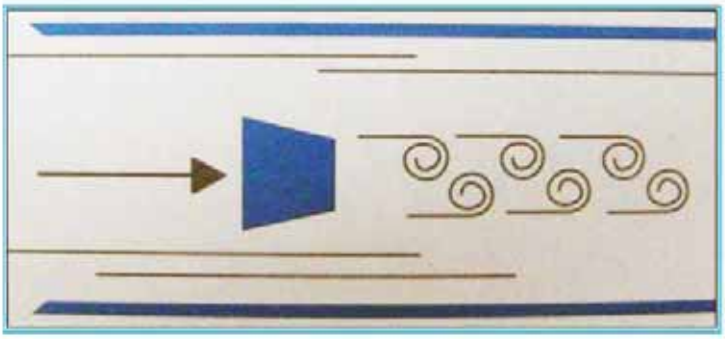


Performance Benefits of Valve

- Low pressure drop
- Quick response to set point changes
- Laminar airflow at point of measurement
- Excellent shut off capability
- Aerodynamically designed
- Corrosion resistant materials
- Low sound level

Vortex Meter and Vortex Shedding

A Unique, Patented Approach For All Critical Environment That Yields The Most Reliable Ventilation Airflow Management System



The principle of physiscs known as vortex sheeding is the basis for Tek Air's patented digital approach to airflow measurement. Whan an obstacle, such as trapezoidal shedder in a VorTex probe, is placed in the path of the airflow, spiraling eddy currents are created. These vortices, in accordance with the laws of physics, are shed in alternating fashion from one side of the shedder to the other. Tek Air measures the rates at which these vortices are produced, converting alternating pulses into digital signals for the precise measurement of airflow volume.

Performance Benefits of Vortex Airflow Measurement

- No compensation is required for temperature, density and humidity changes
- Lincar primary signal
- True velocity averaging from multiple sensors
- Accurancy not affected by dust/dirt
- Doesn't required recalibration
- Lower cost of ownership
- Primary signal is directly proportional to velocity

1.0 Accuvalve Airflow Control Valves

ACCUVALVE®

- True Flow Feedback
- HighAccuracy and Turndown
- Linear Responcse
- Quiet
- No scheduled maintenance
- Electric Actuation
- Fast Speed of Response
- No straight Run Requirements
- Low Pressure Drop

SELECTION TABLE

Size	Duct	Min CFM	Max CFM	Pressure Drop at Max CFM
8"	Round	100	725	0.29"
10"	Round	125	1000	0.27"
12"	Round	200	1600	0.25"
12x18"	Rectangular	260	2100	0.29"
12x24"	Rectangular	375	3000	0.29"
12x36"	Rectangular	520	4400	0.29"
12x48"	Rectangular	750	6000	0.29"

2.0 Accutrol AVC Fume Hood Control System

The award-winning Accutrol AVC Fume Hood Control System with Accutrol Insight graphical software provides an unprecedented evolution in fume hood control technology. It significantly simplifies the start-up,operation and modification for VAV fume hoods.

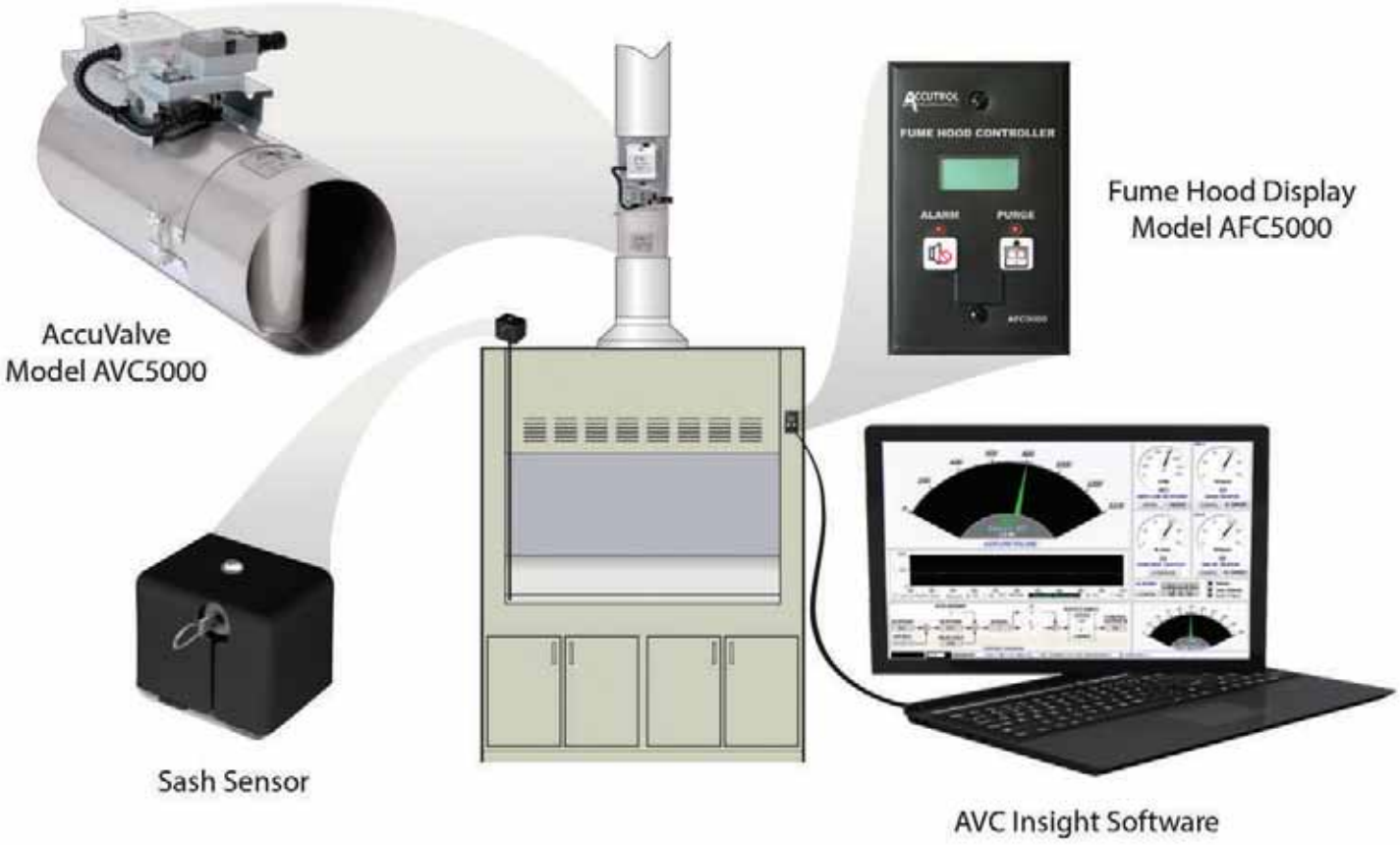
The Accutrol AVC Fume Hood Control System combines the award-winning design of the low pressure drop AccuValve® Airflow Control Valve with a "smart" fume hood display and a powerful and intuitive user interface.This innovative combination allows owners to easily set up and change the fume hood configuration without complicated manuals.

2.0 Accutrol AVC Fume Hood Control System

Easy Configuration & Verification of Sash Positions

Vertical, horizontal or combination sashes are easily configured through the intuitive Accutrol Insight graphical software. The Insight graphical user interface provides users with a diagram of the specific type of fume hood they are configuring and prompts them to enter the pertinent sash dimensions. To verify sash calibration, Insight provides a fume hood diagram showing the real-time vertical and horizontal sash positions.

The Accutrol AVC Fume Hood Control System



Applications

University research and development
Life science
Pharmaceutical
Biotech
Healthcare laboratories
Secondary school laboratories
Retrofit applications

Features & Benefits

Integral operation with low pressure drop AccuValve®
Visual/Audible indication with flow, alarm and purge
Provides text alarm messages on display
Purge set point is programmable
Up to 4 user-defined setback sequences
Optimized energy savings
Simple installation and wiring
Simplified set-up (no menus)
Intuitive graphical user interface using our Insight software

3.0 Room Airflow and Temperature Controllers

Accutrol provides a complete line of controllers to maintain precise airflow and temperature conditions. Applications include critical environments such as laboratories, healthcare and life science support spaces.

Laboratory Airflow Control

Support Space Control

Healthcare Space Control

Laboratory Airflow Control

Laboratory airflow control and large space critical environment control through high-speed, native BACnet room controllers can be easily programmed to maintain precise airflow, temperature and humidity conditions with the following devices :

Accutrol AC7100 – Critical Environment Room Controller (30 point)

- High speed, versatile controller (8-DO, 8-UI, 8-DI, 4-AO and 2 pulse)
- Native BACnet communication

Accutrol AC7200 – Critical Environment Room Controller (20 point)

- High speed, versatile controller (6-UO, 12-UI and 2-DO)
- Native BACnet communication

Accutrol AC7300 – Critical Environment Room Controller (32 point)

- High speed, versatile controller (8-UO, 16-UI and 8-DO)
- Native BACnet communication

3.0 Room Airflow and Temperature Controllers

Support Space Control

Support space control and smaller space airflow and temperature control through dedicated native BACnet room airflow and temperature controller.

Accutrol RTC100 – RoomTrack™ Room Temperature Controller

- For seamless control of life science and lab support spaces with AccuValve AVC5000
- Airflow tracking control and room temperature control
- Native BACnet communication

Healthcare Space Control

Healthcare space control or control of areas such as operating rooms, isolation rooms and patient rooms for precise room airflow and temperature control. The Accutrol HealthTrack Room Controller is specifically designed for these spaces and provides BACnet interface to the building automation system.

Accutrol HTC100 – HealthTrack™ Room Temperature Controller

- For seamless control of life science and lab support spaces with AccuValve AVC5000
- Airflow tracking control and room temperature control
- Native BACnet communication

Tracking Pair Airflow Control

The **Accutrol AVC5000**, with it's integral controller and native BACnet communication interface to the building automation system, can control any area that requires tracking airflow control.

Tracking Pair Configurations

- Lead AVC analog output is wired directly to tracking AVC analog input
- Lead AVC setpoint can be pre-programmed at factory as analog input, digital inputs or BACnet MS/TP
- Airflow output to BAS is available either through hardwired analog output or BACnet MS/TP
- Valve position is available either through hardwired analog output or BACnet MS/TP

4.0 Room and Duct Temperature Sensors

The Accutrol Room Temperature Sensor (RTS100) and Duct Temperature Sensor (DTS100) are designed to be used with the Accutrol AC7000 Series Controllers, HealthTrack™ (HTC100) Room Temperature Controllers, RoomTrack™ (RTC100) Room Controller and BAS Controllers.

Room Temperature Sensor RTS 100

The Accutrol RTS100 Series includes wall mounted Room Temperature Sensors and combination Room Temperature/ Humidity Sensors. Options include temperature setpoint adjustment slider as well as manual override switch where required. The RTS100 Series Sensors are designed to be used with Accutrol AC7000 Series Controllers, Accutrol HTC100/ RTC100 Room Temperature Controllers and BAS Controllers.

RTS 100

DTS 100

Duct Mounted Temperature Sensor DTS 100

The Accutrol DTS100 Duct Mounted Temperature Sensor is designed to be used with the AC7000 Series Controllers as well as the HTC100 and RTC100 Room Temperature Controllers. The DTS100 is a duct mounted series 10K Ohm, Type III thermistor designed for measurement of duct temperature in the discharge of a reheat coil or in the return/exhaust of a space.

5.0 Room Pressure Monitors

Accutrol's room pressure monitor line provides the user with high performance and accuracy for measurement of critical low differential pressure. Models offer touchscreen interface, BACnet communications, multi-condition monitoring and remote station monitoring from nurse stations, etc.

SRPM

SRCM

Applications for use of the Accutrol line of pressure monitors include healthcare, pharmaceutical manufacturing, cleanrooms, research laboratories and animal resource facilities

Accutrol SRPM - Room Pressure Monitor

- Designed for critical low differential pressure applications that require stringent pressure monitoring and alarming.
- Optional BACnet MS/TP communication

Accutrol SRCM - Room Pressure and Condition Monitor

- Designed to measure and display true low pressure differential in pharmaceutical, hospital, laboratory and research facilities.
- Provides display for up to 4 ambient parameters
- Optional BACnet MS/TP communication

Accutrol SRIM - Room Isolation Monitor

- Designed to measure and display true low pressure differential in pharmaceutical, hospital, laboratory and research facilities.

Accutrol MRMS - Multi-Room Monitoring Station

- Designed for installation in a central location to provide remote viewing and alarm monitoring for up to 8 rooms equipped with Accutrol's pressure and room condition monitors, such as the model SRPM or SRCM.

6.0 Airflow Measurement Products

VorTek G3 Airflow Measurement

Vertical, horizontal or combination sashes are easily configured through the intuitive Accutrol Insight graphical software. The Insight graphical user interface provides users with a diagram of the specific type of fume hood they are configuring and prompts them to enter the pertinent sash dimensions. To verify sash calibration, Insight provides a fume hood diagram showing the real-time vertical and horizontal sash positions.

VorTek^{G3} Duct Airflow Measurement Probes

VorTek^{G3} Fan Inlet Airflow Measurement Probes

The VortekG3 Airflow Measurement products provide accurate, linear airflow measurement available for duct insertion and fan inlet installation. The individual sensors on the probes provide pulse type electronic output signals which are directly proportional and linear to the airflow velocity. They are impervious to contaminants and are not affected by temperature, pressure and relative humidity. The analog output is configurable via the Accutrol Insight graphical software and the selections are 0-20mA, 4-20mA, 0-5V, 1-5V, 0-10V and 2-10V. Probes are pre-connected to the transmitter, eliminating the need for complex field terminations. The VortekG3 transmitter operates on industry standard 24VAC or 24VDC power with very low power consumption. In addition, the VorTekG3 incorporates a modular design concept, BACnet option and the free award-winning Accutrol Insight graphical software.

6.0 Airflow Measurement Products

IAQ - Tek Outdoor Air Volume Measuring System

The IAQ-Tek Outdoor Air Volume Measuring System simplifies outdoor air measurement at the entrance to fan systems by incorporating a measurement probe designed specifically for the low velocities and high turbulence associated with outdoor air intakes. The IAQ-Tek includes an 80 character display and keypad with three series of preprogrammed instructions to lead setup persons through the proper routine. Instructions are specific for temperature control contractor, air balancer and user addressing each individual requirement.

- **Simple installation**
- **Operates over -40° to 120° F**
- **Probes require minimal straight runs of duct**
- **Setup Wizard**
- **Resistant to Contamination**

Tek-Air

Airflow Products

MADE IN U.S.A

Accutrol IAQ-Tek

The IAQ-Tek Outdoor Air Volume Measuring System simplifies outdoor air measurement at the entrance to fan systems by incorporating a measurement probe designed specifically for the low velocities and high turbulence associated with outdoor air intakes.

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