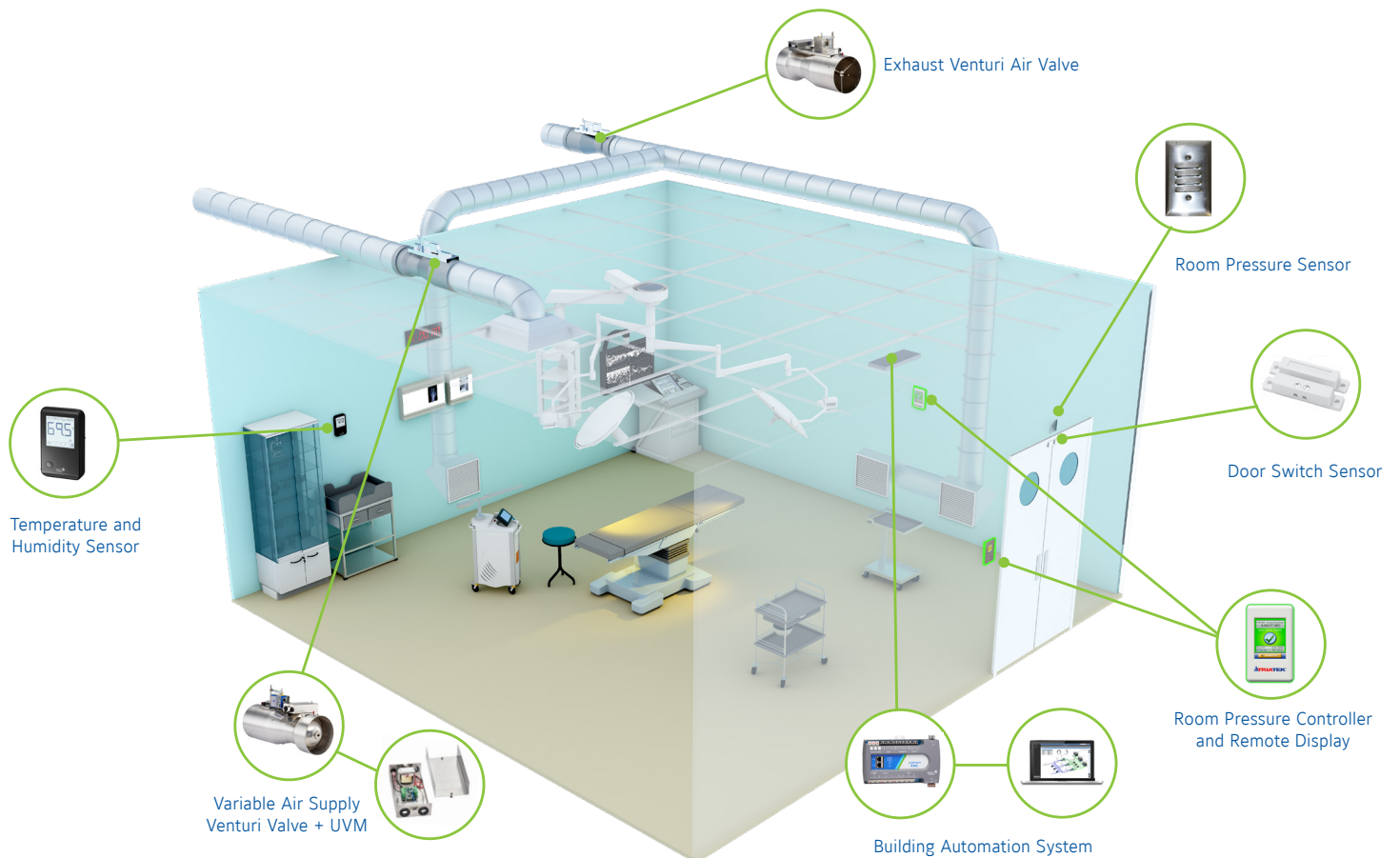# TRIATEK®

Critical Environment Controls
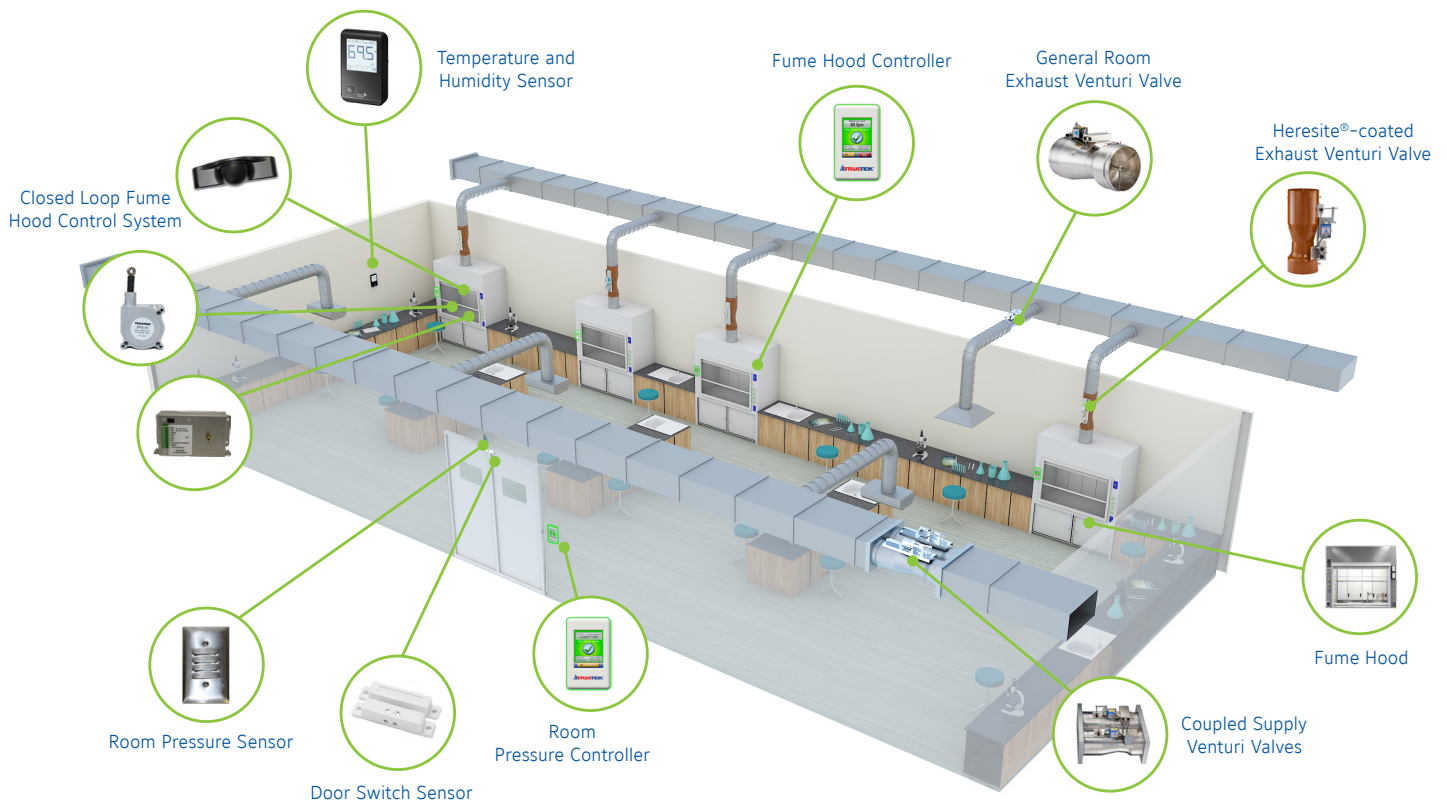
Johnson Controls

Healthcare Solutions

Operating suites, patient isolation rooms, compounding pharmacies, and clean rooms require complex HVAC systems to maintain a safe, therapeutic environment for patients and staff. Triatek can provide a complete solution for all your healthcare airflow needs.

Exhaust Venturi Air Valve

Room Pressure Sensor

Door Switch Sensor

Temperature and Humidity Sensor

Room Pressure Controller and Remote Display

Variable Air Supply Venturi Valve + UVM

Building Automation System

Laboratory Solutions

Triatek offers diverse laboratory control options to provide best-in-class occupant protection while also meeting the regulation compliance and energy reduction needs of campuses and industrial facilities.

Temperature and Humidity Sensor

Fume Hood Controller

General Room Exhaust Venturi Valve

Heresite®-coated Exhaust Venturi Valve

Closed Loop Fume Hood Control System

Room Pressure Sensor

Door Switch Sensor

Room Pressure Controller

Coupled Supply Venturi Valves

Fume Hood

Venturi Air Valves

Triatek's pressure-independent Venturi air valves are a crucial part of a of a critical environment's HVAC infrastructure. They provide a rapid and precise response to constantly changing airflow conditions in order to ensure occupant safety.

Critical environment airflow demands the most precise and dependable instruments in the HVAC industry. The top facilities around the world rely on Triatek Venturi air valves to protect people from harmful airborne pathogens and chemicals, while also optimizing energy consumption.

The exceptional design of our pressure-independent, variable volume valves generates a rapid and accurate response in order to maintain the desired air flow volume independent of static pressure changes.

Whether your space requires negative or positive pressure, special coatings to protect against harsh chemicals in the air stream, or ganged valves for increased airflow, Triatek's valve selection can meet your needs to create a custom airflow solution.

Triatek valves are designed to be flexible and third-party friendly, as they work harmoniously with system components from various manufacturers. Triatek valves also integrate into any BAS, allowing you to create an data-rich system for your laboratory or hospital.

Universal Valve Module (UVM)

Ideal for renovations or new installations in which controllers from multiple vendors are employed, Triatek's UVM simplifies valve communication throughout the HVAC infrastructure and allows you to eliminate other costly controllers and gateways.
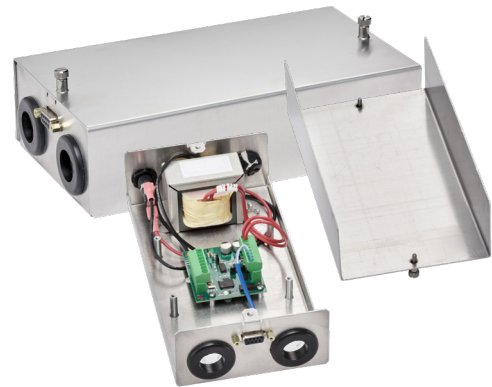
UVM

Venturi Valve with UVM

Venturi Valve Upgrade Kit

The Venturi Valve Upgrade Kit converts legacy valve systems into digital valve systems compatible with any building automation system. By removing the existing valve hardware and installing the Upgrade Kit, you can easily create an airflow system with state-of-art HVAC controls without having to remove valves from the ductwork.

Venturi Valve Options

- Aluminum or stainless steel valve material
- Low or medium pressure
- Partially closed or shut-off
- Constant volume or actuated
- 8", 10", 12," and 14" diameters
- Heresite® or Kynar® coatings
- Thermal insulation to reduce heat loss
- Ganged valves for increased airflow
- Flanged valves for easier installation
- Vertical or horizontal orientation
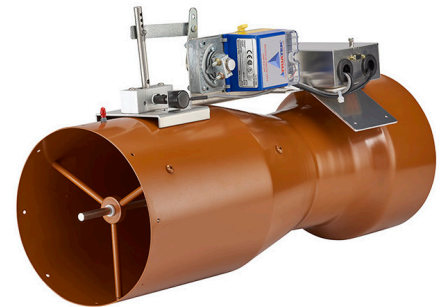- Fast-acting or standard-acting electronic actuators

Size Options
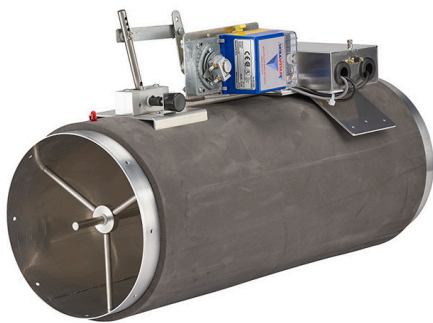
Insulated

Kynar®-coated

Heresite®-coated

Ganged

Flanged

Controllers and Monitors

Triatek's easy-to-use touchscreen controllers and monitors provide nurses, doctors, scientists, and facility managers with confidence that their critical spaces are safe.

Triatek FMS and HMS controllers and monitors are designed to provide staff with the information they need to ensure their hospitals and laboratories are suitable for occupancy.

Triatek controllers also equip you to comply with all required standards and recommendations including USP, OSHA, ANSI, ASHRAE, ASHE, and the CDC.

Each product features a modern touchscreen, intuitive navigation menu, customizable audible alarms, and the patented color-coded Safety Halo™ edge lighting that informs users when their spaces or fume hoods are safe (green), compromised (yellow), or unsafe (red).

The light helps reduce audible alarm fatigue and enables staff to easily monitor their critical spaces down long hospital corridors or across large laboratories with a simple glance. The Safety Halo™ brightness is field-adjustable, with a built-in night time turndown mode.

Triatek's controllers and monitors integrate into any building automation system so owners can examine usage data and make informed decisions to create more energy efficient hospitals and laboratories. The intuitive touchscreen menu and set up wizard makes installation and programming simple and easy.

FMS-1655 Room Pressure Monitor and Controller

The FMS-1655 Room Pressure Controller optimizes the safety, comfort, and efficiency of healthcare and lab spaces by coordinating information like room pressure, air exchange rates, humidity, temperature, and setbacks.

There are a variety of options available including full controllers, basic monitors, and remote displays to accommodate your facility's needs. The FMS-1655 series is available in stainless steel flush mount or plastic surface mount.

HMS-1655 Fume Hood Monitor and Controller

The HMS-1655 Fume Hood Controller simultaneously displays sash height, face velocity, exhaust, hood status, time, and date. It utilizes a closed-loop system to better regulate air entering and exiting the hood, and to produce truer fume hood readings with a higher degree of reliability.

The HMS-1655 immediately alerts users if the fume hood malfunctions. The series is available as a controller, monitor, and remote display. It is available in plastic surface mount.

CMS-1655 Central Monitoring Station

The CMS-1655 Central Monitoring Station allows staff to simultaneously monitor the parameters of up to four rooms or fume hoods; or a combination of rooms and hoods. It is ideal for nurses' stations and other scenarios with multiple critical environments that require constant monitoring.

The intuitive navigation menu makes drilling down to view parameters of specific rooms or hoods quick and easy. It is available in stainless steel flush mount or plastic surface mount.

Johnson Controls

Fume Hoods

The FlowSafe Stable Vortex® II Fume Hood is a unique, patented life safety device that creates safer working conditions for scientists.

Fume hoods are important life safety devices for those working with dangerous chemicals, vapors, and dusts. Fume hoods are also an integral part of a laboratory's HVAC system, and the largest influencer on a facility's overall energy consumption.

The award-winning FlowSafe Stable Vortex® II Fume Hood takes both user safety and energy efficiency into account with its innovative design.

The design is different from conventional fume hoods. It is based on the principle that efficient and stable hood operation is determined by controlling the airflow pattern *within the hood* and not by the entry velocity of air in the sash opening.

The Stable Vortex® II provides an immediate response to environmental changes like cross drafts, work procedures, and thermal changes, which keeps the containment constant and the user protected at all times. This hood also requires significantly less energy to effectively contain when compared to conventional fume hoods, resulting in a more energy efficient laboratory.

Design options include all standard hood utilities along with various colors and sizes to accommodate the unique look and feel of your laboratory.

Benefits

- Actively responds to dynamic conditions
- Designed for a high level of user safety
- Horizontal/vertical combination sash for full-body protection and easy hood loading
- Requires less airflow to properly contain so it is inherently energy efficient
- Less required airflow makes working with fine dusts and powders easier
- Quieter hood, ideal for learning labs

ASHRAE 110 Containment Test

The ASHRAE 110 Containment Test provides a quantitative analysis of air capture rates and evaluates the ability of a fume hood to contain dangerous chemicals and gases to prevent user exposure.

When tested both as-manufactured and as-used (a lot of fume hoods are only tested as-manufactured, which does not take into account user movement, cross drafts, etc.), the Stable Vortex® II Fume Hood performs above and beyond the required ASHRAE standards.
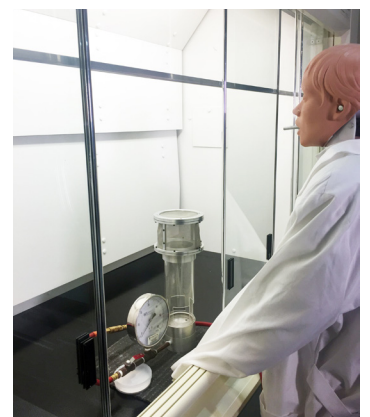
FlowSafe Stable Vortex® Fume Hood Conversion Kit

The Stable Vortex® Fume Hood Conversion Kit adapts conventional fume hoods into high performance, low flow fume hoods that deliver a superior level of safety for the user, while providing substantial energy and cost savings for a laboratory facility. The Conversion Kit utilizes the same technology as a new Stable Vortex® II Fume Hood.

The Conversion Kit is installed by removing the internal working components of the conventional, outdated fume hood and installing the Stable Vortex® component in its place. The original fume hood cabinet can remain in place.

The Conversion Kit is custom designed to accommodate varying hood sizes without altering the fume hood envelope. This also eliminates the need for expensive and time-consuming asbestos abatement. Custom paint options are also available to match the unique look and feel of your workspace.

The Conversion Kit enables you to upgrade your laboratory without having to entirely replace fume hoods. This not only saves money, but also allows for a more flexible installation schedule.

The Conversion Kit costs on average, 50-60% less than replacing an entire fume hood.

Before

AHR EXPO®
INNOVATION AWARDS
2017
FINALIST

After

Johnson Controls

Lighting Controls

Triatek's LP-3500 Lighting Control Panel is used in laboratories, healthcare facilities, commercial buildings, and stadiums. It provides the capability to control high voltage lighting circuits via a two wire RS-485 network, and works in conjunction with occupancy sensors, light level sensors, and manual override switches.

The LP-3500 features improved relays with longer life spans and includes a direct manual override option that can be switched on or off without power, allowing electricians to manually control the circuits during installation.

This unique lighting panel allows authorized users to override the circuits after installation, an added feature not common in other lighting control products.

The LP-3500 integrates with most building automation systems, including *Metasys.*

Coordination between lighting controls and HVAC within a BAS can greatly reduce required temperature setpoints and allow for longer setbacks based on occupancy levels, leading to greater energy and cost savings.

Features:

· ETL Listed®
· Easy to set up and use
· Capable of controlling high voltage lighting circuits
· Integrates with most building automation systems
· Improved relays with longer life spans
· Direct manual override option
· Smaller panel size
· LED displays
· Flash warnings available

Building Automation Controls

Triatek products work seamlessly with any building automation control system from BACnet® to LonWorks®. You can improve your building's performance by examining each layer of your critical environment control strategy to identify opportunities to improve occupant safety and comfort while reducing energy consumption.

General BAS Integration

The diagram to the right showcases how Triatek products provide valuable HVAC infrastructure communications to a BAS. Triatek products are designed to integrate into any third party BAS, but there is also a unique value in integrating Triatek products with Johnson Controls' flagship *Metasys* BAS.
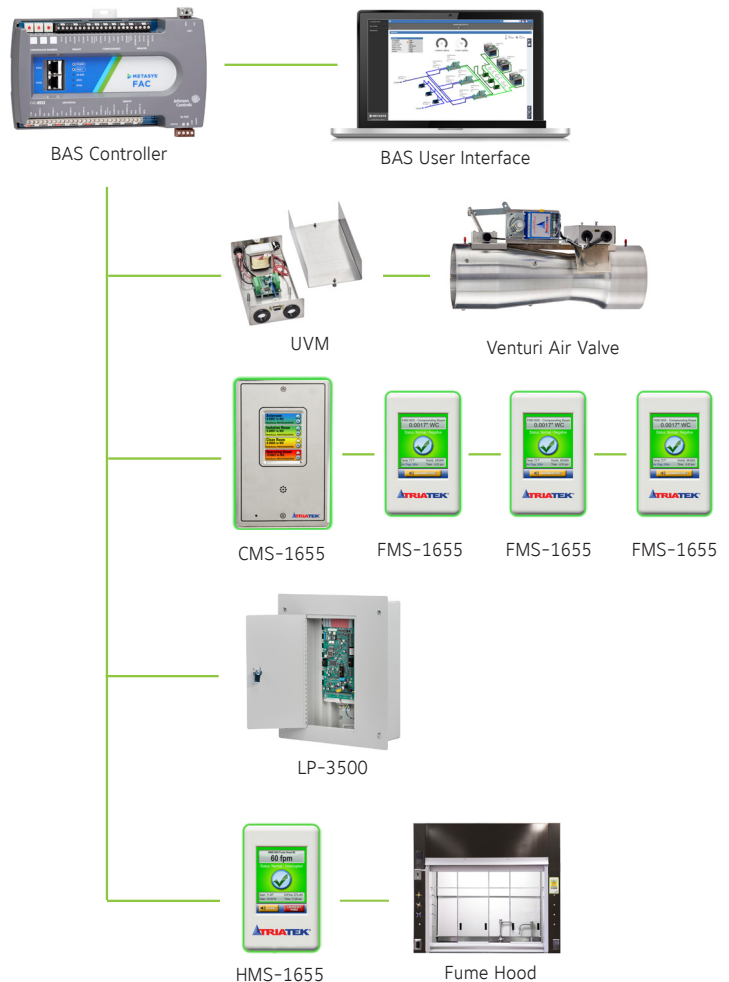
Metasys for Critical Environments

Each Triatek critical environment control product seamlessly integrates into *Metasys* to provide facility managers with the intelligence they need to ensure their hospitals and laboratories are safe, improve building efficiencies, and reduce costs.

The *Metasys* user interface provides a high level of visibility and control to track everything from air change rates and temperature to lighting schedules and fume hood exhaust levels. Rapid-response, real-time alarms enable managers to immediately address HVAC system problems.

The Universal Valve Module and *Metasys*

The UVM simplifies communication between Venturi air valves and *Metasys*, enabling any *Metasys* BACnet® field controller to become the full laboratory controller and eliminate other costly controllers and gateways.

BAS Controller

BAS User Interface

UVM

Venturi Air Valve

CMS-1655

FMS-1655

FMS-1655

FMS-1655

LP-3500

HMS-1655

Fume Hood

TRIATEK®

A Few of Our Clients

GM

KAISER PERMANENTE®

THE UNIVERSITY OF ILLINOIS AT CHICAGO — UIC

CDC

VA

Karolinska Institutet — KAROLINSKA INSTITUTET * ANNO 1810 *

Pfizer

Georgia Tech

About Johnson Controls' Building Technologies and Solutions

Johnson Controls' Building Technologies & Solutions is making the world safer, smarter and more sustainable – one building at a time. Our technology portfolio integrates every aspect of a building – whether security systems, energy management, fire suppression or HVACR – to ensure that we exceed customer expectations at all times. We operate in more than 150 countries through our unmatched network of branches and distribution channels, helping building owners, operators, engineers and contractors enhance the full lifecycle of any facility. Our arsenal of brands includes some of the most trusted names in the industry, such as Tyco®, YORK®, Metasys®, Ruskin®, Frick®, PENN®, Sabroe®, Simplex® and Grinnell®, and now the Triatek® line of critical environment controls.

Email sales@triatek.com
Tel. +1 770 242 1922
Fax +1 770 242 1944
www.triatek.com
www.johnsoncontrols.com

Johnson Controls