



Overview

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 Stable Vortex Conversion Kit is installed by removing the internal working components of the conventional fume hood, and installing the Stable Vortex components in its place. The Stable Vortex Conversion Kit can accommodate varying hood sizes without altering the original fume hood external structure.

Unlike conventional fume hoods, Stable Vortex fume hood technology features an automatically adjusting baffle to respond to environmental changes like doors opening and closing, the sash opening and closing, hood loading, people walking by, and thermal changes. When these events disturb the vortex, it can easily collapse and spill.

The patented design is based on the principle that efficient and stable fume hood operation is determined by controlling the airflow pattern within the hood and not by the entry velocity of air through the sash opening. By maintaining a vortex that is stable at two points, the fume hood is able to provide measurable and predictable containment that is controlled, monitored and sustained.

Stable Vortex Conversion Kits are fitted to existing hood interiors and include replacement LED light fixtures, replacement baffles, replacement sash panels, and the VMS-1655M fume hood monitor that automates the baffles based on environmental changes, alerts the user of any potentially unsafe condition, and features the Safety Halo with 360° edge lighting and a touchscreen user interface.

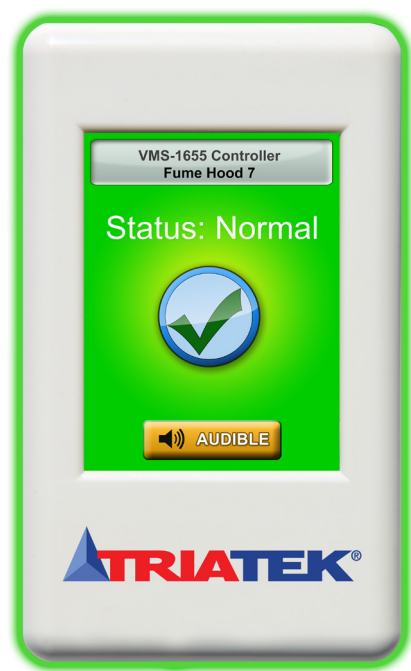
The Stable Vortex Conversion Kit enables facility managers to upgrade their laboratories without having to entirely replace fume hoods. This not only saves money, but also allows for a more flexible installation schedule, and reduces construction waste.

Note: Stable Vortex Conversion Kits are not suitable for use with perchloric acid, radioisotope, acid digestion, walk-in, or table-top fume hood or exhaust applications.

Features

- Unique, patented design that provides dependable safety in a variety of real world environmental and usage conditions.
- VMS-1655M Fume Hood Monitor that measures and controls the vortex and alerts the user if an external factor prevents the hood from containing properly. The VMS-1655M features the patented Safety Halo with 360° edge lighting and a touch screen user interface that is BACnet® MS/TP compatible.
- The Stable Vortex Conversion Kit enables a conventional fume hood to properly contain using significantly less conditioned air from the lab.
- Dynamic turning vane and aerodynamic sash handle keep the vortex properly suspended when the hood is closed. The top turning vane creates a second part of attachment for the vortex-improving robustness and resilience.
- Conversion kits allow owners to continue using existing plumbing, specialty gases, compressed air, vacuum and electrical services.
- Lower noise makes it possible to dual purpose labs for research and teaching.
- Fume hood conversions utilize the best green design strategies and are a better alternative than to throw away existing fume hoods and are more cost effective than purchasing new fume hoods.
- Semi-custom design to optimize high quality fit and finish for each installation.
- Horizontal and vertical combination sash.
- Upgrade constant volume fume hoods including auxiliary air hoods.
- LED lighting

VMS-1655M Vortex Monitor



The VMS-1655M Fume Hood Monitor measures and controls the vortex pressure and adjusts to maintain proper fume hood containment. The VMS-1655M adjusts for environmental and usage conditions such as sash movement, fume hood loading, room pressure fluctuations, and cross drafts with active vortex stabilization in real time. Its alarm function notifies the user if the fume hood performance is compromised. Some of the features and benefits include:

- Full-color touchscreen display with programmable display options and adjustable back-light
- Safety Halo with 360° edge lighting
- Intuitive user interface that simplifies setup and configuration of unit
- Graphical room status display
- Audible and visual alarms
- Multi-level password protection
- 1 Analog Input: 0 to 10 VDC
- 2 analog outputs, actuator control, and flow feedback.
- BACnet MS/TP network comms

Refer to the *VMS-1655M Fume Hood Monitor Product Bulletin (LIT-12013306)* for more information.

Stable Vortex Conversion Kit technical specifications

Conversion kit parts	Ferrous metal and aluminum with epoxy powder coating
Standard color	Off-white
Sash	1/4 in. thick laminated safety glass
Horizontal sash	LED 4000 Kelvin color temperature and minimum color rendering index of 80
Alarm/Monitor/Vortex controller	VMS-1655M visual/audible alarm with Safety Halo, BACnet MS/TP network, touchscreen and user interface
Industry standards compliance	ASHRAE 110-2016
	ANSI Z9.5-2012
	NFPA 45-2019

VMS-1655M Vortex Monitor technical specifications

Electrical	Face velocity range	0 fpm - 325 fpm
	Accuracy of measurement	± 2 fpm, Accuracy is ± 5 fpm when velocity drops below 60 fpm or exceeds 140 fpm.
	2 analog outputs	0 VDC - 10 VDC/4 mA - 20 mA
	1 analog inputs	0 VDC - 10 VDC
	Power supply	Class 2, 24 VAC ± 10%, 30 VA universal 120/240 VAC - 24 VAC, 60/50 Hz, step-down isolation transformer provided
	Recommended cable type	Belden 1325A
Communications	BACnet MS/TP network	Two-wire twisted pair, RS-485 signaling
	Recommended cable type	Belden 3107A
Touch screen user interface	LCD size	3.2 in. diagonal
	LCD type	Transmissive
	Resolution	240 pixels x 320 pixels portrait
	Viewing area	50.6 mm x 66.8 mm
	Color depth	18-bit or 262K colors
	Back light color	White
	Luminous intensity	Min 2500 cd/m2
Mechanical	VMS-1655M surface-mount enclosure (height x width x depth)	5 in. x 3 in. x 1.13 in.
	External remote sensor housing (height x width x depth)	4 in. x 2.5 in. x 2 in.
	Stainless steel cover plate for flow tube (height x width x depth)	4.5 in. x 2.7 in. x 0.2 in.
	VMS-1655M with flow tube cover plate	Approx. 3.5 lb
	VMS-1655M with sidewall sensor	Approx. 4.0 lb
	Flow tube cover plate mounting	Flush
Environmental	Operating temperature	32°F to 125°F
	Operating humidity	10% - 95%

Contact information

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	Verasys Controls	www.verasyscontrols.com/contact 1-844-820-4830
	Triatek	www.triatek.com/contact 1-888-424-1922 1-770-242-1922

Sales support

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	Triatek Sales Support	sales@triatek.com 1-888-424-1922 1-770-242-1922

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Product warranty

This product is covered by a limited warranty. Contact your representative/branch for more details.

