

Chemical fume hoods in Rowan Academic and Research laboratories are equipped with face velocity monitoring devices. The fume hoods on campus are intended to operate with an average face velocity between 80 and 120 feet per minute (FPM). The fume hoods in operation are either of the Constant Air Volume (CAV) or Variable Air Volume (VAV) type. As the sash is opened or closed on a CAV hood, the face velocity will increase or decrease depending on the size of the sash opening. VAV hoods have an automated damper that maintains a consistent face velocity by adjusting the air volume based on the sash opening size. When a properly functioning chemical fume hood is opened to the indicated maximum sash height, it should be able to maintain a face velocity of at least 80 FPM.

During normal use with the sash positioned at or below the maximum operating height, a hood monitor should not go into alarm or show a face velocity outside of the 80 to 120 FPM range. The only time an alarm should be anticipated on a properly functioning hood would be when a sash is opened beyond the maximum operating height. Temporary muting/silencing of the audible alarm is permissible only under specific circumstances, such as adding/removing large equipment from a hood with the sash fully opened. Hood alarms must be unmuted/reset after such work has been completed.

## Managing Airflow Alarms

If a hood monitor goes into alarm during normal use, DO NOT mute or ignore the alarm for any reason. Discontinue all work in the hood and immediately place a work order with Facilities to have the system inspected and repaired. Contact Laboratory Safety at 856.256.5105 or [LabSafety@Rowan.edu](mailto:LabSafety@Rowan.edu) with any questions or safety concerns. **A chemical fume hood that is malfunctioning or that has a low face velocity will not provide a user with proper protection against chemical hazards.**

### Chemical Fume Hood Face Velocity Monitors by Building

Building Name	Monitor Make & Model
Science Hall	Phoenix Controls FHM510-ENG, Fisher Hamilton SAFEAIR 54L0335, TEL AFA 1000, or ALNOR AIRGUARD 335
Rowan Hall	Phoenix Controls FHM631, or TEL AFA 1000
Engineering Hall	Phoenix Controls FHM431
Discovery Hall	Phoenix Controls FHD120 Sentry-SV
South Jersey Technology Park	ALNOR AIRGUARD 200 or TEL AFA 1000

## Phoenix Controls FHD120 Sentry-SV Fume Hood Display

The FHD120 face velocity monitor is found on the VAV chemical fume hoods located in Discovery Hall. These monitors feature a digital touch screen display, a button for emergency exhaust, and a button to mute audible alarms. These monitors work in conjunction with presence sensing modules located above the hood to detect when a hood is in use. These hoods will automatically reduce airflow to save energy if a person is not working at the hood face.

During normal operation the monitor will display the hood's airflow in FPM. If the face velocity drops to an unsafe level, an alarm will sound, and the screen will change to flashing red with associated text indicating a problem.



## ALNOR AIRGUARD 335 & Fisher Hamilton SAFEAIR 54L0335 Fume Hood Displays

The AIRGUARD 335 & SAFEAIR 54L0335 face velocity monitors can be found on certain chemical fume hoods in Science Hall. Both units feature the same layout with LED Status Lights and a Digital Bar Graph of the face velocity.

During normal operation, the Green LED should be illuminated, and the bar graph should be within the Green Band area. A Yellow LED indicates a potential issue such as a sash that is raised too high leading to reduced face velocity. If the face velocity drops to an unsafe level, the Red LED will illuminate, and an alarm will sound.



## ALNOR AIRGUARD 200 Fume Hood Displays

The AIRGUARD 200 face velocity monitor can be found on certain chemical fume hoods at the South Jersey Technology Park. This style of monitor utilizes LED lights to indicate the status of the fume hood.

During normal operation, the Green “NORMAL” light should be illuminated. If the face velocity drops to an unsafe level, the Red “LOW FLOW” light will illuminate and an alarm with sound. The small Amber LED at the bottom left indicates that the monitor has power.



## TEL AFA 1000 Fume Hood Display

TEL AFA 1000 face velocity monitor can be found on chemical fume hoods in Science Hall, Rowan Hall, and the South Jersey Technology Park. This monitor features an LCD display that shows airflow in FPM, as well as LED status indicator lights.

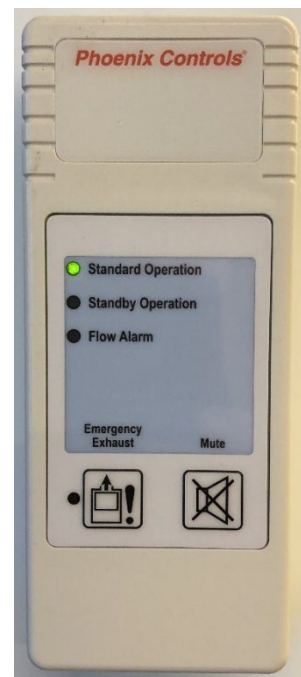
During normal operation, the Green “SAFE” LED should always be illuminated, and the Display should read 80 to 120 FPM. If the monitor detects a face velocity issue, the Red “ALARM” LED will illuminate, and an alarm will sound.



### Phoenix Controls FHM431 Fume Hood Monitor

The FHM431 face velocity monitor can be found on chemical fume hoods in Engineering Hall. This style of monitor utilizes LED lights to indicate the status of the fume hood. There is a button to place the hood in Emergency Exhaust mode, and another to mute a flow alarm.

During normal operation, the Green “Standard Operation” LED should always be illuminated. If the monitor detects a face velocity issue, the Red “Flow Alarm” LED will illuminate, and an alarm will sound.



### Phoenix Controls FHM631 Fume Hood Monitor

The FHM631 face velocity monitor can be found on chemical fume hoods in Rowan Hall. This style of monitor utilizes LED lights and a digital display to indicate the status of the fume hood. There is a button to place the hood in Emergency Exhaust mode, and another to mute a flow alarm.

During normal operation, the Green “Standard Operation” LED should always be illuminated, and the Display should read 80 to 120. If the monitor detects a face velocity issue, the Red “Flow Alarm” LED will illuminate, and an alarm will sound.



## Phoenix Controls FHM510-ENG Fume Hood Monitor

The FHM510-ENG face velocity monitor is found on chemical fume hoods in Science Hall. This style of monitor utilizes LED lights to indicate the status of the fume hood. There is a red button which places the hood in Emergency Exhaust mode, and a grey button to mute a flow alarm.

During normal operation, the Green “Standard Operation” LED should always be illuminated. If the monitor detects a face velocity issue, the Red “Caution-Flow Alarm” LED will illuminate, and an alarm will sound.



If you are experiencing problems with a chemical fume hood, contact Rowan Facilities via the [RowanWorks System](#) to have the equipment inspected and repaired. Do not use the fume hood until you have received confirmation from Facilities that the problem has been resolved.

If you have any questions about chemical fume hood operation or safety, contact Laboratory Safety at [LabSafety@Rowan.edu](mailto:LabSafety@Rowan.edu) or 856.256.5105.