

Quick Start Guide



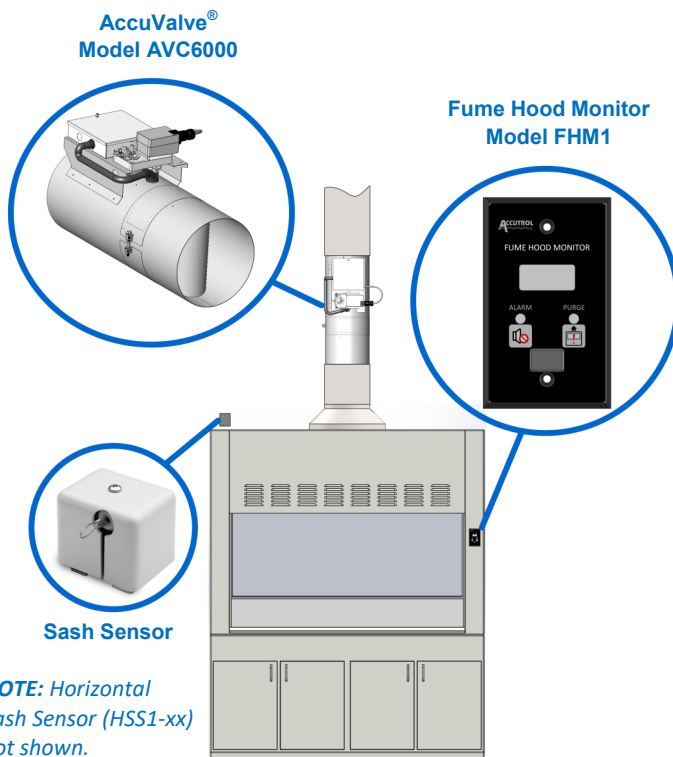
AVC Fume Hood Control System

Models: AVC6000, FHM1, VSS-xx and HSS1-xx

This Quick Start Guide provides the basic steps required for the installation, wiring and start-up of the AVC Fume Hood Control System. For details, refer to the individual product Submittal Drawings, User Manuals and Job-Specific Requirements.

APPLICATION

The AVC Fume Hood Control System is comprised of the award-winning AccuValve®, Model AVC6000, paired with a dedicated Fume Hood Module, Model FHM1. For VAV applications sash sensors are provided for precise measurement of the fume hood face open area. For CAV applications sash switches can be used to change the airflow volume set point to achieve energy savings. The following diagram shows the main components of the AVC Fume Hood Control System for a single vertical sash bench fume hood.



NOTE: Horizontal Sash Sensor (HSS1-xx) not shown.

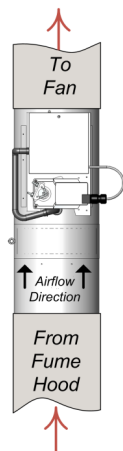
STEP 1: INSTALLATION

CAUTION: Wear eye protection, cut resistant gloves and clothing suitable for working with sheet metal. Failure to do so may result in personal injury.

1a. Install AVC6000 AccuValve

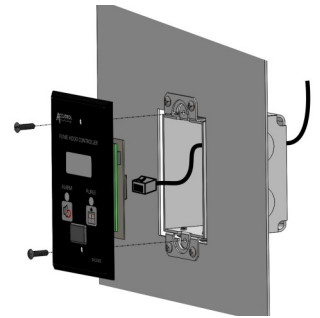
Select a location in close proximity to the fume hood and install the valve per the AVC6000 Submittal Drawing and Manual.

Verify the Airflow Direction Label located on the valve is positioned in agreement with the exhaust airflow direction of the duct and the controller is accessible for wiring.



1b. Install FHM1 Module

Install the FHM1 into a single-gang electrical box located on the front of the fume hood. Be sure to select a location that provides unobstructed access for the user and is clearly visible so the display can be easily viewed.



If the fume hood does not have a preinstalled electrical box available, then one will need to be installed.

1c. Install Sash Sensors

Vertical Sash Sensor (VSS): Select a suitable location to attach the retractable cable to the fume hood sash or counterweight system per the VSS-xx Installation Drawing.

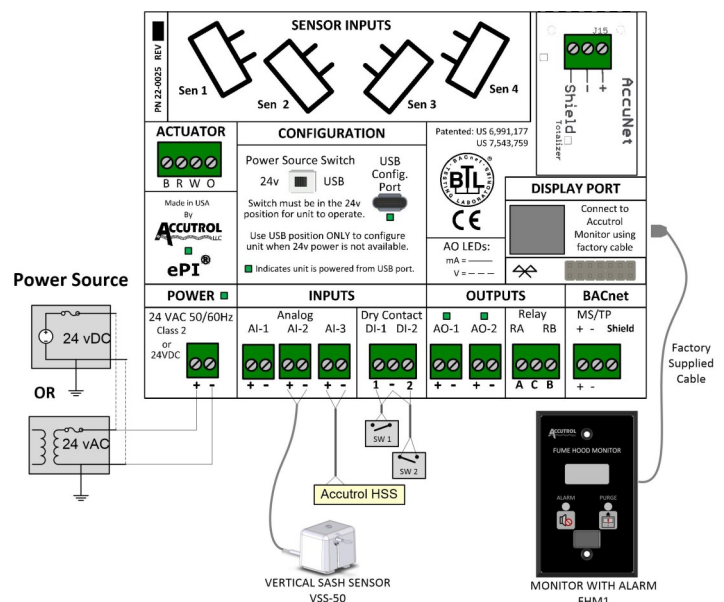
CAUTION: Do not allow the wire rope to “snap back” into the reel or damage to the part and personal injury can result.

After securing the VSS to the fume hood and attaching the retractable cable, verify operation by slowly raising and lowering the sash while observing the VSS and retractable cable to ensure the wire rope extends and retracts straight and without interference.

Horizontal Sash Sensor System: Install the Panel Magnets (PMx-xx) and Horizontal Sash Sensor (HSS1-xx) onto the fume hood per the instructions provided in the Manual. Due to variations in fume hood construction, installation details may vary.

STEP 2: WIRING

Connections to the AVC6000 Control Module will vary depending on the application requirements. The below diagram is provided as a general reference only. For detailed wiring requirements, refer to the job specific submittal wiring diagrams and AVC6000 Manual.

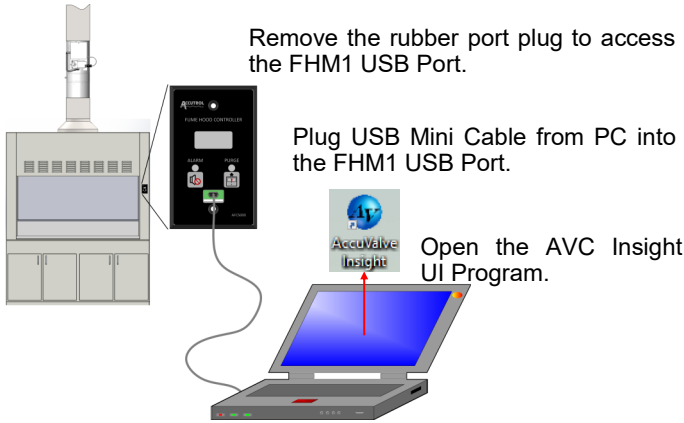


STEP 3: START UP

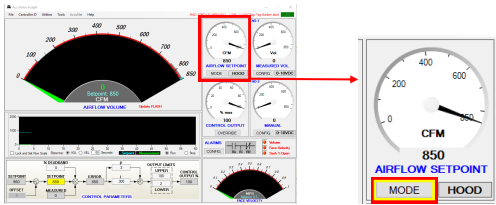
✔ Before proceeding with start-up, verify the following items have been completed:

- All installation has been completed and verified.
- All wiring has been completed and verified.
- Power is present at the AVC6000 and verified to spec.
- Exhaust system is operating with static pressure control.
- The configuration PC has Insight loaded and operational.

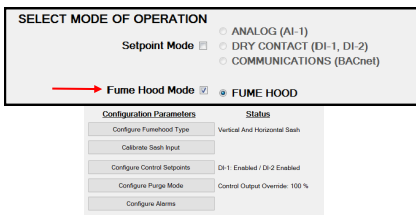
3a. Connect PC to FHM1



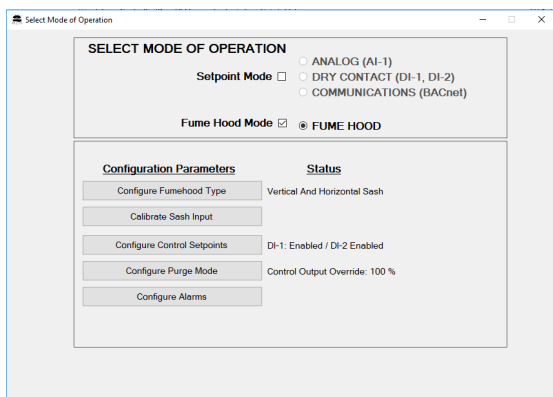
3b. On the AIRFLOW SETPOINT Gauge, Select **MODE**



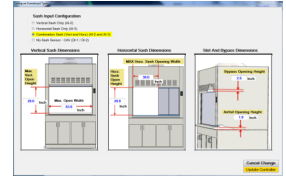
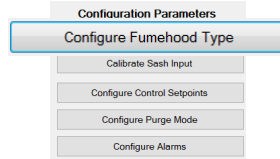
3c. Verify the Mode of Operation is set to **FUME HOOD MODE**



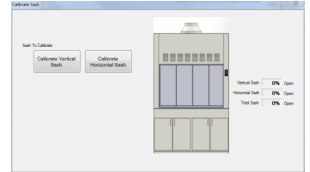
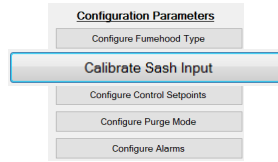
The **Configuration Tools** provided for Fume Hood Mode are accessed through a series of buttons that are positioned in the order of which they should be completed during the initial start up.



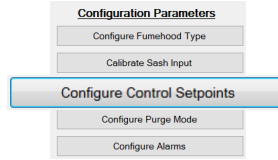
3d. Select **Configure Fume Hood Type** and enter the information required.



3e. Select **Calibrate Sash Input** if sash sensors are employed and perform the sash calibration procedure.

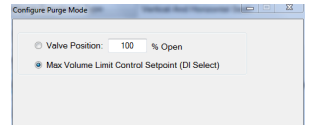
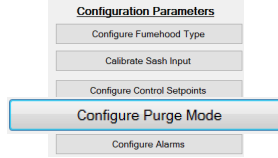


3f. Select **Configure Control Setpoints** and enter the setpoint information required for the application.

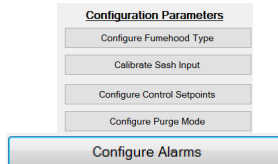


Digital Inputs	Face Velocity		Volume Limits	
	DI-1 (I) Status	DI-2 (I) Status	Setpoint	Minimum/Maximum
FRANACC	FRANACC	FRANACC	100	50 / 500
OPEN	OPEN	OPEN	50	50 / 700
CLOSE	CLOSE	CLOSE	80	80 / 800
OPEN to CLOSED Delay (sec)	3	3		
CLOSE to OPEN Delay (sec)	1	1		

3g. Select **Configure Purge Mode** and select the appropriate Purge configuration per the application requirements.



3h. Select **Configure Alarms** and enter the alarm setpoint information required for the application.

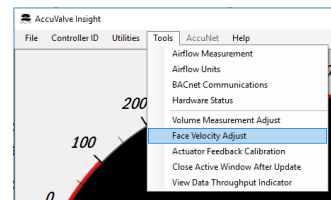


DI-1	DI-2	Face Velocity Alarm	Volume Alarm	Peak
FRANACC	FRANACC	FRANACC	FRANACC	FRANACC
OPEN	OPEN	OPEN	OPEN	OPEN
CLOSE	CLOSE	CLOSE	CLOSE	CLOSE
OPEN to CLOSED Delay (sec)	3	3		
CLOSE to OPEN Delay (sec)	1	1		

4. After completing the above steps, verify the displayed face velocity correlates with the measured average face velocity.

Be sure the average face velocity field measurement is obtained using appropriate methods and instrumentation per industry standards and facility requirements.

5. If desired, the displayed face velocity can be correlated to the field measured face velocity by using the **Face Velocity Measurement Adjust** Function, which can be accessed through the Utilities Menu under Tools.



This document is a quick-start reference only and is not intended to be used exclusively as a comprehensive guide for the AVC Fume Hood Control System. For more details, refer to the AVC6000 User Manual, submittal drawings and job specifications to obtain the required operating parameters.