Cook has developed a complete line of electronically commutated (EC) and permanent magnet (PM) motors and controls that make it simple to provide demand-based control of fans for a wide variety of applications.

**INTRODUCTION**

**ESSENTIAL ADVANTAGES**

**READY TO RUN**
Vari-Flow motors are pre-wired & pre-programmed from factory

**COST SAVINGS**
maximized by combining Vari-Flow motors and controls

**GREATER EFFICIENCY**
across entire RPM range

**EQUIPPED WITH**
Air Balance Kit on all external control packages

**APPLICATION-SPECIFIC**
control packages available for pressure, humidity, temperature, CO$_2$, VOC control and more!

**CONVENIENT**
remote manual or automatic adjustability

**EXTRA BENEFITS**

- Vari-Flow EC and PM motors provide superior part-load performance.
- Maximum potential for savings is reached when Vari-Flow motors and controls are combined.
- Each Cook fan provided with Vari-Flow motors and ordered with external signal capability will be supplied with a Vari-Flow Air Balance Kit.
- The entire offering of Vari-Flow motors and controls is integrated in Compute-A-Fan to simplify the selection process.
DEFINING VARI-FLOW

The Vari-Flow family of motors and controls provides smart solutions required by today’s energy-conscious designers. When combined, they create efficient, integrated, and simple air movement solutions.

WHAT IS VARI-FLOW?

Vari-Flow blends ultra-efficient EC & PM motors and application-specific controllers to meet the efficiency needs of demand-based ventilation systems. Vari-Flow motors, by themselves, are more efficient than NEMA Premium Efficiency motors. When paired with Vari-Flow controls, it allows the fan to operate at precisely the correct speed for even greater energy savings.
Vari-Flow motors provide superior part-load performance. Cook determines and selects your appropriate motor type based on the product, application, HP and performance.

- Provides basic functions and features along with outstanding performance and efficiency
- On-board potentiometer provides simple adjustment with a flat head screwdriver
- Internal/external control is triggered by 24V control signal
- Offered up to 3/4 HP

- Programmed from the factory to meet fan and application needs
- User interface with LED display shows RPM and percent of full load for precise speed adjustment
- User interface can be mounted up to 16” from fan
- Simple two-wire connection for external control
- Offered up to 1 HP

- Offers the most functions and features of any of the Vari-Flow motors
- Comes equipped with a compatible and easy to use motor controller
- All PM packages come pre-programmed and pre-wired for easy start-up
- Built-in remote on/off capabilities
- Offered up to 30 HP
The Vari-Flow Air Balance Kit (VFABK) integrates and simplifies the installation, and enhances the function of Vari-Flow motors and controls.

- Provides a convenient point to set the speed range over which the Vari-Flow motor will operate
- Contains an integral 24V control transformer which is required for all other Vari-Flow controls
- Incorporates a speed control to facilitate field air balancing as well as a Hand-Stop-Auto control that allows selection of operating modes from 'stopped', to manual, to fully automatic control
- Label clearly indicates where and how each component is connected
- Provides convenient terminals for landing Vari-Flow motors and controls as well as auxiliary control of motor operated dampers
- Provides a means for remote on/off control
- Status indicated by a tricolor LED light
- Provided with all Vari-Flow controls (except two-speed controller)
The Vari-Flow 2-Speed Controller (VF2SC) allows the setting of two separate motor speeds and switching between these speeds by an external control device.

- Two speed control dials individually set 0–10V signals which are then selected via an external switch, relay or control system input
- Contains an integral 24V control transformer
- Equipped with A-B-Stop-Auto switch which is used to set the two fan speeds, accept an external selection signal or stop the control signal to the motor
- Most common application of this type of control is occupied/unoccupied control
- Provides convenient terminals for landing Vari-Flow motors and controls as well as auxiliary control of motor operated dampers
- Provides a means for remote on/off control
- Status indicated by a tricolor LED light
The Vari-Flow Pressure Controller (VFPC) addresses a wide variety of pressure-based applications. This controller is compact and easy to set up.

- Modulates fan speed via a 0-10VDC output signal to a Vari-Flow motor to maintain a constant static or differential pressure at a given set point in a duct, a space or between areas
- Available in 1, 2 or 5 inch pressure ranges
- Setup configured via pushbutton menu and digital readout
- Monitoring capability achieved through dry contact set points
- NEMA 1 enclosure
CUSTOM PRESSURE CONTROL SYSTEM

The Vari-Flow Custom Pressure Controller (VFCPC) provides customizable pressure control.

- Modulates fan speed via a 0-10VDC output signal to a Vari-Flow motor to maintain a constant static or differential pressure at a given set point in a duct, a space or between areas
- Pressure ranges customizable
- Simple set-up/connections
- NEMA 3R enclosure
The Vari-Flow Remote Speed Controller (VFRSC) allows the speed of a Vari-Flow motor to be manually adjusted and set from a location other than the fan.

- Outputs a 0-10VDC signal, used by all Vari-Flow motors
- Allows simple adjustment of fan speed based on percent of motor RPM range
- Mounts to a 2 x 4 standard junction box via stainless steel cover plate
The Vari-Flow Temperature Controller (VFTC/VFTC-N) is used to modulate fan speed based on temperature set point.

- Modulates fan speed via a 0-10VDC output signal to a Vari-Flow motor
- Setup configured via a pushbutton menu and digital readout
- Monitoring capability achieved through dry contact set points
- BACnet or Modbus network-compatible (N-model)
- Wall-mounted

**PRODUCT**

**DESCRIPTION**

**DIMENSIONS**
**HUMIDITY CONTROLLER**

The Vari-Flow Humidity Controller (VFHC/VFHC-N) is used to modulate fan speed based on relative humidity set point.

**PRODUCT DESCRIPTION DIMENSIONS**

- Modulates fan speed via a 0-10VDC output signal to a Vari-Flow motor
- Simultaneously operates to both relative humidity and temperature set points
- Setup configured via a pushbutton menu and digital readout
- Monitoring capability achieved through dry contact set points
- BACnet or Modbus network-compatible (N-model)
- Wall-mounted
**CO₂ CONTROLLER**

The Vari-Flow CO₂ Controller (VFCO2/VFCO2-N) is used to modulate fan speed to maintain a preset CO₂ concentration in a space over a range of 400–2000 ppm.

**PRODUCT**

- Modulates fan speed via a 0-10VDC output signal to a Vari-Flow motor
- Simultaneously operates to any combination of CO₂, temperature and relative humidity set points
- Setup configured via a pushbutton menu and digital readout
- Monitoring capability achieved through dry contact set points
- BACnet or Modbus network-compatible (N-model)
- Wall-mounted

**DESCRIPTION**

**DIMENSIONS**
VOC CONTROLLER

The Vari-Flow VOC Controller (VFVOC/VFVOC-N) modulates fan speed to maintain a preset VOC level over a range of 0–1000 ppb.

PRODUCT DESCRIPTION DIMENSIONS

- Modulates fan speed via a 0-10VDC output signal to a Vari-Flow motor
- Simultaneously operates to any combination of VOC, CO₂, temperature and relative humidity set points
- Setup configured via a pushbutton menu and digital readout
- Monitoring capability achieved through dry contact set points
- BACnet or Modbus network-compatible (N-model)
- Wall-mounted
The Vari-Flow SimpliDrive comes mounted, wired and programmed from the factory. SimpliDrive allows for easy demand-based control of the fan.

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<tr>
<th>PRODUCT</th>
<th>DESCRIPTION</th>
<th>AVAILABILITY</th>
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| ▶ Fan-mounted Speed Control  
▶ Motorized Damper Control  
▶ External Signal Capable  
▶ NEMA 1/IP20 Enclosure  
▶ Soft Start  
▶ Built-in Motor Protection  
▶ Remote On/Off  
▶ Compatible with all Vari-Flow Controls  
**Optional**  
▶ PM Compatible  
▶ BACnet/Modbus communication  
▶ Bluetooth interface  
▶ NEMA 4X/IP66 Enclosure  
▶ Integral Service Switch | It is available on the following fans up to 15 HP:  
▶ ACEB  
▶ ACRUB  
▶ ACWB |