



ELECTRICAL CONTROL SYSTEM

AIRFLOW CONTROLLER WITH
VARIABLE FREQUENCY DRIVE (VFD)

OPTIMIZING NEW AND EXISTING DUST COLLECTION SYSTEMS

The Donaldson® Torit® **Electrical Control System: Airflow Controller with Variable Frequency Drive (VFD)** maintain the design airflow in your dust collection system and work to maximize filter performance, to minimize system downtime, and to create opportunity for energy savings.

- Increases filter life by maintaining constant design airflow and desired minimum transport velocity
- By maintaining a constant duct velocity, dust accumulations in the duct associated with poor duct velocities diminish
- Reduces abrasion on filters and ducting generally caused by high transport velocities
- Reduces the fan motor's energy consumption by allowing the fan motor to operate at a lower RPM while also increasing the mechanical life of the fan
- Reduces the audible noise radiating from the fan housing and fan motor since the fan is running at less than full speed
- Soft-start capabilities reduce mechanical stress and improve fan reliability
- Reduces line current peaks on electrical distribution systems, lowering energy costs



Electrical Control System
Airflow Controller with VFD

HOW DOES THE AIRFLOW CONTROL SYSTEM WORK?

Three components work hand in hand for maximum results.

Donaldson's filter media provides lower pressure drop due to superior surface-loading and better dust-shedding capabilities throughout the entire filter life. Lower pressure drop during the life of a filter eases the workload on the fan.

The Airflow Controller with Variable Frequency Drive (VFD) monitors the fan speed and automatically maintains the design airflow by either slowing down (at start-up) or speeding up the motor (at the end of the filter's useful life) based on system static pressure drop.

The control system is most effective in combination with Premium Efficiency Motors which are designed to boost efficiency with less heat. Since less heat is generated, less energy is needed to cool the motor with a fan.

THE AIRFLOW CONTROL SYSTEM:

Programmed only once during the collector start-up

- No manual adjustments
- Maintain design capture velocity at the duct system hoods
- Never adjust a fan damper or ductwork damper
- Maintain design duct conveying velocity regardless of the differential pressure

Go to DSIREUSA.org for additional information. Federal, State, and local programs may issue rebates for the use of a VFD and/or Premium Efficiency Motor. The rebate may offset initial investment costs.

CUSTOM BUILT TO FIT YOUR APPLICATION

BASE SPECIFICATIONS

Power Required	Standard available voltages 208/230/460/575/400: 50/60 Hz; 3 Phase
Horsepower Required	3 - 200 HP
Keypad	Two user set-points; High and Low. Up and Down Arrow keys; programmable from front panel
Pressure Range	0-20 "wg (0-508 mm of H ₂ O) operating scale controls fan speed based on system static pressure at dirty air plenum
Output Signal	4-20 mA for remote indication of static pressure
External Inputs	Remote contact closure to lock setpoints
Environmental Rating	Indoor installation only (NEMA Type 12)
Operating Temperature	32°F - 90°F (0-32°C)
Humidity	0-85%, non-condensing
Altitude	3,280 ft (999.7 m)
Approvals	UL/CUL



BASE FEATURES & OPTIONS

BASE STANDARD	OPTIONAL
Airflow Controller	Window for VFD Display
VFD (with soft-start capability) properly sized for application	Face-Mounted VFD Keypad (changes enclosure rating to NEMA Type 1)
Torit Delta P or Delta P Plus On-Demand Cleaning	Custom Configurations • Additional Components • Company Specific Components • Other Enclosure Ratings • Additional Motor Starters • Additional Horsepower Available • Additional Pressure Ranges Available
Solid State Sequential Pulse Timer	
Start/Stop Push Buttons	
Auto-Manual Selector Switch	
IEC Control Panel Disconnect	
Control Power Transformer	
Running Light	
Solid-state electronics for reliability and long-term accuracy	

Significantly improve the performance of your collector with genuine Donaldson Torit replacement filters and parts. **Call Donaldson Torit at 800-365-1331.**

Important Notice

Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, product specifications, availability and data are subject to change without notice, and may vary by region or country.



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