

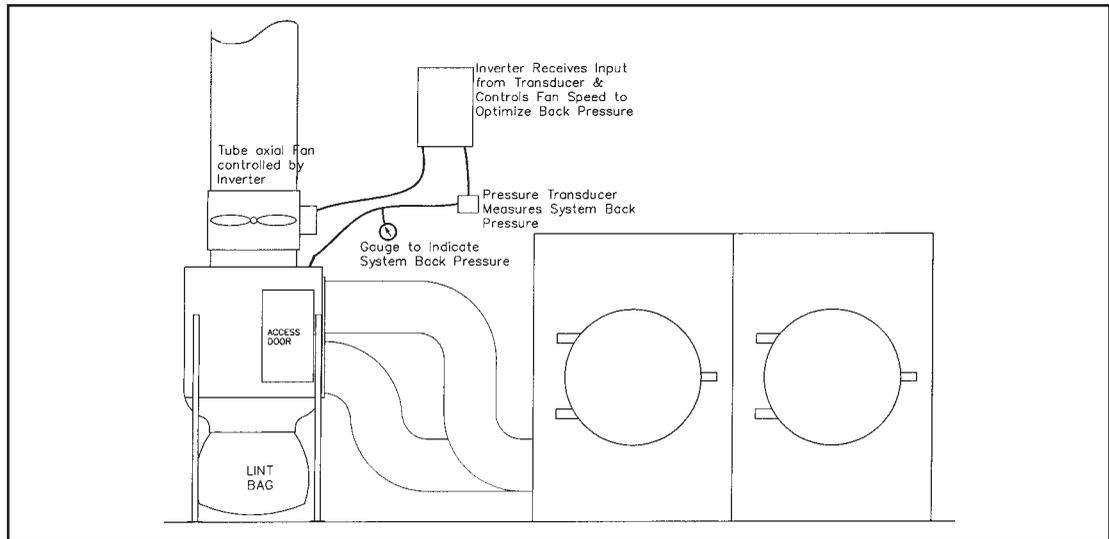
# FULLY AUTOMATIC AIR-FLOW OPTIMIZER

## CONTROLS EXHAUST SYSTEM AIR FLOW TO OPTIMIZE DRYING

The key component of this system is the Energenics pressure sensing control measuring system backpressure. Controlling backpressure allows equipment emitting exhaust to perform to the manufacturer's airflow specification. The system airflow is continuously balanced as equipment cycles on and off at different intervals. When a booster fan is installed to assist airflow it needs to be adjusted quickly and automatically. Energenics monitors the changing backpressure utilizing the transducer based control and sends input to the inverter, which is preprogrammed by Energenics to change the booster fan speed therefore maintaining optimal air balance.

### SYSTEM COMPONENTS

(Booster fan not shown)



## Features

**Maintains optimal airflow**

**Fully automatic operation**

**Controls fan operation**

## Benefits

**Minimize drying time**

**No user input required after start-up**

**Conserves energy**

## *Optimizing Unique Venting Challenges*

- **Multi story, multi use venting:** A 1,400 room four star resort hotel in a Southern California city has a large laundry with 8 dryers and 2 ironers in the basement exhausting 30 stories to the roof with a booster fan. The issue was variable airflows with different dryers cycling on/off exacerbated by the abnormal ducting necessary by the layout of the hotel. The result was very inefficient drying and finishing because the resulting system backpressure fluctuated to over 4" w.c. Installing the Air-Flow optimizer compensated for the constantly changing airflow and presently the backpressure is now .3" w.c. By eliminating over/under drying caused by varying airflow, they now have very consistent production and superior quality.
- **Optimizing older laundries with minimal airflows:** A central laundry in Texas was experiencing inordinate transfer holds due to lack of dryer availability caused by longer than designed dry times. After installing the Air-Flow Optimizer and replacing the older inefficient lint collection systems with new Energenics Filters, drying times were reduced substantially. By eliminating transfer holds, the laundry experienced a 33% increase in system productivity. This increase in productivity eliminated the need to utilize one extra day to complete their production requirements. This resulted in savings of over \$100,000 per year of operating costs. System improvement payback was under 1 year.
- **Optimizing the external filter:** A new nursing home OPL currently operates with 5 new high speed, backpressure sensitive 150 lb. dryers. The challenge was to avoid additional backpressure from the external filter in excess of dryer manufacturers' .5w.c. specification. They installed the Air-Flow optimizer to control and a booster fan placed between the dryers and the external filter outside. This system resulted in system backpressure of less than .25" w.c. Perfect dryer performance and superior lint collection.
- **Central lint collection in existing laundries:** A large laundry with (5) 200 lb. continuous batch dryers with built-in lint screens required 2-4 hours of labor to maintain and empty lint screens. Having an automated system the customer wanted to fully optimize the system with a central self cleaning lint filter. The lint filter was installed with a booster fan and an Air-Flow Optimizer to compensate for the varying airflows caused by dryers cycling on/off at different times. The result was a system backpressure of .25" w.c.; well below the manufacturers maximum allowable back pressure.

### **Specifications**

Energenics Automatic Air Flow Optimizer comprising of Pressure Sensing Control that adjust the booster fan speed based on changes in back pressure measured in inches of water column. The system utilizing a variable frequency drive maintains air flow to .2-.4 WC. The system must operate independently with no electrical interconnection from the sources of air flow.

*Contact Energenics Corporation for the name of our closest authorized distributor.*



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