

# Green Hood System<sup>®</sup>

Conserve Energy, Reduce Costs, Increase Equipment life and create a quieter, more comfortable work environment.

## 25% OF ENERGY COSTS ARE TO CONDITION AIR

The average food service kitchen exchanges inside air for fresh outside air at least 20 times an hour. It sounds like an effective way to keep a kitchen comfortable and safe, but in most situations it's actually a huge drain on energy resources that provides no real health benefits to employees or guests. Roughly 25 percent of a food service operation's energy costs go to conditioning the outside air brought in during these air exchanges, and, according to estimates from the American Gas Association, the U.S. food service industry wastes more than \$2 billion each year because of excessive ventilation.

## EXCESSIVE VENTILATION

Technology is typically the culprit. Until a few years ago, most kitchen ventilation controls consisted of a manual on/off switch and a magnetic relay or motor starter for each fan. Exhaust and makeup fans either operated at 100 percent speed or not at all, and the whir of the exhaust fan was a common sound in the average commercial kitchen— even when cooking equipment was not in use. Manual two-speed systems that relied on cooks to switch from low- to high-speed and vice versa offered some energy savings but were seldom used efficiently.

## VARIABLE VOLUME CONTROL

**The Green Hood System has changed all that.** With microprocessorbased controls whose sensors automatically regulate fan speed based on cooking load, time of day, and hood temperature, while minimizing energy usage. The **Green Hood System** includes a temperature sensor installed in the hood exhaust collar, optic sensors on the ends of the hood that detect the presence of smoke or cooking effluent and variable frequency drives (VFD) that control the fan(s).

## BENEFITS GO BEYOND ENERGY SAVINGS

Variable volume control can also mean:

### A significantly quieter kitchen

Even relatively small decreases in speed can reduce the kitchen noise level. When the fans run at 80 percent speed, the air noise generated at the grease filters decreases more than 20 percent; when the fans run at 50 percent speed, air noise is virtually eliminated. The result: a more pleasant environment for employees and guests (when the hoods are located near customers).

### Reduced HVAC Equipment Wear

Soft-starting the hood fans with a VFD extends belt life, and reducing the outside air load on the kitchen air-conditioning units reduces compressor run time and extends its life as well (this also can apply to refrigeration units inside the kitchen). In addition, reducing the make-up airflow decreases the rate at which the filters become dirty and need to be cleaned or replaced.

### Decreased grease entrapment

Excessive fan speeds send grease up the duct, into the fan and out to the building roof—and, sometimes, even into the atmosphere. Slowing down the exhaust fans and reducing the air duct velocity allows the grease to drain back to the hood and into grease cups, where it can be easily disposed of.

**Kitchen exhaust ventilation may be the largest single opportunity for reducing energy costs in a food service operation.**

**green**  
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