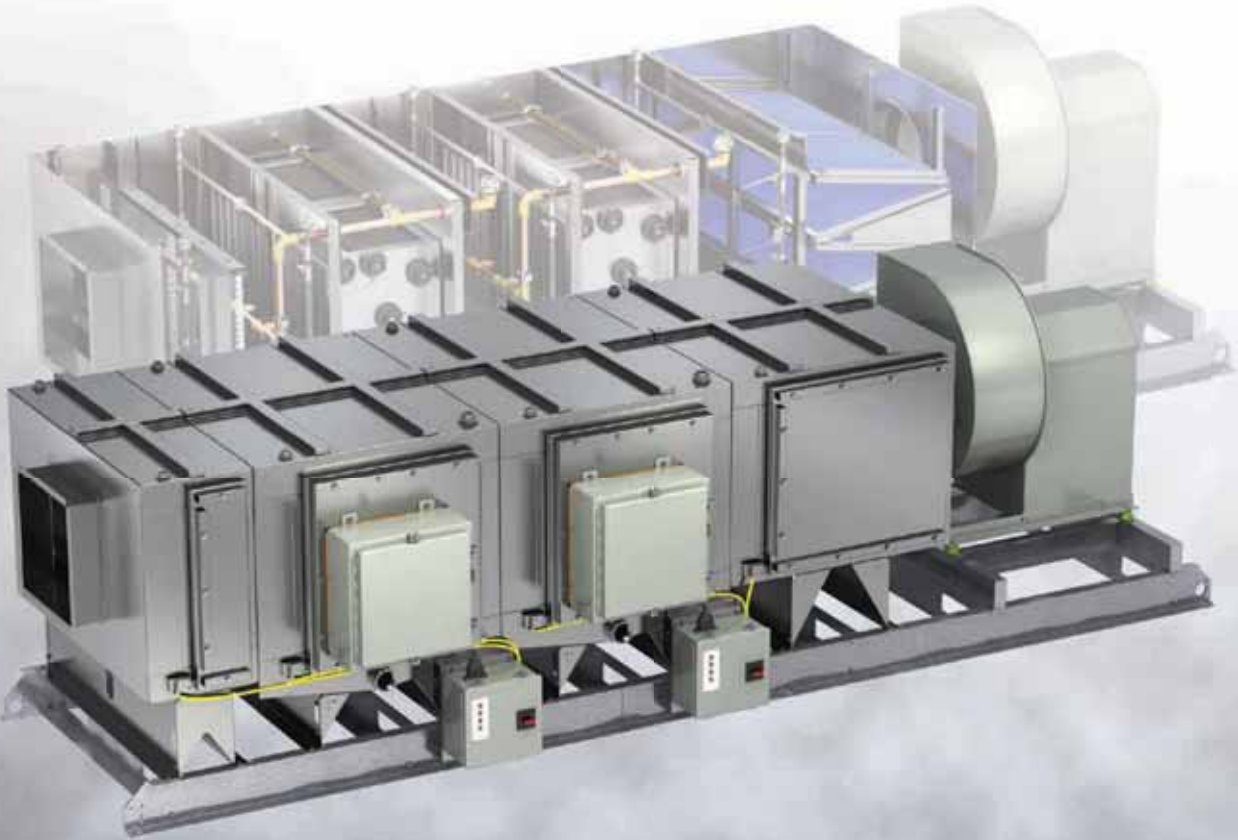


Engineered Kitchen Ventilation Systems Grease Trapper ESP™ Pollution Control Unit



BUILDING VALUE IN AIR.



August
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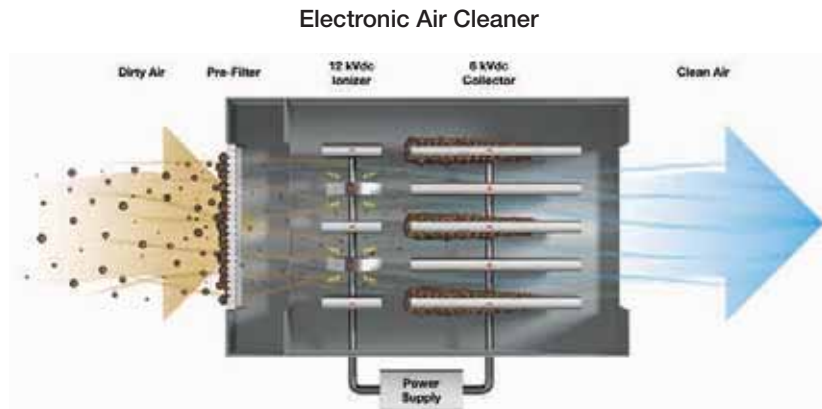
The Grease Trapper ESP™ Pollution Control Unit uses electrostatic precipitator modules and carbon filters to remove grease, smoke and odors from the exhaust airstream. UL Listed to UL 1978 Grease Duct Standards and meeting the requirements of UL 867 Standard for Electrostatic Air Cleaners earns the Grease Trapper ESP recognition as one of the safest pollution control units in the market.

The automated wash down sequence allows for the grease which has been removed from the airstream to be easily removed by site personnel with the touch of a button.

The unique construction of the Grease Trapper ESP allows for the smallest clearance to combustibles required in the industry. It can be mounted within 12-inches of combustibles on the top of the unit and 6-inches on the sides and bottom to easily fit it into tight mechanical rooms or ceiling spaces.

How it Works

As air enters the ESP module it passes by an ionizer that positively charges the particles in the airstream. Upon entering the collector portion of the cell, the positively charged particles are attracted to the negatively charged plates like a magnet which captures and removes the contaminant from the airstream. This eliminates the need to change out costly filters and lowers overall maintenance requirements.



Durable ESP Cells

- Lightweight cells allow for easier handling and removal from unit
- Universal cell size eliminates the possibility of loading cells in the wrong order or position
- Thermoset isolators provide improved reliability and reduced weight, unlike ceramic isolators that can break easily
- Stainless steel spiked blade ionizer improves reliability and will not break easily like tungsten wire systems
- Cells have been third-party tested to ensure the highest performance and efficiency



UL/cUL Listed to UL 1978 Grease Duct Standards

- Listed to the same standard as factory-built grease duct typically used from exhaust hood to exterior of building. Tested to the rigorous UL factory-built grease duct testing standards to ensure the safety of the building and its occupants.

UL/cUL Listed to UL 867 Standard for Electrostatic Air Cleaners

- UL 867 is a safety standard for the electronics of Electrostatic Air Cleaners and more specific for the Power Supply and ESP Cell assemblies. The Grease Trapper ESP electrical assemblies were tested to UL 867 Standard requirements and meet or exceed the standard as listed.

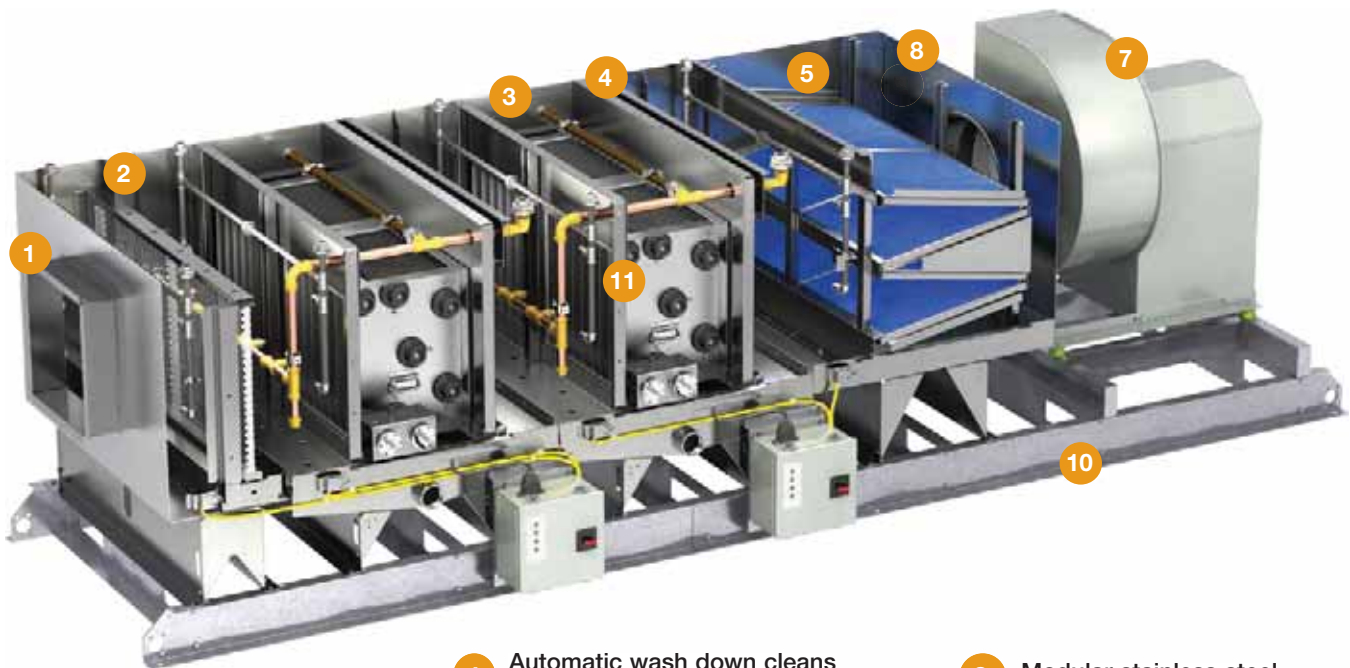
Additional Options

- For solid fuel applications, three ESP modules and two carbon modules handle the higher grease and smoke loading
- Unit can be constructed in multiple sections for field assembly if required
- NEMA-1 and NEMA-4 fire cabinets with internal heaters are available for indoor or outdoor mounting locations to protect your fire system components and save installation time



Keypad or Touchscreen Control

1. NEMA-1 indoor mounted control panel
2. Motor starter or variable frequency drive (VFD) for complete motor control and protection
3. Unit status lights allow kitchen personnel to quickly verify unit operation



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| <p>1 Factory inlet transition for ease of installation</p> <p>2 Impingement filter evenly distributes airflow and stops large particles from entering the system</p> <p>3 UL 867 Standard for Electrostatic Air Cleaners ensures power supplies and components are tested for safety</p> | <p>4 Automatic wash down cleans the entire cell from a 30 gallon detergent tank. Eliminates the need for manual cleaning.</p> <p>5 Bonded activated carbon filters reduce cooking odors and are easily removed</p> <p>6 Detergent flow detection ensures pump protection, <i>not shown</i></p> <p>7 Greenheck UL 762 utility set fan with motor and drive mounted outside of the airstream per NFPA 96</p> | <p>8 Modular stainless steel construction</p> <p>9 Automatic cell discharge allows cells to be discharged by the control system automatically, eliminating the risk of electrical shock to maintenance personnel, <i>not shown</i></p> <p>10 Integral mounting rails provide base for unit modules and exhaust fan</p> <p>11 Prepiped UL 300 fire system</p> |
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UL 1978 Testing Requirements

An average of 7,640 restaurant fires, causing \$246 million in property damage, are responded to each year by local fire departments. A UL 1978 Listed PCU ensures you provide the best protection to your customers, employees and property when selecting your Pollution Control Unit.

*Source: National Fire Protection Agency Fire Analysis and Research Division.
Report based on reported calls 2006-2010.*

UL 1978 Testing Requirements:

Section 14 - 500°F Temperature Test

Ensures the unit will operate safely up to a surface temperature of 500°F. During the 15 minute test there can be no visible openings on the unit due to structural deformities, smoke leakage or the presence of flames on the exterior of the unit.

Section 15 - Abnormal Temperature Test

After passing the normal temperature test, the unit inlet temperature is increased to 2,000°F and held for 30 minutes to simulate a high temperature condition. At the end of the 30 minutes there can be no loss of structural integrity to the unit and there can be no flame, grease or grease vapors that have escaped the unit through the seams, joints and doors.

The results from section 14 and 15 help to demonstrate the unit will safely withstand the temperatures it may see during operation and what the clearance to combustibles for the unit shall be.

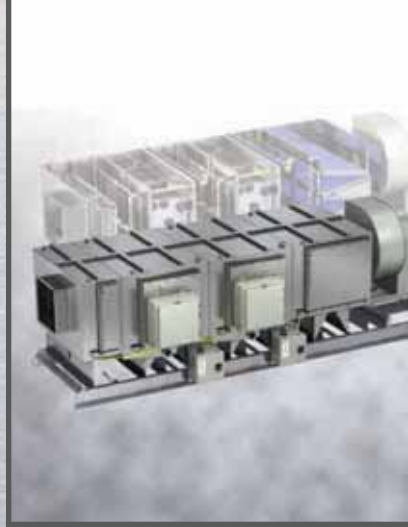
Section 16 - Leakage Test

The leakage test will ensure the unit is liquid tight and will not allow any grease to escape during operation. The interior surfaces are coated with pork lard and the inlet duct is connected to a capped tee. Under the tee, a pan with lard in it is set on fire and allowed to burn completely. The heat from this fire is directed into the PCU unit. During the test, no flame, grease leakage or grease vapor shall penetrate the exterior of the unit.

Section 21 - Tensile Strength, Elongation, and Change in Volume of Gaskets and Seals

This test will simulate the stresses placed on the gaskets and their ability to hold up to normal operating conditions over time. The gasket and seals used on the PCU are submerged in hot (277°F) lard and corn oil for 70 hours. After this time they are removed and tested to ensure they fall within acceptable limits.

By specifying a PCU with a UL 1978 Listing you can be assured the unit will withstand a PCU's harsh operating conditions and provide you with the safest PCU in the industry.



Our Commitment

As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.

Specific Greenheck product warranties are located on greenheck.com within the product area tabs and in the Library under Warranties.



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Green Building Efforts