



PCU

POLLUTION CONTROL UNIT

Sustainable By Design

The CaptiveAire Pollution Control Unit, PCU Series, is designed specifically for the removal of smoke and grease particles from the air stream of commercial kitchen exhaust systems and to eliminate or reduce odor to an acceptable level if equipped with the optional odor control section. The PCU is designed for use with a CaptiveAire high efficiency self-cleaning or baffle ventilator but may be used with other high efficiency exhaust hoods.

PCU (Inside View)



Features

- ▶ Constructed specifically to meet kitchen exhaust duct standards
- ▶ Optional Odor Removal Module
- ▶ Suitable for indoor or outdoor installation
- ▶ Unit may be shipped in one piece or in sections to facilitate entry and installation
- ▶ Optional exhaust fan
- ▶ Optional Advanced Filter Monitoring System
- ▶ Optional CORE Protection Fire System

Benefits

- ▶ Pre-engineered for the most efficient and cost-effective systems
- ▶ Listed by ETL Testing Laboratories, assuring acceptance by local building officials
- ▶ One year parts warranty

PCU with optional exhaust fan



Fan Features & Benefits

- ▶ TEFC, Class H insulation, washdown duty motors
- ▶ Heavy duty construction, durable and weather resistant
- ▶ Non-overloading backward inclined wheels
- ▶ Fully Adjustable motor mounting base
- ▶ Quick release latches allow for easy access to motor compartment
- ▶ Variable pitch motor pulley allows for field adjustment and system balancing
- ▶ High efficiency combined with low tip speeds results in quiet operation
- ▶ Standard emergency disconnect switch

Fan Options

- ▶ Opposite Side Controls
- ▶ Roof Equipment Rails
- ▶ Side Discharge Outdoor Screen

Fan Resources

- Motor Information »
- Performance Data »
- Submittal Drawings »
- Written Specs »

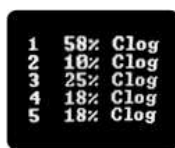
Advanced Filter Monitoring System



The Pollution Control Unit (PCU) with Advanced Filter Monitoring option offers an automated assessment of the unit to ensure proper operation.



HMI - human machine interface



Screen showing Filter Saturation



Screen showing Pressure Drop across Modules

Advanced Filter Monitoring Benefits

- ▶ **Sustainability** – Extends life of various filters, address specific filters which need replacement based on monitoring
- ▶ **Ease of Installation and Startup** – automatic calibration of the system via HMI
- ▶ **Maintenance** – Provides advanced notice, pinpoints specific faults to address
- ▶ **Reliability** – Ensures proper operation of the PCU

PCU - Fire Suppression Systems

The CORE Protection Fire System is an automatic, pre-engineered fire suppression system. The CORE protection System is designed to provide primary coverage for Pollution control equipment including ducts and filters.

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PCU CORE Control Panel

Application

The system is ideally suitable for use in restaurants, hospitals, nursing homes, hotels, schools, airports, and other similar facilities.

The PCU CORE control panel is limited to interior applications only. The system must be designed and installed within the guidelines of the Listed Design, Installation, Recharge, and Maintenance Manual.

Features

- ▶ Electric Fire Detection with Battery Backup System
- ▶ Electric Remote Pull Station
- ▶ Factory Installed in Utility Cabinet

Benefits

- ▶ System Reliability
- ▶ Microprocessor Based Control to ensure Reliable Operation
- ▶ Easy Installation and Service
- ▶ Fire Suppression sprays until risk of fire is eliminated

Component Descriptions

Overview of all the pieces and parts that make up the CORE Fire Protection System.

CORE Circuit Board

The CORE Fire System printed circuit board is a microprocessor based control that provides all the necessary monitoring, timing and supervision functions required for the reliable operation of the CORE Protection Fire System. If a fault is detected anywhere in the CORE system, the audible alarm will periodically sound and the "Fire System Activated" light will flash a fault code to indicate the specific fault detected.

Electric System with Battery Backup

The detection and pull station for CORE comprise an electric circuit that is connected to a battery backup system. In the event of a power outage, the power to all gas and electric appliances must be disrupted through the use of electric gas valves or shunt trip breakers. The battery powers the detection and pull station circuits, as well as monitoring those devices.

Supervised Loop

The supervised loop is a class A fire loop, it is the means by which fire sensors and pull stations are connected to the CORE system. It incorporates both redundancy and fault detection.

CORE Control Cabinet

The CORE Control Cabinet contains most of the necessary components for the fire system to function. The control cabinet holds the manifold, surfactant tank and pump, CORE control board, power supply and battery backup.

