



# FDNY

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**Kam Chan P. E.**

Lead Engineer / Administrative Engineer of Technology Management  
Bureau of Fire Prevention

## **CERTIFICATE OF APPROVAL # 5753**

**THIS CERTIFICATE IS REVOCABLE, NOT TRANSFERABLE**  
**AND EXPIRES ON January 2, 2021**

January 3, 2018

Mr. William Griffin  
VP of Engineering  
Captive Aire Systems, Inc.  
4641 Paragon Park Road  
Raleigh, NC 27616

RE: Certificate of Approval #5753  
F.P. Index#: 1710079A      FPIMS#: 37311909

Dear Mr. Griffin:

By order of Fire Commissioner, Daniel A. Nigro, and pursuant to Section 112 of the New York City Fire Code, the following equipment or material may be acceptable for use provided the conditions outlined below are in full compliance.

Manufacturer:            Captive Aire Systems Inc.

Product:                 Pollution Control Unit (PCU) (**Hood Accessory for Purposes of COA Review**)

Model Number:        PCU-PF, PCU-PF-HE, PCU-PF-HEPA, PCU-PF-OC, PCU-PF-HE-HE, PCU-PF-HE-OC, PCU-PF-HE-HE-OC, PCU-PF-HE-HE-OC-OC, PCU-PF-HE-HE-OC-OC, PCU-PF-HE-HEPA, PCU-PF-HE-HEPA-OC, PCU-PF-HE-HEPA-OC-OC, PCU-HE, PCU-HEPA, PCU-OC, PCU-HE-HE, PCU-HE-OC, PCU-HE-HE-OC, PCU-HE-OC-OC, PCU-HE-HE-OC-OC, PCU-HE-HEPA, PCU-HE-HEPA-OC, PCU-HE-HEPA-OC-OC followed by -1, -2, -3, -4, -5, -6, -7

Pertinent Code Sections:        New York City Fire Code Section 901.4.5

Testing Laboratory:    ETL Testing Labs (Intertek)  
Underwriters Laboratories, Inc.

Prescribed Tests:      UL1978, UL 705, UL 762, UL 710, ULC-S646 AND ULC-S647, ULC-S662, CSA Std. C22.2

Report:                 3158877SAT            Issued on October 14, 2013  
                              3175852SAT            Issued on September 13, 2012  
                              3049729-001          Issued on June 26, 2015  
                              MH116963              Issued on September 29, 2016

**Description:** The Pollution Control Unit (PCU) aids in the removal of grease particles and abatement of smoke from the air stream. The PCU may be ordered with optional equipment: Odor Control, Exhaust Fan, Fire Suppression system. Unit is a multi-stage passive filter apparatus designed to be installed downstream of a UL 710 listed or NFPA 96 Compliant exhaust hood/damper assembly. Unit may be of single and multiple stage filter construction. An optional primary filter assembly (PCU-PF) may use the following; grease lock filters, Shepherd filters, pleated steel wire filters or UL1046 - rated baffle filters. A secondary assembly (PCU - HE) houses high efficiency medium density particle filters. Following these two assemblies is either a HEPA filter assembly (PCU-HEPA) or activated carbon filter assembly (PCU-OC), or both. This unit does not include an extraction fan. Output of unit will be connected to an external extraction fan which, when sealed, will provide suction for the entire hood / extraction system. UL 762 exhaust blowers (KB10, KB14, KB18, KB20, KB25, KB32,KB Inline/USBI) as identified in Captive-Aire's Listing Report, Project No. 3158877SAT- 001 and 3049729- 001, can be installed as an alternate construction to the Pollution Control Unit Assemblies identified in this Report. The Pollution Control Unit is available with an optional Advance Filter Monitoring System ( see Section 7, Illustrations 26 – 28 ) and a RUSKIN UL Classified 1.5 Rated Vertical Style Fire Damper ( see Section 7, Illustrations 29-31 ).This PCU unit also includes a UL94V0 listed McMaster- Carr extreme temperature tubing which is connected to a CE Listed Dwyer Differential Pressure Switch. This switch is preset from the Captive-Aire factory to .15" w.c. above the internal static pressure of the PCU with clean filters. The switch monitors the pressure drop between the beginning of the first stage filter and the end of the last filter. Once filters become clogged, the switch closes and illuminates a light in the kitchen on the Hood Control Panel. User should then clean or replace filters as required. This PCU includes a fire suppression system listed to UL 300 standard. The system shall consist of a supervised self- contained fire system which can be remote mounted , or mounted on the PCU. Each discharge nozzle designed for the PCU fire suppression system shall be tested and listed. Each nozzle shall be marked designating the size of the nozzle. Each nozzle shall have a metal blow - off cap to keep the nozzle tip orifice free of cooking grease build- up. Distribution piping shall be Schedule 40 black - iron, chrome- plated, stainless steel, or Pro-press/ copper pipe. The detector shall be a fusible link style or electronic sensor (Detect - A- Fire's thermal sensor) designed to activate at 360°F - 500°F depending on application. The fire suppression system used in the PCU is directly linked to appliances under the hood. If the fire system activates, the appliances will shut down. The fire suppression system used in the PCU shall be interlocked with the kitchen hood fire suppression system via a wired interlock network for simultaneous activation. A remote actuation device is also required for operator activation. In the event of a fire in the cooking appliance and the activation of the fire extinguishing system, the power and gas to the cooking appliances is terminated.

## **Conditions of Approval**

1. Prior to installation of the above referenced PCU unit, plans shall be filed with and accepted by New York City Department of Buildings (DOB), and a copy of DOB docketed plans shall be transmitted to the New York City Fire Department for review and approval.
2. Approved automatic fire extinguishing system shall be provided for the component filter sections and the ductwork downstream of the equipment. The fire extinguishing system shall be suitable for the above referenced PCU units.

**NOTE: This Certificate of Approval does not include the fire extinguishing system.**

3. Prior to installation of the fire extinguishing system, plans shall be filed with and accepted by New York City Department of Buildings (DOB), and a copy of DOB docketed plans shall be transmitted to the New York City Fire Department for review and approval.
4. Two weeks after startup, the entire unit and duct shall be inspected for grease leaks. All filters loading shall be monitored to determine the frequency of cleaning. All fasteners and hardware shall be checked for tightness each time maintenance checks are performed prior to restarting unit.
5. The entire PCU shall be inspected, cleaned and replaced if necessary, by qualified employees of the restaurant owner or by a cleaning agency. A record of such inspection and cleaning shall be kept on the premises for inspection.
6. Installation, maintenance, cleaning procedures and use of the above referenced products shall comply with all applicable New York City Fire Code and Construction Code, rules and regulations.
7. Certificate of Approval number shall be plainly and permanently stamped or otherwise affixed upon each product by the manufacturer or by the local sales representative of the manufacturer/applicant.  
**NOTE: Product must already be identified with Certificate of Approval number before it arrives at New York City job site.**
8. The Fire Suppression system shall be serviced by an authorized fire suppression company holding a master fire suppression piping contractor license semi-annually. If fusible links are used in the hoods, they are to be changed annually and be date stamped.
9. Intertek ETL's listing requirements and limitations shall be complied with and manufacturer's installation, maintenance procedures and safety limitations shall be complied with.
10. All installations are subject to inspection by representatives of the Bureau of Fire Prevention which may result in added requirements being imposed.
11. The entire exhaust system shall be inspected at least once every three months. Filters shall be inspected, cleaned and replaced by qualified employees of the restaurant owner or by a cleaning agency. A record of such inspection and cleaning shall be kept on the premises for inspection.
12. The Fire Department's condition of approval shall be enumerated in the installation manuals and brochures which will be provided to all New York City buyers, users and installers.
13. The Fire Department Certificate of Approval does not constitute an endorsement or recommendation of your product by the Fire Department, but is a certification that your product, as represented, meets the standards as of the date of issuance.

14. The Fire Department may withdraw this approval at any time in the event there is a reasonable doubt that the product does not operate or perform as required by code, the conditions of this resolution or as represented in your application.
15. Any end user who fails to comply with the condition as outlined in the acceptance is subject to enforcement action which may include fines and imprisonment.

Any change in company name or ownership, product name, material of construction, chemical composition, product design, or model number of any product included on this certificate must be immediately reported to this Department in writing.

Very truly yours,



Kam Chan, P.E.

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