



## *Advanced PCO System*

# Installation Instructions & Consumer Information



### Section I. Important Installer Information

The Dynamic Advanced Photo Catalytic Oxidation (PCO) System utilizes the latest developments in air purification technology to provide an effective means of controlling odors, volatile organic compounds (VOCs), and biological contaminants. The Dynamic Advanced PCO system installs in the ductwork of the HVAC system and consists of a high intensity 254 nanometer UV-C ultraviolet lamp and two pleated, nickel titanium dioxide catalyst screens. When exposed to the ultraviolet light, the photocatalyst becomes highly reactive and breaks down the chemical bonds of VOCs and other gas phase bio-aerosol pollutants and reduces them to simple carbon dioxide and water vapor. Airborne biological contaminants such as bacteria, molds and viruses are destroyed through both exposure to the germicidal UV-C light and the PCO mechanisms. The Dynamic Advanced PCO System is the perfect complement to the Dynamic Polarized-Media Electronic Air Cleaner.

#### **WARNINGS**

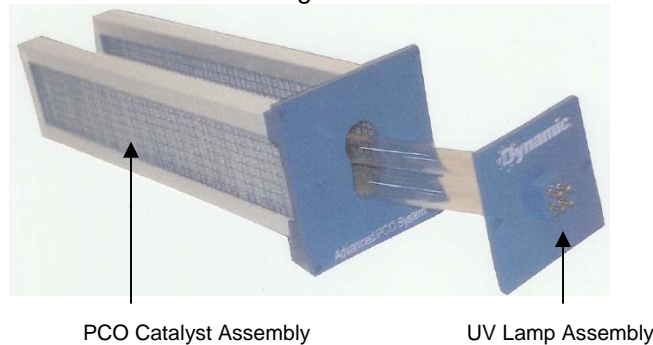
- UV-C light will damage eyes, skin, and plastic and rubber components.
- Do not install in such a way that UV light is visible.
- Do not install in outdoor applications.
- Do not expose wiring or plastic to UV light.
- Do not install beneath a humidifier.
- If installed near an air filter, check with the filter manufacturer for UV resistance.

### Section II. Installation Instructions

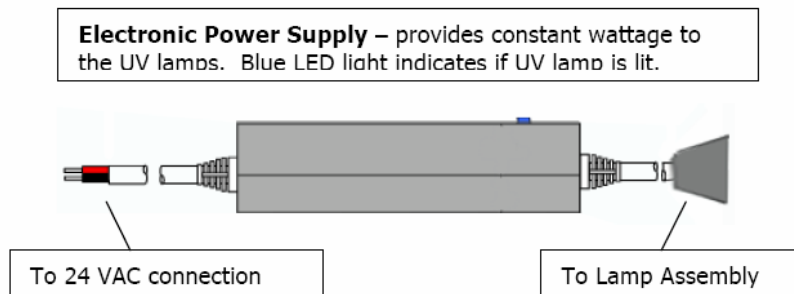
The Dynamic 24V Germicidal UV Lamp mounts directly to the Dynamic Advanced PCO Catalyst Module and is designed for easy installation and service (figure 1). The unit can be installed in either the return or supply air side of the HVAC system although locating the unit on the supply side will keep the unit cleaner and improve performance.

- 1) Select a mounting location that offers sufficient flat surface area for the 4" x 4" catalyst assembly and a minimum of 14" internal depth for the UV lamp. In addition, allow sufficient clearance to remove and service the UV lamp assembly. Installation will require 24VAC electrical power for the UV lamp.

Figure 1



- 2) Cut a 3-1/2" x 3-1/2" square opening in the duct or plenum using the template provided.
- 3) Insert the PCO Catalyst assembly into the hole and attach it to the duct wall with sheet metal screws. If mounting to duct board, using molly bolts is recommended.
- 4) Slide the UV Lamp assembly through the center hole of the PCO Catalyst assembly and fit the UV lamp mounting holes over the PCO Catalyst assembly so that the mounting holes line up and the UV assembly fits snugly to the PCO assembly. Attach with acorn nuts (provided). Do not over-tighten. Care should be taken to wipe off any fingerprints from the lamp.
- 5) Find a suitable location to mount the power supply module where the UV indicator light is visible and there is sufficient wire available to reach the 24VAC power source. The ballast assembly includes 3' of wire from power to the ballast and 6' from the ballast to the UV lamp connector.



**NOTE: ONLY A QUALIFIED ELECTRICIAN SHOULD PERFORM ELECTRICAL WIRING. THIS UNIT MUST BE INSTALLED IN COMPLIANCE WITH ALL STATE AND LOCAL ELECTRICAL AND MECHANICAL CODES. FAILURE TO DO SO MAY VOID WARRANTY.**

- 6) Connect the power supply wires to 24VAC power. **A minimum of 36VA is required.** This may exceed the available capacity of the on-board transformer in the furnace/air handler. If so, it will be necessary to install a separate transformer. An isolated class II transformer is recommended. The transformer must be installed according to local codes and ordinances.
- 7) Turn on the power to the furnace/air handler. The power indicator light on the power supply module should illuminate.

## Section III. Maintenance

The Nickel Titanium Dioxide catalyst module is self-cleaning as long as UV lamps are replaced every 9,000-12,000 hours (1 year). Should heavy coating of dirt or dust accumulate on the catalyst assembly, it should be removed and cleaned by rinsing the screens with a mild detergent in warm water. Replacement UV Lamps are available from your heating and air conditioning contractor or by ordering online at [www.DynamicAQS.com](http://www.DynamicAQS.com). Use only genuine Dynamic replacement UV lamps.

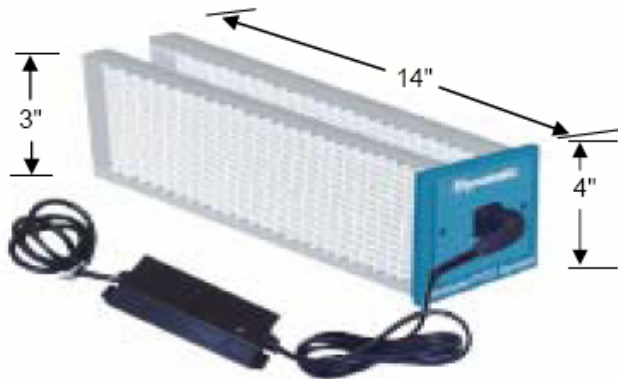
### **CAUTION**

**Ultraviolet Light Will Cause Eye and Skin Damage** – Never look at an illuminated ultraviolet lamp without UV protective glasses, such as Uvex Ultraspec 2000 S0360X. Sunglasses are not sufficient. Always unplug the lamp before servicing.

**Ultraviolet Lamp May Cause Injury** – Ultraviolet lamps are made of glass and therefore fragile. Safety glasses and gloves should be worn when handling UV lamps. In addition, UV lamps can become hot and cause burns. Allow lamps to cool before handling.

- 1) Make sure power is off to the furnace/air handler and the UV lamp is off.
- 2) Remove the rubberized cap from the UV lamp assembly.
- 3) Remove the screws holding the UV lamp assembly in place and remove the old lamp.
- 4) Insert the new UV lamp assembly and reattach to duct or bracket.
- 5) Reattach the rubberized cap making sure the lamp socket is pushed onto the metal pins tightly.
- 6) Turn on the power to the furnace/air handler. The power indicator light on the power supply module should illuminate.

## Section IV. Dimensions & Specifications



### **Dimensions**

- Overall: 4" x 4" x 15-1/4" (10.2 cm x 10.2 cm x 38.7 cm)
- PCO Mounting Plate: 4" x 4" (10.2 cm x 10.2 cm)
- PCO Duct Opening Required: 3.5" x 3.5" (8.9 cm x 8.9 cm)
- PCO Screens: 3" x 14" x 3/4" (7.6 x 35.6 cm x 1.9 cm)
- Ballast (UL Listed): 7-1/4" x 2-1/2" x 1-3/8" (18.4 cm x 6.4 cm x 3.5 cm)
- Ballast & Wire Assembly: 9' (274.3 cm)

**Weight**

- PCO Catalyst Assy: 15.6 oz. (442 g)
- UV Lamp Assembly: 5 oz. (142 g)
- Ballast & Wire Assembly: 3 oz. (85 g)

**PCO Material**

- Titanium Dioxide Coated Nickel

**Electrical**

- 24VAC, 2 Amps

**UV Lamp (One Year)**

- 33 watt, 95  $\mu\text{w}/\text{cm}^2$  @ 1 meter

## Section V. Warranty

The Dynamic PCO Catalyst Module is warranted against defects and workmanship under normal use and service for a period of ten (10) YEARS from date of installation. This warranty is provided to the original purchaser of the air purifier and is not transferable.

The Dynamic Germicidal UV Ballast is warranted against defects and workmanship under normal use and service for a period of three (3) YEARS from date of installation. Lamp is covered under warranty for its useful life of one (1) YEAR. This warranty is provided to the original purchaser of the air purifier and is not transferable.

This warranty does not cover damage caused by handling, shipment, negligence, misuse, cosmetic damage, acts of God, connection to improper voltage, improper maintenance, or abuse. The manufacturer is not responsible for the installation of this product. This warranty does not cover faulty installation or damage to personal property resulting from incorrect or faulty installation. The warranty does not cover any labor, the cost of removal or reinstallation of the unit, or the cost of return shipping to the manufacturer.

The manufacturer's exclusive obligation under this warranty shall be to supply, without charge, a replacement for any covered component that is found to be defective within the parameters defined herein. The manufacturer reserves the right to replace or repair the defective part or component.

The manufacturer shall not be liable for any loss or damage of any kind, including any incidental or consequential damages resulting, directly or indirectly, from any breach of warranty, express or implied, mis-application of the product, or any other failure of this product. The manufacturer's maximum liability shall not exceed the actual purchase price paid for the product. The warranties set forth herein are exclusive and the manufacturer expressly disclaims all other warranties, whether written or oral, implied or statutory, including but not limited to any warranties of merchantability, workmanship, or fitness for a particular use. This warranty does not obligate the manufacturer for any labor costs and shall not apply to defects in workmanship or materials furnished by the installer.

If you have a warranty claim, contact the dealer that installed the product. Proof of original purchase is required. Do not return products or parts without a Return Authorization from the manufacturer.

### FOR TECHNICAL SUPPORT (800) 578-7873

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