

Installer's Manual

FACTS ABOUT THE PCO/UV N-DUCT™ UNIT

AirGorilla™ combines the power of two highly regarded contaminant fighting technologies - ultraviolet light and PCO (photocatalytic oxidation). The PCO/UV N-Duct™ utilizes two, Dual-Radiant™ germicidal ultraviolet lamps that produce a total of 210 microwatts of contaminant killing power (measured at 1 mtr.). In addition, the UV lamps illuminate a unique photocatalytic filter of nano-technology titanium dioxide that provides higher levels of destruction and on a broader range of contaminants. As air circulates through the air duct system and passes the PCO/UV N-Duct™ unit, these powerful technologies destroy airborne bacteria, mold, fungi, viruses, volatile organic compounds (VOC's) & odors.

IMPORTANT POINTS FOR THE INSTALLER

AirGorilla's PCO/UV N-Duct™ unit is designed for ease of installation and service. Cut just one hole and install. The unit never needs to be "un-installed" to replace the UV lamps. Simply open the door and change them out. And thanks to the innovative Display Panel and micro-circuitry, there is no guesswork if the UV lamps are working or if they need to be replaced.

INCLUDED IN THIS BOX

- PCO/UV N-Duct™ System with PCO Filter Attached
- 2 Dual-Radiant™ Ultraviolet Lamps
- Mounting Template
- Installation Manual
- Owner's Guide

TOOLS/SUPPLIES REQUIRED FOR INSTALLATION

Installation into Metal Duct or Plenum

- Metal Cutting Snips
- Electric Drill
- Sheet Metal Screws
- Wire Cutters
- UV Eye Protection

Installation into Ductboard

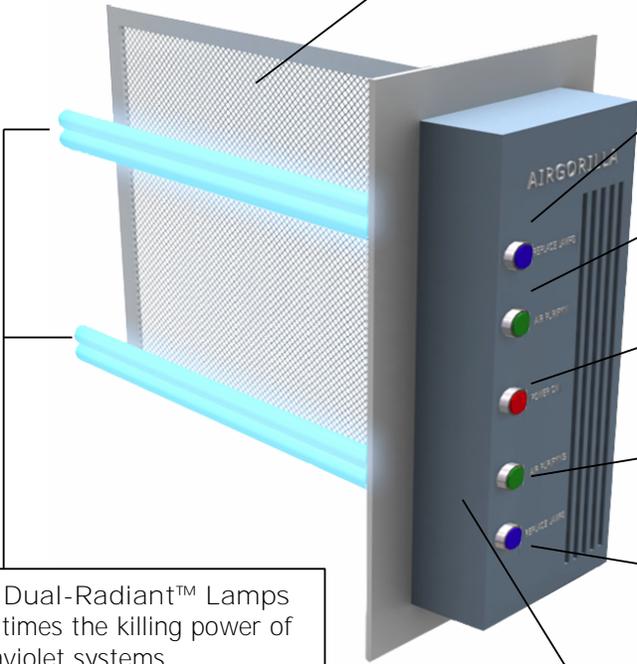
- Ductboard Knife
- Duct Tape (or screws/nuts if using metal mounting brackets)
- Wire Cutters
- UV Eye Protection

BEFORE INSTALLING

- Read all instructions carefully
- Be attentive to all warnings and cautions
- Installation should only be performed by a qualified installer

OVERVIEW OF THE PCO/UV N-DUCT™

Photocatalytic Oxidation (PCO) Filter
 187 square inches of nano-technology titanium dioxide mesh produces maximum destruction of airborne contaminants with negligible air resistance. It never needs cleaning or replacing.



Two, 36 watt, Dual-Radiant™ Lamps Provides over 5 times the killing power of the typical, ultraviolet systems.

Replace #1 UV Lamp - top UV lamp needs to be replaced

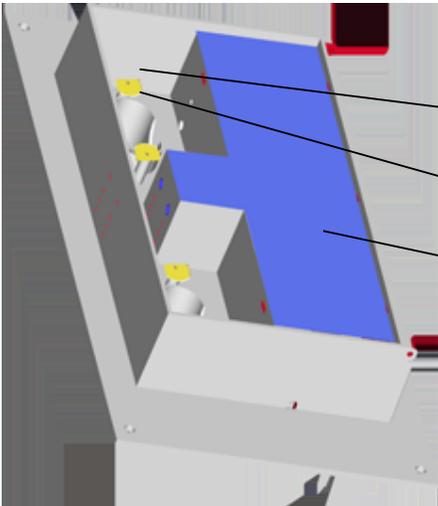
#1 UV Lamp On - top UV lamp is lit and operational

POWER ON - indicates the unit is receiving electrical power

#2 UV Lamp On - bottom UV lamp is lit and operational

Replace #2 UV Lamp- bottom UV lamp needs to be replaced

AUDIBLE ALERT - the PCO/UV N-Duct™ unit is often installed in areas not readily visible to the owner and therefore the Replace Lamp LED may not be seen when lit. When the UV lamps need to be replaced, an audible alert will also be sounded (a continuous beep) to notify the owner of the need to replace the lamps.



Lamp Retaining Swivel Clamp

Lamp Insertion Portal

Cover for Ballast and PCBs

SPECIFICATIONS

Dimensions

- Mounting Plate: 7" x 13"
- PCO Filter: 11" x 17"
- UV Lamp: 1.75" x 16.25"
- Duct mounting hole: 5" x 11"

Weight

- Complete Unit: 4 lbs.

Electrical

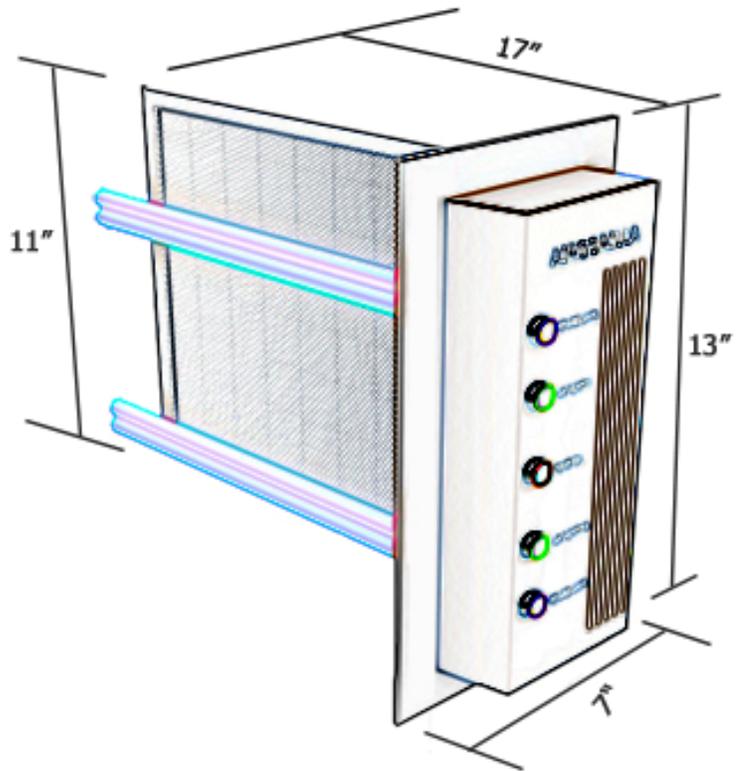
- 120V-277V, 50/60Hz
- Powercord - 9 ft., 3 prong, rated to 240V
- UL Listed Electronic Ballast

UV Lamp

- 36 watt, 105 w/cm² @1 mtr.

Material

- Mounting Plate and Enclosure - Fire Retardant ABS



INSTALLATION

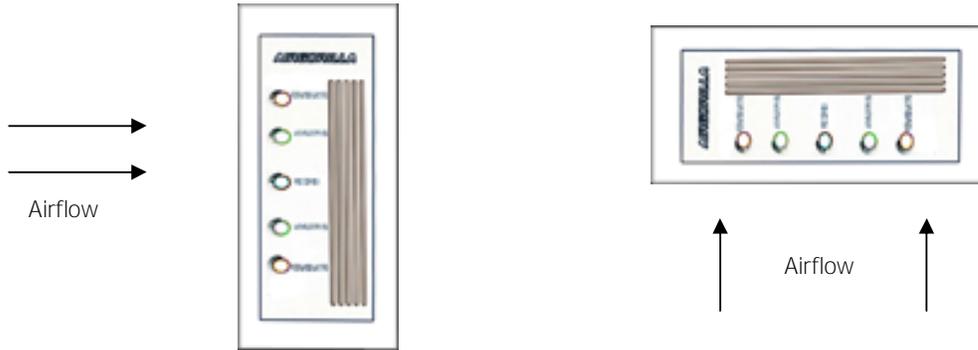
IMPORTANT

This unit must be installed in compliance and in accordance with all national, state, and local electrical and mechanical codes. Failure to do so will void all expressed or implied warranty representations.

The PCO/UV N-Duct™ unit is designed for air disinfection and installs into the air handling system or ductwork. Select a mounting location that offers sufficient space for the mounting plate 7" x 13" and enough internal space for the UV lamps and PCO filter 11" H x 17" D. In addition, allow for sufficient space for removal (pulling out) of an 18" UV lamp. Installation also requires access to 120 – 277 VAC electrical power.

- Do not install where UV lamp is visible
- Do not expose wiring or plastic to UV light
- If installed near an air filter, check with the filter manufacturer for UV properties & safety.
- Do not install in outdoor applications
- Do not install beneath a humidifier

- ∅ The unit should be installed perpendicular to the airflow so that air passes the UV lamps first.



- ∅ While the unit can be installed in either the return or supply air side, it may be more effective in removing airborne contaminants if installed on the supply side.
- ∅ Once a mounting location is selected, use the included Mounting Template to mark the location of the mounting plate screw holes and Lamps/PCO Filter insertion hole (center this hole in the duct if possible).
- ∅ Drill screw holes and cut insertion hole (make sure surfaces are flat and burr free).
- ∅ Install unit into duct securing with sheet metal screws.
- ∅ Open Display Panel door and insert UV lamps into UV lamp portals (swivel lamp retaining clamps out of the way then return when lamps are inserted).
- ∅ Attach white lamp socket to 4 pins on lamp base (the lamp socket is asymmetrical and can only be attached one way – rotate socket so holes align with base pins).

(If installing into ductboard, the unit can be secured with duct tape or by making 2 sheetmetal brackets 1" x 10" and securing the unit to the brackets with screws/nuts – another "work hole" must be cut in the duct to allow access to attach the brackets to the mounting plate.)

CONNECT POWER

The PCO/UV N-Duct™ unit is a variable voltage device and is designed for use with 120 – 277 VAC. The unit can be plugged into any 110 VAC electrical outlet, or by cutting the plug off the powercord can be wired into any AC source so that the unit is "ON" continually; or wired directly into the HVAC control panel so that it operates when the HVAC system is running.

CHECK UNIT OPERATION

Once the unit is connected to an electrical power source it should be fully operational. The PCO/UV N-Duct™ unit has a "kill" switch activated by the Display Panel door. If the door is open, power to the electrical functions of the unit are shut off. The Display Panel door must be closed for the unit to operate. If the unit is receiving power and the Display Panel door is closed, the Power On LED should be lit as well as the 2 LEDs indicating the UV lamps are lit.

TROUBLESHOOTING

- 1) Power On light is not lit
 - Ensure the unit is receiving power (unit is wired correctly or plugged into an active AC outlet)
 - If wired into the HVAC control panel, HVAC unit must be running
 - Ensure Display Panel door is closed completely

- 2) UV Lamp On light is not lit
 - Check that the lamp socket is firmly attached to the lamp base pins
 - Ensure the wires to the lamp socket have not become dislodged
 - Ensure the UV lamp is operational (open the Display Panel door; pull the UV lamp out slightly so that the lamp glass can be seen; deactivate the “kill switch” by depressing the kill switch button; if UV lamp does not light, replace lamp – UV resistant safety glasses should be worn for this test)

WARNINGS

WARNING

Electrical Shock – The PCO/UV N-Duct™ system is to be wired or plugged into 110 – 240 VAC electrical power.

Ultraviolet Light is Harmful – Never look at a lit ultraviolet lamp without UV protective glasses and skin coverings. Unplug the lamp before servicing.

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

ULTRAVIOLET LAMP LIFE

Like all light bulbs, UV lamps have a life span. Unlike regular light bulbs, however, UV lamps lose their effectiveness over time. Typically, after 9000 hours of use (approximately 1 yr.), the lamps do not produce enough ultraviolet germicidal irradiation to be effective. However, even after this time, the lamps usually do not burn out, but stay lit. This is often confusing to owners, but the lamps simply no longer produce the intensity necessary to be effective in improving or maintaining indoor air quality and must be replaced. It should also be noted that some ultraviolet lamps burn out prematurely and do not last the full 9000 guaranteed hours. AirGorilla’s visual and audible reminders of when the UV lamps need to be replaced (or if they have burned out) help ensure you are receiving the full benefit and effectiveness of the PCO/UV N-Duct’s™ advanced air cleaning technologies.

INSTALLING OR REPLACING THE ULTRAVIOLET LAMPS

Steps for Replacing the Ultraviolet Lamps:

1. READ THE WARNINGS ABOVE.
2. If the unit is plugged into an AC outlet, simply unplug it before servicing the UV lamps.
3. Open the Display Panel door. The Display Panel door is connected to a kill switch that disables power inside the unit when the door is opened.
4. The unit contains 2 UV lamps. The base of the UV lamps (white in color) are visible on the left side of the enclosure. Attached to each lamp base is a white socket with wires leading to the power supplies that are housed to the right (separately enclosed). Pull the lamp socket off the UV lamp base.
5. Each lamp base is held in a cavity by two swivel clamps. Simply swivel them out of the way. Grab the lamp base and pull it toward you gently. The lamps are held snug so a little force may be necessary to pull them out. The lamps are 16" long.
6. Install new, replacement lamps (AirGorilla #DR36-1).
 - a. Make sure lamp is clean – use alcohol wipe to remove dirt and fingerprints.
 - b. Insert UV lamp into UV lamp portal.
 - c. Turn swivel clamps over lamp base to hold secure.
 - d. Attach lamp socket (align holes in socket to lamp base pins).
7. Push the "Reset" button next to the lamp (there is a reset button for each lamp) that restarts the 9000 hour timer that alerts you when the lamp reaches the end of its effective life.
8. Close the Display Panel door. Plug in the power cord if applicable. Within a few seconds, the LED lights that indicate POWER ON and AIR PURIFYING should be lit (not the REPLACE LAMP LED).
9. If the correct LEDs are not lit, reopen the Display Panel door and make sure the lamp socket is attached fully to the lamp base pins, then make sure the Display Panel door is closed completely. If the LED lights are still not lit, consult the TROUBLESHOOTING SECTION ABOVE.

LIMITED LIFETIME WARRANTY

AirGorilla Corporation warrants this unit to be free from defects in material and workmanship under normal use and service, for as long as it is owned by the original purchaser. This warranty does not cover expendable components with limited life such as the UV lamps (1 yr. warranty, prorated replacement cost) and ballasts (3 yr. warranty, prorated replacement cost).

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. AirGorilla Corporation 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 the cost of removal or reinstallation of the unit or the cost of return shipping to the manufacturer.

AirGorilla Corporation'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. AirGorilla Corporation reserves the right to replace or repair the defective part or component.

AirGorilla Corporation 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, 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 AirGorilla Corporation 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 AirGorilla Corporation 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 company from which you purchased the product. Proof of original purchase and proof of identity as to being the original purchaser is required. Product or parts are not to be returned without factory issued Return Authorization number issued by AirGorilla Corporation.