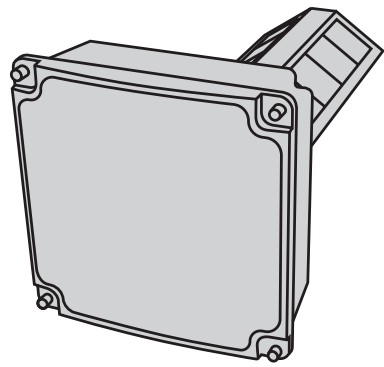


FRESH-AIRE
The Indoor Air Quality Expert

APCO-X[®] ULTRA

AIR TREATMENT SYSTEM

APCO-X Ultra reduces odors (VOCs) and biological contaminants such as mold, bacteria, viruses, and allergens in indoor air. The system is installed in the duct work of the central air system. The award-winning design of APCO-X Ultra uses a unique combination of UVC light and activated carbon cells to clean the air.



EPA
Est. Reg. No.
075179-FL-002



US patent #7,704,463

IMPORTANT!

- Only qualified technicians should install this product*
- Install in accordance with relevant building codes
- Read instructions carefully including safety warnings

WARNING!

PROTECT EYES FROM UV LIGHT
TURN OFF UNIT OR DISCONNECT
BEFORE SERVICING

*Installation of this product by anyone other than licensed HVAC or electrical contractors voids warranty.
LIT-FAUV-APCO-XU-MAN 010424

1 Installation Notes

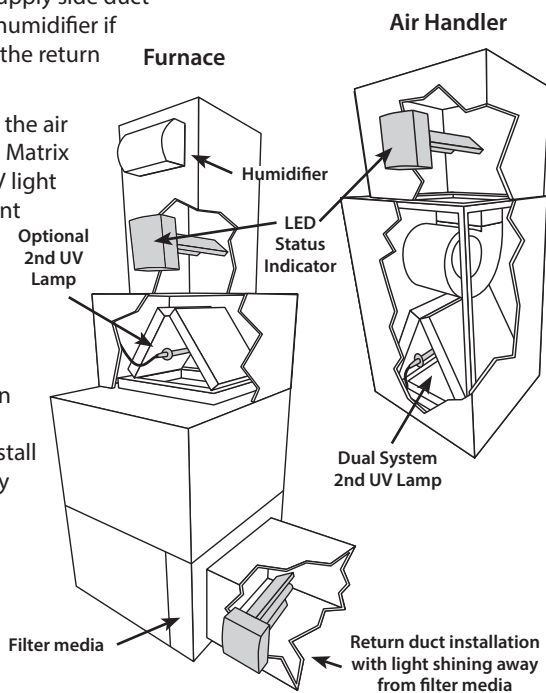
APCO-X Ultra is usually installed on the supply side duct just above the air system (upstream of a humidifier if there is one) but can also be installed on the return side if necessary.

The main unit should be oriented so that the air flows past the UV Light first then into the Matrix Element. Position the main unit so the UV light does not shine directly on non-uv-resistant materials (filters, humidifiers, flex duct, etc) and if possible orient it so UV light shines on the cooling coil.

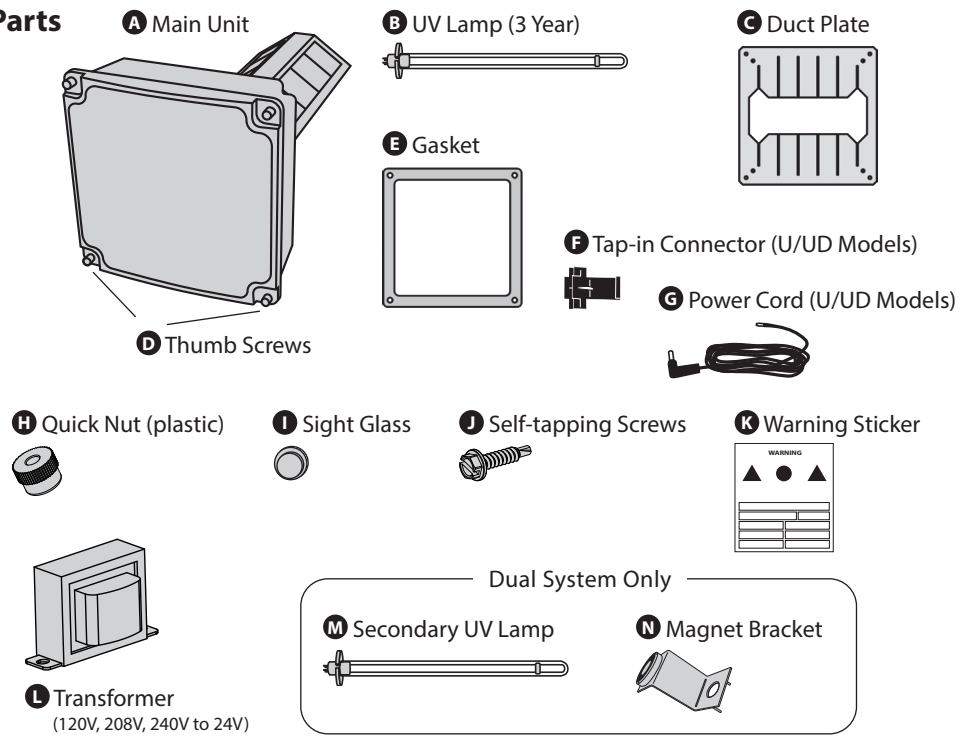
When installing a dual system (a second remote UV Lamp) select a location inside the air system that will allow it to shine on the greatest surface area or the area with the most evident microbial growth. To install the secondary UV light use the Secondary UV Light Installation Instructions on the next page.

LED Status Indicator

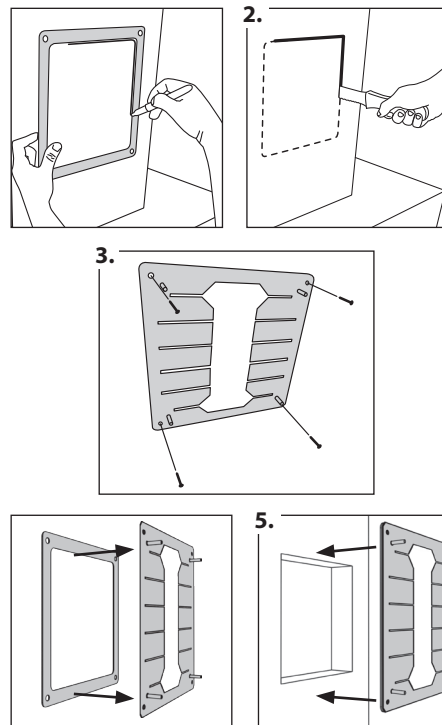
- SOLID BLUE** = Normal Operation
- FLASHING BLUE** = Replace UV Lamp
- FLASHING RED** = UV Lamp Expired
- SOLID RED** = UV Lamp Failure



Parts



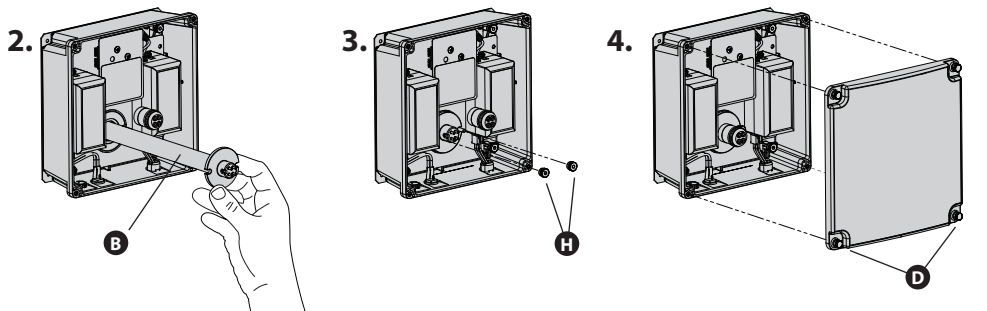
2 Duct Mounting



1. Use gasket to trace cut-line onto duct.
 2. Cut hole in sheet metal or duct board.
IMPORTANT! Remove and dispose of cut-out piece of material.
 3. For sheet metal duct secure mounting plate with Self-tapping Screws **J**.*
 4. Remove paper backing from one side of gasket and fix gasket to the back of the mounting plate.
 5. Remove paper backing from back of gasket then fix mounting plate and gasket to the duct.
 6. Bend mounting plate flanges around the edges of the hole to secure mounting plate. For duct board use tape on edges of mounting plate for air leaks and additional hold.
- * If the backing plate can't be used install directly with 4 Self-tapping Screws **J**.

3 Attach Power Unit to Duct & Mount UV Lamp

1. Fit the Main Unit through hole in duct. If attaching directly to metal duct use 4 Self-tapping Screws **J**. If the Backing Plate is used fit the unit over the threaded posts and use 4 Quick Nuts **H** to secure it.
2. Insert UV Lamp.
3. Mount UV Lamp using 2 Quick Nuts **H** and attach lamp connector (be sure to align the four connector pins).
4. Rotate the cover so it is oriented correctly then attach with thumb screws.

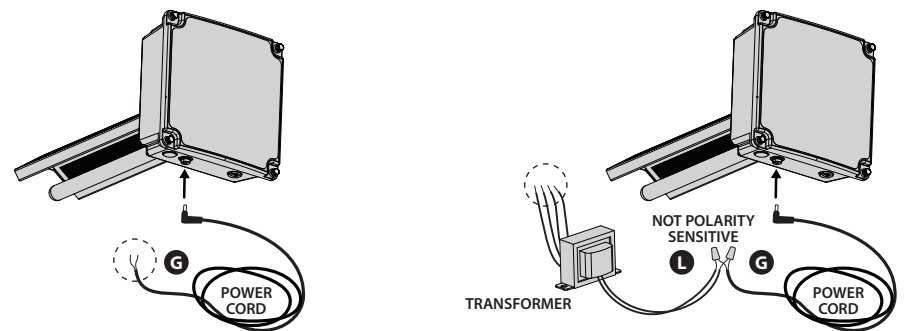


Electrical Configuration

IMPORTANT

Before connecting to power determine if the transformer is needed. Turn off main power source before installation. Always wire according to local and national electrical codes.

IMPORTANT! Must be wired to constant power - do not connect to blower relay.

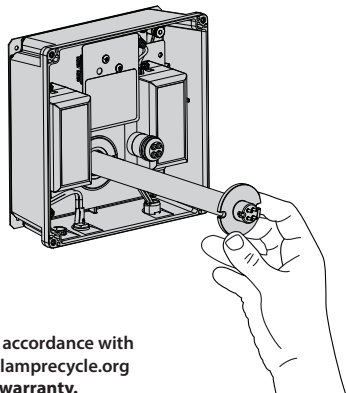


DIRECT TO HVAC PANEL
Power Cord **G** is connected directly to 18-32V constant power terminals in HVAC system control panel.

USE TRANSFORMER
Power Cord **G** wires are spliced to Transformer **L** 24V leads after Transformer has been connected to a high voltage source (see installation instructions included with transformer).

4 Lamp Replacement

Replace the UV lamp in APCO-X Ultra (model TUVL-315) every 3 years. Note: UV lamps will continue to emit visible light but lose germicidal effectiveness over time.

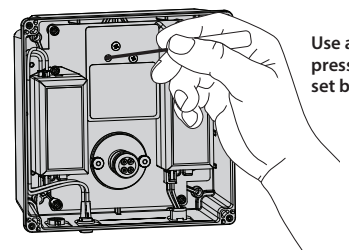


CAUTION!

UV lamps contain small amounts of mercury - dispose of lamps in accordance with local environmental regulations. For more information visit www.lamprecycle.org
Note: Use of replacement UV lamps other than TUVL- 315 voids warranty.

5 Replacement Lamp Timer Set

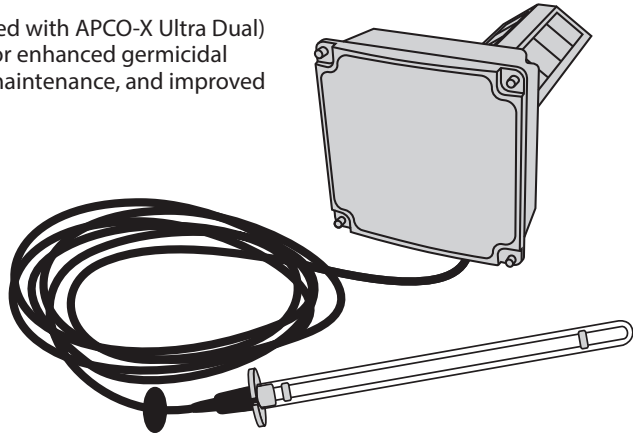
1. With the Power Head in hand connect power **without the lamp installed**.
2. For lamp replacement hold the timer set button for 5 seconds to enter timer mode. The LED will flash purple once indicating timer mode.
3. Within 5 seconds press the timer set button once, twice or thrice. LEDs will flash 1, 2, or 3 times indicating numbers of years set.



Use a 1/8" tool to press the timer set button

Secondary UV Light Installation (Dual Systems)

The Secondary UV Light (included with APCO-X Ultra Dual) is typically installed at the coil for enhanced germicidal effectiveness, reduced system maintenance, and improved indoor air quality.



IMPORTANT!

- Dual System lamps are wired in series - connect both for lamps to light
- Only qualified technicians should install this product
- Install in accordance with relevant building codes
- Read instructions carefully including safety warnings

Installation Notes

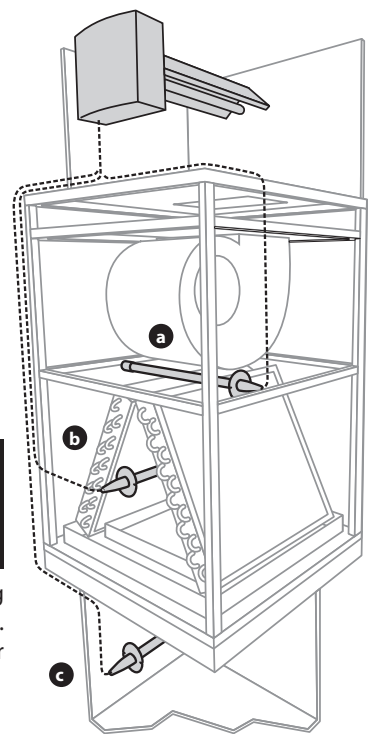
Before installing the Secondary UV Light it is necessary to determine the optimal mounting location inside the air system. First, look for the area with the heaviest mold growth. Also consider a location that will allow the germicidal UV Light to shine on the greatest surface area.

Some typical mounting locations:

- a** Across top of coils
- b** Coil "A" plate
- c** Return-side duct

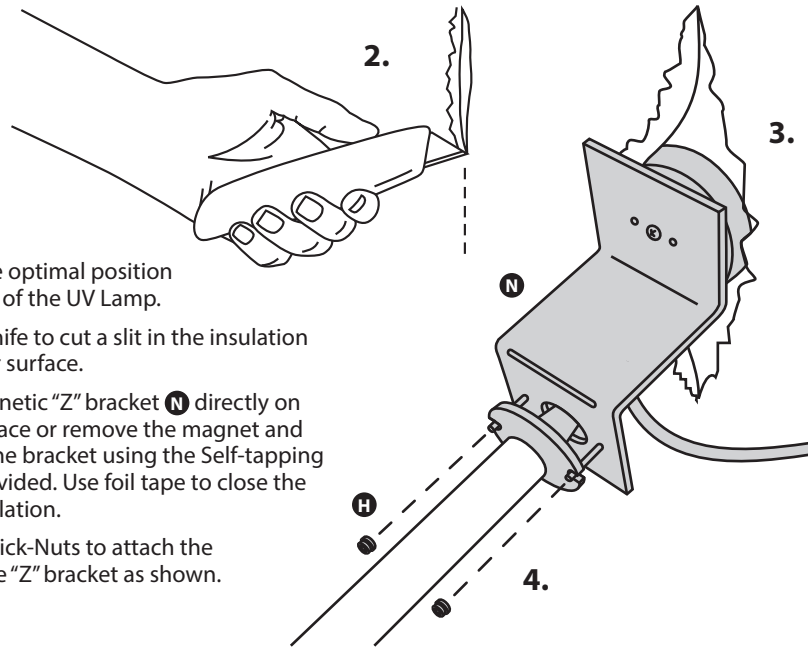


Important: Some materials inside the air system (including filter media, flex duct, wiring etc) may not be UV light resistant. Use the optional UV shield (part #TUV-SHIELD-LPC) or cover the materials with reflective tape.



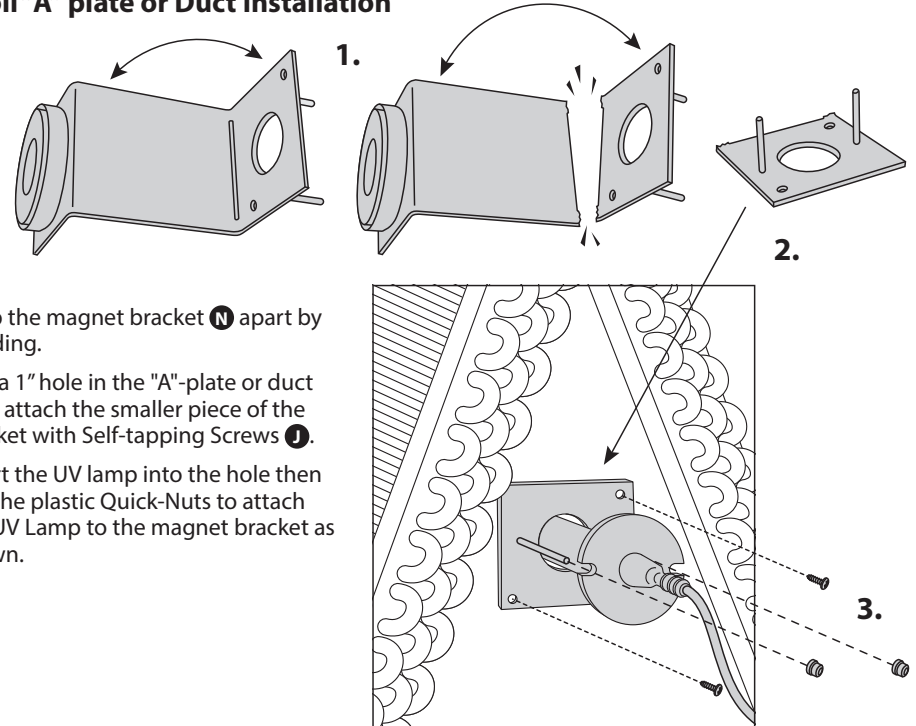
Mounting Options

1 Air Handler Interior Surface Installation



1. Determine the optimal position for placement of the UV Lamp.
2. Use a utility knife to cut a slit in the insulation on the interior surface.
3. Place the magnetic "Z" bracket **N** directly on the metal surface or remove the magnet and hard-mount the bracket using the Self-tapping Screws **J** provided. Use foil tape to close the cut in the insulation.
4. Use plastic Quick-Nuts to attach the UV lamp to the "Z" bracket as shown.

2 Coil "A" plate or Duct Installation



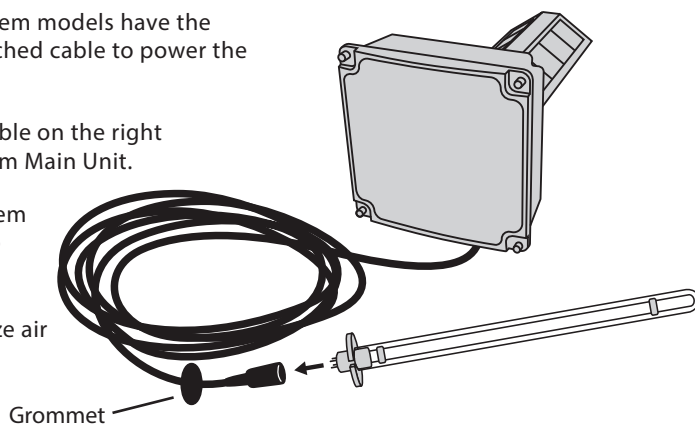
1. Snap the magnet bracket **N** apart by bending.
2. Drill a 1" hole in the "A"-plate or duct then attach the smaller piece of the bracket with Self-tapping Screws **J**.
3. Insert the UV lamp into the hole then use the plastic Quick-Nuts to attach the UV Lamp to the magnet bracket as shown.

3 Remote UV Light Configuration

IMPORTANT! Only Dual System models have the electrical capacity and attached cable to power the Secondary UV Light.

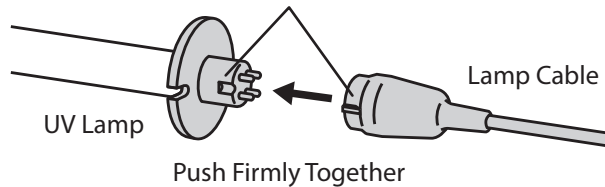
Find the secondary lamp cable on the right underside of the Dual System Main Unit.

Drill a 1" hole in the air system housing then pass the lamp cable through the hole. The hole is then sealed with the rubber grommet to minimize air leakage.



Grommet

Align Pins with Alignment Key

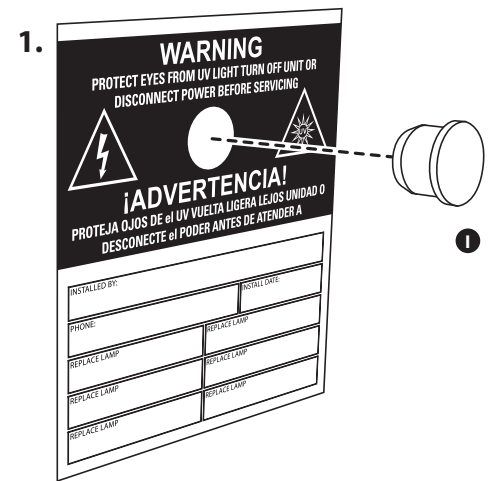


UV Lamp

Push Firmly Together

4 Sight Glass Installation

1. Find a suitable location on the outside of the duct-work near the UV Lamp installation and apply the warning/lamp replacement sticker **K**.
2. Drill a 1/2" hole through the circle on the sticker. Press the sight glass **I** into hole.
3. Turn on the power and use the sight glass to confirm that the UV Lamp is operating.

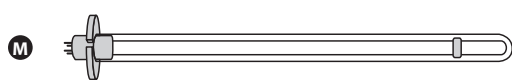


1.

5 Lamp Replacement

The second germicidal UV Lamp **M** should be replaced every three years along with the primary lamp.

Note: UV lamps may continue to emit visible light after three years, however, germicidal effectiveness falls off over time and will quickly drop to near zero after three years.



TUVL-315



CAUTION!

UV lamps contain small amounts of mercury - dispose of lamps in accordance with local environmental regulations. For more information visit www.lamprecycle.org

Note: Note: Use of replacement UV lamps other than TUVL- 315, TUVL- 215, or TUVL- 115 voids warranty.