



## **Indoor Air Purifier**

### **Kite**

Residential Filter Cabinet

CenterPoint Photocatalytic Oxidation Technology



## **Product Description**

The Genesis Air Kite is a CenterPoint PCO filter cabinet designed to work in conjunction with residential HVAC systems. The Kite is used to reduce the levels of Volatile Organic Compounds (VOC's) and viable airborne biological contaminants in the air.

## **Shipping and Packing List**

- (1) Kite Cabinet
- (1) 3" Pleated Catalyst Panel with UV-C Lamps
- (1) UV Shielding
- (1) 2" MERV 13 Pre-Filter
- (1) Control Box
- (1) Power Whip
- (4) Lamp Plugs

## **Copyright**

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## **Revision Summary**



Original IOM manual created in April 2024.

Manual last revised on June 20<sup>th</sup>, 2024.

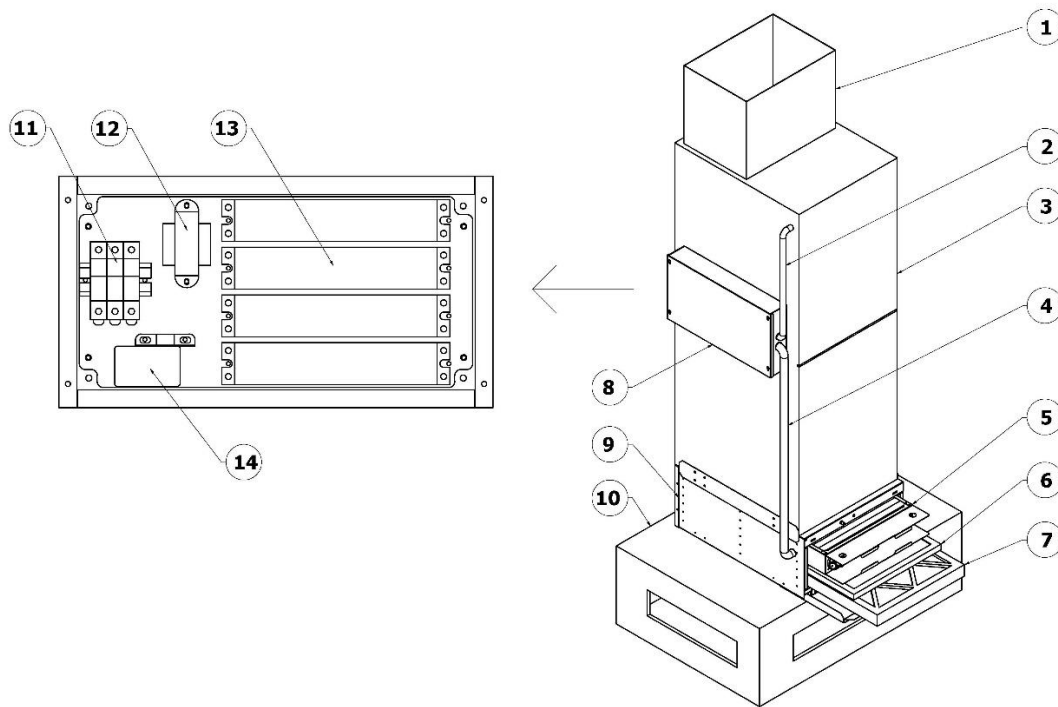
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## Warning Labels

	<p><b>⚠️ WARNING</b></p> <p><b>Electric / Shock Hazard</b> Electrical Shock can cause serious injury or death. Disconnect all remote electrical power supplies before servicing.</p>	<p><b>⚠️ WARNING</b></p> <p>To reduce the potential of electric shock or fire, the wiring required by this manual should be performed by a licensed electrician in accordance with applicable National Electric Code, NFPA 70, and local codes.</p>
	<p><b>⚠️ WARNING</b></p> <p>UVC Light hazard. UVC light can cause temporary or permanent loss of vision and sunburn. Take proper precautions to protect eyes and skin from direct exposure. Replace lamps with replacement parts from original equipment manufacturer.</p>	
<p><b>⚠️ WARNING</b></p> <p><b>Mercury Hazard</b> Do not break lamps. Each UVC lamp contains a small amount of Mercury. In case of breakage, use proper lamp disposal techniques.</p>	<p><b>⚠️ WARNING</b></p> <p>Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or death. Installation and service must be performed by a qualified installer or service agency.</p>	
<p><b>⚠️ WARNING</b></p> <p><b>TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:</b></p> <p>a.) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.</p> <p>b.) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag to the service panel.</p>		

## Product Overview



**Figure 1: Components of Kite**

*Report missing or damaged parts to the manufacturer. Refer to warranty for more information.*

- 1.) **Supply Air Plenum** – Duct for air leaving the air handling unit. (Not included)
- 2.) **Power Whip** – Conduit providing power from the air handling unit to the control box.
- 3.) **Furnace** – Residential air handing unit. (Not included)
- 4.) **Lamp/Ballast Wire Conduit** – (Wires and lamp plugs included. Conduit and fittings not included.)
- 5.) **PCP3** – Pleated catalyst panel; Photocatalytic oxidation panel containing UV-C lamps.
- 6.) **UV Shielding** – Protects filter from UV-C light.
- 7.) **Filter** – 2” MERV 13 filter recommended.
- 8.) **Control Box** – Provides power to UV-C lamps.
- 9.) **Kite Cabinet** – Holds PCP3, UV shielding, and filter.
- 10.) **Return Air Plenum** – Duct for air entering the air handling unit. (Not included)
- 11.) **Fuse Block** – 2-pole for main power supply and 1-pole for 24V control power.
- 12.) **Transformer** – 20VA, 24VAC output.
- 13.) **Ballast** – 120-277VAC program start lighting ballast.
- 14.) **Relay** – DPDT, 10A, 24VAC coil.

## Specifications

**U.S. Patent Number:** 10946116

**Model Name:** Kite

**Maximum Air Speed (ft/min):** 500

*Caution: Air speeds above 600 ft/min will damage equipment beyond repair.*

**Total Pressure Drop:** 0.43 in.H<sub>2</sub>O (with MERV 13 at 500 ft/min)

**Power Requirements:** 120/240VAC, 50/60 Hz

**UVGI Life Cycle:** 12,000 operational hours

**Catalyst Panel Life Cycle\*:** 5-year minimum life / 15-year maximum life

**Particle Filtration:** minimum rating of MERV 8 required; MERV 13 recommended

**Installation Type:** AHU Return

**Temperature Rating:** -20°F to 122°F

*\* CenterPoint equipment must be properly maintained. If MERV particle filters are not used or are not replaced at the appropriate intervals, the life of the catalyst panels will be reduced. If PCPs are cleaned incorrectly or too frequently, the life of the catalyst panels will be reduced. **High pressure spray cannot be used directly on catalyst panels.** Performing maintenance improperly will result in a voided product warranty. Catalyst can exceed warranty and last up to 15 years if well maintained.*

## Product Labeling Nomenclature

Ex : 20 25 KITE

Nominal Panel Height (inches)

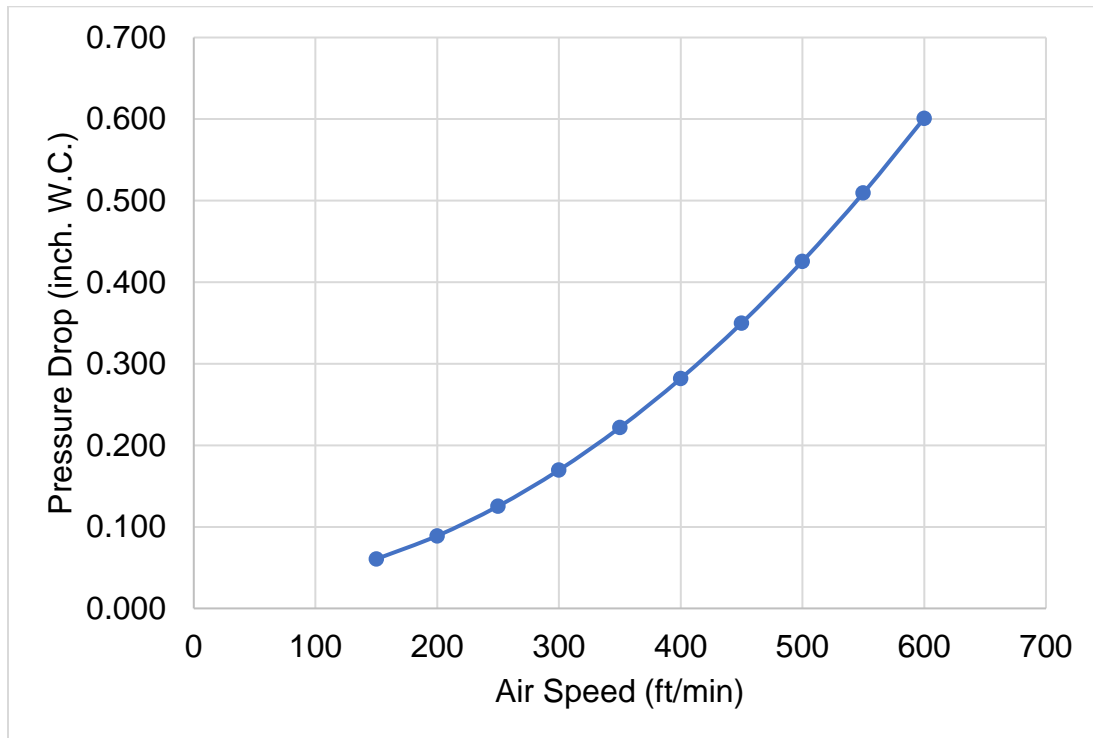
Nominal Panel Width (inches)

## Storage

Catalyst Panels should be stored in a dry environment when not in use to prevent mold growth.

## Pressure Drop

2025 Kite (with UV Shielding and MERV 13 Filter)



**Figure 2: Pressure Drop vs Air Speed**

Sample #	Air Velocity (ft/min)	$\Delta h$ (in H <sub>2</sub> O)
1	150	0.061
2	200	0.089
3	250	0.125
4	300	0.170
5	350	0.222
6	400	0.282
7	450	0.350
8	500	0.426
9	550	0.509
10	600	0.601

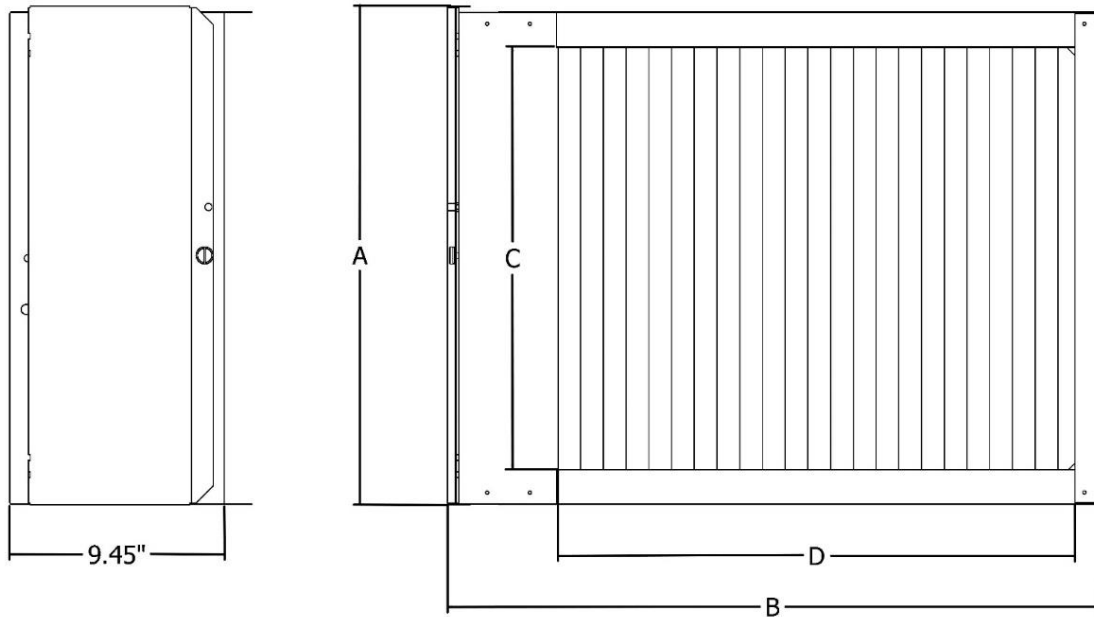
This test was performed by Genesis Air, Inc. on Wednesday, February 23, 2022.

Pressure Meter: Dwyer Magnehelic 1" scale  
 $\pm 0.02"$

**Table 1: Pressure Drop**

**Note:** Due to the use of UV Shielding, some furnace fans may not have enough static pressure to provide target air flow through the Kite. In these applications, it is recommended to remove the 2" MERV 13 Filter and UV Shielding from the Kite and install a MERV rated filter out of direct line of site of the UV lamps. This will eliminate the need for UV Shielding.

## Size Charts



**Figure 3: Kite**

Model Number	Actual Dimensions (inches)				Nominal MERV 13 Filter Size	CFM	Tonnage	Wattage	Lamp Length & Quantity
	A	B	C	D					
1620 KITE	17.6	23.6	14.6	17.7	16" x 20" x 2"	1111	2.5	132	(3) 20"
1625 KITE	17.6	28.6	14.6	22.7	16" x 25" x 2"	1389	3.5	187	(3) 24"
2020 KITE	21.6	23.6	18.6	17.7	20" x 20" x 2"	1389	3.5	132	(3) 20"
2025 KITE	21.6	28.6	18.6	22.7	20" x 25" x 1"	1736	4.5	187	(3) 24"
2420 KITE	25.6	23.6	22.6	17.7	24" x 20" x 2"	1667	4.0	176	(4) 20"
2425 KITE	25.6	28.6	22.6	22.7	24" x 25" x 2"	2083	5.0	250	(4) 24"

**Table 2: Kite Size Chart**



# UVC Lamps

## Safety

Ultraviolet germicidal irradiation (UVGI) is used for the activation of the CenterPoint catalyst. The residual light presents a variety of potential health hazards to humans. These hazards include eye damage, skin burns, and the potential to cause skin cancer. Because germicidal UV rays are invisible to the human eye, personnel may be subjected to a hazardous dose of UV without warning. There is no Occupational Safety and Health Administration standard for exposure to ultraviolet light. UV can be associated with adverse health effects depending on duration of exposure and wavelength. These adverse health effects include erythema (sunburn), photokeratitis (a feeling of sand in the eyes), skin cancer, melanoma, cataracts, and retinal burns. Ideally, activated UV sources should always be attended by knowledgeable personnel. The UVC lamps in CenterPoint products do not produce ozone! The lamps provided contain trace amounts of mercury. Lamps include a Teflon case to encapsulate the lamp and reduce the risk of exposing the consumer and environment to mercury.

## Personal Protective Equipment

While in normal operation, the unit will not emit harmful levels of UV radiation to the surrounding area. When checking for proper lamp connection and lamp intensity, you may be exposed to harmful levels of UV radiation. If you must have the lamps on to check for proper operation, follow these instructions.

- All personnel exposed to UV radiation must wear UV protective glasses.
- All personnel exposed to UV radiation must protect exposed skin with UV resistant clothing.

## UVC Lamp Test Procedure

Lamps may not be substituted with an unapproved manufacturer. These lamps provide UV-C light at a wavelength of 254 nm. Despite their appearance to the naked eye, the lamp intensity will reduce over time. A 20% reduction in UV output is considered below the minimum acceptable intensity level. A visual inspection alone cannot be used to determine if a lamp is providing the correct level of UV energy. Replace lamps every 16 months (12,000 hrs.) of continuous use to maintain intensity requirements. If the run time of the equipment is unknown, use one of the recommended lamp test procedures recommended by the manufacturer.

## Malfunctions

In the event of a lamp or ballast malfunction or failure, failed components should be salvaged and sent back to the manufacturer for investigation. The manufacturer may consider sending new components under warranty if malfunctioning components are sent back to the manufacturer.

## Installation

The Kite is designed to be installed permanently on to the return side of new or existing air handlers. Installation must be completed by competent personnel. It is recommended that the Kite installation be performed by an HVAC contractor. The manufacturer assumes no liability for damages or injuries sustained from installations done by persons other than technicians who are employed by the manufacturer.

### WARNING!

#### Sharp Edges Hazard

Equipment with sharp edges can cause injuries. Use protective gloves when grasping the edges of equipment.

### WARNING!

Do not use silicone to seal catalyst racks to floor or ceiling. The presence of silicone in UV light will pollute the catalyst.

### WARNING!

#### Unpacking Required

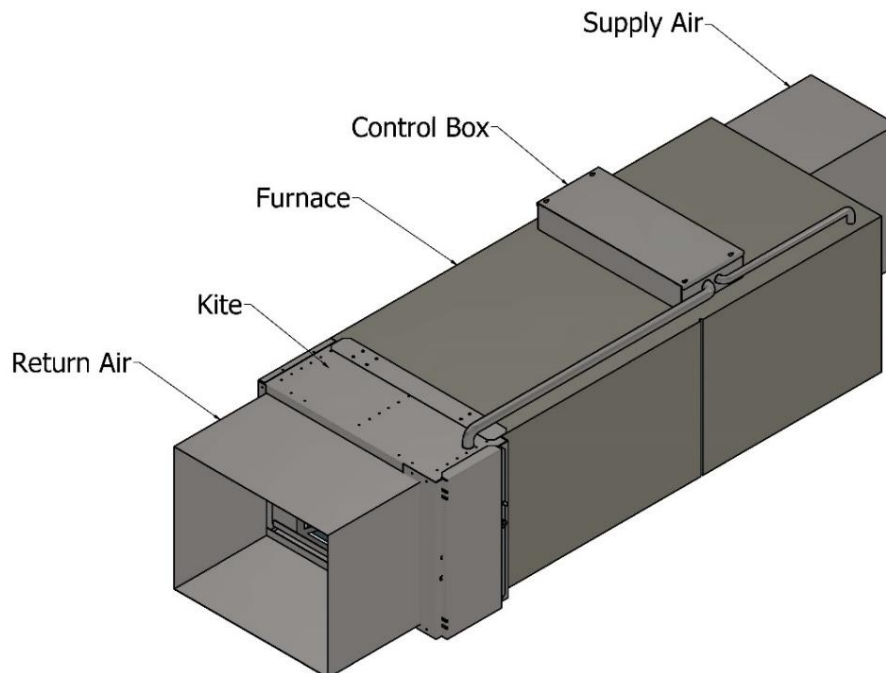
Remove all protective packing material from the box before removal of catalyst panel. All packing material should be discarded properly.

### WARNING!

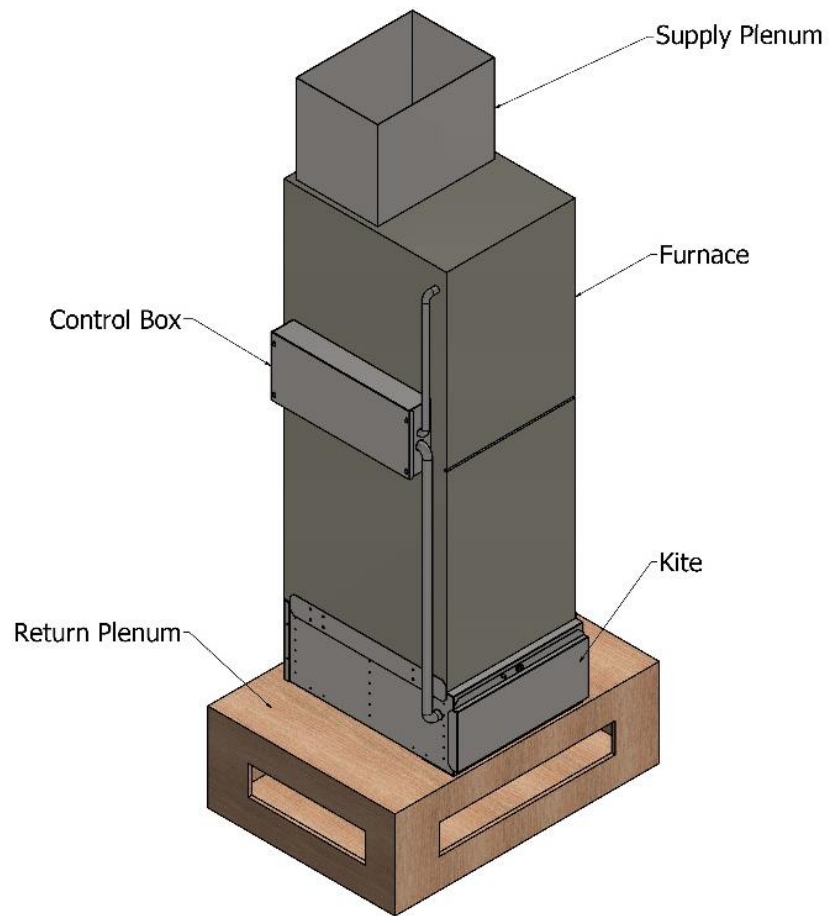
#### Lamps Contain Mercury

Ingestion or contact with mercury of mercury vapor is hazardous to your health. Take care when handling lamps. If broken, avoid contact with mercury.

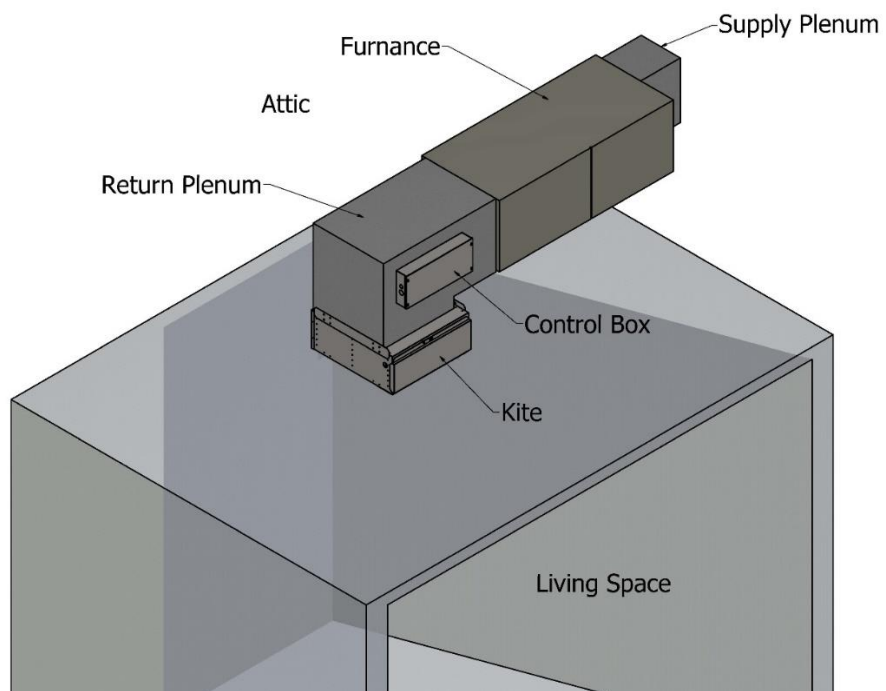
## Suitable Locations and Orientations



**Figure 4:** Horizontal Furnace



**Figure 5: Vertical Furnace**



**Figure 6: Ceiling Filter**

## Installation Instructions

1.) The Kite is intended to be installed in the HVAC system between the return plenum and the furnace or air handler unit. Find a suitable location in the system where space is available for installation and servicing. Make the following considerations. Installation should be performed by a trained HVAC technician.

- The presence of structural components that may be needed to hold the Kite in place.
- Access to power (120 or 240VAC).
- Clearance from preexisting ductwork, beams, sprinklers, lights, or other fixtures.
- Best unit orientation to allow removal of catalyst panel and filter for maintenance.
- Be sure that Kite UV lights are at least 3 feet away from plastics or out of direct line of sight.
- Length of duct needed for transitions (if applicable).
- Relocation of particle filters (if applicable).

2.) If installing in the return, attach the Kite to the furnace return side using the metal strap/coupling provided with the Kite and sheet metal screws. Duct sealant or foil tape may also be used.

**Caution:** *Do not use silicone in the direct line of sight of UV light. UV light will cause the silicone to off-gas and potentially damage the Kite.*

3.) If Kite is installed in an attic, basement, or garage with a high temperature gradient, the interior may need to be insulated with foil-lined fiberglass. However, most installations will not require insulation.

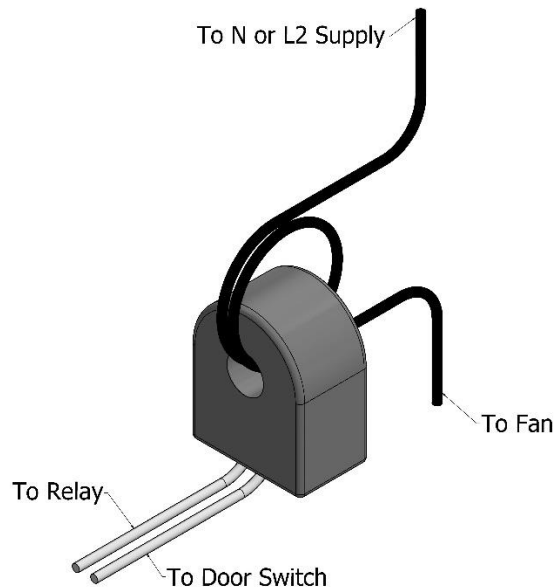
**Caution:** *Exposing units to fluctuating temperatures may allow water vapor to condense on the interior or exterior metal. Water can cause corrosion of duct components and electrical components.*

**Note:** *Non-insulated units can allow heat to be transferred. This can result in an unnecessary strain on the building's heating and cooling system.*

4.) Mount the control box in a suitable location within 6 ft of the Kite.

5.) Run the power whip from the control box to the furnace. This whip may be cut to length. This MC-conduit will include (3) 18-AWG wires to bring main power from the furnace to the control box. This can be two 120V legs or one 120V leg and a neutral leg. The conduit will also include (2) 18-AWG wires to connect the current sensing relay to the control box.

6.) Land power to the fuse holder inside the control box.

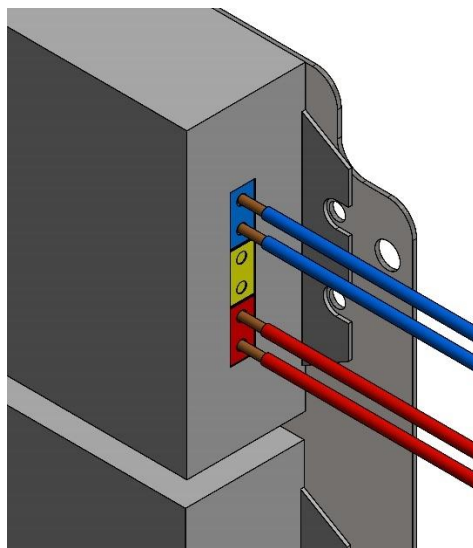


**Figure 7: Current Sensing Relay**

7.) Install current sensing relay. Connect the relay to the (2) 18-AWG wires coming from the control box. See electrical wiring schematic for details.

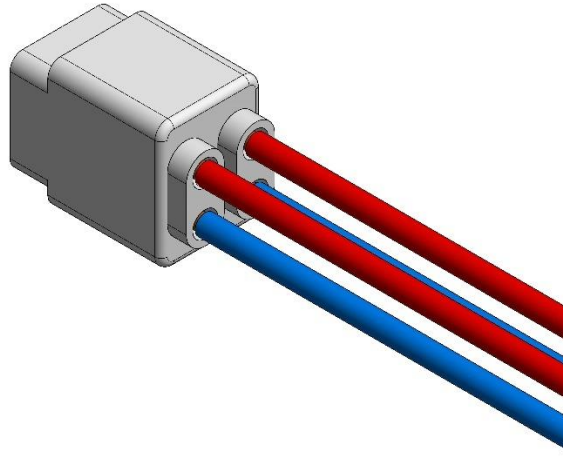
a.) For a 120VAC furnace, wrap the fan neutral leg twice around the core of the current sensing relay. Be sure that the primary side of the control transformer is wired for 120V.

b.) For a 240VAC furnace, wrap one leg of the fan power wires twice around the core of the current sensing relay. Be sure that the primary side of the control transformer is wired for 240V.



**Figure 8: Ballast Wire Connection**

8.) Run  $\frac{3}{4}$ " MC-conduit from the control box to the Kite. This will hold (4) 18-AWG wires per lamp plug and (3) 18-AWG wires for the door switch. See Figure 8. See wiring diagram for more details.



**Figure 9: Lamp Plug Wiring**

9.) Connect lamp plugs, door switch, and LED indicator as shown in wiring diagram.

10.) Once the Kite is installed be sure to test the unit immediately upon completion.

**Caution:** *UV-C Light hazard. UV-C light can cause temporary or permanent loss of vision and sunburn. Take proper precautions to protect your eyes and skin from direct exposure.*

a.) Open the cover, exposing the green lamp sleeves.

b.) Switch ON main power and be sure that fan is ON.

d.) Briefly press in the interlock safety switch.

e.) Look at the green lamp sleeves attached to each lamp. If these sleeves glow, the lamps are working. If the sleeves do not glow, the lamps are not working. Lamps will not illuminate if the fan is turned off.

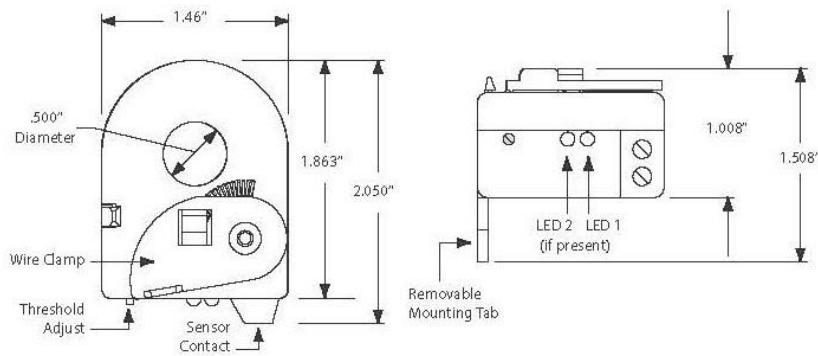
11.) Check the electrical connections to any inoperable lamps. Verify correct voltage. Check all fuses for continuity. If all connections appear correct, proceed to Ballast Troubleshooting section for diagnosing ballast faults.

**Note:** *It is important to fix any electrical issues as soon as possible. If catalyst panel is left in the air stream with non-operating UV lamps, damage can occur. This damage may void the factory warranty. Catalyst panels should be removed from the air stream if lamps remain inoperable for an extended period of time.*

## Electrical Components

### RIBXK Series

Current Switches, Solid Core, Fixed or Adjustable, Up to 150 Amps Sensing Range, Terminal Strip or Wire Lead Output



**Operating Temperature:** -30 F to 140 F

**Humidity range:** 5 to 95%

**Max. Sensing Voltage:** 600 Vac

**Min. Sensing Range:** 0.25 or 0.50 Amp

**Max. Switching Current:** 0.4 Amp

**Switching Voltage:** 30V AC/DC

**Sensor Contact Status:**

Current below threshold: Open

Current above threshold: Closed

**Approvals:** UL Listed, UL916, C-UL, CE, RoHS

**Moulding / Installation:** Removable mounting tab provided. The wire clamp locks against the wire being monitored, securing the unit in place.

**Figure 10: Current Sensing Relay**



**Description:** NLT1150-800-PH-UNV electronic ballast developed for use with UV lamps.

**Input voltage:** 120V – 277V 50/60 Hz

**Lamp Watts/Type:** 65W - 155W

**Lamp Current:** 800mA

**Input Watts:** 60W – 125W

**Line current:** 0.20A – 1.03A

**Current Crest Factor:** <1.7

**EMI/FRI Compliance:** FCC Part 18-B (Consumer)

**Ballast Type:** Programmed Start

**Voltage Transients:** ANSI 62.41

**Input Protection:** Fuse

**Output Protection:** EOL

**Min. Operating Temp:** -20C (-4F)

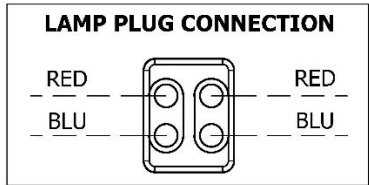
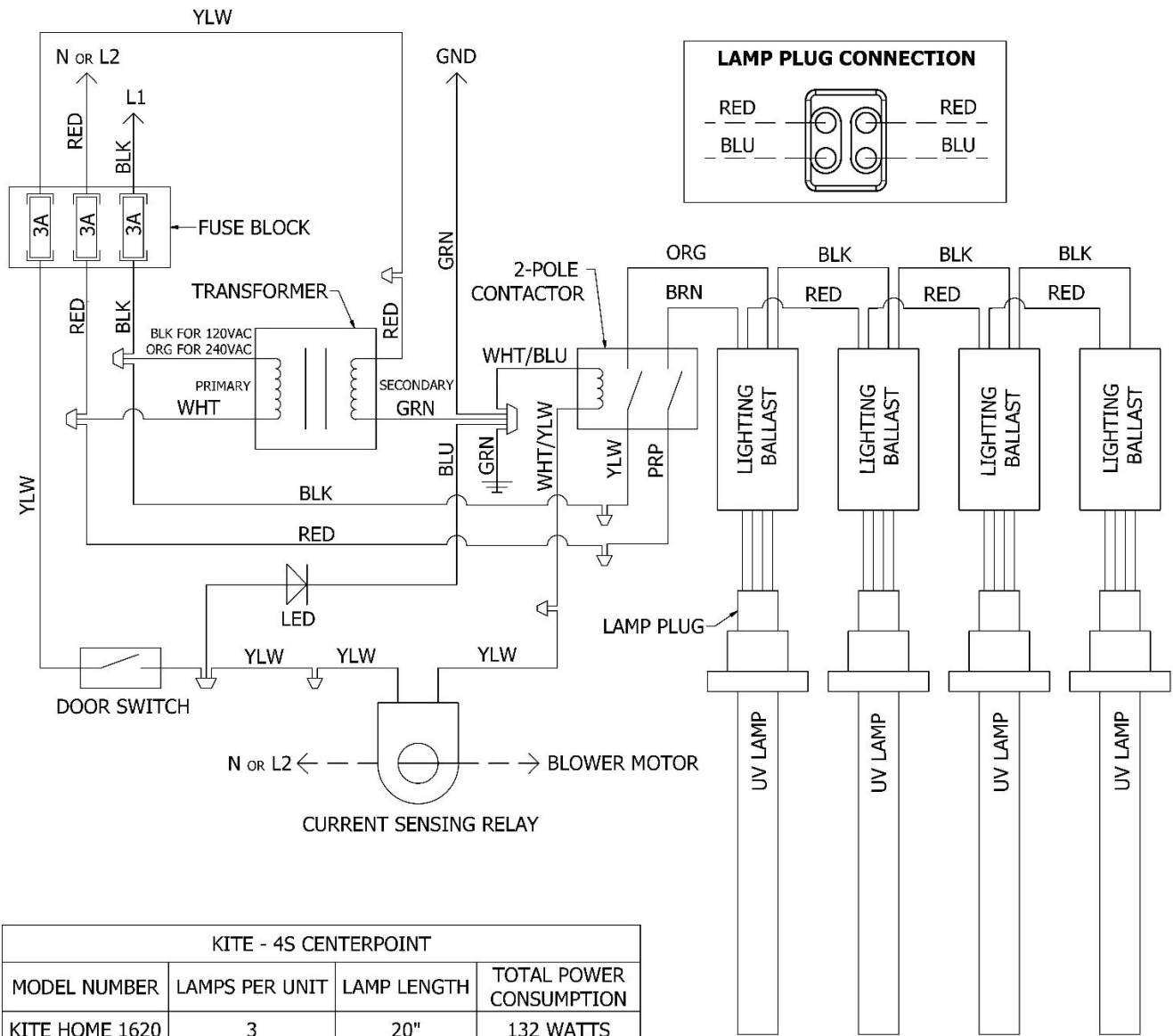
**Max. Case Temp:** 80C (176F)

**Approvals / Class:** UL/cUL Listed, Class "P", Type 1 Outdoor

**Figure 11: Lighting Ballast**

# KITE CONTROL BOX WIRING DIAGRAM

4S CENTERPOINT TECHNOLOGY, LLC (NOT TO SCALE)



KITE - 4S CENTERPOINT			
MODEL NUMBER	LAMPS PER UNIT	LAMP LENGTH	TOTAL POWER CONSUMPTION
KITE HOME 1620	3	20"	132 WATTS
KITE HOME 2020	3	20"	132 WATTS
KITE HOME 2420	4	20"	176 WATTS
KITE HOME 1625	3	24"	187 WATTS
KITE HOME 2025	3	24"	187 WATTS
KITE HOME 2425	4	24"	250 WATTS

- TO POWER WITH 120VAC:**
1. CONNECT 2ND FUSE BLOCK (RED WIRE) TO NEUTRAL.
  2. CONNECT TRANSFORMER PRIMARY SIDE IN 120V CONFIGURATION.
  3. FEED BLOWER MOTOR NEUTRAL WIRE THROUGH CURRENT SENSING RELAY.
- TO POWER WITH 230/240VAC:**
1. CONNECT 2ND FUSE BLOCK (RED WIRE) TO L2.
  2. CONNECT TRANSFORMER PRIMARY SIDE IN 240V CONFIGURATION.
  3. FEED BLOWER MOTOR L2 WIRE THROUGH CURRENT SENSING RELAY.

- NOTES:**
1. CONTROL BOX WILL CONNECT POWER WHEN FURNACE FAN IS ON AND WHEN THE FILTER ACCESS DOOR IS CLOSED.
  2. LED WILL ILLUMINATE WHEN FILTER ASSESS DOOR IS CLOSED.
  3. MOUNT CONTROL BOX WITHIN 6 FT OF KITE HOME.
  4. CLAMP IN CURRENT SENSING RELAY AROUND BLOWER MOTOR NEUTRAL OR L2 WIRE.
  5. ALL WIRE PIGTAILS INSIDE CONTROL BOX ARE 6" 18-AWG SOLID STRAND, SUITABLE FOR MAX AMP DRAW OF 10A.
  6. ALWAYS USE 3 AMP MIDGET FUSES.
  7. NOT SUITABLE FOR OUTDOOR USE.
  8. FINAL WIRING DONE BY INSTALLER.
  9. ELECTRICALLY GROUND UNIT IN ACCORDING TO NATIONAL ELECTRICAL CODE.



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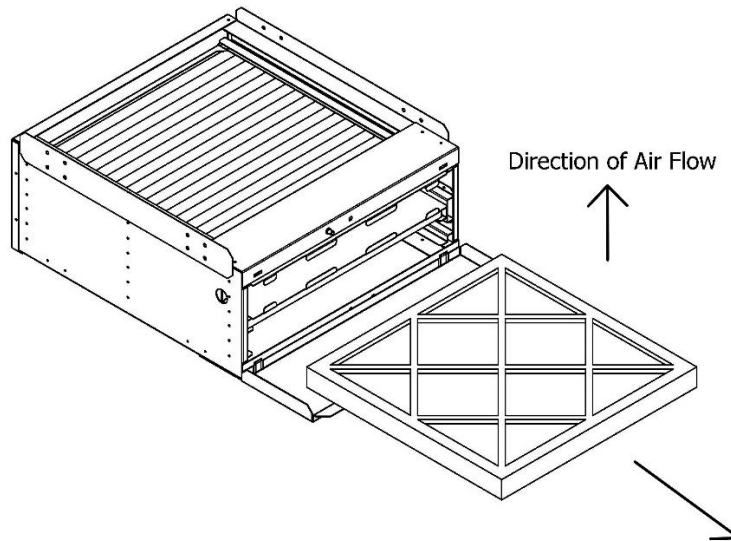
DRAWING BY: CONNOR CROAK  
DATE: 01.18.24



# Maintenance

## Filter Replacement

The Kite housing includes a 2" filter section to remove particles from the air stream. This prevents the buildup of debris on the catalyst panel or on the coils in the air handler. The filter should be replaced when it has become built up with dust and other contaminants. The manufacturer recommends replacing filters every 3 months with a MERV 8 minimum rated filter. Filters must be replaced on a regular schedule to maintain the factory warranty.



**Figure 12: Filter replacement**

### Filter Replacement Procedure

1.) Switch furnace OFF at the thermostat.

**Note:** *If the Kite is powered on during cover removal, a safety switch will break power.*

**Caution:** *Power must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.*

2.) Open access cover by loosening knob with fingers or with a coin.

**Caution:** *If the Kite has been installed with access cover facing the ground, internal components may fall out when cover is removed.*

3.) Remove old air filter. Take note of the direction of air flow marked on the filter. See Figure 12.

4.) Inspect the new filter to ensure that it is the same size as the original filter.

5.) Insert new air filter. Ensure that arrows on filter match the direction of air flow.

6.) Close the access cover and tighten knob with fingers or with a coin.

7.) Switch furnace back ON at the thermostat.

## Lamp Replacement

The Kite contains a catalyst panel that utilizes UV-C lamps to energize the catalyst. Lamps must be replaced after 12,000 hours of continuous use. The manufacturer recommends replacing lamps every 16 months or once per year. Lamps should be ordered from your CenterPoint distributor.

### Lamp Replacement Procedure

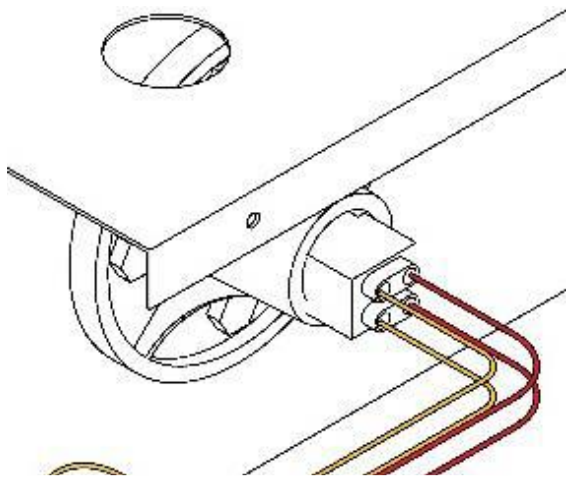
- 1.) Switch furnace OFF at the thermostat.
- 2.) Use a Philips head screwdriver to remove the control box cover.
- 3.) Switch Kite OFF by opening fuse holder and removing fuses.

**Note:** *If the Kite is powered on during cover removal, a safety switch will break power.*

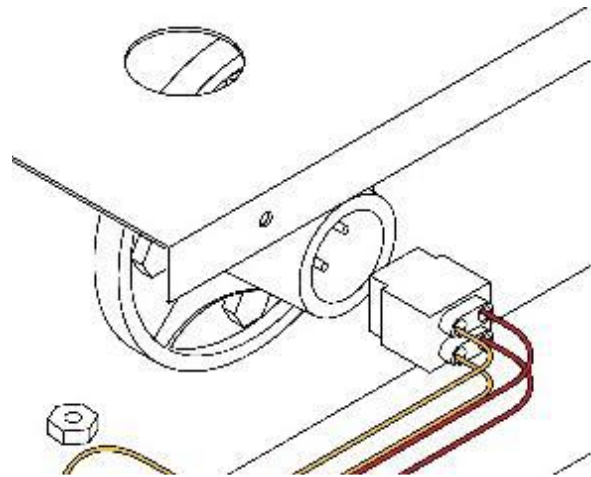
**Caution:** *Power must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.*

- 4.) Open access cover by loosening knob with fingers or with a coin.

**Caution:** *If the Kite has been installed with access cover facing the ground, internal components may fall out when cover is removed.*

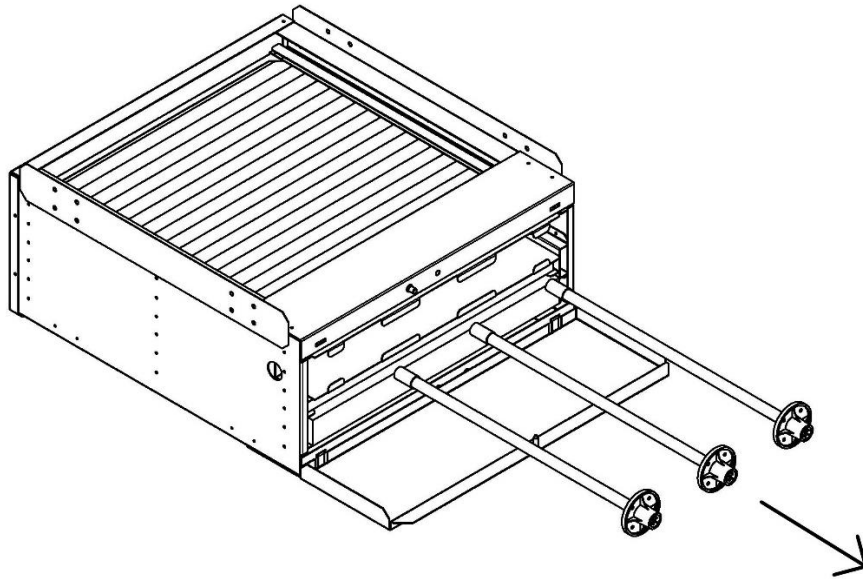


**Figure 13**



**Figure 14**

- 5.) Disconnect lamp plugs from lamps. See Figures 13 and 14.
- 6.) Lamps are attached to catalyst panel with (4) 10-16 Self-Drilling screws per lamp. Remove the screws using a 5/16" socket.



**Figure 15: Lamp replacement**

7.) Remove lamp by alternating a quarter turn clockwise and a quarter turn counterclockwise as it is pulled out. This will prevent the lamp from becoming bound up in the catalyst media. See Figure 15.

**Caution:** *Lamps may be hot if recently in operation. Allow lamps to cool before removing.*

8.) Inspect the new lamp to ensure that it matches the length of the original lamp.

9.) Replace lamp by alternating a quarter turn clockwise and a quarter turn counterclockwise as it is pushed in. This will prevent the lamp from becoming bound up in the catalyst media.

10.) Reinsert (4) screws per lamp using a 5/16" socket.

11.) Reconnect lamp plugs. See Figures 13 and 14.

12.) Switch Kite ON by reinserting fuses and closing fuse holder in control box.

13.) Replace control box cover and tighten Phillips-head screws.

14.) Check lamp operation by turning on fan at thermostat and holding in door switch. If green sleeves glow, lamps are illuminated.

15.) Close the access cover and tighten knob with fingers or with a coin.

## Lamp Disposal

Products containing Mercury are considered hazardous waste. Since January 1, 2000, the United States Environmental Protection Agency (EPA) has allowed for spent lamps to be managed by Universal Wastes. The Universal Waste Rules (UWR) are designed in part to simplify the management of mercury containing wastes, including spent fluorescent lamps. The Rules are also intended to encourage recycling, thereby reducing mercury emissions to the environment.

As an alternative to managing lamps as universal wastes, a facility may elect to manage its spent lamps as hazardous wastes. Hazardous waste rules, like the universal waste rules, are promulgated under the federal Resource Conservation Recovery Act (RCRA) and state laws equivalent to RCRA. RCRA regulates hazardous waste from the cradle to the grave. RCRA Subtitle C requires a waste generator to properly identify, treat, store, transport, and delegate to the States the responsibility for the day-to-day management of the program.

## List of Lamp Recycling Facilities in the US

- AERC Recycling Solutions – Hayward, CA ; West Melbourne, FL ; Allentown, PA
- Universal Recycling Technologies – Dover, NH ; Clackamas, OR ; Fort Worth, TX ; Janesville, WI
- Veolia ES – Phoenix, AZ ; Tallahassee, FL ; Stoughton, MA ; Port Washington, WI

Go online to find your nearest lamp disposal location.

# Ballast Troubleshooting Procedure

## Troubleshooting All Fluorescent Fixtures

**Safety First:** Voltage and current measurements present the possibility of exposure to hazardous voltages and should be performed only by qualified personnel. Many troubleshooting techniques require measurements with input voltages applied requiring extra precautions to avoid electrical shock. Use proper safety equipment such as eye protection and gloves when performing electrical measurements.

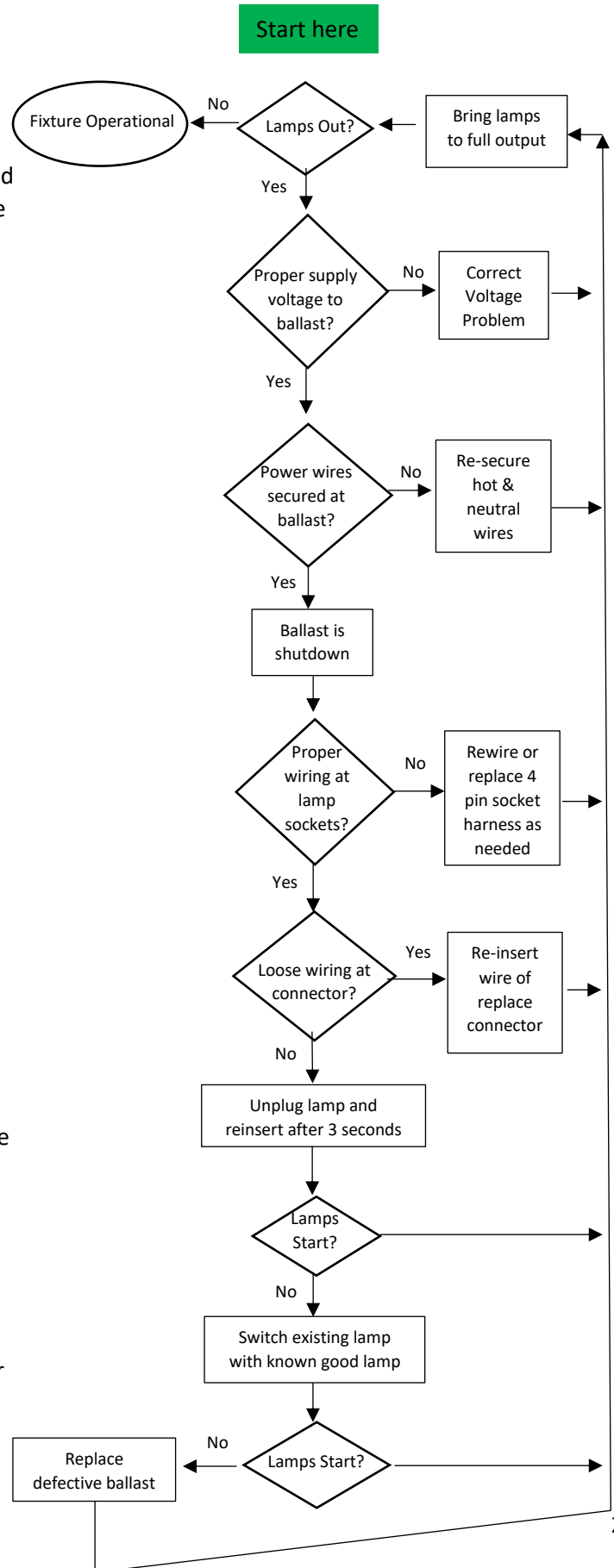
### Inoperative Fixture:

Often, a fixture becomes inoperative due to causes not attributable to the ballast. It is important to examine all fixture components before removing the ballast for replacement. We recommend the following general procedure for both magnetic and electric ballasts:

- 1.) Replace or check all lamps to ensure satisfactory operation.
- 2.) As lamps are removed, examine all sockets to ensure they are not damaged or broken and are making proper contact with the lamps.
- 3.) Examine all electrical connection within the fixture, including at the lamp socket, to ensure conformance with the wiring diagram (see Wiring Diagram).

To left is a systematic approach for troubleshooting most problems than arise regarding fixture using ballasts with startup protection. For those situations when this document does not assist in correcting the problem, the manufacture should be contacted.

**Note:** Programmed Start Ballasts include lamp end-of-life circuitry. This circuit is included to maximize lamp life when one lamp fails in the circuit. The feature enables the ballast to detect when lamps fail and safely removes power for the lamp by going into a shutdown mode. The ballast also goes into a shutdown mode when it detects lamps not properly placed in the sockets. When troubleshooting the circuit, make sure lamps are placed properly in the sockets. Programmed Start ballasts also include a re-strike feature that will restart the lamps after the failed lamp has been replaced. Open circuit voltage cannot be measured due to lamp end-of-life circuitry.



## Ballast Replacement.

There is not a set lifetime for ballasts. Ballasts are intended to last the life of the unit. However, ballasts can fail prematurely and will need to be replaced. Always replace them with ballasts through your CenterPoint air purifier supplier. See Ballast Troubleshooting Chart for diagnosing ballast faults.

### Ballast Replacement Procedure

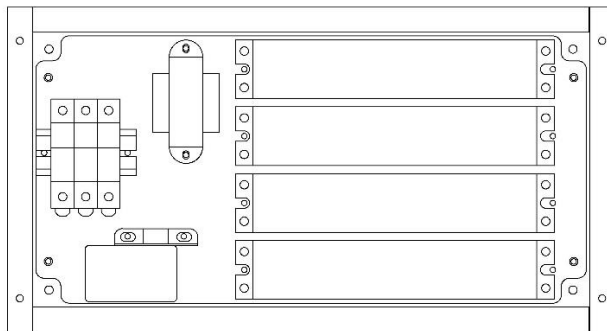
- 1.) Switch furnace OFF at the thermostat.
- 2.) Use a Philips head screwdriver to remove the control box cover.
- 3.) Switch Kite OFF by opening fuse holder and removing fuses.

**Caution:** Power must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.

- 4.) Use an 11/32" hex driver to remove the nuts holding the ballast into place. See Figure 12.

**Note:** *Change one ballast at a time to prevent mixing up wires.*

- 5.) Each ballast is powered by the relay through (3) 18-AWG wires. Each ballast is also connected to each lamp by (4) 18-AWG wires. Using a precision flat head screwdriver, eject the power wires from the push-in wire ports. Take note of which wires power the ballast and which wires power the lamp.



**Figure 16: Control Box**

- 6.) Inspect the new ballast and ensure that it matches the original one being replaced.
- 7.) Reinsert the wires powering the ballast and the lamp.
- 8.) Using the 11/32" socket wrench, reinstall the nuts that hold the ballast in place.
- 9.) When all wires are reconnected, reinsert fuses into the fuse holder and close the fuse holder.
- 10.) Replace control box cover and tighten Phillips-head screws.
- 11.) Check lamp operation by turning on fan at thermostat and holding in door switch. If green sleeves glow, lamps are illuminated.
- 12.) Close the access cover and tighten knob with fingers or with a coin.

## Catalyst Cleaning

As debris and contaminants accumulate on the catalyst, the effectiveness of the unit decreases. The catalyst must be inspected periodically for buildup. It is recommended that this inspection be performed during filter replacement.

### Catalyst Inspection Procedure

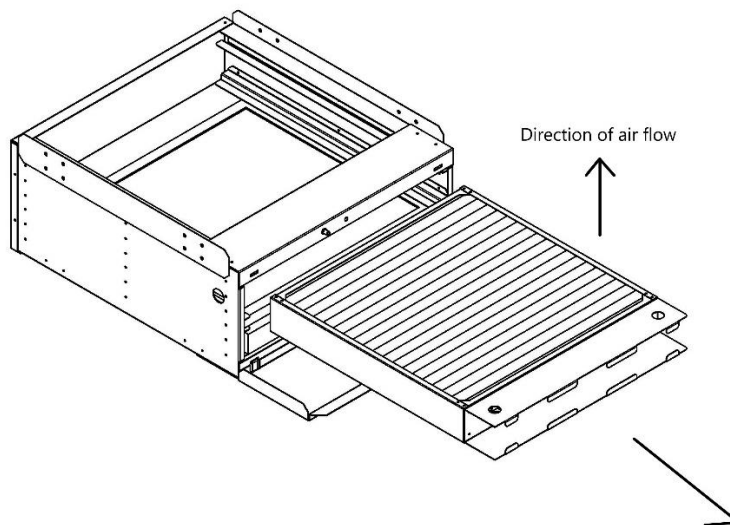
- 1.) Switch furnace OFF at the thermostat.
- 2.) Use a Philips head screwdriver to remove the control box cover.
- 3.) Switch Kite OFF by opening fuse holder and removing fuses.

**Caution:** Power must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.

- 4.) Open access cover by loosening knob with fingers or with a coin.

**Caution:** *If the Kite has been installed with access cover facing the ground, internal components may fall out when cover is removed.*

- 5.) Disconnect lamp plugs from lamps. See Figures 13 and 14.



**Figure 17**

- 6.) Remove catalyst panel from Kite by pulling it out of the housing. See Figure 17.
- 7.) Using a flashlight, visually inspect catalyst. Look for clumps of dirt and debris.
- 8.) If the catalyst appears clean and free of particulate, the catalyst will not need to be cleaned. Proceed to the next step to reassemble. If catalyst has accumulated dirt and debris, the catalyst panel should be cleaned. Proceed to Catalyst Cleaning Procedure.

- 9.) Reinsert catalyst panels into Kite housing. Be sure that the catalyst wire mesh is on the downstream side of the direction of air flow.
- 10.) Reconnect lamp plugs.
- 11.) When all wires are reconnected, reinsert fuses into the fuse holder and close the fuse holder.
- 12.) Replace control box cover and tighten Phillips-head screws.
- 13.) Check lamp operation by turning on fan at thermostat and holding in door switch. If green sleeves glow, lamps are illuminated.
- 14.) Close the access cover and tighten knob with fingers or with a coin.

### Catalyst Cleaning Procedure

- 1.) Use a Philips head screwdriver to remove the control box cover.
- 2.) Switch Kite OFF by opening fuse holder and removing fuses.

**Note:** *If the Kite is powered on during cover removal, a safety switch will break power.*

**Caution:** *Power must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.*

- 3.) Open access cover by loosening knob with fingers or with a coin.

**Caution:** *If the Kite has been installed with access cover facing the ground, internal components may fall out when cover is removed.*

- 4.) Disconnect lamp plugs from lamps. See Figures 13 and 14.
- 5.) Remove catalyst panel from Kite by pulling it out of the housing. See Figure 17.
- 6.) If the catalyst has only light to moderate dust build up, use a pump-up spray bottle with water only to rinse the catalyst. Avoid heavy concentration of spray on ballast tray.

If the catalyst is soiled with resin (E.T.S.) or grease, spray the catalyst liberally with Nu-Calgon CalClean, Special HD, or another suitable coil cleaner. Do not spray ballast tray. Allow the catalyst to sit for 15 minutes before rinsing with pump-up water spray bottle.

If the catalyst has been discolored, a mixture of powered Oxiclean and water can be sprayed on the catalyst with a pump-up spray bottle. Allow to sit for 15 minutes before rinsing with pump up water spray bottle.

**Caution:** *Do not spray high-pressure water to clean the catalyst. Excessive use of high-pressure water will remove catalyst coating. This type of damage will make void the product warranty.*

- 7.) Allow catalyst to dry before reinserting into unit.
- 8.) Reinsert catalyst panels into Kite housing. Be sure that the catalyst wire mesh is on the downstream side of the direction of air flow.



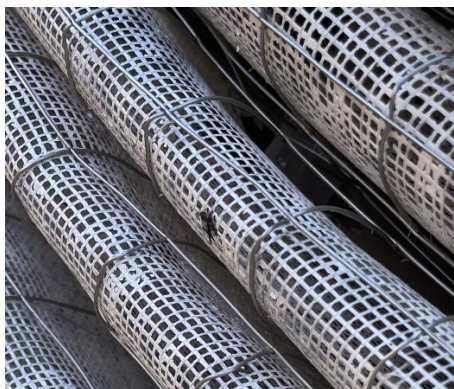
- 9.) Reconnect lamp plugs.
- 10.) When all wires are reconnected, reinsert fuses into the fuse holder and close the fuse holder.
- 11.) Replace control box cover and tighten Phillips-head screws.
- 12.) Check lamp operation by turning on fan at thermostat and holding in door switch. If green sleeves glow, lamps are illuminated.
- 13.) Close the access cover and tighten knob with fingers or with a coin.

### Catalyst Replacement

After 15 years of continuous use, the catalyst panel inside the unit will need to be replaced. Over time the UV lights will degrade the TiO<sub>2</sub> coating, exposing the fiber glass core. In Figure 18, notice the stripes in the mesh created by the lamps. It is time to replace the catalyst when these stripes appear. Figures 19 and 20 show the removal of catalyst windowing over time. When the windowing is removed, the catalyst is not effective.



**Striped Catalyst: Figure 18**



**Used Catalyst Windowing: Figure 19**



**New Catalyst Windowing: Figure 20**

## Catalyst Replacement Procedure

- 1.) Use a Philips head screwdriver to remove the control box cover.
- 2.) Switch Kite OFF by opening fuse holder and removing fuses.

**Note:** *If the Kite is powered on during cover removal, a safety switch will break power.*

**Caution:** *Power must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.*

- 3.) Open access cover by loosening knob with fingers or with a coin.

**Caution:** *If the Kite has been installed with access cover facing the ground, internal components may fall out when cover is removed.*

- 4.) Disconnect lamp plugs from lamps. See Figures 13 and 14.
- 5.) Remove catalyst panel from Kite by pulling it out of the housing.
- 6.) Insert new catalyst panels into Kite housing. Be sure that the catalyst wire mesh is on the downstream side of the direction of air flow. See Figure 17.
- 7.) Reconnect lamp plugs.
- 8.) When all wires are reconnected, reinsert fuses into the fuse holder and close the fuse holder.
- 9.) Replace control box cover and tighten Phillips-head screws.
- 10.) Check lamp operation by turning on fan at thermostat and holding in door switch. If green sleeves glow, lamps are illuminated.
- 11.) Close the access cover and tighten knob with fingers or with a coin.

## Replacement Parts

Part	Description	Name / Model Number
Ballast	120/277 VAC, 60 Hz	NTL1150-800-PH-UNV
Transformer	24V, 20VA	Packard PF42420
Relay	24V, 2-Pole	Functional Devices RIB2401D
Fuse	3A, Midget Fuse	Littelfuse BLF003
Fuse Holder	3-Pole Midget Fuse	Socomec 57010018-1PK
Catalyst	(Sizes will vary)	PCP3
Particle Filter	(Sizes will vary)	MERV 13
UVGI Lamps	UV-C Lamp (Sizes will vary. See Table 1 for specific lamp size and quantity)	First Light Technologies, Inc. or UV Engineering Solutions, LLC
UVGI Shielding	(Sizes will vary)	UV Shield
Lamp Screws	Hex Screw	10-16 Self-Drilling Screw
Catalyst Cover Screws	Philips Head Screw	PPH ½" Self-Drilling Screw

**Table 3: Replacement Parts**

*\*Only use genuine replacement parts. Parts highlighted in gray may be substituted with other manufactures.*

To place an order for replacement parts, please contact the manufacturer at

Phone: 806-745-7000

Website: [www.genesisair.com](http://www.genesisair.com)

Physical Address: 5202 CR 7350 Suite D Lubbock, TX 79424

# Air Purification Testing

The manufacturer has conducted numerous tests to authenticate that CenterPoint Technology is an effective means of reducing airborne indoor air contaminants. The manufacturer of this device will make copies of test results available to those who request it.

## Testing Protocol

There are two main types of tests that can be performed with air purifying equipment: single pass tests and chamber tests. A single pass test measures the contaminant level at the inlet of the equipment and compares that value to the level of contaminants at the outlet. A chamber test measures the change in contaminant level within an enclosed space over a given amount of time. Tests can measure volatile organic compounds (VOCs) reduction, reduction of viable biological contaminants (bacteria, viruses, fungi), and particulate reduction.

CenterPoint equipment is intended to reduce VOCs and deactivate viable biological contaminants. **CenterPoint equipment is not intended to significantly reduce non-viable biological contaminants. CenterPoint equipment is not intended to significantly reduce particle contaminants.**

Many testing groups do not make a distinction between viable and non-viable biological contaminants. When testing CenterPoint equipment, a distinction must be made between viable and non-viable biological contaminants in the air. **Tests must only measure viable biological contaminants that appear in the air.** The bodies of inactivated biological contaminants will remain in the air. **Inactive bodies are incapable of reproducing or infecting people occupying the space.**

For more information, please contact the manufacturer at

Email: [information@genesisaair.com](mailto:information@genesisaair.com)

## **LIMITED WARRANTY**

### **FAILURE TO MAINTAIN YOUR EQUIPMENT WILL VOID THIS WARRANTY**

Your CenterPoint purification system is expressly warranted from the date of installation to be free from manufacturing defects for the coverage period stated below. Defective parts must be returned by you to the installation contractor together with the CenterPoint purification system's model number, serial number, and documented installation date no later than thirty (30) days after the failure.

### **ONE (1) YEAR COVERAGE -- RESIDENTIAL AND COMMERCIAL APPLICATIONS**

The covered equipment and covered components are warranted by Genesis Air for a period of ONE (1) year from the date of the original unit installation, when installed in a residential or commercial application. If during this period, a covered component fails because of a manufacturing defect, Genesis Air will provide a free replacement part. You must pay shipping charges and all other costs of warranty service. Genesis Air will not pay labor involved in diagnostic calls or in removing, repairing, servicing, or replacing parts. Such costs may be covered by a separate warranty provided by the installer. NOTE - If the date of original installation cannot be verified, the warranty period will be deemed to begin six (6) months after the date of manufacture.

### **EXCLUDED COMPONENTS**

The following components are not covered by this warranty: the UVCGI lamps or the pleated photocatalytic material. These are replacement items, which must be replaced as stated in the maintenance section of the installation instructions to ensure effective operation.

### **REPAIRS**

All repairs of covered components must be made with authorized service parts by a qualified service dealer or contractor. Labor charges are not covered by this warranty.

### **WARRANTY LIMITATIONS**

This warranty will be voided if the covered equipment is removed from the original installation site. This warranty does not cover damage or defect resulting from:

- 1** - Flood, wind, fire, or lightning damage. Storage, installation, or operation in a corrosive atmosphere (chlorine, fluorine, salt, recycled wastewater, urine, fertilizers, or other damaging chemicals).
- 2** - Accident, or neglect or unreasonable use or operation of the equipment, including operation of electrical equipment at voltages other than the range specified on the unit nameplate (Includes damage caused by brownouts).
- 3** - Modification, change or alteration of the equipment, except as directed by the manufacturer.
- 4** - Operation with system components (indoor unit and control devices), which do not match, or meet the specifications recommended by the manufacturer.
- 5** - Operation with system components (indoor unit and control devices), which exceed operational temperature range of; -20 F to 122F.
- 6** – **Cleaning equipment with high pressure water spray so that the PCP catalyst coating is damaged.**
- 7** – Damage caused by allowing non-functioning equipment in an air stream for a prolonged period. Air speeds above 600 ft/min will damage equipment beyond repair.

THIS WARRANTY SHALL NOT OBLIGATE THE MANUFACTURER FOR ANY LABOR COSTS AND SHALL NOT APPLY TO DEFECTS IN WORKMANSHIP OR MATERIALS FURNISHED BY THE INSTALLING CONTRACTOR AS CONTRASTED TO DEFECTS IN THE CENTERPOINT™ PURIFICATION SYSTEM ITSELF. IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFORESAID COVERAGE PERIOD. THE MANUFACTURER'S LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, OTHER THAN DAMAGES FOR PERSONAL INJURIES, RESULTING FROM ANY BREACH OF THE AFORESAID IMPLIED WARRANTIES OR THE ABOVE LIMITED WARRANTY IS EXPRESSLY EXCLUDED. THIS LIMITED WARRANTY IS VOID IF DEFECT(S) RESULT FROM FAILURE TO HAVE THIS UNIT INSTALLED BY A QUALIFIED HEATING AND AIR CONDITIONING CONTRACTOR. IF THE LIMITED WARRANTY IS VOID DUE TO FAILURE TO USE A QUALIFIED CONTRACTOR, ALL DISCLAIMERS OF IMPLIED WARRANTIES SHALL BE EFFECTIVE UPON INSTALLATION.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

**Last Revision: 10/21/2021**

**To register your new CenterPoint Purification System, PLEASE CUT ON DOTTED LINE AND RETURN THE REGISTRATION FORM TO THE ADDRESS NOTED BELOW.**

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**Customer Registration Form**

Customer Name: \_\_\_\_\_ Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_

Home Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Installing Contractor: \_\_\_\_\_ Phone: \_\_\_\_\_

Date of installation: \_\_\_\_\_ Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

Please send this completed form to the manufacturer.

Genesis Air, Inc.

5202 CR 7350, SUITE D LUBBOCK, TX 79424

