

## REPLACING THE UV BULB

Like all light bulbs, UV bulbs have a limited life span. Unlike regular light bulbs that work until they burn out, UV bulbs lose their germicidal effectiveness over time and must be replaced even though they may still produce light.

After approximately 1 year of continuous use (about 9,000 hours), the UV bulb will lose power and have to be replaced. **Replace with a new Dometic UV bulb. Use of any other bulb will void the warranty.**



### NOTE

The bulb will still glow blue after 9,000 hours of use, but the UV radiation will not be strong enough to be functional. If the bulb is glowing red or orange instead of a bright purple-blue, the bulb needs to be replaced immediately.



### NOTE

The photocatalytic nano-mesh material does not need to be replaced.

Refer to Figure 7 below and follow these steps to replace the bulb:

1. Turn off all power breakers running to AU unit before removal of any part of the airhandler.



### DANGER

**Shock hazard. Turn off all power breakers running to AU unit before removal of any part of the airhandler.**

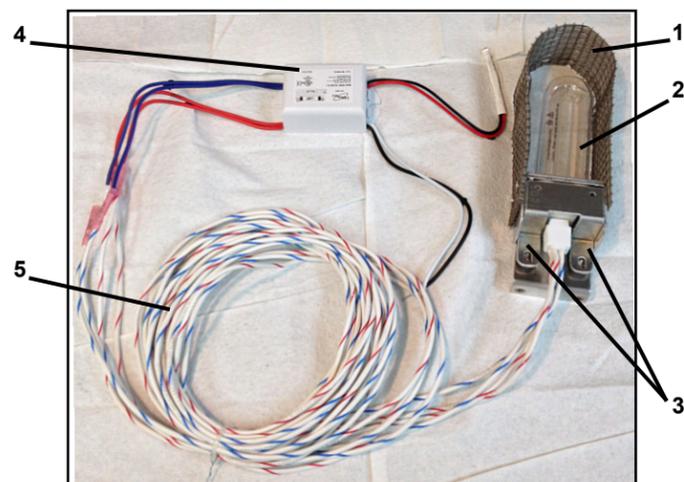
2. If necessary, close ball valves to isolate the AU airhandler and remove water connections so the AU can be moved to an accessible location.
3. On top of the AU, remove the cover screws and lift out the cover panel.
4. Remove the harness plug from the top of the UV bulb by pulling up gently.
5. Remove the two screws that secure the bulb bracket to the AU cover.
6. Remove the two screws that secure the bulb brace to the bracket.
7. Pull the old bulb up through the bulb bracket to complete the removal process.
8. Place the new bulb in the bulb bracket by sliding it through the vacant hole.
9. Insert the two screws that secure the bulb brace to the bracket.
10. Insert the two screws that secure the bulb bracket to the AU cover.
11. Insert the harness plug from the base of the UV Bulb by pushing down gently.
12. On top of the AU, slide in the cover panel and insert the cover screws.
13. Write today's date on the appropriate sticker as a reminder to replace the bulb again a year from this date.
14. Dispose of the old bulb according to local regulations and codes.



### CAUTION

Bulb contains hazardous materials and should be disposed of according to local regulations and codes.

Figure 7: Components of the Breathe Easy Retrofit Kit



1	Nano-Mesh Structure
2	UV Bulb
3	Bulb Clips (2 pairs)
4	Ballast
5	Wiring Harness

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## Breathe Easy™ Air Purifier Retrofit Kit For Gold Series (AU) Airhandler

### Installation Manual



### HOW IT WORKS

The Dometic Breathe Easy Air Purifier uses your Gold Series (AU) airhandler to move air through the unit where ultraviolet (UV) light and innovative Photocatalytic Nano-Mesh technology improve air quality.

The purifier uses a specific frequency of UV light that enables maximum effectiveness in reducing pollutants such as pollen, mold spores, bacteria, viruses, fumes, and odors, while producing no harmful ozone.

UV energy activates the titanium-dioxide catalyst on the surface of the nano-mesh structure. The molecules of pollutants that come in contact with the catalyst are reconfigured into nontoxic elements. The density and quantity of pollutants present affect how rapidly the air will be cleaned. As air re-circulates and makes multiple passes through the system you will notice continuously improving purification levels.

NOTE: The air purifier does not fix the *source* of ongoing odor problems. For example, a leak causing mold must be repaired and the mold must be removed.

### SAFETY PRECAUTIONS



#### WARNING

- Do not use outdoors.
- Keep the cord away from heated surfaces.
- Never open the cover without turning off the main breaker.
- Never operate this unit if it has a damaged cord or plug.
- Never operate this unit if it has been damaged or submerged in water.
- Do not place in an area where uncured siliconized sealers are being used, as the vapors will inhibit the unit's photocatalytic capability.



#### DANGER

- Never look directly at a lit ultraviolet (UV) bulb. The direct power of the UV bulb can be harmful to the eyes. However, looking at the indirect blue glow from the bulb is safe.
- This equipment is not ignition protected per CFR 183.410 and may not be installed in areas that may be exposed to flammable gas.

### SYSTEM SETUP

#### Location

- This Breathe Easy (BE) retrofit kit is designed only for installation within a Dometic Gold Series (AU) airhandler.
- Make sure the ducting that connects to the airhandler is UV-stable. If you can not confirm that it is, replace the ducting in the area stretching at least 3 feet (1m) before and 3 feet (1m) after the unit with UV-stable ducting to prevent eventual deterioration of the ducting. *Deteriorated ducting may create air leaks that could cause secondary condensation.*



#### WARNING

An air leak at the duct connection could cause secondary condensation to form, resulting in drips & wetness in the surrounding area.

- The unit requires annual replacement of the UV bulb, so situate the airhandler for easy access to the air purifier.
- The unit requires electricity and operates on 120V or 230V AC power.
- The ducting should service an indoor area.
- Do not install in areas that may be exposed to flammable gas.

#### Power

The unit operates on 120V/60Hz or 230V/50Hz or 60Hz AC power and is wired to the incoming power of the air conditioning system. The unit is configured for 230V/50Hz or 60Hz as a default. If it is to be used for 120V/60Hz the switch on the ballast must be switched to the left to the 120V/60Hz position. See Figure 6.

See table on next page for electrical specifications and Figure 6 for wiring information. Do NOT wire the unit to blower power, as this will significantly reduce the life of the UV bulb and cause damage to the ballast. **For the most accurate wiring information, always refer to the wiring diagram on the inside of the electrical box.**

ELECTRICAL SPECIFICATIONS	AU6	AU9	AU12	AU18	AU24
Volts/Hz/mA	115/60/200 220/50/350 230/60/200	115/60/200 220/50/350 230/60/200	115/60/200 220/50/350 230/60/200	115/60/250 220/50/350 230/60/225	115/60/250 220/50/350 230/60/225
UV Bulb Watts	12	12	12	20	20
UV Bulb Part Number	4210800	4210800	4210800	4210827	4210827

## Installation

1. Turn off all power breakers running to AU unit before removal of any part of the airhandler.



### DANGER

There is an electrical shock hazard if the airhandler is powered on during the installation of this retrofit kit.

2. If necessary, close ball valves to isolate the AU airhandler and remove water connections so that the AU can be moved to an accessible location.
3. On the top of the AU, remove cover screws and lift out the cover panel. See Figure 1.

4. Using the **two screws supplied**, secure BE bulb bracket to the cover panel, as shown in Figure 2. Ensure that the BE setup is oriented so that it does not overhang past the cover panel.
5. Connect the wiring harness plug to the BE bulb. Route the harness through the plastic fitting in the cover panel. If the AU is equipped with a heater, ensure that the wires are routed through the plastic fitting on the heater bracket also. It is important to keep the wires from touching the heater coils as it may cause damage. See Figure 3.



### WARNING

Do not let the BE's electrical wires contact the heater if one is installed. Use the heater bracket's plastic fitting to keep the wires away from the heating coils.

6. Replace cover panel with screws onto AU.
7. Route the wiring harness back to the AU electrical box.
8. Check the ballast to ensure that it is set to the correct voltage for your installation. The toggle switch can be set for either 120V or 220V. See Figure 4.
9. Attach the ballast to the electrical box by placing it on the studs in the box and secure with two nuts supplied in the location shown in Figure 5.
10. Crimp wiring harness from the BE bulb to the ballast. The blue and white striped harness wires are attached to the blue ballast wires while the red and white stripped harness wires are attached to the red ballast wires.
11. Wire the ballast into the terminal strip, as shown on the wiring diagram on the lid of the electrical box.
12. Supply power to the electrical box to check functionality of the UV bulb. The glow of the UV light should be easily seen through the evaporator coil of the unit. *Never look directly at a lit UV bulb!* Also, be sure to check the pilot light on the ballast to ensure it is illuminated. The blue pilot light will be lit only if power is applied to the unit and the bulb is operational (i.e., if the bulb is not properly seated but power is connected, the pilot light will not be lit).
13. Place UV light warning stickers on unit in a clearly visible location.

Figure 1: Removing cover panel from airhandler

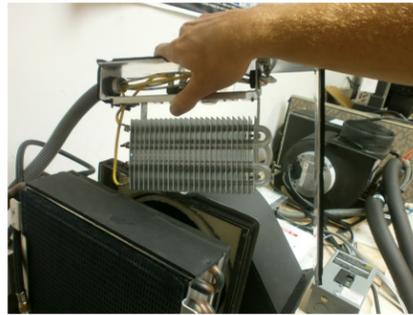


Figure 2: Securing BE to cover panel



Figure 3: Proper routing of BE wiring harness

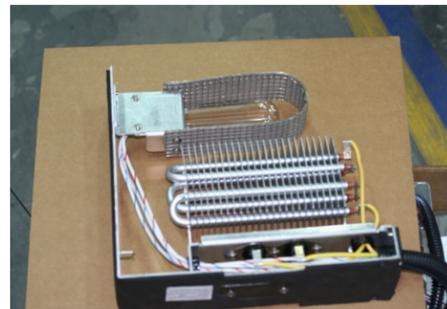


Figure 4: Voltage toggle switch on ballast



### DANGER

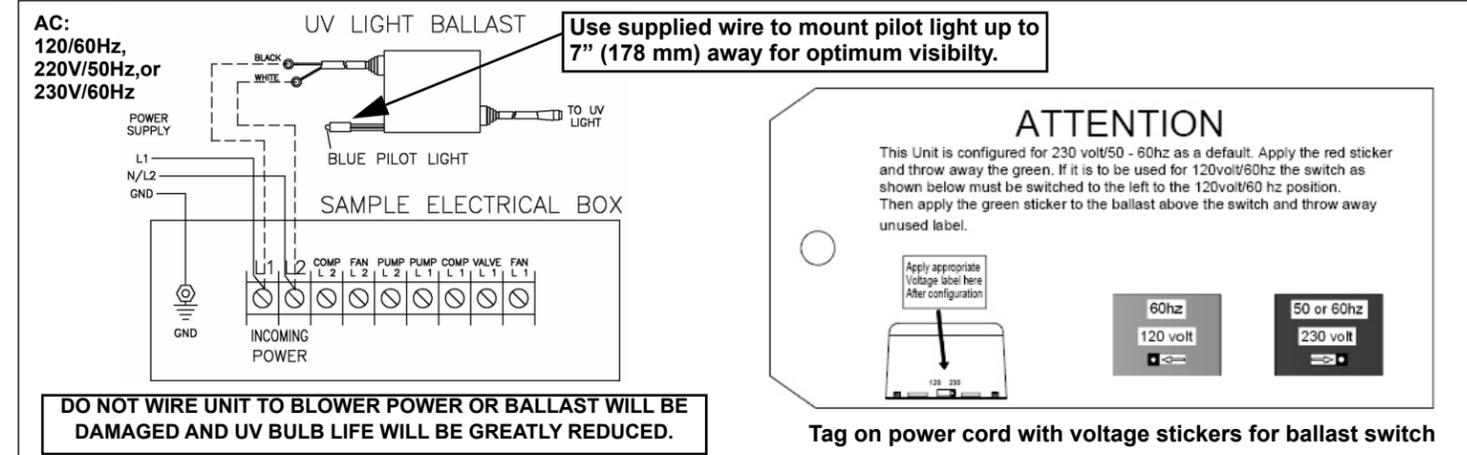
Never look directly at a lit UV bulb.

14. Place the UV bulb date sticker on the unit in a clearly visible location and write the initial date of startup. The UV bulb lasts approximately 1 year as it operates continuously and should be replaced annually.
15. Route the 7-inch (178 mm) wire of the blue pilot light to a point where the pilot light can be seen easily.

Figure 5: Installation location of ballast in electric box



Figure 6: Electrical Wiring Diagram And Ballast Switch Tag



## SYSTEM OPERATION

### On

The Breathe Easy unit is in operational ready mode when power is supplied to the unit and the bulb is lit and the blue pilot light on the ballast is lit. The air purification process begins when the air conditioning system's blowers begin moving air through the tube.



### NOTE

It is normal for the Breathe Easy UV bulb to remain lit as long as power is applied to the unit at the breaker, even if the AC unit is in OFF mode. This maximizes the life of the bulb. One hour of bulb life is lost each time it is turned on and off, which is why the unit should never be wired to blower power.

### Off

Disconnect power to the unit by turning off the breaker to the air conditioning system's incoming terminal strip. **Always turn the unit off when performing maintenance.**

## TROUBLESHOOTING

### No power, unit does not turn on (no blue glow).

1. Verify that the power source is working.
2. UV bulb is not seated correctly in the socket (see "Replacing the UV Bulb").
3. UV bulb needs to be replaced (see "Replacing the UV Bulb").
4. Blue light on the ballast is not lit (see "Replacing the UV Bulb").
5. Replace ballast if you have a known good bulb and power is on to ballast (confirmed with a volt meter at power terminals).
6. **The unit is configured for 230V/50Hz or 60Hz as a default. If it is to be used for 120V/60Hz the switch on the ballast must be switched to the left to the 120V/60Hz position.**

### Output seems ineffective.

1. Make sure unit is servicing an enclosed area.
2. Remove any obstructions in the air stream's input and output vents.
3. Clean the air filter of the air conditioning system.
4. Is it time for a new bulb? The UV bulb should be replaced each year (see "Replacing the UV Bulb").
5. Replace bulb if it is glowing red, not blue (see "Replacing the UV Bulb").