

**Part Number P103-CC2020**

**SAFETY CONSIDERATIONS**

Installation and servicing of air-conditioning equipment can be hazardous due to system pressure and electrical components. Only trained and qualified service personnel should install, repair, or service air-conditioning equipment.

Untrained personnel can perform basic maintenance functions such as changing lamps. All other operations should be performed by trained service personnel. When working on air-conditioning equipment, observe precautions in the literature, tags and labels attached to the unit or accessory, and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses and work gloves.

**⚠ WARNING**

Before installing accessory or performing maintenance or service on germicidal coil cleaner, turn off main power switch to unit. Electrical shock can cause injury or death. There may be more than one disconnect switch.

**⚠ CAUTION**

Never expose eyes or skin to ultra-violet light from any source. Coil cleaner must be off before performing maintenance or service. Personal injury may result.

**⚠ CAUTION**

Use only specified replacement lamps with this accessory. Use of an incorrect lamp can result in damage to accessory or lamp.

**⚠ CAUTION**

Do not touch lamp glass without gloves. Reduced performance of lamp may result. Clean lamp after handling.

**⚠ CAUTION**

Lamp contains a small quantity of mercury. If a lamp breaks, clean and dispose of with care.

**GENERAL**

The Totaline® commercial ultra-violet coil cleaners are designed to keep the coil free from biological contaminants, including mold and fungus, that may be transmitted through the air ducts of the HVAC (heating, ventilation and air conditioning) equipment. The germicidal air purifiers are installed in the return air plenum of the HVAC equipment. The ultra-violet band light inhibits and kills mold, fungus, and microbial growth on the coil.

Depending on the size of the coil, more than one germicidal cleaner may be needed for commercial applications.

**PACKAGE CONTENTS**

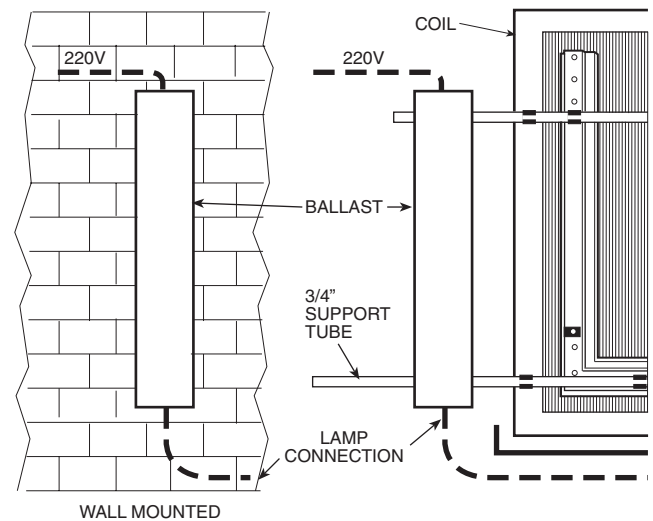
- 2 — Lamps with Reflector/Shield
- 1 — Ballast Box
- 2 — Spring Clamps
- 2 — 8-32 x 5/16 in. machine screws
- 2 — 8-32 Hex Nuts

**INSTALLATION**

**Location** — Germicidal coil cleaners are installed facing the return air side of the HVAC coil so that air flows over the aluminum reflector first. The ballast box of the germicidal coil cleaner can be installed on the same conduit as the lamps or on a hard surface outside of the coil. See Fig. 1.

Mount the L-shaped coil cleaners 12 in. away from the coil surface, plus or minus 3 inches. The lower support tube should be at a height that will allow the bottom of the coil cleaner to be placed 1 to 6 in. parallel to the top of the drain pan. The coil cleaner should be positioned so that the lamp shines on the drain pan.

The upper support tube is to be attached to the coil so that it is 16 in. from the lower support tube. The coil cleaner has clamps on the back of the aluminum extrusion that are 16 in. center to center. The aluminum extrusion will snap back onto the conduit. Place the coil cleaner so that the top part of the “L” is positioned along the horizontal edge of the coil, on either side of the coil, not more than 6 in. from the edge of the coil.



**Fig. 1 — Germicidal Coil Cleaner**

Make sure site can be supplied with the necessary power requirements. The commercial germicidal coil cleaners have a power consumption of 1.25 amps per lamp and require a 230 v, 60 Hz power source. Ensure that there is adequate clearance for service. If a humidifier is present, the germicidal coil cleaner should be installed in the airstream before the humidifier.

The operating temperature range is 50 to 115 F. Operating the germicidal coil cleaner outside this range will result in decreased performance.

NOTE: The germicidal coil cleaner is NOT waterproof. If installing outdoors, germicidal coil cleaner must be installed in a watertight enclosure.

**Installation** — Perform the following procedure to assemble the germicidal coil cleaner:

1. Turn off all power to HVAC equipment.
2. Remove the germicidal coil cleaner from its packaging. Use care in handling the aluminum reflector/shield, as the lamp is fragile.
3. Unpack the ballast box.
4. Remove the 3 Phillips head screws from the ballast box. Slide off the cover and remove the plastic bag containing the spring clips. If the spring clips are to be used, install the spring clips on the short side of the ballast box using the enclosed nuts and bolts. The ballast box will be attached to the conduit using these clamps. See Fig. 2. If the ballast box is to be mounted on a wall or other hard surface, attach the ballast box to the surface using the 2 holes in the center of the ballast box. Be careful not to damage the wiring.

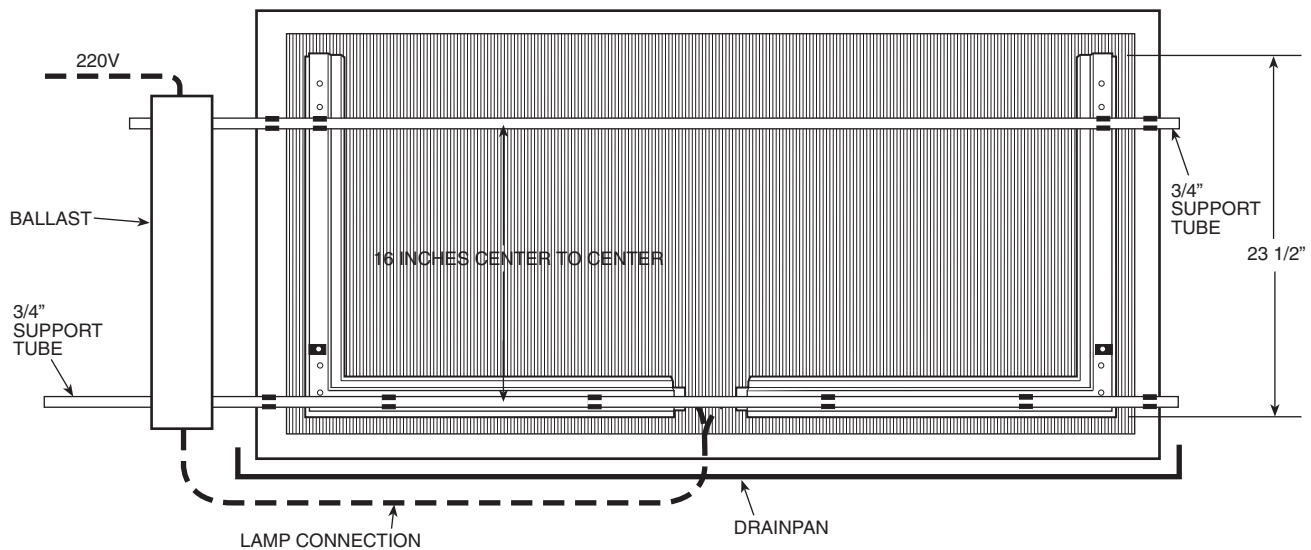
5. Connect the 230-volt wiring. **DO NOT ENERGIZE.**
6. Slide the cover back into place and secure with the 3 Phillips head screws.
7. On the return-air side attach a length of  $\frac{3}{4}$  in. electrical conduit across the coil so that the aluminum reflector/shield will be parallel to the drain pan, 1 to 6 in. above the drain pan, and approximately 12 in. plus or minus 3 in. away from the coil. See Fig. 2.

NOTE: The spring clamps on the reflector/shield are spaced 16 in. center to center and can be rotated in order to attach the reflector/shield to the conduit.

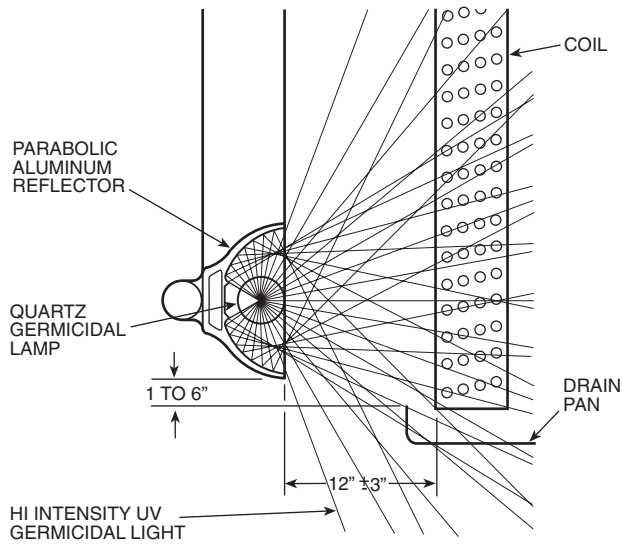
8. Attach a second electrical conduit across the coil 16 in. above the lower conduit. See Fig. 2.
9. The L-shaped germicidal coil cleaner is snapped onto the conduit so that it faces the coil. The germicidal coil cleaner should be configured so that the reflector/shield at each end of the coil perpendicular to the drainpan, is within 2 in. of the edge of the coil. See Fig. 3.
10. Attach the ballast box to the conduit, or a hard surface (see Step 4).
11. Route lamp connection wiring from ballast to coil cleaner. Connect the white plug to each lamp.

NOTE: The plug will only attach to the germicidal coil cleaner in one direction. It may be necessary to rotate the plug 90 degrees to attach it.

12. Ensure that all connections are secure.



**Fig. 2 — Germicidal Coil Cleaner Installation**



**Fig. 3 — Reflector/Shield Installation**

### OPERATION

The germicidal coil cleaner is designed to operate continuously. This allows the high intensity ultra-violet light to kill bacteria on the coil surface and drain pan even when the fan is not operating.

Never look directly at the lamp while operating. Make sure lamp is glowing and operating.

Fiberglass filter media are recommended for operation of HVAC equipment when filters are exposed to ultra-violet lamps. Polyester or cotton filters are subject to ultra-violet degradation and are not recommended.

### MAINTENANCE

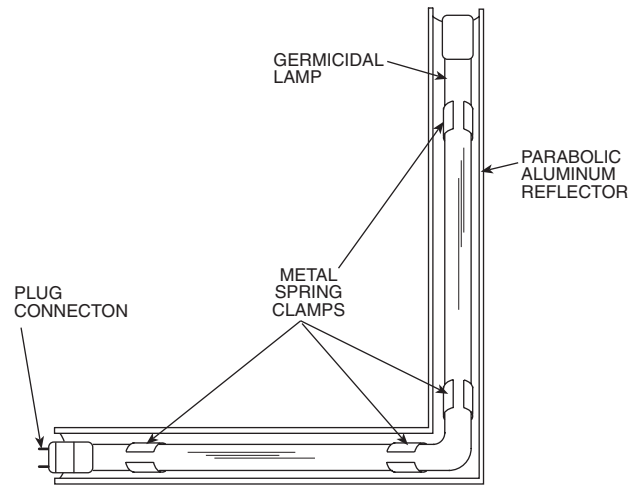
Disconnect all power before performing any maintenance or service.

Lamps need periodic replacement to maintain design specifications. In commercial applications, replace lamps after 15,000 hours of operation. Use caution when removing and inserting lamps from the metal spring clamps. See Fig. 4.

#### **⚠ CAUTION**

Use only specified lamps with this accessory. Use of an incorrect lamp can result in damage to accessory or lamp.

A P103-GERMLAMP008 replacement lamp can safely be used with the germicidal coil cleaner. Other lamps may plug into the accessory, but they should not be used.



**Fig. 4 — Lamp and Metal Spring Clamps**

**COILCLEAN ULTRA-VIOLET GERMICIDAL COIL CLEANER  
LIMITED FIVE (5) YEAR WARRANTY**

**FIVE-YEAR WARRANTY** — This CARRIER CORPORATION product is warranted to be free from electrical and mechanical defects in material and workmanship, under normal use within its listed capacity and maintenance, for a period of FIVE (5) years from the date of original installation, excluding the lamp which is warranted for 12,000 hours from the date of installation. This CARRIER CORPORATION product must not have been moved from the site of original installation. A new or remanufactured part to replace the defective part will be provided without charge for the part itself, through an authorized CARRIER CORPORATION service dealer, provided the defective part is returned to the Distributor. The replacement part assumes the unused portion of the warranty. **Proof of Purchase and Installation** must be provided. Failing this, CARRIER CORPORATION will guarantee the unit for a period of sixty (60) months from the date of manufacture, according to the manufacturer's records and the conditions within this warranty.

**THIS WARRANTY DOES NOT INCLUDE ANY ADDITIONAL LABOR ALLOWANCE OR OTHER COSTS** incurred for diagnosis, repairing, removing, installing, shipping, servicing, or handling of either defective parts or replacement parts. SUCH COSTS MAY BE COVERED BY a separate warranty provided by the installer.

**LIMITATIONS OF WARRANTY** — ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER.

CARRIER CORPORATION WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the Installation, Operation and Maintenance Instructions including cleaning and/or replacement of filters.
2. Damage or repairs required as a consequence of faulty installation or application by others.
3. Damage or repairs needed as a consequence of any misapplication, abuse, improper servicing, unauthorized alteration, or improper operations.
4. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
5. Damage as a result of floods, winds, fires, lightning, accidents, corrosive atmosphere, or other conditions beyond the control of CARRIER CORPORATION.
6. CARRIER CORPORATION products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Any special indirect or consequential property or commercial damage of any nature whatsoever. Some States do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

Model No.	Serial No.
Date of Installation	Installed by
Name of Owner	Address of Installation