

Part Number P103-CCIL12, P103-CCIL18, P103-CCIL24, P103-CCIL30,  
P103-CCIL40, P103-CCIL50, P103-CCIL60

### 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 this accessory or performing maintenance or service on the germicidal coil cleaner, turn off the unit's main power switch. Electrical shock can cause injury or death. There may be more than one disconnect switch.

#### **▲ CAUTION**

Never expose eyes or skin to ultraviolet 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 in-line, ultraviolet 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 ultraviolet band light inhibits and kills mold, fungus, and microbial growth on the coil.

In-Line Coil Cleaners come in various sizes, from 12 to 60 inches long. Depending on the size of the coil, more than one germicidal cleaner may be needed for commercial applications.

### PACKAGE CONTENTS

- 1 — Lamp with Reflector/Shield
- 1 — Ballast Box
- 2 — Clamps
- 1 — Aluminum Pole with 2 flanges

### 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 hard surface outside of the coil. See Fig. 1.

**NOTE:** The coil cleaner(s) may be installed on the supply air side of the HVAC coil if necessary. If installed on the supply air side, the lamps must be cleaned regularly.

Ideally, the coil cleaner should be mounted 12 in. away from the coil surface, plus or minus 3 inches. Do not mount the coil cleaner closer than 4 in. away from the coil. The coil cleaner should be positioned approximately 1 to 6 in. above the drain pan, so that the lamp shines on the drain pan.

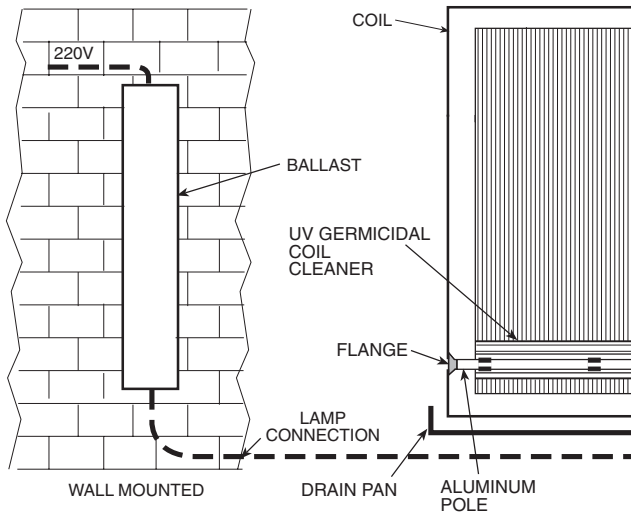
For large surface area coils, install multiple germicidal coil cleaners, parallel to each other. As you move away from the drain pan, the spacing of the in-line germicidal coil cleaners increases (concentrate the coil cleaners closer together at the bottom of the coil where the bacteria will be most likely to form).

The coil cleaner comes mounted onto the aluminum pole, attached to it with the two clamps. The whole assembly must be field-installed inside the air conditioning unit, either to the side panels, or to field-mounted brackets on the coil frame.

Make sure that the site can be supplied with the necessary power requirements. The commercial germicidal coil cleaners have a power consumption of 1.00 amps for lamps up to 40 in. long, 1.25 amps up to 50 in. long, and 1.50 amps for lamps up to 60 inches long. All models require a 110 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.



**Fig. 1 — In-Line Germicidal Coil Cleaner**

**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 2 Phillips head screws from the ballast box. Mount the ballast box on a wall or other hard surface, attaching it using the 2 holes in the center of the ballast box. Be careful not to damage the wiring.
5. Connect the 110-volt wiring. **DO NOT ENERGIZE.**
6. On the return-air side install the assembled in-line coil cleaner 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. away from the coil. The flanges on the ends of the aluminum pole may be attached directly to the unit's side panel, or to the coil frame.

**NOTE:** If it is not possible to attach the flanges directly to the unit panels or to the coil frame, a bracket (field-supplied) is required.

7. Attach the ballast box to a hard surface (see Step 4).
8. Route the lamp connection wiring from the ballast to the coil cleaner. Use the 4 pin connector at the end of the wire set to make the connection.

**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.

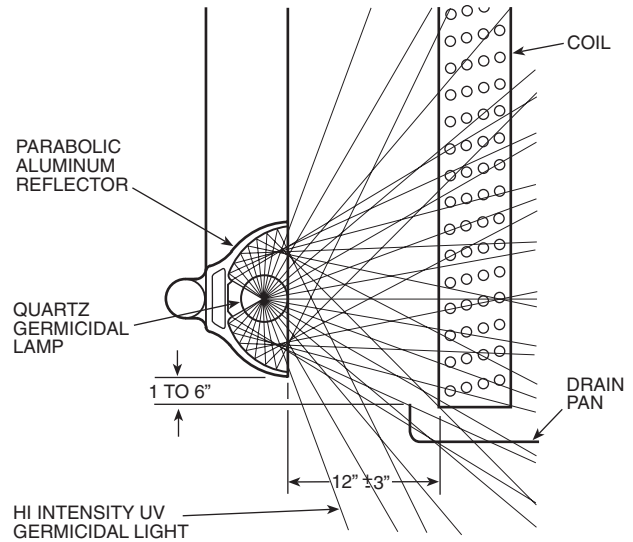
9. Ensure that all connections are secure.

## OPERATION

The in-line germicidal coil cleaner is designed to operate continuously. This allows the high intensity ultraviolet light to kill bacteria on the coil surface and drain pan even when the fan is not operating. See Fig. 2.

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 ultraviolet lamps. Polyester or cotton filters are subject to ultraviolet degradation and are not recommended.



**Fig. 2 — Coil Cleaner In Operation**

## MAINTENANCE

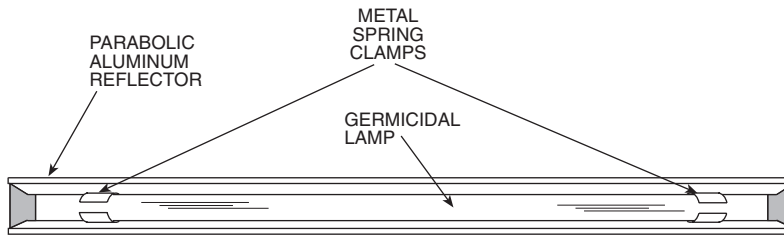
Disconnect all power before performing any maintenance or service.

Lamps need periodic replacement to maintain design specifications. In commercial applications, replace lamps after 17,000 hours of operation. Use caution when removing and inserting lamps from the metal spring clamps. See Fig. 3.

### ⚠ CAUTION

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

Use a Totaline replacement lamp for safe operation of the germicidal coil cleaner. Other lamps may plug into the accessory, but they should not be used.



**Fig. 3 — Lamp and Metal Spring Clamps**

**COILCLEAN IN-LINE ULTRAVIOLET 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

**TOTALINE<sup>®</sup>**

**Your Assurance of Quality**

**ALL Totaline products are backed by Carrier Corporation,  
the world's largest manufacturer of air conditioning,  
heating, and refrigeration products.**