

Part Numbers: P103-RTUVL-024, P103-RTUVL-030

**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 accessory, 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 ultraviolet light from any source. Lamp must be off before entering HVAC (heating, ventilation, air conditioning) unit to perform maintenance or service. Personal injury may result.

**▲ CAUTION**

Use only specified high-output, low temperature lamps with this accessory. Use of a lower wattage or incorrect lamp can result in damage to accessory or lamp.

**▲ CAUTION**

Do not touch lamp glass without gloves. Reduced performance may result. Wipe lamp clean after handling.

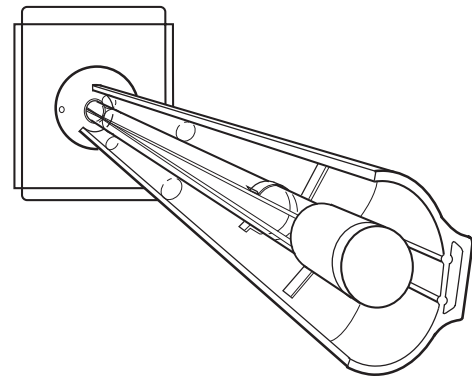
**▲ CAUTION**

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

**GENERAL**

Totaline's CoilClean commercial rooftop ultraviolet (UV) germicidal Air Purifier is designed to kill odor causing mold and fungus that may develop in the wet evaporator section of an HVAC unit. The high output, low temperature germicidal lamps are installed in the evaporator section of the HVAC unit, and are pointed directly at the evaporator coil. The short

wavelength ultraviolet band light inhibits and kills mold, fungus, and microbial growth. See Fig. 1.



**Fig. 1 — CoilClean Germicidal Air Purifier**

**INSTALLATION**

**Location** — The ideal location for the CoilClean RT series is on the return side of the coil, near the bottom of the coil, facing up into the coil, about 6 to 10 in. away from the coil. In many cases this is not possible due to the filters being located within two inches of the coil. If the filters can not be relocated, or if there is some other obstruction in this area, then the CoilClean RT unit will have to be mounted on the supply side of the coil near the top of the evaporator coil, a minimum of 6 to 10 in. away from the coil, with the UV light directed downward onto the coil. If the CoilClean unit is installed on the supply side of the coil, then the reflector/shield will have to be taken out and cleaned every few months, as particles will accumulate on the lamp and reduce the intensity of the UV light.

The CoilClean RT units can be mounted in a horizontal or vertical position. More than one unit can be used if needed.

Make sure site can be supplied with the necessary power requirements. Ensure that there is adequate clearance for service.

**Mount Air Purifier on Unit** — Perform the following procedure to install the air purifier:

1. Turn off all power to unit.
2. Open the access door or panel on the unit. Assess internal arrangement of components and evaluate the ideal area for locating and installing the aluminum reflector. Ensure that the purifier will fit into the cabinet. Space required internally is approximately 4-in. diameter and 26<sup>1</sup>/<sub>4</sub>-in. (RT 24) or 32<sup>1</sup>/<sub>4</sub>-in. (RT 30) long.
3. Ultraviolet light may damage certain plastics and exposed non-UV-C (Ultra Violet Radiation, C-Band) protected wires. Wrap exposed plastic and wiring with aluminum tape or use metal conduit.

### ⚠ CAUTION

If the drainpan is plastic, it must be protected with a reflective material, such as metal tape. Wrap exposed plastic and wiring with aluminum tape or use metal conduit.

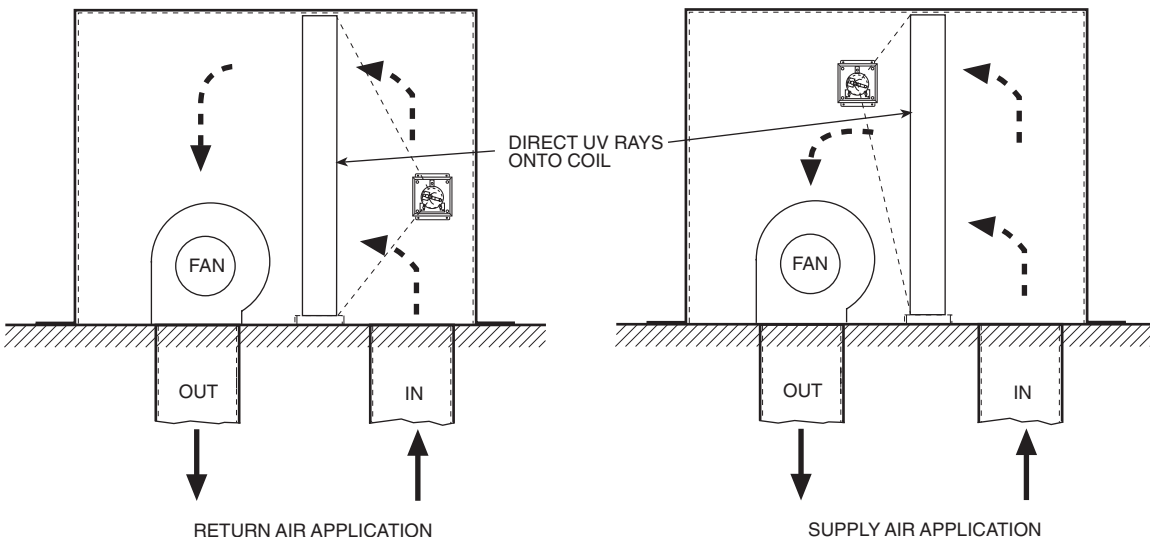
### ⚠ CAUTION

Be careful not to drill into coil, refrigerant lines, or other objects inside the HVAC unit. Damage to unit can result.

4. Mark off the center of the 4-in. diameter hole to be cut on the outside of the air handler. Cut out the 4-in. diameter hole or a 4-in. square hole.
5. Remove the NEMA 4X box from its package. Use soft tissue paper to manipulate the lamp.
6. Open the door of the box by turning the latch  $\frac{1}{4}$  turn to the left. Line up the center hole of the mounting box against the 4-in. opening.
7. Mark the four mounting holes and drill a  $\frac{5}{32}$ -in. diameter hole through the panel.
8. Secure the NEMA 4X box using the 4 screws supplied with the purifier.
9. Loosen the two wing nuts on the locking device inside the NEMA 4X box. Rotate the swivel clamp so that it is parallel to the wing nuts. Lift the probe by the handle and gently slide it through the NEMA 4X box, through the 4-in. opening, until the aluminum disc of the handle is in contact with the inside face of the box.
10. The Parabolic reflector/shield can be rotated 360 degrees via the attached handle. The UV rays should be directed onto the coil avoiding the drainpan that is often made of UV sensitive material. All areas behind the reflector/shield are completely safe from UV rays. See Fig. 2.

### ⚠ CAUTION

Ensure that any plastic or rubber that is in direct view of the UV rays is covered with aluminum tape or foil.



NOTE: Arrows show direction of airflow.

**Fig. 2 — Area of UV-C Coverage (Side View)**

11. Once the reflector has been positioned, secure by tightening the two wing nuts and rotating the swivel clamp 90 degrees. For maintenance ease, mark aluminum disk to align with swivel clamp.

## ELECTRICAL

1. The RT 24 and RT 30 CoilClean models are designed to operate on 208-240 V AC. The units should be wired to the air handler so that they will only be powered when the air handler is powered.
2. Install the wiring through the bottom hole of the NEMA 4X box. Connect the white, black, and green wires of the CoilClean unit to the white, black and green wires of the supply. Wire per Table 1.
3. Secure with twist-on wire connectors. Ensure that the ground wire is properly secured on the cover of the NEMA 4X box.
4. Other voltages will permanently damage the germicidal lamp.
5. Test all circuits and return power to unit. Accessory lamp should glow with a blue hue. If lamp cannot be seen back out lamp and view from safe distance. Replace lamp when done. If lamp does not glow, check wiring, or replace lamp.

**Table 1 — Wiring Recommendations**

WIRING	COLOR
Power	Black
Neutral	White
Ground	Green

## MAINTENANCE

Disconnect all power before performing any maintenance or service.

Lamps need periodic replacement to maintain design specifications. Replace lamps after 12,000-15,000 hours of operation or 1 year, whichever comes first.

If CoilClean unit is installed on return side of coil, no maintenance is required.

If CoilClean units are installed on the supply side of the coil, the reflector and lamp should be cleaned every three or four months. This can be done by removing the reflector, and removing the lamp from the reflector and cleaning with alcohol-based solution. Replace the lamp in the reflector making sure that the Teflon wires are not pinched. Reconnect the lamp and reinsert the reflector into the NEMA 4X box aligning mark on aluminum disk with swivel clamp.

**⚠ CAUTION**

Use only specified high-output, low temperature lamps with this accessory. Use of a lower wattage or incorrect lamp can result in damage to accessory or lamp.

**OPERATION**

While lit, lamp color should be blue. If lamp color changes to red or flickers, replace the lamp. Lamps that are not light blue will not emit ultraviolet radiation and will not kill harmful bacteria or fungi.

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**Your Assurance of Quality**

**ALL Totaline<sup>®</sup> products are backed with a one-year warranty by Carrier Corporation, the world's largest manufacturer of air conditioning, heating, and refrigeration products.**