



Thermal Edge Inc.

TEMPERATURE CONTROL SOLUTIONS FOR ELECTRICAL ENCLOSURES

PREVENTATIVE MAINTENANCE GUIDE
FOR
THERMAL EDGE AIR CONDITIONERS



MADE IN AMERICA MATTERS...

HOW TO PROPERLY CLEAN YOUR AIR CONDITIONER COILS



*****KEY THINGS TO CHECK DURING PREVENTATIVE MAINTAINCE ROUTINE*****

1. Filters - Remove the old filter, replace it with a clean one immediately, then rinse the old filter and let dry for the next shift. (For extremely dirty environments, filters should be changed out every shift or when filters are 25% clogged.)
2. Condenser Coil - Use pressurized air
3. Evaporator Coil - Use pressurized air
4. Fan Blades - Use pressurized air
5. Capacitors - Use pressurized air
6. Controllers - Use pressurized air
7. Circuit Boards - Use pressurized air

*****All preventative maintenance should be performed by a certified or qualified Technician*****

These are general preventative maintenance practices that are used across the board for all Thermal Edge Air Conditioners.

1. Turn off the unit by unplugging the power cord or disconnecting power at the breaker panel.
2. Once you have verified that the unit is off, ensure no voltage is present by verifying with your multimeter.
3. When doing a “PM” on a unit mounted onto an enclosure, “DO NOT USE A WATER HOSE”
4. Remove the condenser fan assembly to access the back side of the coil.
(Figure .1 below)
5. Start by brushing off the coil with a polyester brush. BE CAREFUL NOT TO BEND ANY COIL FINS AND CERTAINLY DO NOT USE A WIRE BRUSH. If any fins are bent, **Thermal Edge recommends using an 11 FPI fin comb to straighten the fins. (Figure .2 below)**
6. Once you have loosened and removed the debris from the coil with the polyester brush, it is recommended to blow off the coil from both sides simultaneously with 70-80 PSI of compressed air from no less than 6 inches to avoid flattening or bending any of the coil fins.
7. Confirm the coils are clean from debris build-up by visually inspecting with a flashlight to ensure you can see light passing through the coil. Mount the fan and shroud back onto the unit as this concludes the standard coil cleaning process.

Figure 1.



Figure 2.



WASH DOWN PROCEDURE

NOTE: IN ANY CASE, DO NOT USE A PRESSURE WASHER MACHINE, YOU WILL BEND THE COIL FINS AND COMPROMISE THE PERFORMANCE OF THE UNIT.

NOTE: For thorough cleaning: If the coils are compacted with debris, you will need to:

1. Remove the unit from the enclosure and perform a **wash down**.
2. Ensure that all electrical components will be protected from water and that the condenser fan has been properly removed.
3. In a safe, designated washing area, using a pump sprayer, spray a 1:1 mixture of Simple Green and water solution onto both sides of the coils, and let it soak for 5 - 8 minutes.
4. Tilt the unit at about 45 degrees and rinse the coil from the back side where you removed the condenser fan. Use standard water hose pressure only. Repeat until the coil is clean.
5. You will know the coils are properly cleaned when you shine a light through the coils and no debris is in the way of the light. Dry off any water, ensuring the electrical components or terminals are not wet. Reinstall the condenser fan and remount the air conditioner to the enclosure.

NOTE: Preventative maintenance routines will vary from application to application. Each environment has its own level of maintenance requirements which is not within Thermal Edge's scope to define. Thermal Edge can suggest best practices, but it is solely the decision of the appointed building maintenance team to decide the maintenance measures of their needs, ensuring that the air conditioners are operating at max efficiency and reliability.

NOTE: The condenser leaving air temperature will rise 15 degrees from the nominal condenser leaving air temperature when 25% of the filter is clogged. To obtain the nominal condenser air temperature, a baseline measurement of the leaving condenser air temperature will need to be recorded by a facility personnel using an accurate temperature measuring device, as well as a clean air filter. At any time, Thermal Edge recommends replacing the air filter when the condenser leaving air temperature has risen 15 degrees from the nominal leaving air temperature.