



Cleaning Evaporator and Condenser Coils

BioCLEAN Your Solution for Cleaner Air and Efficient Heating/Cooling

Evaporator and condenser coils in heating and air conditioning units accumulate dirt, allergens, and debris, which can reduce system efficiency and impact indoor air quality. With **BioCLEAN** Coil Cleaner, a non-toxic, non-acid, non-alkaline, non-pathogenic, non-polluting, and biodegradable formula, you can maintain cleaner coils effortlessly, improving energy efficiency and providing healthier air.

For residential, commercial, or industrial HVAC systems, **BioCLEAN**'s eco-friendly formula simplifies the cleaning process, ensuring peak performance and reduced operating costs.

EVAPORATOR COIL TREATMENT

1. Preparation

- **Safety First:** Always prioritize safety by wearing appropriate personal protective equipment (PPE), including safety glasses. Keep a dry towel handy for minor spills or cleaning needs.
- **Set Thermostat to "Fan Only" Mode:** Set the thermostat to "Fan Only" mode to promote air circulation, allowing air to be drawn through the coil for thorough cleaning.

2. Initial Inspection & Cleaning:

- **Visual Inspection:** Inspect the evaporator or condenser coil for dirt, debris, and biological contaminants such as mold.
- **Debris Removal:** Use a stiff nylon brush to gently remove large particles. Be cautious not to damage the delicate coil fins.
- **Biological Growth:** If biological contaminants are present, apply **BioCLEAN** Coil Cleaner to the affected areas and let it sit for 10-15 minutes to allow for effective cleaning.

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3. Pretreatment:

- **Prepare the Solution:** Mix a 50/50 solution of **BioCLEAN** Coil Cleaner** and purified water in a hand sprayer. Depending on the climate you're in, water may need to be mixed only for pretreatment purposes.
- **Apply in Sections:** Starting at the top of the coil, spray the solution lightly in 1-foot sections. After allowing time for the solution to penetrate, visually inspect the supply side for bubble penetration. Once that has been achieved, stop the pretreatment and move on to foam application.

4. Fan: With the fan only running start the pretreatment process. The fan will help pull the cleaner thru the coil.

5. Foam Cleaning:

- **Foam Application:** After pretreatment, use the IK power sprayer to apply **BioCLEAN** Coil Cleaner foam and scrub away deeper dirt and grime. Apply foam in small amounts to avoid excess foam discharge on the supply side of the coil.
- **Monitor Foam Action:** As the foam breaks down contaminants, it lifts debris from the coil. Continue applying foam only as needed.

6. Drain Pan Cleaning:

- **Pan & Drain Line Maintenance:** Over time **BioCLEAN** will dissolve contaminants and biological matter in the drain pan and prevent clogs in the condensation drain line, ensuring proper drainage.

7. Final Steps:

- **Inspect & Reassemble:** Reassemble the unit and replace the air filter. **BioCLEAN** will continue to clean the coils 24 to 48 hours after you have performed the steps listed above.
- Once the cleaning is complete and the coil is free of debris, check the system to confirm proper function.



CONDENSER COILS

3 MAJOR TYPES OF COILS CLEANING PROCESS CHANGES SLIGHTLY DEPENDENT ON COIL TYPE

- **Standard Coil A** "standard coil" refers to a typical fin-tube heat exchanger coil
- **Micro Coil A** "micro coil" (also known as a microchannel coil) has significantly smaller channels within the coil for improved heat transfer efficiency
- **Spine fin Coil:** a "spine fin coil" features a unique fin design with a central "spine" that maximizes airflow and heat dissipation.

Process for Cleaning Standard and Micro Condensing coils

1. Preparation

- a. **Safety First:** Always prioritize safety by wearing appropriate personal protective equipment (PPE), including safety glasses. Keep a dry towel handy for minor spills or cleaning needs.
- b. **Set Thermostat to "Fan Only" Mode:** Lower the thermostat for a call for cooling so the condenser fan is running which will allow air to be drawn through the coil for thorough cleaning.

2. Initial Inspection & Cleaning:

- a. **Visual Inspection:** Inspect the condenser coil for dirt, debris, and biological contaminants such as mold.
- b. **Debris Removal:** Use a stiff nylon brush to gently remove large particles. Be cautious not to damage the delicate coil fins.
- c. **Biological Growth:** If biological contaminants are present, apply **BioCLEAN** Coil Cleaner to the affected areas and let it sit for 10-15 minutes to allow for effective cleaning.



3. Pretreatment:

- a. **Start Compressor** with a call for cooling from the thermostat. This will also start the fan on the condensing unit. Having the fan running will help pull the BioCLEAN through the coil.
- b. **Prepare the Solution:** Mix a 50/50 solution of **BioCLEAN** Coil Cleaner** and purified water in a hand sprayer. Depending on the climate you're in, water may need to be mixed only for pretreatment purposes.
- c. **Apply in Sections:** Starting at the top of the coil, spray the solution lightly in 1-foot sections. After allowing time for the solution to penetrate, visually inspect the inside of the condenser for bubble penetration. Once that has been achieved, stop the pretreatment and move on to foam application.

4. Foam Cleaning:

- a. **Foam Application:** After pretreatment, use the IK power sprayer to apply **BioCLEAN** Coil Cleaner foam and scrub away deeper dirt and grime. Apply foam in small amounts to avoid excess foam discharge on the inside of the condensing coil.
- b. **Monitor Foam Action:** As the foam breaks down contaminants, it lifts debris from the coil. The fan will pull the dirt through the coil. Continue applying foam only as needed.

5. Deep Cleaning for extra dirty coils:

- a. If the unit is extremely dirty shut the power off. Removal of the fan and side panels may be necessary to allow a garden hose to be used to spray water from the inside out.
- b. This step should only be required once on the initial cleaning
- c. Once the unit is treated with CoilSHIELD you should not have to remove the fan and exterior panels on future cleanings.



Process for cleaning Spine Fin condensing coils

1. Preparation

- **Safety First:** Always prioritize safety by wearing appropriate personal protective equipment (PPE), including safety glasses. Keep a dry towel handy for minor spills or cleaning needs.

2. Initial Inspection & Cleaning:

- **Visual Inspection:** Inspect the condenser coil for dirt, debris, and biological contaminants such as mold.
- **Biological Growth:** If biological contaminants are present, apply **BioCLEAN** Coil Cleaner to the affected areas and let it sit for 10-15 minutes to allow for effective cleaning.

3. Power: Turn off power at disconnect for condensing unit

4. Disassemble the unit for cleaning

- **1:** remove top panel(fan may have to be removed and supported before the top panel is removed)
- Remove all side panels

5. Pretreatment:

- **Prepare the Solution:** Mix a 50/50 solution of **BioCLEAN** Coil Cleaner** and purified water in a hand sprayer. Depending on the climate you're in, water may need to be mixed only for pretreatment purposes.
- **Apply in Sections:** starting at top of the coil, spray the solution lightly in 1 foot sections using a standard garden sprayer to the inside and outside of the coil. Allow time for solution to penetrate. Hose off from the inside using a garden hose spray nozzle to dislodge buildup of dirt and debris from the coil. Repeat as necessary to get the coil clean.

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6. Foam Cleaning:

- The next step is to use the foam applicator spraying the inside and outside of the coil.
- Do not rinse the foam off the coil. It will continue to clean for 24-48 hours after application.
- Turn power on at disconnect, turn down thermostat to start fan on the condenser unit.
- Apply the foam to the exterior of the condenser until bubbles on the interior are visible.
- Do NOT rinse off the BioCLEAN, it will continue to clean for up to 24-48 hrs.

7. Reassemble the unit

8. Check for proper operation