

Best Practices for Keeping Your Buildings Cool & Running Efficiently Throughout the Summer

When it comes to maintaining an HVAC system, during the cooling season, the most critical tasks are cleaning the coils, verifying operating pressures and temperatures of the refrigeration circuit and ensuring that outside air/economizers are functioning correctly. Neglecting these components can lead to reduced efficiency, increased energy consumption, and even system failure.

WHY CLEAN HVAC COILS?

There are two types of coils in a typical DX cooling system:

- **Condenser Coils:** Used to dissipate heat
- **Evaporator Coils:** Cools the air that passes over it to provide space cooling

Over time, dirt, dust, and debris can accumulate on the coils, reducing airflow which lowers efficiency and causes the system to work harder to maintain the desired temperature. This increased workload can lead to higher energy consumption and increased wear and tear on the system, ultimately resulting in a reduced equipment lifespan, higher energy, and maintenance costs.

The regular cleaning of HVAC coils is critical to maintaining system performance and efficiency. It is generally recommended to perform coil cleaning at the beginning of the summer. A professional HVAC technician can inspect and clean the coils, removing any buildup and ensuring that the system is functioning at optimal levels. It is important to note that some equipment may need to have the condenser coils cleaned more than once a year depending on the location of the building. If your building is near an active construction site, freeway, or cottonwood tree, it is recommended to have the initial Spring cleaning done and then reinspect the coils in August to see if another cleaning is required. Evaporator coils are located inside the equipment and have a filter bank in front of them, so they are less likely to need a second cleaning. Your best protection for the evaporator coils is to make sure you are performing regular filter changes, which is typically part of a preventative maintenance program.



FUNCTIONING OUTSIDE AIR AND ECONOMIZERS

Outside air/economizers are important components of an HVAC system that help to maintain indoor air quality and energy efficiency. Outside air is introduced into the

system to dilute indoor pollutants, and air/economizers help to reduce the amount of energy required to cool a building by using outdoor air when the outside temperature is lower than the indoor temperature. The term, “free cooling” is often used when the air/economizers are engaged.

When outside air/economizers are not functioning correctly, indoor air quality can suffer, and energy consumption can increase during periods of the year when the air/economizers can be effective. Proper maintenance of these components is essential to ensure that they are functioning correctly and providing their intended benefits. The primary culprit in a failed economizer is a malfunctioning damper actuator. The actuator is a mechanical damper that opens and closes to control the volume of outside air being let into the building envelope. These moving parts are prone to failure and/or misalignment.

TIPS FOR MAINTAINING HVAC COILS AND FUNCTIONING OUTSIDE AIR/ECONOMIZERS

Here are some tips for maintaining HVAC coils and functioning outside air/economizers:

- **Scheduled Maintenance:** Regular maintenance by a professional HVAC technician can help to identify and address most issues with the system, including dirty condenser coils and malfunctioning outside air/economizers.
- **Change Air Filters Regularly:** Clean air filters will help to prevent dirt and debris from accumulating on evaporator coils, ensuring that they remain clean and efficient.

Regular inspection and cleaning of HVAC coils to ensure that outside air/economizers are functioning correctly is critical to maintaining the efficiency and performance of an HVAC system. By scheduling regular maintenance, changing air filters regularly, monitoring outdoor air temperature, and inspecting ductwork, building owners can ensure that their HVAC systems are functioning optimally, reducing energy consumption, maximizing the equipment’s useful life, and promoting indoor air quality.

NEED TO SCHEDULE MAINTENANCE? CONTACT US!

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