

Commercial HVAC Maintenance Checklist



Checklist

Preventative maintenance is vital for the longevity and efficiency of your commercial HVAC system. Just like biannual visits to the dentist or a monthly tune-up for the family vehicle, HVAC equipment is no different. Routine maintenance schedules can prevent costly repairs, reduce energy costs and extend the life of the HVAC system. In fact, The New Building Institute estimates that regular HVAC maintenance can reduce energy cost by 10 to 20 percent across all climate zones in the United States. In contrast, poorly maintained units can consume 30 to 60 percent more energy. Here is a detailed commercial HVAC maintenance checklist.

Typical Maintenance Checkups

Some of the usual maintenance practices that should be on the top of your checklist include:

- Checking thermostat setting to ensure that the HVAC keeps you comfortable and saves energy
- Tightening all electrical connections and measuring voltage and current on motors
- Lubricating all moving parts to prevent friction
- Checking and inspecting the condensate drain. A plugged drain can cause water damage in the house and affect humidity levels
- Monitor system operation per manufacturer's specifications

Inspect air filters every 3 to 4 weeks with replacement or cleaning

Air filters capture a lot of dust and can be a food source for molds. Dirty filters also block normal air flow and reduce the efficiency of your commercial HVAC. Filters should be inspected every three to four weeks and replaced between one to six months depending on the dirt load.

Clean condenser coils and evaporator (once or twice a year)

Since the condenser coil is exposed to unfiltered outdoor air, it suffers considerable degradation due to dirt. Even though the condenser coil does not affect indoor air quality, cleaning it the same time the evaporator is cleaned helps to improve energy efficiency.

Treat Coils (after every cleaning)

After cleaning your coils, treat them with antimicrobial treatments to prevent the growth of mold. In fact, the entire air handler should be cleaned to ensure the entire unit remains free of microorganisms between cleanings.

Check the Air Conditioner's Refrigerant Level

Too much or too little refrigerant will make your system work inefficiently, reducing its lifespan and increasing energy costs.

Inspect the Blower Wheel Housing and Motor

The motor and blower wheel housing are key parts of the air handling system. Dirty blower wheels can reduce the longevity of the system by decreasing airflow, making coils to freeze and compressor to fail and increase the cost of running your commercial HVAC. Thus, it is essential to clean and adjust the blower to provide proper airflow for greater comfort levels.

Inspect bearings, pulleys, belts and lubricate bearings and motors

Examine belts for fraying, cracking and proper tension. Loose belts can slip and lead to intermittent heating and cooling. Excessive tension causes stress on the motor and bearings. Irregularly lubricated bearings will overheat and seize. When this happens, the bearings will break apart, and the blower wheel, shaft, and housing will be damaged.

Change Blower Belts Annually

Blower belts are a regular wear and tear item that should be replaced once every year. For HVAC systems that operate extensively, belt replacement should be done more than two times a year.

Inspect Economizer Annually

Check to be sure that the temperature sensors, dampers, and the actuator are working properly. Inspect the ventilation settings and dampers located throughout the duct-work system. It is essential also to check the high and low voltage electrical connections. Loose electrical connections can cause big problems and can be a safety issue.

Examine the system for voltage imbalances

Electrical gadgets, especially motors, and their controllers cannot function on unbalanced voltages in a 3-phase system. High voltage imbalances cause overheating and intermittent shutdown of motor controllers.

Clean Leaks in Cabinet and Supply Ducts (annually)

Examine your system for air leaks and take corrective actions, such as replacing screws or latches and replacing or patching gaskets. The integrity of the cabinet and duct is vital on the supply-air inside, where high pressure can force air out via a small crack.

Clean air ducts

There is no an established frequency of cleaning air ducts. Cleaning frequency depends on the maintenance of the commercial HVAC system and the use of the building. Experts recommend inspecting air ducts every two years (in hospitals). If the inspection reveals contamination, the ducts should be cleaned.

Conduct overall operational checks seasonally

This entails examining and adjusting the refrigerant charge and checking the unit's gas pressure as per the manufacturer's guidelines. After making all the inspections, ensure the necessary repairs and adjustments are performed.

By following the above commercial HVAC maintenance checklist, you will avoid future heating and cooling problems as well as unwanted costs. Keep your commercial heating and cooling system operating optimally by having professionals do annual pre-season checkups.

Hire HVAC Technician Near You

Contact
Us

made with
Beacon