

HVAC Maintenance for the Whole Year

Are you staying on top of HVAC maintenance? Deferred maintenance on HVAC equipment can cause issues from noisy operation to premature failure. Check out these maintenance tasks that you'll likely need to schedule for your HVAC system's components—though note that you should follow the manufacturer's recommendations for how and how often to do maintenance on each part.

COMPONENT MAINTENANCE

Coils

- Air-handling units should have chilled water and hot water coils cleaned annually.
- Rooftop units need their evaporator and condenser coils cleaned annually.
- Condensing units should have a microbial treatment applied annually to prevent microorganisms from growing on the coils.
- You may need to clean more often than annually if your location demands it (for example, a building near a tree line that results in leaves getting trapped in the equipment).

Tubes

- Pull out tubes annually to check for clogs and remove all debris.
- Clean plates and replace gaskets in plate and frame heat exchangers as needed. Nothing should be clogging the space between the plates.
- Clean tubes in the winter if possible because the chillers won't be operating as much.

Controls

- Review control calibration and setpoints annually. Control calibration tends to drift gradually, so periodic checkups are important.
- Check the controls that monitor the temperature on heat tracing or other auxiliary equipment, in addition to your main HVAC system.

Fans

- Fans need to be maintained quarterly for maximum longevity.
- Implement vibration monitoring if possible to see whether you have worn bearings, which can be a symptom of other problems.
- Inspect belts quarterly to make sure they're not cracked or worn.
- Make sure bearings are lubricated properly to reduce friction and corrosion.

Filters

- Clean or replace filters quarterly unless you're in an area with higher-than-average particulates, such as high-pollen areas.

Strainers

- Conduct a blowdown process to flush debris out of the strainer so you don't have to isolate and drain that one piece of equipment. A clogged strainer will cause a pressure drop in your HVAC system.

SEASONAL OPTIMIZATION

Spring and Fall

- Review the sequence of operations for morning warmup and cooldown. Your outdoor damper should be closed during morning cooldown in the summer and morning warmup in the winter—that way you're not trying to condition outside air first thing in the morning.
- Utilize economizers during the day.
- Reset your airflow pressure and your discharge air and water temperature. You can allow the temperature to drift up to reduce the mechanical cooling that's required. For example, when your building is in cooling mode above 80°F, you can maintain chilled water at 44°F—but when the temperature drifts below 80°, the chilled water temperature can rise a little.

Winter

- Consider snow entrainment prevention measures, an especially big issue in cold Northern climates. Snow entrainment happens when an HVAC unit's supply fan pulls in snow that clogs up the filters, causing the unit to work harder. Prevention measures could include putting a heating coil upstream of the filter or bypassing the filter during snowy seasons. **B**