

The Ultimate Guide to Preparing Your HVAC for Winter Weather

Buildings practicing proper HVAC preventive maintenance (PM) use up to 30% less energy than those where systems are allowed to deteriorate. As a facility manager, you know that proper HVAC maintenance extends beyond regularly changing your filters and belts, and simply pressing a few buttons to switch from A/C to heating.

While preventive maintenance should always be an ongoing priority, the changing of the seasons is an ideal time to take a deep dive into your HVAC equipment to ensure everything is working properly and your systems are ready for the transition from cooling to heating.

With an overflowing workload and managing the day-to-day, it can be easy for some PM items to slip through the cracks, especially if your systems still seem to be working fine. But one small failure can easily snowball into a costly emergency situation, especially when temperatures dip below freezing.

Corrective repairs can cost two to four times more on average than total preventive maintenance costs and with supply chain issues, parts are not as easily available as they once were with delays spanning weeks up to two years. Staying on top of your PM plan is an easy way to proactively put the parts you need on order before they completely fail and threaten to take your whole system down.

This winter season, to truly optimize your equipment, extend its lifespan and avoid a potential emergency, consider the following:

✓ MAINTAIN PROPER RELATIVE HUMIDITY (RH) LEVELS

RH is the amount of moisture within the air at a given temperature and is a key component of environmental comfort. Aim for a minimum RH level of 35% to 40% for standard environments, but for healthcare facilities and certain types of manufacturing, you may require higher RH levels up to 55%.

✓ CHECK ECONOMIZER FUNCTION

Economizers are extremely effective in reducing energy costs by harnessing cool nighttime air, often to the tune of hundreds or even thousands of dollars a month. The best way to verify that your economizer is working properly is through regular preventive maintenance.

Even in buildings that have an HVAC maintenance program in place, however, economizers are frequently overlooked, misunderstood, or both. Without proper PM, sensors drift out of calibration, dampers get stuck, linkages break, seals fail, and actuators stop working properly. Ensure that your PM provider is experienced in economizer function and maintenance.

WINTER WEATHER CHECKLIST ✓

✓ INSPECT HEAT EXCHANGERS

It's imperative to inspect your heat exchangers at the start of every heating season. If your heat exchangers aren't working properly, your building won't heat properly and it can also be potentially dangerous if leaks or other damages are neglected.

✓ BALANCE AIR AND HYDRONIC SYSTEMS

If you notice your building has hot and cold spots, high energy bills, drafts or stuffy areas, or there's a frequent need to adjust the thermostat, your building may benefit from testing, adjusting and balancing (TAB).

TAB typically uncovers a combination of issues that can degrade HVAC performance, so if you are experiencing these issues, enlist a NEBB-Certified TAB provider to conduct advanced diagnostics. Most recommended fixes are certainly far less costly than replacing equipment.

✓ CHECK HEAT PUMP SYSTEMS

Regular heat pump maintenance can prevent small issues that would otherwise turn into major repairs. It's important to inspect all components and the area around your heat pump to make sure everything is working properly and to replace any worn parts that could become problematic down the road.

✓ CHECK HEATING CONTROLS

Before making the switch to heating, it's important to ensure all controls are working properly. If you have a faulty thermostat, it can cause your heat to run on short cycles, run nonstop or not turn on at all. It may seem obvious, but make sure to change the batteries regularly and that you have the correct settings in place.

✓ CHANGE FILTERS AND BELTS

Dirty or clogged filters can result in an underfunctioning HVAC system and poorer air quality. Generally, filters need to be changed at least quarterly and sometimes even more frequently depending on your facility to ensure optimal performance. Over time, fan belts can also become worn and loose, preventing your system from operating properly. Belts should be inspected during each filter change and generally need to be replaced 1-2 times per year.

There's still time to set your equipment up for success before the winter season starts. Not only will a seasonal PM program give you peace of mind that your system is operating efficiently, you'll also save time and money by avoiding costly major repairs and system downtime.

MSC's team of expert HVAC technicians can create a custom preventive maintenance program for you. To schedule a free consultation for a personalized preventive maintenance program contact us today.

[Contact us](#) today to schedule a consultation.