

Keeping Your Indoor Air Quality High in the Middle of Winter



As temperatures drop and snow piles up, HVAC systems need to work hard to keep homeowners and their families comfortable and safe. Proper installation and proper maintenance both play an important role in the longevity and the efficiency of these systems.

In addition to heating needs, winter brings other challenges for HVAC systems, namely, in the realm of preserving high indoor air quality. If not handled correctly, the season can lead to a drop in ventilation and air quality. This can make it easier for viruses and infectious diseases to spread throughout a home and make it harder to sleep. In the worst cases, issues with heating systems may lead to dangerous carbon monoxide filling rooms in a home.

Filtration and Purification

First, homeowners should be sure to have their HVAC systems checked regularly. Technicians will make sure that the furnace or heat pump is healthy enough to make it through a cold winter, examine any ductwork for imperfections in designs or leaking, and look for any parts of the system in need of a tune-up. High-end HVAC systems include smart technology and remote diagnostics, meaning that the systems can trigger an alert if there is a critical breakdown or if it is time for maintenance.

The filter in a system is specifically relevant for preserving air quality in a home. The filter is responsible for catching large particles that otherwise would circulate in a home. A filter that is dirty and in need of changing will not do its job and will lead to greater amounts of dust in the air.

Specialized air purifiers, such as ones that incorporate ultraviolet technology, are able to cut down on the spread of diseases and purify the air from viruses, bacteria, and other contaminants.

Ventilation and Humidity

Proper ventilation is important to ensuring that all of the air in a building circulates through the furnace and is heated. Air that isn't moving doesn't have the ability to pass through filters or over ultraviolet lights, and it can cause inconsistent comfort. One room may be too hot and another too cold. Improper ventilation can be a result of a dirty filter, a damaged furnace blower, or poor ductwork. A technician will be able to look at a home and identify causes to suboptimal ventilation.

In addition to ventilation, maintaining an ideal humidification level plays an important role in keeping air quality high. Ideal indoor relative humidity rests in the range of 40-60%, and going above or below this can lead to greater infections and reduced sleep quality. Humidity levels that are too low can lead to dehydration. Add-on humidifiers are incorporated into an HVAC system, and they monitor/adjust the humidity of the air, working in conjunction with the system to make sure the air has an ideal humidification level through all four seasons. Proper humidification can also reduce the occurrence of fungi and dust mites, plus limit static shocks and reduce ailments like itchy skin or bloody noses.

The indoor air quality of a home is impacted by external weather, behavior of occupants, and the health of the HVAC system. A trusted contractor can walk you through the right solution for your needs, taking into account your personal budget and the unique needs of your home in the winter.