How Technology is Changing HVAC Systems for the Better

The concept of living in a “smart” home was once a futuristic idea limited to science fiction. However, as with many suggestions that sound far-fetched at first, home automation technology is really taking off.

Products with remote connectivity have become increasingly commonplace in homes and businesses these days. This advancing technology is changing HVAC systems for the better by providing consumers with self-learning thermostats, mobile and voice control options, and self-diagnosing equipment.

BENEFITS OF HVAC AUTOMATION

The benefits of smart HVAC systems are far-reaching. They include:

Improved indoor comfort, thanks to automated HVAC settings and the ability to make changes from anywhere using a smartphone;

Lower energy bills and maintenance costs, made possible by self-learning thermostats and HVAC systems with predictive diagnostics;

Smaller environmental impact resulting from lower energy use;

Greater control with options to change settings on a mobile device or with voice commands; and

Enhanced safety due to automatic notifications sent to the user’s mobile device when something is wrong with the equipment.

TYPES OF HVAC AUTOMATION

With interconnectivity at an all-time high, it’s easier than ever to automate household appliances. Let’s take a look at a few of the most in-demand devices and features that bring automation technology to HVAC systems.

Smart Thermostats

One of the first automated home devices was the thermostat. Continued advancements in designs and user interfaces have only improved the performance and popularity of smart thermostats. They learn what temperatures users prefer and when, and should soon anticipate the user’s preferences and implement them automatically.

They also often feature motion sensors to turn HVAC equipment off automatically when the building is vacant. Smart thermostats even learn to limit how much they run during peak demand periods when utility rates are higher. With no effort on the user’s part, comfort levels rise, and energy bills fall.

Mobile Control

Self-learning thermostats feature Wi-Fi, allowing users to monitor, change, and receive notifications about their HVAC system. From heating the bathroom before getting out of bed to putting the thermostat in recovery mode on the way home from work, mobile control is all about improving comfort when you need it and reducing energy usage when you don’t.

Wi-Fi thermostats also keep homeowners in the know if something goes awry with their home comfort systems while they’re gone. For instance, a notification that the temperature has fallen drastically could indicate a broken furnace. The homeowner can schedule a repair as soon as possible to prevent frozen pipes.

Voice Control

Users want their automated systems to integrate without significant input, but voice control is a trendy way to make changes. When a thermostat or ceiling fan connects to a Siri- or Alexa-enabled device, it’s possible for users to change settings with a voice command.

This may not be significantly more convenient than controlling home comfort equipment with a keypad, thermostat, or Smartphone, but according to consumer surveys, voice control is all about the “coolness” factor. As an HVAC solutions provider focused on meeting critical comfort needs, it’s not the answer you would expect to hear.

Self-Diagnostic and Performance Rating Capabilities

Homeowners want to know they’re getting the most from their HVAC equipment. Predictive diagnostics and insights on system performance are satisfying and deliver peace of mind. Systems with these features can even recommend ways to improve efficiency and reduce future maintenance costs, providing an entirely new level of long-term performance.

In a few short years, automation technology has already drastically changed HVAC systems for the better. Only time will tell what role artificial intelligence will play in the homes of the future.

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