



What is a variable-speed Furnace

The term "variable speed" refers to the furnace's indoor air blower motor. The blower motor is the component that determines the amount of air the blower is required to deliver to your home.

When your furnace is installed, the speed and airflow for your home are set depending upon your specific situation, such as the size of your home, etc. However, there are situations that can occur within the household to restrict this airflow, such as ductwork design, unit location, zoning and dirty filters, to name just a few. Think of variable-speed technology as your insurance for home comfort the way you prefer it. Variable-speed technology ensures that your home receives the amount of air required to keep you and your family comfortable. Variable-speed motors have intelligent technology that monitor incoming data from the blower and adjust accordingly so you can feel confident that your system is working to keep you comfortable.

Having the technology of variable speed in your furnace offers many benefits:

Electrical efficiency: Variable-speed motors can actually save you money on your energy bills as they consume less electricity than standard motors.

Cooling efficiency: Variable-speed technology also means you will gain air conditioning efficiency or SEER.

Zoning: Variable-speed furnaces are excellent for zoning, where you control the conditioning of your home. Zoning allows you to customize your comfort in different areas or zones in your home and control your energy bills.

Air quality: A variable-speed motor combined with a humidistat allows you to control the humidity in your home. Humidity plays a big role not only in the comfort of your home, but also in its air quality. The relative humidity in your home should be between 30 and 60 percent. This range is most ideal to minimize growth of biological pollutants such as mold and mildew. The consistent airflow of the variable-speed motor also helps to improve air filtration.

What is two-stage heating (or a two-stage furnace)?

Thanks to the innovation of two-stage heating, it is possible for your home to be cozier than ever while saving you money on your energy bill in the process. Two-stage heating can be a tremendous help when looking for that just-right temperature during the cold winter months.

Traditional single-stage furnaces are designed to heat your home and keep you warm during the coldest weather in your climate. Therefore, when they are operating, they are heating at their full capacity. Unlike those furnaces, two-stage furnaces are designed to operate like two separate furnaces, maintaining more consistent comfort levels throughout the home.

The first stage consists of the furnace running at about 68% of its heating capacity. A two-stage furnace will always start in the first stage and attempt to meet the heating demand. This reduced capacity is enough to warm a home on mild winter days. When temperatures drop, the furnace adjusts itself and enters the second stage to meet the demand for heat within the home. With two-stage heating, a homeowner has no need to keep adjusting the thermostat.

Two-stage heating has many advantages:

Consistent comfort: Thanks to two-stage technology, the temperature inside your home should vary only a couple of degrees versus the larger temperature swings that are common with traditional furnaces.

Quiet comfort: Because a two-stage furnace starts in its first stage, when the amount of heat required is lower, and runs in this stage about 80 percent of the time, it greatly reduces the noise associated with furnaces that turn on and run full blast. Two-stage technology means quiet comfort.

Improved air filtration: A two-stage furnace provides more consistent airflow and with more consistent airflow comes improved air filtration, which means you'll breathe easier with two-stage heating.

Efficient operation: Because the furnace spends the majority of its time operating in its lower-capacity first stage, it burns less fuel than a traditional furnace that always runs at full capacity and then shuts off when the heating demand has been met.

Although you can't see the air and temperature within your home, you can certainly feel them. A two-stage furnace can provide preferred comfort within your home despite the changes in weather outside your home.

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