

# Variable Speed Furnace

Next time you need to purchase a new system, you may hear that a variable speed furnace is a good choice for your comfort and your budget. Yet, what is a variable speed furnace and why is it a better choice? At Central Washington Heating and Air, we hear these questions frequently, so we wanted to share the top 3 benefits of selecting a variable speed furnace. More importantly we also want to share the reasons why you wouldn't want a variable speed furnace.

## What is a Variable Speed Furnace?

The "variable speed" in this case refers to the furnace's fan motor. Instead of just operating at one set speed, the fan motor can alternate its speed for greater precision over home heating and cooling. By improving the airflow within the home, this type of furnace controls temperature and humidity better than fixed-speed furnaces.

## Benefits of Selecting a Variable Speed Furnace

While there are many benefits to be gained by selecting a variable speed furnace, these are the top gains:

- **Better Temperature Control** – Since the variable speed furnace is able to be more precise in operation, it results in better temperature control in the home. This type of furnace also promotes greater air circulation within the home, which helps to eliminate those stubborn pockets of hot or cold air. The variable speed fan motor is able to be set to stay on between calls for heating and/or cooling but at a very low airspeed (20 to 25%). This also aids in the elimination of hot and cold spots in the home by constantly mixing and redistributing the air throughout your home. This is especially effective with 2 story homes that have a return air duct on each floor.
- **Quieter Operation** – If you're the type of person who tunes into every little noise around the home, then you probably hear every creak and groan the traditional furnace makes as it comes to life.
- **Greater Efficiency** – Traditional home furnaces consume the most energy and experience the most wear and tear when they start up. If your furnace cycles on and off repeatedly, it's hogging energy and reducing the life of the motor. A variable speed furnace runs more frequently than a traditional furnace, but at a slower speed. This improves the unit's efficiency and decreases your utility costs, since the furnace no longer has to stop and start.
- **Improved Indoor Air Quality** - Variable Speed Furnaces provides a longer period of time at low-speed operation which increases the effectiveness of the furnace's filters, allowing them to capture and remove more contaminants.

## When not to select a Variable Speed Furnace

- **Single Story Homes** – Single story homes receive the least benefit from a Variable Speed Furnace. The lack of multiple air returns, that is common in single story homes, defeats the purpose of a Variable Speed Furnace. Setting the furnace to always on at a low airflow will accomplish very little in the way of eliminating hot and cold spots in the home. The smaller the home the less effective a Variable Speed Furnace would be.
- **Multi Story Homes with only one Air Return** – Once again, having only one return in a Multi-Story home would defeat the purpose of a Variable Speed Furnace. There are exceptions though. A single air return at the highest point of the house would result in a benefit. Each home is different and should be evaluated on a case by case basis.

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