

# Hints For Homeowners

## The Next Step In Heat Pump Technology

(NAPSA)—There's good news for homeowners looking for more efficient and economical ways to heat and cool their home. The next generation in geothermal technology has arrived. These systems are designed to leverage underground thermal energy to provide ultra efficient heating and cooling of a home.

That's the word from experts at WaterFurnace who say that new variable capacity geothermal technologies are more than twice as efficient as any air source heat pumps or air conditioner and a third more efficient than existing geothermal systems.

### Less Wasted Energy

Compressors in conventional heat pumps typically run at only one or two speeds. About 90 percent of the time, a fixed-speed compressor cycles on and off or uses some other energy-wasting technique to throttle back capacity. The 7 Series from WaterFurnace—the latest in variable capacity geothermal heat pumps—can scale up and down over 12 speeds.

### A Constant Temperature

Imagine that your car had only two choices: 30 mph and 70 mph. It would be hard to maintain a speed of 55 mph and the car wouldn't be very fuel efficient because it takes more gas to get up to speed than it does to maintain it—gently accelerating and then maintaining constant speeds increases fuel efficiency. Similarly, a variable speed compressor uses low capacities and just a small amount of energy to constantly maintain building temperatures.

This can translate to savings, since variable speed compressors cut energy consumption by varying compressor capacity to match exact cooling and heating needs.

With no cycling on and off, there is less wasted energy ramping back up to capacity. This allows the system to run more often at very low capacities, keep-



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ing a building at a stable, constant temperature and improving energy efficiency.

To change speed, the compressor uses an external variable frequency drive (VFD)—also known as an inverter—to slow or speed up the alternating current (AC) electric motor that drives the rotating elements inside the scroll compressor.

### Efficient Operation

Using the earth as a natural energy source, a geothermal system can operate more efficiently than ordinary heating and air-conditioning systems, delivering five units of energy for every one unit of electrical energy used—a 500 percent efficiency rating.

That means a geothermal system can provide a precise distribution of comfortable air all year long, eliminating hot and cold spots throughout the home while operating quietly.

WaterFurnace International, Inc. is a leading manufacturer of residential, commercial, industrial and institutional geothermal and water source heat pumps.

To learn more, you can visit [www.waterfurnace.com](http://www.waterfurnace.com).