Singing River Electric
A Touchstone Energy® Cooperative

DUCTED VARIABLE- CAPACITY HEAT PUMPS

Residential air conditioning and space heating are the top two energy consumers in homes today. One technology shown to save money through improved energy efficiency is the ducted variable-capacity heat pump. These systems function the same way as a basic single-stage or multi-stage/speed heat pump, by absorbing energy in the form of heat from one location and moving it to another. However, they incorporate variable-speed technology that allows them to better and more efficiently meet the needs of a home. Ducted variable-capacity heat pumps can be a great whole-home option for homeowners looking to change out an existing system.

BENEFITS

- Increased room comfort: Temperatures are more consistent throughout the home because of the longer run times, which give air more time to mix and move.
- Monthly savings: These systems have excellent Seasonal Energy Efficiency Ratios (SEER2) of 16 or more and Heating Seasonal Performance Factors (HSPF2) of 8.5 or more, which is 8 to 36 percent more efficient than traditional ducted electric air-source heat pumps.
- Low cost to operate: These systems represent an affordable option for direct replacement of older equipment.
- With their increased run times at slower fan speeds, ducted variable-capacity heat pumps are quieter than traditional systems.
- In humid climates, these systems can improve comfort by acting as a better dehumidifier than traditional systems. In the spring and fall, the improved dehumidification can make the home more comfortable.
- In colder climates, variable-capacity heat pumps can be sized closer to the heating load to greatly lower heating costs.

CONSIDERATIONS

- Ducted variable-capacity heat pumps should be on your radar if you are looking to replace an existing heating and cooling system, putting an addition on your home or building a new one.
- Ductwork should be confirmed to be leak-free and tight to avoid wasting energy. Because these systems run longer, more opportunities exist for leaks associated with poorly performing ductwork.
- Ask for pricing from three different contractors to weigh your options. Be sure to contact several of each contractor's references to make sure that customers were satisfied.
- These systems are typically more costly to purchase upfront than other equipment, but they have additional features and are often cheaper to operate.
- Use energy savings calculators or software to help with investment decisions specific to your home and climate.

DUCTED VARIABLE-CAPACITY HEAT PUMPS

DUCTED VARIABLE-CAPACITY HEAT PUMP BENEFITS

MORE EFFICIENT

- Save up to 36% in annual heating and cooling costs*
- Long, quiet run times
- Ramps up and down more gradually

BETTER COMFORT

- Can keep temperatures more even throughout your home
- Can improve air filtration
- Efficient fans vary speed to keep a consistent temperature

ESTIMATED ANNUAL HEATING AND COOLING ENERGY SAVINGS FROM REPLACEMENT*

Existing Heat Pump	Replacement Heat Pump Efficiency Rating	
Efficiency Rating**	**20 SEER2, 10 HSPF2**	**16 SEER2, 8.5 HSPF2**
10 SEER, 7.0 HSPF	36%	30%
12 SEER, 7.5 HSPF	30%	17%
13 SEER, 7.7 HSPF	27%	13%
14 SEER, 8.2 HSPF	22%	8%

*Savings estimated with the ENERGY STAR® Savings Calculator.

**Pre-2023 metrics were SEER and HSPF. Post-2023 metrics are SEER2 and HSPF2.

COMMON MANUFACTURERS

Lennox • Trane • Carrier • Goodman • Bosch • Rheem • Ruud • York

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