



*Comfort at home...*



## Rheem Geothermal System Solutions

Chances are, the last thing you think is about your heating and cooling equipment. You simply expect to be comfortable. That's why Rheem is the best choice you can make. We simply offer the finest heating and air conditioning solutions in the business, Top-quality, innovative products with the latest technology, dependable performance, great warranties and excellent service and support. All of this is why we confidently say, "Relax. It's Rheem."

*relax*  
It's Rheem®



# Geothermal Is The Best Choice To Make.

Homeowners across North America are searching for better ways to get more out of their energy dollar. Many have found that a geothermal heat pump can help. Geothermal energy not only costs less to operate than any other heating and cooling system, but it also helps preserve our natural resources and lessens our dependency on fossil fuels.

According to the U.S. Environmental Protection Agency (EPA) geothermal systems are, "the most energy-efficient, environmentally clean, and cost-effective space conditioning systems available today." Extremely high levels of efficiency are possible because a geothermal heat pump only uses electricity to move heat, not produce it. A geothermal unit typically supplies four to five kilowatts of heat for every kilowatt of electricity used. Three to four of these kilowatts of heat come directly

from the earth itself, and are clean, free and renewable. Geothermal heat pumps also take advantage of the mild ground temperature for extremely high efficiency cooling. Most systems also include a hot water generator, which diverts a portion of the supplied heat to the domestic water heater. This provides a substantial portion of your family's hot water needs at a very low cost.

Geothermal systems transfer heat from your home to the earth in the cooling mode, or from the earth to your home in the heating mode. Circulating water is used as the heat transfer medium through a closed loop piping system buried in the ground. By using this stable thermal source, geothermal heat pumps provide energy efficient heating and cooling year around, without the need for a noisy outdoor fan.

## GEOTHERMAL LOOP SYSTEMS

### Vertical (Drilled) Closed Loop

Vertical or drilled closed loop systems take up the least amount of land or yard space. Since the heat exchange takes place along the vertical drilled (bore) hole walls, only a small diameter hole - typically 4" is required for each ton of heat pump capacity. Minimal spacing is required between bore holes, typically 15 feet for residential applications. Depending upon drilling costs, vertical loops may be more expensive than horizontal or pond/lake loops, but their compact layout makes a geothermal closed loop application possible for almost any home that has a small yard, driveway or sidewalk. Loops can even be installed underneath the foundation.



for vertical loops, but significantly more land space is required. For rural installations, horizontal loops can be very cost effective.

Pipe is typically buried around five feet deep, and may be configured in a variety of layouts, depending upon available space and the cost of pipe versus the cost of excavation. Between one and six pipes per trench are buried and connected to a header system.

### Pond/Lake Loop

Pond or lake loops are one of the most cost-effective closed loop installations because of the limited excavation required (supply and return line trenches to the pond).



Pond loops require a minimum of about 1/2 acres of land and a minimum depth of 8 to 10 feet. Like other closed loop installations, pond loops utilize polyethylene pipe, but are typically laid out in a coil or "slinky" arrangement.

### Horizontal (Trenched or Bored) Loop

Horizontal loops may be installed with a trencher, backhoe or horizontal boring machine. Excavation costs for horizontal loops are usually less than the costs



# INDOOR SPLIT SYSTEMS

## Prestige Series™ 24 EER Indoor Split (RPVS) Geothermal Heat Pump equipped with Comfort Control<sup>2</sup> System™

- Four capacities 025, 036, 048, and 062.
- Highest efficiency ratings for heating COP's, cooling EER's with low water flow rates.
- Operating temperature range and high efficiency allow shorter loops.
- Optional hot water generator with internal pump generates hot water at considerable savings.
- Rugged and highly efficient next generation Copeland UltraTech™ scroll compressors provide the industry's highest efficiencies and full capacity with reduced cycling losses.
- Oversized coaxial tube water-to-refrigerant heat exchangers operate at low liquid pressure drop. Copper or optional cupronickel water tube functions efficiently at low-flow rates and provides freeze-damage resistance.



**R-410A**  
earth friendly refrigerant

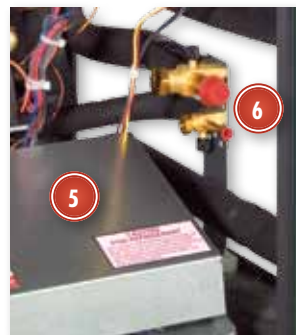


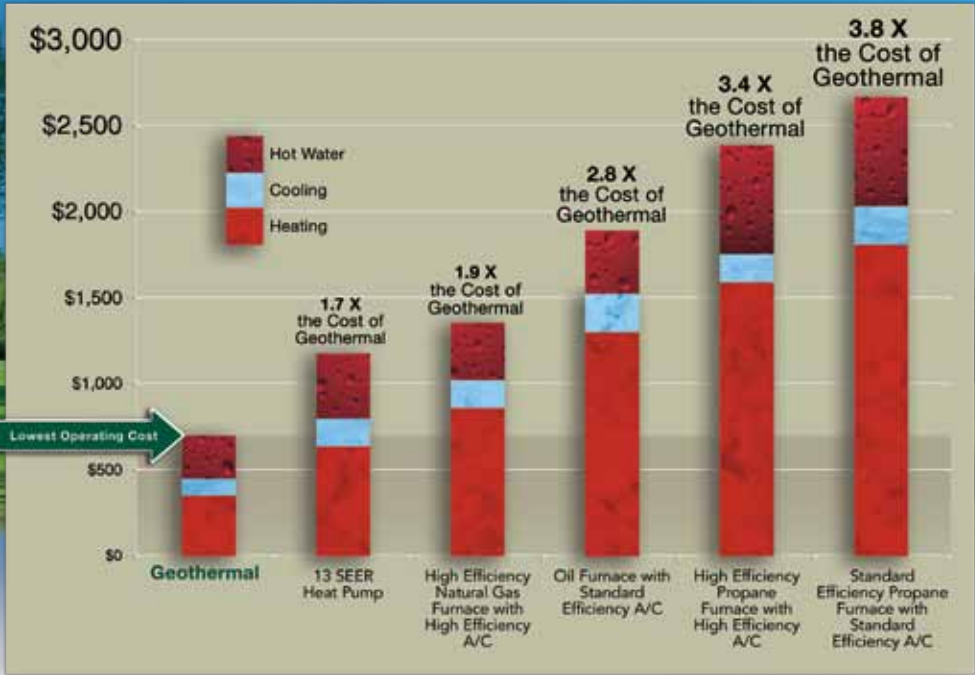
RPVS

For all season home comfort, performance, and energy conservation, choose a Rheem Prestige Series™ RPVS Series Heat Pump with an RHPL-HM Air Handler.

## UNIT FEATURES

- 1 Copeland™ Ultra-Tech™ two-stage unloading scroll compressor.
- 2 Oversized water coil.
- 3 Fully insulated water and refrigerant lines.
- 4 Optional factory installed hot water generator with internal pump.
- 5 Large easily accessible control box.
- 6 Backseating brass service valves with service port.
- 7 Brass swivel water connections.
- 8 Exclusive double spring and grommet compressor isolation for ultra quiet operation.
- 9 Three easy, lift-out service access panels.





**Notes:**  
 Calculations in above chart are based upon current utility costs for a typical home in the U.S. midwest.  
 Your Rheem dealer can provide customized savings estimates for your home.

## Geothermal Savings.

Geothermal heat pumps will save you money day after day. By using the stable temperature of the earth, your geothermal system doesn't need to work as hard to heat and cool your home when compared to a conventional air conditioning system. It runs more efficiently, so it saves you money – more than 50% savings over your existing heating and cooling system!

[www.rheem.com](http://www.rheem.com)

Rheem Heating & Cooling  
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Rheem also manufactures commercial air conditioning products, as well as residential and commercial water heater products.  
 In keeping with its policy of continuous progress & product improvement, Rheem reserves the right to make changes without notice.  
 Printed in the U.S.A. 10/09 DC Form No. M11-3042 Part No. RH011