The Best Heat Pump Water Heater Solution

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uperb engineering, coupled with decades of water heating expertise, have produced an integrated heat pump water heater that has over TWICE the efficiency of standard electric water heaters. Its narrow 21" diameter fits through access doors, unlike some hybrid products. It has the same connections as a standard electric water heater, making installation fast and easy. The user-friendly LED control panel is protected behind a small door conveniently located at eye level. This touch pad allows homeowners to select the water temperature range as well as choose the efficiency setting based on hot water demand.

Ruud HVAC product lines have successfully utilized heat pump technology for over 30 years. By taking our field proven technology and combining it with our industry leading tank design, we have developed an integrated heat pump water heater that is second to none.

The Ruud HP-50 provides best-in-class performance. In the Energy Saver mode it provides the same first hour hot water delivery as a standard electric model. In the Normal mode it exceeds the first hour delivery of a standard 65 gallon electric model.

Exceptional energy efficiency, performance, reliability, and easy installation make the Ruud HP-50 the best heat pump water heater on the market today.

How the Ruud Heat Pump Water Heater Works

In "Energy Saver" mode, this water heater's high efficiency heat pump operates automatically for hot water storage in this sequence:

- 1 A fan pulls air through the top air filter.
- 2 Heat in the air is absorbed by eco-friendly refrigerant inside the evaporator coil and cool (dehumidified) air is exhausted.
- 3 Refrigerant is pumped through a compressor, which increases the temperature.
- 4 Simultaneously the cooler water from the bottom of the tank is pumped to the top of the appliance, where it circulates through a patented condenser coil.
- **5** Hot refrigerant transfers its heat to the water inside the condenser coil.
- 6 Heated water is returned back to the top of the tank.
- All functions are controlled simultaneously by an advanced circuit board located behind the user touch pad.
- In "Normal" mode, the heat pump can run in tandem with an electric element during periods of high demand.
- In "Electric Heat Only" mode, the heat pump is disabled and the appliance operates like a standard electric water heater with two elements.
- 8 Condensate drain connection.
- 9 Backup electric heating elements.

Super Africient! RUUD HEAT PUMP HP-50

Specifications DESCRIPTION FIRST HOUR RATING G.P.H. DIMENSIONS (SHOWN IN INCHES) ENERGY INFORMATION SHIP WT. (LBS) NORMAL 50 HP50RU 67 72 75-1/2 21 200 2.0 EF \$248 1.5 EF \$330

Energy Factor and Average Annual Operating Costs based on D.O.E. (Department of Energy) test procedures. D.O.E. national average fuel rate electricity (April 2009).

Available in 50 Gallon Model with a 10-Year Limited Warranty*

- Energy efficient: 2.0 EF
- 3 Operation modes
- Energy Saver (heat pump)
- Normal (heat pump with element backup)
- Electric Heat Only (temporary)
- 2-1/2" Non-CFC foam insulation
- Premium resistored anode rod protection, extends tank life
- Exclusive Ruudglas® tank lining
- Factory installed T&P valve
- Brass drain valve
- Easy access side connections
- 3/4" NPT water inlet, outlet, and condensate drain connections
- 21" diameter, fits through access doors
- Easily replaces a standard electric water heater
- · Stainless steel resistor elements
- Heat pump operating range 40° F to 120° F
- Built in freeze/overheat protection
- Easy access, top mounted washable
- *See Residential Warranty Information Brochure for complete warranty information.

Annual Operating Cost Comparison Standard 50 Gallon Electric vs. 50 Gallon Heat Pump \$500 \$550 Homeowner \$400 saves \$302 annually \$300 \$200 \$100 Standard 50 Gallon HP-50 Integrated

Operating costs based on US Department of Energy annual operating cost calculations and 2009 average consumer, national energy costs.

Estimated Homeowner Payback HP-50 Heat Pump Water Heater Payback with application of federal tax credit and other state/utility rebates. Based on average consumer product cost of HP-50 vs. a standard electric water heater and difference in D.O.E. measured annual operating cost. Payback <u>with</u> application of federal tax credit only. Based on average consumer product cost of HP-50 vs. a standard electric water heater and difference in After payback, homeowners will continue to

Operating costs based on US Department of Energy annual operating cost calculations and 2009 average consumer, national energy costs. Please consult with your tax advisor for eligibility requirements and amount of tax credit.





Hot Outlet 、

Cold Inlet

Drain Valve



8" TOP CLEARANCE

FOR AIR CIRCULATION

3/4" WATER CONNECTIONS

240 VOLT - 1 PH

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In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice.

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RUUD HEAT PUMP WATER HEATERS

Superefficient! HP-50

Rely on Ruud

RUUD





The Most Advanced, Energy-efficient Water Heater You Can Own

uud air-source heat pump water heaters work much like a refrigerator in reverse. The heat pump extracts the heat from warm air, intensifies the heat with a compressor, delivers the heat to the water, and exhausts the cooler air. Because it uses the warm ambient air temperature to do most of the work, it is a very efficient way to heat water.

2.0 Energy Factor Over TWICE the efficiency of standard electric water heaters

- Uses heat pump technology for superb energy-efficiency
- Easy-to-use LED touch pad controls the water temperature range, 3 energy efficiency settings, and overall operation
- Ideal choice for new homes and for electric water heater replacements in attics, basements, and garages
- Installs as easily as a standard electric water heater
- Standard 3/4" NPT water inlet, outlet, and condensate drain connections
- 10-Year limited tank and parts warranty



Choose the Right Efficiency Setting

Based on climate, demand, and installation site



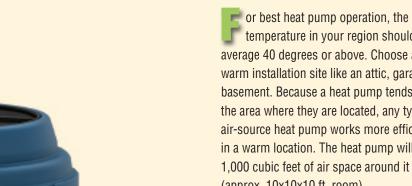
The most energy efficient setting is Energy Saver mode, it works by extracting warmth from the surrounding air, concentrating the heat, and delivering it to the water. This mode provides an industry leading 2.0 energy factor (EF) and a first hour delivery comparable to a standard 50 gallon electric model.



When hot water demands are high, use the Normal setting. In this mode both the heat pump and electric element will operate as needed. The Normal mode will provide a remarkable 1.5 EF and a first hour delivery in excess of a standard 65 gallon electric model.



A temporary Electric Heat Only setting is available to ensure hot water availability without operating the heat pump. The HP-50 will revert back to Energy Saver operation after two weeks, if not reset by the user.









Select the Right Installation Site

temperature in your region should average 40 degrees or above. Choose a warm installation site like an attic, garage or basement. Because a heat pump tends to cool the area where they are located, any type of air-source heat pump works more efficiently in a warm location. The heat pump will need 1,000 cubic feet of air space around it (approx. 10x10x10 ft. room).









Energy Efficiency Zones

The map below indicates, on the average, the most favorable locations for heat pump water heaters. Annual weather patterns and other factors will determine your overall energy efficiency.



Months the seat pump will be used most of the year (90-100%)

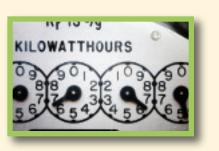
Zone 2: Combination heat pump (60%) and electric heating elements (40%)

Zome (50%) Combination heat pump (50%) and electric heating elements

Heat pump water heaters can be effectively used in all areas of the U.S. The highest efficiencies will be achieved when installed in locations where the unconditioned air temperature is between 40°F – 120°F. Attics, basements, and garages typically provide optimal performance.

Electric Utilities benefits!

The new fully integrated heat pump is the only electric water heater that is ENERGY STAR® rated. It also qualifies for federal tax credits. It has the highest energy factor of any tank-type water heating product and reduces the load on electric utilities. With additional utility incentives and federal tax credits, it is an affordable investment for the homeowner with a payback of less than three years.



Homeowners benefits!



The Ruud heat pump water heater has over TWICE the efficiency of standard electric water heaters. If your annual energy cost for hot water is \$550, you can save as much as \$302 per year. The user-friendly touch pad allows homeowners to select the water temperature range and choose the highest efficiency setting for their hot water demand. The Ruud Heat Pump water heater is ENERGY STAR® rated and qualifies for federal tax credits through December 2010. Additional state and local incentives/rebates may also be available.

Contractors benefits!

The Ruud heat pump water heater was designed for easy installation. It installs much like a standard electric water heater, with the same familiar connections. Its narrow 21" diameter helps the contractor place the unit in the right area for highest energy efficiency. It can conveniently be ordered from your local Ruud wholesaler.



s benefits!



Builders are always looking for products that will set their homes apart from the competition. The Ruud heat pump water heater offers the highest energy factor of any water heater and will reduce their homeowner's overall cost of ownership. The heat pump water heater's distinctive look and its energy performance will attract the interest of today's savvy consumers.



ENERGY STAR® Rated and Qualifies for Federal Tax Credit

This water heater qualifies for the energy efficient building property federal tax credit of up to \$1,500. The federal tax credit is limited to 30% of energy efficient building property and cost of installation through 2010, with a total limit of \$1,500. Additional state and local utility incentives may also be available. Please consult with your tax advisor for eligibility requirements and amount of tax credit.

See Use & Care Manual for important installation details, LED touchpad control, and general maintenance requirements.

How you heat water is impacting your budget and the environment. Your water heater is the second largest user of energy in your home. On the average you are spending approximately \$500 to heat water annually.

