

How to select the right tankless electric water heater for any home

Tankless electric water heaters are transforming the way households experience hot water by offering energy-efficient, space-saving solutions that deliver heated water on demand. These compact units can be up to 98% smaller than traditional storage water heaters. They may be installed in tight spaces or even mounted to a wall, freeing up valuable space while reducing energy consumption.

Selecting the right model requires preparation and research. Homeowners should consider key elements of their home's design, including the number of occupants, bathrooms and hot water appliances - paired with overall water usage - to ensure the correct tankless electric water heater is installed.

TIP 1: ESTIMATE HOUSEHOLD HOT WATER DEMAND

A critical first step is properly estimating the household's hot water demand. A tankless electric water heater's flow rate, measured in gallons per minute (GPM), determines its size. Calculating how many hot water GPMs the household typically uses is essential and is done by adding up the flow rates of fixtures, such as faucets and showers, that run at the same time.

After determining the GPM required to meet all the household's simulta-



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neous needs, the homeowner can choose the right size tankless electric water heater. For example, if someone uses the shower while two faucets are running, the home will need a tankless electric water heater with at least a 5 GPM capacity.

See infographic for an overview of product usage, sizing and geographic zones.

Another important consideration is the number of bathrooms and

typical usage patterns of occupants.

Larger families or homes with multiple bathrooms may require a higher-capacity unit, whereas smaller households can often rely on a more compact solution. For example, the Rheem RTEX and EcoSmart models under the Rheem® family of brands cater to a wide range of needs, from point-of-use (POU) units for single fixtures, to whole-home options de-

signed to handle multiple fixtures concurrently.

TIP 2: FACTOR IN REGIONAL CLIMATE

Groundwater temperatures vary across the country. In northern regions of the U.S., which tend to be colder, the ground water is also colder. This means that a higher temperature rise (difference between the ground water temperature and the desired output water temperature) is

required compared to warmer southern areas.

For example, in southern areas where the groundwater temperature is 62° F, to reach a desired output water temperature of 105° F, the temperature rise would be 43° F. Whereas, in northern regions, if the groundwater temperature is 40° F, to reach 105° F, the temperature rise is much higher at 65° F. The unit has to work harder to achieve this temperature.

For this reason, certain models will work well in southern climates, but a similar household in a northern region may need a larger tankless electric water heater to achieve the degree rise needed to meet household hot water requirements.

TIP 3: ACCOUNT FOR WATER TEMPERATURE AND FLOW RATE

Water temperature and flow rate are equally crucial when determining the appropriate tankless electric water heater size. Higher flow rates demand more powerful models to maintain consistent hot water output. Some residences may be accommodated by one whole-home unit, while others may require multiple point-of-use systems.

TIP 4: EVALUATE ELECTRICAL CAPACITY

The home's electrical capacity is another essential consideration when selecting a tankless electric water heater. For most

homes, the average available amp service is either 100-, 200-, or 300-amps. While a 200-amp service panel typically suffices for average households, new construction, larger homes and high-demand systems may require a higher 300-amp service panel. Additionally, older homes with lower amp service may require an electric panel upgrade to meet the needs of a tankless electric water heater.

Higher-capacity tankless electric water heaters require more power, so be sure to assess the capability of the home's electric service panel to accommodate additional circuit breakers before installation. Consult a licensed electrician or contractor to evaluate the home, circuit breaker size and wiring gauge to ensure the service panel can handle the load, prevent overloads and ensure a safe, efficient operation.

There are many benefits to tankless electric water heaters, including the ease of installation.

Tankless electric models simplify installation by eliminating the need for venting, but sizing is key. If the unit is undersized, it may not fully meet demand during simultaneous water use.

An oversized unit can lead to unnecessary energy consumption and higher utility costs.

Follow these tips and use a manufacturer's guide, such as Rheem's online sizing resource, to confidently select a tankless electric water heater model, then work with a professional to guarantee a safe and efficient installation for endless hot water and energy-efficient operation.

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