

Consumer report:

Water heaters: Hot tips for a better buy

You probably don't think much about your water heater until a cold shower or a telltale puddle suggests that you need a new one--now. How to choose? Most look alike on the outside. But a look inside tells a very different story.

Sawing open 18 gas and electric models confirmed that paying a little more for a longer warranty typically buys you a better water heater. Several smart steps can also help you save money, avoid installation hassles, and get enough hot water, even on busy mornings.

See whether it's fixable. While a corroded, leaking tank isn't salvageable, a leaky drain valve or pressure-relief valve or a worn-out electric heating element can be repaired. But replacing the heater may make more sense.

Find out by getting a repair estimate. Then weigh that amount against the \$500 to \$600 you'll pay for a new heater with installation. A rule of thumb: Consider a repair if the labor cost, which warranties often exclude, averages less than \$50 per year for each remaining year of coverage. Otherwise put the roughly \$100 you'll pay just for the plumber's visit toward installing a new unit, especially if yours is out of warranty.

Look past capacity. Most water heaters are sold on that basis. But a water heater's first-hour rating (FHR) is more important, since it tells you how much hot water the heater can deliver in an hour of use.

Determine how much hot water you need based on the busiest hour of an average day. Figure on roughly 2 gallons for shaving, 4 gallons for washing face and hands, 5 gallons for preparing food, 10 gallons for a dishwasher, and 20 gallons each for a 10-minute shower and a load of laundry. Factor in growing children and other issues that can increase your water needs.

Once you've arrived at a total, be sure that the FHR on the new heater's yellow EnergyGuide label meets or exceeds that amount.

Look for a long warranty. Most cover 6, 9, or 12 years. Heaters with the lowest and highest warranties differ by just \$60 to \$80 for electric models and \$50 to \$100 for gas units. But we found much bigger differences inside.



COVERAGE COMPARED A look inside these gas water heaters confirms that a move up in warranty coverage from 6 years (foreground, left) to 12 years (foreground, right) typically buys thicker outer heat insulation, among other features.

Electric water heaters with 9- and 12-year warranties typically had larger heating elements, thicker insulation, and thicker or longer corrosion-fighting metal rods, referred to as anodes.

Most higher-warranty gas heaters had bigger burners and better heat transfer for faster water heating, along with more anode material and thicker insulation. An exception: Whirlpool's 40-gallon gas heaters, whose 9- and 12-year models are identical inside.

Longer coverage is especially important considering that warranties typically cover only the heater, not the \$200 to \$300 you'll pay a pro to install a new one. You'll also welcome a longer warranty if you have hard water and use water softeners. These softeners can speed up the rate of anode corrosion. While anodes can be replaced if there's enough clearance to remove them, you'll need a plumber unless you're handy.

Measure before you buy. Last year's tougher federal energy standards require about 10 percent higher efficiency for gas water heaters and about 5 percent for electric models. But the insulation added to meet those standards has made some heaters up to 4 inches fatter, a potential problem for closets and other tight spots.

Consider gas. Based on national average fuel costs, gas heaters cost roughly half as much to run as electric models and can pay for their higher up-front cost in as little as a year. Factor in the cost of running a gas line to your home if you don't have one. Also consider adding insulation to hot-water pipes and the cold water pipe exiting the water heater.

You may have heard about thankless water heaters, which save energy by heating only the water you draw. Those savings can add up to some \$50 per year compared with conventional heaters. But even at that rate, it will take more than 25 years for an average household to recoup the extra \$1,300 or so those units cost to buy, install, and maintain.

Keep it safe. New 30-, 40-, and 50-gallon gas heaters are designed to prevent the heater's flame from igniting flammable vapors in the room. As with any fuel-burning appliance, however, you'll still need smoke and carbon-monoxide (CO) detectors.

Also remember that heaters are generally vented through the same chimney as a furnace or boiler. If you change venting for one appliance, you might need to change it for the other.