

Tankless Propane Water Heaters Save Homeowners Money

Efficient New Technology Offers Protection from Fluctuating Energy Prices
[July 15, 2004]

Consumers across the country are seeking out new ways to insulate their energy bills from variable energy prices. Small, cost-efficient, and relatively easy to install, propane-powered tankless water heaters are the hottest trend in energy-efficient home construction and remodeling.

Hot water accounts for 20 percent or more of a household's total annual energy costs (U.S. Department of Energy). When it comes to heating water in American homes, "standby losses" are the enemy of efficiency. Standby losses occur in most traditional tank-type water heaters and can equal 10 to 20 percent of a household's annual water heating expense (U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy).

Traditional storage tank water heaters operate by raising and maintaining the water temperature within the tank. Even if no hot water is drawn from the tank, the heater will operate periodically to maintain the standing water's temperature – typically between 120 and 140 degrees. This constant energy use results in costly standby losses, or energy wasted to heat water.

Common in Japan and Europe, tankless water heaters are now available in the United States in a variety of sizes for different applications, such as a whole-house water heater, a hot water source for a remote bathroom or hot tub, or as a boiler to provide hot water for a home heating system. They are also versatile enough to be used in separate structures – indoor or outdoor – such as greenhouses or garages.

Some propane tankless water heaters feature digital temperature control pads located at the point of water use, allowing homeowners to precisely control water temperature for unique needs around the home. Once the desired temperature is set, the heater will constantly deliver hot water at that exact temperature. Households with small children use digital controls to help prevent scalding accidents. Homes and businesses can use the use super-hot settings for cleaning purposes, such as dishwashing, laundry, anti-bacterial sanitizing, and even washing cars.

Tankless heaters are much smaller than tank heaters. Although sizes vary by manufacturer, the average heater is about 24 inches high, 18 inches wide, and 9 inches deep.

Rinnai tankless units were installed in the 5,300-square-foot Ultimate Family Home at the 2004 International Builders' Show in Las Vegas; they require 16 fewer square feet of space than a comparable tank heater. A space-efficient model by Takagi Industrial Co. USA provides 240 gallons of hot water per hour, while occupying only 2.2 cubic feet of space.

Residential gas-fired models typically provide about three to five gallons of hot water per minute. The largest Rinnai residential units can supply 8.5 gallons per minute.

The expected life span of a tankless water heater is 20 years, twice as long as most storage water heaters (Home Energy Saver: Lawrence Berkeley National Laboratory, 2002). In addition, propane tankless heaters are much less labor-intensive to repair or replace should the need arise.

"Propane tankless water heaters are a great way for homeowners to not only decrease their energy bills, but increase their comfort," said Jim Hitzemann, chairman of the Propane Education & Research Council's Homebuilder Subcommittee. "Imagine endless hot water and greater

efficiency – it's really a marvelous product. Plus, tankless heaters typically last longer than tank heaters, are much more versatile, and are easy to install.”

Today's homeowners believe hot water is vital. A nationwide survey of more than 800 homeowners by Washington, DC-based Public Opinion Strategies found that 90 percent of American homeowners considered hot water the one convenience they could not do without, beating even furniture/beds (80 percent). Fifty-two percent said they could live without a TV.