

# New Era for Tankless Water Heaters



“Never Run Out Of Hot Water Again.” That’s the trademark slogan for the Rinnai Continuum, a tankless gas water heater. It’s 24 inches tall, 14 inches wide and 9 inches deep – the size of a small suitcase. It stores no water. It heats water passing through.

Rinnai is one of three large, well-established Japanese manufacturers whose whole-house, tankless, on-demand gas water heaters are now showing up in the U.S. The other two are Takagi and Noritz. All three brands are marketed in Florida and available in Tallahassee.

**Think of it as a multipurpose Engine, not just a water heater.** A modern tankless unit can heat the water, heat the house, heat the pool, heat the spa, warm the bathroom floor, warm the towels and de-fog the mirror.

Let’s distinguish between two kinds of tankless water heaters: a) Point Of Use units, usually electric, usually for hand washing; and b) Whole House units, usually gas, serving all household needs from a single location. Neither kind is new. What distinguishes the Takagi, Noritz and Rinnai products from earlier whole-house “instantaneous water heater” technologies?

1. **Huge capability:** These new models can deliver up to 8.5 gallons of hot water per minute, enough to serve three showers simultaneously and never run out of hot water. A single unit can quick-fill a modern full-sized garden tub, something that a tank-style water heater can’t match. In average sized homes or apartments, a single tankless unit easily heats the house while serving the hot water needs of a family-of-four.
2. **Energy savings:** Energy efficiency is up around 85%. A conventional tank-style 40 gallon gas water heater’s efficiency is around 55% — a much lower efficiency rating owing to heat losses through the storage tank walls, together with having a constant burning pilot light. By comparison, tankless units have electronic ignition and no pilot light.

3. **Adaptability:** Newer tankless models are surprisingly small and light weight. They can be installed outdoors or indoors. Outdoor installation frees up indoor floor space that is particularly treasured in multifamily/condominium construction, but also in single family detached homes.
4. **Computerized control technology:** A big improvement. These new models deliver water at exact, controlled temperatures. Some units provide digital controls room-to-room. Homeowners can choose a 130-degree F. setpoint in the kitchen vs. 105 degrees F. for safety in the childrens’ bathroom, for example.
5. **Reliability:** The equipment is durable. Warranties are long. User satisfaction is high. Newer models with battery backup provide hot water after-the-hurricane.

**Life Cycle Costs.** Energy engineers like to look at “life-cycle costs” when comparing appliances like refrigerators, dish washers, clothes washers, water heaters and so forth. Life cycle costs express the total ownership costs over time, including purchase, operation, maintenance and replacement.

How do tankless water heaters rate? The American Council for an Energy-Efficient Economy provides up-to-date life-cycle cost comparisons in their 2003 publication, *Consumer Guide to Home Energy Savings*. Their rankings of tankless, tank, solar and heat pump water heater technologies identify the lowest cost choice as: Tankless gas, what they call a “high efficiency pilotless on-demand gas water heater.”

**Who’s buying them?** Ironically, tankless water heaters are not necessarily being purchased by energy conscious home owners. The market niches identified so far:

1. The homeowner who doesn’t want to run out of hot water.
2. New custom high end homes.
3. The homebuilder or apartment builder who wants to save valuable floor space by installing water heating equipment outdoors.

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