

# No limits

Tankless water heaters provide multifunction versatility.

By Drew Robb

**T**ankless water heaters have established a reputation as an environmentally friendly, energy efficient and low-cost way to supply water to the entire home. Their use in the home provides plentiful water where and when it is needed.

What isn't always realized is the versatility of tankless natural gas water heaters. While their primary use is in household water heating, tankless water heaters are also experiencing increased deployment as home heating systems, pool and spa heaters and snow melts. These are great space savers for single homes or multifamily structures.

## NEARLY LIMITLESS HOT WATER

A tankless natural gas water heater is a space-efficient solution with low operating costs. Fuel is only consumed when water is actually needed. But as soon as hot water is required, it is instantly available.

"Some of the compelling reasons to use natural gas water heaters are performance and nearly limitless hot water," said Mark Risinger, owner, Austin, Texas-based Risinger & Co., a specialist in architect-driven remodeling or new-build projects. "There is no longer a problem of water running out if someone takes a long shower."

He added that tankless units take up almost no space and have a much longer life span than tank-type water heaters, which have a useful life of about 10 years.

## HIGHLY-EFFICIENT INTEGRATED SYSTEMS

Natural gas-powered tankless water heaters are also very efficient. Instead of having separate natural gas tankless systems for heating and hot water, some homeowners prefer an integrated system. A combined space and water heating system is a great way to use a set of equipment to provide both functions. A natural gas tankless water heater not only provides continuous hot water for use throughout the home, it offers space heating whenever it is needed.

These combo systems are highly efficient. They can achieve 95 percent efficiency, compared to only 78 percent for traditional home

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PHOTO COURTESY OF RHEEM MANUFACTURING CO.

A tankless natural gas water heater, like Rheem Manufacturing Co.'s Prestige system (above), is a space-efficient solution with low operating costs. Fuel is only consumed when water is actually needed. But as soon as hot water is required, it is instantly available.

furnaces and 58 percent for tank-storage water heaters. Studies show that an integrated system can reduce energy consumption by up to 20 percent, compared to separate water-heating and space-heating equipment. By investing in only one highly-efficient natural gas system, homeowners can greatly reduce their lifecycle costs, compared to buying separate independently-operating systems for hot water and space heating. This approach offers significant space savings compared to the typical furnace and storage water-heater arrangement.

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PHOTO COURTESY OF RINNAI CORP.



Tankless water heaters, such as those made by Rinnai Corp. (left), are environmentally friendly, energy efficient and low-cost.

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Integrated systems are ideal options for new-build properties, when extensive renovation work is being planned, or when an aging water tank is up for replacement.

### LIFELONG HEATING

A hydronic heating system is another home-heating option. It uses hot water circulation to heat up a home. A natural gas tankless water heater distributes hot water through sealed pipes to radiators throughout the home. The same system can also be used to heat towel rails and floor slabs. A pump is installed that recirculates hot water to save on energy costs.

This system generally operates independently of the domestic hot water supply. In some cases, radiators in each space emit natural radiant heat, which can be individually adjusted to provide the desired level of comfort in each room. In other cases, tubing is run below the floor to provide warmth to cold floors such as bathrooms and kitchens. While traditional central heating systems transmit airborne particles, hydronic heating systems provide dust-free and allergen-free heating.

Natural gas hydronic systems are fuel efficient, provide unsurpassed comfort and can last the entire life of the building. Heat loss is minimized, and unoccupied spaces can be maintained at lower temperatures to lower energy usage.

It's no wonder that more and more homes are turning to tankless, natural gas-powered technology to heat their homes.

### NATURAL GAS VERSATILITY

Natural gas tankless water heaters, then, have expanded their scope beyond their traditional usage for domestic water heating. They have proven so versatile that they are increasingly being used for space heating. In some areas, they are even used to warm swimming pools, keep spas toasty, and melt snow and ice during frigid temperatures.

Due to their value in terms of environmental friendliness, energy efficiency, space savings and lower utility bills, natural gas tankless units are now looked upon as a mainstream approach to keeping water hot. That's why many manufacturers and retail outlets offer

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natural gas tankless units. These include Rheem, Rinnai, Takagi, Noritz, Bosch and A.O. Smith. In addition, home improvement stores such as Home Depot, Lowes and Ace Hardware can help homeowners select the right unit for their domestic water, pool, spa or snow melting needs. ■

## TANKLESS WATER HEATERS: WHAT YOU NEED TO KNOW

Natural gas tankless water heaters have grown tremendously in popularity over the past decade. They are finding their way into more residential units. Whether it is self-contained homes or apartment buildings, contractors and owners are finding that homeowners and residents are demanding natural gas appliances and water heaters.

But like any modern technology, to some people, tankless water heaters still are somewhat of a mystery. After all, many have grown up with the presence of a space-hogging water tank in their homes all their lives. How can you do without a tank and still have hot water?

Tankless water heaters deliver all the hot water needed by a household at any time of the day or night – on demand.

“When you turn on the shower, appliance or faucet, cold water is fed to the unit,” said Shaun Larson, a Realtor with Larson James Real Estate in Franklin,



Tennessee. “Water is then heated as it passes inside the tankless heater. This water becomes almost immediately available wherever it is required in the home.”

A natural gas tankless unit heats water instantaneously and sends it to any faucet, shower or appliance. As demand fluctuates, the system adjusts automatically to meet user preferences for water temperature. The great thing about this arrangement is that there is no need to continually heat and reheat a storage tank. As a result, energy consumption is greatly reduced.

In many cases, taking out the old tank frees up a lot of space for a room extension or an extra closet. The tankless unit is tiny in comparison, about the size of a small briefcase. It can easily be hung on a wall or installed in a like garage, closet or utility room.

Similar to a tanked electrical or natural gas system, there is a brief delay as the cold water is flushed out of the line before hot water is available. This is typically no more than a second or two. Some households select to set up a recirculating system in their home to ensure hot water is instantly available as soon as the faucet is turned. This entails some additional piping and the installation of a recirculating pump.

**Tankless water heater**



About the size of a suitcase, a tankless water heater mounts on your wall.

**Traditional water heater**



About the size of a small fridge, a filled tank heater must be located in a space that can support 400-600 pounds

