

Inspector's Notes

September 2018

Is this water heater big enough?

A question I'm always asked is "Will this water heater be large enough for my family? That's a good question that's not always easy to answer. Merely looking at the capacity of the water heater won't be enough tell if it's large enough to serve the purpose.

When determining if a hot water heater will fill the needs there are three things to take into consideration: **# of bedrooms.** **2. # of bathrooms.** **3. The 1st Hour Rating**

The first two items are obvious, but the third takes some explanation.

The 1st Hour Rating = (the water heater capacity + the hourly recovery rate).

Fortunately the 1st Hour Rating (1HR) can be found on the yellow Energy Label on the side of the water heater. The table below provides the information needed to make the call.

Looking at the chart below a 4/2.5 home would need a water heater with a 1HR of 67 at a minimum to be sufficient for the home.

# of Bathrooms	# of Bedrooms	1st hr. Rating ^A (gallons)
1 to 1-1/2	1	42
1 to 1-1/2	2 to 3	54
2 to 2-1/2	2	54
2 to 2-1/2	3 to 4	67
2 to 2-1/2	5	80
3 to 3-1/2	3	67
3 to 3-1/2	4 to 6	80
A. These rates apply to	tankless water	heaters

The 1st Hour Rating found on the yellow Energy Label is usually in the upper left hand corner. However, don't always count on it to be there.

Also, make sure you don't confuse the 1HR with the Gallons Per Minute (GPM) that is also listed on the label. On the next page are a few label examples.

- ENERGY GUIDE -

Marcy

GA10LPDP

Gas Tankless Water Heater
Capacity (1st hour rating): 162 gallons

Estimated Yearly Energy Cost

\$456.00

Cost Range of Similar Models
\$433.20 - \$592.80

Estimated Yearly Electricity Use

4800 kWh

YOUR COST WILL DEPEND ON YOUR UTILITY RATES AND USE.

Cost range based only on models of similar capacity tested by electricity.

Propane gas water heater: cost approximately \$10 less per month to operate than comparable electric units.

Estimated energy cost is based on a national average electricity cost of 12.00 cents per kWh.

Federal law prohibits removal of this label before consumer purchase.

Based on standard U.S. Government tests

ENERGYGUIDE

Water Heater - Natural Gas
Capacity (1st hour rating): 57 Gallons

GSW Water Heating Company
Model: JWS40SNA
H4400

Compare the Energy Use of this Water Heater with Others Before You Buy.

This Model Uses

268 therms/year

Energy use (therms/year) range of all similar models

Uses Least Energy: 238 Uses Most Energy: 273

Therms/year is a measure of energy use. Your utility company uses it to compute your bill. Only models with first hour ratings of 56 to 64 gallons are used in this scale.

Natural gas water heaters that use fewer therms/year cost less to operate. This model's estimated yearly operating cost is:

\$162

Based on a 1994 U.S. Government national average cost of \$0.604 per therm for natural gas. Your actual operating cost will vary depending on your local utility rates and your use of the product.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302) 72311

Water Heater
ELECTRIC
FIRST HOUR RATING: 58

MODEL-ERS2-FES2-TR52-121140-121068
PREFIX-CR-16, K, M, Z
SUFFIX-D, S, L, U

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Estimates on the scale are based on a national average ELECTRIC RATE OF 8.0¢ PER KILOWATT HOUR

Only models with first hour ratings of 56 - 64 GALLONS are used in this scale

\$526

Model with lowest energy cost: \$428 Model with highest energy cost: \$547

THIS MODEL ▼

Estimated yearly energy cost

Your cost will vary depending on your local energy rate and how you use the product. This energy cost is based on U.S. Government standard tests.

How much will this model cost you to run yearly?

YEARLY COST	
Estimated yearly \$ cost shown below	
Cost per KILOWATT HOUR	
4¢	\$262
6¢	\$333
8¢	\$523
10¢	\$654
12¢	\$785
14¢	\$916

Ask your salesperson or local utility for the energy rate in your area. COST PER KILOWATT HOUR

Important: Removal of this label before consumer purchase is a violation of federal law. (42 U.S.C. 6302) 6011120

The remodeling impact

Something to keep in mind is the remodeling aspect. If your client plans on adding a bedroom, bathroom or even just changing a half-bath to a full bath this will have an impact on your water heater requirements.

For instance, a 4/2.5 with a 74 1HR water heater is going to find they need more water when they upgrade that 1/2 bath to a full bath. While the 4/2.5 only required a 67 1HR water heater, a 4/3 will now require an 80 1HR which means the current water heater with the 74 1HR is now insufficient to meet the demands.

Now you're in a better position to answer when your client says "Hey, you think we can put a bathroom in here?"

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Do you have a question you've encountered while out in the field? Has your client posed a question you're not familiar with. Is there something on which you'd like to hear more information? Let me know and I'll include it in my monthly newsletter.

If you have a question, you can count on it that others have the same question, so let me hear from you. Email your questions or inquiries to Higher Ground Inspections;

hginspectionsllc@gmail.com or
anthony@highergroundinspections.com.

Answers are always free. I look forward to hearing from you!