

Rinnai Tankless Water Heater Sizing Guidelines

The sizing information provided below is intended to be used as a guide only and NOT as a replacement for a professionally engineered system.

Fixture Description	Hot Water Usage
Tub & Shower Fixtures*	1.5 GPM
Lavatories	0.5 GPM
Kitchen faucets	1.4 GPM
Residential Dishwashers	1.5 GPM
Residential Washers	1.5 GPM
Utility Sinks	1.5 GPM
Laundry Sinks	1.5 GPM

*Sizing assumes 1 standard showerhead per shower, & NO body sprayers, large soaking tubs or whirlpool tubs.

Model Number	TWH Flow Rate at 50/60F Rise	Model Number	TWH Flow Rate at 50/70F Rise
V65	5.0 GPM/4.3 GPM	RL75	6.0 GPM/5.1 GPM
V75	6.0 GPM/5.1 GPM	RLX94	6.4 GPM/5.4 GPM
RU180	5.9 GPM/5.0 GPM	RUC90	7.0 GPM/6.0 GPM
RU199	7.6 GPM/6.6 GPM	RUR199	7.7 GPM/6.6 GPM

Flow rates shown above taken from Rinnai spec sheets.

The Application Engineer at RAC is relying on the information provided by you to try to assist in determining the model and number of products needed to meet your application. This sizing analysis is intended to be used as a guide only and not as a replacement for a professionally engineered project. The Application Engineers have not been to the location, so this guidance is for your assistance only and should not be the sole factor in making your decision. Sizing does not describe a complete system. The contractor/engineer must determine the necessary components for and configuration of the particular system being installed. Sizing does not imply compliance with local building codes. It is the engineer/contractor's responsibility to ensure the installation is in accordance with all local building codes. Confer with local building officials before installation.

When using a Rinnai product as the heat source for a circulation loop, the piping systems should be designed with a hot water circulation loop having a minimum flow rate of 3 gpm. You must also review pressure drop curves for the model of Rinnai tankless water heater being considered when using circulators.

The circulation pump must be controlled by an aqua stat, timer or both.

Rinnai Water Heaters cannot be used in application requiring 180-195°F water at a dishwasher, unless a booster heater capable of producing 180-195°F water is provided at the dishwasher.

For beauty salons, a hot water circulation loop feeding the head wash stations is highly recommended. This provides instant hot water to head wash stations and reduces the occurrence of cold bursts (Consult Rinnai's Hot Water Design Manual for piping schematics). Insulation of recirculation piping is also recommended for heat retention. Remember that gases from beauty salons and fume hoods of commercial dish washers with chemical sanitizers can be highly corrosive and may cause premature failure of water heater components. Care must be taken to ensure tankless and vent terminations are installed away from the areas. An uncontaminated supply of combustible air must be maintained for optimum performance of the water heater.

If the intended installation is located in a hard water area, a softener or similar water treatment system must be used. Always remember to perform routine maintenance.

Water supply Fixture Units (WSFU) and GPH Data are from the following sources: Facilities Piping System Handbook, ASHRAE, IPC, UPC, ASPE and Appliances Manufacturer.

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Always contact Rinnai at (800) 621-9419 or your Keyline Sales Rep for sizing assistance on commercial projects.