

TYPICAL GPM REQUIREMENTS FOR VARIOUS FIXTURES:

- **HAND WASHING SINK = 0.5 GPM**
- **COMMERCIAL LAVATORY SINK = 0.5 GPM**
- **RESIDENTIAL KITCHEN SINK = 2.0 GPM**
- **MULTI-COMPARTMENT WASH SINK = 2.5 – 3.0 GPM**
- **RESIDENTIAL DISHWASHER = 1.0 – 2.0 GPM**
- **COMMERCIAL JANITORS SINK = 2.0 – 4.0 GPM**
- **SHOWER = 2.0 – 2.5 GPM (per shower head)**
- **WASHING MACHINE = 1.0 – 1.5 GPM**

Average GPM figures based on 2010 plumbing standards.

PROPER SIZING EXAMPLE:

Let's size an Eemax **Electric Tankless Water Heater** for a bathroom in a new addition for a home. The goal is to provide hot water for a full bathroom with one sink and a standard shower. The application would be point-of-use with only cold water lines running to the addition. The first thing to know is the gallons per minute (GPM) demand on the heater (all flow volumes are estimates, fixture's GPMs may vary):

Bathroom Lavatory Sink =	0.5 GPM
Standard Shower =	2 to 2.5 GPM
Total GPM Demand =	3 GPM (running at the same time)

The result of "Total GPM Demand" equals the number on the left column of the **Flow Chart Power Required** guide on the reverse side of this sheet. In this case, 3 GPM is the result. If the result is a mixed number, we suggest rounding up to the nearest whole number.

Next, it's time to figure out how much heat is needed for the lavatory sink and shower (typical desired showering temperature is 110°F). Now, determine the average

incoming water temperature keeping the cold winter months in mind. Subtract COLD WATER temperature (Example 58°F) from the 110°F. The result equals 52°F of TEMPERATURE RISE needed. For Flow Chart purposes, it is recommended to round this number to 50°F.

Now, use the bottom row of numbers on the **Flow Chart Power Required** guide and search for 50°F. Then read UP from the bottom row to the intersection of 3 GPM from the left column. Based on the above example and information from the chart, the required kilowatt (kW) of power needed is 22. This means, a 22kW Electric Tankless Water Heater is needed for the application.

The next step would be selecting the proper Eemax heater that best fits the application and one that provides enough kW of at least 22. As an example for this specific application, the Eemax SS023240TC would be best suited for the single sink and a standard shower with an incoming average water temperature of 58°F.

To find the proper water heater per the requirements, please reference **Eemax.com** or refer to the **Eemax Quick Reference Product Spec Guide**.

SPECIAL MODEL OPTIONS:

- EE = Emergency Eyewash** – Meets ANSI tepid water requirements.
- ML = Multi-Lav** – Factory preset to 110°F with 0.3 GPM turn-on.
- S = Sanitation** – Factory preset not to exceed 180°F.
- FS = Factory Set** – Customer specified factory-set not to exceed temperature ambient to 180°F.
- SL = Single Lav** – 3/8" compression fittings standard. Available on EX non-thermostatic models only.
- DL = Dual Lav.** – (2) 0.5 GPM aerators supplied as standard.
- T3 = Thermostatic (parallel turn on) Activates 1.8 GPM, Max Flow 5 GPM.**
- T4 = Thermostatic (parallel turn on) Activates 2.6 GPM, Max Flow 8 GPM.**
- T2T = Thermostatic (staged turn on) Activates 0.7 GPM, Max Flow 4 GPM.**
- T2T2 = Thermostatic (staged turn on) Activates 0.9 GPM, Max Flow 6 GPM.**
- NEMA 4 = Optional Waterproof Cabinet** – Hinged cover. Powder coated finish.
- NEMA 4x = Optional Waterproof Corrosion-Resistant Cabinet** – Stainless steel.

