



FREQUENTLY ASKED QUESTIONS

POWERMITE[®] GAS BOOSTER WATER HEATERS

MODELS: PMG-60, PMG-100 & PMG-200



OVERVIEW

This information is provided only as a quick reference. Many of the questions below are covered in more detail in the operator/owner's manual. The Installation, Operating, Service and Parts Manual should be read completely before installing and operating the heater. This document is not a substitute for that reading.

Q: Why gas?

A: The choice will have to be yours. Most often the cost of energy will make gas a practical alternative to electricity. Ask your Hatco Representative for an Energy Cost Comparison.

Q: What do I have to know about booster water heater ventilation?

A: The National Fuel Gas Code NFPA 54 allows all water heaters to vent into the room provided that certain overall conditions exist. This is explained in the following excerpt:

EXCERPT FROM ANSIZ223.1/NFPA #54

7.2.1 Connection To Venting Systems. Excerpt as permitted in 7.2.2 through 7.2.6, all gas utilization equipment shall be connected to venting systems.

7.2.2 Equipment Not Required To Be Vented.

A single booster-type [automatic instantaneous] water heater, when designed and used solely for the sanitizing rinse requirements of a dishwashing machine, provided that the equipment is installed, with the draft hood in place and unaltered, if a draft hood is required in a commercial kitchen having a mechanical exhaust system. Where installed in this manner, the draft hood shall not be less than 36 inches (91 cm) vertically and 6 inches (15 cm) horizontally from any surface other than the equipment.

Where any or all of this equipment is installed so the aggregate input rating exceeds 20 Btu per hour per cubic foot (.207 watts per meter) of room space in which it is installed, one or more shall be provided with venting systems or other approved means for removing the vent gases to the outside atmosphere so the aggregate input rating of the remaining unvented equipment does not exceed the 20 Btu per hour per cubic foot (207 watts per cubic meter) figure. Where the room or space in which the equipment is installed is directly connected to another room or space by a doorway, archway, or other opening of comparable size that cannot be closed, the volume of adjacent room or space shall be permitted to be included in the calculation.

PMG-60

Q: Tell me about venting the PMG-60.

A: Provided the local code accepts NFPA 54 requirements for venting a gas booster, the PMG-60 vents directly into the room in which it is installed.

Q: Why would I want to install the auxiliary hood?

A: As a convenience to the end-user HATCO offers an auxiliary hood that can be placed directly over the PMG-60 booster heater. This hood will direct flue gas products to the rear of the unit. The flue gas may be directed to exhaust behind the counter or dishwasher or up into a nearby ventilation/exhaust hood. (See manual for more details.)

Q: Can it be vented through a wall?

A: No. The PMG-60 is designed to exhaust only into the room in which it is installed where the typical restaurant ventilation system can handle the kitchen atmosphere in accordance with NFPA 54.

Q: Can it be vented outdoors?

A: No. The PMG-60 is designed to exhaust only into the room in which it is installed. It is not agency approved for outside venting

Q: How far can I vent it?

A: The vent hood is approved for a 20 linear foot run. Note that an elbow is equivalent to 5 linear feet. For example: you might place an elbow at the hood exit, run 4 feet, then a second elbow placed behind the warewasher with a six foot vertical vent tube to exit near the condensate hood. This would add up to 20 linear feet.

PMG-100 & PMG-200

Q: Tell me about venting the PMG-100 and PMG-200

A: Because the PMG-100 & PMG-200 heaters may add significantly to this equation, an induced draft means is provided to also allow venting directly outside.

Q: Can it be vented through a wall?

A: Yes, provided the correct Thimble or through-the-wall fitting is used for either combustible or non-combustible wall material as it may apply. If this is not an outside wall, then the pipe must continue until it can penetrate an outside wall and this adjoining room must be at the same temperature as the kitchen.

Q: Can it be vented outdoors?

A: Yes. This can be done horizontally through a wall as described above or vertically through the roof by using the proper approved venting materials. An installer of heating and ventilating equipment should know the AGA acceptable materials and methods to meet NFPA 54 or local equivalent standards. Some helpful suggestions appear in the manuals; however, it is the installer's responsibility to meet the applicable venting system standards.

Q: How far can I vent it?

A: These two models are approved for a 40 linear foot run. Note, however, that an elbow is equivalent to 5 linear feet of pipe. Beyond this length, consult a ventilating specialist to provide appropriate means to move the exhaust farther. Booster fans are available in the industry that the specialist would be capable of applying.

Q: What is the temperature of the exhaust?

A: Exhaust temperature is approximately 200°F. right at the outlet of the heater. It quickly cools to ambient temperature as it travels through the vent pipe and exits outside or into the room.

PMG60, PMG-100 & PMG-200

Q: Why are they different?

A: The PMG-60 was designed primarily for batch-type washers and because of its low rating may be allowed to exhaust directly into the room in compliance with NFPA 54. The PMG-100 and PMG-200 were designed to accommodate conveyor and flight-type washers as well. Induced draft venting was employed to allow the customer to more readily comply with NFPA 54 when these higher ratings are added to the other appliances in the kitchen.

Q: Can anybody install a gas booster?

A: Only someone capable and knowledgeable of complying with the National Fuel Gas Code NFPA 54 and/or applicable local code should install the unit to provide the highest level of safety. Installers of commercial gas heating and ventilating systems might be an example of such a source.

**Q: What do I need to know if I want to operate a unit at high altitudes?
(Higher than 2000 feet above sea level)**

A: The unit will operate at less than its sea level capacity due to either natural derating or code compliance derating. This means that the unit's sizing selection should be checked for the intended altitude. Also, an orifice change may be required to achieve the maximum allowable burn rate. Charts are provided in the manuals to help in this process for compliance with AGA's limits for our models. NFPA 54 and local codes, however, should be checked to be sure they don't take precedence. A kit of blank orifices is available to allow you the flexibility to comply with the specific altitude regulation at your installation.

Q: What should I do when I close down for the winter?

A: All main electric and gas services to the heater should shut OFF. The tank and the heat exchanger should be drained of all water to prevent damage due to freezing.

Q: What should I do when outside air temperatures are extremely cold?

A: As long as your facility is heated for inhabitancy, the PMG-60 would be unaffected whether ON or OFF. The PMG-100 and PMG-200 have exhaust fans that keep warm air moving out the vent when they are ON. Because of this, it is recommended that the heater be left ON at all times when the outside temperature is below 32°F. to counteract the unlikely occurrence of cold air migrating into the vent pipe.

Q: Do you recommend installing a check valve on the inlet side of the booster?

A: No. A check valve could potentially create a high-pressure situation that would make the pressure release valve leak.

Q: How does your optional blended phosphate water treatment system work?

A: The system stops mineral scale by introducing a measured amount of polyphosphate into the water. The mineral molecules, which have a positive charge, are attracted to the negative charge of the polyphosphate. The mineral molecules are unable to join together, so scale is unable to form.