

Everything You Need to Know About Hatco Booster Water Heaters

Welcome. Today we're sharing dish-worthy information with you about Hatco Booster Water Heaters.

But before diving in, we'd like to take a moment and introduce you to a very special guest and your guide for the day — Mr. Billy Booster. Billy's been a part of the Hatco family since the beginning and (not to brag) is a bit of a celebrity in these parts. Billy is not only the *original* booster, but he's also an absolute pro on the topic of water heating. So, without further ado, we'll hand it off to Billy to take it away.



***Hi guys.** Are you ready for a booster-riffic adventure?!*

Here's what we'll cover:

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The birth of the booster

To understand how the booster water heater came to be, we first need to travel back to a time when "free lunch" reigned king and dishes weren't (well) quite so clean. Here's how it all began.

The depressing (or not-so depressing) beginning.

In 1931 during the heart of the Great Depression, the restaurant industry was, like so many others, struggling to stay afloat. During this time, two Wisconsinites — one of whom was a local restaurateur and the Director of the National Restaurant Association and the other who worked for the state Board of Health — set their sights on saving their beloved industry. To do this, they sought to unify and strengthen the restaurant business by setting up an association of industry leaders, known to this day as the Wisconsin Restaurant Association (WRA).

The WRA takes on "free lunch."

In 1934, the Great Depression was still raging, Prohibition had been repealed, and restaurants were sinking further underwater. Part of the problem was that restaurants were struggling to compete with taverns, which offered "free lunch" (or really any meal) to patrons who purchased drinks. To level the playing field, members from the WRA helped write and push through a code of fair competition that, among other things, put the kibosh on boozy free meals at the bar and gave restaurants a fighting chance.



Up next — sanitation.

After tackling free lunch, the WRA joined others at the state and national level to (quite literally) clean up the restaurant industry by pushing for stricter sanitation standards. Over the years, much progress was made. And by the late 1940s, Wisconsin announced a code change that required rinse water temperatures for commercial and institutional dishwashers to be at least 180 °F (82 °C). A move in the right direction for public health, this addressed the sanitation issues posed by bacteria-ridden towel drying and dishwashing practices that long promoted the spread of germs and foodborne illness.

Did you know that 180 °F (82 °C) has been a rinse water requirement for commercial dishwashers since the 1940s?!



An entirely new concept is hatched.

In 1950, in response to the new Wisconsin rinse water requirements, technical engineer Gordon Hatch and his talented wife LaReine put their prowess to work and launched an entirely new concept — the booster water heater. This innovative solution was just what the industry needed, as it ensured foodservice operators could easily and quickly boost the temperature of their available hot water to meet the new sanitation requirements.



One of the first Hatco boosters



The original Billy Booster
(talk about aging well!)

Gettin' their invention to market.

No one doubted that Gordon and LaReine Hatch would find a way to get their new product out into the world. After all, Gordon had already started a successful company of his own (The Gordon Hatch Company) and LaReine's charisma and personality was a benefit to any business endeavor. That said, these two knew that a product this special needed a dedicated company that could scale to support their long term sales and manufacturing needs. And that company was — you guessed it — Hatco Corporation, a company as colorful and innovative as the Hatches themselves.



LaReine in one of her signature hats



Hatco booster assembly line



Innovation. No matter what.

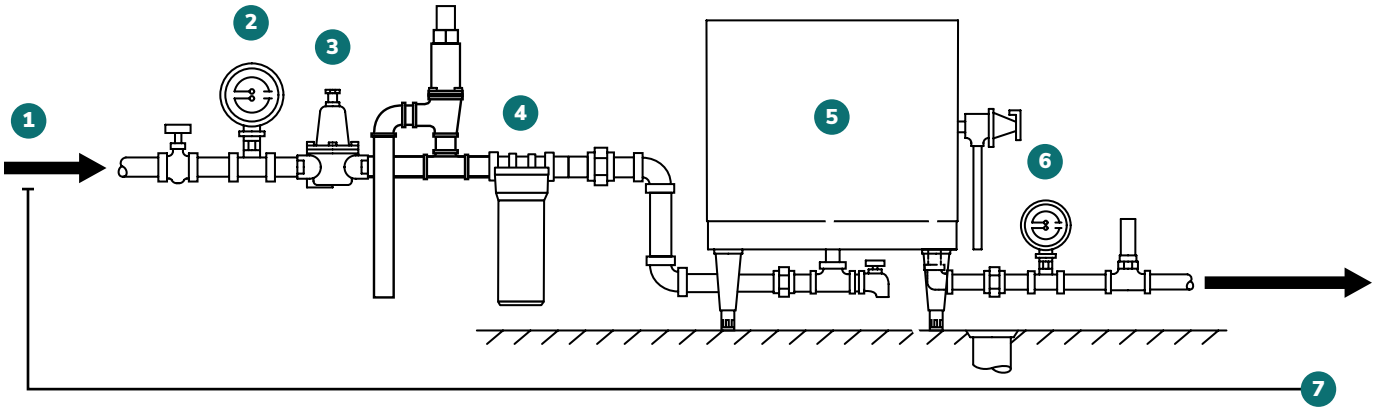
The Hatches were quite the savvy couple. Between the two of them, they were always finding ways to make their dreams a reality. In one story, LaReine actually put her jewelry and furs up for collateral for a $2,000 loan for a new project. And good ole Gordon? He'd run booster experiments right out of his very own garage — one of which accidently turned his entire driveway into a sheet of ice!

How Hatco boosters work

As we learned, commercial dishwashing machines require very hot water (at least 180 °F / 82 °C) to properly clean and destroy bacteria and harmful microorganisms that can end up on dirty dishes, utensils, and other kitchenwares. The problem, however, is that your primary water heater (the one your building uses) only increases water temperatures to between 110-145 °F (43-63 °C). Anything higher would be a scalding hazard.

A Hatco Booster Water Heater connects with any dishwasher (low or high temp) to raise the temperature of its final rinse water to the required levels — and keep them there, so you have ongoing access to sanitizing water. Plus, you get spot-free dishware!

The Step-by-Step Process



STEP 1

Water that's heated by the primary water heater to 110-145 °F (43-63 °C) flows through the water line.

STEP 2

A gauge displays inlet temperatures and pressures to verify proper operation.

STEP 3

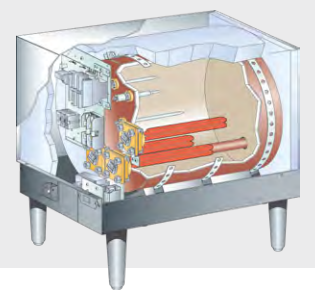
If installed, a pressure reducing valve reduces water pressure to the necessary 20-25 pounds per square inch (psi).

STEP 4

If the Phosphate Water Treatment System is installed, it dispenses a small amount of polyphosphate into the water to prevent mineral buildup in the tank.[1]

STEP 5

The booster heats the cooler incoming water to the desired temperature using powerful internal heating elements.



STEP 6

The booster maintains water at the desired temperature so it can instantly deliver hot water to the dishwasher. When called, the heated water passes through a second temperature/pressure gauge before heading out to the dishwasher.

STEP 7

The process repeats.

[1] Required for gas boosters. Recommended for electric boosters.

How to care for your booster

Hatco Booster Water Heaters come with a pretty impressive warranty: one-year parts and labor plus an additional nine years on the tank. But no matter how well-made and durable our boosters are, you still need to show them a little love. Caring for your booster will prolong its life, prevent unnecessary servicing, and ensure it operates as efficiently as possible. Take care of your booster and it'll take care of you.



Tips for a happy and healthy booster:

1. **Fill 'er up:** To avoid burning out the unit's heating elements, prefill the tank with water and ensure the heating elements are completely immersed before turning the unit on. However, not to worry — if water levels dip below required levels during operation, the low water cut-off system will automatically shut the unit off.

2. **Get the incoming temp right:** We recommend that the temperature of the water coming into your booster is 110 °F (43 °C). With that said, make sure it's never lower than 85 °F (29 °C) or higher than 160 °F (71°C). Those extreme temperatures can impact proper temperature response during operation.

3. **Care about water quality:** To prevent mineral build-up in the tank, treat and soften incoming water if it has more than 3 grains of hardness per gallon (.75 grains of hardness per liter). This ensures your booster works most efficiently, uses less energy, and has a longer operating life. The Blended Phosphate Water Treatment System can also help.

4. **Track levels:** At least once per week (if not daily), monitor pressure and temperature from incoming and outgoing gauges to ensure the unit is functioning properly. This is the best way to sniff out issues early!

5. **Avoid freezing:** If it is colder than 32 °F (0 °C) outside, take extra precautions with gas boosters to avoid freezing water damage by leaving the unit on and protecting the venting from migrating cold air. If you must turn it off, drain the water.

6. **Clean safely:** Keep the exterior of the booster dry and use a mild cleaner to remove dirt and debris from its surface. Also, we're talking about a high-pressure system, so be safe and always use a Hatco authorized service agent (not you!) to descale the booster.

7. **Go pro:** Speaking of authorized service agents, it's a good idea to bring one by for an annual inspection to ensure all is working well. Again, only use an authorized agent. These folks know the ins and outs of Hatco equipment and will ensure whatever you need is done right the first time. Use this service agent locator tool to find an agent near you: **hatcocorp.com/find-a-service-agent**.



Ready to cuddle up with your next great read?

If you're looking for more tips on how to care for your Hatco Booster Water Heater, our installation and operating manuals are a great resource. Real page turners? Well, that's up for debate — but they sure are helpful.

Check them out in our resource library at **hatcocorp.com/document-library**.

How to determine (aka size) the right booster

Selecting a booster isn't as simple as just picking one off the shelf. You need to choose a booster with the right size tank to ensure you have enough on-demand hot water to meet your dishwashing needs. Size too small and you won't have the hot water supply your dishwasher needs. Size too large and you may end up spending excess money on installation. Sound touchy? It doesn't have to be. Just fill out the worksheet below to determine which Hatco Booster Water Heater options are right for you.

Hatco Booster Water Heater sizing worksheet

Populate the below fields with the requested information.

1. **Make and model of dishwasher**
   Find this information on the dishwasher itself or in the paperwork that came with it. Should questions arise, you'll want this information on hand to share with a Hatco representative.

2. **Temperature rise in °F**
   Determine the temperature of the water coming into your booster, so you can calculate the temperature rise you need to reach 180-190 °F for high-temp dishwashers.[2] The incoming water temperature should be available via a gauge on your dishwasher and/or primary water heater. You can also use a probe thermometer to get a reading at the faucet nearest your dishwasher. Fill the incoming water temperature into the below formula and calculate the degree rise.

Goal Temperature		Incoming Water Temperature		Degree Rise
180 °F	-		=	

3. **Gallons per hour (GPH)**
   Figure out the GPH for your dishwasher to determine how much water it uses. This information is available at **nsf.org/certified/food/** or on the dishwasher's manufacturer website or specification sheet.

GPH

4. **Kilowatts (kW)**
   Plug the information you gathered above into the corresponding boxes below to calculate the KWs you need.

GPH		Degree Rise			kW requirement
	x		÷	400	=

5. **Type/model and voltage**
   Turn to the appendix (page 9) of this guide. Locate your kW requirement (round up if needed) in the first column of the chart. Follow the row to the right to identify your recommended booster model or models. Lastly, review the voltage requirements in the chart and ensure you have enough voltage to support the energy it takes to run the unit.

Type	Model[3]	Voltage

[2] If using a low-temp dishwasher, adjust the formula to figure out the degree rise you need to reach 140-150 °F.
[3] For dishwashers with large rinse tanks that must be filled prior to operation, the larger Imperial booster may be required.

Hatco booster options

Hatco has a booster option to satisfy the water consumption requirements of nearly any make or model of dishwasher, including low-temp machines. Hatco Booster Water Heaters are durable, insulated for maximum efficiency, and the absolute industry-favorite since 1950!

ELECTRIC

Imperial
(S models)



- **16 gallon (61 liter) capacity**
- Castone®-lined tank
- Step-loading for energy savings and fast recovery

Learn more »

Compact
(C models)



- **6 gallon (23 liter) capacity**
- Castone®-lined tank
- Smaller footprint with substantial capacity

Learn more »

Mini-Compact
(MC models)



- **3.2 gallon (12 liter) capacity**
- Fits almost anywhere
- Works with dishwashers, but also hot water dispensers

Learn more »

GAS

Powermite®
(PMG models)



- **4.75 gallon (18 liter) capacity**
- Consistent ignition
- Powered by either propane or natural gas

Learn more »

Need more information?

If you're going between boosters, it's worth noting the above differences. However, to explore all of the nitty-gritty details, be sure to head over to **hatcocorp.com/booster-water-heaters**.



How to learn more or order

Alrighty, temperature check! How are you feeling?

If you feel you need a little one-to-one guidance, a Hatco representative is just the ticket. They are the ultimate educational resource. They have in-depth knowledge of Hatco equipment, its different applications, the foodservice industry as a whole, and are the perfect problem solvers. Where do you find these magical creatures? Locate a rep near you using our handy Find-a-Rep tool at **hatcocorp.com/find-a-rep** or by clicking the button below.



What's the deal with dealers?

If there's a Hatco dealer near you, they can help too. They know a lot about a lot of different equipment (Hatco or other). They are a tremendous resource and are usually the folks you go to when you're ready to make an actual purchase. Hatco rep or dealer — either way, help is at hand.



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Appendix:
Hatco Booster Water Heater Recommendation Chart

kW	Imperial Electrical Booster Water Heater	Compact Electrical Booster Water Heater	Mini-Compact Electrical Specialty Water Heater	Powermite® Gas Booster Water Heater	Volts
4		C-4			208, 240, 480
5		C-5			208, 240, 480
6	S-6	C-6			208, 240, 480, 600
7	S-7	C-7			208, 240, 480, 600
9	S-9	C-9			208, 240, 480, 600
9.9			MC-10		208
11.4			MC-11		240, 480
12	S-12	C-12			208, 240, 480, 600
13.5	S-13	C-13			208, 240, 480, 600
15	S-15	C-15			208, 240, 480, 600
15			MC-15		208
17.25	S-17	C-17	MC-17		208
18	S-18	C-18			208, 240, 480, 600
24	S-24	C-24			208, 240, 480, 600
24.8				PMG-100	120VAC/Gas
27	S-27	C-27			208, 240, 480, 600
30	S-30	C-30			208, 240, 480, 600
36	S-36	C-36			208, 240, 480, 600
39	S-39	C-39			208, 240, 480, 600
40.5	S-40				208, 240, 480, 600
45	S-45	C-45			208, 240, 480, 600
45.7				PMG-200	120VAC/Gas
54	S-54	C-54			208, 240, 480
57	S-57	C-57			208, 240, 480, 600