Comprehensive Guide to Hatco Strip Heaters



Every foodservice professional knows that food safety and customer satisfaction are two of the most important elements of a successful operation. When handling hot foods, safety often hinges on an operator's ability to cook each menu item to the correct temperature. But once that food is cooked, time is of the essence.

Many foods should be held within specific temperature ranges where harmful bacteria cannot grow. In addition, people prefer their hot food ... well, hot.

So, what's the solution? Hot-holding equipment is one practical way operators can keep their menu items at optimal serving temperatures. There's a ton of holding options on the market, but today we'll dive into one equipment solution that's an absolute staple (and often the unsung hero) in most foodservice establishments — the strip heater.

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What are strip heaters?

Food cools quickly in ambient temperatures. Even a few minutes at room temperature can turn a tasty dish into a disappointing meal. Strip heaters are a commercial foodwarming solution that's used to hold food in quick-turn scenarios. These heaters don't bring food up to temperature and should never be used to cook food (they don't get hot enough to do that properly). Instead, these hard-working units slow the natural cooling process of foods, so operators can keep already-cooked food warm for longer.

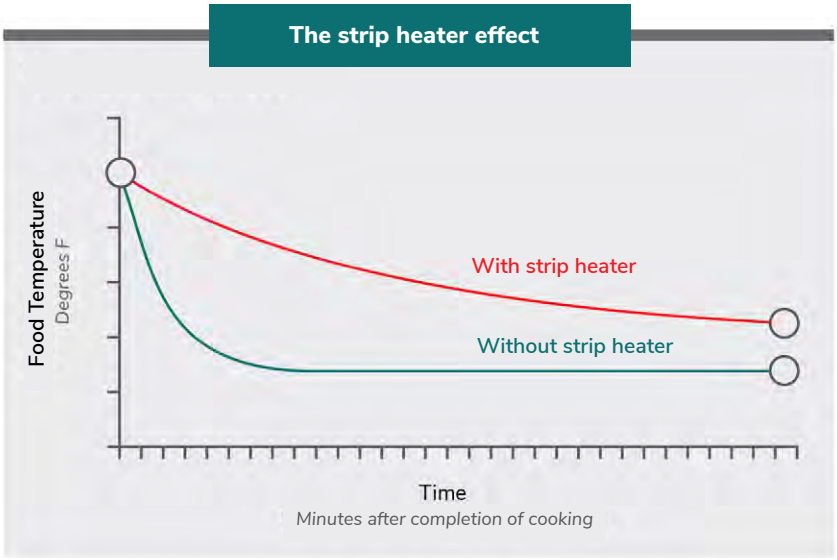


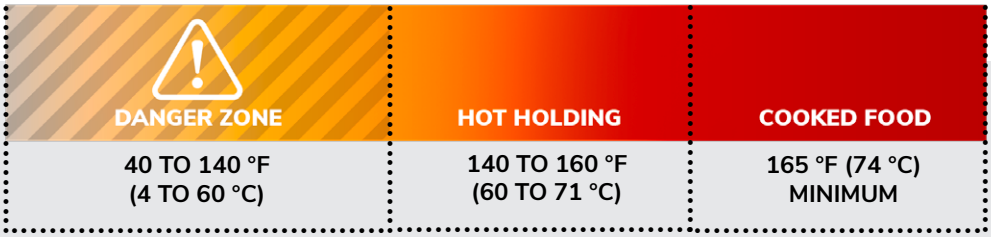
Chart is meant to convey conceptual information and is based on a Hatco-conducted experiment where thermocouples were placed in two identical pieces of food and one food sample was exposed to overheat heat while the other was not.

What's considered a 'quick-turn' scenario?

A strip heater can accommodate a wide variety of applications. Think about the multiple areas within a foodservice operation where food sits briefly at room temperature. Back-of-the-house areas, expediting stations, waitstaff pickup locations or customer serving counters can all benefit from the effective warmth of a strip heater.

Operators can also find value in using a strip heater in combination with another heat source. Alone, strip heaters are intended for brief hold times. However, many operators add a bottom heat source (such as a heated shelf or warming plate) to supplement their strip heater setup. With top and bottom heat, operators can cover more surface area of the food in heat and effectively extend their hold times.





Optimal temperatures for food safety

Food temperature is an incredibly important factor in keeping food safe. Most hot foods should be cooked to a minimum internal temperature of 165 °F (74 °C). When holding these hot foods, operators should stay within the recommended holding range to ensure food does not cool into the danger zone or continue to cook when held at too high of heat.

How do strip heaters work?



Strip heaters use radiant heat

There are a variety of strip heaters available through Hatco (and other manufacturers). But no matter the make, model, style or equipment provider, all strip heaters use what's called infrared radiant energy. Radiation is the transfer of heat via infrared energy waves (electromagnetic waves somewhere between radar waves and visible light). These waves travel through the air from the heating source (the heating element in the strip heater) to the food below. As long as the food is within the target zone (or the area receiving heat from the strip heater), the food will absorb the energy, and the food will stay warm for longer.

Radiant heat can get interrupted

Infrared radiant waves can be interrupted by different factors. For example, free-flowing air is one factor that can lower how effectively heat gets to food items. When using a strip heater, operators must check for open doors, windows, vents, air conditioning, unwanted air from a hood system, or other ways moving air could disrupt the energy waves. Balancing a hood system, blocking a poorly placed cold air supply register or even adding base heat is often all it takes to create an optimal strip heater environment.

The other factor that can interrupt infrared waves is the distance between the source of heat and the object it's heating. The farther the object is from the source, the more heat is needed to keep the product at the right temperature. The model type, heating element and wattage of the strip heater affects the distance the heater should be hung from the surface holding the food. That's why there are always specific height clearances suggested for strip heaters hung above a counter or holding surface (we'll share more on that in a bit).

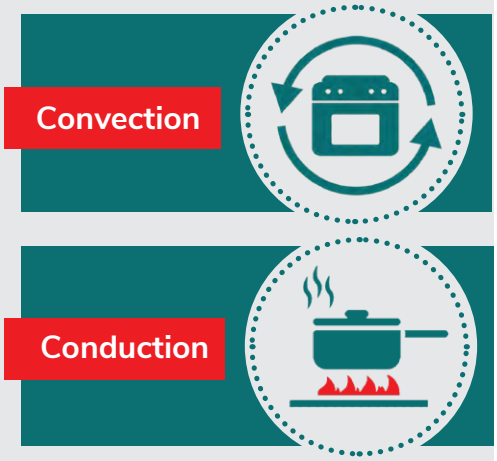
The sun is also a source of radiant heat

Like strip heaters, the sun transfers heat via energy waves that travel through the air and affect the temperature of the object it shines on. For example, during a deep winter freeze, the outside temperature might remain below freezing, but the sun shining on a frosty car window melts the ice away. A window on the same car, but not in the sun's path, stays ice covered. Swap sun for strip heater, and car for food — and we're seeing the same phenomenon at play in a hot-holding scenario.



Two other types of heat energy

In addition to radiant heat, there are two other main heating methods used to warm food: conduction and convection. Conduction occurs when heat is transmitted through direct contact with the heat source (think, pan to burner). Convection transfers heat from the heating element by circulating a hot gas or liquid. An example is forced air in a convection oven that moves throughout the unit to cook food or boiling water that circulates about a pan to cook a hard-boiled egg.



How do strip heaters compare to other hot-holding units?

The closest relative to a strip heater

Heat Lamps: Heat lamps are both decorative and functional. These heaters use radiant heat and are most like a strip heater in use and application. If deciding between a strip heater and a heat lamp, it's worth learning everything you can about the two. This guide (yup, the one you're reading now) covers strip heaters, but head over to **hatcocorp.com/heat-lamp-guide** for more on heat lamps.



Get Heat Lamp Guide

Other popular foodwarming solutions



Model: FSHC-7W1-EE

Hot holding cabinets

These cabinets employ convection heat and are used in both back- and front-of-the-house applications, but are most often leveraged to stage food before serving. They're great for long hold times and offer an array of humidified options that'll extend hold duration even further.



Model: FS2HAC-15

Heated air curtain cabinets

These doorless beauties also rely on convection heat transfer to achieve longer hold times and impressively even temperatures. Their doorless design makes them an ideal, no-touch solution for tight kitchen spaces and high-turnover food products.



Model: GRCD-2PD with flip-up doors

Heated display cases

Used by full-service and self-serve operations, this solution often relies on a combination of conductive and radiant heat to keep packaged foods warm while putting them on display for customer purchase. Available in a variety of design and color options, they're sure to fit right in with any décor.



Model: GRS-30-I with overhead heater GRAH-36

Warming shelves

Warming shelves use conduction heat to create a quick place to hold wrapped, packaged or plated food for short periods of time and are often used in conjunction with overhead heating equipment like strip heaters or heat lamps.



Model: F2GP-14-C

Food pickup and delivery lockers

Designed for holding to-go orders at hot or ambient temperatures, food lockers preserve food quality while providing a more secure, fun, orderly, safe and reduced-touch method for food pickup. Just because a meal isn't being eaten at a restaurant, doesn't mean it can't be hot and delicious!

Choosing the right Hatco strip heater

Emitters are central to a strip heater choice

All Hatco strip heaters utilize one of three emitter types: Infra-Black®, metal sheathed and ceramic. Emitters are the bread and butter of strip heaters and are the source of that infrared energy we talked about earlier. All emitters produce heat (not light), but it's important to note that different emitter types provide different levels of heat intensity — and perform best when hung at different clearance levels from the surface below them.

GENTLE HEAT → VERSATILE HEAT → INTENSE HEAT

Infra-Black® heating element

Hatco's strip heaters with Infra-Black emitters are ideally suited for operations with narrow clearances. These emitters are made with a solid panel, which quickly and evenly distributes a less intense heat pattern (especially important when the heat source is positioned at such a close range).

LOW CLEARANCES

Metal sheathed heating element

Strip heaters with a metal sheathed heating element are the most popular option. And for good reason. They're economical, reliable, easy to replace, and accommodate 90% of foodservice applications with their variable sizes and wattages (standard, high or max).

AVERAGE CLEARANCES

Ceramic heating element

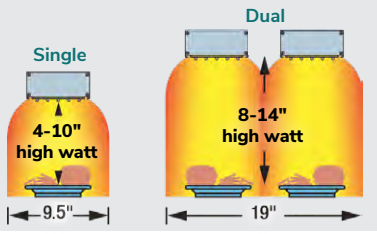
Strip heaters containing ceramic emitters create a strong and more intense heat, allowing the heat to travel longer distances. This is helpful in problem areas like fry holding stations that can be harder to heat. Like the metal sheathed strip heaters, these heavy-duty heaters come in a variety of different sizes, as well as single or dual models and standard or high wattages.

HIGH CLEARANCES

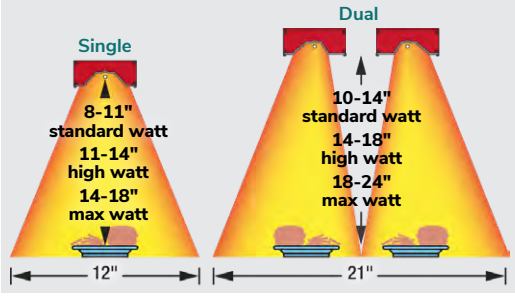
A closer look at clearances

Certain strip heaters contain emitters that accomodate lower clearances better, while others are best when hung at average or higher distances above a surface. Many factors influence clearance recommendations, starting with countertop material. Combustible surfaces like wood will always require greater clearances than non-combustible surfaces like stainless steel, glass or stone. After material, other factors come into play as well — such as if a strip heater is a single or dual or if it's a standard, high or max watt unit.

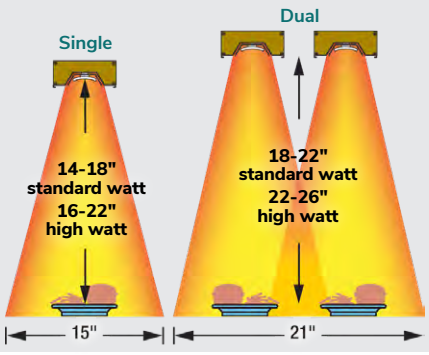
Infra-Black Low clearances



Metal sheathed Average clearances



Ceramic High clearances



For more specifics on clearances and to review recommendations for a particular strip heater or application, visit **hatcocorp.com/strip-heater-hanging-recommendations.**

Connecting emitter type to strip heater

Now that we've discussed emitter types, let's connect the dots. If you know which emitter type is best for you, how do you determine which Hatco strip heaters utilize your ideal emitter? Well, Hatco offers three main categories of strip heaters — each of which employ one of the three emitter types.

Infra-Black® emitter



→ **Glo-Ray® Infra-Black® Aluminum Strip Heaters**

- GRAIH series (single or dual, lights or no lights)

Metal sheathed emitter



→ **Glo-Ray® Infrared Strip Heaters**

- Curved GR5A/GR5AH series (lights or no lights)
- Aluminum GRA/GRAH and GRAM series (single or dual, lights or no lights, max watt or other)
- *Designer* GR2A/GR2AH series (single or dual, lights or no lights)
- Narrow GRN/GRNH and GRNM series (max watt or other)
- Stainless steel GR/GRH series

Ceramic emitter



→ **Ultra-Glo® Ceramic Infrared Strip Heaters**

- UGA/UGAH series (single or dual, lights or no lights)

Want to explore all the strip heater models? Visit hatcocorp.com/strip-heaters and start your journey today.

Explore Now

What's in a name?

Every Hatco strip heater has a name, but not like Sam or Suzie. With Hatco strip heaters, there's quite a bit packed into each naming convention. The individual letters represent a feature of the strip heater. Once you've made your strip heater choice, the name offers an easy way to order your strip heater model (with all the bells and whistles you've chosen).

GR2AHL-xxD

- GR = Glo-Ray
  UG = Ultra-Glo
- No character = other
  2 = *Designer*
  5 = curved
  N = narrow
- A = aluminum
- No character = standard
  H = high watt
  IH = Infra-Black high watt
  M = max watt
- No character = no lights
  L = lights
- Length (inches)
- No character = single
  D = dual with 3 or 6" (76 or 152 mm) spacing

Considering all the features is a necessary next step

Okay, you figured out the emitter and strip heater type that works best for your operation and confirmed that you have enough room to support clearance recommendations. Now, it's time to think about the additional strip heater features available and determine what you need. Those options can be simplified with a few simple choices.



Width

Hatco offers three varieties of width: narrow, single or dual. Need your heater to fit in a tight space? The narrow strip heater is your best option. If the depth of the target area you need to heat is greater than 12 inches (305 mm), you may want to consider a dual model, as a dual can provide almost three times the heating coverage as a single unit.

Length

This one is easy. What is the length of the space you need warmed? With a span of 1.5 feet (.46 m) to 12 feet (3.7 m), Hatco strip heaters are sure to accommodate your needs. Just note, strip heaters come in set lengths so you'll want to ensure you pick the right sized option. For reference, they scale up in 6 inch (152 mm) increments between 18-72 inches (457-1829 mm) and then in 12 inch increments (305 mm) from 72-144 inches (1829-3657 mm).

Lights

Almost all Hatco strip heaters come with the option of lights. Will your warming area also be a display unit? Adding lights might be a nice touch since well-lit areas add to marketing appeal. Or, lights might be a good option in darker areas of the kitchen to help with visibility? Does your operation offer a morning breakfast buffet where food needs to stay warm, and then move to a cold salad bar lunch option? One Hatco strip heater model comes with optional dual-colored LED lights that have the added bonus of working for both warm and cool units.

Wattage

Standard and high watt options are available for most strip heaters, with the exception of the Infra-Black® strip heater models. Additionally, there are a few select models that offer max wattage. If you have a high-volume operation with a large surface area to keep warm, high wattage might be the way to go. Or, if your operation is smaller with less warming space available, check out a standard-watt strip heater.

Sneeze guard

If your strip heater will be used in a customer service area, adding a sneeze guard on one or both sides of a customer service area is recommended for keeping food safe and away from coughs or sneezes. Most health departments require sneeze guards in customer service lines, so be sure to factor that into any decision.

Installation

There are many ways to install or mount strip heaters for optimal convenience. Take your pick of standard angle brackets, overhead mounts, chain suspension and non-adjustable stands. Some options are even portable. However, the hanging clearance is non-negotiable and strict adherence to the product manual instructions is crucial.

Design

Does your operation need an attractive front-of-the-house strip heater to match with the rest of your branded decor? Take your pick of standard, curved or designer options with styled inset panels and an array of attractive colors. Many operators love our designer series for their front-of-the-house needs!

Controls

Just to be safe, operators often purchase strip heaters with slightly more “oomph” than they really need. If you go this route, adding infinite controls to ensure you can turn the power down a bit — or off during certain dayparts — is a great solution. Hatco’s line of Remote Mount Boxes (RMBs) allow you to safely locate those toggles, infinite switches and indicator lights away from the heat zone, which will extend their life and reduce your long-term servicing costs.

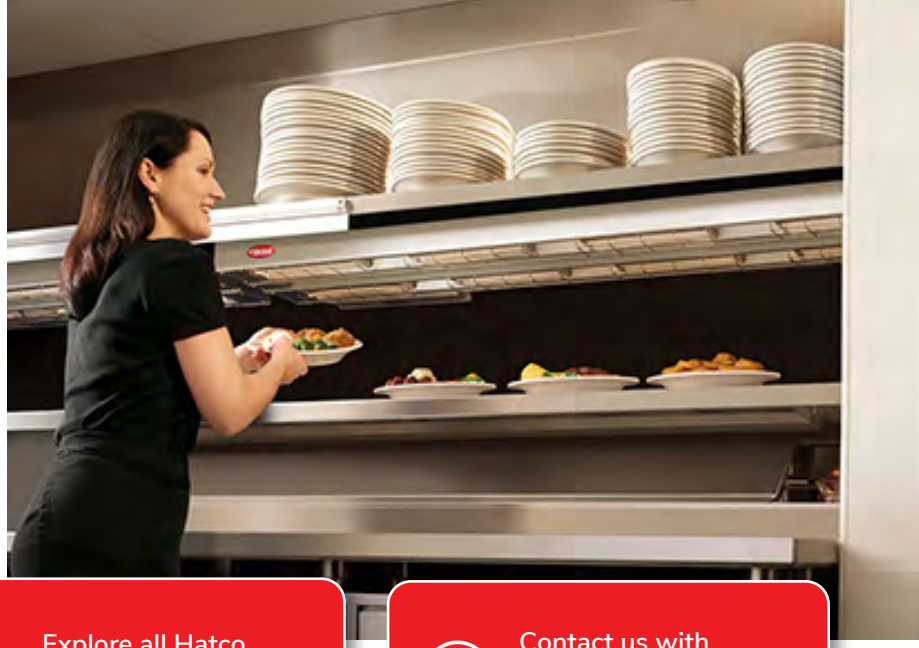
A word on Remote Mount Boxes

The continuous heat from a strip heater can be tough on its control components — especially when those controls are mounted directly to the heater. Remote Mount Boxes (RMBs) keep toggle switches, indicator lights and any infinite controls cooler by moving these sensitive components to a remote and cool location away from the strip heater and target area. This extends the life of the controls and keeps costly servicing at bay.

To learn more, visit **hatcocorp.com/blog/remote-mount-boxes**.

Additional resources

We've covered a lot of ground about strip heaters here. But, if you're still hungry for more, we have a bevy of other resources to help you on your journey to finding the strip heater (or other hot-holding solution) of your dreams. Here are a few additional resources to get you started!



Watch our video on choosing the best strip heater for your needs

Explore all Hatco strip heater options in more detail

Contact us with questions or for more strip heater insights

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