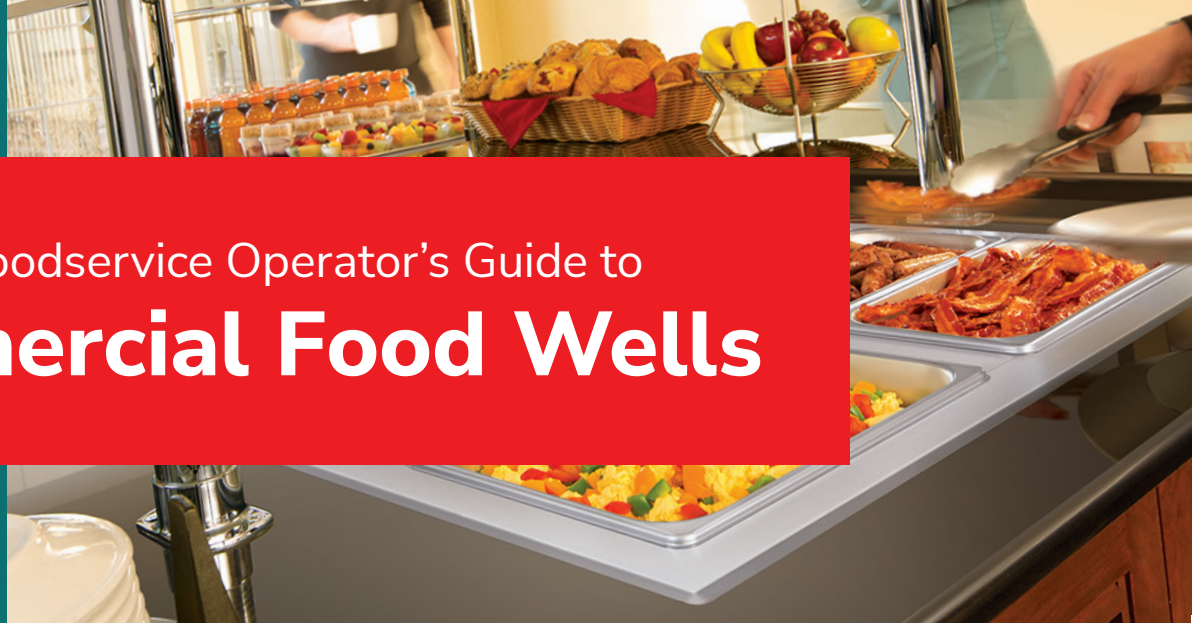

The Foodservice Operator's Guide to

# Commercial Food Wells

**Every foodservice professional knows that food safety and customer satisfaction are two of the most important elements of a successful operation. That's why finding a holding solution that keeps hot and cold menu items at peak quality and safe temperatures is absolutely critical.**

Food wells offer one such solution. After menu items are prepared — and cooled or heated to their ideal serving temperatures — a food well will keep them at temperature for longer while also ensuring products are easy for staff or customers to see and access. These qualities combined make food wells a popular choice for buffets, staff prep stations and even to-go staging areas. But their versatility and applications don't stop there. There's a great big world of food wells out there, and it's yours to discover.

**Ready to learn more?** In this guide, we explore the ins and outs of food wells to help you understand your options and determine if a food well is right for you and your operation.

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Model:
CHW-FUL

## What are food wells?

Food wells are a foodservice equipment type designed for holding and serving hot or cold menu items. There are hot wells, cold wells and convertible wells with both hot and cold modes. Some hot wells have cooking and rethermalizing capabilities, but most are intended to hold precooked, preheated foods. Similarly, cold wells (including convertible wells in cold mode) are for holding pre-chilled menu items.

Put another way, most food wells are not designed to bring the temperature of their contents up or down to a certain level. Rather, they slow the natural impact of ambient air on the products they're holding. In fact, they do this quite well.

To help maintain temperatures, food wells utilize a heating or cooling source, such as an internal heating element, induction technology, refrigeration or ice. They also leverage pans with more substantial sides (usually 2.5-6 inches or 64-152 millimeters in depth), as opposed to a flat shelf or rimmed tray. And while you don't want too much depth to your holding pans (this can impact food freshness by inhibiting more frequent food rotations), having some depth is beneficial to maintaining temperatures. Here's why.

Well pans have four sides and a bottom, not including an optional lid. This means five (not one) full pan surfaces are in close contact with the heating or cooling source of the well. As a result, you're exposing more surface area of your pans (and therefore food) to desired temperatures and are able to slow the natural cooling or warming process more effectively.

**Can you use food wells to hold beverages?**

You can leverage certain cold wells to hold pre-chilled, contained beverages. Just be careful that the tops to your beverage containers are sealed or securely fastened to avoid spills.

Model:
CWB-S4

## Food wells 101

The bullets on hot, cold and hot/cold convertible wells:

- Promote food safety and customer satisfaction
- For pre-chilled, precooked and preheated foods*
- Support front- and back-of-house applications
- Showcase and merchandise menu items
- Increase staff and customer access to product

**Some hot wells also have rethermalizing and multi-purpose cooking capabilities.*

## What you need to know about hot wells

Hot wells typically fall into one of two categories: a wet well or a dry well. Understanding how each works and what sets them apart from each other is extremely valuable. There will always be capacity, style and feature considerations to factor in with a well purchase, but determining whether your hot holding needs best align with a wet or a dry model is step one.

Model: HWB-43

**Wet Well**

Model: DHWBI-2

**Dry Well**

### How wet and dry hot wells work

As the name implies, **wet wells** must be filled with water to function properly. Operators can either fill the well manually or opt for a plumbed model that automatically fills and maintains proper water levels on its own. From here, an internal mechanism (aka heating element) in the well heats the water, which produces steam. This steam gently and evenly envelops the well's food pans, effectively passing heat to the food within them.

Like wet wells, some **dry wells** also utilize an internal mechanism to generate heat. But unlike wet wells, there is no water or steam involved. Instead, this internal mechanism produces heat, which is then passed to the food via a convection (fan, not steam-powered), radiant or conductive heat transfer method. Alternatively, some dry wells don't utilize a traditional heating element at all. Instead, they use induction technology to generate energy that flows through the well pan where it is released as heat, essentially making the well pan the heating element that then transfers the heat to the food within it.

**Is a wet well the same as a steam table?**

The terms "wet well" and "steam table" are often used as synonyms, but they actually mean different things. A wet well refers specifically to the well and its equipment components. A wet well only becomes a steam table when it's installed in a table-like format, such as a counter with cabinetry.

## Which types of hot wells provide the best heat?

### Wet wells

Wet wells utilize a natural steam convection method to transfer heat from the well's heating element to the well pans. Steam transfers heat more efficiently than water or air. It also circulates the heat in a way that gently envelops the pans to evenly disperse the heat and prevent hot or cold spots. For these reasons (and others), **wet wells are an industry favorite**.

### Convection dry wells

Similar to wet wells, some dry wells also use convection to transfer heat. The biggest difference is that dry wells use a fan and hot air (rather than naturally convected steam). This process touts the same **even, gentle heat** that you'll find with a wet well; the heat is just slightly less efficient and permeating than with steam. Ever open the door to a steam oven? The steam immediately envelops you unlike any dry oven can. That's what's at play with wet versus dry convection wells!

### Induction dry wells

Induction dry wells convert energy to heat within the metal of the well pans. Heat isn't traveling from a heating element below to the food pans above. Rather, heat conducts directly from the food pans to the food. This creates a very direct, even and energy-efficient way of delivering heat. Heat control is also a benefit with induction, so you don't have to worry about harsh heat scorching your food. **If opting for a dry well, induction or convection are definitely the way to go.**

### Radiant or conduction dry wells

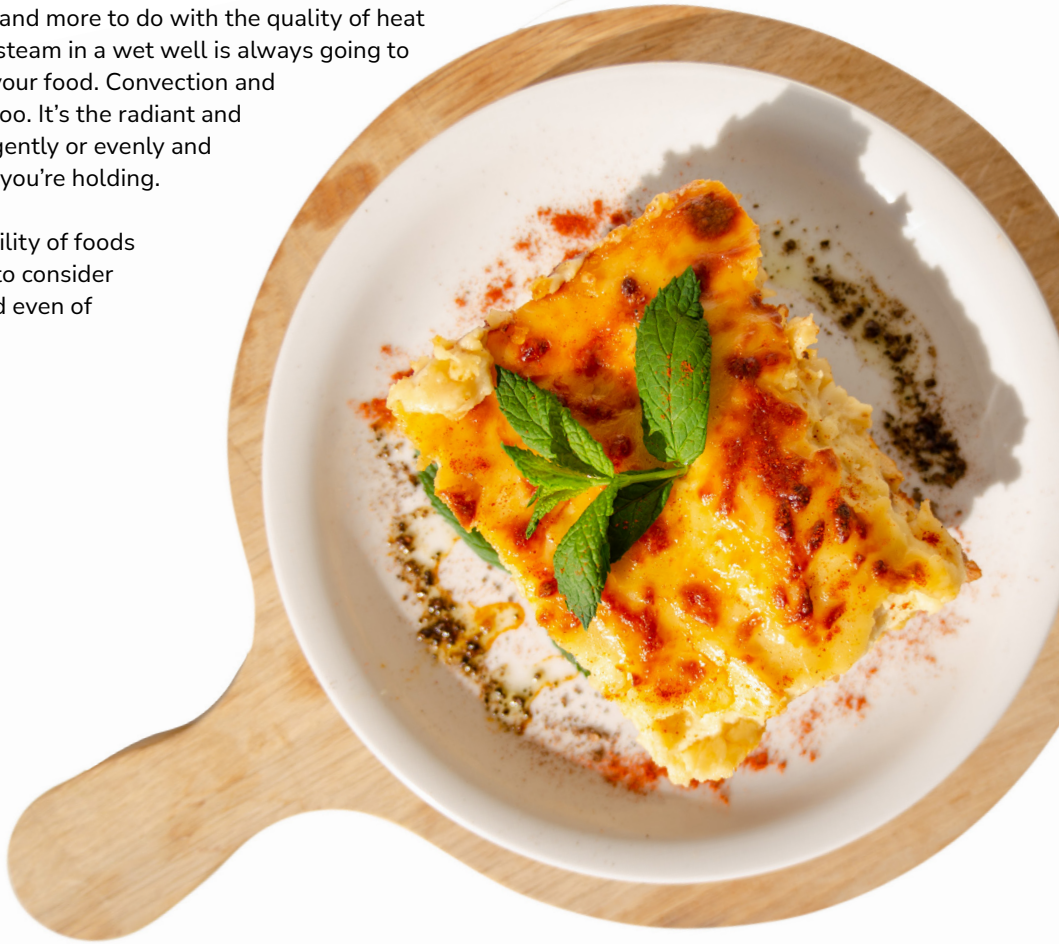
Dry wells can also utilize radiant or conduction heat transfer methods. With these methods, heat is either transferred through the air via infrared energy waves (radiant) or through direct surface-to-surface contact (conductive). Because the hot air is not circulating, it tends to apply heat more aggressively to one area of the well. This can create uneven heating and even scorch food that's sitting directly above the heating element. With these wells, **frequent food turnover and rotation is key**.

## Menu items hot wells accommodate

As discussed earlier, hot wells are typically for holding foods that have already been cooked and heated to a safe and ideal temperature for customers to enjoy. Outside of this requirement, there's not a whole lot of limitations on what you can hold in a hot well. Additionally, there's no real difference in the types of foods you can hold in a hot wet well versus a hot dry well.

Veggies, lasagna, eggs, fried rice, ground meats, and much more — there's a huge variety of foods that can go in both a wet and a dry well. Deciding between a wet and a dry well has less to do with menu and more to do with the quality of heat you're delivering to the food. Again, the steam in a wet well is always going to deliver a super even and gentle heat to your food. Convection and induction dry wells do a nice job of this too. It's the radiant and conduction dry wells that don't heat as gently or evenly and can easily impact the quality of the food you're holding.

Therefore, factoring in hold times, durability of foods and rotation frequencies are something to consider when thinking about just how gentle and even of heat you require.



## Can you hold to-go orders with a hot well?

Yes! Adding a well cover accessory to a modular/ganged wet or dry well creates a nice shelf to hold packaged grab-n-go items or pickup and delivery orders. Technically you can also hold packaged containers directly in a dry well. You just need to ensure you're using an appropriate packaging material for the temperature of the well.

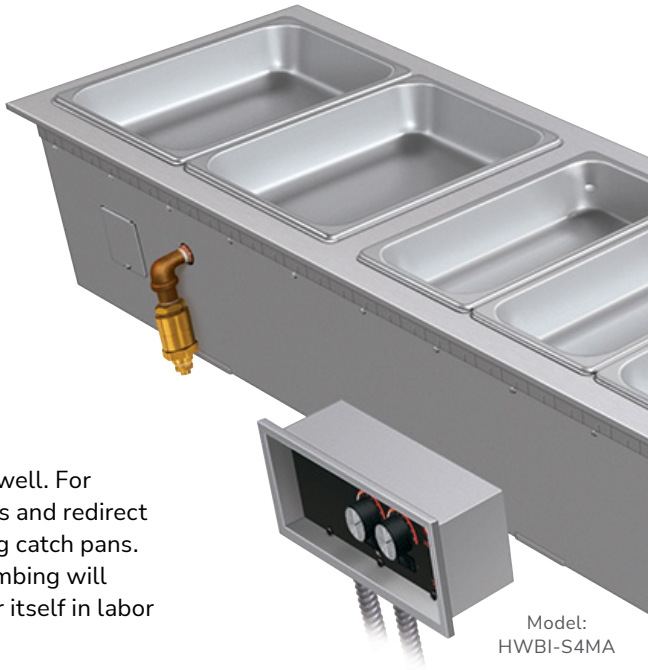
Model: COVFUL

## What's involved with installation of a hot well

As with any foodservice equipment installation, you need to use a qualified, trained installer. You'll also want to consult the operator's manual for specific installation details, as there are usually a number of requirements and recommendations around approved surface materials, distances from combustibles, ambient temperatures, remote controls and cutout sizes for drop-in models and more.

That said, the biggest thing to note about a hot well installation is that certain wells may require plumbing. Dry wells don't utilize water, so there's not really a need for it there, but wet wells are a different story. Many local codes will require them to be plumbed, particularly if the well has a drain.

But even if it's not required, plumbing can add to the convenience of your wet well. For example, plumbing will allow you to take advantage of handy auto-fill features and redirect staff time that would otherwise be spent filling and draining wells or emptying catch pans. Plus, do you really want staff scooping hot water out of a hot well? While plumbing will add an upfront cost (if you don't already have a plumbing set up), it will pay for itself in labor savings and automation.



Model:
HWBI-S4MA

**Over the install?**

Look for a countertop model. These wells sit right on your counter, require little to no installation and can easily be relocated when the need arises.

## How to care for a hot well

Despite a common misconception, hot wells are not 100% maintenance-free. Whether you go with a drop-in, countertop, wet or dry well, you still need to keep it clean. This involves a basic daily regime where you remove and clean the well pans and adapters, drain the water (if using a wet well), wipe down the entire unit with a mild detergent, remove any hardened food or mineral deposits with a plastic scouring pad, and dry the unit with a non-abrasive cloth.

In addition to daily cleanings, you need to do a deeper clean on a more periodic basis. For a dry well, this process is very similar to what we talk about above — you'll just want to take some additional measures, such as clean the fan blades on a convection unit. Same holds for a wet well. Follow the daily cleaning instructions, but take the periodic cleanings one step further. For a wet well, these periodic cleanings involve a more aggressive removal of lime and mineral buildup. Always consult the product manual, but typically you'll need to replace the water with a vinegar-water mixture, run the unit for 30 minutes, and then let the mixture sit in the well for anywhere from one to eight hours to remove excess buildup.

**Takeaway:**
All wells require daily and periodic cleaning, but wet wells require a little more work. You'll need to carve out time for cleanings and ensure staff are trained on proper cleaning protocols and processes. The good news? Taking care of your well will extend its life and enhance its performance.

## What you need to know about cold wells

Cold wells are ... well, cold. Therefore, they need a way to generate the chilly temperatures required to hold cold foods and drinks at safe and ideal temperatures. To achieve this, cold wells rely on either ice or refrigeration. This means you have two main cold well options to consider: ice wells or refrigerated wells. There is much to learn about both, but let's start with how they each work.

Model: IWB-6

**Ice Well**

Model: CWB-S2

**Refrigerated Well**

## How ice and refrigerated cold wells work

**Ice wells** are relatively straightforward. Fill them with ice (taking care to leave room for the well pans to fit), pre-chill the pans, add the pre-chilled food or drinks and let the ice do its thing. As the ice melts, it drains out of the unit and down a drain line or into a catch pan. Periodically top the well off with ice, and you're good to go.

**Refrigerated wells** are a bit more complex in terms of how they work. There's an advanced thermodynamics explanation we could get into, but let's stick with the stripped down, simplified version. Refrigerated wells use a cooling agent called refrigerant. This cooling agent essentially absorbs heat and leaves cool air behind as it passes through the well's compressor and evaporator. This cold air is delivered to the food pans (and therefore food) in one of two ways: via refrigeration lines that are wound within the well walls or through a convection fan that blows the cold air across and around the pans of food.

**Product features that enhance cold well temperature retention and performance?**

- Bezeled top and angled walls
- Insulation on the sides and bottom of the well cavity
- NSF 7 Component approved cold wall construction*
- Quality name-brand condenser*
- Refrigerant that doesn't dry food out*
- Auto-defrost* and large drain

**Only applies to refrigerated wells*

## Menu items cold wells accommodate

Cold wells are for holding any pre-chilled foods and beverages. That said, whether you opt for an ice or a refrigerated well will impact the type of products you can or may want to hold.

Ice wells are a beautiful way to showcase foods and beverages; afterall, who doesn't instantly want a cold beverage or snack that's presented upon a refreshing bed of ice? But merchandising aside, ice wells are for holding menu items that do not require time and temperature controls in order to keep them safe for human consumption. Veggies, fruits, soda, salsa, guacamole, hummus, cold pastas, salads and more — these are all great for an ice well. Just save the potentially hazardous foods, such as meats, fish and dairy, for an NSF-approved refrigerated well.

**Takeaway:**
Refrigerated wells can hold any pre-chilled foods or drinks. Ice wells are only approved for holding menu items that do not require time and temperature controls to keep them safe for consumption.

## What's involved with installation of a cold well

Just like with a hot well, you'll want to use a qualified installer and consult the operator's manual for any specifics on installing your particular cold well. That said, installation requirements vary wildly depending on if you're going with an ice well or refrigerated well.

As you'd probably guess, ice wells are easier to install; you pretty much just fill them with ice to get going. The biggest factor is the drain. If you have an ice well with a drain, you'll need to either plumb the unit or place a catch pan beneath the drain fitting to contain any water that empties from the unit. Note: local codes can dictate whether or not plumbing is required.

Refrigerated wells require a more involved installation. First off, it's recommended (and often required by code) that you plumb the unit rather than utilize a catch pan. Secondly, you need a condenser. You can opt for a self-contained or a remote condenser. Self-contained condensers are installed near the well in an attached cabinet. Remote condensers are installed in a separate location away from the unit. Determining which option is best for you comes down to preference and ventilation capabilities.

Both remote and self-contained condensers require proper ventilation. If opting for a refrigerated well with a self-contained condenser, you'll need to add louvered or grill-style vents to the cabinetry that houses the well components. Operators must consult the manufacturer's guidelines for exact requirements, but typically these vents must go in front of and behind the condensing unit, and cover a minimum area of 144 square feet (961 square centimeters). It's also worth noting that some wells include self-contained condensing units that are mounted to the center of the unit, but rotate 90 or 180 degrees for greater flexibility with vent location.

Operators that don't like the look of cabinet vents or don't want their condenser out front in higher traffic areas may want to consider the remote option. This provides design flexibility for vent-free cabinetry and allows operators to stash their unit's condenser in a more discrete location. However, operators interested in a remote setup must ensure that the location they have in mind for their condenser is well ventilated, ideally without the help of a loud air compressor.

Model: IWB-6

## How to care for a cold well

Just like with a hot well, you need to keep your cold well clean by undergoing a basic daily cleaning regimen. For the most part, this regimen involves defrosting the unit, removing and cleaning the well pans and adapters, wiping down the unit and any vents with a mild detergent, removing hardened food and mineral deposits with a plastic scouring pad, and drying the unit with a non-abrasive cloth.

Additionally, if you go with a refrigerated well, you'll need to give the condenser a little extra love each month to ensure it receives proper airflow and performs to its full potential. To do this, you need to vacuum and wipe off all vent openings and panels and gently clean the condenser's cooling fans using a vacuum and condenser coil brush. Other than than, common-sense deeper cleanings are a good idea.

Model: CWBX-S2

**Takeaway:**
All cold wells require daily and monthly cleanings to maintain proper and efficient operation. If using a refrigerated well, don't forget to also keep the airways to the condenser and the condenser itself clean and free of dust, dirt and lint buildup.

**Interested in a refrigerated well?**

Look for a refrigerated well with lower labor features, such as auto-defrost capabilities, a larger drain for easy cleaning and long, flexible refrigerant lines for convenient servicing. These features can eliminate the need for extra headcount by taking on the work for you!

## Want the best of both worlds?

In many cases, operators are on the hunt for a well that holds either hot or cold menu items. But could you benefit from a well that does both?

Convertible hot/cold wells allow operators to switch from hot to cold holding (or visa versa) in as little as 60 minutes. Have a breakfast menu that's cold and a dinner offering that's pipin' hot? With just one well and in one footprint, you can get the versatility you need to switch between dayparts and accommodate both hot or cold foods.

**Hatco's Drop-In Hot/Cold Food Well**

Model: HCWBI-3DA

**See convertible well**

## How to specify a food well

On top of determining if you want a hot (dry or wet), cold (ice or refrigerated) or hot/cold convertible well, there are a lot of other decisions you need to think through before deciding on and ordering a well. There's much to consider, but below are a few high-level categories to weigh when specifying your exact food well.

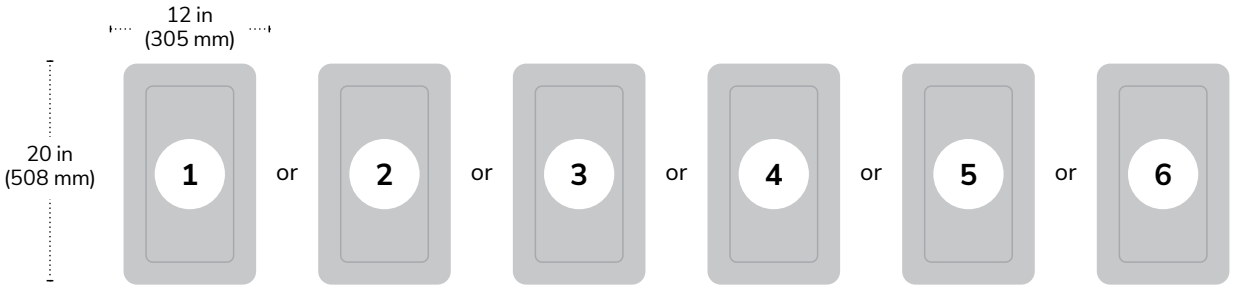
### 1. Capacity

Determining how much product you need to hold at one time is an important factor. As a general guideline, you'll need enough holding capacity to support demand during your busiest service times, but not too much that you deter staff from swapping product in and out frequently enough.

**Estimating tip: Use the "pan test"**

While well pans come in a variety of sizes and depths, think about how many full-sized, average depth pans worth of food you need to meet demand. Once you have this estimate, you can work with the well vendor to discuss other variables and determine which well options will best meet your capacity needs.

**How many pans worth of product are needed?**




*Also factor in a pan depth of 2.5-6 in (64-152 mm).*

**Tip:** If you're supplying your own condenser, make sure it's sized correctly. A six pan unit will require a larger condenser than a three pan unit!

### 2. Location

Ensure that the location you want to install the well is suitable for the model you've selected. At a minimum, confirm that the following statements are true of your desired install location:

- Your countertop will support the weight of the well with food product in it.
- The countertop material can withstand required temperatures.
- The install location does not prevent the well from sitting in an upright, horizontal position with adequate room for any necessary components, such as electrical, plumbing, a drain, condenser or other.
- The well controls can be installed in a vertical, viewable location that is accessible to the operator.
- The install location is free from drafts or excessive temperatures and heat or grease.
  Note: The location of exhaust fans, ducts, fryers and grills can impact this.
- Side-to-side and depth clearances for the well and its controls and cutouts meet the specifications outlined by the manufacturer.
- The location provides adequate ventilation for the condenser and does not rely on recycled air.

## 3. Power

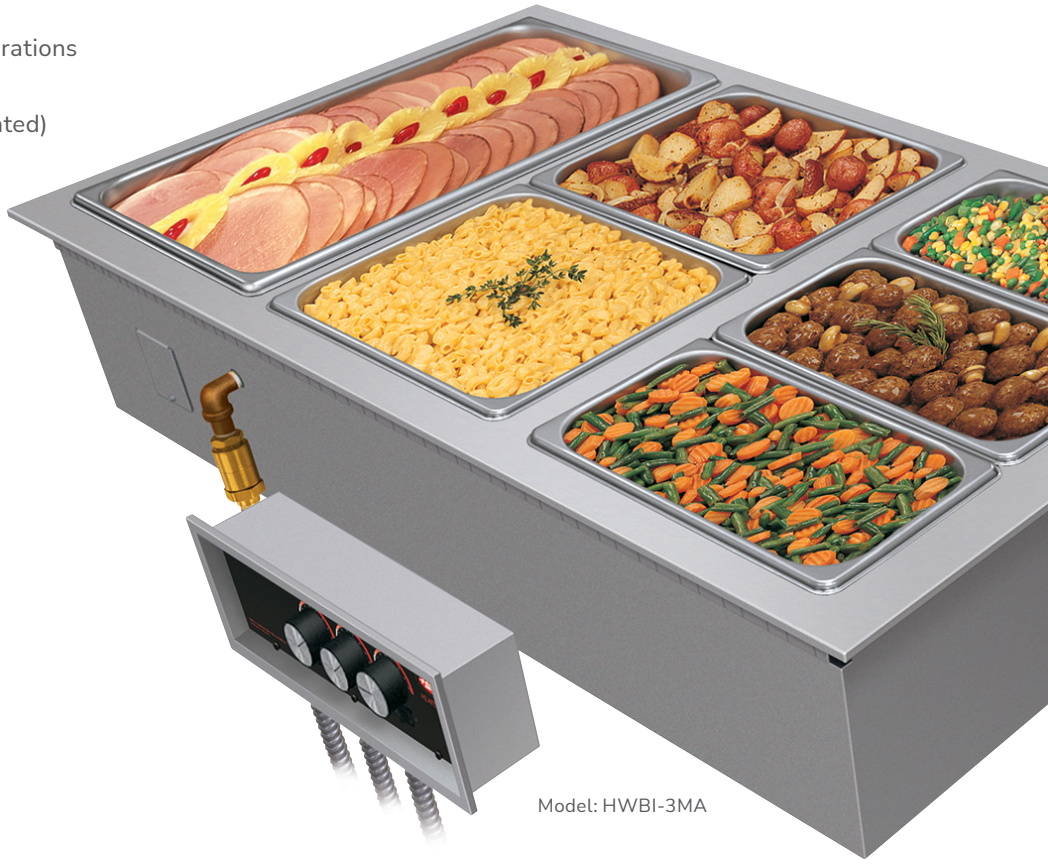
Always consult a licensed electrical contractor to ensure that the well you want conforms to electrical codes and meets your power needs. Prior to making a purchase, confirm the following:

- The voltage in your building supports the voltage of the well.
- The utility line voltage supplied to your building (single or three phase) matches the well you're purchasing.
- The electrical circuit can support the amp load that the well delivers.
- The well will deliver the level of power you're after.
  Note: Wells are available as low, standard or high watt units. For most applications, a standard watt unit will meet your needs. Consider a low watt unit if you have several wells on the same electrical circuit and a high watt unit if you're dealing with hard-to-hold foods that lose temperature quickly because of food type or location.

## 4. Features and more

Wells aren't one size fits all, so review the different features, functionality and accessories offered for each well and select a unit that will meet your immediate and near-future needs. Here are a few items to explore:

- Automation features like auto-fill, auto-defrost and other programmability
- Control box options (location and temperature control capabilities)
- Accessories such as slant kits, specialty pans, false bottoms and well covers
- Drain versus no drain
- Pan styles, sizes, depths and configurations
- Insulated or uninsulated hot wells
  (Note: all cold wells should be insulated)
- Mounting styles (top versus bottom or drop-in versus countertop)
- Slim versus standard configurations
- Warranties



Model: HWBI-3MA

## Interested in a hot or cold well?

Alrighty, temperature check! How are you feeling? Is a hot, cold or hot/cold convertible well the right holding solution for you and your operation? If so, Hatco has a large variety of high-quality wells to choose from. Ready to check them out? Click below to get started.

**Explore drop-in hot wells**

**Explore countertop hot wells**

**Explore drop-in cold wells**


Model: CWB-2

### Need more?

If you feel you need a little one-on-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**.

Hatco Corporation
P.O. Box 340500
Milwaukee, WI 53234-0500 USA
414-671-6350
support@hatcocorp.com