



# DISHROOM OPERATIONS GUIDE

for Commercial Dishwashers



[www.hobartclean.com](http://www.hobartclean.com)

# GET BETTER RESULTS FROM YOUR DISHROOM

From the pots and pans used in the kitchen to the plates and utensils in the dining areas, it's important to have clean, sanitized ware for a safe, enjoyable dining experience. Hobart commercial dishwashers play an integral role in dishroom operations, helping improve efficiencies and productivity.

This guidebook provides resources to help optimize the performance of the staff and equipment in your dishroom. You'll also find information to help get you started when you're looking at a new commercial dishwasher for your operation. For more detailed help specifying a dishmachine for your operation, contact our team at 888-378-1338.

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# DISHROOM OPERATIONS

## Great Wash Performance Creates Better Dishwashing

Anyone who has spent time soaking and scrubbing dried-up, crusty foods and grease off dishes, prep ware and pots and pans knows just how tough and time consuming some foods soils are to remove. Some of the top offenders are eggs, cheese, pie filling and tomato-based sauces, and anything with a high sugar or fat content is a prime culprit in baked-on, dried-up or greasy food messes.

Thanks to these tough foods, scrapping and soaking are necessary procedures in the dishroom. But with the right equipment in place the

time spent on these labor-intensive tasks can be reduced, leading to increased productivity and cost savings in the kitchen.

**In automatic commercial dishwashers, five factors combine to deliver optimum performance in dishwashing—water, chemicals, time, motion and dishroom procedures.**

Years of design and testing have allowed engineers to optimize these five factors in the best way to deliver dishwashers that provide excellent wash performance and consistent results.

To help get the best wash performance, engineers subject each design to a battery of tests to ensure dishwashers produce results consistent with industry standards for commercial dishwashers defined by NSF. All Hobart dishwashers are NSF certified, including the Pot & Pan certification, which means operators can be assured that the ware they put in a dishwasher, no matter how soiled, will come out clean, sanitized and ready for use. And getting more soil off can mean less time scrubbing ware.

### TIME

The soiled dishes are in the machine exposed to chemical cleaning solution is critically important.

### CHEMICALS

Detergents and rinse aids work to break up food and deliver spotless ware.



### MOTION

The distribution of water and detergent that moves food and soil off the ware.

### WATER

Maintaining the right temperature (150–160°F wash and 180°F rinse for a hi-temp machine) and the right water hardness (3 grains per gallon or less) ensures proper machine operation and sanitization.



## Dishroom Best Practices

A commercial dishwasher is a big investment. But with the right training and procedures in place, your food service operation can experience increased productivity and improved water and energy use leading to reduced costs. Dishroom best practices and guidelines provide the structure for a successful operation, and proper training ensures everyone follows washing procedures for efficiency, food safety compliance, and prolongs the life of your dishwasher.

Best practices encompass three areas: Training, washing procedures and equipment maintenance. Here are a few items to get you started with your own checklist.



### TRAINING SHOULD COVER.

- Machine startup
- Machine cleaning
- Machine shut down
- Deliming the machine
- Share operator training videos
- Display wallcharts
- An understanding of what can be washed and sanitized in the dishwasher.
- Knowledge of the proper handling, usage, and storage of chemicals. **NOTE:** Only use commercial dishwashing chemicals recommended for your machine.



### WASHING PROCEDURES.

- Pre-scrap and rinse dishes thoroughly.
- Create an efficient workflow with a dirty side and clean side to avoid cross-contamination of clean ware.
- Load racks and trays properly with adequate spacing between items so water and chemicals can reach all parts of the ware.
- Make sure adequate chemicals are available to the dishwasher and replace when needed, using proper PPE.
- Allow sufficient space for all items to dry, unstacked.



### EQUIPMENT CLEANING AND MAINTENANCE.

- Spray down the interior of the machine to clear away any remaining food particles or residue.
- Remove and clean the wash/rinse arms, scrap basket(s), curtain(s), and strainer pan(s) in soapy water.
- Spray and wipe down the tank interior.
- Carefully reinstall removed parts.
- Leave the door(s) open to allow the interior to dry and air out.
- Wipe down the exterior of the machine with stainless-steel polish to protect against corrosion.
- Run the deliming cycle as needed.

Visit [HobartCorp.com](http://HobartCorp.com) to access operator resource videos, wall charts and other training materials

## THERE'S CLEAN, AND THEN THERE'S HOBART CLEAN.



At Hobart, we set the standard for five-star quality and superior value that all other commercial dishwashers are judged by. It's a distinction we've earned over many decades by engineering dishwashers that lead the industry in wash performance, food safety, operational efficiency, and lifetime value; complete with teamwork you won't find anywhere else.

Learn more at [HobartClean.com](http://HobartClean.com)

# Time-Saving Technologies that Boost Productivity.

Not only does a commercial dishwasher improve the efficiency of your dishroom operations and reduce labor demands over time spent at a 3-compartment sink, the technologies and features of Hobart dishmachines can improve other aspects of the dishroom procedures as well.

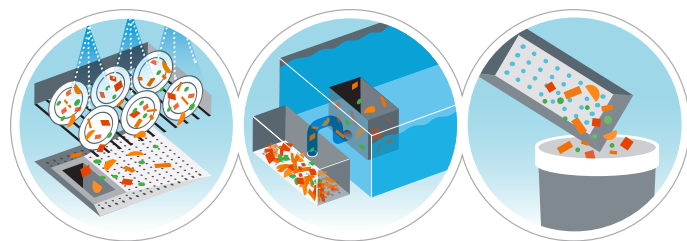


## Reducing Dishroom Labor

One of the more time-consuming steps in dishroom operations is pre-scrapping. Large pieces of leftover food and other debris need to be removed before loading ware onto the rack for cleaning. The process of getting items “clean enough” to go into the dishwasher can be a labor-intensive job. Hobart Advansys™ commercial dishwashers come with **Automatic Soil Removal (ASR)** that filters and removes heavy food soils during the wash cycle. Food remains, which would previously have had to be removed, can now go directly into the machine, reducing the time spent prescrapping by hand by 20% or more, and allowing staff to get done faster and have more time for other tasks.



Another benefit of ASR is that it actively pumps food soils out of the wash tank, which means the wash water stays clean for a longer period of time. That can reduce wash tank water changes by as much as 50%, leading to a lot less cleaning of the machine and downtime during the day.



## Taking the Pain out of Cleaning Pots and Pans

It's one thing to scrape and rinse dinner ware, but when it comes to pots and pans with baked on food and grease, there's always a lot more labor involved in manually scrubbing out ware. Many manufacturers offer pot and pan washers to help alleviate this manual labor in the dishroom, but Hobart has **NSF rated pot and pan cycles** available on all its commercial dishwashers. This means the equipment has been designed and tested to a higher NSF standard to wash off those stubborn food soils, so staff can spend less time at the sink. Hobart machines are also designed with taller openings to allow for the larger prepware cleaned during pot and pan cycles, and sheet-pan racks are available to help staff get through stacks of pans quickly.



Read more about Hobart Exclusive Advansys Technologies that cut labor time as well as water, energy and chemical consumption.



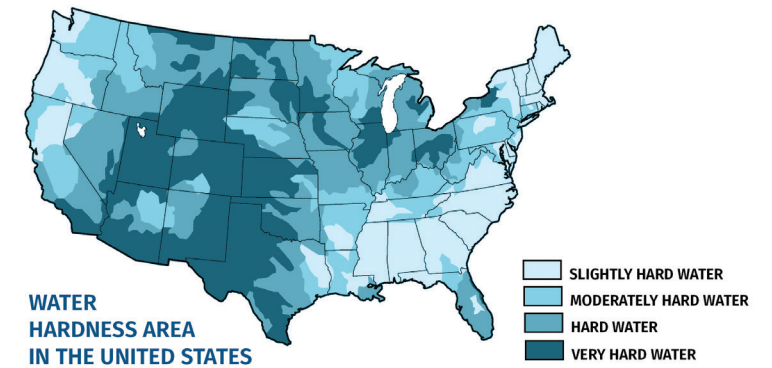
## Protecting Your Machine from Hard Water.

Water is a crucial component of dishwasher performance. The force of water breaks away caked on foods, the water itself provides a medium for delivering detergent and rinse aid, and hot water sanitizes ware. In order for all of these processes to work efficiently, the water should be the appropriate hardness for efficient dishmachine performance.

Water is described as either hard or soft depending on the amount of minerals dissolved in it, especially calcium and magnesium. Water quality measures the amount of minerals in water in grains per gallon, with 3.5-7 grains classified as moderately hard and anything over 7 grains as hard.

The process of running hard water through a machine at high temperatures causes those minerals to precipitate out of the water, eventually building up in crusty layers in the pipes, in the pump, inside the walls and on wash and rinse arms and heating element. Unmanaged, hard water in dishmachines causes issues including:

- Corrosion and rust on pipes and dishwasher components.
- Decreased efficiency and mechanical failure in parts such as the wash pump and heating element.
- Spotting or cloudy residue on glasses and other dishware due to diminishing results of soap and detergent.



Hobart recommends water measure at 3 grains or less for optimal dishmachine performance and longevity and offers a number of water treatment options as an accessory to its commercial dishwashers.

At any level of hardness, it is important to regularly delime your machine to remove scale and build up. Hobart's **Complete Delime™ with Booster Guard™** notifies operators when it is the right time to delime, saving time and chemicals while maintaining peak machine performance. Auto Dispensing automatically doses delimer into the machine, preventing excessive dosing while reducing the handling of chemicals, making it safer for operators. Booster Guard injects delimer directly into the booster, preserving machine life and helping to prevent premature booster failure.



Ask Hobart Service to measure your water hardness

## Connected Kitchens

Another way Hobart is bringing efficiencies to the dishroom is through its **Smart Connect App**. New Hobart dishmachines, like the AM16, monitor a wide range of data points and send that data to the Smart Connect Cloud via onboard WiFi. Users can connect with the free smart phone app and track and analyze dishmachine data on their smartphone or tablet.

- Analyze & optimize your machine usage over days, weeks and months.
- Monitor sanitization & food safety with temperature monitoring & logs.
- Track operating costs & consumption to manage energy, water & chemical use.
- Reduce downtime with machine status & updates errors & events.



Scan to learn more and download the SmartConnect App

# SPECIFYING AND PURCHASING GUIDE

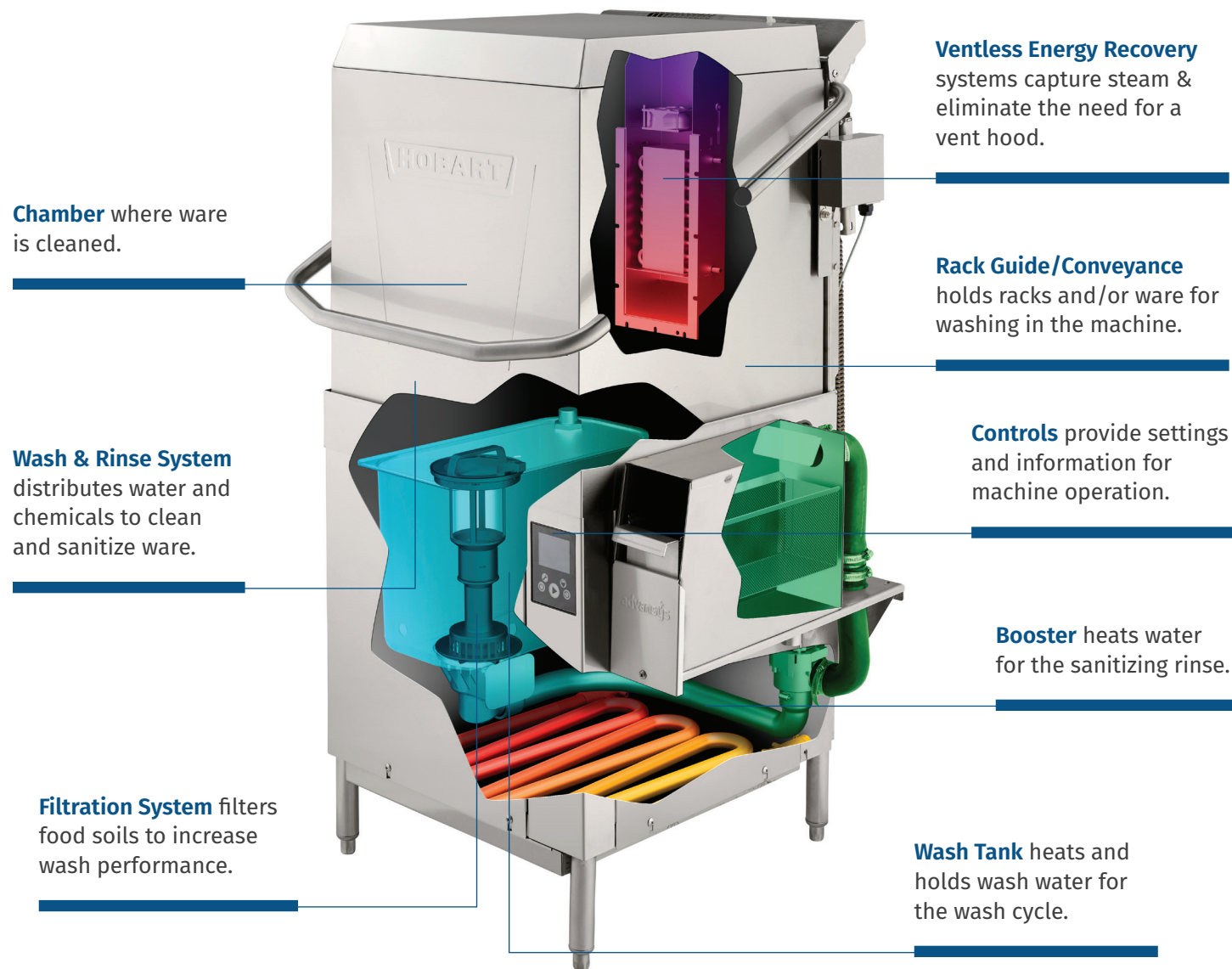
## INTRODUCTION TO COMMERCIAL DISHWASHERS

The purchase of a commercial dishwasher can go a long way in improving the efficiency and productivity of your dishroom. Whether you're upgrading from an older machine or making the jump from manual dishwashing, you'll see immediate benefits in terms of labor savings, water usage and energy costs.

Once you've decided to purchase a new machine, how do you decide which type is right for your operation? There are many factors that come into play when considering the size and type of dishwasher that will give your operation the best return on investment. From the amount of traffic during meal service to the plumbing and HVAC of your dishroom, each aspect of your dishroom should be considered to help ensure from the right size and fit of your new commercial dishwasher.

### What Makes up a Commercial Dishwasher?

Most high-temperature, recirculating commercial dishwashers feature the following anatomy:



## What Size Dishwasher Do You Need?

There are five basic types of commercial dishwashers. Determining which type is best for your operation will depend on a variety of factors, including:

- Volume and type of service provided.
- Type of ware and utensils you'll be washing.
- Utilities
- Building layout
- Local and federal regulations, such as plumbing and building codes.

Racks Per Hour	Model	Type	Description	Learn More
13-48	LXn	Glasswashers & Undercounter Warewashers	Packs speed & performance into a compact size, runs up to 48 racks per hour with optional second level rack. Perfect in bars and operations serving up to 50 meals per hour.	
13-20	PWn	Pot, Pan & Utensil Washers	Are specially engineered for messy, oversized ware generated in the back-of-the-house. They are well suited to bakeries, delis and other food prep environments.	
36-60	AM16	Door Type Warewashers	Are designed for operations serving 50-100 people per meal and are efficient for operations putting through up to 60 racks per hour. The door slides up for chamber loading in either a pass-through or corner application.	
202-342	CL	Rack Conveyors	Move dishes on a rack through the wash and rinse system, washing 202-342 racks per hour for higher volume operations serving 250-1,500 meals per hour.	
15,000 (Dishes per Hour)	FT1000e	Flight Type Dishwashers	Are manufactured for high-volume operations serving more than 1,500 meals per hour and can wash up to 15,000 dishes per hour. The belt conveyor takes ware through the pre-wash, wash and rinse tank.	

# DIVING DEEPER INTO DISHWASHER TYPES

The size and wash style differentiate types of commercial dishwashers, but there are other choices to make as well.

## Preparing for Your Dishwasher

As you research and prepare to install a new commercial dishwasher, it's important to think beyond the equipment itself and consider your facility and local building codes and plan accordingly for the new equipment. Always refer to the product specification sheets available at [www.HobartCorp.com](http://www.HobartCorp.com) for the power, drain and water line requirements for your machine, and make sure you use licensed contractors when any changes or

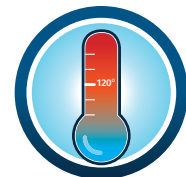
upgrades are required. Most Hobart dishmachines are designed to fit into existing utilities and tabling footprints when you're replacing an old machine.

There are also other factors to take into consideration that can be addressed by special Hobart technologies.



## Choosing Between High Temperature or Chemical Sanitizing

Among the many different considerations in choosing a commercial dishwasher, operators must weigh the options of high or low temp, or chemical sanitizing machines.



### High Temperature Dishwashers

sanitize ware with hot water. Minimum temperatures for wash water are 150-160°F, and 180°F for rinse water.



### Chemical Sanitizing Dishwashers

sanitize ware with a chemical sanitizer. Minimum temperatures for wash water and rinse water are the same at 120-140°F.

Chemical sanitizing dishwashers often use a lower amperage and require less energy to heat the water; however, lower chemical consumption and energy saving

technologies often make the total cost of ownership less with a hot water sanitizing dishwasher. Other benefits of high temperature dishwashers include:

- Better removal of tough food soil and less prescrapping.
- Onboard booster heaters help provide more consistent wash results.
- Water evaporates more quickly from ware, making it dry and ready for use when removed from the machine.
- Energy recovery technologies allow some models to run on a cold water line, reducing demand on facility water heaters.



For more information on sanitization and food safety, check out Hobart's Food Safety Fact Book at: [Warewash.hobart.com/factbook](http://Warewash.hobart.com/factbook).



## Keeping Things Comfortable in the Dishroom

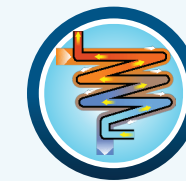
The speed and efficiency in cleaning dishes comes from high temperatures and lots of water, which of course leads to the creation of heat and steam. This can affect the venting and HVAC requirements and overall comfort of a dishroom, measured in terms of latent heat and sensible heat.

- **Sensible Heat** is the warmth produced by the equipment that raises the temperature of the environment, much like the sun warms the Earth.
- **Latent Heat** is the energy released when water changes to steam. Humidity itself isn't latent heat, but it contains latent heat, which can make the environment feel hotter without causing a change in the actual temperature.

Your facility's HVAC should be properly sized to accommodate both the latent and sensible heat put off by a commercial dishwasher. A system that is too small

might not be able to cool the area to the temperature set on the thermostat, while a unit that is too big will cool the room temperature down so quickly that the unit doesn't have time to remove the latent heat, leaving the air in the room uncomfortable. Work with your construction engineer to properly size the HVAC system for the load in your dishroom. You will find latent and sensible heat values on all Hobart spec sheets.

**Ventless dishwashers** are another way to help improve the comfort level in your dishroom. Hobart dishmachines with **Ventless Energy Recovery** incorporate a condensing cycle that captures steam from the wash chamber and condenses it to heat the incoming cold water. Less is energy needed for the booster to heat water, and less latent heat is released into the dishroom. This eliminates the need for a costly vent hood and ductwork, and the possible roof penetration that goes with it.



## WHAT'S GOING DOWN YOUR DRAIN?

When preparing to install a commercial dishwasher consider what's going down the drain. Many municipalities have adopted National Plumbing Code requirements that water entering the drainage system be 140°F or less, in order to prevent damage to pipes. A drain water tempering kit must be installed on high-temperature dishwashers, which opens a valve to automatically add cold water to the hot wastewater when it starts to drain at the end of a cycle. This is usually a 1:1 ratio, literally dumping water right down the drain.

The **Drain Water Energy Recovery system (DWeR)** option on Hobart dishmachines save both water and money for operators. The DWeR system transfers heat from the hot wastewater to the incoming cold water going to the booster. Drain water is cooled below 140 degrees without the addition of more cold water, reducing the amount of tempering water needed by up to 90%. The heat transfer also allows the machine to run on a cold water line, while reducing the energy needed to heat the booster by as much as 20%.



## ENERGY STAR® Certification

Hobart dishmachines are engineered for low cost of operations and energy efficiency, from energy recovery technology that recycles heat into the booster, to wash systems designed for peak performance and efficient water use. For 14 consecutive years, Hobart has earned Energy Star Partner of the Year recognition, the nation's highest honor for energy efficiency. Hobart is fully committed to delivering on high standards for efficiency across all of our dishwasher lines.

In 2021 the EPA is issuing Energy Star 3.0, with more stringent guidelines and testing for commercial dishmachines. All new Hobart dishwasher lines have been updated and tested to meet these new requirements and can help operators see 17% or more in savings from improved consumption and performance over older, non-Energy Star recognized models. Look for the Energy Star label when you're specifying your next commercial dishwasher.





## ADDITIONAL RESOURCES



THERE'S CLEAN, AND THEN  
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