



HFM-24



HFM-30



HFM-48



HFM-72

### Models:

**HFM-24**

**HFM-30**

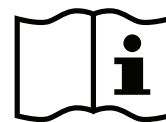
**HFM-48**

**HFM-72**

- **INSTALLATION**
- **OPERATION**
- **MAINTENANCE**

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[www.alto-shaam.com](http://www.alto-shaam.com)



Consult instructions  
for operation and use.



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### Enjoy your Alto-Shaam Thermal Shelf!

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**Features**

Elevate your food display using décor matching surface materials that compliment your countertop while enhancing the presentation of your food. Simple thermostat controls ensure that food stays at the right temperature for a long service, while stainless steel panels assume the classy pose needed for high-end events.

The heated drop-in base features radiant Halo Heat to heat to maintain food temperature and quality over a longer period of time. Better presentation means more sales and less waste.

Halo Heat drop-in thermal display modules are more energy efficient than standard coil-based heating elements resulting in lower utility costs.

### Extend Your Manufacturer's Warranty

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**Register**

Registering your appliance ensures prompt service in the event of a warranty claim. You will also receive direct notifications of software updates and additional product information.

Your personal information will not be shared with any other company.

[www.alto-shaam.com/warranty](http://www.alto-shaam.com/warranty)

### Alto-Shaam 24/7 Emergency Repair Service

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**Call**

Call 800-558-8744 to reach our 24-hour emergency service call center for immediate access to local authorized service agencies outside standard business hours. The emergency service access is provided exclusively for Alto-Shaam equipment and is available throughout the United States through Alto-Shaam's toll free number.

**Availability**

Emergency service access is available seven days a week, including holidays.

## Delivery

This Alto-Shaam appliance has been thoroughly tested and inspected to ensure only the highest quality appliance is provided. Upon receipt, check for any possible shipping damage and report it at once to the delivering carrier. See Transportation Damage and Claims section located in this manual.

This appliance, including unattached items and accessories, may be delivered in one or more packages. Ensure all standard items and options have been received with each appliance as ordered. Save all the information packed with the appliance. Register the appliance online at [www.alto-shaam.com/en/support/warranty-registration](http://www.alto-shaam.com/en/support/warranty-registration) to ensure prompt service in the event of a warranty parts and labor claim.

This manual must be read and understood by all people using or installing the appliance. Contact the Alto-Shaam Tech Team Service Department if you have any questions concerning installation, operation, or maintenance.

1-800-558-8744; servicedept@alto-shaam.com

### The serial number is required for all inquiries.

Always include both model and serial number(s) in any correspondence regarding the appliance.

**Model:** \_\_\_\_\_

**Serial number:** \_\_\_\_\_

**Purchased from:** \_\_\_\_\_

**Date installed:** \_\_\_\_\_ **Voltage:** \_\_\_\_\_



## CAUTION



Appliance and accessories may be heavy. To prevent serious injury, **always** use a sufficient number of trained and experienced workers when moving or leveling appliance and handling accessories.

## Environmental Conditions

### Operational Environmental Conditions

- Before use, appliance must acclimate to room temperature in the environment it is placed — 24 hours is recommended.
- Ambient temperature range of 60°F to 110°F (16°C to 43°C).
- Relative humidity of less than 95% non-condensation.
- Atmospheric pressure range of 50kPa to 106kPa.

## Transportation and Damage Claims



All Alto-Shaam equipment is sold Free on Board (F.O.B.) shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, do not put the appliance into service until the damage has been inspected by an authorized Alto-Shaam service provider.

Shipping damages are a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

1. Make an immediate inspection while the appliance is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the appliance is moved to a storage area.
2. Do not sign a delivery receipt or a freight bill until a proper count has been made and inspection of all appliances are received.

3. Note all damage to packages directly on the carrier's delivery receipt.
4. Make certain the driver signs the delivery receipt. If the driver refuses to sign, make a notation of this refusal on the receipt.
5. If the driver refuses to allow inspection, write the following on the delivery receipt: **Driver refuses to allow inspection of containers for visible damage.**
6. Contact the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation to the carrier's office with the time, date, and the person called.
7. Save any packages and packing material for further inspection by the carrier.
8. Promptly file a written claim with the carrier and attach copies of all supporting paperwork.

Alto-Shaam will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. Alto-Shaam cannot, however, file any damage claims, assume the responsibility of any claims, or accept deductions in payment for such claims.

Record the model and serial number of the appliance for easy reference. Always refer to both model and serial number in any contact with Alto-Shaam regarding this appliance.

Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Date Installed: \_\_\_\_\_

Voltage: \_\_\_\_\_

Purchased From: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_



Alto-Shaam has established a twenty-four hour emergency service call center to offer immediate customer access to a local authorized service agency outside of standard business hours. The emergency service access is provided exclusively for Alto-Shaam equipment and is available throughout the United States through the use of Alto-Shaam's toll-free number. Emergency service access is available seven days a week including holidays.

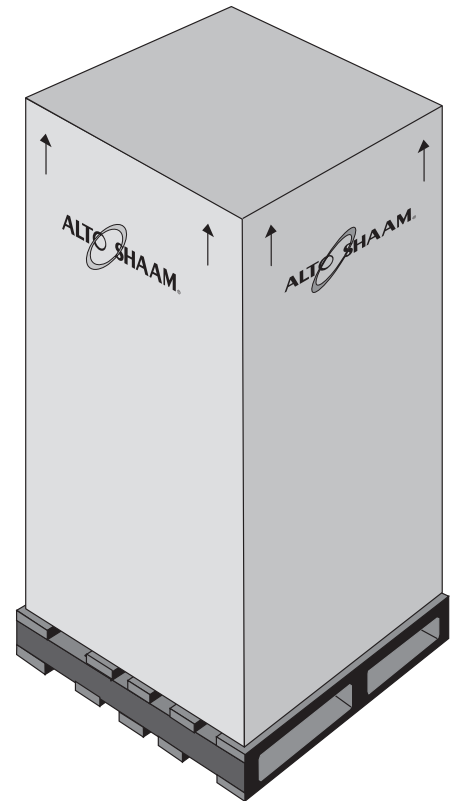
## Unpacking

- Carefully remove the appliance from the carton or crate.

**NOTE:** Do not discard the carton and other packaging material until you have inspected the appliance for hidden damage and tested it for proper operation.


Do not discard this manual. This manual is considered to be part of the appliance and is to be provided to the owner or manager of the business or to the person responsible for training operators. Additional manuals are available from the manufacturer.

- Read all instructions in this manual carefully before installing this appliance, using the appliance or performing routine maintenance. Following procedures other than those indicated in this guide to use and clean the appliance is considered inappropriate and may cause damage, injury or fatal accidents, in addition to voiding the warranty and relieving Alto-Shaam of all liability.
- Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.



- The appliance is intended to cook, hold or process foods for the purpose of human consumption. No other use for this appliance is authorized and is therefore considered dangerous. The appliance must not be used to cook food containing flammable materials (such as food with alcohol). Substances with a low flash point can ignite spontaneously and cause a fire.
- The appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users. Alto-Shaam recommends regular staff training to avoid the risk of accident or damage to the appliance. Operators must also receive regular safety instructions.
- Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified and trained technicians.
- This manual should be considered a permanent part of this appliance. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the appliance if the item is sold or moved to another location.

**NOTICE:** For equipment delivered for use in any location regulated by the following directive: 2012/95/EC WEEE



**Do not** dispose of electrical or electronic equipment with other municipal waste.

Knowledge of proper procedures is essential to the safe operation of electrically and/or gas energized equipment. The following signal words and symbols may be used throughout this manual.

## **DANGER**

Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

## **WARNING**

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

## **CAUTION**

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

**NOTICE:** Indicates information considered important, but not hazard-related (e.g., messages relating to property damage).



Indicates that referral to operating instructions is recommended to understand operation of equipment.

## Safety Procedures

- To prevent serious injury, death or property damage, the appliance should be inspected and serviced at least every twelve (12) months by an authorized service partner or trained technician.
- **Only** allow an authorized service partner or trained technician to service or to repair the appliance. Installation or repairs that are not performed by an authorized service partner or trained technician, or the use of non-factory authorized parts will void the warranty and relieve Alto-Shaam of all liability.
- When working on this appliance, observe precautions in the literature, on tags, on labels attached to or shipped with the appliance and other safety precautions that may apply.
- If the appliance is installed on casters, freedom of movement of the appliance must be restricted so that utility connections (including gas, water, and electricity) cannot be damaged when the appliance is moved. If the appliance is moved, ensure that all utility connections are properly disconnected. If the appliance is returned to its original position, ensure that retention devices and utility connections are properly connected.
- **Only** use the appliance when it is stationary. Mobile appliance racks, mobile plate racks, transport trolleys, and appliances on casters can tip over when being moved over an uneven floor or threshold and cause serious injury.
- **Always** apply caster brakes on mobile appliances or accessories when these are not being moved. These items could move or roll on uneven floors and cause property damage or serious injury.
- Be extremely careful when moving appliances because the food trays may contain hot fluids that may spill, causing serious injury.



### WARNING

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.



## ⚠ WARNING

Improper installation, alteration, adjustment, service, cleaning, or maintenance could result in property damage, severe injury, or death.

Read and understand the installation, operating and maintenance instructions thoroughly before installing, servicing, or operating this equipment.

## ⚠ CAUTION



To prevent **personal injury** or **property damage**:

**Always** use hand protection when operating this appliance to avoid burns. Metal parts of this equipment become extremely hot when in operation.

## ⚠ CAUTION



Appliance and accessories may be heavy. To prevent serious injury, **always** use a sufficient number of trained and experienced workers when moving or leveling appliance and handling accessories.

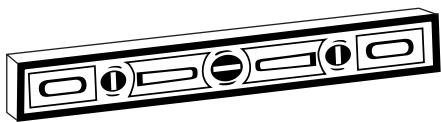
## ⚠ WARNING



To prevent personal injury, death or property damage:

**Do not** store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

1. The hot food module must be installed on a stable and level surface free of vibration and suitably strong enough to support the combined weights of the unit plus the maximum product load weight.
2. Peel the protective film from the VHB tape located on the inside flanges of decor face. Press decor face (control) up against the mounting surface.
3. Level the appliance from side-to-side and front-to-back with the use of a spirit level.
4. Follow solid surface material manufacturer's instructions for its installation.



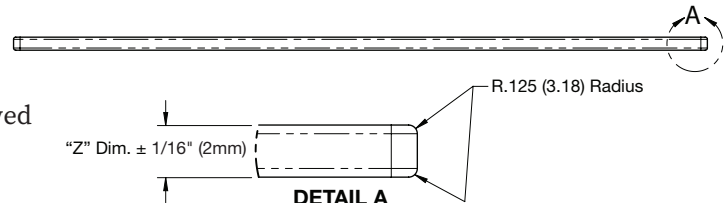
5. In order to maintain standards established by the National Sanitation Foundation, all edges must be sealed to the heated module with NSF approved sealant.

### Clearance requirements

6" (152mm) from bottom of appliance.

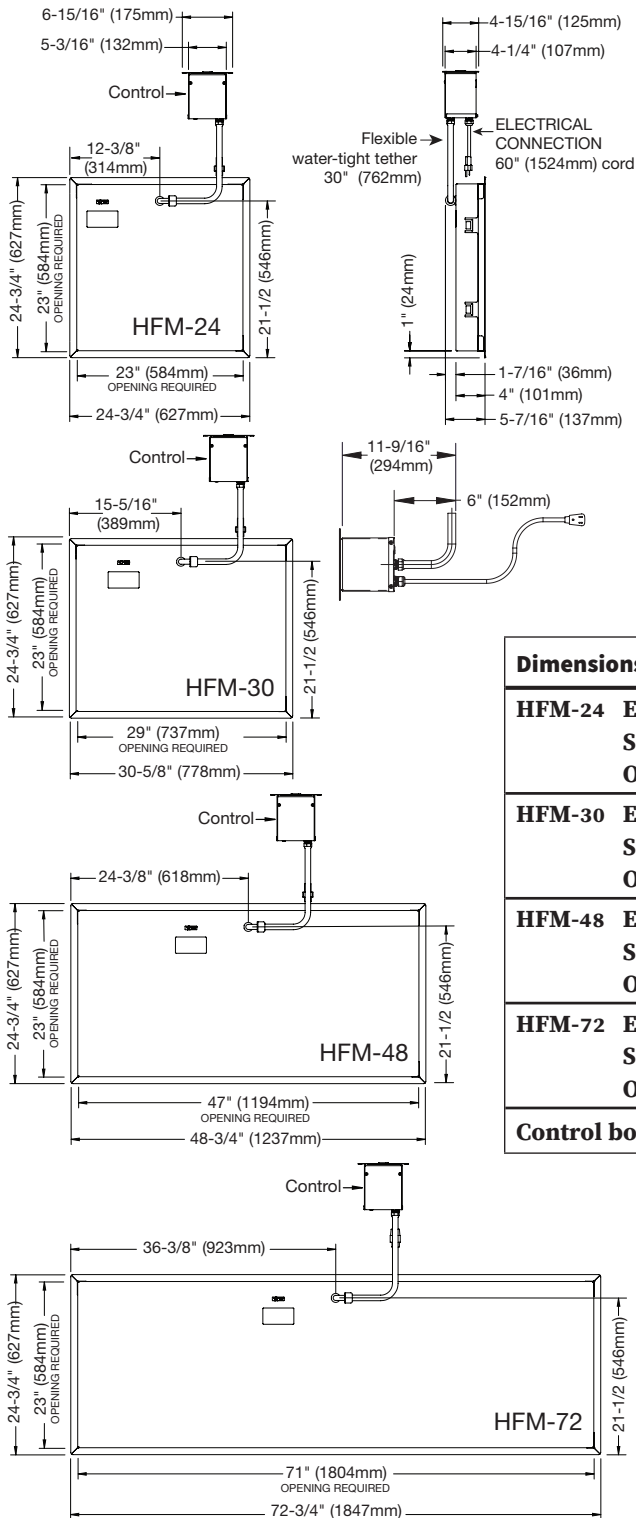
### Installation requirements

- Unit must be installed level.
- It must not be installed in any area where it may be affected by steam, grease, dripping water, high temperatures, or any other severely adverse conditions.
- Customer supplied solid surface material must be rated to withstand temperatures of 300°F (148°C). Material must be 3/4" (19mm) thickness, 3/8" (10mm) radius corners and 1/8" (3mm) top and bottom edge. Edges must be polished. Contact Alto-Shaam for additional information.



# Dimensions

## HFM SERIES SIDE VIEW



### Dimensions: L x W x D

<b>HFM-24</b>	<b>Exterior:</b> 24-3/4" x 24-3/4" x 5-7/16" (627mm x 627mm x 137mm)
	<b>Surface material:</b> 22-3/8" x 22-3/8" x 3/4" (568mm x 568mm x 19mm)
	<b>Opening required (L x W):</b> 23" x 23" (584mm x 584mm)
<b>HFM-30</b>	<b>Exterior:</b> 30-5/8" x 24-3/4" x 5-7/16" (778mm x 627mm x 137mm)
	<b>Surface material:</b> 28-3/8" x 22-3/8" x 3/4" (721mm x 569mm x 19mm)
	<b>Opening required (L x W):</b> 29" x 23" (737mm x 584mm)
<b>HFM-48</b>	<b>Exterior:</b> 48-3/4" x 24-3/4" x 5-7/16" (1237mm x 627mm x 137mm)
	<b>Surface material:</b> 46-3/8" x 22-3/8" x 3/4" (1178mm x 569mm x 19mm)
	<b>Opening required (L x W):</b> 47" x 23" (1194mm x 584mm)
<b>HFM-72</b>	<b>Exterior:</b> 72-3/4" x 24-3/4" x 5-7/16" (1847mm x 627mm x 137mm)
	<b>Surface material:</b> 70-3/8" x 22-3/8" x 3/4" (1788mm x 569mm x 19mm)
	<b>Opening required (L x W):</b> 71" x 23" (1803mm x 584mm)
<b>Control box cutout required:</b> 4-1/2" x 5-1/2" x 11-9/16" (115mm x 140mm x 294mm)	

### Accessories

- ☐ Cutting Board (for placement on top of surface material) BA-2054
- 24" (610mm) H x 18" (470mm) W x 1/2" (13mm) D

## Electrical Connections

### **WARNING**



To prevent serious injury, death, or property damage:

All electrical connections must be made by a qualified and trained service technician in accordance with applicable electrical codes.



This appliance must be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/NFPA No. 70. In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1 or local codes.



CE-approved appliances include an equipotential-bonding terminal marked with the symbol shown on the left. Provisions for earthing are to be made in accordance with IEC:2010 60335-1 section 27 or local codes.

### **WARNING**



To prevent SERIOUS INJURY, DEATH or PROPERTY DAMAGE:











All electrical connections must be made by a qualified and trained service technician in accordance with applicable electrical codes.

### **CAUTION**



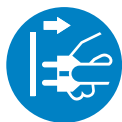
Power source must match voltage identified on appliance rating tag. The rating tag provides essential technical information required for any appliance installation, maintenance or repairs. Do not remove, damage or modify the rating tag.

1. An identification tag is permanently mounted on the unit.
2. Plug the unit into a properly grounded receptacle ONLY, positioning the unit so the power supply cord is easily accessible in case of an emergency. Arcing will occur when connecting or disconnecting the unit unless all controls are in the OFF position.

Electrical					
HFM-24					
V	Ph	Hz	A	kW	
208	1	60	3.2	0.65	 NEMA 6-15P 15A, 250V plug
230	1	50/60	3.4	0.78	 CEE 7/7* Plug rated 250V
HFM-30					
V	Ph	Hz	A	kW	
208	1	60	2.8	0.62	 NEMA 6-15P 15A, 250V plug
230	1	50/60	3.4	0.83	 CEE 7/7* Plug rated 250V
HFM-48					
V	Ph	Hz	A	kW	
208	1	60	6.4	1.3	 NEMA 6-15P 15A, 250V plug
230	1	50/60	7.1	1.6	 CEE 7/7* Plug rated 250V
HFM-72					
V	Ph	Hz	A	kW	
208	1	60	9.7	1.99	 NEMA 6-15P 15A, 250V plug
230	1	50/60	10.6	2.4	 CEE 7/7* Plug rated 250V
*Additional 230V plugs available					
 CH2-16P Plug rated 250V			 BS1363 Plug rated 250V		

# Operating Instructions

## ⚠ WARNING



To prevent serious injury, death, or property damage, **always** disconnect the appliance from the power source before cleaning or servicing.

## ⚠ WARNING

Improper installation, alteration, adjustment, service, cleaning, or maintenance could result in property damage, severe injury, or death.

Read and understand the installation, operating and maintenance instructions thoroughly before installing, servicing, or operating this equipment.

## ⚠ CAUTION



To prevent **personal injury** or **property damage**:

**Always** use hand protection when operating this appliance to avoid burns. Metal parts of this equipment become extremely hot when in operation.

➤ **Customer-supplied solid heated surface material must be rated to withstand temperatures at 300°F (148°C) or above. Material must be 3/4" (19mm) thickness.**

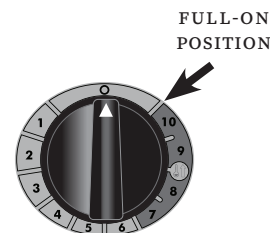
➤ **DO NOT use knives or utensils on the heated surface. Use a cutting board.**

➤ **Use hand protection when handling hot items.**

## Before initial use:

Before operating, clean the exterior with a clean, damp cloth and mild soap solution. Rinse carefully.

1. Turn power switch ON.
2. A preheat step is now built into the new control. If you want to hold at setting #4, set dial to #4. The unit will automatically preheat for a predetermined time and then begins to cycle on and off based on the setting selected. The pilot light (green) is "on" whenever the dial is turned to a number.
3. This unit is not designed for heating cold products. The product must be at the proper heated internal temperature before transferring to the hot food module surface. Use a temperature sensing food probe to check the internal temperature of the product being held.
4. Adjust the thermostat on the hot food module to give the best overall setting based on the type and quantity of the product.
5. When holding food for prolonged periods, it is advisable to periodically check the internal temperature of each item with a food thermometer to assure proper temperature maintenance.
6. Read this manual for additional information on safe internal product temperatures, general holding guidelines, and sanitation procedures.



## General Holding Guidelines

Chefs, cooks and other specialized food service personnel employ varied methods of cooking. Proper holding temperatures for a specific food product must be based on the moisture content of the product, product density, volume, and proper serving temperatures. Safe holding temperatures must also be correlated with palatability in determining the length of holding time for a specific product.

Halo Heat maintains the maximum amount of product moisture content without the addition of water, water vapor, or steam. Maintaining maximum natural product moisture preserves the natural flavor of the product and provides a more genuine taste. In addition to product moisture retention, the gentle properties of Halo Heat maintain a consistent temperature throughout the cabinet without the necessity of a heat distribution fan, thereby preventing further moisture loss due to evaporation or dehydration.

In an enclosed holding environment, too much moisture content is a condition which can be relieved. A product achieving extremely high temperatures in preparation must be allowed to decrease in temperature before being placed in a controlled holding atmosphere. If the product is not allowed to decrease in temperature, excessive condensation will form increasing the moisture content on the outside of the product. To preserve the safety and quality of freshly cooked foods however, a maximum of 1 to 2 minutes must be the only time period allowed for the initial heat to be released from the product.

Most Halo Heat holding equipment is provided with a thermostat control between 60° and 200°F (16° to 93°C). If the unit is equipped with vents, close the vents for moist holding and open the vents for crisp holding.

Holding Temperature Range		
Meat	Fahrenheit	Celsius
Beef Roast — Rare	130°F	54°C
Beef Roast — Med/Well Done	155°F	68°C
Beef Brisket	160°F–175°F	71°C–79°C
Corn Beef	160°F–175°F	71°C–79°C
Pastrami	160°F–175°F	71°C–79°C
Prime Rib — Rare	130°F	54°C
Steaks — Broiled/Fried	140°F–160°F	60°C–71°C
Ribs — Beef Or Pork	160°F	71°C
Veal	160°F–175°F	71°C–79°C
Ham	160°F–175°F	71°C–79°C
Pork	160°F–175°F	71°C–79°C
Lamb	160°F–175°F	71°C–79°C
Poultry		
Chicken — Fried/Baked	160°F–175°F	71°C–79°C
Duck	160°F–175°F	71°C–79°C
Turkey	160°F–175°F	71°C–79°C
General	160°F–175°F	71°C–79°C
Fish/Seafood		
Fish — Baked/Fried	160°F–175°F	71°C–79°C
Lobster	160°F–175°F	71°C–79°C
Shrimp — Fried	160°F–175°F	71°C–79°C
Baked Goods		
Breads/Rolls	120°F–140°F	49°C–60°C
Miscellaneous		
Casseroles	160°F–175°F	71°C–79°C
Dough — Proofing	80°F–100°F	27°C–38°C
Eggs — Fried	150°F–160°F	66°C–71°C
Frozen Entrees	160°F–175°F	71°C–79°C
Hors d'oeuvres	160°F–180°F	71°C–82°C
Pasta	160°F–180°F	71°C–82°C
Pizza	160°F–180°F	71°C–82°C
Potatoes	180°F	82°C
Plated Meals	140°F–165°F	60°C–74°C
Sauces	140°F–200°F	60°C–93°C
Soup	140°F–200°F	60°C–93°C
Vegetables	160°F–175°F	71°C–79°C
The holding temperatures listed are suggested guidelines only. All food holding should be based on internal product temperatures. Always follow local health (hygiene) regulations for all internal temperature requirements.		

# Cleaning and Preventative Maintenance

## Protecting Stainless Steel Surfaces



It is important to guard against corrosion in the care of stainless steel surfaces. Harsh, corrosive, or inappropriate chemicals can completely destroy the protective surface layer of stainless steel. Abrasive pads, steel wool, or metal implements

will abrade surfaces causing damage to this protective coating and will eventually result in areas of corrosion. Even water, particularly hard water that contains high to moderate concentrations of chloride, will cause oxidation and pitting that result in rust and corrosion. In addition, many acidic foods spilled and left to remain on metal surfaces are contributing factors that will corrode surfaces.

Proper cleaning agents, materials, and methods are vital to maintaining the appearance and life of this appliance. Spilled foods should be removed and the area wiped as soon as possible but at the very least, a minimum of once per day. Always thoroughly rinse surfaces after using a cleaning agent and wipe standing water as quickly as possible after rinsing.

## Cleaning Agents

Use non-abrasive cleaning products designed for use on stainless steel surfaces. Cleaning agents must be chloride-free compounds and must not contain quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel surfaces. Failure to observe this precaution will void the warranty. Always use the proper cleaning agent at the manufacturer's recommended strength. Contact your local cleaning supplier for product recommendations.

## Cleaning Materials

Cleaning can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods are needed, use a non-abrasive scouring pad on difficult areas and make certain to scrub with the visible grain of surface metal to avoid surface scratches. Never use wire brushes, metal scouring pads, or scrapers to remove food residue. Failure to observe this precaution will void the warranty.

## NOTICE



To protect stainless steel surfaces, completely avoid the use of abrasive cleaning compounds, chloride based cleaners, or cleaners containing quaternary salts. **Never** use hydrochloric acid (muriatic acid) on stainless steel. **Never** use wire brushes, metal scouring pads or scrapers.

## ! WARNING



To prevent **serious personal injury, death, or property damage:**

The appliance must be cleaned thoroughly to avoid deposits of grease and or food residue inside the appliance that may catch fire. If fat deposits and/or food waste inside the appliance ignite, shut down the appliance immediately and keep the appliance door closed to extinguish the fire. If further extinguishing is required, disconnect the appliance from the main power and call the fire department. Failure to clean the appliance properly voids the warranty and relieves Alto-Shaam of all liability.

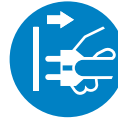
## Cleaning and Preventative Maintenance

### Clean after each use:

1. Disconnect from the power source and allow to cool.
2. Remove cutting board after each use. Clean and sanitize separately following applicable state or local health sanitation ordinances. Air dry the board on a clean, flat surface to prevent board from warping. If the board becomes warped, heating will restore flexibility to facilitate flattening. Warped boards may be heated on the carving shelf surface, in a preheated Combitherm CombiOven for 10 minutes on the steam program, or in a preheated Halo Heat cook and hold oven for 15 minutes at 250°F (121°C).
3. Clean metal surface with mild soap solutions only. **DO NOT** clean with lye or alkaline based cleaners or any abrasive cleaners. Rinse carefully with a clean sponge and water to remove all soap or detergent residue.
4. Follow manufacturer's recommendations for the care of the customer-supplied solid heated surface material.
5. Wipe control panel, drawer vents, handles, and gaskets thoroughly since these areas harbor food debris.



### WARNING



To prevent serious injury, death, or property damage, **always** disconnect the appliance from the power source before cleaning or servicing.



### WARNING



To prevent serious personal injury, death, or property damage:

**Do not** steam clean, hose down or flood the interior or exterior with water or liquid solution of any kind. **Do not** use water jet to clean. Failure to observe this precaution will void the warranty.



## Food Safety

Food flavor and aroma are usually so closely related that it is difficult, if not impossible, to separate them. There is also an important, inseparable relationship between cleanliness and food flavor. Cleanliness, operating efficiency, and appearance of equipment contribute considerably to savory, appetizing foods.

Most food imparts its own particular aroma and many foods also absorb existing odors. Unfortunately, during this absorption there is not a distinction between **good** and **bad** odors. The majority of objectionable flavors and odors troubling food service operations are caused by bacteria growth. Sourness, rancidity, mustiness, stale or other undesirable flavors are usually the result of germ activity.

The easiest way to ensure full, natural food flavor is through comprehensive cleanliness. This means good control of both visible soil (dirt) and invisible soil (germs). A thorough approach to sanitation will provide essential cleanliness. It will ensure an attractive appearance of equipment, along with maximum efficiency and utility. More importantly, a good sanitation program provides one of the key elements in the prevention of food-borne illnesses.

A comprehensive sanitation program should focus on the training of staff in basic sanitation procedures. This includes personal hygiene, proper handling of raw foods, cooking to a safe internal product temperature, and the routine monitoring of internal food temperatures from the time the food is received through the time the food is served.

A controlled holding environment for prepared foods is just one of the important factors involved in the prevention of food-borne illnesses. Temperature monitoring and control during receiving, storage, preparation, and the service of foods are of equal importance.

The most accurate method of measuring safe temperatures of both hot and cold foods is by internal product temperature. A thermometer is an effective tool for this purpose, and should be routinely used on all products that require holding at a specific temperature.

Internal Food Product Temperatures		
Hot Foods		
Danger Zone	40°F to 140°F	4°C to 60°C
Critical Zone	70°F to 120°F	21°C to 49°C
Safe Zone	140°F to 165°F	60°C to 74°C
Cold Foods		
Danger Zone	Above 40°F	Above 4°C
Safe Zone	36°F to 40°F	2°C to 4°C
Frozen Foods		
Danger Zone	Above 32°F	Above 0°C
Critical Zone	0°F to 32°F	-18°C to 0°C
Safe Zone	0°F or Below	-18°C or Below

Hazard Analysis (at) Critical Control Points (HACCP), is a quality control program of operating procedures to assure food integrity, quality, and safety. Taking steps necessary to augment food safety practices is both cost effective and relatively simple. Additional HACCP information is available by contacting:

Center for Food Safety and Applied Nutrition  
Food and Drug Administration  
Phone: 1-888-SAFEFOOD  
[www.foodsafety.gov](http://www.foodsafety.gov)

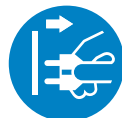


## NOTICE

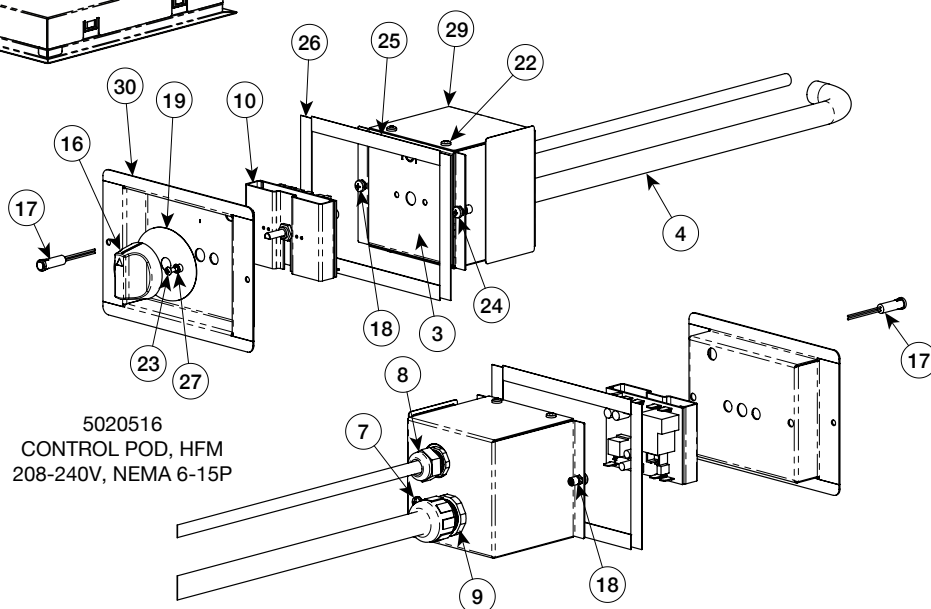
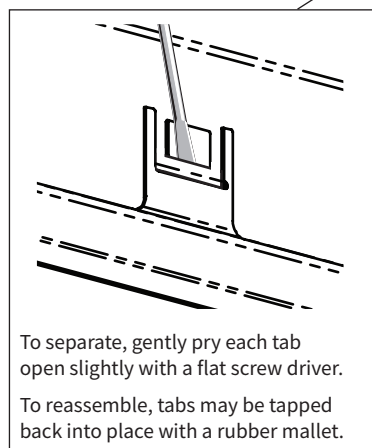
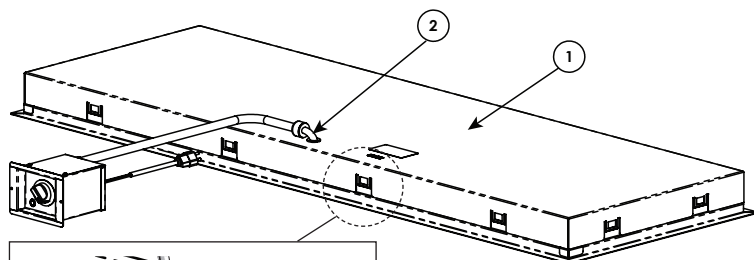
This section is provided for the assistance of qualified and trained service technicians only and is not intended for use by untrained or unauthorized service personnel. Do not attempt to repair or service the oven beyond this point. Contact Alto-Shaam for the nearest authorized service agent. Repairs made by any other service agents without prior authorization by Alto-Shaam will void the warranty.



## WARNING



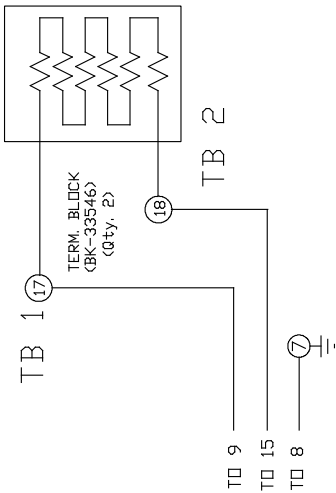
To prevent serious injury, death, or property damage, **always** disconnect the appliance from the power source before cleaning or servicing.



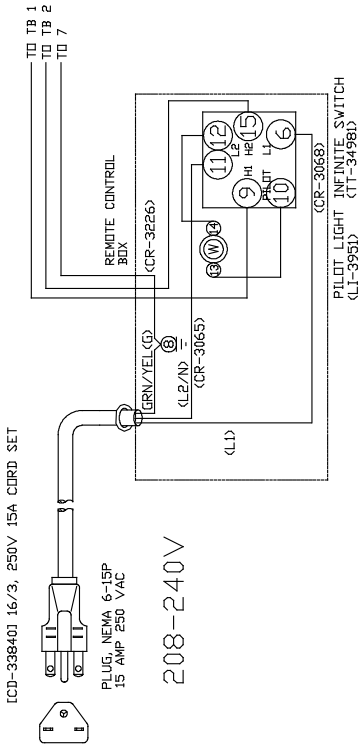
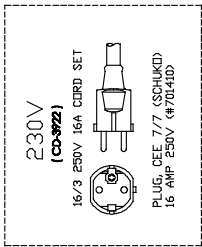
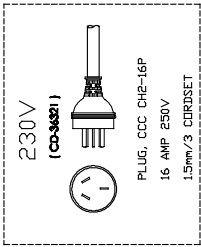
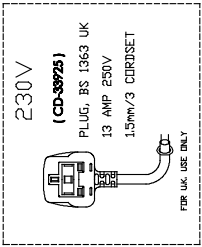
ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.	QTY
1	HEAT PAD ASSEMBLY	HFM-24, 24 X 24	5015505	1	CONNECTOR-2 CONDUCTOR	CR-34967	3
		HFM-30, 24 X 30	5015506	16	KNOB, UNIBODY, T-STAT CONTROL	KN-36424	1
		HFM-48, 24 X 48	5014472	17	LIGHT, IND., BRIGHT	LI-37215	1
		HFM-72, 24 X 72	5015507	18	NUT, HEX INSERT M5	NU-23909	2
2	CONNECTOR, FLEX	CR-33179	1	19	PANEL OVERLAY, ELAN CONTROL	PE-36566	1
3	PLATE, FACE	1017287	1	20	3/8" HOLE PLUG	PG-25574	2
4	CONDUIT FLEX LIQUID TIGHT, 6'	1017519	1	21	1/4" HOLE PLUG	PG-35411	1
5	EQUIPOTENTIAL GROUND STUD	5013179	-	22	SCREW, M4 x 0.7 x 6mm PAN	SC-22271	4
6	ASSEMBLY, WIRE CONNECTOR	5018676	1	23	SCREW 6-32 x 1/4" PAN HEAD	SC-22500	2
7	GROUND STUD ASSEMBLY	5018898	1	24	SCREW, M5 x 0.8 x 10mm PAN	SC-22766	2
8	BUSHING, STRAIGHT, STRAIN RELIEF	BU-3964	1	25	TAPE, VHB, FOAM, 1/2" x 5.0	TA-24637	2
9	BUSHING, STRAIGHT, STRAIN RELIEF	BU-34606	1	26	TAPE, VHB, FOAM, 1/2" x 4.9"	TA-24637	2
10	CONTROL, ELAN, DUTY CYCLE TIMING	CC-36859	1	27	WASHER, #6, LOCK, INT., #410 S/S	WS-2768	2
11	CORDSET - 16AWG, 3/C, INT'L HARM	CD-3922	-	28	CH2-16P CORDSET FERRULE ASSEMBLY	5016998	-
12	CORDSET 15A 208-240V	CD-33840	1	29	SHELL, CONTROL POD, 1 KNOB	1015723	1
13	CLIP, LIGHT MOUNTING XYZ	CL-37245	1	30	BOX, REMOTE, DECOR FACE, 1 KNOB	1015805	1
14	CONNECTOR-5 CONDUCTOR	CR-34646	3				

\*not shown

Wiring Diagrams



FOIL PAD OF HI-TEMP CABLE EL-35384 = 66.56 OHMS AMBIENT TEMP



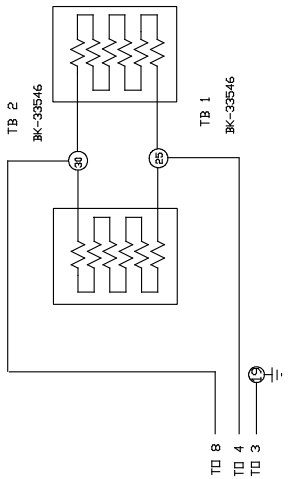
Cordset	Line 1	Line 2/N
208-240V	Black	White

Cordset	Line 1	Line 2
230V	Brown	Blue

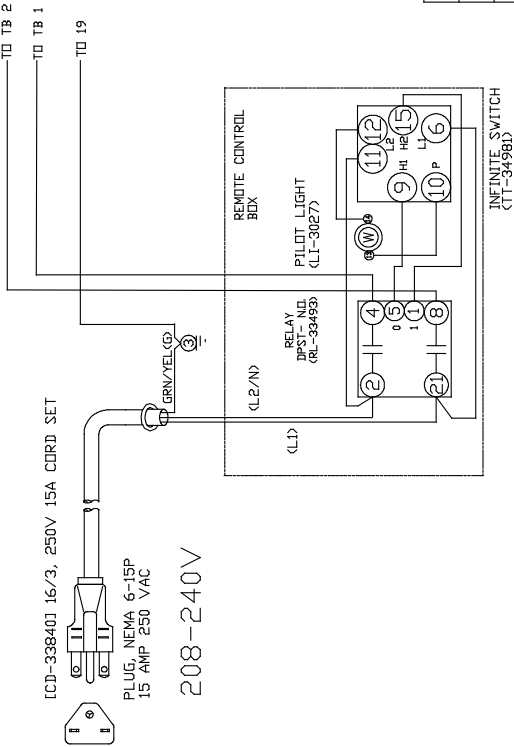
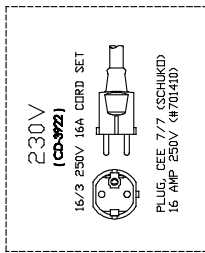
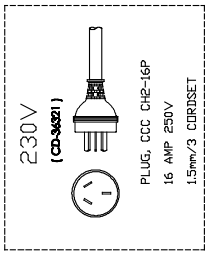
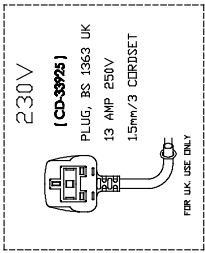
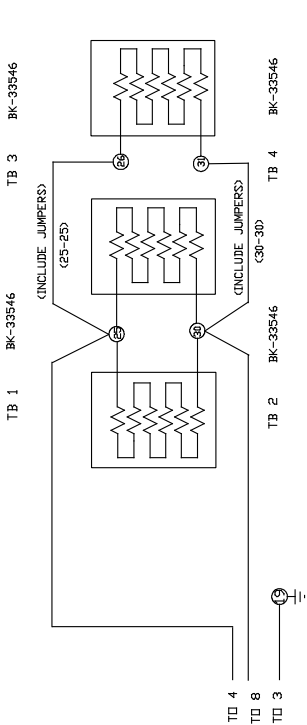
2	6756	NEW POWER CORD APPLICATIONS	10/08/13	TJG
1	6142	INCLUDE 230V APPLICATION	10/12/12	TJG
0	-	INITIAL RELEASE	07/31/12	TJG
REV	ECO	DESCRIPTION	DATE	APP
HFM-24, 30		208-240V , 230V	50/60HZ	
ALTO-SHAAM		WIRING DIAGRAM		
BY: NV		DATE: 03/24/12	DWG: 77503	SHEET 1_OF_1

REFERENCE WIRE ASSBY #5015458

HFM - 48

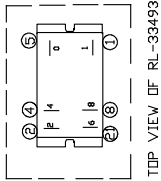


HFM - 72



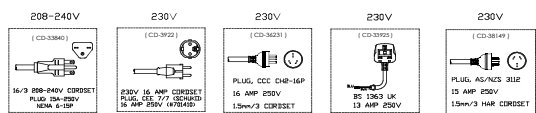
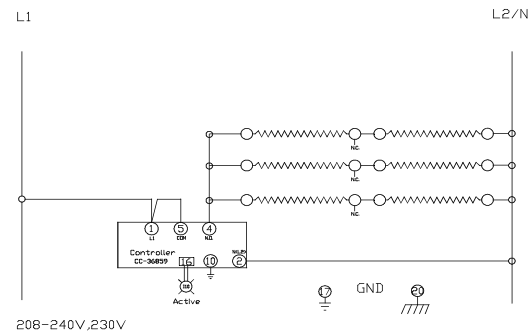
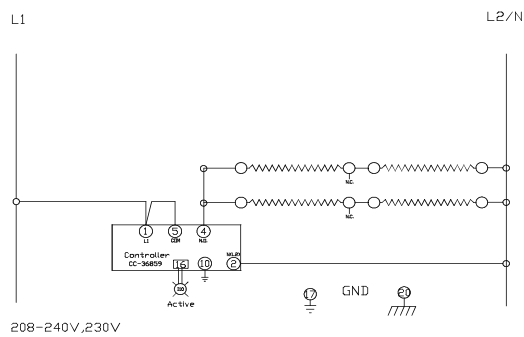
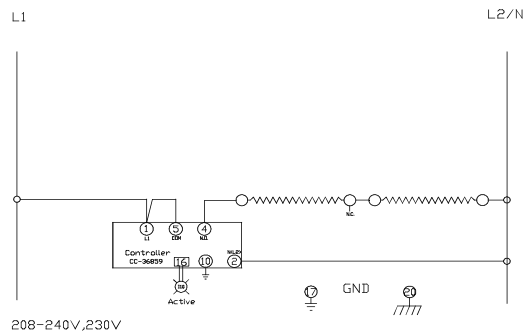
Cordset	Line 1	Line 2/N
208-240V	Black	White

Cordset	Line 1	Line 2
230V	Brown	Blue



2	6756	NEW POWER CORD APPLICATIONS	10/08/13	TJG
1	6142	INCLUDE 230V APPLICATION	10/12/12	TJG
0	-	PRODUCT RELEASE	08/01/2012	TJG
REV	ECO	DESCRIPTION	DATE	APP
HFM-48, 72 SERIES 208-240V, 230V 50/60HZ				
<b>ALTO-SHAAM</b>			<b>WIRING DIAGRAM</b>	
BY: NV A DATE: 03/24/12			DWG: 77512	SHEET 1_OF_1

REFERENCE WIRE ASSBY #5015460 FOR HFM-72 VERSION  
REFERENCE WIRE ASSBY #5015459



0	7490	Release NPD	08/06/2015	TJC
REV	ECO	DESCRIPTION	DATE	APP
HFN-24,38,48,72 230 V, 208-240VAC 50-60Hz				
<b>ALTO-SHAAM</b>		<b>WIRING DIAGRAM</b>		
REV: JPF DATE: 03/11/13		DWG: 77624	SHEET	

Alto-Shaam, Inc. warrants to the original purchaser only that any original part that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

**The original parts warranty period is as follows:**

For the refrigeration compressor on Alto-Shaam Quickchillers™, five (5) years from the date of installation of appliance.

For the heating element on Halo Heat® cooking and holding ovens, as long as the original purchaser owns the oven. This excludes holding only equipment.

For all other original parts, one (1) year from the date of installation of appliance or fifteen (15) months from the shipping date, whichever occurs first.

The labor warranty period is one (1) year from the date of installation or fifteen (15) months from the shipping date, whichever occurs first.

Alto-Shaam will bear normal labor charges performed during standard business hours, excluding overtime, holiday rates or any additional fees.

To be valid, a warranty claim must be asserted during the applicable warranty period. This warranty is not transferable.

**This warranty does not apply to:**

1. Calibration.
2. Replacement of light bulbs, door gaskets, and/or the replacement of glass due to damage of any kind.
3. Equipment damage caused by accident, shipping, improper installation or alteration.
4. Equipment used under conditions of abuse, misuse, carelessness or abnormal conditions, including but not limited to, equipment subjected to harsh or inappropriate chemicals, including but not limited to, compounds containing chloride or quaternary salts, poor water quality, or equipment with missing or altered serial numbers.
5. Damage incurred as a direct result of poor water quality, inadequate maintenance of steam generators and/or surfaces affected by water quality. Water quality and required maintenance of steam generating equipment is the responsibility of the owner/operator.
6. Damage caused by use of any cleaning agent other than Alto-Shaam's Combitherm® Cleaner, including but not limited to damage due to chlorine or other harmful chemicals. **Use of Alto-Shaam's Combitherm® Cleaner on Combitherm® ovens is highly recommended.**
7. Any losses or damage resulting from malfunction, including loss of product, food product, revenue, or consequential or incidental damages of any kind.
8. Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.

This warranty is exclusive and is in lieu of all other warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. In no event shall Alto-Shaam be liable for loss of use, loss of revenue or profit, or loss of product, or for any indirect, special, incidental, or consequential damages. No person except an officer of Alto-Shaam, Inc. is authorized to modify this warranty or to incur on behalf of Alto-Shaam any other obligation or liability in connection with Alto-Shaam equipment.

Effective November 1, 2012

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