ALTO SHAAM®

OPERATION and CARE MANUAL

HOT FOOD COUNTERTOP MERCHANDISER

MODELS: MM-30/2S • MM-30/2P

24•7 Your Service Hotline 1-800-558-8744

HALO HEAT® COOK/HOLD/SERVE SYSTEMS

W164 N9221 Water Street • P.O. Box 450 • Menomonee Falls, Wisconsin 53052-0450 U.S.A.
PHONE: 262.251.3800 FAX: 262.251.7067 • 800.329.8744 U.S.A. ONLY WEBSITE:
800.558-8744 U.S.A./CANADA 262.251.1907 INTERNATIONAL www.alto-shaam.com

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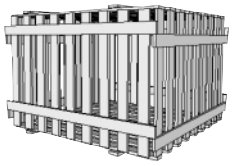
UNPACKING and SET-UP



The Alto-Shaam Merchandiser Case has been thoroughly tested, checked for calibration, and inspected to insure only the highest quality unit is provided. When you receive your unit, 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.

Save all the information and instructions packed inside the carton. Complete and return the warranty card to the factory as soon as possible to assure prompt service in the event of a warranty parts and labor claim.

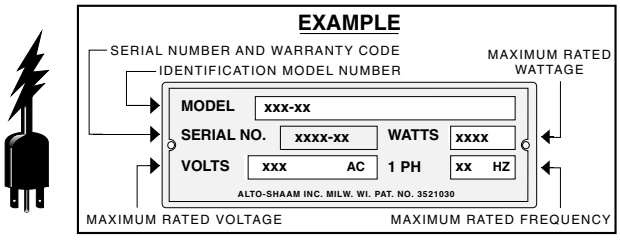
In order to maintain established National Sanitation Foundation standards, all units must be sealed to the counter with a R.T.V. or silastic meeting N.S.F. requirements. Warranty will become null and void if these directions are not followed.

***NOTE**: Any and all claims for warranty must include the full model number and serial number of the unit.*

ELECTRICAL INSTALLATION

1. An identification tag is permanently mounted on the case.

2. Plug the unit into a properly grounded receptacle ONLY. Arcing will occur when connecting or disconnecting the display case unless all controls are in the **"OFF"** position.



Ensure Power Source Matches Voltage Stamped on Unit Nameplate

START-UP

Before operating the case, clean the interior and exterior of the unit with a damp cloth and mild soap solution. Remove all detachable items and clean separately. Rinse well. Clean the glass with a non-caustic, non-abrasive cleaner.

This unit should NOT be installed in any area where it may be affected by steam, grease, dripping water, high temperatures or any other severely adverse conditions. Do not install directly adjacent to heat producing equipment.

OPERATION PROCEDURES

1. TURN DISPLAY LIGHTS, HEAT SWITCH, AND THERMOSTATS "ON."
Indicator lights will illuminate when the thermostats are turned "**ON.**" The indicator lights will remain lit as long as the unit is preheating or calling for heat. The unit should be preheated at the number **10** setting for a minimum of 30 minutes before loading the display case with hot food. Preheat the case along with any empty serving pans or containers which will be used to transfer hot foods for display. When preheating is completed, or whenever the unit reaches any temperature between **1** and **10** set by the operator, the indicator lights will go **"OUT"**.

2. LOAD HOT FOODS INTO THE DISPLAY CASE.
Using hand protection, be certain **only hot foods** which have been cooked to the appropriate internal temperature are transferred into the case. Use a pocket-type meat thermometer to make certain all products have been maintained at an internal temperature of 150° to 180°F (66° to 82°C) before loading the case. If any food product is not at proper serving temperature, bring the product within the correct temperature range before loading. Foods reheated from a refrigerated temperature must be brought to an internal temperature of 165°F (74°C). **Be certain only hot PREPACKAGED foods in appropriate heat-tested containers are used. Do not stack containers.**

3. RESET THERMOSTATS AS NEEDED.
After all products are loaded into the display case and the doors are closed, reset the thermostats to the number **"8"** setting.

This will not necessarily be the final setting.
Since proper temperature range depends on the type of products and the quantities being held, it is necessary to periodically use a pocket thermometer to check each item to make certain the correct temperatures are being maintained. Generally, proper holding temperature range is between 150° and 180°F (66° and 82°C). Normally, this will require a thermostat setting of between number "**6**" and "**8**," although a higher or lower setting may sometimes be required.

4. SERVE FRESH HOT FOOD.
Keep hot foods looking fresh. Occasionally rotate or stir foods as needed. Keep display case doors closed after serving. Serve products in proper packages or containers. Wipe spills immediately to assure maximum eye appeal and to minimize end of the day cleanup.

Use hand protection when handling hot items.

CARE and CLEANING

The cleanliness and appearance of this unit will contribute considerably to operating efficiency and savory, appetizing food. Good equipment that is kept clean works better and lasts longer.

CLEAN THE DISPLAY CASE DAILY

1. Disconnect the unit from the power source and let cool.

2. Remove all detachable items, and clean these separately.

3. Clean the interior metal surfaces of the cabinet with a damp cloth and any good alkaline or alkaline chlorinated based commercial detergent or grease solvent at the recommended strength. Use a plastic scouring pad or oven cleaner for difficult areas. Avoid the use of abrasive cleaning compounds, chloride based cleaners, or cleaners containing quaternary salts. Rinse well to remove all residue and wipe dry.

4. Use only non-caustic, non-abrasive cleaner for the glass. ***Do not attempt to clean hot glass*** because the cleaner may cause burns, emit hot noxious fumes, and stain the glass.

5. To help maintain the protective film coating on polished steel, clean the exterior stainless steel of the cabinet with a cleaner recommended for stainless steel surfaces. Spray the cleaning agent on a cloth and wipe with the grain of the stainless steel.

NOTE: Never use hydrochloric acid (muriatic acid) on stainless steel.

Always follow appropriate state and local health (hygiene) regulations regarding all applicable cleaning and sanitation requirements for equipment.

Disconnect Unit From Power Source Before Cleaning or Servicing.

At no time should the inside or outside of the unit be washed down, flooded with water or liquid solution.

NEVER STEAM CLEAN.
Severe damage or electrical hazard could result.

SANITATION GUIDELINES

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, top operating efficiency, and appearance of equipment contribute considerably to savory, appetizing foods. Good equipment that is kept clean, works better and lasts longer.

Most food imparts its own particular aroma and many foods also absorb existing odors. Unfortunately, during this absorption, there is no 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 *OFF* flavors are usually the result of germ activity.

The easiest way to insure 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 assure 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 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 quality 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° TO 140°F	(4° TO 60°C)
CRITICAL ZONE	70° TO 120°F	(21° TO 49°C)
SAFE ZONE	140° TO 165°F	(60° 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° TO 32°F	(-18° TO 0°C)
SAFE ZONE	0°F OR BELOW	(-18°C OR BELOW)

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 temperatures from receiving through service.

Most food-borne illnesses can be prevented through proper temperature control and a comprehensive program of sanitation. Both these factors are important to build quality service as the foundation of customer satisfaction. Safe food handling practices to prevent food-borne illness is of critical importance to the health and safety of your customers. HACCP, an acronym for Hazard Analysis (at) Critical Control Points, is a quality control program of operating procedures to assure food integrity, quality, and safety. Taking steps necessary to augment food safety practices are both cost effective and relatively simple. While HACCP guidelines go far beyond the scope of this manual, additional information is available by contacting the USDA/FDA Food-borne Illness Education Information Center at (301)504-6803.

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.

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.

If the unit is equipped with a thermostat indicating a range of between 1 and 10, use a metal-stemmed indicating thermometer to measure the internal temperature of the product(s) being held. Adjust the thermostat setting to achieve the best overall setting based on internal product temperature.

HOLDING TEMPERATURE RANGE

MEAT	FAHRENHEIT	CELSIUS
BEEF ROAST — Rare	140°F	60°C
BEEF ROAST — Med/Well Done	160°F	71°C
BEEF BRISKET	160° — 175°F	71° — 79°C
CORN BEEF	160° — 175°F	71° — 79°C
PASTRAMI	160° — 175°F	71° — 79°C
PRIME RIB — Rare	140°F	60°C
STEAKS — Broiled/Fried	140° — 160°F	60° — 71°C
RIBS — Beef or Pork	160°F	71°C
VEAL	160° — 175°F	71° — 79°C
HAM	160° — 175°F	71° — 79°C
PORK	160° — 175°F	71° — 79°C
LAMB	160° — 175°F	71° — 79°C
POULTRY		
CHICKEN — Fried/Baked	160° — 175°F	71° — 79°C
DUCK	160° — 175°F	71° — 79°C
TURKEY	160° — 175°F	71° — 79°C
GENERAL	160° — 175°F	71° — 79°C
FISH/SEAFOOD		
FISH — Baked/Fried	160° — 175°F	71° — 79°C
LOBSTER	160° — 175°F	71° — 79°C
SHRIMP — Fried	160° — 175°F	71° — 79°C
BAKED GOODS		
BREADS/ROLLS	120° — 140°F	49° — 60°C
MISCELLANEOUS		
CASSEROLES	160° — 175°F	71° — 79°C
DOUGH — Proofing	80° — 100°F	27° — 38°C
EGGS —Fried	150° — 160°F	66° — 71°C
FROZEN ENTREES	160° — 175°F	71° — 79°C
HORS D'OEUVRES	160° — 180°F	71° — 82°C
PASTA	160° — 180°F	71° — 82°C
PIZZA	160° — 180°F	71° — 82°C
POTATOES	180°F	82°C
PLATED MEALS	180°F	82°C
SAUCES	140° — 200°F	60° — 93°C
SOUP	140° — 200°F	60° — 93°C
VEGETABLES	160° — 175°F	71° — 79°C

THE HOLDING TEMPERATURES LISTED ARE SUGGESTED GUIDELINES ONLY.

SAFETY ALERT

This units performance has been optimized using the factory provided bulbs. These bulbs should be replaced with an exact replacement or with a factory recommended replacement.

Quartz heaters are designed to be used in a horizontal position only. White cotton gloves should be worn when handling the quartz heating elements.

Service Parts Description	Qty. per Unit	***MM-30/2S*** **120V** FULL SERVE	***MM-30/2P*** **120V** SELF SERVE	***MM-30/2S*** **220V/230V** FULL SERVE	***MM-30/2P*** **220V/230V** SELF SERVE
Capillary Block	6	BK-2609	BK-2609	BK-2609	BK-2609
Capillary Guard	2	GD-2536	GD-2536	GD-2536	GD-2536
Cordset	1	CD-33593	CD-33593	CD-33469, 220V	CD-33469, 220V
Cordset	1	--	--	CD-33471, 230V	CD-33471, 230V
Inlet for electrical cord	1	IT-33306	IT-33306	IT-33306	IT-33306
Quartz Heating Element	2	EL-33586	EL-33586	EL-33590, 220V	EL-33590, 220V
Quartz Heating Element	2	---	--	EL-33591, 230V	EL-33591, 230V
Thermostat, Quartz Heater	2	TT-3498	TT-3498	TT-3498	TT3498
Cable Heating Element Kit	72' (21945mm)	4874	4874	--	--
Cable Heating Element Kit	115' (35052mm)	--	--	4879	4879
Thermostat Knob	2	KN-3473	KN-3473`	KN-3473	KN-3473
Thermostat, BiMetal	1	TT-33254	TT-33254	TT-33254	TT-33254
Glass, self serve	1	n/a	GL-24507	n/a	GL-24507
Glass, front, full serve	1	GL-24506	n/a	GL-24506	n/a
Glass, end	2	GL-24515	GL-24515	GL-24515	GL-24515
End Glass Retainer Latch	4	LT-2195	LT-2195	LT-2195	LT-2195
Left hand glass door assembly	1	5000010	5000010	5000010	5000010
Right hand glass door assembly	1	5000011	5000011	5000011	5000011
Door Handle	2	HD-2910	HD-2910	HD-2910	HD-2910
Door Hinge Clip	2	CL-24596	CL-24596	CL-24596	CL-24596
End Glass Gasket	4.3' (1310mm)	GS-22547	--	GS-22547	--
End Glass Gasket	2.5' (762mm)	--	GS-22547	--	GS-22547
Insulation	1	IN-2003	IN-2003	IN-2003	IN-2003
Insulation	.5' (152mm)	IN-22364	IN-22364	IN-22364	IN-22364
Indicator Light	3	LI-3027	LI-3027	LI-3951	LI-3951
Bulb, 150W, Halogen	4	LP-33587	LP-33587	LP-33513	LP-33513
Bulb Receptacle	4	RP-33588	RP-33588	RP-33588	RP-33588
Switch	3	SW-3041	SW-3041	SW-3041	SW-3041
Switch, breaker, 15 Amp	2	n/a	n/a	SW-33342	SW-33342
Switch boot	3	n/a	n/a	SW-3905	SW-3905
Thermometer	1	TH-3300	n/a	TH-3412	n/a

Caution: Disconnect Unit From Power Source Before Servicing.

Quartz Heater - Installation, Operation and Replacement

- White cotton gloves should be worn when handling quartz elements. Never touch them with bare hands, as oil and dirt from the skin can contaminate the quartz sheath and cause hot spots and premature heater failure. If this element is touched, thoroughly wipe, using dry clean cloth and alcohol or other suitable solvent.

- Do not expose these heater elements to water.
- Solvent vapors can be flammable. Be sure to provide adequate ventilation.
- Quartz heaters are designed to be used in a horizontal position only.

Installation

Care should be taken to insure that all installations meet local code requirements and safety regulations. The heater will expand about 1% of its length. Be sure it is mounted to allow this growth. Check the area around the quartz heater for flammable materials.

Electrical

Never operate the quartz heater element at a voltage higher that the design voltage. Disconnect and/or lock out power before installing heater and making electrical connections. Make electrical connections according to local, national or country codes. Be sure all electrical connections are made safely and that the terminals do not contact the housing. On units supplied with leads, make certain the lead connections are tight before applying power. When attaching leads to the heater element, be sure to hold the inner terminal nut with pliers to prevent twisting or breaking.

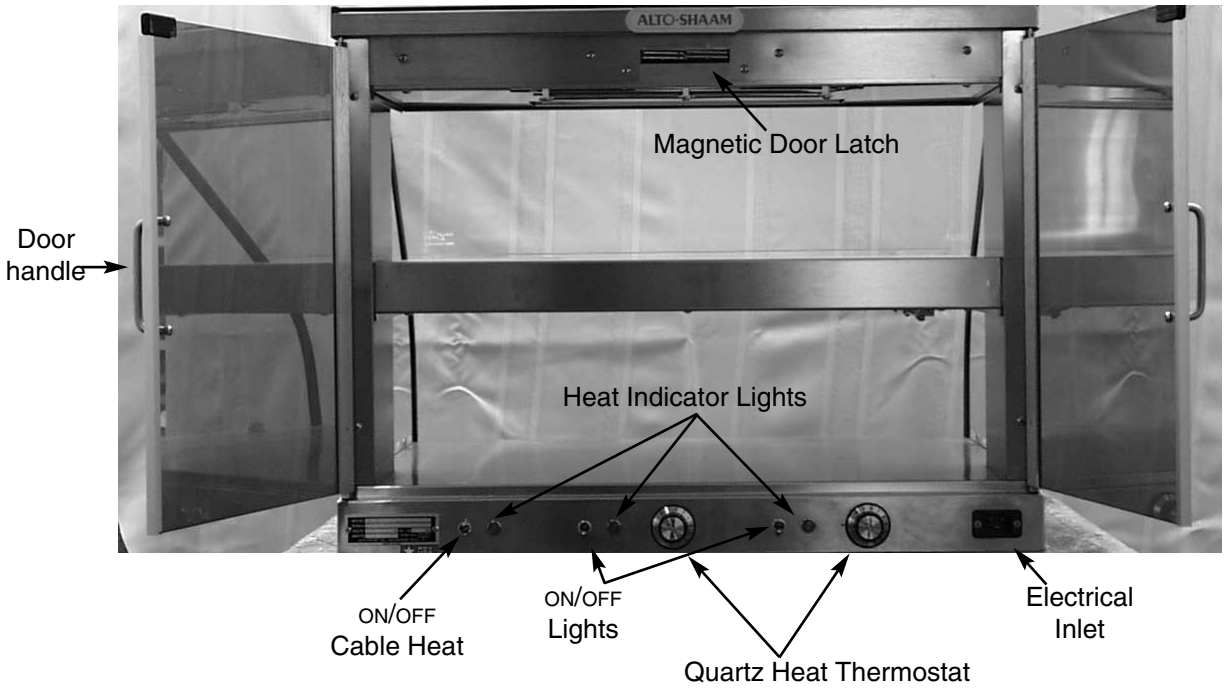
Operation

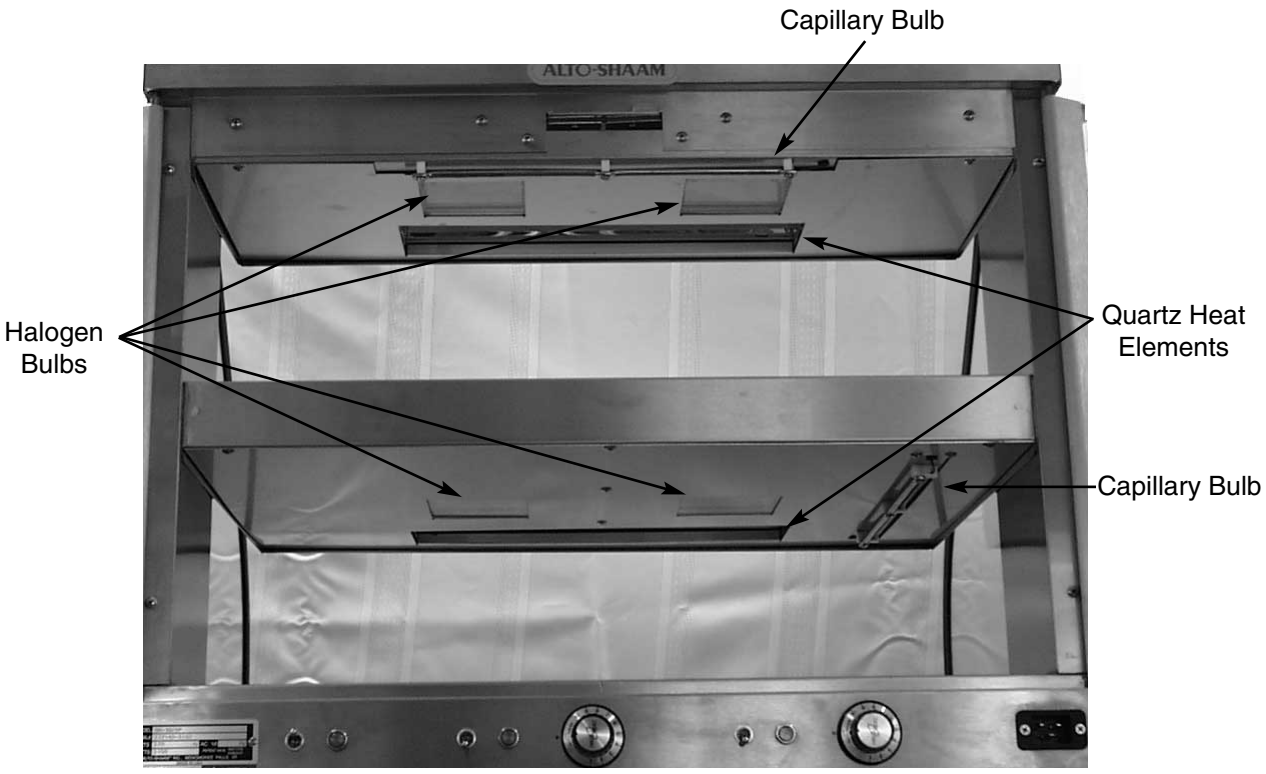
These heaters are designed to provide trouble-free operation; however, some minimal precautions are required. Be sure the area is free of flammable hazards. Remove objects that may fall behind the reflectors. Periodically check to see that the wiring is not frayed, burnt, or cut. If there is vibration, check to see that mounting screws remain secure. The heaters will operate best with clean reflectors. The loss of efficiency can be as high as 30% with dirty reflectors. Always disconnect and lock out power before parts are replaced. The quartz heater can be replaced from the front of the unit.

Replacement

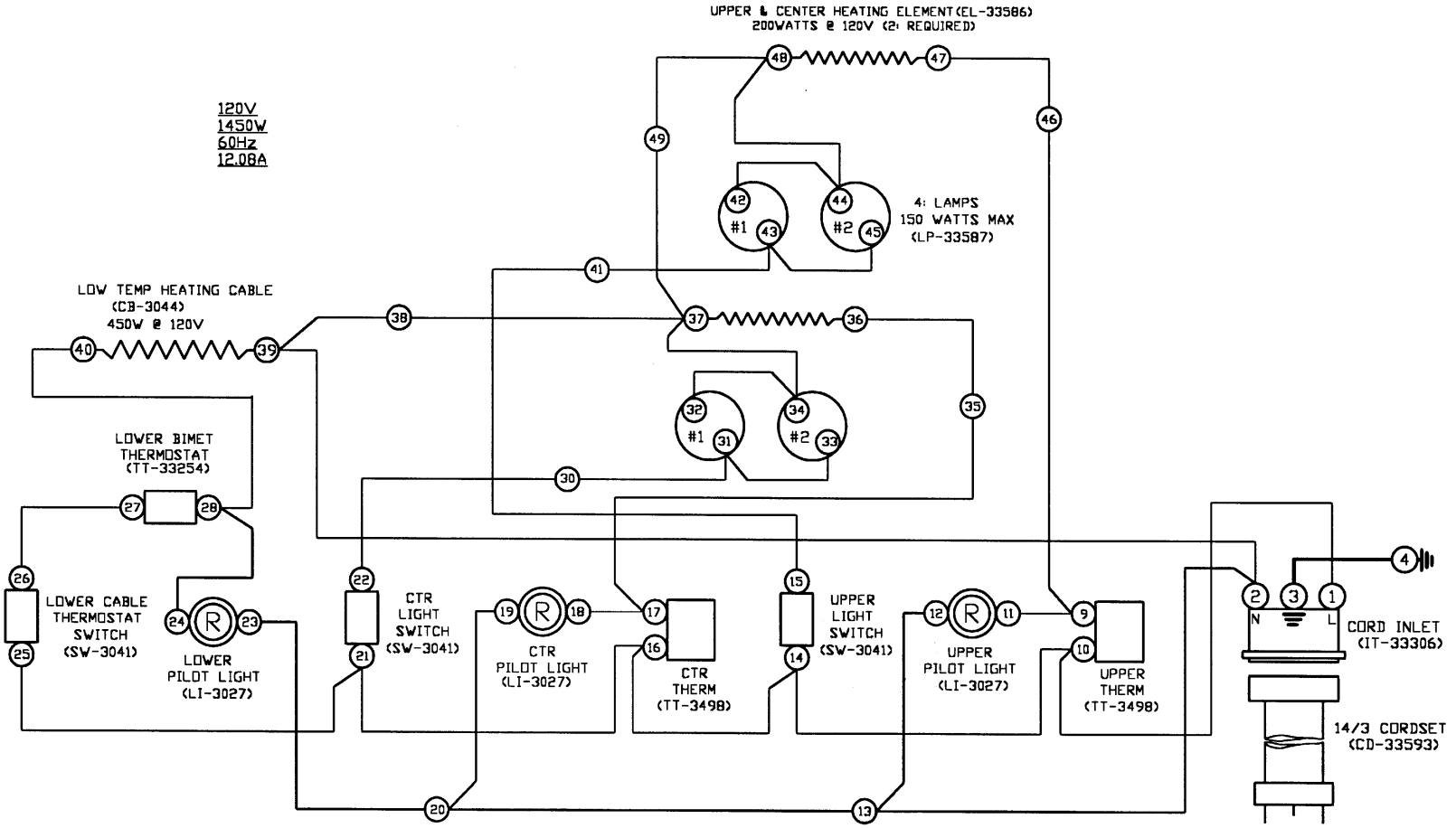
Quartz heater replacement is accomplished by removal of the screws holding the end caps, removing the end caps, and disconnecting the power leads from the terminals on the heater element. Installation is accomplished by reversing the procedure.

Rear View of MM-30/2S





Rear View of Unit tipped up to expose Lights and Heating Elements



NOTE 1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS

NOTE 2: SEE DRW. #8976 FOR WIRE ASSEMBLIES

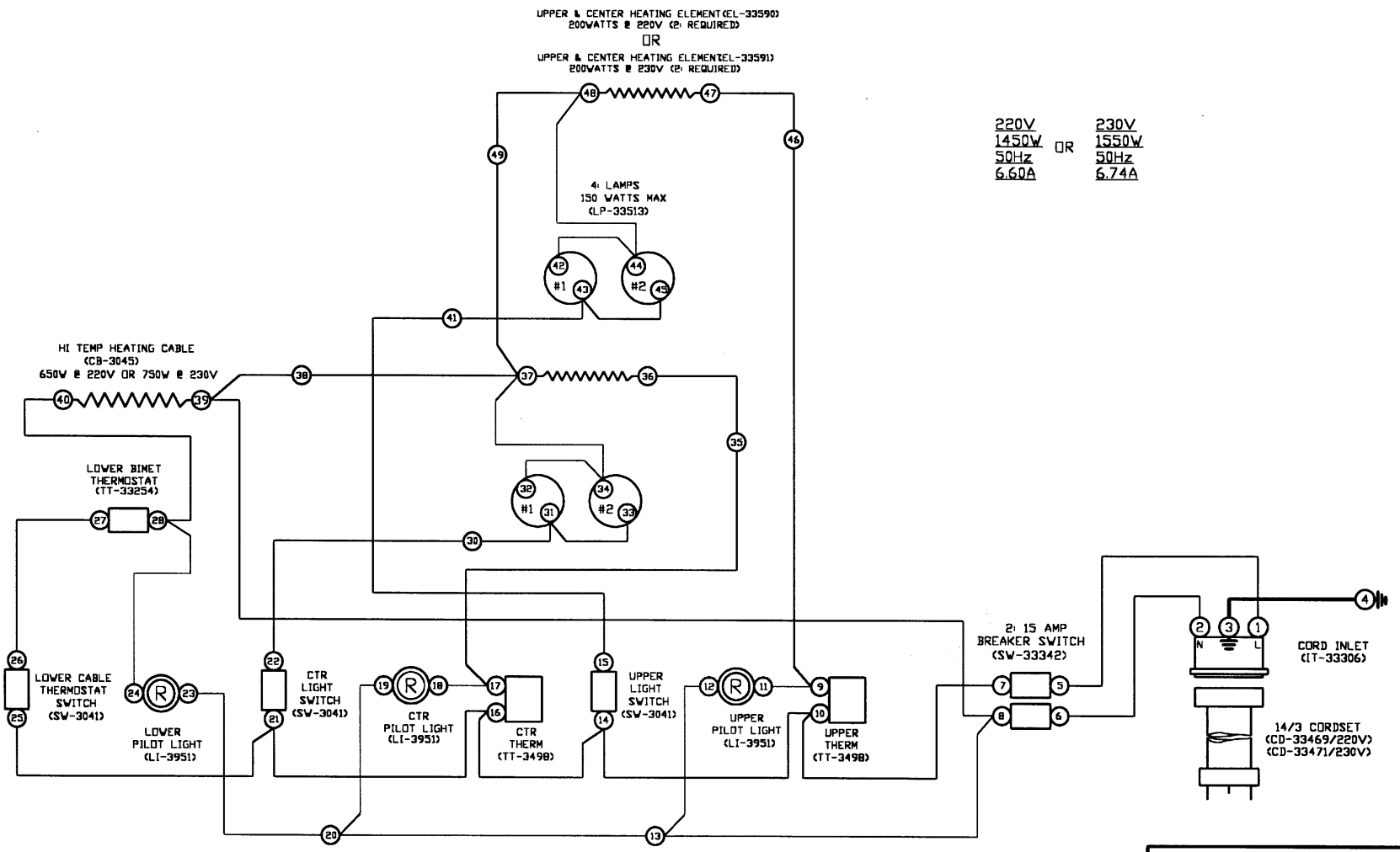
WIRING DIAGRAM

CUT SIZE:	NA
MATERIAL:	NA
DESCRIPTION:	NA
QUANTITY:	NA
APPROVAL:	JQ/ML

MODELS: MM-30/2S,2P — 120V,60HZ

ALTO-SHAAM.
MENOMONEE FALLS, WISC. 53052-450

SCALE: 1/2" = 1" | BY: NWW | DATE: 10/11/00 | DWG: B-7557



NOTE 1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS

NOTE 2: SEE DRW. #8977 FOR WIRE ASSEMBLIES

WIRING DIAGRAM

CUT SIZE:	NA
MATERIAL:	NA
DESCRIPTION:	NA
QUANTITY:	NA
APPROVAL:	J.Q./M.L.

MODELS: MM-30/2S,2P — 220/230V,50/60HZ

ALTO-SHAAM.
MENOMONEE FALLS, WISC. 53052-450

SCALE: 1/2" = 1" | BY: NWW | DATE: 10/11/00

DWG: B-7558

TRANSPORTATION DAMAGE and CLAIMS

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

Should damage occur in shipment, it is 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 equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.

2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.

3. Note all damage to packages directly on the carrier's delivery receipt.

4. Make certain the driver signs this receipt. If he 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. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of 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.

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

ALTO-SHAAM® LIMITED WARRANTY

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

The labor warranty remains in effect one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first.

The parts warranty remains in effect one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first.

Exceptions to the one year part warranty period are as listed:

A. Halo Heat cook/hold ovens include a five (5) year parts warranty on the heating element. Labor will be covered under the terms of the standard warranty period of one (1) year or fifteen (15) months.

B. Alto-Shaam Quickchillers include a five (5) year parts warranty on the refrigeration compressor. Labor will be covered under the terms of the standard warranty period of one (1) year or fifteen (15) months.

This warranty does not apply to:

1. Calibration
2. Replacement of light bulbs and/or the replacement of display case 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.
5. Any losses or damage resulting from malfunction, including loss of product or consequential or incidental damages of any kind.
6. 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, expressed or implied, including the implied warranties of merchantability and fitness for purpose. In no event shall the Company be liable for loss of use, loss of revenue, or loss of product or profit, or for indirect or consequential damages. This warranty is in lieu of all other warranties expressed or implied and Alto-Shaam, Inc. neither assumes or authorizes any persons to assume for it any other obligation or liability in connection with Alto-Shaam equipment.

ALTO-SHAAM, INC.

Warranty effective January 1, 2000

Record the model and serial numbers of the unit for easy reference. Always refer to both model and serial numbers in your correspondence regarding the unit.

Model: _____

Serial Number: _____

Purchased From: _____

Date Installed: _____ Voltage: _____

HALO HEAT COOK/HOLD/SERVE SYSTEMS BY ALTO-SHAAM®

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