ALTÓ SHAAM

OPERATION and CARE MANUAL



KYSYS-48



HOT FOOD DISPLAY CASE

MODELS: KYSYS-48 KYSYS-72 KYSYS-96

KYSYS-96



HALØ HEAT. COOK/HOLD/SERVE SYSTEMS

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ALTO-SHAAM, HEATED DISPLAY CASES

UNPACKING & SET-UP

The Alto-Shaam Hot Display Case has been thoroughly tested, checked for calibration, and inspected to insure only the highest quality cabinet is provided. When



you receive your display case, 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.

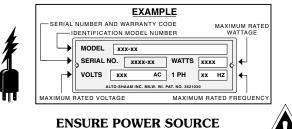
In order to maintain established National Sanitation Foundation standards, all stationary floor models must be sealed to the floor with a R.T.V. or silastic meeting N.S.F. requirements or have 6"(153mm) unobstructed clearance beneath the unit. Warranty will become null and void if these directions are not followed.

Save all the information and instructions packed inside the display case. 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.

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

ELECTRICAL INSTALLATION

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



MATCHES VOLTAGE STAMPED **ON NAMEPLATE OF UNIT**

START UP

CAUTIO

Before operating the unit, clean both the interior and exterior of the unit with a damp cloth and mild soap solution. Rinse carefully. Make sure all accessories supplied with the case are installed correctly. Become familiar with the operation of the controls. Read this manual carefully and keep it in a secure location.

PROCEDURES

1. DO NOT ADD WATER TO THE CASE

Halo Heat display cases maintain a constant but gentle temperature and eliminate much of the moisture loss associated with conventional display cases. Because of this gentle heat, it is not necessary to add water to the case. As a matter of fact, adding water is not recommended since water will accelerate deterioration of the product, and may damage the case and void the warranty.

2. PLACE DIVIDERS and SERVING PANS IN CASE

Refer to the pan layout diagrams for different types of pan accommodations. A complete pan configuration layout is located in this manual. It is <u>VERY</u> important to note that

with any chosen pan configuration, pan separator bars or divider bars must be used to close all gaps between pans, and all gaps between the pans and the edges of the display case. If these gaps are not closed, heat can be pulled out of the bottom of the case, into the display area. As a consequence, heat distribution will be uneven and uniform temperature will be difficult to hold. If needed, additional pan divider bars are available.

3. TURN BREAKER SWITCH and POWER ON They are located on the control panel.

4. SET THE THERMOSTAT(s) TO "9" TO PREHEAT An indicator light will illuminate when the thermostat(s) is (are) turned "ON." The indicator(s) will remain lit as long as the unit is preheating or calling for heat. The unit should be preheated, at the number 9 setting, for a minimum of <u>60</u> minutes before loading the case with food. When preheating is completed, or whenever the unit reaches any temperature set by the operator between 1 and 10, the indicator light(s) will go "OUT". Preheat the unit along with any empty serving pans or containers which will be used to transfer hot food for display. To prolong the life of the bulbs, preheat the bulbs on high for 15-20 minutes before turning down to low.

5. LOAD HOT FOOD INTO THE CASE

Be certain only hot food is transferred into the unit. Before loading food into the case, use a pocket-type meat thermometer to make certain all products have reached an internal temperature of 140° to 160° F (60° to 71°C). If any food product is not at proper serving temperature, use a Combitherm oven, or a Halo Heat cooking and holding oven set at 250° to 275°F (121° to 135°C) to bring the product within the correct temperature range.

- ✓ Use hand protection when handling hot items.
- ✓ Do not stack food containers.
- ✓ Be certain hot foods in appropriate heat tested containers are used in this hot display case.

6. RESET THERMOSTAT AS NEEDED

After all products are loaded into the display case and the doors are closed, reset the thermostat(s) to the number "8" setting. THIS WILL NOT NECESSARILY **<u>BE THE FINAL SETTING</u>**. Since proper temperature range depends on the type of products and the quantities being held, it is necessary to periodically use a thermometer to check each item to make certain the correct temperatures are being maintained. Proper temperature range is between 140° and 160°F (60° and 71°C). Normally, this will require a thermostat setting of between number "6" and "8," although a higher or lower setting may sometimes be required.

7. SERVE FRESH HOT FOOD

Keep hot foods looking fresh. Occasionally stir or rotate foods as needed. Serve products in the proper package or container. Keep case doors closed after serving. Wipe spills immediately to assure maximum eye appeal and to ease end of the day cleanup.

THOROUGHLY CLEAN UNIT DAILY

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



- 1. Turn lights and adjustable thermostat(s) to the "OFF" position, and disconnect unit from power source.
- 2. Remove, cover or wrap, and store unused products under refrigeration. Let unit cool.
- 3. Clean the interior metal surfaces of the unit 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.
- **NOTE:** Never use hydrochloric acid (muriatic acid) on stainless steel.
- 4. Clean the glass with a window cleaner.
- 5. To help maintain the protective film coating on polished stainless steel, clean the exterior of the unit with a cleaner recommended for stainless steel surfaces. Spray the cleaning agent on a clean cloth and wipe with the grain of the stainless steel.
- 6. Clean other exterior surfaces with a clean cloth and hot soapy water. Rinse carefully and dry.

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

Remember to turn power and breaker switches ON before use.

Duids, 150W, 250VLP-55515
Custom Panels & Bumper Colors
Glass Divider (FOR BUTTING MULTIPLE CASES)GL-24562
Interior Ambient Temperature GaugeGU-33384
Menu Board System — KYSYS-48
Platform, Scale, LH
Platform, Scale, RH14976
Pocket Thermometer °FTH-3300
Pocket Thermometer °CTH-3412
Stainless Steel Exterior Front Skirt Panels FACTORY QUOTE
Stainless Steel End PanelsFACTORY QUOTE
Pan Separator Bars— Third Size Pan— Full/Half/Third (Long Bar)— Full/Half/Third (Short Bar)— Full/Half/Third (Short Bar)— Sheet Pan (Long) KYSYS-48— Sheet Pan (Long) KYSYS-72 and -96— Sheet Pan (Short)— Sheet Pan (Short)— 3/4 Sheet Pan Filler

Options & Accessories

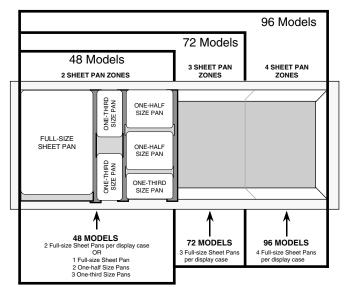
LP-33513

Bulbs 150W 230V

Always 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. Do not use

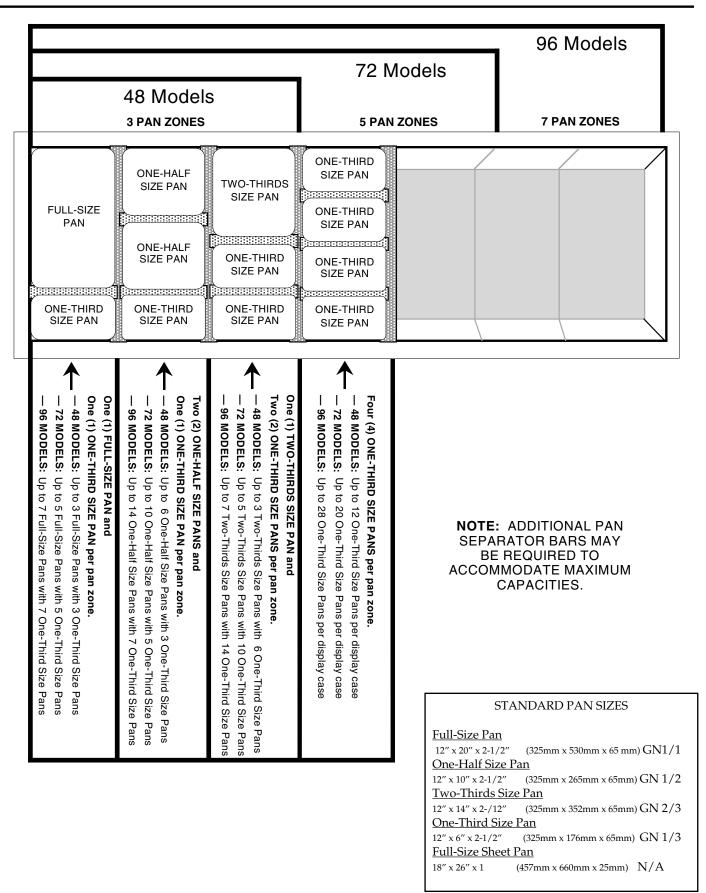
water jet to clean. Severe damage or electrical hazard could result, voiding the warranty.



SHEET PAN CONFIGURATIONS • HOT DELI DISPLAY CASES

Operation & Care Manual #879 • Pg. 2

PAN CONFIGURATIONS • HOT DELI DISPLAY CASES



SANITATION GUIDELINE

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	EMPERATURES	OD PRODUCT T	INTERNAL FOO	
accurate	HOT FOODS			
method of	(4° TO 60°C)	40° TO 140°F	DANGER ZONE	
measuring	(21° TO 49°C)	70° TO 120°F	CRITICAL ZONE	
safe	(60° TO 74°C)	140° TO 165°F	SAFE ZONE	
temper-	COLD FOODS			
atures of	(ABOVE 4°C)	ABOVE 40°F	DANGER ZONE	
	(2°C TO 4°C)	36°F TO 40°F	SAFE ZONE	
both hot and cold	FROZEN FOODS			
	(ABOVE 0°C)	ABOVE 32°F	DANGER ZONE	
foods is by	(-18° TO 0°C)	0° TO 32°F	CRITICAL ZONE	
internal	$(-18^{\circ}C \text{ OR BELOW})$	0°F or below	SAFE ZONE	
mucdurat				

by 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.

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 GUIDELINE

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.

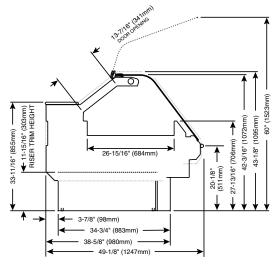
In an enclosed holding environment, too much moisture content is a condition which can be relieved. A product achieving extremely high temperatures in preparation must be allowed to decrease in temperature before being placed in a controlled holding atmosphere. If the product is not allowed to decrease 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).

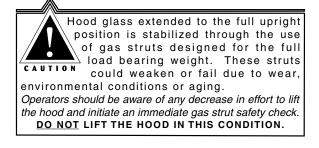
If the unit is equipped with a thermostat indicating a range of between 1 and 10, use a metal-stemmed indicating thermometer to measure the internal temperature of the product(s) being held. Adjust the thermostat setting to achieve the best overall setting based on internal product temperature.

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	$160^{\circ} - 175^{\circ}F$	71° — 79°C	
PASTRAMI	$160^{\circ} - 175^{\circ}F$	71° — 79°C	
PRIME RIB — Rare	140°F	60°C	
STEAKS — Broiled/Fried	$140^{\circ} - 160^{\circ}F$	60° — 71°C	
RIBS — Beef or Pork	160°F	71°C	
VEAL	160° — 175°F	71° — 79°C	
НАМ	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.			

KYSYS Hot Display Cases



Side Profile



CAUTION

Cable Heating Service Kit for KYSYS-48#4880			
includes: CB-3045	Cable Heating Element		
CR-3226	Ring Connector		
IN-3488	Insulation Corner1 foot		
BU-3105	Shoulder Bushing4		
BU-3106	Cup Bushing		
SL-3063	Insulating Sleeve 4		
TA-3540	Electrical Tape1 roll		
NU-2215	Hex Nut, 10-32		
ST-2439	Stud, 10-32		

Cable Heating Service Kit for KYSYS-72#4881		
CB-3045	Cable Heating Element	
CR-3226	Ring Connector	
IN-3488	Insulation Corner 1 foot	
BU-3105	Shoulder Bushing12	
BU-3106	Cup Bushing	
SL-3063	Insulating Sleeve	
TA-3540	Electrical Tape1 roll	
NU-2215	Hex Nut, 10-32	
ST-2439	Stud, 10-32	

Cable Heating Service Kit for KYSYS-96#14228			
includes:			
CB-3045	Cable Heating Element		
CR-3226	Ring Connector		
IN-3488	Insulation Corner 1 foot		
BU-3105	Shoulder Bushing8		
BU-3106	Cup Bushing		
SL-3063	Insulating Sleeve		
TA-3540	High Temperature Tape 1 roll		
NU-2215	Hex Nut, 10-32		
ST-2439	Stud, 10-32		

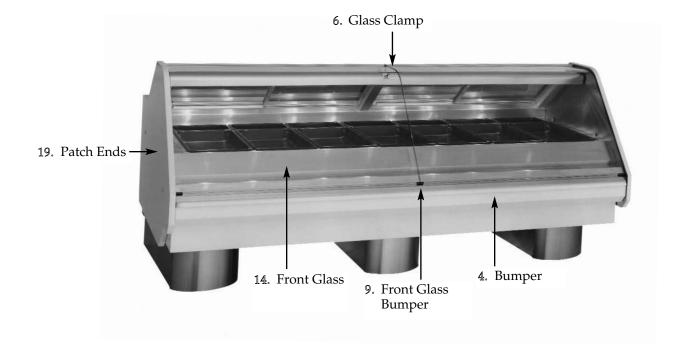


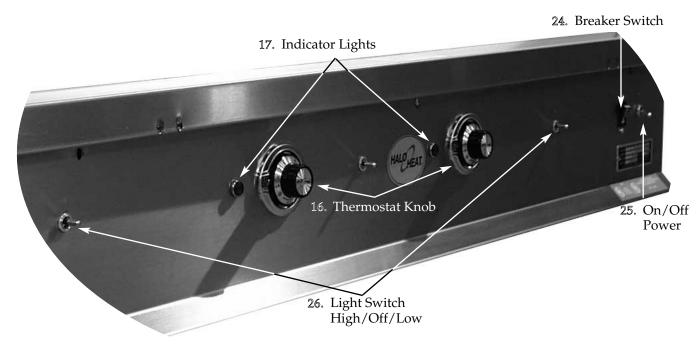
At no time should the inside or outside of the unit be washed down, flooded with water or liquid solution. Do not use water jet to clean. NEVER STEAM CLEAN. Severe damage or electrical hazard could result, voiding the warranty.

Always disconnect unit from power source before cleaning or servicing.

	Part No.	Serv Description	ice Parts KYSYS-48 _{Qty.}	KYSYS-72 Qty.	KYSYS-96 Qty.
1.	11088	Track, Bumper (NOT SHOWN)	1		
	11089	, I ()		1	
	11090				1
2.	BA-24255	Cutting board	1		2
	BA-24417			1	
3.	BK-3019	Block, terminal (NOT SHOWN)	1	1	1
4.	BM-24082 BM-24083	Bumper, black vinyl	4' (1219mm)	6' (1829mm) 2	8' (2438mm) 2
5.	CD-3304	Bumper, rail end cap, black vinyl Cord, electric (NOT SHOWN)	2	2 8' (2438mm)	
5.	CD-3607	cord, electric (Nor shown)	8' (2438mm)	0 (24001111)	0 (24001111)
6.	CM-22675	Clamp, Glass	1		2
Ŭ.	CM-24676	Charley, Glass	T	1	-
7.	CR-3293	Connector	1	1	1
8.	DR-24556	Door Assembly, sliding glass			
	DR-24555	"		1	
	DR-24231	"			1
	Door Assemb				
	DR-22480F	Door Guides, #44049			
	DR-22480G	Door Bumper Assembly			
	DR-24556A	LH Glass Door			2
	DR-24555A		1		2
	DR-24556B	RH Glass Door			2
	DR-24555B DR-24555E	RH Glass Door Center Glass-out			
	TK-24418	Top Track		· · · · Z	
	TK-24410	Top Track		1	
	TK-24422	Top Track			2
	TK-24419	Bottom Track			· · · · · · · /
	TK-24421	Bottom Track		1	
	TK-24423	Bottom Track			2
9.	DR-2969	Front Glass Bumper	2	2	4
10.	FU-33581	Fuse	2	2	2
11.	FU-3772	Fuseholder, 15A	2	2	2
12.	FU-3911	Fuse, 10A	2	2	2
13.	GD-24557	Guard, Lamp	2	3	4
14.	GL-24558	Glass, front		1	
	GL-24559		1		2
15.	HG-22672	Hinge, insert	8	8	12
	HG-23669	Hinge, Pivot	2	2	4
1 /	HG-24563	Hinge, Upright	2	2	3
16. 17.	KN-3473	Knob, Thermostat Light, Indicator	2 2	3	4
	LI-3025				4
18.	LP-33513	Lamp, 150W, 230V, tubular	3	5	7
19.	PE-24564 PE-24565	Panel, end patch, white, LH Panel, end patch, white, RH	1 1	1 1	1 1
20	PG-2899	Plug, strut (NOT SHOWN)			
20. 21.	PG-2899 PI-23678		4	4	8
4 2.	PI-23678 PI-23679	Pin, Hinge, Anchor (NOT SHOWN) Pin, Strut	2	4 2	8 4
	PI-2894	Pin, Hinge, Top	4	4	4
22.	RP-3952	Receptacle, bulb	3	5	7
23.	SU-24021	Strut (NOT SHOWN)	2		4
	SU-22704	· · · · ·		2	
24.	SW-33361	Switch, breaker	1		
	SW-33362			1	1
25.	SW-3528	Switch, On/Off	1	1	1
26.	SW-3616	Switch, light, toggle	3	5	7
27.	TN-33582	Transformer	1	1	1
28.	TT-3498	Thermostat	2	3	4

KYSYS Hot Display Case

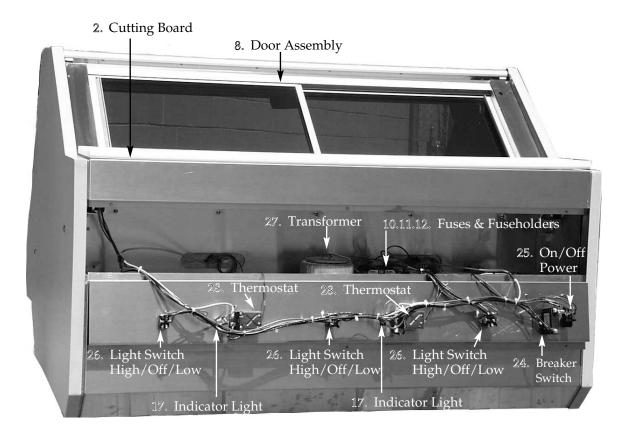




Control Panel

KYSYS Hot Display Case

Interior Service View Rear of Unit

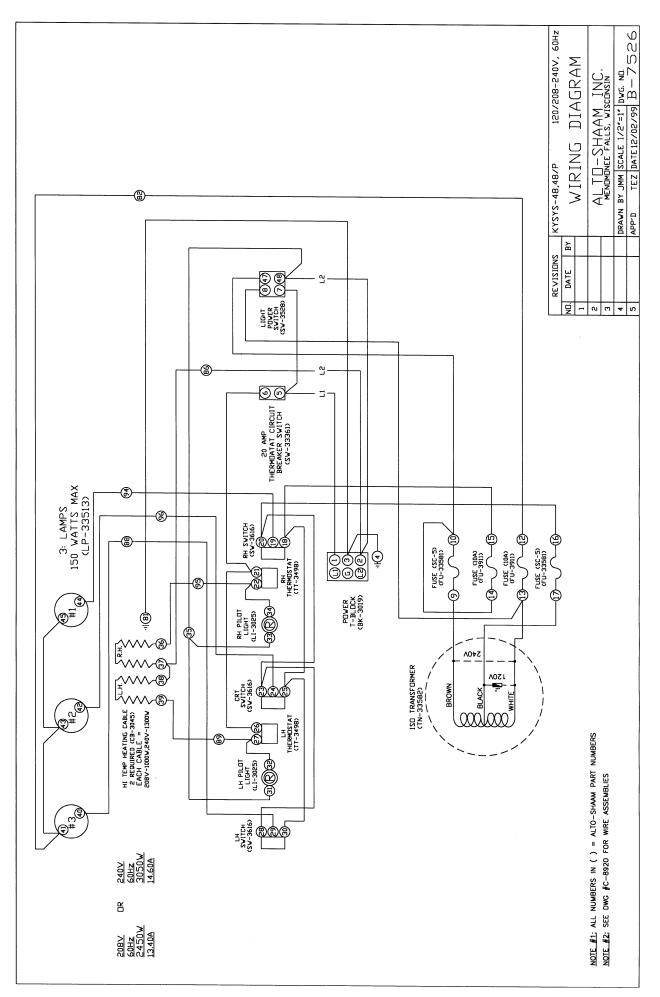


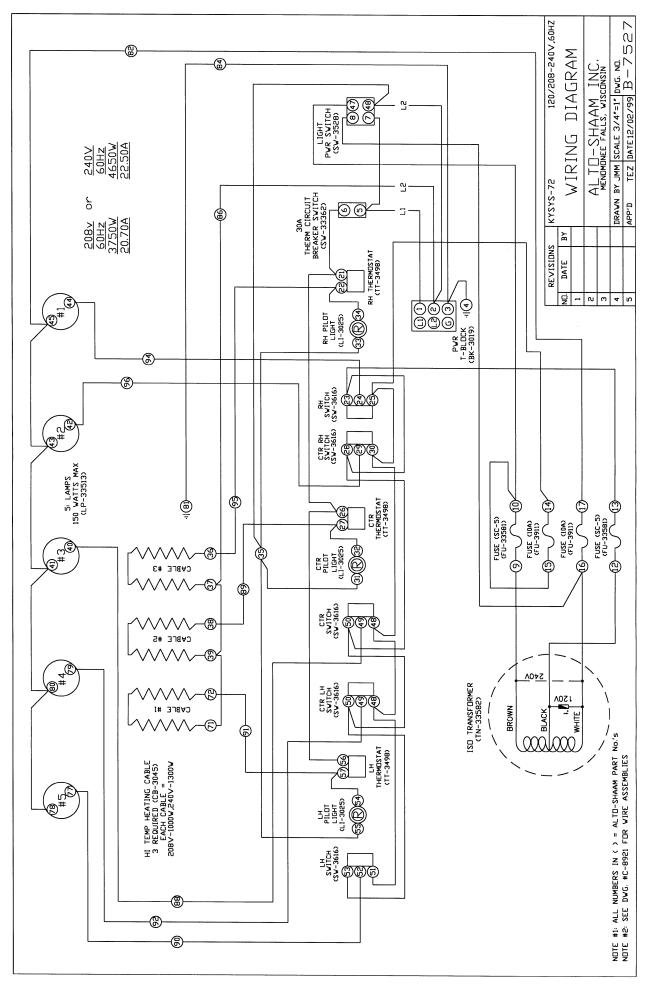


26. Bulb Receptacle

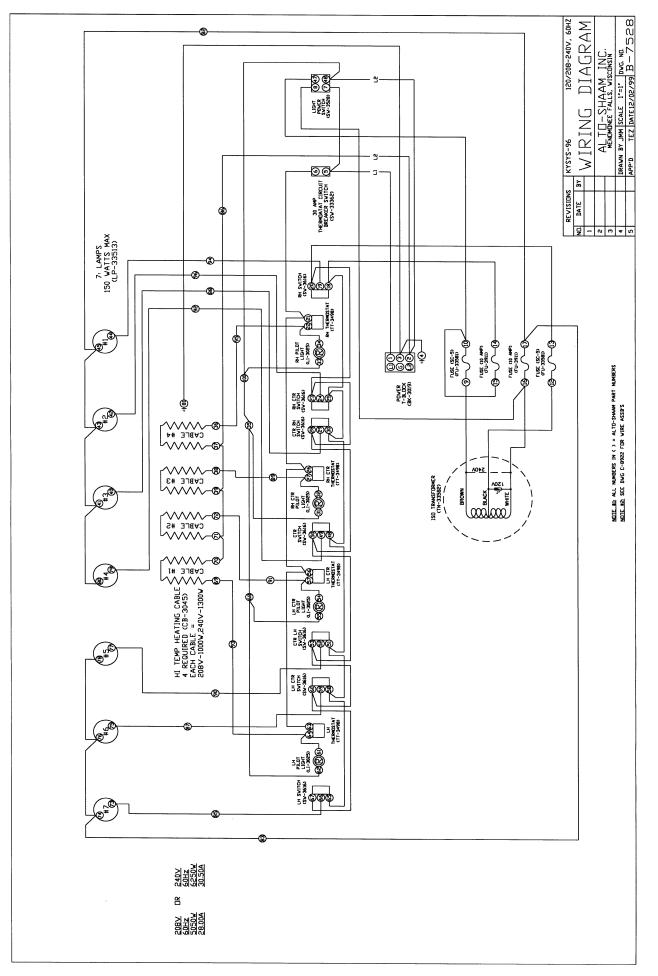
13. Bulb Guard

18. Tubular Bulb





Operation & Care Manual #879 • 10.



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.

- 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.
- 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. W164 N9221 Water Street • P.O. Box 450 • Menomonee Falls, Wisconsin 53052-0450 • U.S.A.

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