

INSTALLATION OPERATION AND MAINTENANCE MANUAL

Food Holding Cabinet, Electric

MODEL: 500-PH/GD

ALTO-SHAAM_® Hot Food Holding Cabinet

UNPACKING and SET-UP

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

The cabinet, complete with unattached items and accessories, may be delivered in one or more packages. Check to ensure that all the accessories that were ordered have been received with each unit.

Save all the information and instructions packed inside with the unit. 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.

Alto-Shaam holding cabinets are designed for the purpose of maintaining hot food at a temperature for safe consumption. The unit must be installed on a level surface in a location that will permit the equipment to function for its intended purpose and allow adequate access for proper cleaning and maintenance. Installation minimum clearance recommendations are: 3-inches (76mm) at the back, 2-inches (51mm) at the top, and 1-inch (25mm) at both sides.

NOTE: Any claims for warranty must include the full model number and serial number.

HEATING CHARACTERISTICS

The Cabinet is equipped with a special, low heat density, heating cable. Through the Halo Heat concept, the heating cable is mounted against the walls of the warming compartment to provide an evenly applied, thermostat controlled, heat source. The design and operational characteristics of the cabinet eliminates the need for a moisture pan or a heat circulating fan. Through even heat application, the quality of a food product is maintained up to as much as several hours.

ELECTRICAL INSTALLATION

1. An identification tag is permanently mounted on the unit. See sample below.



ENSURE POWER SOURCE MATCHES **VOLTAGE STAMPED** ON NAMEPLATE OF UNIT



- 2. Plug unit into a properly grounded receptacle ONLY, positioning the unit so that the power supply cord is easily accessible in case of an emergency.
- 3. If necessary, a proper receptacle or outlet configuration as required for this unit, must be installed by a licensed electrician in accordance with applicable, local electrical
- 4. For 230V units: To prevent an electrical shock hazard between the appliance and other appliances or metal parts in close vicinity, an equalization-bonding stud is provided. An equalization bonding lead must be connected to this stud and the other appliances / metal parts to provide sufficient protection against potential difference. The terminal is marked with the following symbol. The appliance must be connected to an electrical circuit that is protected by an external GFCI outlet.

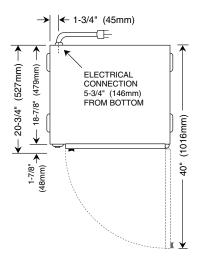
Disconnect unit from power source before cleaning or servicing. At no time should the unit be steamed cleaned, washed down or flooded with water or liquid solution. Do not use water jet to clean. CAUTI Severe damage or electrical hazard could result.

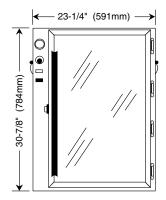


Warranty becomes void if unit is flooded.

INSTALLATION

Outside Dimensions





Product Capacity

Thirteen (13) 16" (406mm) pizzas

Interior Dimensions (HxWxD)

27-7/8" x 17-3/8" x 17-1/2" (708mm x 441mm x 445mm)

Electrical Information

125 V.A.C. — 50 Hz, 1 ph 1000 Watts, 8.4 Amps

230 V.A.C. — 50/60 Hz, 1 ph 950 Watts, 4.1 Amps

Net Weight

57 lb (26 kg)

Ship Weight

71 lb (32 kg)

Options & Accessories

Wire Shelf, Chrome-Plated SH-21	02
Caster Stand Assembly 156	33
Leg Stand Assembly 156	34
Solid Door Model, 125V 4050	01
Solid Door Model, 230V 4050	05
Stacking Kit 50013	59

START-UP

The unit must not be installed in any area where it will be affected by steam, grease, dripping water, high temperatures, or any other severely adverse conditions.

Before operating the unit, clean it with a clean, damp cloth and mild soap solution. Glass cleaner or distilled vinegar can be used on the glass. Clean and install the cabinet wire shelves.

OPERATION

1. Make sure the unit is connected to the appropriate power source.

2. Turn thermostat to 200°F (93°C) and preheat for 30 minutes.

When the thermostat is turned clockwise to an "ON" position, the indicator light will illuminate and will remain lit as long as the unit is calling for heat.

The indicator light will go OUT when the air temperature inside the unit reaches the temperature set by the operator. It will then cycle "ON/OFF" at this holding point. Verify the full preheated temperature with the holding temperature gauge located on the control panel of the cabinet.

3. Load the cabinet with hot food only.

The purpose of the holding cabinet is to maintain hot food at proper serving temperature. Only hot food should be placed into the cabinet. Before loading the cabinet with food, use a food thermometer to make certain all products are at an internal

temperature range of 140° to 160°F (60° to 71°C). Any food product not within the proper temperature range should be heated before loading into the holding cabinet.

4. Reset the thermostat to 160°F (71°C).

Check to make certain the cabinet door is securely closed, and reset the thermostat to $160^{\circ}F$ ($71^{\circ}C$).

THIS WILL NOT NECESSARILY BE THE FINAL SETTING.

The proper temperature range for the products being held will depend on the type and quantity of product. When holding food for prolonged periods, it is advisable to periodically check the internal temperature of each item with a food thermometer to assure maintenance of the proper temperature range of 140° to 160°F (60° to 71°C).



- ♦ Use hand protection when handling hot items.
- ♦ Be certain only hot foods are placed into the cabinet.



To avoid personal injury and damage to the unit -- treat glass with care.

Remember -- glass can shatter.

OPERATION

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.

HOLDING TEM	PERATURE	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
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	$120^{\circ}-140^{\circ}\mathrm{F}$	49° — 60°C
MISCELLANEOUS		
CASSEROLES	160° — 175°F	71° — 79°C
DOUGH — Proofing	$80^{\circ}-100^{\circ}\mathrm{F}$	27° — 38°C
EGGS —Fried	150° — 160°F	66° — 71°C
FROZEN ENTREES	160° — 175°F	71° — 79°C
HORS D'OEUVRES	$160^{\circ}-180^{\circ}\mathrm{F}$	71° — 82°C
PASTA	160° — 180°F	71° — 82°C
PIZZA	$160^{\circ}-180^{\circ}\mathrm{F}$	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

When product is removed from a high temperature cooking environment for immediate transfer into equipment with the lower temperature required for hot food holding, condensation can form on the outside of the product and on the inside of plastic containers used in self-service applications. Allowing the product to release the initial steam and heat produced by high temperature cooking can alleviate this condition. 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.

This unit is equipped with a thermostat control between 60° and 200°F (16° and 93°C). If the unit is equipped with vents, close the vents for moist holding and open the vents for crisp holding. Use a metal-stemmed thermometer to measure the internal temperature of the product being held. Adjust the thermostat

setting to achieve the best overall setting based on internal product temperature.

The holding temperatures listed are suggested guidelines only.

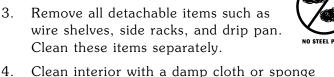
CARE and CLEANING



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.

THOROUGHLY CLEAN THE UNIT DAILY

- Turn lights and adjustable thermostat(s) to the "OFF" position. Disconnect unit from power source, and let cool.
- 2. Remove, cover or wap, and store unused products under refrigeration.
- 3. Remove all detachable items such as Clean these items separately.



- and any good commercial detergent at the recommended strength. 5. Spray heavily soiled areas with a water soluble
- remove soil with a plastic scouring pad. **NOTE**: Avoid the use of abrasive cleaning compounds, chloride based cleaners, or cleaners containing quaternary salts. **Never** use hydrochloric acid (muriatic acid) on stainless steel.

degreaser and let stand for 10 minutes, then

- 6. Clean control panel, door vents, door handles, and door gaskets thoroughly since these areas harbor food debris.
- 7. Rinse surfaces by wiping with sponge and clean warm water.
- 8. Remove excess water with sponge and wipe dry with a clean cloth or air dry. Leave door open until interior is completely dry. Replace shelves.
- 9. Interior can be wiped with a sanitizing solution after cleaning and rinsing. This solution must be approved for use on stainless steel food contact surfaces.
- 10. To help maintain the protective film coating on polished stainless steel, clean the exterior of the cabinet 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.
- 11. Clean glass with a window cleaner.

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

> At no time should 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. Warranty becomes void if unit is flooded.

SANITATION

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.

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:

Center for Food Safety and Applied Nutrition Food and Drug Administration 1-888-SAFEFOOD

INTERNAL FO	OD PRODUCT T	EMPERATURES	
F	HOT FOOD	S	
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)	

SERVICE

THERMOSTAT & PILOT LIGHT SEQUENCE

Whenever the thermostat is turned "ON," the indicator light will indicate the power ON/OFF condition of the heating cable, and consequently, the cycling of the cabinet as it maintains the dialed cavity temperature. If this light does not illuminate after normal start-up, the main power source, thermostat, and/or indicator light must be checked. If the warming cabinet does not hold the temperature as dialed, the calibration of the thermostat must be checked. If the warming cabinet fails to heat or heats continuously with the thermostat "OFF," the thermostat must be initially checked for proper operation. If these items are checked and found to be in order, a continuity and resistance check of the heating cable should be made. SEE CIRCUIT DIAGRAM.

THERMOSTAT CALIBRATION

The thermostat is precision calibrated at the factory. Normally, no adjustment or recalibration is necessary unless the thermostat has been mishandled in transit, changed or abused while in service. A thermostat with a sensing bulb operates on hydraulic pressure, consequently, any bending of the bulb results in a change in its volume, and alters the accuracy of the thermostat calibration.

A thermostat should be checked or recalibrated by placing a quality, thermal indicator at the center of an empty holding cavity. **DO NOT CALIBRATE WITH ANY FOOD PRODUCT IN THE CABINET.** The thermostat should be set, and should be allowed to stabilize at that setting for a minimum of one hour. The center of the thermal swing of the air temperature within the cabinet should approximately coincide with the thermostat setting.

If calibration is necessary, the calibration screw should be adjusted with great care. The calibration screw of the thermostat is located in the thermostat dial shaft. With the shaft held stationary, a minute, clockwise motion of the calibration screw appreciably lowers the thermostat setting. A reverse, or counter-clockwise motion appreciably raises the thermostat setting. After achieving the desired cycling of the thermostat, the calibration screw must be sealed. Place a few drops of enamel sealant directly on the calibration screw. (Red nail polish or equivalent is acceptable.)

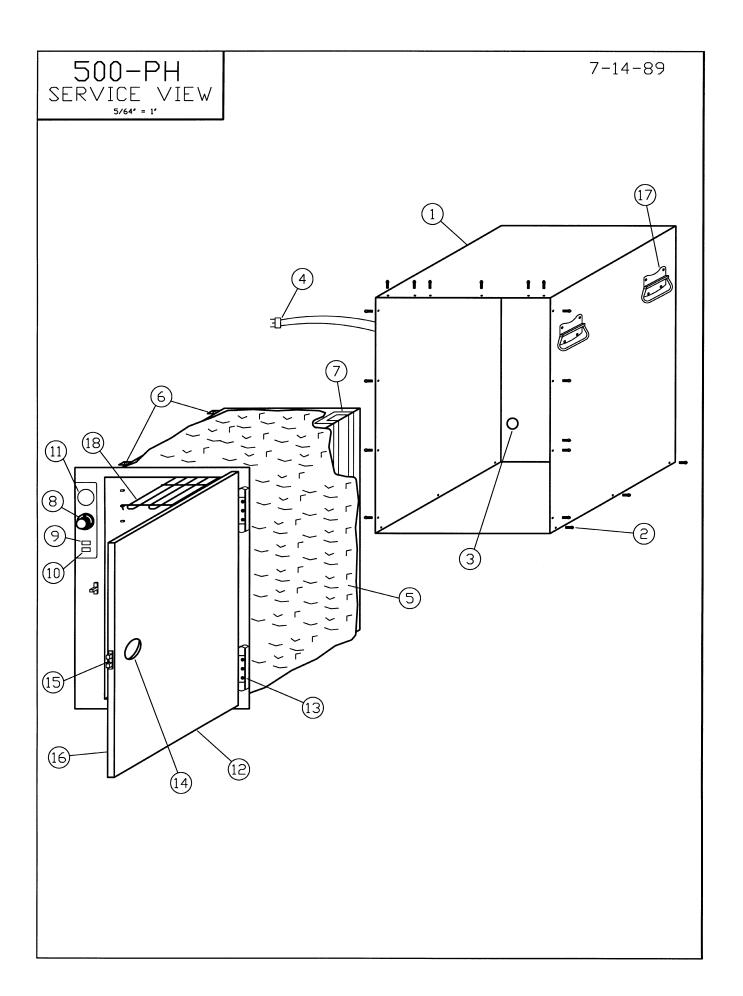


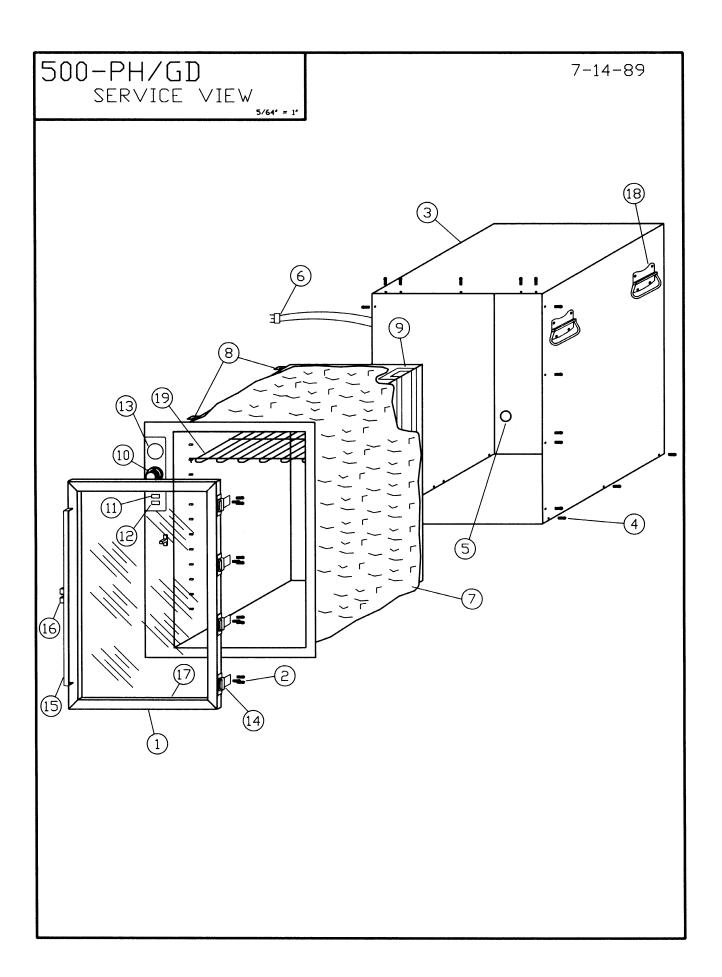
DISCONNECT CABINET FROM THE POWER SOURCE BEFORE CLEANING OR SERVICING

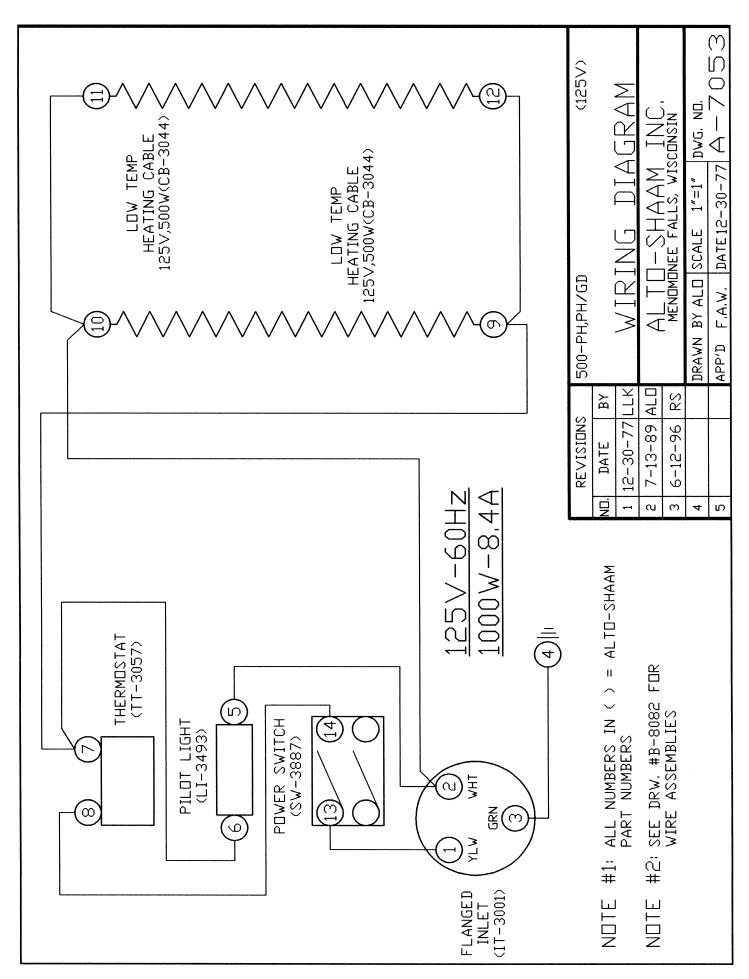


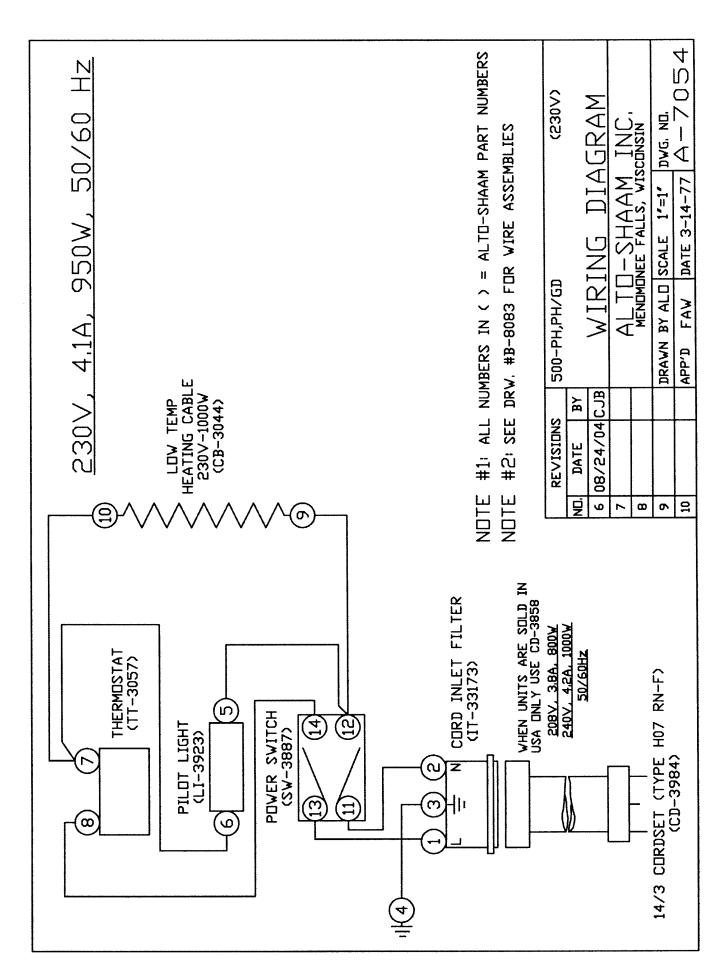
SERVICE					
8-21-00 500-PH			8-21-00 500-PH/GD		
PART DESCRIPTION	UNIT QTY	ALTO-SHAAM PART NO.	PART DESCRIPTION	UNIT QTY	ALTO-SHAAM PART NO.
1. CASING CASING BOTTOM CASING BACK 2. CASING MOUNTING RIVETS 3. INLET (125V) INLET (230V) 4. CORD AND PLUG SET (125V) CORDSET: 230V INTL (TYPE HO7 RN-F) CORDSET: 230V (FOR USA USAGE) 5. INSULATION: 18" x 82" (457mm x 2082mm) 6. CABLE CONNECTION HARDWARE 7. HEATING CABLE: Length 107' (32614mm) 8. THERMOSTAT THERMOSTAT KNOB (Fahrenheit) THERMOSTAT KNOB (Celsius) 9. HEAT INDICATOR LIGHT (125V) HEAT INDICATOR LIGHT (230V) 10. POWER SWITCH (125V) POWER SWITCH (230V) 11. TEMPERATURE GAUGE 12. DOOR ASSEMBLY, RIGHT-HAND DOOR ASSEMBLY, LEFT-HAND 13. HINGE SET (1 pair of 2 hinges) HINGE TO DOOR TO UNIT MOUNTING SCREWS 14. DOOR LATCH DOOR LATCH DOOR LATCH MOUNTING SCREWS 16. DOOR GASKET: Length 9' (2743mm)	QTY 1 1 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1. GLASS DOOR ASSEMBLY 2. GLASS DOOR MOUNTING SCREWS 3. CASING CASING BOTTOM CASING BACK 4. CASING MOUNTING RIVETS 5. INLET (125V) INLET (230V) 6. CORD AND PLUG SET (125V) CORDSET: 230V INTL (TYPE HO7 RN-F) CORDSET: 230V (FOR USA USAGE) 7. INSULATION: 18" x 82" (457mm x 2082mm) 8. CABLE CONNECTION HARDWARE 9. HEATING CABLE: Length 107' (32614mm) 10. THERMOSTAT THERMOSTAT KNOB (Fahrenheit) THERMOSTAT KNOB (Celsius) 11. HEAT INDICATOR LIGHT (125V) HEAT INDICATOR LIGHT (230V) 12. POWER SWITCH (125V) POWER SWITCH (230V) 13. TEMPERATURE GAUGE 14. HINGE SET (1 pair of 2 hinges) HINGE TO DOOR TO UNIT MOUNTING SCREWS 15. DOOR HANDLE DOOR HANDLE DOOR LATCH DOOR LATCH DOOR CASKET: Length 9' (2743mm)	QTY 1 12 1 1 1 20 1 1 1 1 1 1 1 1 1 1 2 1 2	
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SERVICE VIEW • PAG	E 9		SERVICE VIEW • PAGE	10	

Cable Heat	ing Service Kit No. 4874
CB-3044	Cable Heating Element
CR-3226	Ring Connector4
IN-3488	Insulation Corner 8 feet
BU-3105	Shoulder Bushing
BU-3106	Cup Bushing
SL-3063	Insulating Sleeve
TA-3540	High Temperature Tape 1 roll
NU-2215	Hex Nut, 10-328
ST-24-39	Stud, 10-32









TRANSPORTATION DAMAGE and CLAIMS



LIMITED WARRANTY



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, 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

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

	MODEL AND SERIAL NUMBERS IN ANY CONTACT WITH ALTO-SHAAM REGARDING THE UNIT.
Model:	Date Installed:
Voltage:	Purchased From:

RECORD THE MODEL AND SERIAL NUMBERS OF THE UNIT FOR EASY REFERENCE. ALWAYS REFER TO BOTH

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