ALTO SHAAM®

OPERATION and CARE MANUAL

Manual Control

with optional full perimeter bumper assembly

Electronic Control

FOOD HOLDING CABINET
PASS-THROUGH & REACH-IN
Manual or Electronic Control

MODELS: **1000-UP/HD**
1000-UP/P
1000-UP/STD
1000-UPS/HD
1000-UPS/STD

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

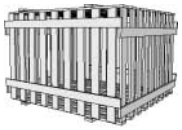
HALO HEAT® **COOK/HOLD/SERVE SYSTEMS**

W164 N9221 Water Street • P.O. Box 450 • Menomonee Falls, Wisconsin 53052-0450 U.S.A.
PHONE: 262.251.3800 / 800.558.8744 U.S.A./CANADA **FAX:** 262.251.7067 • 800.329.8744 U.S.A. ONLY / 262.251.1907 INTERNATIONAL **WEBSITE:** www.alto-shaam.com

PRINTED IN U.S.A.
#838/44 • 4/2004

ALTO-SHAAM® — HOLDING CABINETS

UNPACKING and SET-UP



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

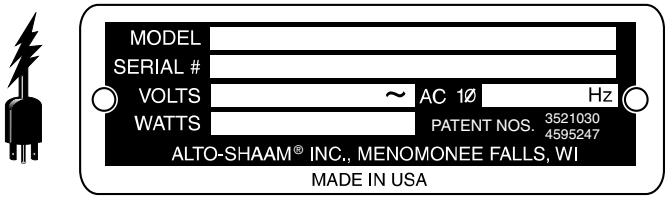
The cabinet, complete with unattached items and accessories, may be delivered in one or more packages. Check to ensure that all accessories that were ordered have been received with each unit.

Save all the information and instructions packed inside the cabinet. 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 claims for warranty must include the full model number and serial number of the cabinet.

ELECTRICAL INSTALLATION

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



2. Plug the cabinet 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 codes.

ENSURE POWER SOURCE MATCHES VOLTAGE STAMPED ON UNIT NAMEPLATE

CABINET 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, thermostatically controlled, heat source. The design and operational characteristics of the cabinet eliminate 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.

START-UP

1. Before operating the unit, clean both the interior and exterior of the unit with a clean, damp cloth and mild soap solution. Rinse carefully.
2. Clean and install the cabinet side racks.

CARE and CLEANING

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

CLEAN THE UNIT DAILY

1. Disconnect the unit from the power source. Let unit cool.
2. Remove all detachable items such as wire shelves, side racks, and drip pan. Clean these items separately.
3. Clean the interior metal surfaces of the cabinet with a clean, 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 carefully to remove all residue and wipe dry.

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

4. 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.

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

Disconnect unit from power source before cleaning or servicing. Never flood the inside or outside of the unit 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.

DOUGH PROOFING

1. Set holding thermostat to 95°F (35°C).
2. Pour approximately 2 quarts (c. 2 liters) of hot water, 140-180°F (60-82°C) into a pan on the bottom surface of the holding compartment.
3. Preheat cabinet for 45-60 minutes.
4. Remove dough from retarder or refrigerator, and allow covered product to set up at room temperature.
5. Remove covering and place product in preheated cabinet.
6. Allow dough to remain in the cabinet until it approximately doubles in size.
7. Remove product from cabinet, brush with egg wash if desired, and bake according to product manufacturer's directions.

NOTE: The above proofing procedure is suggested as a general guideline only. Due to variations in product, product quality, and weight, adherence to the product manufacturer's instructions are recommended.

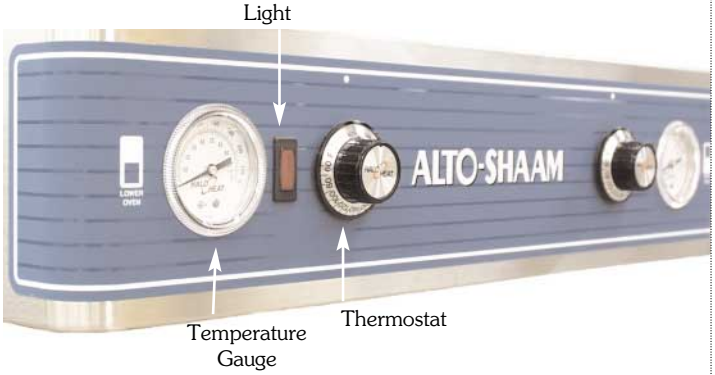
PROCEDURES

1. ***Preheat at 200°F (93°C) for 30 minutes.***
   When the thermostat is turned clockwise to the ON position, the indicator light will illuminate and will remain lit as long as the unit is calling for heat. Allow a minimum of 30 minutes of preheating before loading the holding cabinet with food. Closing the vents on the inside of the door will speed up the process. The indicator light will go OUT after approximately 30 minutes, or when the air temperature inside the unit reaches the temperature set by the operator.

2. ***Load the cabinet with hot food only.***
   The purpose of the holding cabinet is to maintain hot food at proper serving temperatures. Only hot food should be placed into the cabinet. Before loading the unit with food, use a food thermometer to make certain all food products are at an internal temperature range of 140° to 160°F (60° to 71°C). All food not within the proper temperature range should be heated before loading into the holding cabinet.

3. ***Reset the thermostat to 160°F (71°C).***
   Check to make certain the cabinet door is securely closed, and reset the thermostat to 160°F (71°C). *THIS WILL NOT NECESSARILY BE THE FINAL SETTING.*

   The proper temperature range for the food being held will depend on the type and quantity of product. Whether or not the door vents should be open or closed will also depend on the type of food being held. When holding food for prolonged periods, it is advisable to periodically check the internal temperature of each item to assure maintenance of the proper temperature range.



THERMOSTAT and HEAT LIGHT SEQUENCE

Whenever the thermostat is turned ON the heat 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 the light does not illuminate after normal start-up, the main power source, thermostat, and/or 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.*

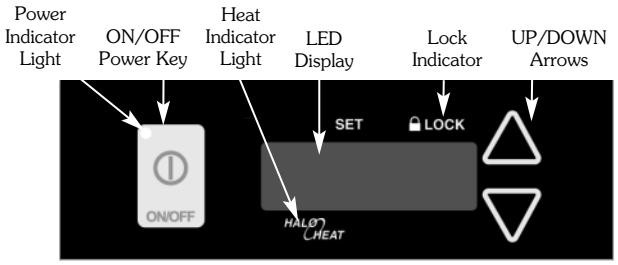
THERMOSTAT CALIBRATION

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 at 140°F (60°C), and should be allowed to stabilize at that setting for a minimum of one hour. Following temperature stabilization, the center of the thermal swing of the air temperature within the cabinet should approximately coincide with the thermostat dial 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.)**

Electronic Control - Option



ON/OFF Key

Press the ON/OFF key once and the power indicator light will illuminate. Press and hold the ON/OFF key until the LED display turns off (at least three seconds) and power indicator light goes out.

UP/DOWN Arrow Key

The UP and DOWN arrow keys are used for a variety of settings when selecting the holding temperature. If an arrow key is pressed and released the display will show the current set temperature for two seconds. If an arrow key is held (at least eight seconds), the value will change at a rapid rate. If the arrow key is pressed and released in rapid succession, the set temperature will change by increments of one degree.

Enable/Disable Beeper

A beeper sounds when an error code is displayed. To choose between beeper on and beeper off mode, the control must be ***off***, then press and hold the DOWN arrow key until either "ON" or "OFF" is shown in the LED display. Release arrow key when desired mode is displayed.

Fahrenheit / Celsius

°F/°C

With the control ***off***, to choose between Fahrenheit and Celsius, press and hold the UP arrow key until either °F or °C is shown in LED display. Release key when desired setting is displayed.

The control has a four-digit LED display. When the display is on, it will show current holding temperature, as well as diagnostic information.

CONTROL LOCK

The warmer controls can be locked so that no changes can be made to the set temperature.

To ***lock the display***, press and hold the ON/OFF key and the Up Arrow key at the same time. The lock LED will illuminate. When the lock LED is illuminated, additional programming will not be functional other than the key sequence required to unlock the panel.

To ***unlock the display***, press and hold the ON/OFF key and the Down Arrow key at the same time. The lock LED will extinguish. The panel keys will resume normal function.

HEATING PROCEDURE

1. ***Preheat at 200°F (93°C) for 30 minutes.***
   Press the ON key, and set the temperature to 200°F (93°C) by using the UP/DOWN arrow keys. Allow a minimum of 30 minutes preheating time before loading the holding cabinet with food. Closing the vents on the inside of the door will speed the preheating process. The LED heat indicator light will go OUT after approximately 30 minutes preheat time, or when the air temperature inside the unit reaches the temperature set by the operator. The set indicator light will light up anytime the temperature is set or reset.

2. ***Load 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.

3. ***Reset the control to 160°F (71°C).***
   Check to make certain the cabinet door is securely closed, and reset to 160°F (71°C) by using the UP/DOWN key. ***THIS WILL NOT NECESSARILY BE THE FINAL SETTING.*** The proper temperature range--or closing or opening the door vents--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).

EXCLUSIVE FEATURE

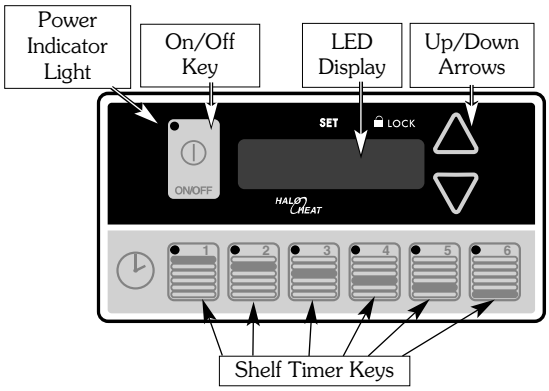
HEAT RECOVERY

The patented SureTemp™ heat recovery system in this unit will immediately compensate for any loss of heat when the door is opened. In order to maintain a more consistent cavity temperature, the control will automatically apply heat to the unit's interior while the door is open and for a short time after the door is closed. If the door remains open for more than three minutes, the solid state electronic control will sound three rapid beeps every ten seconds until the door is closed.

PRINTING

These holding cabinets can be equipped with an option called HACCP with Kitchen Management for connection to a PC. This connects to the internet via a Gateway device, thereby providing temperature recording data as well as setup and diagnostic information which can be used for HACCP.

Electronic Control - Timer - Option



The Multiple Shelf Timer Key option is available for hot food holding units with the electronic control. These keys monitor food safety by using a timer-based "First-In, First-Out" product management system. Products should be cooked to HACCP recommended internal temperature and then held in the unit. The Timer system allows operator to select holding times when the unit is loaded. Multiple timer keys correspond to various pan locations in the holding unit. As the timers expire, alarms notify the operator.

Timer Programming Information

1. **Turn On/Off Power Key OFF.**
Press the On/Off Key until the display turns OFF (at least 3 seconds) and On/Off Key's Power Indicator Light goes out.

Note: The following steps can only be done when the On/Off Power Key is OFF.

2. **Set Shelf Timer Keys.**
Press and hold a Shelf Timer Key (at least 3 seconds) until a value is shown in the LED display. Use the Up or Down Arrow Key to change the time desired.

3. **Set Additional Timer Keys.**
Repeat step 2 for each Shelf Timer Key to be programmed.

4. **Turn On/Off Power Key ON.**
When selected timers have been programmed, press the On/Off key to turn ON unit. Power Indicator Light will illuminate.

5. **Press Shelf Timer Key.**
Press selected Shelf Timer Keys to activate. Shelf LED display will illuminate and the count down will begin.

The Shelf Timer Key LED with the least amount of time remaining will flash slowly and the LED display will alternate between hold temperature and time remaining.

6. **Turn OFF alarm.**
Listen for beeping alarm. Press flashing shelf timer key to turn OFF alarm.

Reprogram Shelf Timer Keys

If you wish to reprogram holding times, turn OFF power. Press the desired Timer Shelf Key and input new time using Up or Down Arrow Key. Turn unit ON and press each Shelf Timer Key to start the count downs.

Important Note: Timer Station Key retains initial time settings in memory. Count down times are cancelled when On/Off Key is turned OFF. It may help to note any remaining count down times before reprogramming.

Power Failure: The Power Indicator Light by On/Off Power Key will blink to indicate a power failure. To stop the blinking, simply depress On/Off Key. The memory will not be impaired.

TROUBLE SHOOTING CHECKLIST • ELECTRONIC CONTROL

Repairs should be made by authorized service agents only.

TROUBLE	POSSIBLE CAUSE	REMEDY
Unit does not operate.	Insufficient power supply.	Check power source.
	Defective power cord or plug.	Check and replace if necessary.
No display in electronic control.	Faulty power supply board.	Check line voltage for 24V across pins 7 and 8 on the power supply board and across terminals J9 and J10 on the electronic control.
	Faulty electronic control.	Replace control.
Cannot control temperature but sensor and electronic control checks O.K.	Faulty relay	Replace relay.
	Heating element grounded.	Replace element.
Temperature readout incorrect.	Dirty or faulty sensor.	Check sensor at 32°F (0°C).
	Faulty control.	If Ohm reading is 100, replace display. If Ohm reading is not 100, replace sensor.

CAUTION

Remember to disconnect the unit from power source before cleaning or servicing.

CABLE HEATING SERVICE KIT No. 4874
(one kit per compartment)

includes:

CB-3044	Cable Heating Element	108 feet
CR-3226	Ring Connector	4
IN-3488	Insulation Corner	1 foot
BU-3105	Shoulder Bushing	4
BU-3106	Cup Bushing	4
ST-2439	Stud	4
NU-2215	Hex Nut	8
SL-3063	Insulating Sleeve	4
TA-3540	Electrical Tape	1 roll

OPTIONS & ACCESSORIES

Electronic Control . . . . . (Factory Installation only)

Electronic Control
➥with multiple timers . . . . (Factory Installation only)

Bumper, full perimeter 44119

Casters, 3" (76mm) 14227

Casters, 5" (127mm) 4007

HACCP with
Kitchen Management . . . . . CONTACT FACTORY

Legs, 6" (152mm) 5205

Shelves — Stainless Steel Wire
➥Reach-in SH-2325
➥Pass-through SH-2346

Wire Pan Grid
➥18" x 26" Sheet Pan Insert PN-2115

Window Door 15148
➥(Factory Installation only)

Left hand door swing
➥(Factory Installation only)

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 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 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 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.

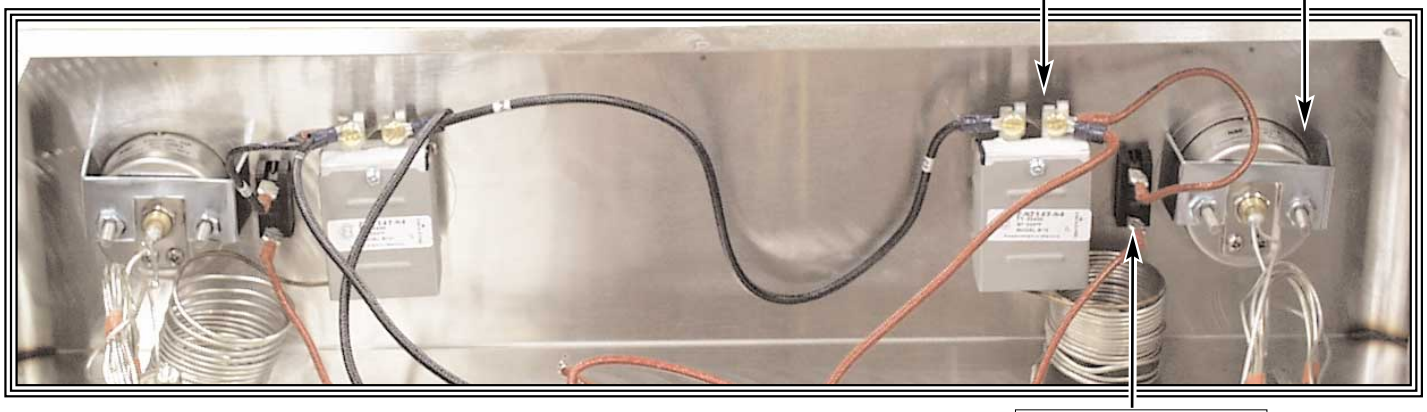
HOLDING TEMPERATURE RANGE

	FAHRENHEIT	CELSIUS
MEAT		
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.

Service Parts	1000-UP/HD	1000-UP/P	1000-UP/STD	1000-UPS/HD	1000-UPS/STD
Description	*reach-in models*			*pass-thru models*	
Manual *or* Electronic Units					
Side rack for shelf, s/s ea., STANDARD	SR-2120	SR-2120	SR-2120	SR-2120	SR-2120
Shelf, stainless steel wire, ea., OPTION	SH-2325	SH-2346	SH-2325	SH-2346	SH-2346
Bottom	44154	44154	44154	44154	44154
Casing Back, heavy duty	16389	16389	N/A	16389	N/A
Casing Back, standard	N/A	N/A	16395	N/A	16389
Side, heavy duty	16390	16390	N/A	16390	N/A
Side, standard	N/A	N/A	16394	N/A	16394
Front Trim	16388	16388	16388	16388	16388
Bonnet	16385	16385	16385	16385	16385
Control Top	44155	44155	44155	44155	44155
Circuit Breaker, 230V	SW-33788	SW-33788	SW-33788	SW-33788	SW-33788
Door Assembly, slab, RH or LH	15147	15147	15147	15147	15147
Door Handle	HD-24171	HD-24171	HD-24171	HD-24171	HD-24171
-Mounting Screws for handle (4)	SC-2073	SC-2073	SC-2073	SC-2073	SC-2073
-Mounting Screws for latch (2)	SC-2070	SC-2070	SC-2070	SC-2070	SC-2070
Door Hinge, ea.	HG-2535	HG-2535	HG-2535	HG-2535	HG-2535
Door Gasket, ea.	GS-23794	GS-23794	GS-23794	GS-23794	GS-23794
Casters, 5" (127mm) swivel w/brake	CS-2026	CS-2026	CS-2026	CS-2026	CS-2026
Casters, 5" (127mm) rigid	CS-2025	CS-2025	CS-2025	CS-2025	CS-2025
Insulation	IN-2381	IN-2381	IN-2381	IN-2381	IN-2381
Manual Units					
Control Face	16386	16386	16386	16386	16386
Panel Overlay, Manual	PE-24944	PE-24944	PE-24944	PE-24944	PE-24944
Thermostat, Manual, 120V, 208/240V, 230V	TT-33626	TT-33626	TT-33626	TT-33626	TT-33626
Heat Indicator Light, Manual, 125V	LI-3493	LI-3493	LI-3493	LI-3493	LI-3493
Heat Indicator Light, Manual, 208/240V	LI-3516	LI-3516	LI-3516	LI-3516	LI-3516
Heat Indicator Light, Manual, 230V	LI-3923	LI-3923	LI-3923	LI-3923	LI-3923
Temperature Gauge, Manual	GU-3273	GU-3273	GU-3273	GU-3273	GU-3273
Thermostat Knob, Manual, 208/240V, 120V	KN-3469	KN-3469	KN-3469	KN-3469	KN-3469
Thermostat Knob, Manual, 230V	KN-3474	KN-3474	KN-3474	KN-3474	KN-3474
Cordset, Manual, 125V	CD-33824	CD-33824	CD-33824	CD-33824	CD-33824
Cord, Manual, 208/240V	CD-3551	CD-3551	CD-3551	CD-3551	CD-3551
Cord, Manual, 230V	CD-3922	CD-3922	CD-3922	CD-3922	CD-3922
Electronic Units					
Control Face	16387	16387	16387	16387	16387
Power Supply Board	BA-33554	BA-33554	BA-33554	BA-33554	BA-33554
Electronic Control, Hold ONLY, WITHOUT HACCP KIT.MGMT.	5000872	5000872	5000872	5000872	5000872
Electronic Control, Hold ONLY, WITH HACCP KIT.MGMT.	5000873	5000873	5000873	5000873	5000873
Electronic Control, Hold W/TIMER, WITHOUT HACCP K.M.	5000874	5000874	5000874	5000874	5000874
Electronic Control, Hold W/TIMER, WITH HACCP KIT.MGMT.	5000875	5000875	5000875	5000875	5000875
Sensor	SN-33541	SN-33541	SN-33541	SN-33541	SN-33541
Terminal block for sensor	BK-33546	BK-33546	BK-33546	BK-33546	BK-33546
Relay	RL-33558	RL-33558	RL-33558	RL-33558	RL-33558
Reed Switch	SW-33559	SW-33559	SW-33559	SW-33559	SW-33559
Terminal Circuit Strip (2)	TM-33560	TM-33560	TM-33560	TM-33560	TM-33560
Latch Plate, Electronic	PA-24657	PA-24657	PA-24657	PA-24657	PA-24657
Panel Overlay, Electronic	PE-24945	PE-24945	PE-24945	PE-24945	PE-24945
Panel Overlay, Electronic Timer	PE-25368	PE-25368	PE-25368	PE-25368	PE-2536
Cordset, 125V	CD-33824	CD-33824	CD-33824	CD-33824	CD-33824
Cordset, 208/240V	CD-3551	CD-3551	CD-3551	CD-3551	CD-3551
Cordset, 230V	CD-3922	CD-3922	CD-3922	CD-3922	CD-3922
Beeper	BP-3567	BP-3567	BP-3567	BP-3567	BP-3567

Manual Control • Service View



Front of unit

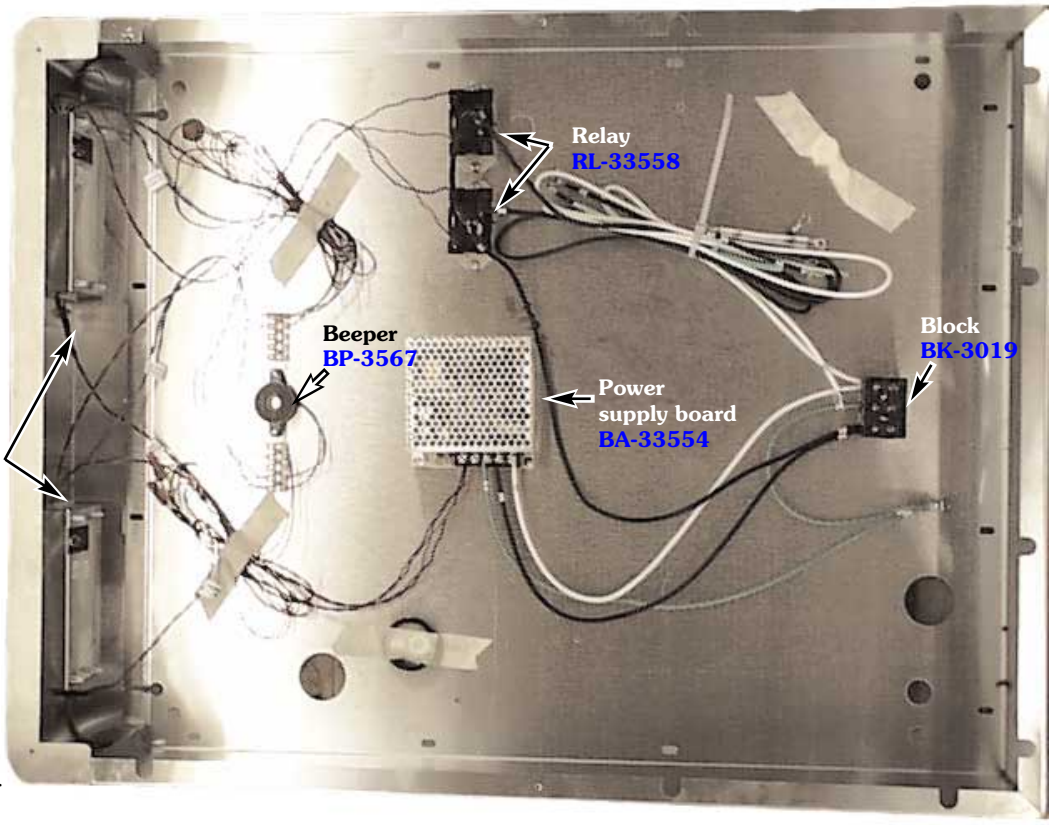
CAUTION

Remember to disconnect the unit from power source before cleaning or servicing.

Electronic Control • Service View

Hold ONLY
W/O HACCP
KIT. MGMT. -
5000872
WITH HACCP
KIT. MGMT. -
5000873

Hold with Timer
w/o HACCP
KIT. MGMT. -
5000874
with HACCP
KIT. MGMT. -
5000875



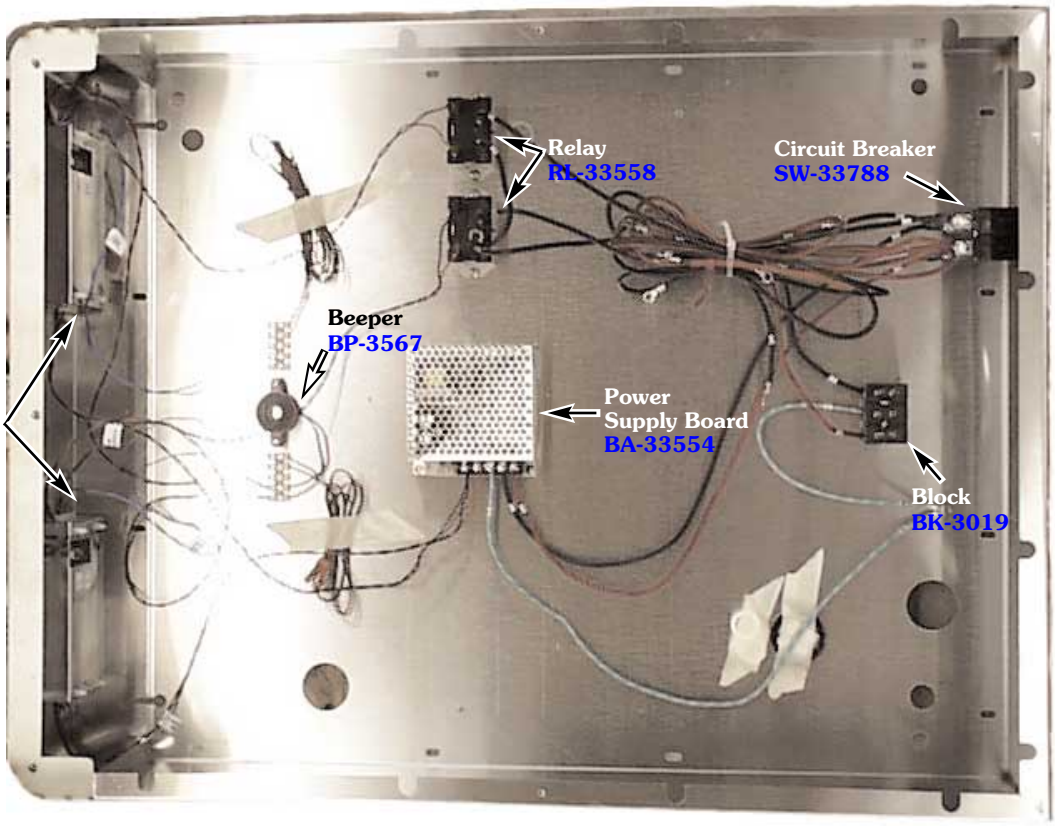
120V Unit

Front of Cabinet

Back of Unit

Hold ONLY
W/O HACCP
KIT. MGMT.-
5000872
WITH HACCP
KIT. MGMT. -
5000873

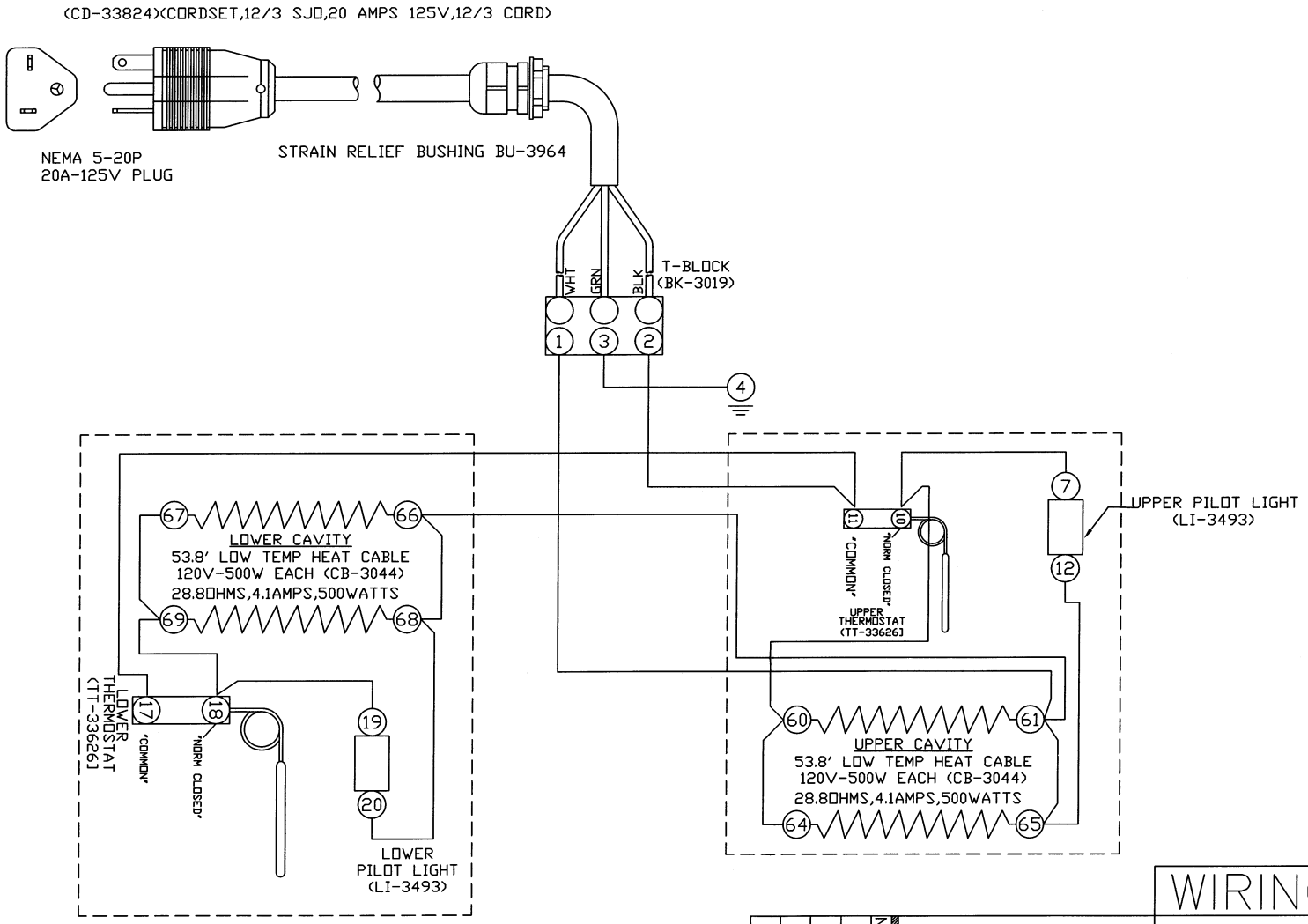
Hold with Timer
w/o HACCP
KIT. MGMT. -
5000874
with HACCP
KIT. MGMT. -
5000875



230V Unit

CAUTION

Remember to disconnect the unit from power source before cleaning or servicing.



120V-60Hz 2000W, 16.0A

NOTE #1: ALL NUMBERS IN ()= ALTO-SHAAM PART NO.'S

NOTE#2: SEE DRW #8055 FOR WIRE ASSEMBLY'S

NO.	REVISION	BY
4	04/01/03	DDF
3	05/10/02	CJB
2	04/16/02	CJB
1	04/05/02	CJB

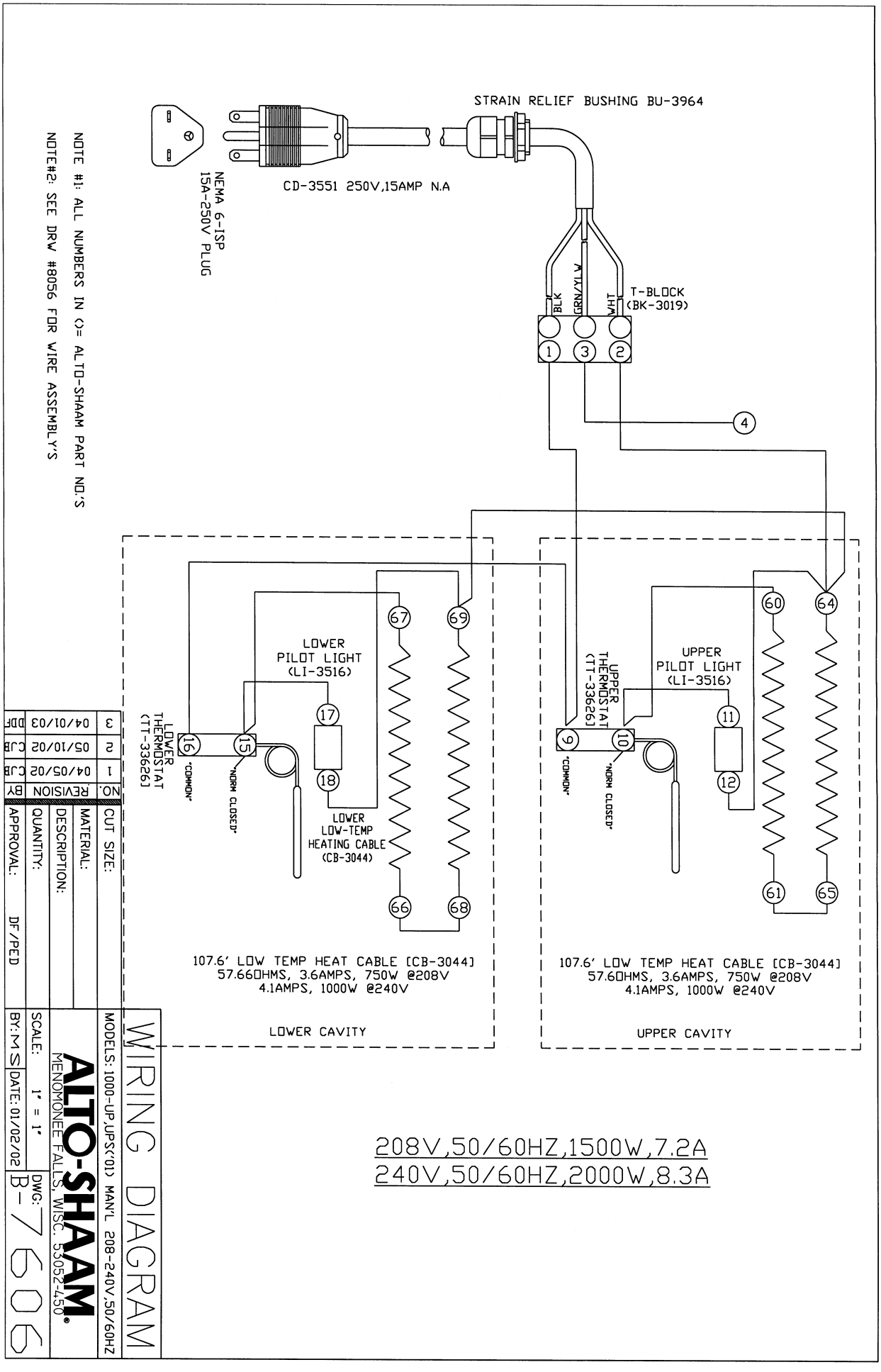
CUT SIZE:
MATERIAL:
DESCRIPTION:
QUANTITY:
APPROVAL: DF/PED

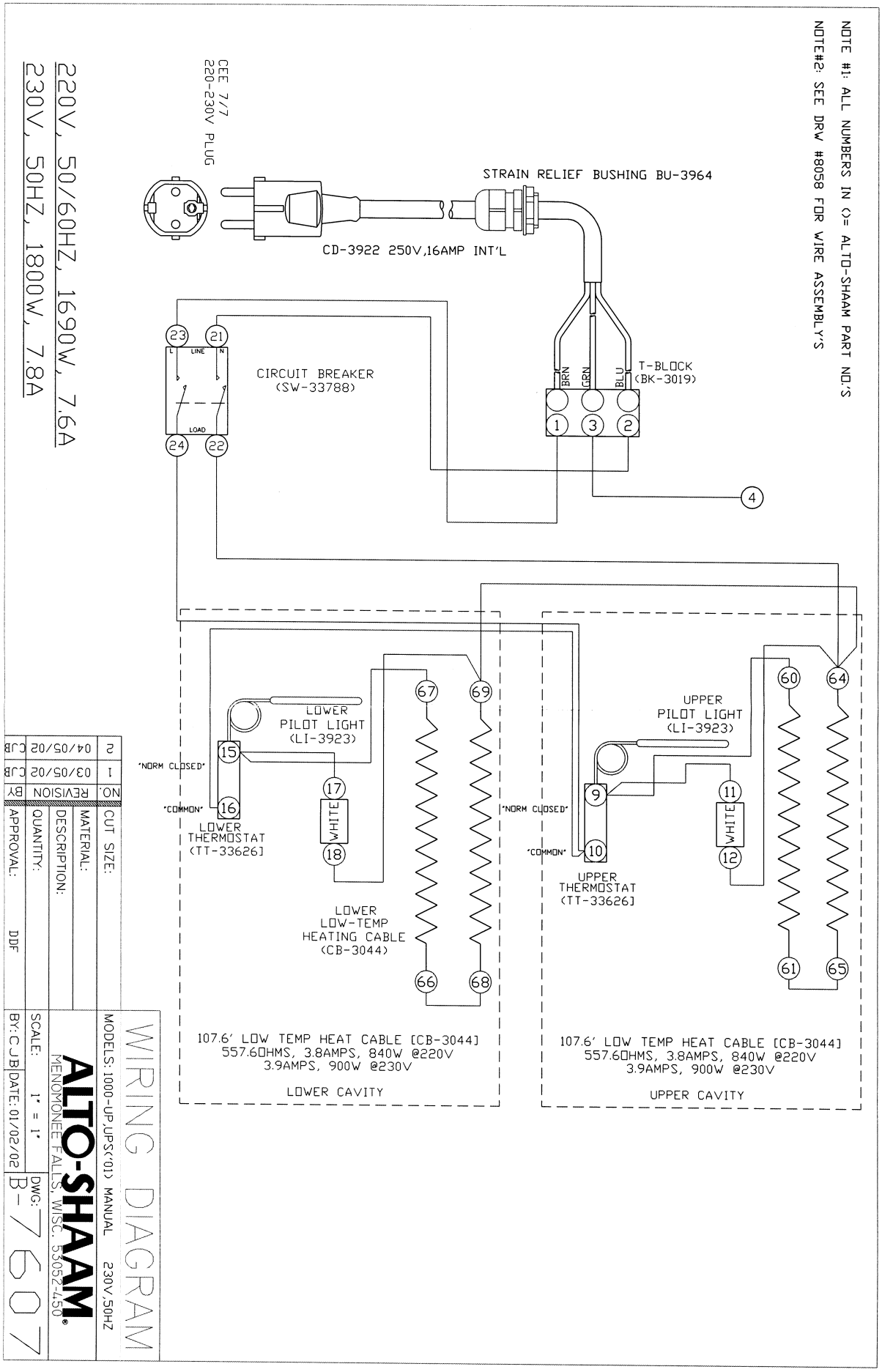
WIRING DIAGRAM

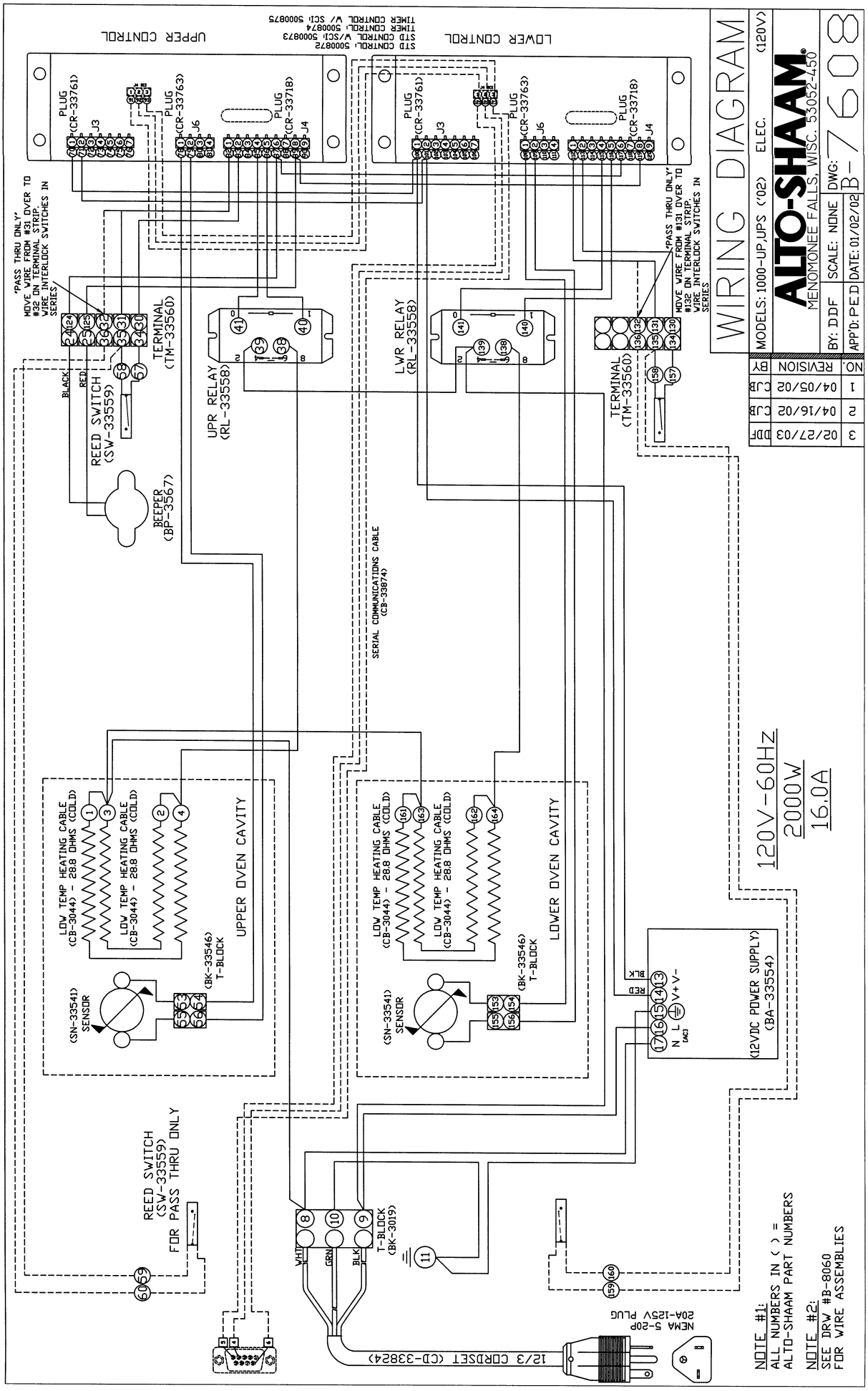
MODELS: 1000-UP,UPS('01) MANUAL 120V,60HZ

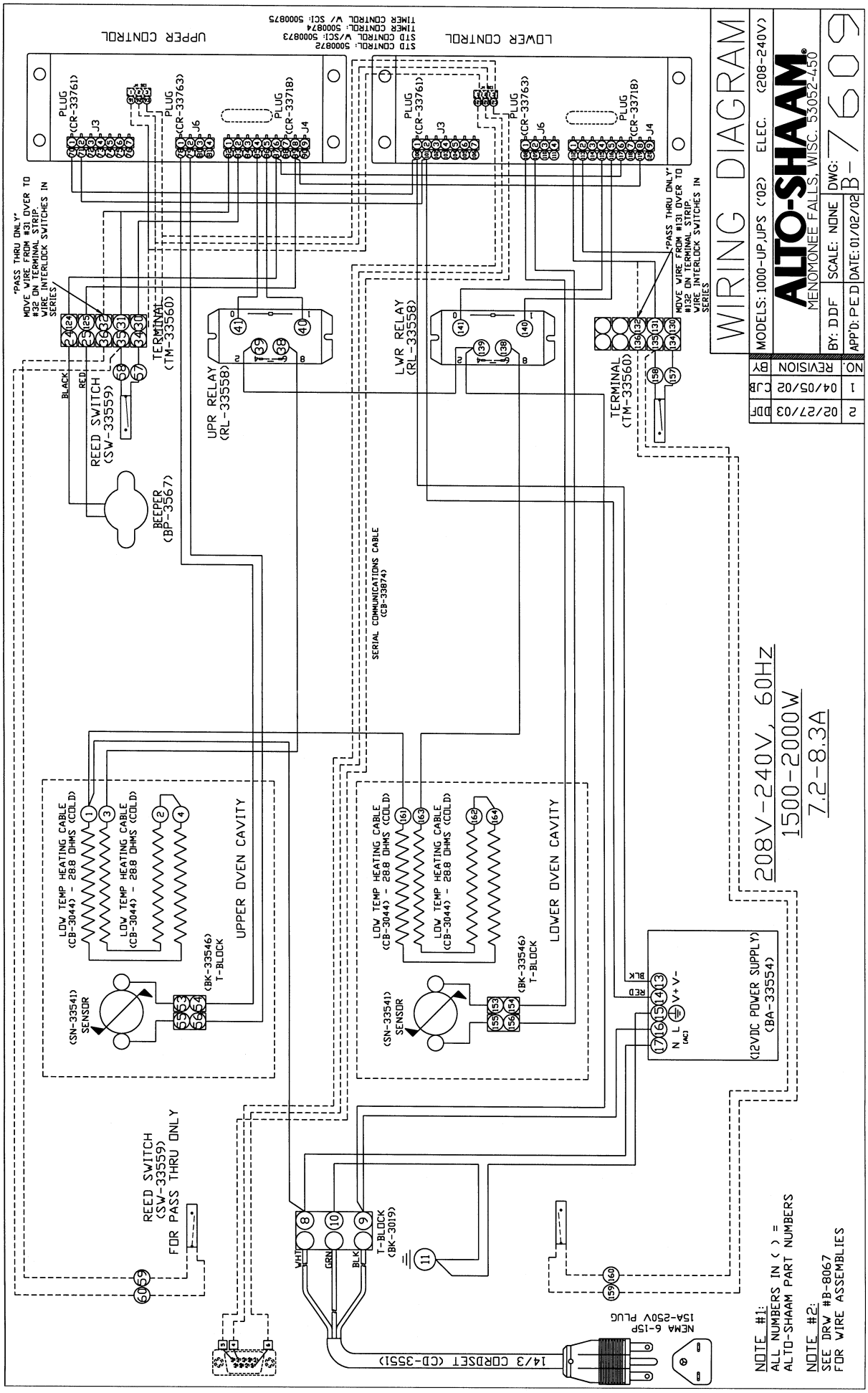
ALTO-SHAAM.
MENOMONEE FALLS, WISC. 53052-450

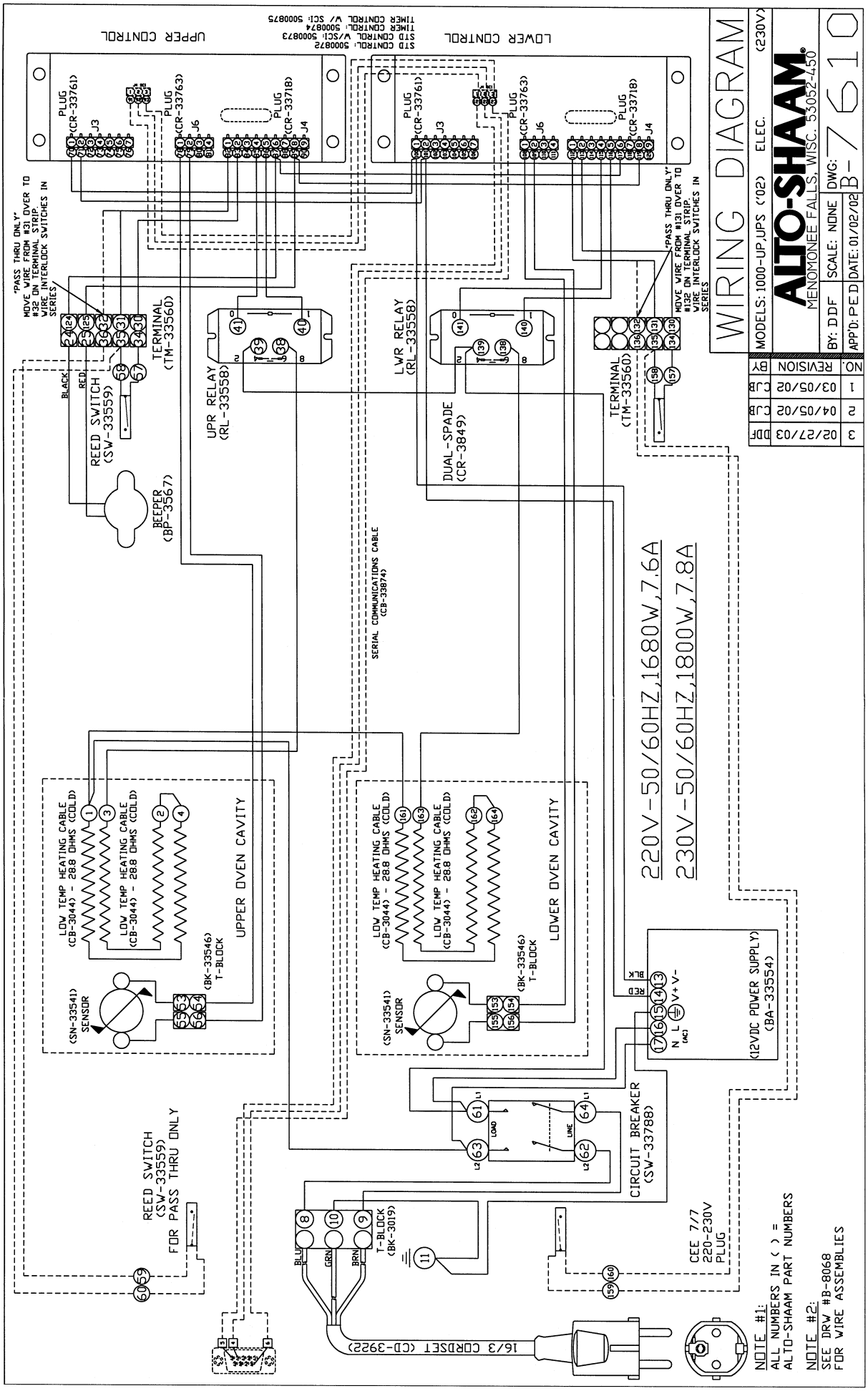
SCALE: 1" = 1"
BY: MS DATE: 01/02/02
DWG: B-7605


STRAIN RELIEF BUSHING BU-3964
NEMA 6-15P
15A-250V PLUG
CD-3551 250V,15AMP N.A
T-BLOCK
(BK-3019)
BLK
GRN/YLW
WHT
1
3
2
4
LOWER
PILOT LIGHT
(LI-3516)
LOWER
THERMOSTAT
(TT-33626)
"COMMON"
"NORM CLOSED"
LOWER
LOW-TEMP
HEATING CABLE
(CB-3044)
67
69
66
68
16
15
17
18
UPPER
PILOT LIGHT
(LI-3516)
UPPER
THERMOSTAT
(TT-33626)
"COMMON"
"NORM CLOSED"
60
64
61
65
9
10
11
12
107.6' LOW TEMP HEAT CABLE [CB-3044]
57.6OHMS, 3.6AMPS, 750W @208V
4.1AMPS, 1000W @240V
LOWER CAVITY
107.6' LOW TEMP HEAT CABLE [CB-3044]
57.6OHMS, 3.6AMPS, 750W @208V
4.1AMPS, 1000W @240V
UPPER CAVITY
NOTE #1: ALL NUMBERS IN <> = ALTO-SHAAM PART NO.'S
NOTE#2: SEE DRW #8056 FOR WIRE ASSEMBLY'S
208V,50/60HZ,1500W,7.2A
240V,50/60HZ,2000W,8.3A
WIRING DIAGRAM
MODELS: 1000-UP,UPS('01) MAN'L 208-240V,50/60HZ
CUT SIZE:
MATERIAL:
DESCRIPTION:
QUANTITY:
APPROVAL: DF/PED
NO. REVISION BY
3 04/01/03 DDF
2 05/10/02 CJB
1 04/05/02 CJB
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-450
SCALE: 1" = 1"
BY: MS
DATE: 01/02/02
DWG: B-7606


NOTE #1: ALL NUMBERS IN ◇= ALTO-SHAAM PART NO.'S
NOTE#2: SEE DRW #8058 FOR WIRE ASSEMBLY'S
220V, 50/60HZ, 1690W, 7.6A
230V, 50HZ, 1800W, 7.8A
CEE 7/7
220-230V PLUG
CD-3922 250V,16AMP INT'L
STRAIN RELIEF BUSHING BU-3964
CIRCUIT BREAKER
(SW-33788)
LINE
LOAD
T-BLOCK
(BK-3019)
BRN
GRN
BLU
LOWER
PILOT LIGHT
(LI-3923)
"NORM CLOSED"
"COMMON"
LOWER
THERMOSTAT
(TT-33626)
WHITE
LOWER
LOW-TEMP
HEATING CABLE
(CB-3044)
UPPER
PILOT LIGHT
(LI-3923)
UPPER
THERMOSTAT
(TT-33626)
107.6' LOW TEMP HEAT CABLE [CB-3044]
557.6OHMS, 3.8AMPS, 840W @220V
3.9AMPS, 900W @230V
LOWER CAVITY
107.6' LOW TEMP HEAT CABLE [CB-3044]
557.6OHMS, 3.8AMPS, 840W @220V
3.9AMPS, 900W @230V
UPPER CAVITY
WIRING DIAGRAM
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-450
MODELS: 1000-UP,UPS('01) MANUAL 230V,50HZ
CUT SIZE:
MATERIAL:
DESCRIPTION:
QUANTITY:
APPROVAL: DDF
SCALE: 1" = 1"
DATE: 01/02/02
BY: CJB
DWG: B-7607
NO. REVISION BY
1 03/05/02 CJB
2 04/05/02 CJB


WIRING DIAGRAM
MODELS: 1000-UP,UPS ('02) ELEC. (120V)
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-450
BY: DDF SCALE: NONE DWG: B-7608
APP'D: P.E.D DATE: 01/02/02
NO REVISION BY
3 02/27/03 DDF
2 04/16/02 CJB
1 04/05/02 CJB
UPPER CONTROL
LOWER CONTROL
STD CONTROL, 5000872
STD CONTROL W/SCI: 5000873
TIMER CONTROL, 5000874
TIMER CONTROL W/ SCI: 5000875
PLUG (CR-33761) J3
PLUG (CR-33763) J6
PLUG (CR-33718) J4
TERMINAL (TM-33560)
UPR RELAY (RL-33558)
LWR RELAY (RL-33558)
REED SWITCH (SW-33559)
BEEPER (BP-3567)
SERIAL COMMUNICATIONS CABLE (CB-33874)
LOW TEMP HEATING CABLE (CB-3044) - 28.8 OHMS (COLD)
UPPER OVEN CAVITY
LOWER OVEN CAVITY
(SN-33541) SENSOR
(BK-33546) T-BLOCK
(12VDC POWER SUPPLY) (BA-33554)
120V-60Hz
2000W
16.0A
T-BLOCK (BK-3019)
12/3 CORDSET (CD-33824)
NEMA 5-20P
20A-125V PLUG
NOTE #1:
ALL NUMBERS IN ( ) =
ALTO-SHAAM PART NUMBERS
NOTE #2:
SEE DRW #B-8060
FOR WIRE ASSEMBLIES


WIRING DIAGRAM
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-2450
MODELS: 1000-UP,UPS ('02) ELEC. (208-240V)
BY: DDF
SCALE: NONE
DWG: B-7609
APP'D: PED
DATE: 01/02/02
NO. REVISION BY
1 04/05/02 CJB
2 02/27/03 DDF
208V-240V, 60Hz
1500-2000W
7.2-8.3A
LOWER CONTROL
UPPER CONTROL
STD CONTROL: 5000872
STD CONTROL W/SCI: 5000873
TIMER CONTROL: 5000874
TIMER CONTROL W/ SCI: 5000875
PLUG (CR-33761)
PLUG (CR-33763)
PLUG (CR-33718)
TERMINAL (TM-33560)
UPR RELAY (RL-33558)
LWR RELAY (RL-33558)
REED SWITCH (SW-33559)
BEEPER (BP-3567)
"PASS THRU ONLY" MOVE WIRE FROM #31 OVER TO #32 ON TERMINAL STRIP. WIRE INTERLOCK SWITCHES IN SERIES
"PASS THRU ONLY" MOVE WIRE FROM #131 OVER TO #132 ON TERMINAL STRIP. WIRE INTERLOCK SWITCHES IN SERIES
SERIAL COMMUNICATIONS CABLE (CB-33874)
LOW TEMP HEATING CABLE (CB-3044) - 28.8 OHMS (COLD)
UPPER OVEN CAVITY
LOWER OVEN CAVITY
(SN-33541) SENSOR
(BK-33546) T-BLOCK
(12VDC POWER SUPPLY) (BA-33554)
REED SWITCH (SW-33559) FOR PASS THRU ONLY
T-BLOCK (BK-3019)
WHT
GRN
BLK
14/3 CORDSET (CD-3351)
NEMA 6-15P
15A-250V PLUG
NOTE #1:
ALL NUMBERS IN ( ) =
ALTO-SHAAM PART NUMBERS
NOTE #2:
SEE DRW #B-8067
FOR WIRE ASSEMBLIES


WIRING DIAGRAM
MODELS: 1000-UP,UPS ('02) ELEC. (230V)
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4502
BY: DDF SCALE: NONE DWG: B-7610
APP'D: PE D DATE: 01/02/02
NO. REVISION BY
3 02/27/03 DDF
2 04/05/02 CJB
1 03/05/02 CJB
LOWER CONTROL
UPPER CONTROL
STD CONTROL: 5000872
STD CONTROL W/SCI: 5000873
TIMER CONTROL: 5000874
TIMER CONTROL W/ SCI: 5000875
PLUG (CR-33761) J3
PLUG (CR-33763) J6
PLUG (CR-33718) J4
"PASS THRU ONLY" MOVE WIRE FROM #31 OVER TO #32 ON TERMINAL STRIP. WIRE INTERLOCK SWITCHES IN SERIES
"PASS THRU ONLY" MOVE WIRE FROM #131 OVER TO #132 ON TERMINAL STRIP. WIRE INTERLOCK SWITCHES IN SERIES
TERMINAL (TM-33560)
REED SWITCH (SW-33559)
BEEPER (BP-3567)
UPR RELAY (RL-33558)
LWR RELAY (RL-33558)
DUAL-SPADE (CR-3849)
SERIAL COMMUNICATIONS CABLE (CB-33874)
LOW TEMP HEATING CABLE (CB-3044) - 28.8 OHMS (COLD)
UPPER OVEN CAVITY
LOWER OVEN CAVITY
(SN-33541) SENSOR
(BK-33546) T-BLOCK
220V-50/60HZ,1680W,7.6A
230V-50/60HZ,1800W,7.8A
(12VDC POWER SUPPLY) (BA-33554)
CIRCUIT BREAKER (SW-33788)
T-BLOCK (BK-3019)
CEE 7/7 220-230V PLUG
16/3 CORDSET (CD-3922)
REED SWITCH (SW-33559) FOR PASS THRU ONLY
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW #B-8068 FOR WIRE ASSEMBLIES

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®

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

PHONE: **262.251.3800** **800.558.8744** U.S.A./CANADA
FAX: **262.251.7067 • 800.329.8744** U.S.A./CANADA **262.251.1907** INTERNATIONAL
WEBSITE: **www.alto-shaam.com**

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