ALTO SHAAM®
HALO HEAT®

INSTALLATION OPERATION AND MAINTENANCE MANUAL

750-CTUS

FOOD HOLDING CABINET

Manual or Electronic Control

MODEL: 750-CTUS

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

PHONE: 262.251.3800
800.558-8744 USA/CANADA

FAX: 262.251.7067 • 800.329.8744 U.S.A. ONLY
262.251.1907 INTERNATIONAL

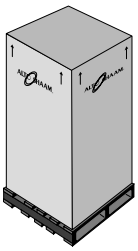
WEBSITE:
www.alto-shaam.com

PRINTED IN U.S.A.

#827 • 11/2004

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 the following items have been received as standard with each unit: *2: SIDE RACKS*

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.

Alto-Shaam holding cabinets are designed for the purpose of maintaining hot food at a temperature for safe consumption. The unit must be installed in a location that will permit the equipment to function for its intended purpose and allow adequate access for proper cleaning and maintenance.

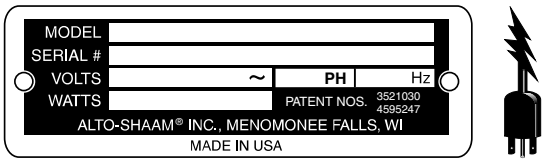
NOTE: *All claims for warranty must include the full model number and serial number of the cabinet.*

HEATING CHARACTERISTICS

The cabinet is equipped with a special heating cable. Through this Halo Heat concept, the heating cable is mounted against the walls of the unit to provide an evenly applied heat source controlled by a thermostat. The design and operational characteristics of the unit eliminate the need for a moisture pan or a heat circulating fan. Through even heat application, the quality of food products is maintained up to several hours or more.

ELECTRICAL INSTALLATION

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



2. Plug cabinet into a properly grounded receptacle ONLY, positioning the unit so the power supply cord is easily accessible in case of an emergency.

ENSURE POWER SOURCE MATCHES VOLTAGE STAMPED ON NAMEPLATE OF UNIT

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.

Disconnect unit from power source before cleaning or servicing.

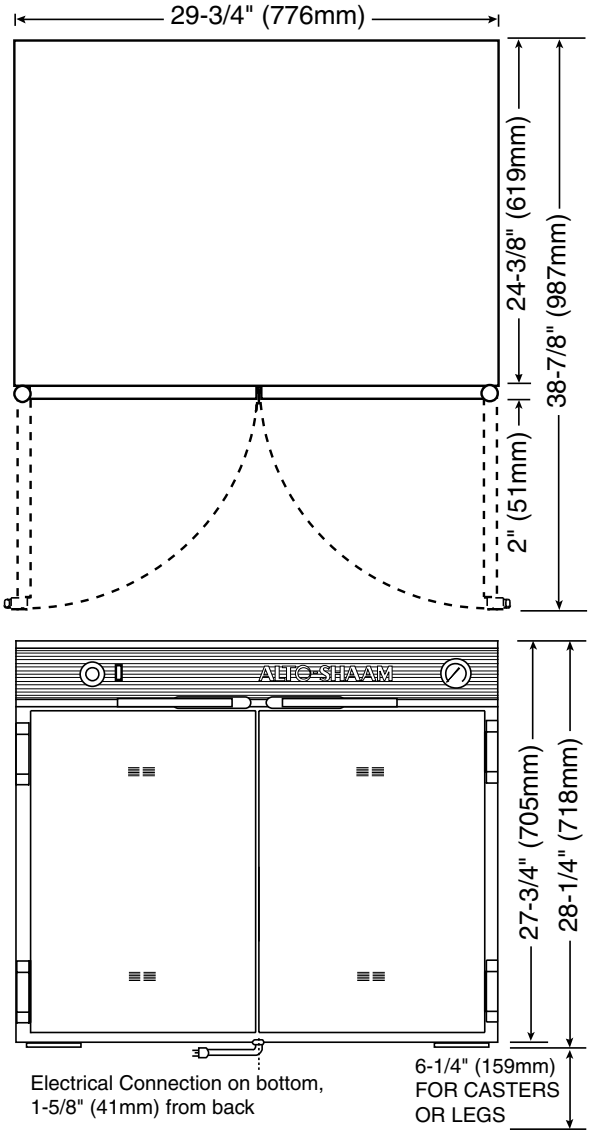
At no time should the inside or outside of the cabinet be washed down, flooded with water or liquid solution. Do not clean with water jet. NEVER STEAM CLEAN. Severe damage or electrical hazard could result. Warranty becomes void if unit is flooded.

START-UP

1. The unit should be installed level and 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.
2. Before operating the cabinet, clean both the interior and exterior of the unit with a damp, clean cloth and mild soap solution. Rinse carefully.
3. Clean and install the cabinet side racks.
4. Before operating the unit, become familiar with the operation of the controls. Read this manual and keep it in a secure location.

Outside Dimensions

750-CTUS



Options & Accessories

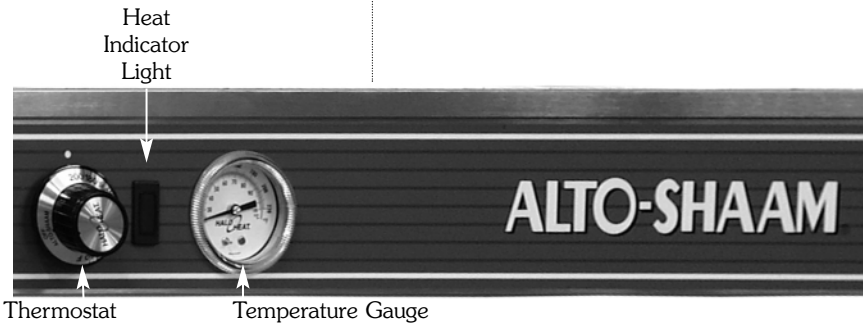
Casters (1 set of 4)
3 " (76mm) 2 rigid, 2 swivel with brake 14227
5" (127mm) 2 rigid, 2 swivel with brake 4007
Legs, 6" (152mm) 5205
Pan grid, chrome plated wire PN-2115
18" x 26" (457mm x 660mm) sheet pan insert
Shelf, chrome plated wire SH-2851

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 <u>NOT</u> 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.



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 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.

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.

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

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

2. Remove all detachable items such as shelves and side racks. Clean these items separately.

3. Clean interior metal surfaces of the unit with a damp, clean cloth and any good commercial detergent or grease solvent at the recommended strength. Spray heavily soiled areas with a water soluble degreaser and let stand for 10 minutes, then remove soil with a plastic scouring pad. Rinse carefully to remove all residue and wipe dry. Leave doors open until interior is completely dry. Replace side racks and shelves.

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.

4. Wipe control panel, door vents, door handles, and door gaskets thoroughly since these areas harbor food debris. Rinse surfaces by wiping with sponge and clean warm water. Remove excess water with sponge and wipe dry with a clean cloth or air dry.

5. 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.

6. 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.

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

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.
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 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)

MANUAL CONTROL

THERMOSTAT and HEAT LIGHT SEQUENCE

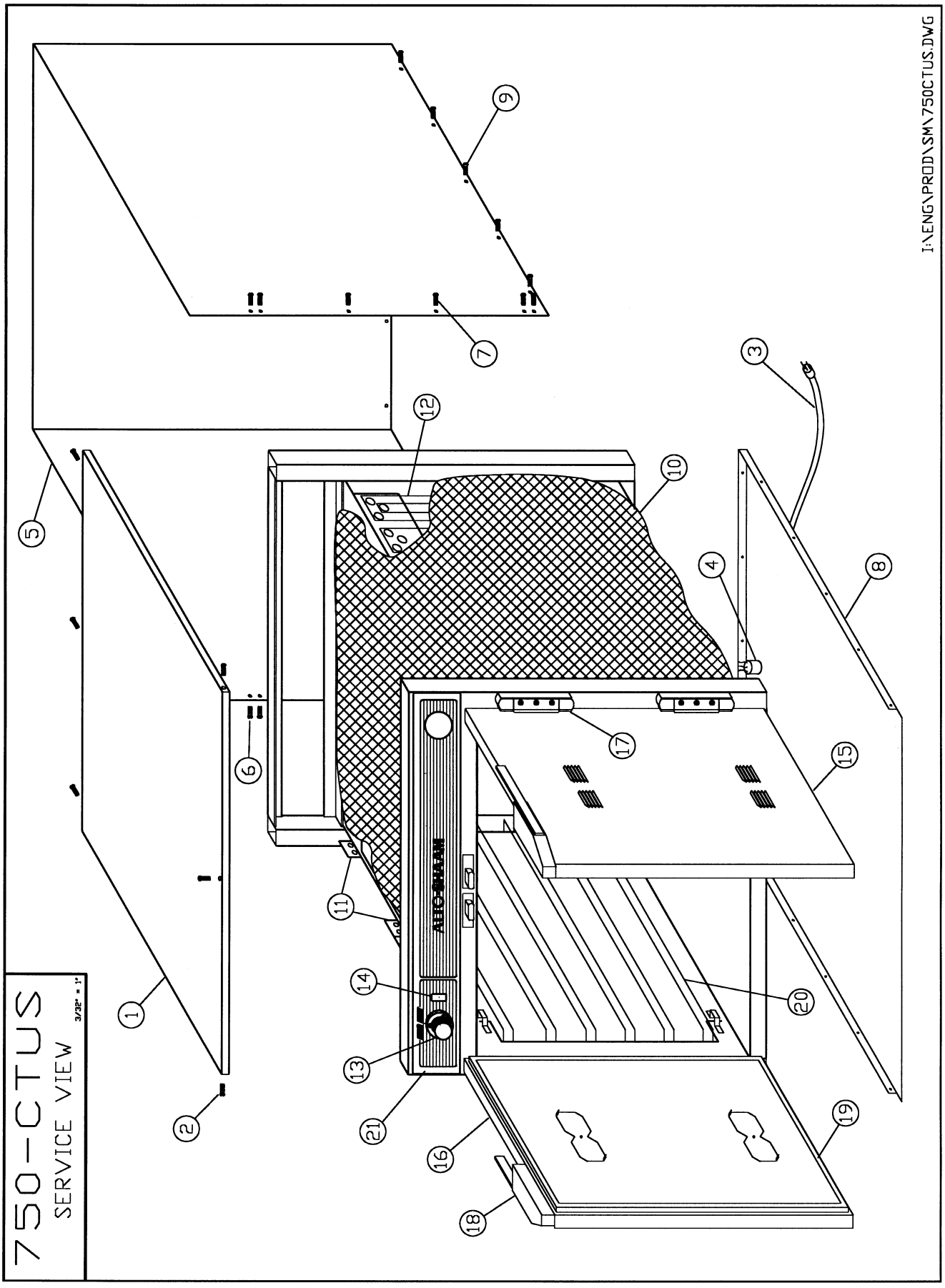
Whenever the thermostat is turned "ON," the heat indicator light will indicate the power ON/OFF condition of the heating cable, and consequently, the cycling of the cabinet as it maintains the dialed cavity temperature. If the light does not illuminate after normal start-up, the main power source, thermostat, 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 warmer 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.)


750-CTUS
SERVICE VIEW
3/32" = 1"
I:\ENG\PROD\SM\750CTUS.DWG
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21

SERVICE VIEW PARTS LIST
MODEL 750-CTUS

9/3/03

PART DESCRIPTION	QTY. PER UNIT	ALTO-SHAAM PART NO.
1. TOP ASSEMBLY	1	4445
2. TOP ASSEMBLY MOUNTING SCREWS	6	SC-2425
3. POWER CORDSET (125V)	1	CD-33367
CORD SET (208-240V)	1	CD-3551
4. CORD STRAIN RELIEF BUSHING	1	BU-3011
5. CASING	1	1009
6. CASING MOUNTING SCREWS	2	SC-2425
7. CASING MOUNTING RIVETS	10	RI-2100
8. BOTTOM ASSEMBLY	1	4499
9. BOTTOM ASSEMBLY MTG. RIVETS	15	RI-2100
10. INSULATION: 25" x 120" (635mm x 3048mm)	1	IN-22364
11. CABLE CONNECTION HARDWARE		
12. HEATING CABLE: Length 144' (43891mm)	1	CB-3045
13. THERMOSTAT	1	TT-33626
THERMOSTAT KNOB (F°)	1	KN-3469
THERMOSTAT KNOB (C°)	1	KN-3474
14. INDICATOR LIGHT (125V)	1	LI-3493
INDICATOR LIGHT (208-240V)	1	LI-3516
15. DOOR ASSEMBLY, RIGHT-HAND	1	5978
16. DOOR ASSEMBLY, LEFT-HAND	1	5977
17. HINGE SET (1 pair of 2 hinges)	2	HG-2015
HINGE TO DOOR & UNIT MTG. SCREWS	24	SC-2072
18. DOOR HANDLE	2	HD-2007
DOOR HANDLE MTG.SCREWS	6	SC-2073
DOOR HANDLE CATCH MTG.SCREWS	6	SC-2071
19. DOOR GASKET: — Length per door: 7' (2134mm)	2	GS-2398
20. SIDE RACK	2	SR-2848
21. CONTROL PANEL OVERLAY	1	PE-2703
CONTROL PANEL OVERLAY, MARINE DIGITAL	1	PE-24727
22. TEMPERATURE GAUGE (NOT SHOWN)	1	GU-3273

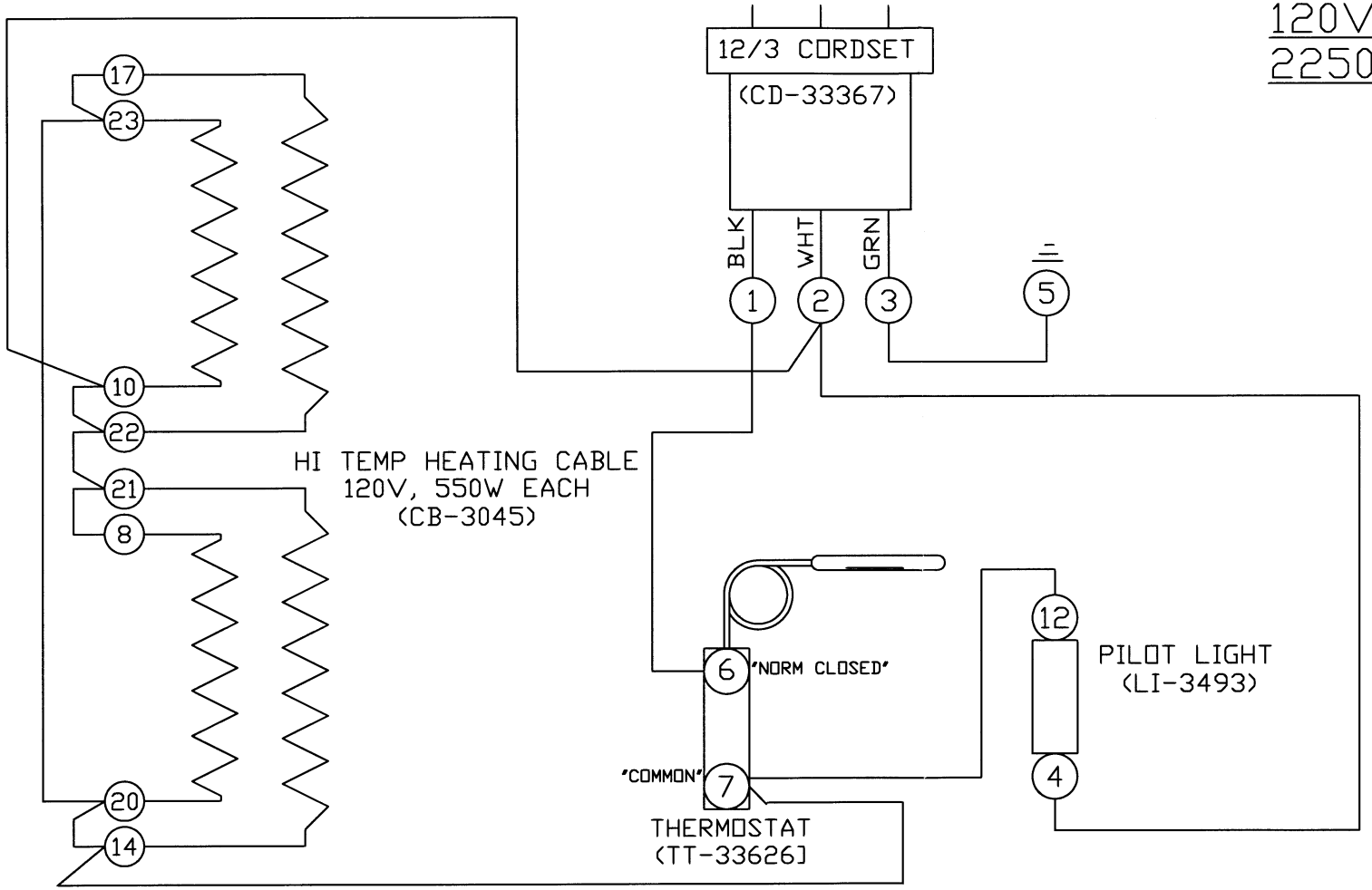
CAUTION

Disconnect the unit from power source before cleaning or servicing.

MODEL 750-CTUS CABLE HEATING SERVICE KIT No. 4881

includes:

CB-3045	Cable Heating Element	210 feet
CR-3226	Ring Connector	12
IN-3488	Insulation Corner	1 foot
BU-3105	Shoulder Bushing	12
BU-3106	Cup Bushing	12
ST-2439	Stud	12
NU-2215	Hex Nut	24
SL-3063	Insulating Sleeve	12
TA-3540	Electrical Tape	1 roll



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

NOTE 2: SEE DRW. #B-8043 FOR WIRE ASSEMBLIES

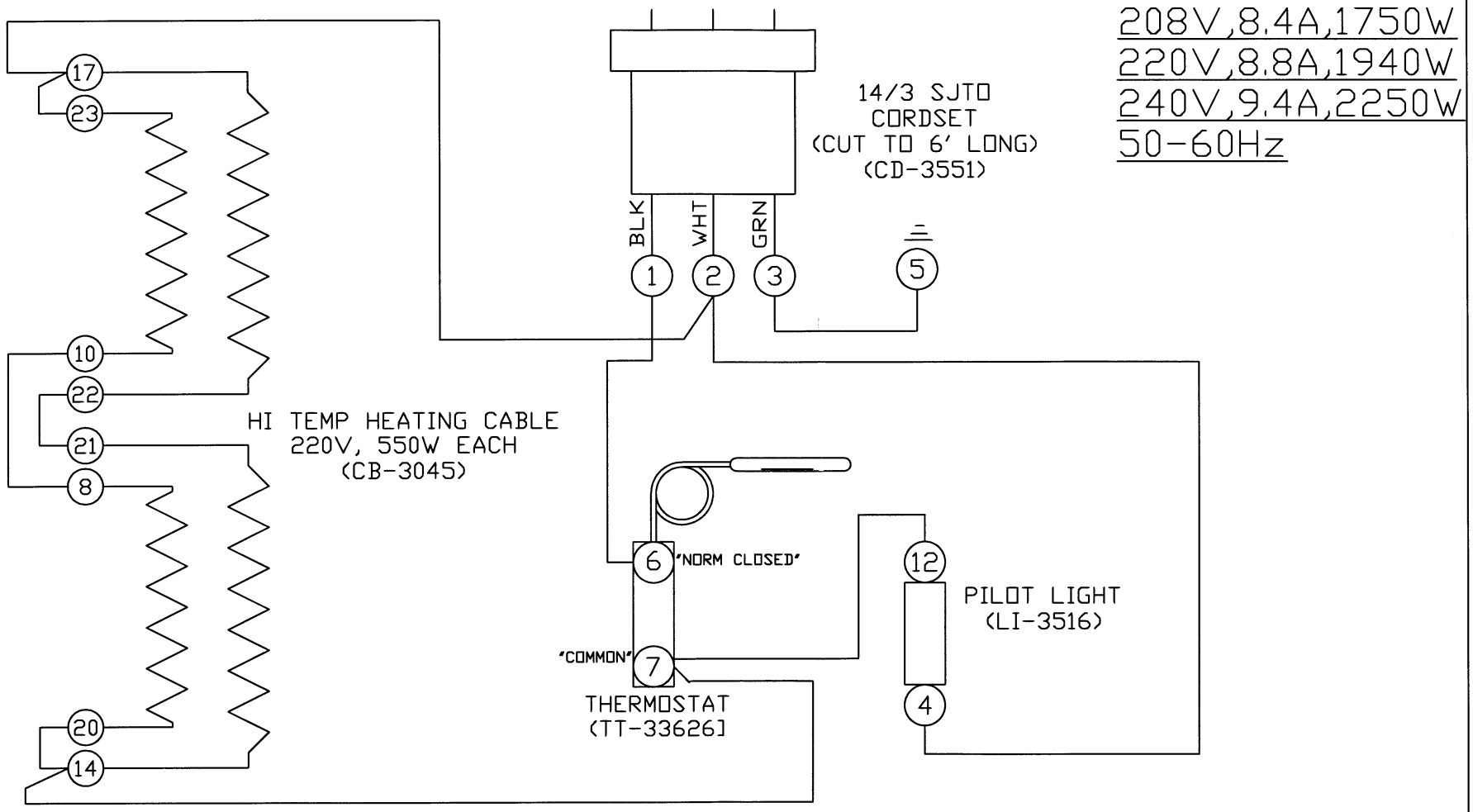
REVISIONS		
NO.	DATE	BY
4	12-08-86	ALD
5	06-26-91	ALD
6	09-04-96	RS
7	03-12-97	RS
8	09-03-03	PED

750-CTUS 120V,60Hz

WIRING DIAGRAM

ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN

DRAWN BY ALD	SCALE FULL	DWG. NO.
APP'D J.Z.	DATE 12-8-86	A-7020



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

NOTE 2: SEE DRW. #B-8381 FOR WIRE ASSEMBLIES

REVISIONS		
NO.	DATE	BY
1	2-25-85	ALO
2	4-4-86	LLN
3	12-8-86	ALO
4	6-26-91	ALO
5	9-3-03	PED

750-CTUS 208-240V, 50-60Hz

WIRING DIAGRAM

ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN

DRAWN BY ALO	SCALE FULL	DWG. NO. A-7190
APP'D	DATE 12-8-86	

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 ANY CONTACT WITH ALTO-SHAAM REGARDING THE UNIT.

Model: _____ Date Installed: _____
Voltage: _____ Purchased From: _____
Serial Number: _____ _____

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

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

PRINTED IN U.S.A.