ALTO SHAAM®

OPERATION and CARE MANUAL

Full serve side *Self serve side*

TYWSYS-96/55L
TYWSYS-96/55R

Full Service &
Two-Tier Self Service
Hot Display Merchandiser

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

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.

#857 • 1/2002

ALTO-SHAAM® HEATED DISPLAY CASES

UNPACKING and 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.

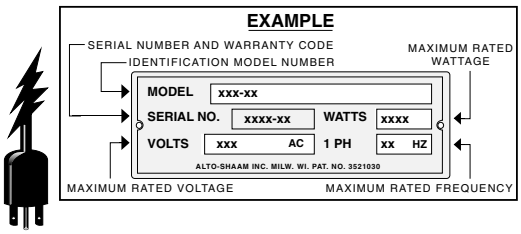
In order to maintain established National Sanitation Foundation standards, all floor models must be sealed to the floor with a R.T.V. or silastic meeting N.S.F. requirements or have 6" (152mm) unobstructed clearance beneath the unit. Warranty will become null and void if these directions are not followed.

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

Proper electrical or outlet configuration as required for the unit (or permanent wiring) must be installed by a licensed electrician in accordance with applicable local electrical codes.



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

ENSURE POWER SOURCE MATCHES VOLTAGE STAMPED ON NAMEPLATE OF UNIT

START UP

1. Before operating the display case, clean the interior and exterior with a clean, damp cloth and mild soap solution. Rinse carefully.

2. Clean the glass with window cleaner.

3. Read all instructions in this manual before using this display case. Keep this manual in a convenient location.

PROCEDURES

1. ***DO NOT ADD WATER TO THE UNIT***
These units maintain a constant temperature eliminating much of the moisture loss so it is not necessary to add water to the unit. As a matter of fact, **adding water is not recommended** since water will accelerate the deterioration of the product and may damage the unit.

2. ***INSERT DIVIDERS, SERVING PANS & WIRE GRIDS***
Refer to the pan layout diagrams for different types of pan accommodations. A complete pan configuration layout is located in this manual. ***It is VERY important to note,*** no matter what type of pan configuration you choose, ***pan divider bars with the desired pans must be in place prior to preheating the unit.*** If air gaps are not closed, heat distribution will be uneven, and uniform temperature will be difficult to maintain. Additional pan divider bars are available if needed. The wire grids should be placed on the open self-serve shelves.

3. ***TURN BOTH POWER SWITCHES ON. PREHEAT LOWER SHELF AT NUMBER "9", UPPER SHELF AT NUMBER "7".*** *See illustrations located in this manual.*
An indicator light will illuminate when the thermostat(s) is (are) turned "**ON.**" This indicator(s) will remain lit as long as the unit is preheating or calling for heat. The unit should be preheated for a minimum of one hour 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**".

4. ***LOAD HOT FOODS INTO THE CASE***
Be certain only hot food is transferred into the case. Before loading food, 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 Halo Heat cooking and holding oven, set at 250° to 275°F (121° to 135°C), or use an Alto-Shaam Combitherm oven to bring the product within the correct temperature range.
   - ✔ Use hand protection when handling hot items.
   - ✔ Do not stack food containers.
   - ✔ Be certain only hot PREPACKAGED foods in appropriate heat tested containers are used in the open self-service side of the display case.

5. ***TURN LIGHTS "ON" AND RESET THERMOSTATS***
After all products are loaded into the display case and the doors are closed, reset the thermostat(s) to the desired setting. THIS WILL NOT NECESSARILY BE THE FINAL SETTING**.** Since proper temperature range depends on the type of products and the quantities being held, it is necessary to periodically use a pocket thermometer to check each item to make certain the correct temperatures are being maintained. 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 "9," although a higher or lower setting may sometimes be required. Self service sections always require a higher thermostat setting.

6. ***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 closed after serving. Wipe spills immediately, assuring maximum eye appeal and easing end of the day cleanup.

CARE and CLEANING

THOROUGHLY CLEAN THE DISPLAY CASE DAILY

1. Turn lights and adjustable thermostat(s) to the "**OFF**" position. Remove, cover or wrap, and store unused products under refrigeration. Let unit cool.
2. Clean the interior metal surfaces of the cabinet with a damp cloth and any good alkaline or alkaline chlorinated based commercial detergent or grease solvent at the recommended strength. Use a plastic scouring pad or oven cleaner for difficult areas. Avoid the use of abrasive cleaning compounds, chloride based cleaners, or cleaners containing quatenary salts. Rinse carefully to remove all residue and wipe dry.

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

3. Clean the glass with glass cleaner.
4. Maintain the protective film coating on polished stainless steel by cleaning the exterior with a cleaner recommended for stainless steel. Spray the cleaning agent on a clean cloth and wipe with the grain of the stainless steel.

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

Disconnect unit from power source before cleaning or servicing.

At no time should the unit be steam cleaned, 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.

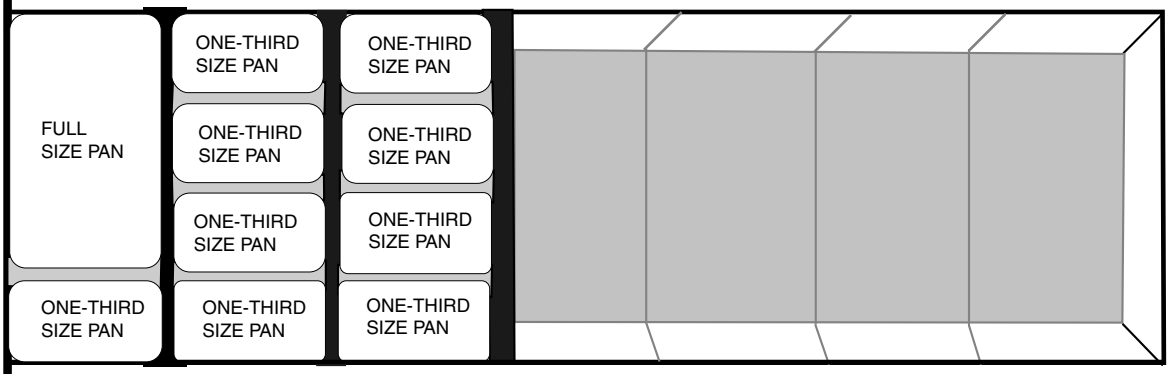
SAFETY ALERT

This units performance has been optimized using the factory provided bulbs. These bulbs should be replaced with an exact replacement or with a factory recommended replacement. Be sure to replace the bulb guards properly in order to maintain compliance with NSF standards.

Glass lifted to the full upright position is stabilized through the use of gas struts designed for the weight. These struts could weaken or fail due to wear, environmental conditions, or aging. Operators should be aware of any decrease in effort to lift the glass and initiate an immediate gas strut safety check.

DO NOT LIFT THE GLASS IN THIS CONDITION.

TYWSYS-96/55R or TYWSYS-96/55L
PAN CONFIGURATIONS
7 PAN ZONES



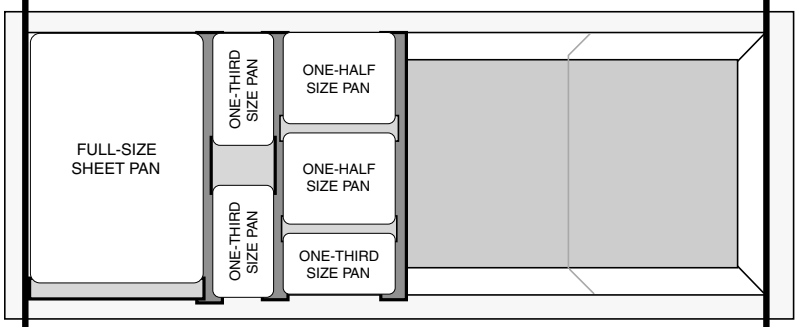
Two (2) ONE-HALF SIZE PANS and One (1) ONE-THIRD SIZE PAN per pan zone.
— **48 MODELS:** Up to 6 One-Half Size Pans with 3 One-Third Size Pans
— **72 MODELS:** Up to 10 One-Half Size Pans with 5 One-Third Size Pans
— **96 MODELS:** Up to 14 One-Half Size Pans with 7 One-Third Size Pans

One (1) FULL-SIZE PAN and One (1) ONE-THIRD SIZE PAN per pan zone.
— **48 MODELS:** Up to 3 Full-Size Pans with 3 One-Third Size Pans
— **72 MODELS:** Up to 5 Full-Size Pans with 5 One-Third Size Pans
— **96 MODELS:** Up to 7 Full-Size Pans with 7 One-Third Size Pans

STANDARD PAN DIVIDER & SEPARATOR BARS - PROVIDED WITH UNIT

ITEM NO.	DESCRIPTION	SIZE (W x L)	QUANTITY
11046	SHEET PAN DIVIDER BAR	1-3/8" x 27-13/16" (35mm x 706mm)	1
11047	ONE-THIRD SIZE PAN	3-1/4" x 7" (83mm x 178mm)	1
11317	FULL, HALF & THIRD SIZE - LONG	1" x 27-7/8" (25mm x 708mm)	3
11318	FULL, HALF & THIRD SIZE - SHORT	1" x 12-3/4" (25mm x 324mm)	9

TYWSYS-96/55R or TYWSYS-96/55L



4 SHEET PAN ZONES

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.

This unit 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, this unit will 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.

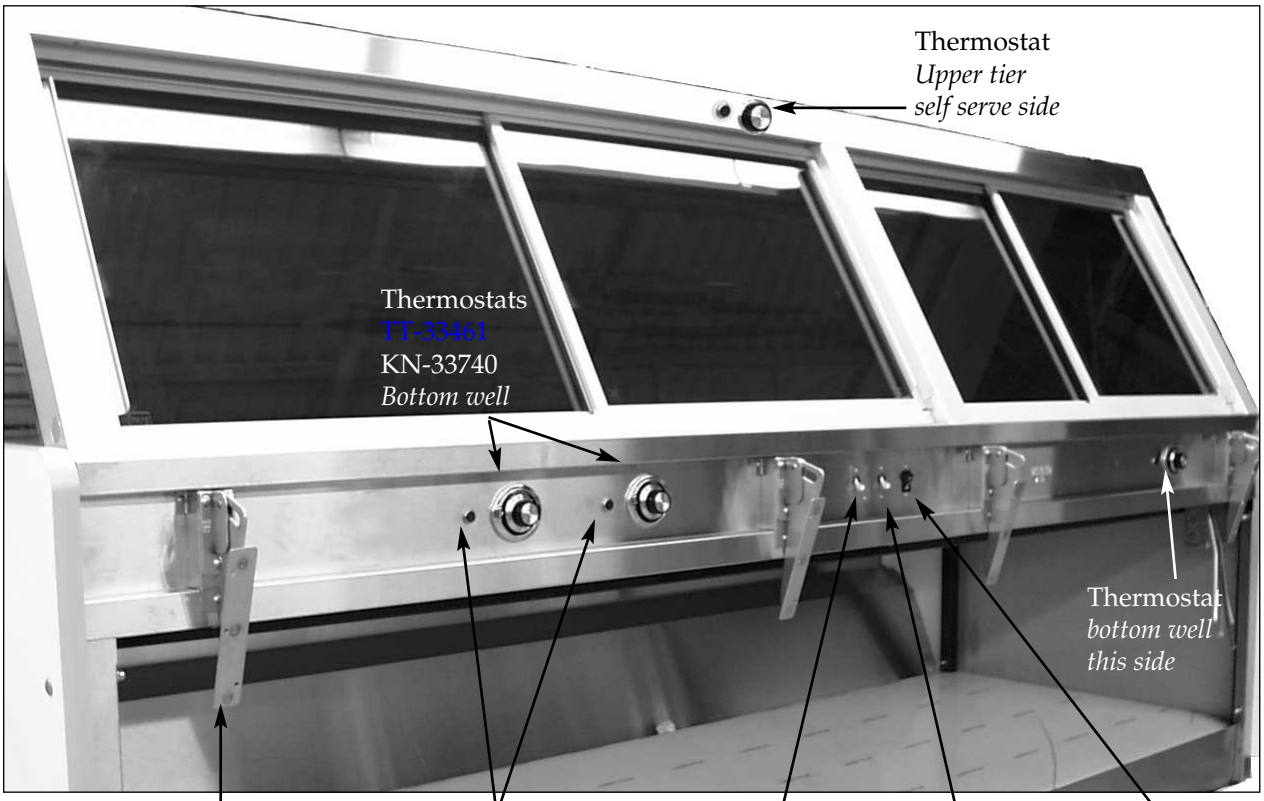
If the unit is equipped with a thermostat indicating a range of between 1 and 10, use a metal-stemmed indicating thermometer to measure the internal temperature of the product(s) being held. Adjust the thermostat setting to achieve the best overall setting based on internal product temperature.

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

SERVICE PARTS

Part Description	Part Number	Quantity per unit
Cutting board assembly	4016	2
Cutting board bracket	BT-2342	4
Clamp, assembly, full	CM-23954	1
Clamp, assembly, self serve	CM-23955	1
Door, assembly, sliding	DR-23956	7
Element, pan, heater	EL-33247	7
Element, tubular	EL-33457	2
Element, calrod, top	EL-33800	1
Guard, bulb, wire	GD-24557	6
Glass, end, LH	GL-22538	1
Glass, end, RH	GL-22539	1
Glass, end, spacer	GL-22719	1
Glass, full serve	GL-25052	1
Gasket, u-channel, end glass	GS-22547	5'
Gasket, u-channel, divider glass	GS- 22548	2'
Gasket, door glass	GS-24992	8'
Knob, thermostat	KN-33740	4
Light, indicator	LI-3025	4
Bulb, frost, 100A, 120V	LP-33693	28
Bulb, coated, 120V, 60W	LP-33757	4
Plug, locking	PG-33521	1
Pan, full size	PN-25410	4
Pan, 1/3 size	PN-25411	6
Pan, 1/2 size	PN-25412	4
Pan, full grates	PN-25413	12
Pan, 1/3 grates	PN-25414	6
Pan, 1/2 grates	PN-25415	6
Pan, grid	PN-25416	2
Pan divider, long	11317	3
Pan divider, short	11318	12
Pan divider, sheet pan	11320	2
Receptacle, locking	RP-33522	1
Receptacle, bulb, snap-in	RP-3952	18
Shelf, grid, wire	SH-25331	1
Spacer, heat guard, nylon	SP-24586	2
Strut, 140#	SU-22702	2
Switch, circuit breaker, lights	SW-33361	1
Switch, circuit breaker, On/Off	SW-3715	2
Track, door, self serve, top	TK-23960	1
Track, door, full serve, top	TK-23961	1
Track, door, self serve, bottom	TK-24775	1
Track, door, full serve, bottom	TK-24776	1
Thermostat	TT-33461	1
Thermostat	TT-33523	1
Thermostat	TT-3498	4
Thermostat, bezel	TT-3713	4

HOT DISPLAY CASE • TYWSYS-96

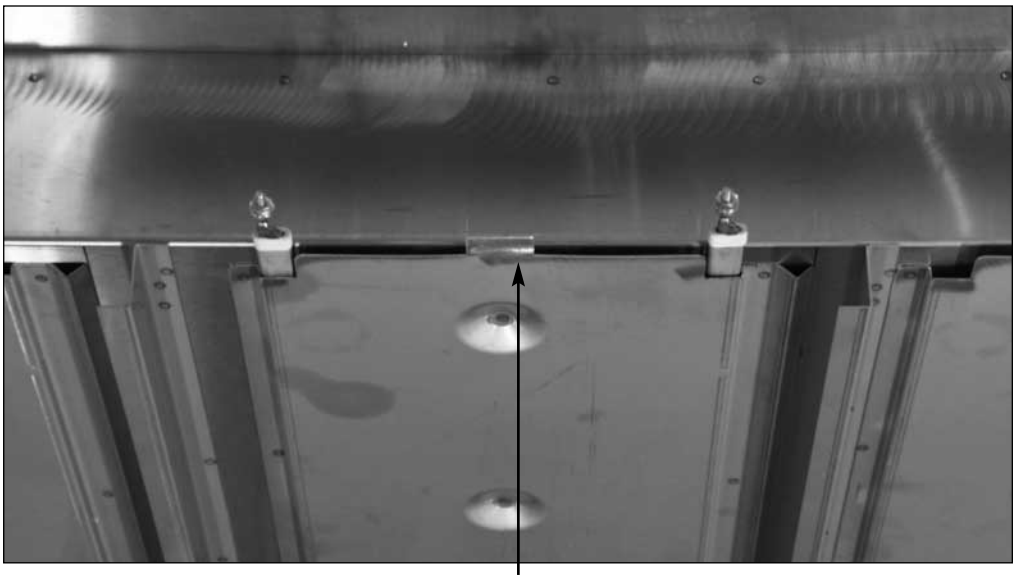


Control Panel - Rear of Unit

Disconnect unit from power source before servicing.
Service should be completed by authorized service technicians only.

To change the heat elements, remove the cutting boards from the brackets. The brackets do not need to be removed for servicing. Remove the screws from the bottom of the control panel -- then the screws from the top of the control panel. Gently pull the control panel down. This allows access to the heat elements.

See illustrations on following pages.



To remove the heat element, bend the retaining clip. Holding the element in place, disconnect the wires to the element.

Pull element straight out and replace in holder. Reconnect wires, retape, and bend retaining clip back into previous position.

Reassemble in reverse order.

Disconnect unit from power source before servicing.

Service should be done by authorized service technicians only.

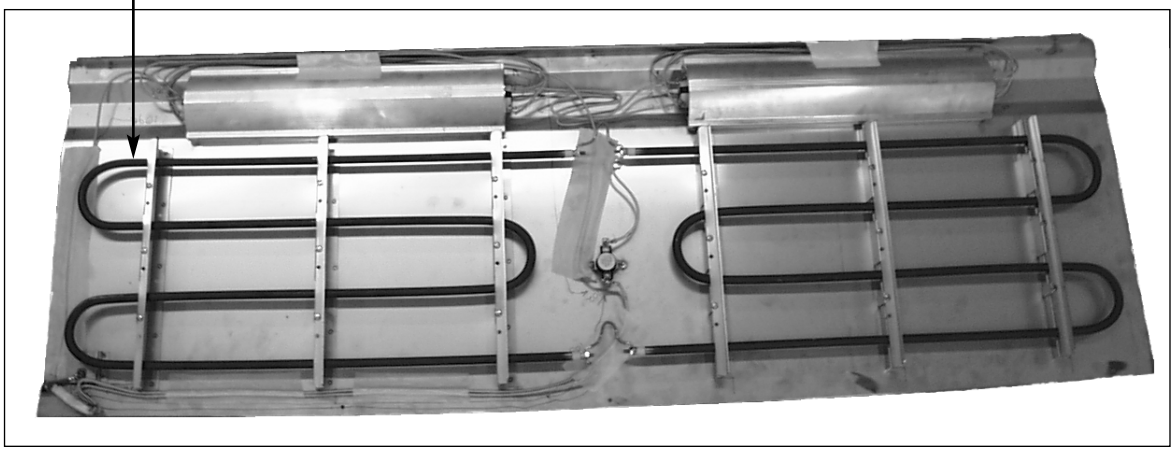
EL-33247

Heat Element and Holder for lower shelf • both sides

HOT DISPLAY CASE • TYWSYS-96

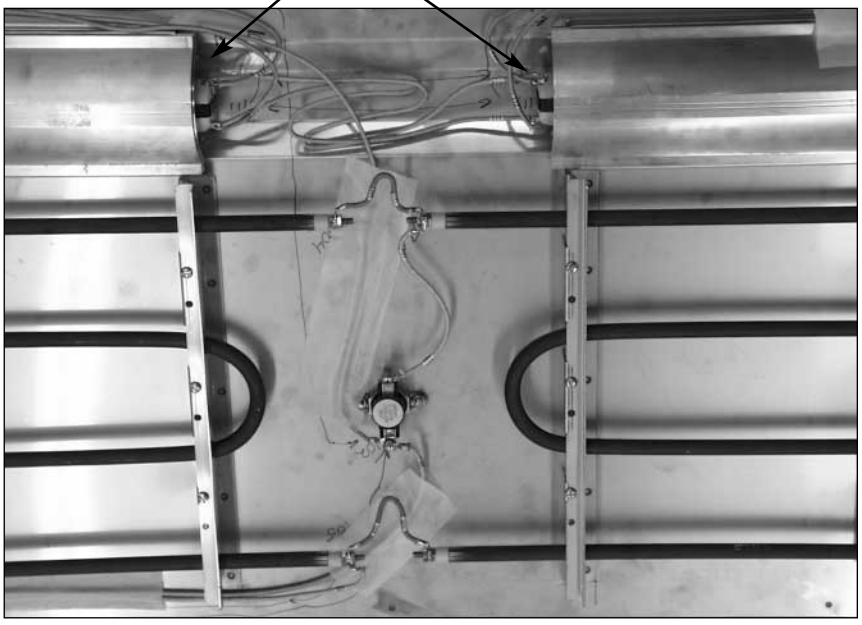
Disconnect unit from power source before servicing.
Service should be done by authorized service technicians only.

Heat Element
EL-33457



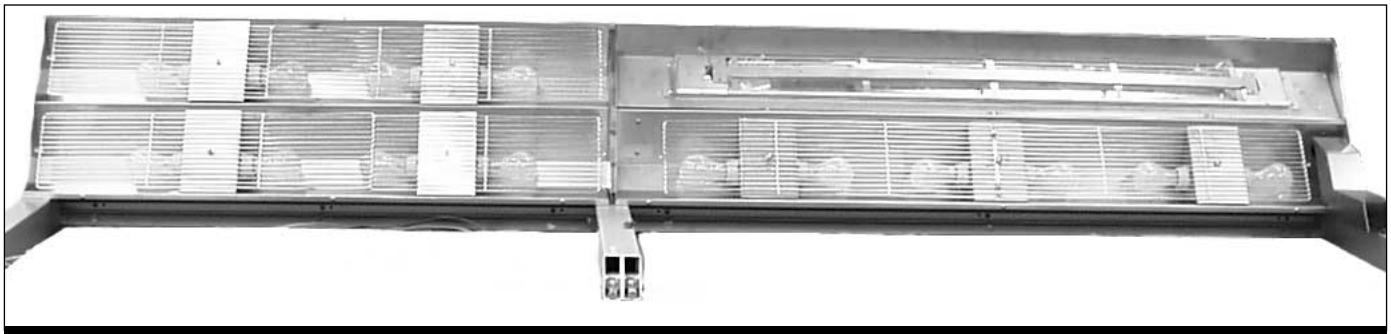
Heat Element & Bulbs for Shelf • self serve side

Bulbs
LP-33757

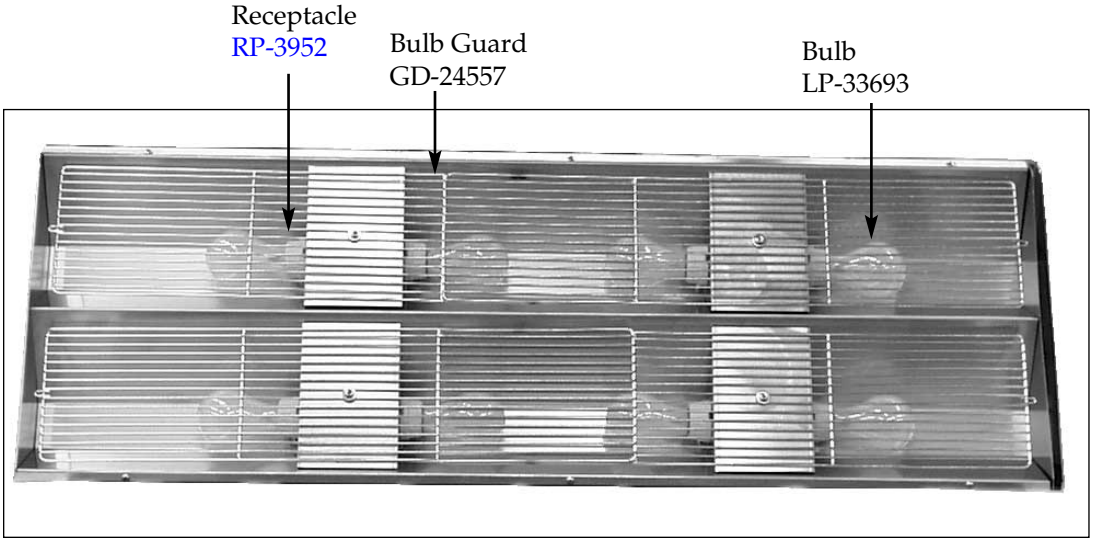


HOT DISPLAY CASE • TYWSYS-96

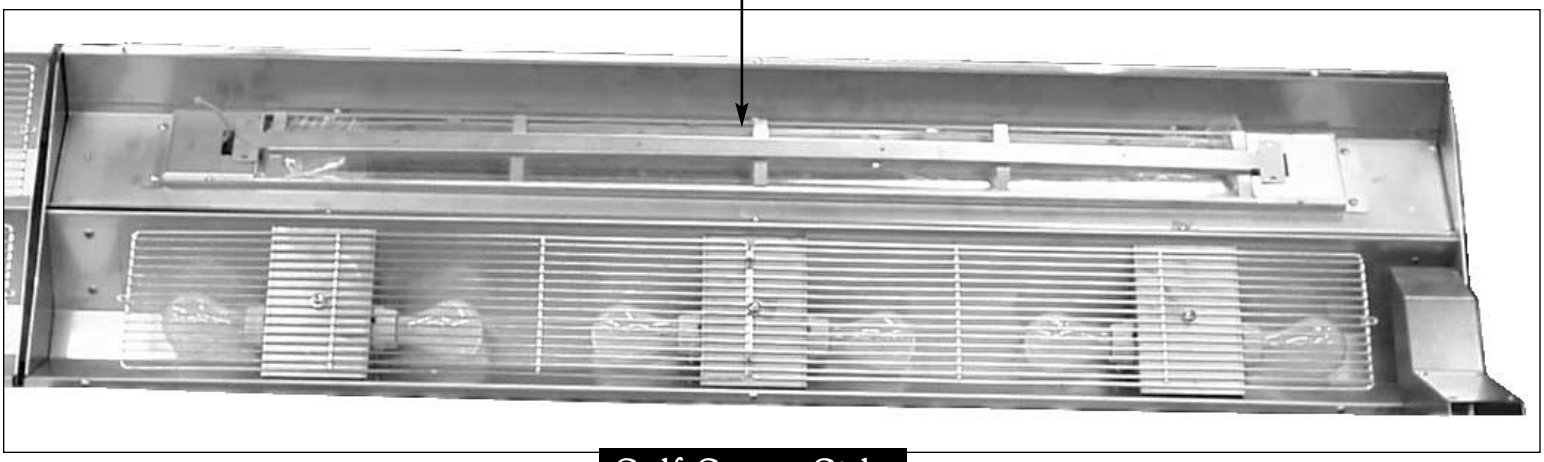
Disconnect unit from power source before servicing.
Service should be done by authorized service technicians only.



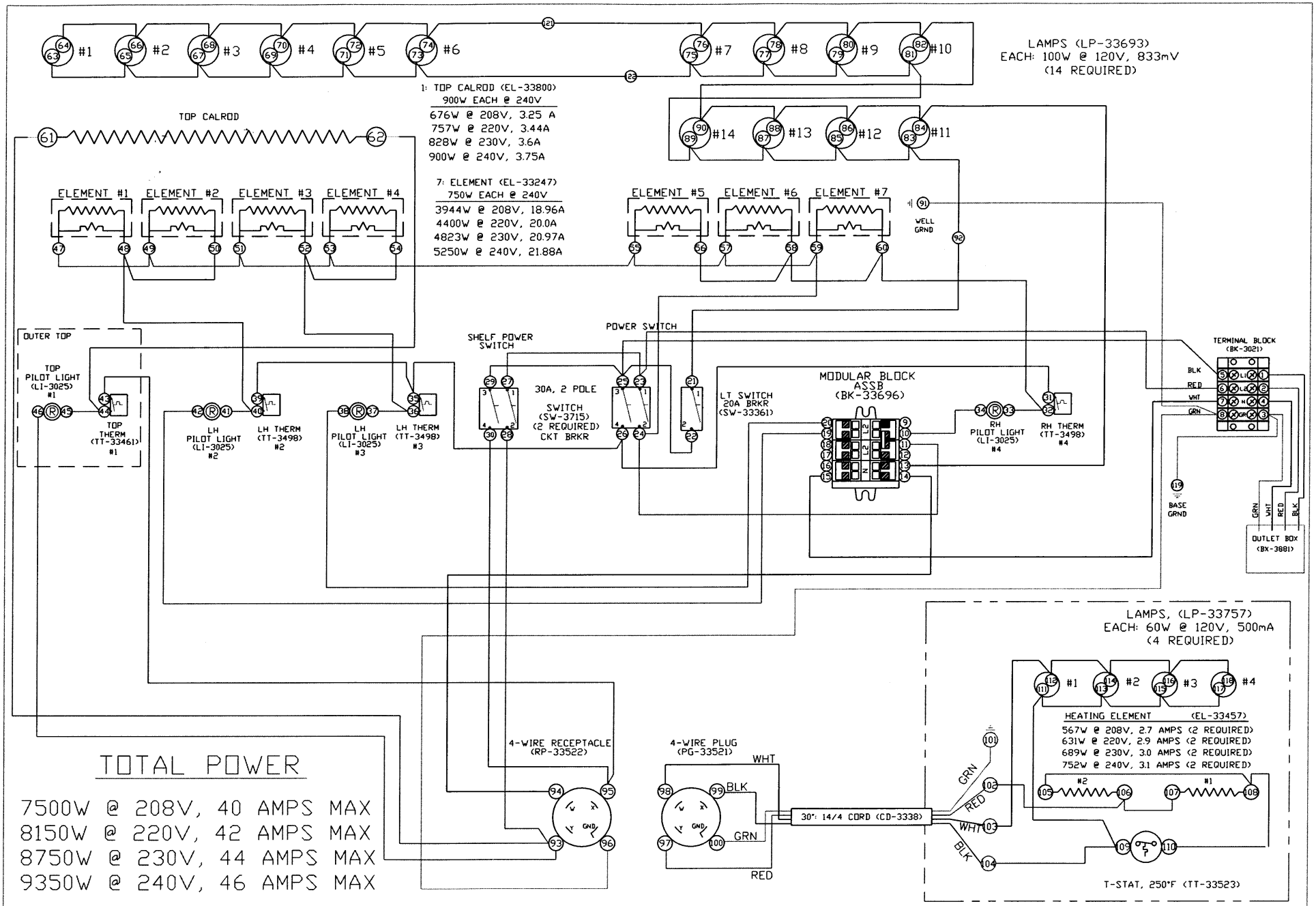
Upper Canopy - underside



Full Serve Side



Self Serve Side



NOTE #1: SEE DRW. I:\ENG\RD\ELECTRICAL\DELI\TYWSYS-96A/55R FOR WIRING ASSEMBLY.

#	REVISION	BY	DATE
A		JRM	09/26/01
B		DDF	11/07/01
C		DDF	01/07/02

WIRING DIAGRAM

CUT SIZE:
MATERIAL:
DESCRIPTION:
QUANTITY:
APPROVAL:

MODELS: TYWSYS-96/55R 120/208-240V

ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-450

SCALE: 3/4" = 1" DWG: C – I:\ENG\RD\DRAWCTEM\TYWSYS96-55

BY: JRM DATE: 06/01/01

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: _____

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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