Commercial Kitchen Equipment Parts

ALTO SHAAM HN-72/PR

Service & Parts Manual

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ALTO SHAAM®

OPERATION and CARE MANUAL





HEATED DISPLAY CASE

MODELS: ***HN-72***
HNSYS-72
HN-72/P
HNSYS-72/P
HN-72/PL
HNSYS-72/PL
HN-72/PR
HNSYS-72/PR

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.
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800.558-8744 U.S.A./CANADA
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WEBSITE:
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#895 • 11/2001

ALTO-SHAAM® *HEATED DISPLAY CASES*

UNPACKING and SET-UP

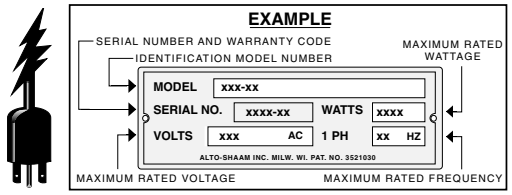
The Alto-Shaam Hot Display Case has been thoroughly tested, checked for calibration, and inspected to insure only the highest quality display case is provided. When you receive your cabinet, check for any possible shipping damage and report it at once to the delivering carrier. *See Transportation Damage and Claims section located in this manual.*

In order to maintain established National Sanitation Foundation standards, all stationary floor models must be sealed to the floor with a R.T.V. or silastic meeting N.S.F. requirements or have 6"(153mm) unobstructed clearance beneath the unit. Counter and table units must be mounted on legs of a sufficient 4"(102mm) height to provide minimum unobstructed space beneath the unit. These legs are supplied with the unit. Warranty will become null and void if these directions are not followed. Save all the information and instructions packed inside the deli 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 number and serial number of the unit.*

ELECTRICAL INSTALLATION

1. An identification tag is permanently mounted on case.



2. A proper receptacle or outlet configuration or permanent wiring for this unit must be installed by a licensed electrician in accordance with applicable, local electrical codes.
3. Plug the case into a properly grounded receptacle only, positioning the unit so that the power 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

OPERATIONAL PROCEDURES

1. ***DO NOT ADD WATER TO THE CASE***
Halo Heat display cases maintain a constant but gentle temperature and eliminate much of the moisture loss associated with conventional display cases. Because of this gentle heat, it is not necessary to add water to the deli case. As a matter of fact, **adding water is not recommended** since water will accelerate the deterioration of the product, and may damage the case.

2. ***PLACE DIVIDERS and SERVING PANS IN CASE***
Refer to the pan layout diagrams for different types of pan accommodations. A complete pan configuration layout is located in this manual. It is very important to note, no matter what type of pan configuration you choose, pan separator bars or divider bars must be used to close all gaps between pans, and all gaps between the pans and the edges of the display case. If these gaps are not closed, most of the heat will be pulled out of the bottom of the case, into the display area. As a consequence, heat distribution will be uneven and uniform temperature will be difficult to hold. If needed, additional pan divider bars are available.

3. ***TURN DISPLAY LIGHTS "ON" AND SET THE THERMOSTAT(s) AT NUMBER "10" TO PREHEAT***
A indicator light will illuminate when the thermostat(s) is (are) turned "ON." The indicator(s) will remain lit as long as the unit is preheating or calling for heat. The unit should be preheated, at the number 10 setting, for a minimum of twenty minutes before loading the case with food. When preheating is completed, or whenever the unit reaches any temperature set by the operator between 1 and 10, the indicator light(s) will go "OUT".

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

5. ***RESET THERMOSTAT AS NEEDED***
After all product is loaded into the unit and the doors are closed, reset the thermostat. For fully enclosed cases, reset the thermostat to number 8. For self-service units, maintain the thermostat at number 9 or 10. Cases with a self-service section should be set at number 9 or 10 for the self-service section only. *These settings will not necessarily be final.* Proper temperature range depends on the type of products and the quantities being held, so 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 a minimum of 140-160°F (60°-71°C). Normally this will require a thermostat setting between 6 and 8 in fully enclosed cases. Self-service cases or sections will always require a higher setting.

6. ***PLACEMENT OF FOOD PROBE (OPTIONAL)***
If the unit is equipped with the probe accessory, wipe each probe and probe tip with a disposable alcohol pad to clean and sanitize before using. If the probe is left in its bracket, the LED temperature display will indicate the ambient air temperature inside the case. To place a probe into food kept in the case, remove the probe from the bracket and push the probe tip halfway into the product, positioning the tip at the center of the food mass. If placing into solid foods such as meat roast or poultry breasts, push the probe in from a straight downward position or in from the side to the center position. If placing into a semi-liquid or liquid product, the probe cable will probably need to be secured to keep the probe positioned properly. Do not let the probe tip touch the



DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING

edges or side of the container. Tape the probe cable to the lip or edge of the container. Wipe each probe tip with a clean paper towel to remove food debris after each use. Follow by wiping probes with a disposable alcohol pad. Return each probe to the proper bracket position.

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

CARE and CLEANING

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



1. CLEAN THE PROBES DAILY
Remove all food soil from probes. Wipe entire probe and cable assembly with warm detergent solution and a clean cloth. Remove detergent by wiping each probe and cable with clean rinse water and a cloth. Wipe probes with disposable alcohol pad or sanitizing solution recommended for food contact surfaces. Allow probe and cable to air dry in probe holding bracket.

2. THOROUGHLY CLEAN THE UNIT DAILY
   A. Turn lights and adjustable thermostat(s) to the "**OFF**" position, and disconnect unit from power source.
   B. Remove, cover or wrap, and store unused products under refrigeration.
   C. 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 quaternary salts. Rinse well to remove all residue and wipe dry.





NOTE: Never use hydrochloric acid (muriatic acid) on stainless steel.
   D. Clean the glass with a window cleaner.
   E. 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 equipment.



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



Disconnect Unit from Power Source Before Cleaning or Servicing.



Ensure Power Source Matches Voltage Stamped on Nameplate of Unit



Hood glass extended to the full upright position is stabilized through the use of gas struts designed for the full load bearing 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 hood and initiate an immediate gas strut safety check.
DO NOT LIFT THE HOOD IN THIS CONDITION.

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. These bulbs have been treated to resist breakage and must be replaced with similarly treated bulbs in order to maintain compliance with NSF standards.



SANITATION GUIDELINES

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 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.

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.

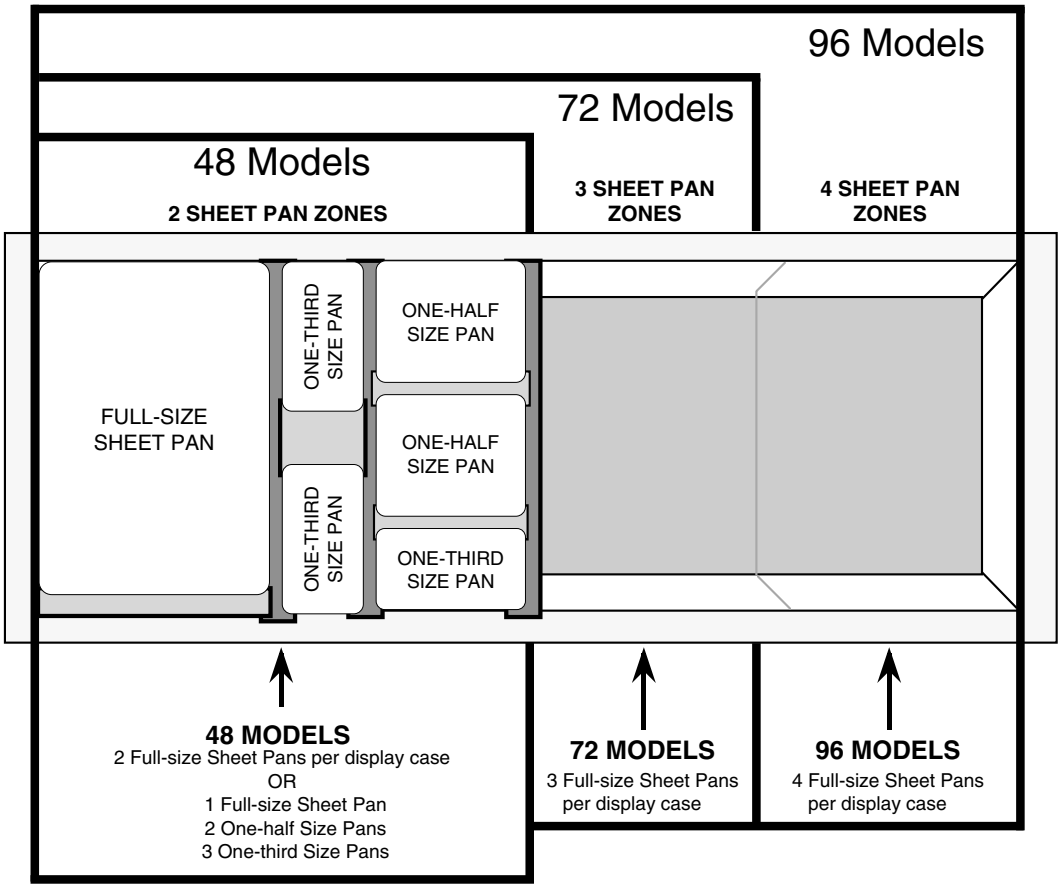
If the unit is equipped with a thermostat indicating a range of between 1 and 10, use a metal-stemmed indicating thermometer to measure the internal temperature of the product(s) being held. Adjust the thermostat setting to achieve the best overall setting based on internal product temperature.

HOLDING TEMPERATURE RANGE

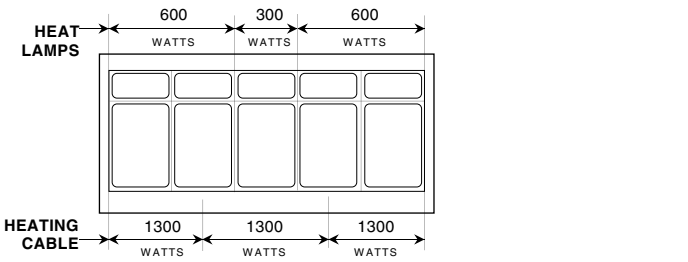
MEAT	FAHRENHEIT	CELSIUS
BEEF ROAST — Rare	140°F	60°C
BEEF ROAST — Med/Well Done	160°F	71°C
BEEF BRISKET	160° — 175°F	71° — 79°C
CORN BEEF	160° — 175°F	71° — 79°C
PASTRAMI	160° — 175°F	71° — 79°C
PRIME RIB — Rare	140°F	60°C
STEAKS — Broiled/Fried	140° — 160°F	60° — 71°C
RIBS — Beef or Pork	160°F	71°C
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 lised are suggested guidelines only.

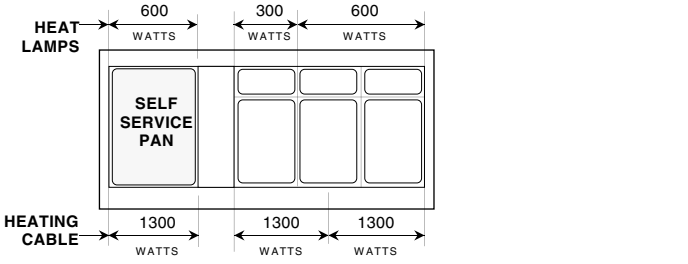
SHEET PAN CONFIGURATIONS • HOT DELI DISPLAY CASES



POWER CONFIGURATIONS



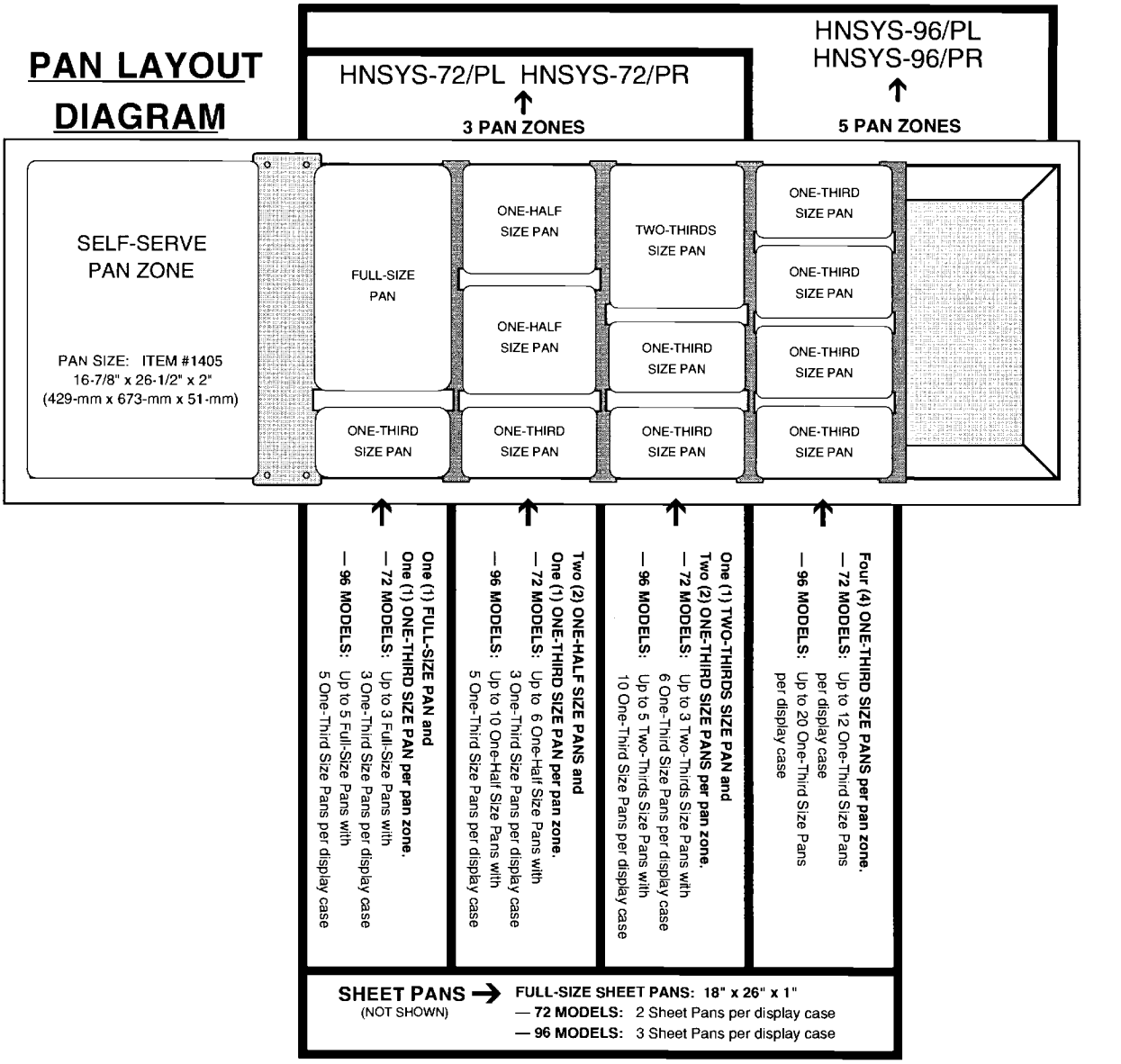
HNSYS-72 • HNSYS-72/P
TOTAL: 5460 Watts (maximum) 1: 20W DISPLAY LIGHT
1: 40W DISPLAY LIGHT



HNSYS-72/PL • HNSYS-72/PR
TOTAL: 5460 Watts (maximum) 1: 20W DISPLAY LIGHT
1: 40W DISPLAY LIGHT

PAN CONFIGURATIONS • SELF-SERVE

PAN LAYOUT DIAGRAM



STANDARD PAN SIZES

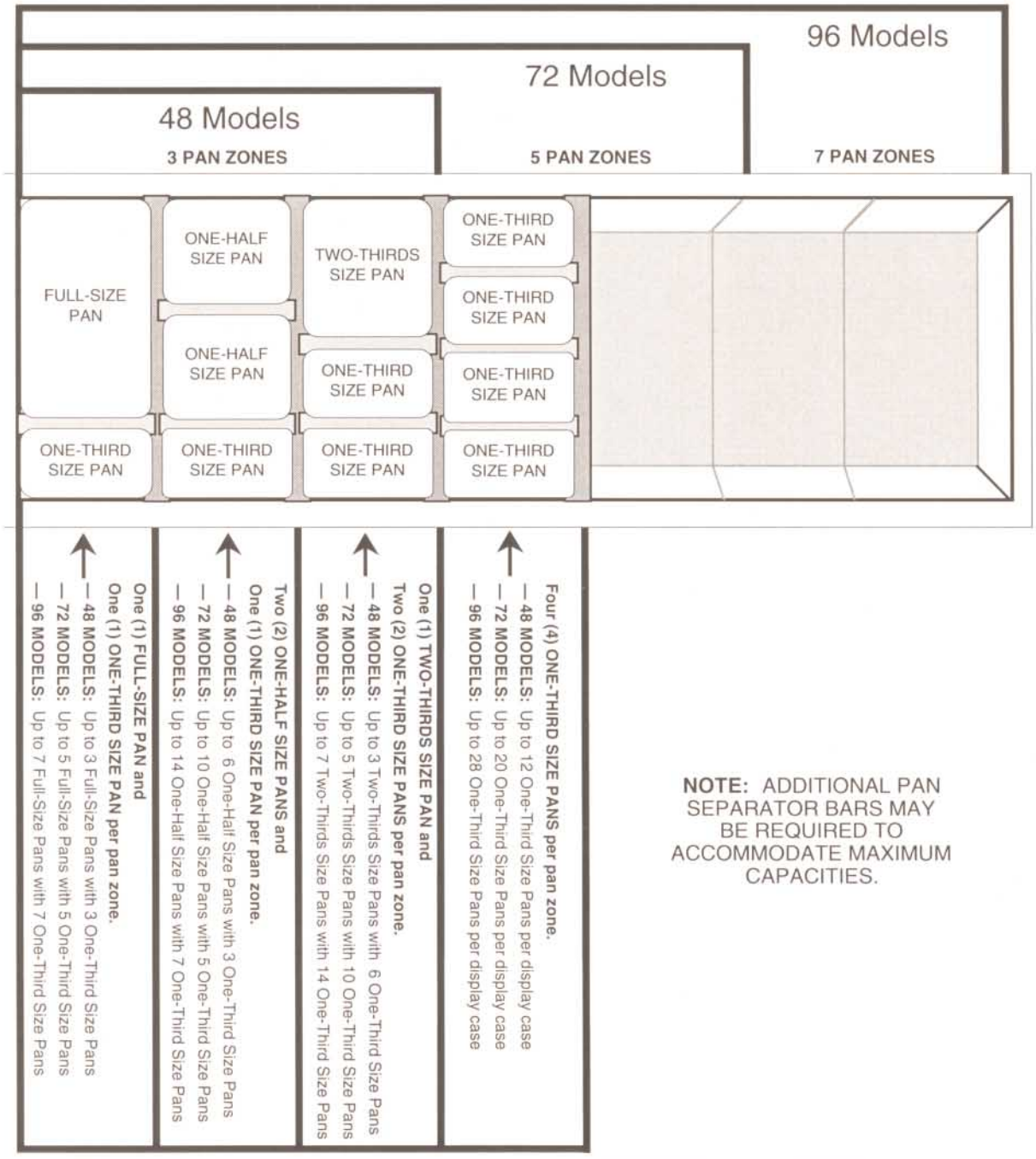
FULL-SIZE PAN		
12" x 20" x 4"	325-mm x 530-mm x 100-mm	GN 1/1
12" x 20" x 2-1/2"	325-mm x 530-mm x 65-mm	GN 1/1
ONE-HALF SIZE PAN		
12" x 10" x 4"	325-mm x 265-mm x 100-mm	GN 1/2
12" x 10" x 2-1/2"	325-mm x 265-mm x 65-mm	GN 1/2
TWO-THIRDS SIZE PAN		
12" x 14" x 4"	325-mm x 352-mm x 100-mm	GN 2/3
12" x 14" x 2-1/2"	325-mm x 352-mm x 65-mm	GN 2/3
ONE-THIRD SIZE PAN		
12" x 6" x 4"	325-mm x 176-mm x 100-mm	GN 1/3
12" x 6" x 2-1/2"	325-mm x 176-mm x 65-mm	GN 1/3
FULL-SIZE SHEET PAN		
18" x 26" x 1"	N/A	

STANDARD PAN DIVIDER & SEPARATOR BARS

Item No.	DESCRIPTION	SIZE (W x L)		72 MODELS	96 MODELS
11046	SHEET PAN DIVIDER BAR	1-3/8" x 27-13/16"	(35-mm x 706-mm)	—	—
11047	ONE-THIRD SIZE PAN	3-1/4" x 7"	(83-mm x 178-mm)	—	—
11317	FULL, HALF & THIRD SIZE - LONG	1" x 27-7/8"	(25-mm x 708-mm)	4	6
11318	FULL, HALF & THIRD SIZE - SHORT	1" x 12-3/4"	(25-mm x 324-mm)	15	21
11319	SHEET PAN DIVIDER BAR	3-1/4" x 27-3/16"	(83-mm x 706-mm)	—	—
11320	SHEET PAN DIVIDER BAR	1-3/4" x 17-3/4"	(45-mm x 451-mm)	3	4
11357	SHEET PAN DIVIDER BAR	5-29/32" x 27-13/16"	(150-mm x 706-mm)	2	3
11732	SHEET PAN DIVIDER BAR	3-3/4" x 27-13/16"	(95-mm x 706-mm)	—	1
1865	GASTRONORM DIVIDER (220V)	7/8" x 27-7/8"	(22-mm x 708-mm)	4	6

NOTE: ADDITIONAL PAN SEPARATOR BARS MAY BE REQUIRED TO ACCOMMODATE MAXIMUM CAPACITIES.

PAN CONFIGURATIONS



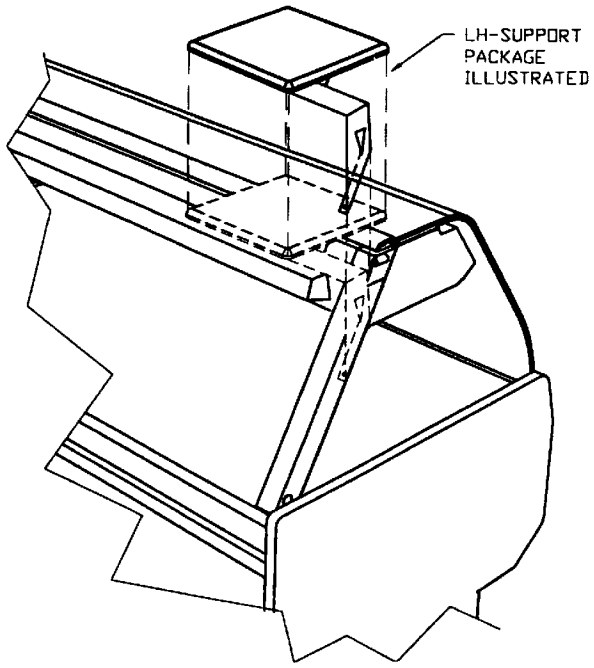
NOTE: ADDITIONAL PAN SEPARATOR BARS MAY BE REQUIRED TO ACCOMMODATE MAXIMUM CAPACITIES.

STANDARD PAN DIVIDER & SEPARATOR BARS

ITEM NO.	DESCRIPTION	SIZE (W x L)		MODELS 48	72	96
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)	2	4	6
11318	FULL, HALF & THIRD SIZE - SHORT	1" x 12-3/4"	(25mm x 324mm)	9	15	21
11319	SHEET PAN DIVIDER BAR	3-1/4" x 27-3/16"	(83mm x 706mm)	1	—	—
11320	SHEET PAN DIVIDER BAR	1-3/4" x 17-3/4"	(45mm x 451mm)	2	3	4
11357	SHEET PAN DIVIDER BAR	5-29/32" x 27-13/16"	(150mm x 706mm)	—	2	3
11732	SHEET PAN FILLER	3-3/4" x 27-13/16"	(95mm x 706mm)	—	—	1
1865	GASTRONORM DIVIDER (220V)	7/8" x 27-7/8"	(22mm x 708mm)	2	4	6

INSTALLATION INSTRUCTIONS – OPTIONAL SCALE PLATFORM

1. Disconnect the unit from the power source.
2. Lift hood glass up to access the outer top.
3. Position the platform mounting bracket in the desired location along the upper rear edge on the outer top, making sure that the bracket is tight against the bend in the top. Using the bracket as a template, mark and punch six mounting holes in the outer top. Drill these six holes with a No. 21 drill, and tap with a 10-32 UNF thread.
4. Attach the scale shelf assembly to the outer top using the six 10-32x1/2" slotted truss-head screws provided (Alto-Shaam part number SC-2661).
5. Remove the four nuts from the bottom of the platform. Mount support (bracket provided) to platform using screws as a guide. While pushing up on support, mark two mounting holes on the support.
6. Remove the support. Drill these mounting holes with a No. 21 drill and tap with a 10-32" UNF thread. Replace support and mount to unit with the two 10-32x1/2" screws provided (Alto-Shaam part number SC-2661). Replace nuts on platform bottom and tighten support to platform.
7. Apply a silicone bead to all perimeter meeting surfaces between the mounting bracket and the outer top.



NOTE: These platforms are intended for use in the CLOSED position ONLY. They slide away from the unit for cleaning. *Using scales with platforms in the OUT position may result in incorrect data on scales.*

CAUTION

The scale shelf platform can be removed from the mounting bracket assembly by removing the 10-32 screw/stop located on the bottom of the scale shelf. Removing the screw allows the shelf to be slid past, and lifted off the shelf guide pins. Failure to replace this screw prior to use could result in serious bodily injury, and/or damage to equipment.

HN-72 Series
Cable Kit #4881

Cable Heating Service Kit #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
SL-3063	Insulating Sleeve	12
TA-3540	Electrical Tape	1 roll
ST-2439	Stud, 10-32	12
NU-2215	Hex Nut	24
BX-2588	Cable Box	1

HN-72 Series
Options & Accessories

Bulbs

➥100 Watt, 130V LP-33253

➥100 Watt, 230-250V LP-3384

Carving Station, Single Well 55299

Custom Panel, End Panel and Bumper Colors . . FACTORY QUOTE

Dual Case Trim Kit

➥HN, HNSYS-48 4584

➥HN, HNSYS-48/P 14136

➥Tempered Divider Glass GL-22598

End Panel, Black Laminate (HNSYS ONLY). PE-22709

End Panel, Kiosk Assembly Kit (HN ONLY) 14599

Independent Circuit Cordset Pkg*: HN (120/208-240 ONLY) 14221

Independent Load Center Pkg*: HNSYS (120/208-240 ONLY) . . . 14220

*NOT CSA APPROVED

Interior Ambient Temperature Gauge GU-33384

Menu Board System (one required) MB-23092

Pocket Thermometer, °F TH-3300

Pocket Thermometer, °C TH-3412

Product Temperature Probe Package (120/208-240V ONLY) 5295

Reflective Tempered Glass Case End Panes, Bronze

➥RIGHT-HAND GL-22602

➥LEFT-HAND GL-22601

Scale Platform Package (120/208-240V ONLY)

➥RIGHT-HAND. 14547

➥LEFT-HAND. 14548

Timer Bar (electronic) 55194

➥Probe Assembly, for 4 ft. Timer Bar 44084

Work Surface, Stainless Steel . . . . . FACTORY QUOTE

Pan Divider Bars for HNSYS-72/PR or PL

➥FULL/HALF/THIRD SIZE (LONG BAR). 4 11317

➥FULL/HALF/THIRD SIZE (SHORT BAR) 15. 11318

➥SHEET PAN 3 11320

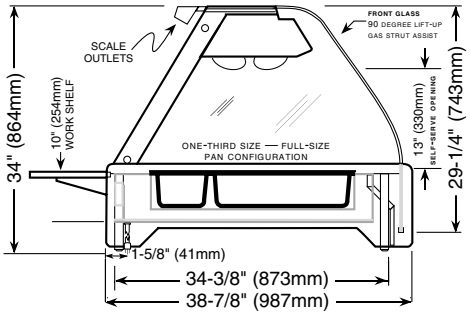
➥S-PAN DIVIDER (LONG) 2 11357

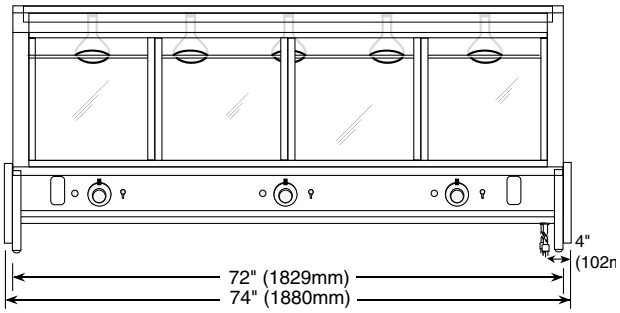
➥PAN GRID. . . . . 1 . . . . . PN-2115

➥SELF-SERVE PAN 1 1405

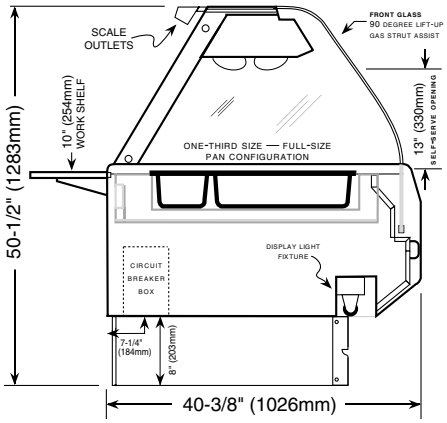
➥SHELF 1 1407

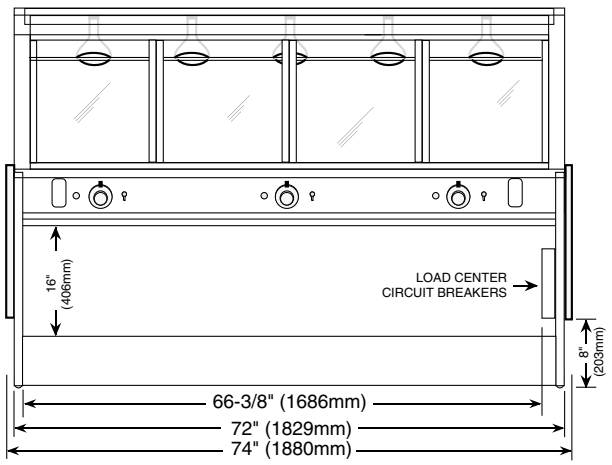
➥SHEET PAN FILLER BAR: 3-3/4" (95mm) 1 11732





EXTERIOR DIMENSIONS





HN-72

12/22/00

PART DESCRIPTION	QTY	ALTO-SHAAM PART NO.
1. BOTTOM END PANEL	1	13028
BOTTOM RIGHT-HAND PANEL, 4'	1	13029
BOTTOM LEFT-HAND PANEL, 4'	1	13030
BOTTOM PANEL, 6'	1	13031
SCREWS, 8-32X1/2"	25	SC-2425
SCREWS, 8-32X1/4"	2	SC-2459
3. CORD: 6′ (1829mm)	1	CD-3557
4. PLUG	1	PG-3267
5. CONTROL PANEL MOUNTING SCREWS	5	SC-2459
6. INSULATION: 34″ x 71″ (864mm x 1803mm)	2	IN-22364
7. CABLE CONNECTION HARDWARE		
8. HEATING CABLE: 205′ (62484mm)	1	CB-3045
9. THERMOSTAT	3	TT-3498
THERMOSTAT KNOB	3	KN-3473
10. INDICATOR LIGHT	3	LI-3025
11. BULB SWITCH	3	SW-3616
12. FUSEHOLDER (120V UNITS), INCLUDES	1	FU-33041
— FUSE, 15 AMP	1	FU-3775
— FUSEHOLDER MTG SCREWS	2	SC-2077
13. INNER TOP SPOT	1	4681
14. BULBS	10	LP-33592
15. BULB SOCKETS	10	RP-3952
16. DOOR ASSEMBLY, INCLUDES	1	DR-22481
— LEFT-HAND GLASS DOOR - IN	1	DR-22481A
— RIGHT-HAND GLASS DOOR - IN	1	DR-22481B
— TOP TRACK	1	TK-23749
— BOTTOM TRACK	1	TK-24266
— CENTER GLASS - OUT	2	DR-22481E
— GUIDES #44049	16	DR-22480F
— DOOR BUMPER ASSEMBLY	1	DR-22480G
17. END PANEL	2	PE-22685
18. CUTTING BOARD ASSEMBLY	1	4017
19. CUTTING BOARD BRACKET (BASE)	2	12069
CUTTING BOARD BRACKET MTG. SCREWS	6	SC-24520
20. CUTTING BOARD BRACKET	2	BT-2342
23. END GLASS	2	GL-22597
END GLASS GASKET, 5' (1524mm)	1	GS-22547
24. FRONT GLASS	1	GL-22596
25. PAN DIVIDER BARS (NOT SHOWN)		
FULL/HALF/THIRD (LONG BAR)	4	11317
FULL/HALF/THIRD (SHORT BAR)	15	11318
SHEET PAN	3	11320
S-PAN DIVIDER (LONG)	2	11357
26. ADJUSTABLE LEGS	4	LG-22686
27. TERMINAL BLOCK, 4 POS	2	BK-3597
28. SNAP-IN RECEPTACLES (120V)	2	RP-3396
RECEPTACLE FUSE, 15 AMP (120V)	1	FU-33351
RECEPTACLE FUSEHOLDER, 15 AMP, (120V)	1	FU-33352
29. OUTLET HOUSING COVER	1	4980
30. 6′ (1829mm) PROBE PKG OPT (120V) (NOT SHOWN)	1	5296
31. IND.CIRCUIT CORDSET PKG. OPTION (120V)*	1	14221
32. FRONT GLASS STRUT	2	SU-2870
33. FRONT GLASS STRUT	1	SU-22704

**NOT CSA APPROVED*

HNSYS-72

12/22/00

PART DESCRIPTION	QTY	ALTO-SHAAM PART NO.
1. BOTTOM END PANEL	1	13028
BOTTOM RIGHT-HAND PANEL, 4'	1	13029
BOTTOM LEFT-HAND PANEL, 4'	1	13030
BOTTOM PANEL, 6'	1	13031
SCREWS, 8-32X1/2"	25	SC-2425
SCREWS, 8-32X1/4"	2	SC-2459
3. CONTROL PANEL MOUNTING SCREWS	5	SC-2459
4. CONDUIT TUBING: 6″ (152mm)	2	TU-3874
5. INSULATION: 34″ x 71″ (864mm x 1803mm)	2	IN-22364
6. CABLE CONNECTION HARDWARE:		
7. HEATING CABLE: 205′ (62484mm)	1	CB-3045
8. THERMOSTAT	3	TT-3498
THERMOSTAT KNOB	3	KN-3473
9. INDICATOR LIGHT	3	LI-3025
10. BULB SWITCH	3	SW-3616
11. INNER TOP SPOT	1	4681
12. BULBS	10	LP-33592
13. BULB SOCKET	10	RP-3952
14. 4′ DISPLAY LIGHT BULB	1	LP-3376
4′ DISPLAY LAMP SHIELD	1	LP-3967
2′ DISPLAY LIGHT BULB	1	LP-3975
2′ DISPLAY LAMP SHIELD	1	LP-3969
4′ DISPLAY LIGHT FIXTURE	1	LP-3966
2′ DISPLAY LIGHT FIXTURE	1	LP-3968
1/4 - 20 X 1/2″ SLOT RD SCREW	4	SC-2332
1/4 - 20 HEX NUT	4	NU-2437
1/4″ SPLIT RING LOCKWASHER	4	WS-2294
3/8″ 90 DEGREE CONNECTOR	2	CR-3292
CONDUIT TUBING: 6′ (1829mm)	1	TU-3976
15. CIRCUIT BOX (120V), INCLUDES	1	CI-3906
— BREAKER, 20 AMP	2	CI-3907
— BREAKER, 15 AMP	2	CI-33071
— GROUND BAR KIT	1	CI-3878
16. DOOR ASSEMBLY, INCLUDES	1	DR-22481
— LEFT-HAND GLASS DOOR - IN	1	DR-22481A
— RIGHT-HAND GLASS DOOR - IN	1	DR-22481B
— TOP TRACK	1	TK-23749
— BOTTOM TRACK	1	TK-24266
— CENTER GLASS - OUT	2	DR-22481E
— GUIDES #44049	16	DR-22480F
— DOOR BUMPER ASSEMBLY	2	DR-22480G
17. END PANEL	2	PE-22639
18. CUTTING BOARD ASSEMBLY	1	4017
19. CUTTING BOARD BRACKET (BASE)	2	12069
CUTTING BOARD BRACKET MTG. SCREWS	6	SC-24520
20. CUTTING BOARD BRACKET	2	BT-2342
23. END GLASS	2	GL-22597
END GLASS GASKET, 5' (1524mm)	1	GS-22547
24. FRONT GLASS	1	GL-22596
25. BASE BOTTOM	1	12563
26. PAN DIVIDER BARS (NOT SHOWN)		
FULL/HALF/THIRD (LONG BAR)	4	11317
FULL/HALF/THIRD (SHORT BAR)	15	11318
SHEET PAN	3	11320
S-PAN DIVIDER (LONG)	2	11357
27. OUTLET HOUSING COVER	1	4980
28. SNAP-IN RECEPTACLES (120V)	2	RP-3396
29. RECEPTACLE FUSE, 15 AMP (120V)	1	FU-33351
RECEPTACLE FUSEHOLDER, 15 AMP (120V)	1	FU-33352
30. 6′ (1829mm) PROBE PKG OPT (120V) (NOT SHOWN)	1	5296
31. LOAD CENTER OPTION (120V) (NOT SHOWN)	1	14220
32. FRONT GLASS STRUT	2	SU-2870
33. FRONT GLASS STRUT	1	SU-22704
34. SNAP-IN BUMPER (NOT SHOWN)	1	11750

HN-72/P • Pass-thru

12/22/00

PART DESCRIPTION	QTY	ALTO-SHAAM PART NO.
1. BOTTOM END PANEL	1	13028
BOTTOM RIGHT-HAND PANEL, 4'	1	13029
BOTTOM LEFT-HAND PANEL, 4'	1	13030
BOTTOM PANEL, 6'	1	13031
SCREWS, 8-32X1/2"	25	SC-2425
SCREWS, 8-32X1/4"	2	SC-2459
3. CORD: 6′ (1829mm)	1	CD-3557
4. PLUG	1	PG-3267
5. CONTROL PANEL MOUNTING SCREWS	5	SC-2459
6. INSULATION: 34″ x 71″ (864mm x 1803mm)	2	IN-22364
7. CABLE CONNECTION HARDWARE		
8. HEATING CABLE: 205′ (62484mm)	1	CB-3045
9. THERMOSTAT	3	TT-3498
THERMOSTAT KNOB	3	KN-3473
10. INDICATOR LIGHT	3	LI-3025
11. BULB SWITCH	3	SW-3616
12. FUSEHOLDER (120V UNITS) INCLUDES	1	FU-33041
FUSE, 15 AMP	1	FU-3775
FUSEHOLDER MTG SCREWS	2	SC-2077
13. INNER TOP SPOT	1	4681
14. BULBS	10	LP-33592
15. BULB SOCKETS	10	RP-3952
16. DOOR ASSEMBLY, INCLUDES	1	DR-22481
— LEFT-HAND GLASS DOOR - IN	1	DR-22481A
— RIGHT-HAND GLASS DOOR - IN	1	DR-22481B
— TOP TRACK	1	TK-23749
— BOTTOM TRACK	1	TK-24266
— CENTER GLASS - OUT	2	DR-22481E
— GUIDES #44049	16	DR-22480F
— DOOR BUMPER ASSEMBLY	2	DR-22480G
17. END PANEL	2	PE-22685
18. CUTTING BOARD ASSEMBLY	1	4017
19. CUTTING BOARD BRACKET (BASE)	2	12069
CUTTING BOARD BRACKET MTG. SCREWS	6	SC-24520
20. CUTTING BOARD BRACKET	2	BT-2342
23. END GLASS	2	GL-22597
END GLASS GASKET, 5' (1524mm)	1	GS-22547
24. FRONT GLASS	1	GL-22594
25. CUSTOMER GUARD: 6′ (1829mm)	1	11116
SPACER	1	SP-24589
SCREWS	2	SC-2073
26. PANS (NOT SHOWN)		
SELF-SERVE PAN	1	11626
SELF-SERVE PAN GRID	3	PN-22048
27. ADJUSTABLE LEGS	4	LG-22686
28. TERMINAL BLOCK, 4 POS	2	BK-3597
29. SNAP-IN RECEPTACLES (120V)	2	RP-3396
RECEPTACLE FUSE, 15 AMP (120V)	1	FU-33351
RECEPTACLE FUSEHOLDER, 15 AMP (120V)	1	FU-33352
30. OUTLET HOUSING COVER	1	4980
31. 6′ (1829mm) PROBE PKG OPT (120V)(NOT SHOWN)	1	5296
32 IND.CIRCUIT CORDSET PKG. OPTION (120V)*	1	14221
33. FRONT GLASS STRUT	2	SU-22431

NOT CSA APPROVED

HNSYS-72/P • Pass-thru

12/22/00

PART DESCRIPTION	QTY	ALTO-SHAAM PART NO.
1. BOTTOM END PANEL	1	13028
BOTTOM RIGHT-HAND PANEL, 4'	1	13029
BOTTOM LEFT-HAND PANEL, 4'	1	13030
BOTTOM PANEL, 6'	1	13031
SCREWS, 8-32X1/2"	25	SC-2425
SCREWS, 8-32X1/4"	2	SC-2459
3. CONTROL PANEL MOUNTING SCREWS	5	SC-2459
4. CONDUIT TUBING: 6″ (152mm)	2	TU-3874
5. INSULATION: 34″ x 71″ (864mm x 1803mm)	2	IN-22364
6. CABLE CONNECTION HARDWARE		
7. HEATING CABLE: 205′ (62484mm)	1	CB-3045
8. THERMOSTAT	3	TT-3498
THERMOSTAT KNOB	3	KN-3473
9. INDICATOR LIGHT	3	LI-3025
10. BULB SWITCH	3	SW-3616
11. INNER TOP SPOT	1	4681
12. BULBS	10	LP-33592
13. BULB SOCKET	10	RP-3952
14. 4′ DISPLAY LIGHT BULB	1	LP-3376
4′ DISPLAY LAMP SHIELD	1	LP-3967
2′ DISPLAY LIGHT BULB	1	LP-3975
2′ DISPLAY LAMP SHIELD	1	LP-3969
4′ DISPLAY LIGHT FIXTURE	1	LP-3966
2′ DISPLAY LIGHT FIXTURE	1	LP-3968
1/4 - 20 X 1/2″ SLOT RD SCREW	4	SC-2332
1/4 - 20 HEX NUT	4	NU-2437
1/4″ SPLIT RING LOCKWASHER	4	WS-2294
3/8″ 90 DEGREE CONNECTOR	2	CR-3292
CONDUIT TUBING: 6′ (1829mm)	1	TU-3976
15. CIRCUIT BOX (120V), INCLUDES	1	CI-3906
— BREAKER, 20 AMP	2	CI-3907
— BREAKER, 15 AMP	2	CI-33071
— GROUND BAR KIT	1	CI-3878
16. DOOR ASSEMBLY, INCLUDES	1	DR-22481
— LEFT-HAND GLASS DOOR - IN	1	DR-22481A
— RIGHT-HAND GLASS DOOR - IN	1	DR-22481B
— TOP TRACK	1	TK-23749
— BOTTOM TRACK	1	TK-24266
— CENTER GLASS - OUT	2	DR-22481E
— GUIDES #44049	16	DR-22480F
— DOOR BUMPER ASSEMBLY	1	DR-22480G
17. END PANEL	2	PE-22639
18. CUTTING BOARD ASSEMBLY	1	4017
19. CUTTING BOARD BRACKET (BASE)	2	12069
CUTTING BOARD BRACKET MTG. SCREWS	6	SC-24520
20. CUTTING BOARD BRACKET	2	BT-2342
23. END GLASS	2	GL-22597
END GLASS GASKET, 5' (1524mm)	1	GS-22547
24. FRONT GLASS	1	GL-22594
25. CUSTOMER GUARD: 6′ (1829mm)	1	11116
SPACER	1	SP-24589
SCREWS	2	SP-2073
26. BASE BOTTOM	1	12563
27. PANS (NOT SHOWN)		
SELF-SERVE PAN	1	11626
SELF-SERVE PAN GRID	3	PN-22048
28. SNAP-IN RECEPTACLES	2	RP-3396
29. OUTLET HOUSING COVER	1	4980
30. RECEPTACLE FUSE, 15 AMP (120V)	1	FU-33351
RECEPTACLE FUSEHOLDER, 15 AMP (120V)	1	FU-33352
31. 6′ (1829mm) PROBE PKG OPT (120V) (NOT SHOWN)	1	5296
32. LOAD CENTER PACKAGE OPT (120V)(NOT SHOWN)	1	14220
33. FRONT GLASS STRUT	2	SU-22431
34. SNAP-IN BUMPER	1	11750

HNSYS-72/PL • Pass-thru Left

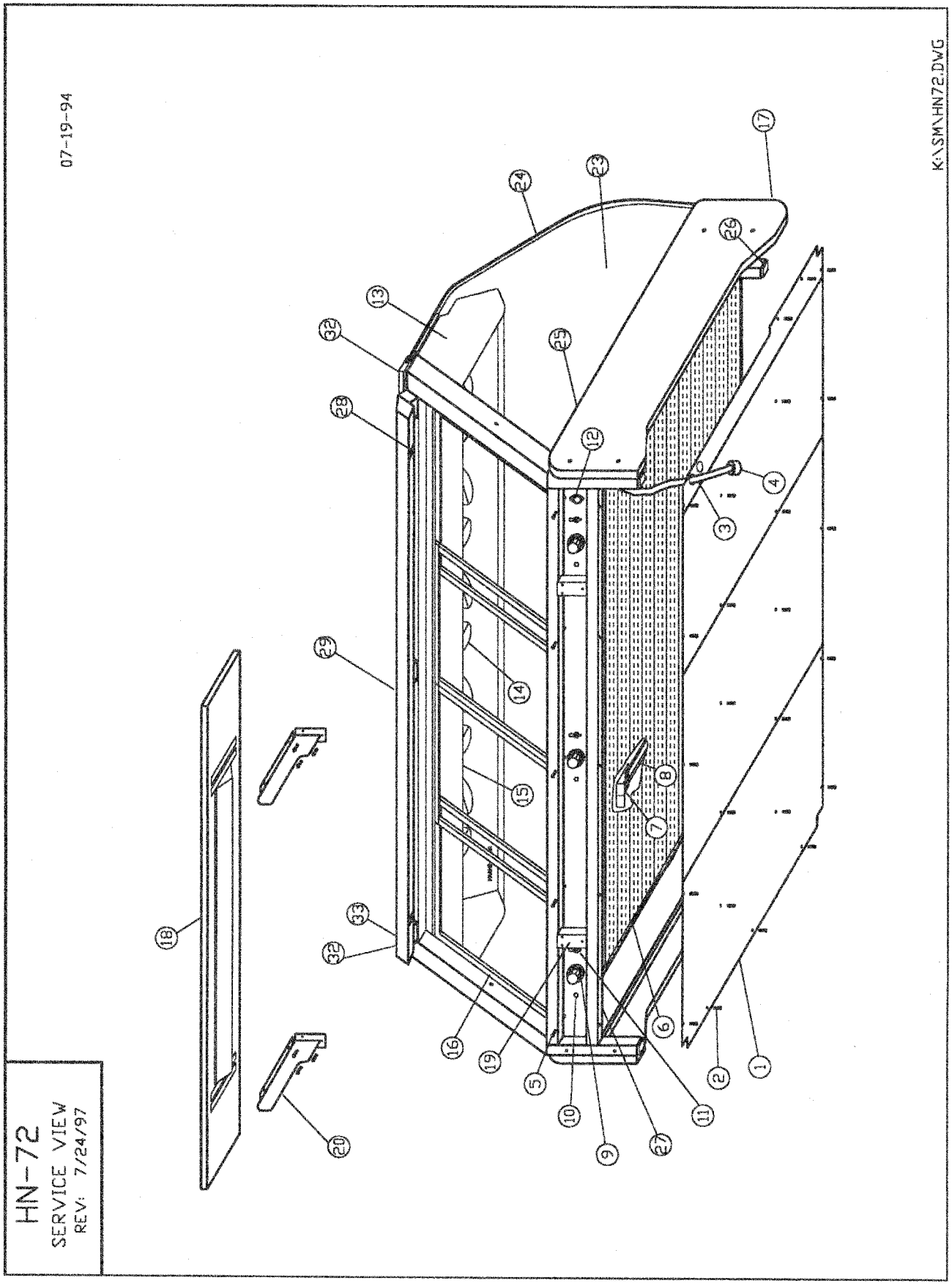
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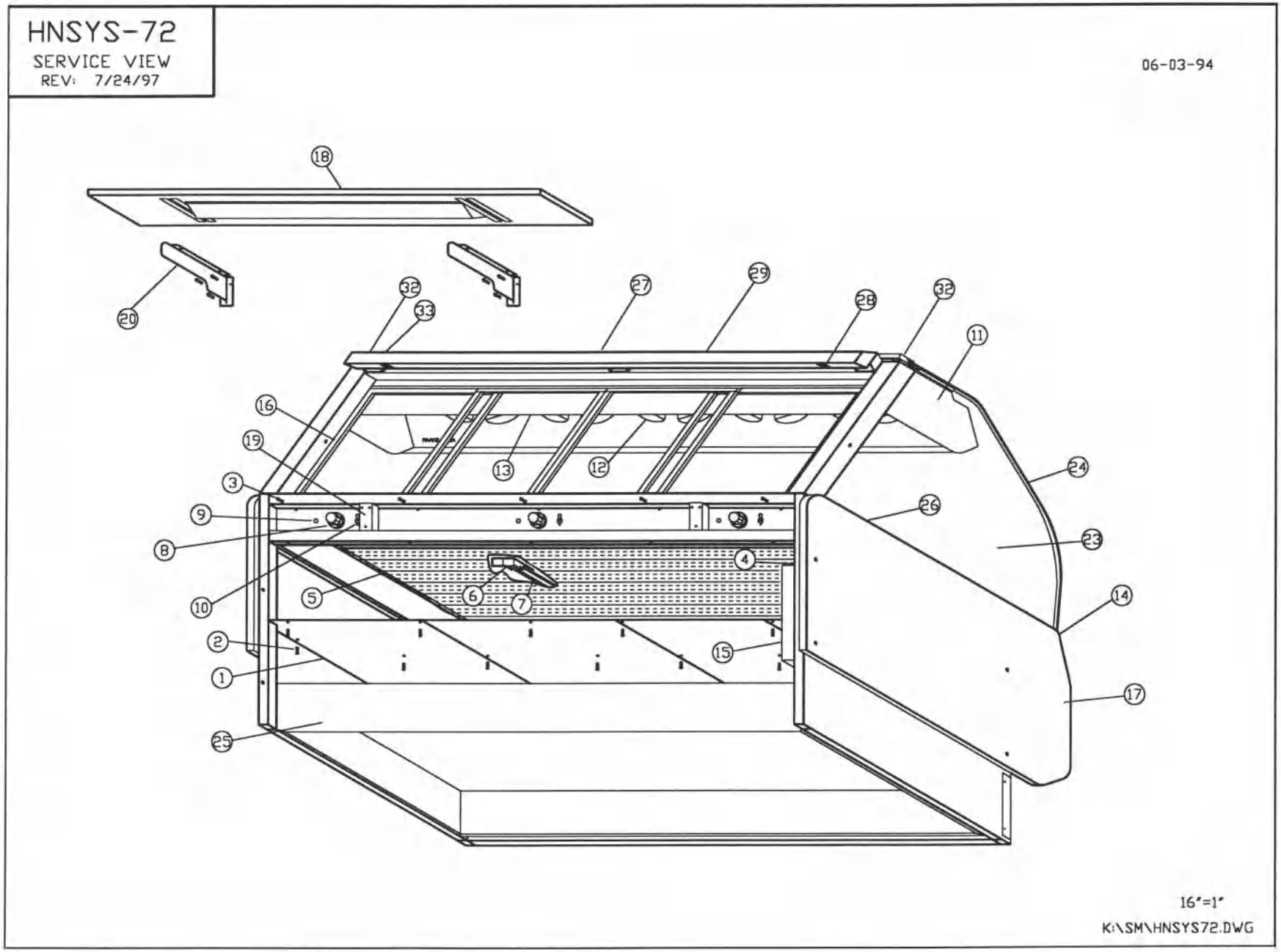
PART DESCRIPTION	QTY	ALTO-SHAAM PART NO.
1. BOTTOM END PANEL	1	13028
BOTTOM RIGHT-HAND PANEL, 4'	1	13029
BOTTOM LEFT-HAND PANEL, 4'	1	13030
BOTTOM PANEL, 6'	1	13031
SCREWS, 8-32X1/2"	25	SC-2425
SCREWS, 8-32X1/4"	2	SC-2459
3. CONTROL PANEL MOUNTING SCREWS	5	SC-2459
4. CONDUIT TUBING: 6" (152mm)	2	TU-3874
5. INSULATION: 34" x 71" (864mm x 1803mm)	2	IN-22364
6. CABLE CONNECTION HARDWARE		
7. HEATING CABLE: 66' (20117mm)	1	CB-3045
HEATING CABLE: 132' (40234mm)	1	CB-3045
8. THERMOSTAT	3	TT-3498
THERMOSTAT KNOB	3	KN-3473
9. INDICATOR LIGHT	3	LI-3025
10. BULB SWITCH	3	SW-3616
11. 2' INNER TOP SPOT	1	4687
4' INNER TOP SPOT	1	4674
12. BULB	10	LP-33592
13. BULB SOCKET	10	RP-3952
14. 4' DISPLAY LIGHT BULB	1	LP-3376
4' DISPLAY LAMP SHIELD	1	LP-3967
2' DISPLAY LIGHT BULB	1	LP-3975
2' DISPLAY LAMP SHIELD	1	LP-3969
4' DISPLAY LIGHT FIXTURE	1	LP-3966
2' DISPLAY LIGHT FIXTURE	1	LP-3968
1/4 - 20 X 1/2" SLOT RD SCREW	4	SC-2332
1/4 - 20 HEX NUT	4	NU-2437
1/4" SPLIT RING LOCKWASHER	4	WS-2294
3/8" 90 DEGREE CONNECTOR	2	CR-3292
CONDUIT TUBING: 6' (1829mm)	1	TU-3976
15. CIRCUIT BOX (120V), INCLUDES	1	CI-3906
— BREAKER, 20 AMP	3	CI-3907
— BREAKER, 15 AMP	2	CI-33071
— GROUND BAR KIT	1	CI-3878
16. DOOR ASSEMBLY, INCLUDES	1	DR-22480
— LEFT-HAND GLASS DOOR	1	DR-22480A
— RIGHT-HAND GLASS DOOR	1	DR-22480B
— TOP TRACK	1	TK-23748
— BOTTOM TRACK	1	TK-24265
— GUIDES #44049	8	DR-22480F
— DOOR BUMPER ASSEMBLY	2	DR-2480G
17. SELF-SERVE DOOR, LEFT-HAND	1	4407
HINGE, LEFT-HAND to unit	2	HG-22167
18. SELF-SERVE DOOR, RIGHT-HAND	1	4409
HINGE, RIGHT-HAND to unit	2	HG-22168
HINGE BUSHING to unit	4	BU-2722
HINGE MOUNTING SCREWS to unit	8	SC-2352
19. END PANEL	2	PE-22639
20. CUTTING BOARD ASSEMBLY	1	4017
21. CUTTING BOARD BRACKET (BASE)	2	12069
CUTTING BOARD BRACKET MTG. SCREWS	6	SC-24520
22. CUTTING BOARD BRACKET	2	BT-2342
25. END GLASS	2	GL-22597
END GLASS GASKET, 4' (1219mm)	1	GS-22547
26. INNER END GLASS	1	GL-22598
DIVIDER GLASS GASKET, 3' (914mm)	3'	GS-22548
27. FRONT GLASS: 4' (1219mm)	1	GL-22595
28. SELF-SERVE GLASS: 2' (610mm)	1	GL-22592
29. CUSTOMER GUARD: 2' (610mm)	1	11115
SPACER	1	SP-24589
SCREWS	2	SC-2073
30. BASE BOTTOM	1	12563
31. PAN DIVIDER BARS (NOT SHOWN) *PART NUMBERS ARE REFERENCED IN THIS MANUAL*		
32. SNAP-IN RECEPTACLES (120V)	2	RP-3396
33. OUTLET HOUSING COVER	1	4951
34. RECEPTACLE FUSE, 15 AMP (120V)	1	FU-33351
RECEPTACLE FUSEHOLDER, 15 AMP (120V)	1	FU-33352
35. 4' (1219mm) PROBE PKG OPT (120V)(NOT SHOWN)	1	5295
36. LOAD CENTER PKG OPTION (120V) (NOT SHOWN)	1	14220
37. FRONT GLASS STRUT	2	SU-22704
38. FRONT GLASS STRUT	1	SU-22431
39. SNAP-IN BUMPER (NOT SHOWN)	1	11750

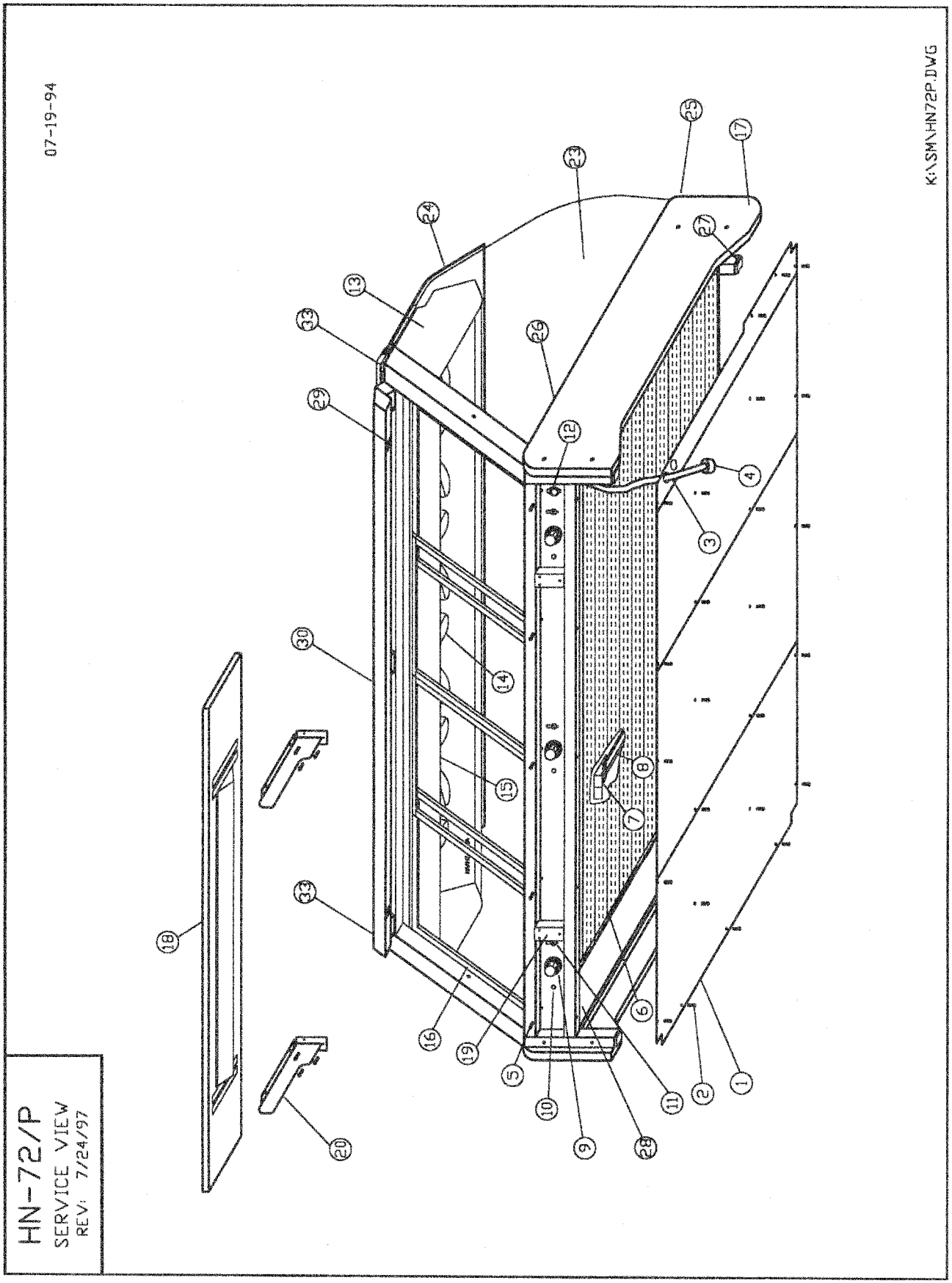
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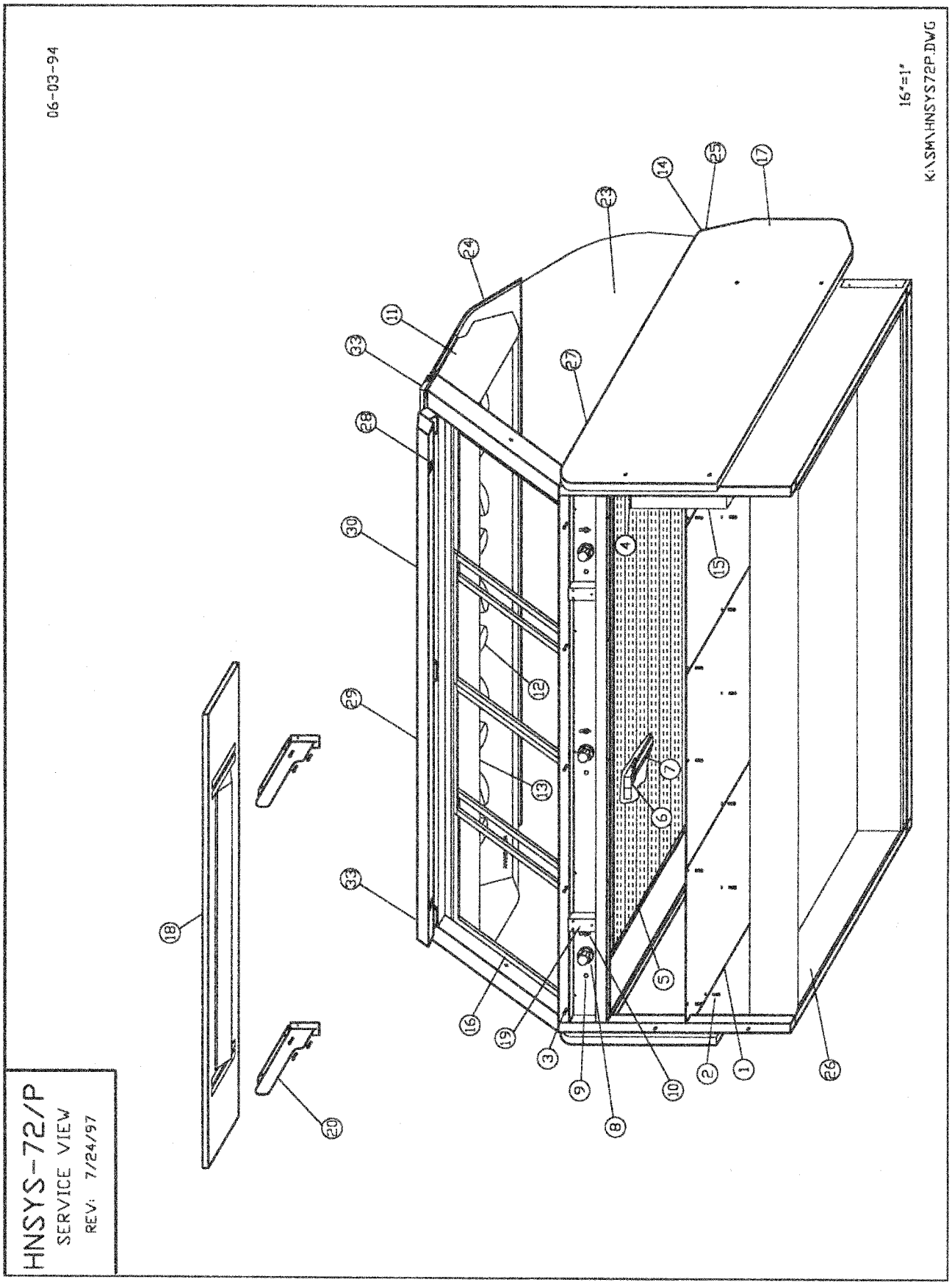
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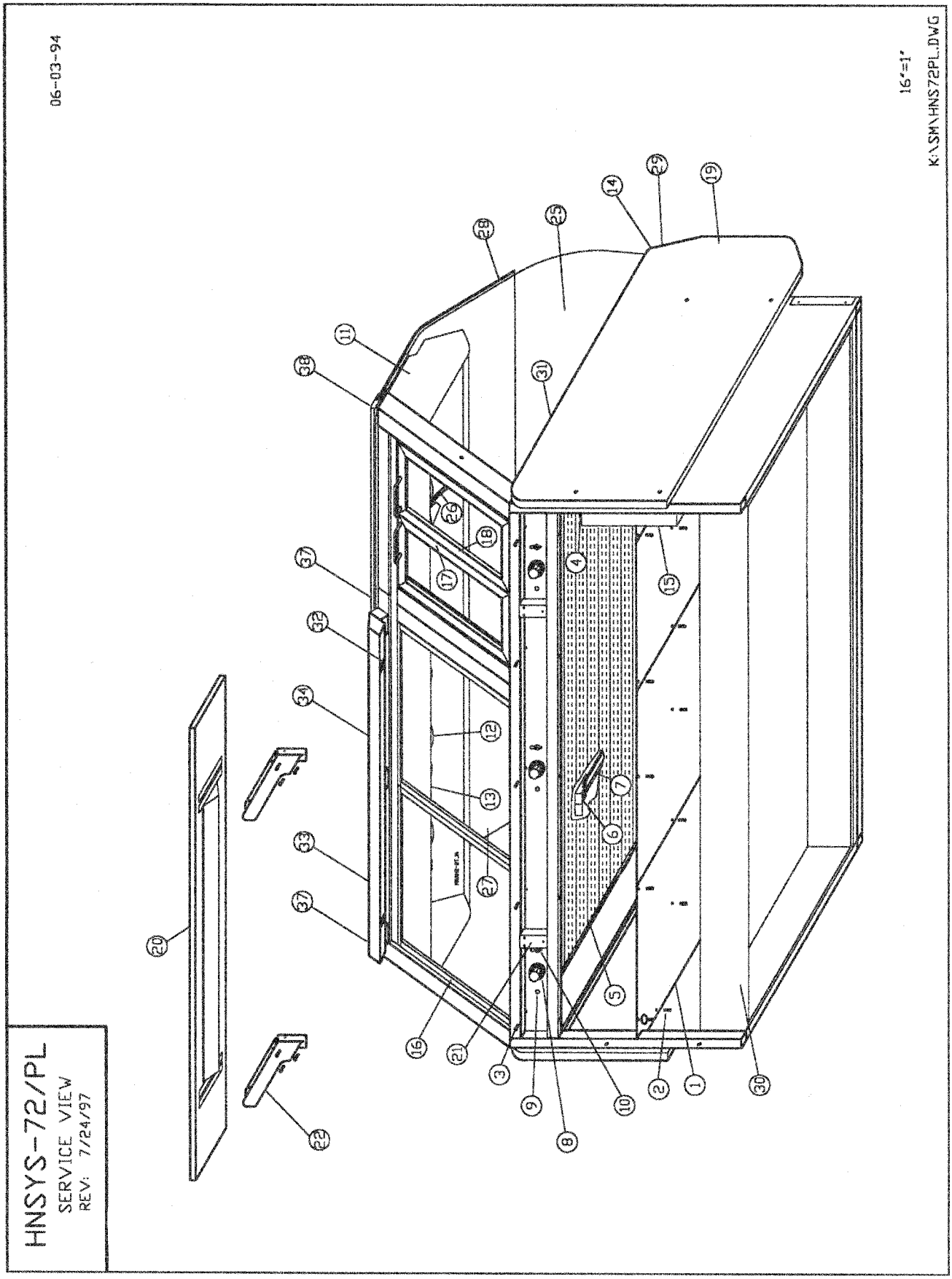
PART DESCRIPTION	QTY	ALTO-SHAAM PART NO.
1. BOTTOM END PANEL	1	13028
BOTTOM RIGHT-HAND PANEL, 4'	1	13029
BOTTOM LEFT-HAND PANEL, 4'	1	13030
BOTTOM PANEL, 6'	1	13031
SCREWS, 8-32X1/2"	25	SC-2425
SCREWS, 8-32X1/4"	2	SC-2459
3. CONTROL PANEL MOUNTING SCREWS	5	SC-2459
4. CONDUIT TUBING: 6" (152mm)	2	TU-3874
5. INSULATION: 34" x 71" (864mm x 1803mm)	2	IN-22364
6. CABLE CONNECTION HARDWARE		
7. HEATING CABLE: 66' (20117mm)	1	CB-3045
HEATING CABLE: 132' (40234mm)	1	CB-3045
8. THERMOSTAT	3	TT-3498
THERMOSTAT KNOB	3	KN-3473
9. INDICATOR LIGHT	3	LI-3025
10. BULB SWITCH	3	SW-3616
11. 2' INNER TOP SPOT	1	4687
4' INNER TOP SPOT	1	4674
12. BULB	10	LP-33592
13. BULB SOCKET	10	RP-3952
14. 4' DISPLAY LIGHT BULB	1	LP-3376
4' DISPLAY LAMP SHIELD	1	LP-3967
2' DISPLAY LIGHT BULB	1	LP-3975
2' DISPLAY LAMP SHIELD	1	LP-3969
4' DISPLAY LIGHT FIXTURE	1	LP-3966
2' DISPLAY LIGHT FIXTURE	1	LP-3968
1/4 - 20 X 1/2" SLOT RD SCREW	4	SC-2332
1/4 - 20 HEX NUT	4	NU-2437
1/4" SPLIT RING LOCKWASHER	4	WS-2294
3/8" 90 DEGREE CONNECTOR	2	CR-3292
CONDUIT TUBING: 6' (1829mm)	1	TU-3976
15. CIRCUIT BOX (120V), INCLUDES	1	CI-3906
— BREAKER, 20 AMP	3	CI-3907
— BREAKER, 15 AMP	2	CI-33071
— GROUND BAR KIT	1	CI-3878
16. DOOR ASSEMBLY, INCLUDES	1	DR-22480
— LEFT-HAND GLASS DOOR	1	DR-22480A
— RIGHT-HAND GLASS DOOR	1	DR-22480B
— TOP TRACK	1	TK-23748
— BOTTOM TRACK	1	TK-24265
— GUIDES #44049	8	DR-22480F
— DOOR BUMPER ASSEMBLY	2	DR-22480G
17. SELF-SERVE DOOR, LEFT-HAND	1	4407
HINGE, LEFT-HAND to unit	2	HG-22167
18. SELF-SERVE DOOR, RIGHT-HAND	1	4409
HINGE, RIGHT-HAND to unit	2	HG-22168
HINGE BUSHING to unit	4	BU-2722
HINGE MOUNTING SCREWS to unit	8	SC-2352
19. END PANEL	2	PE-22639
20. CUTTING BOARD ASSEMBLY	1	4017
21. CUTTING BOARD BRACKET (BASE)	2	12069
CUTTING BOARD BRACKET MTG. SCREWS	6	SC-24520
22. CUTTING BOARD BRACKET	2	BT-2342
25. END GLASS	2	GL-22597
END GLASS GASKET, 4' (1219mm)	1	GS-22547
26. INNER END GLASS	1	GL-22598
DIVIDER GLASS GASKET, 3' (914mm)	1	GS-22548
27. FRONT GLASS: 4' (1219mm)	1	GL-22595
28. SELF-SERVE GLASS: 2' (610mm)	1	GL-22592
29. CUSTOMER GUARD: 2' (610mm)	1	11115
SPACER	1	SP-24589
SCREWS	2	SC-2073
30. BASE BOTTOM	1	12563
31. PAN DIVIDER BARS (NOT SHOWN) *PART NUMBERS ARE REFERENCED IN THIS MANUAL*		
32. SNAP-IN RECEPTACLES (120V)	2	RP-3396
33. OUTLET HOUSING COVER	1	4951
34. RECEPTACLE FUSE, 15 AMP (120V)	1	FU-33351
RECEPTACLE FUSEHOLDER, 15 AMP (120V)	1	FU-33352
35. 4' (1219mm) PROBE PKG OPT (120V) (NOT SHOWN)	1	5295
36. LOAD CENTER PKG OPTION (120V) (NOT SHOWN)	1	14220
37. FRONT GLASS STRUT	2	SU-22704
38. FRONT GLASS STRUT	1	SU-22431
39. SNAP-IN BUMPER (NOT SHOWN)	1	11750

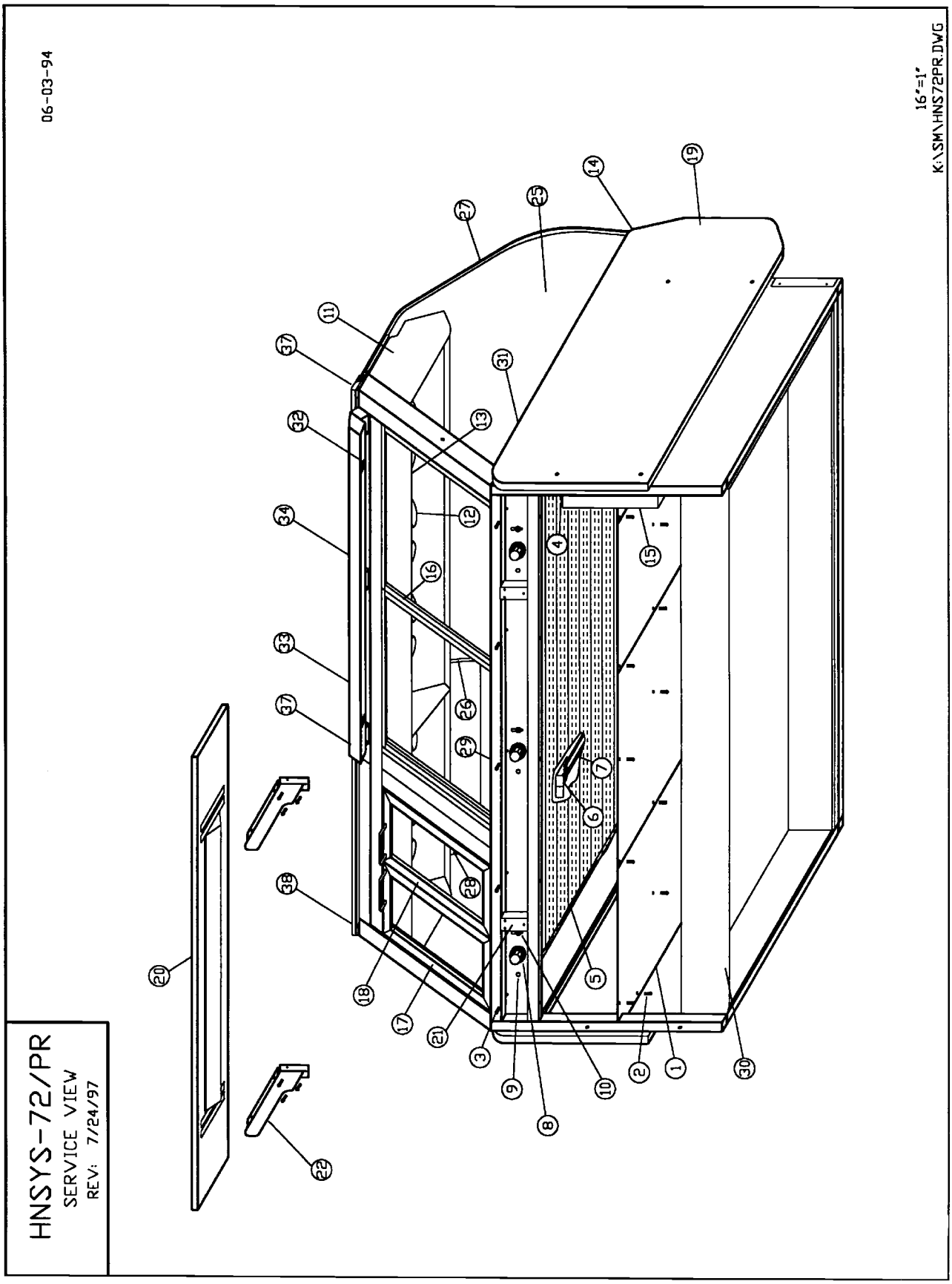

HN-72
SERVICE VIEW
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07-19-94
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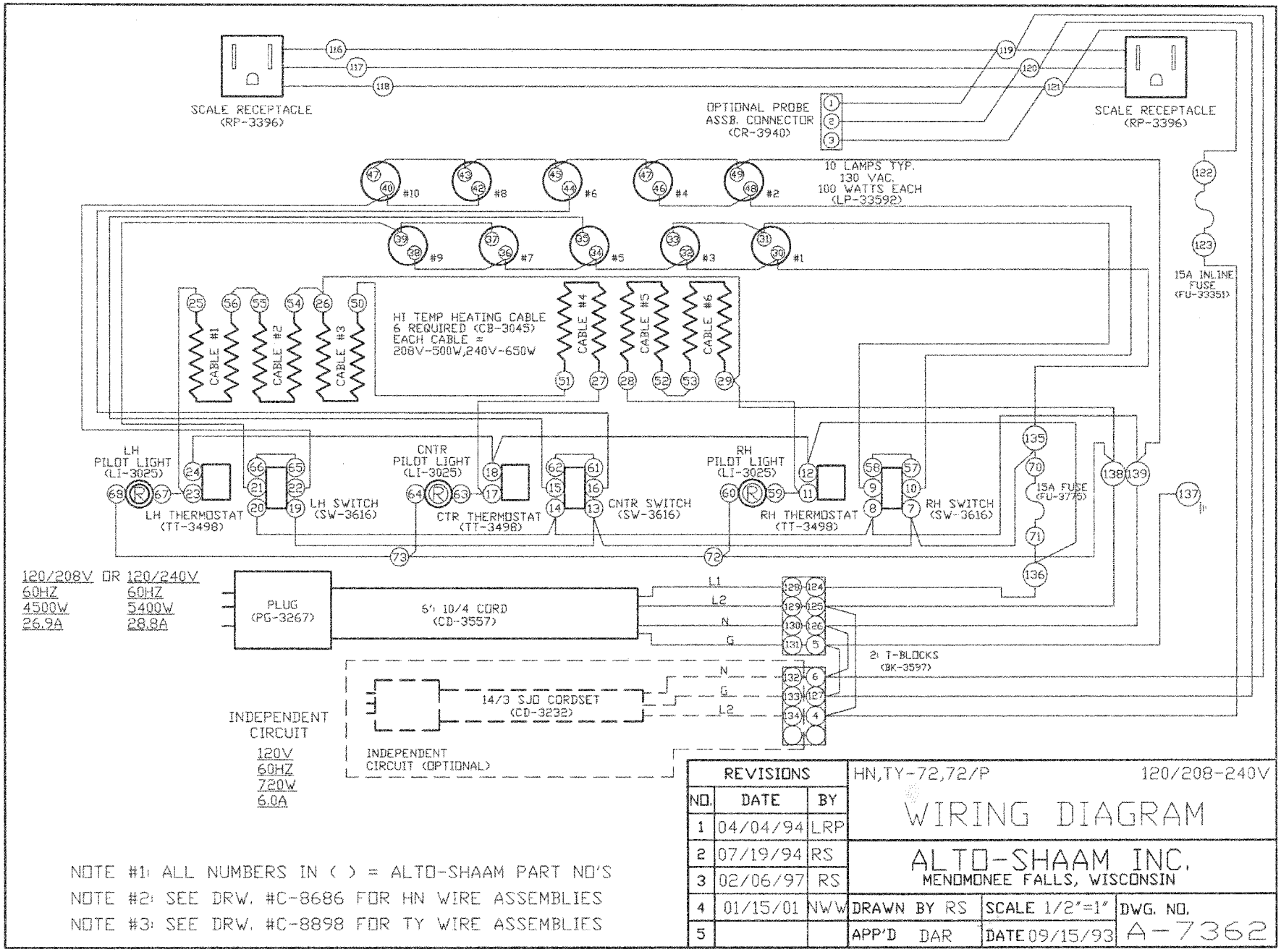

HNSYS-72
SERVICE VIEW
REV: 7/24/97
06-03-94
18
20
32
33
27
29
28
32
11
16
19
13
12
24
3
26
9
23
8
4
6
7
5
10
14
2
15
1
17
25
16"=1"
K:\SM\HNSYS72.DWG


HN-72/P
SERVICE VIEW
REV: 7/24/97
07-19-94
K:\SM\HN72P.DWG


HNSYS-72/P
SERVICE VIEW
REV: 7/24/97
06-03-94
16"=1"
K:\SM\HNSYS72P.DWG


HNSYS-72/PL
SERVICE VIEW
REV: 7/24/97
06-03-94
1 6"=1'
K:\SM\HNS72PL.DWG


HNSYS-72/PR
SERVICE VIEW
REV: 7/24/97
06-03-94
16"=1"
K:\SM\HNS72PR.DWG



NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S
NOTE #2: SEE DRW. #C-8686 FOR HN WIRE ASSEMBLIES
NOTE #3: SEE DRW. #C-8898 FOR TY WIRE ASSEMBLIES

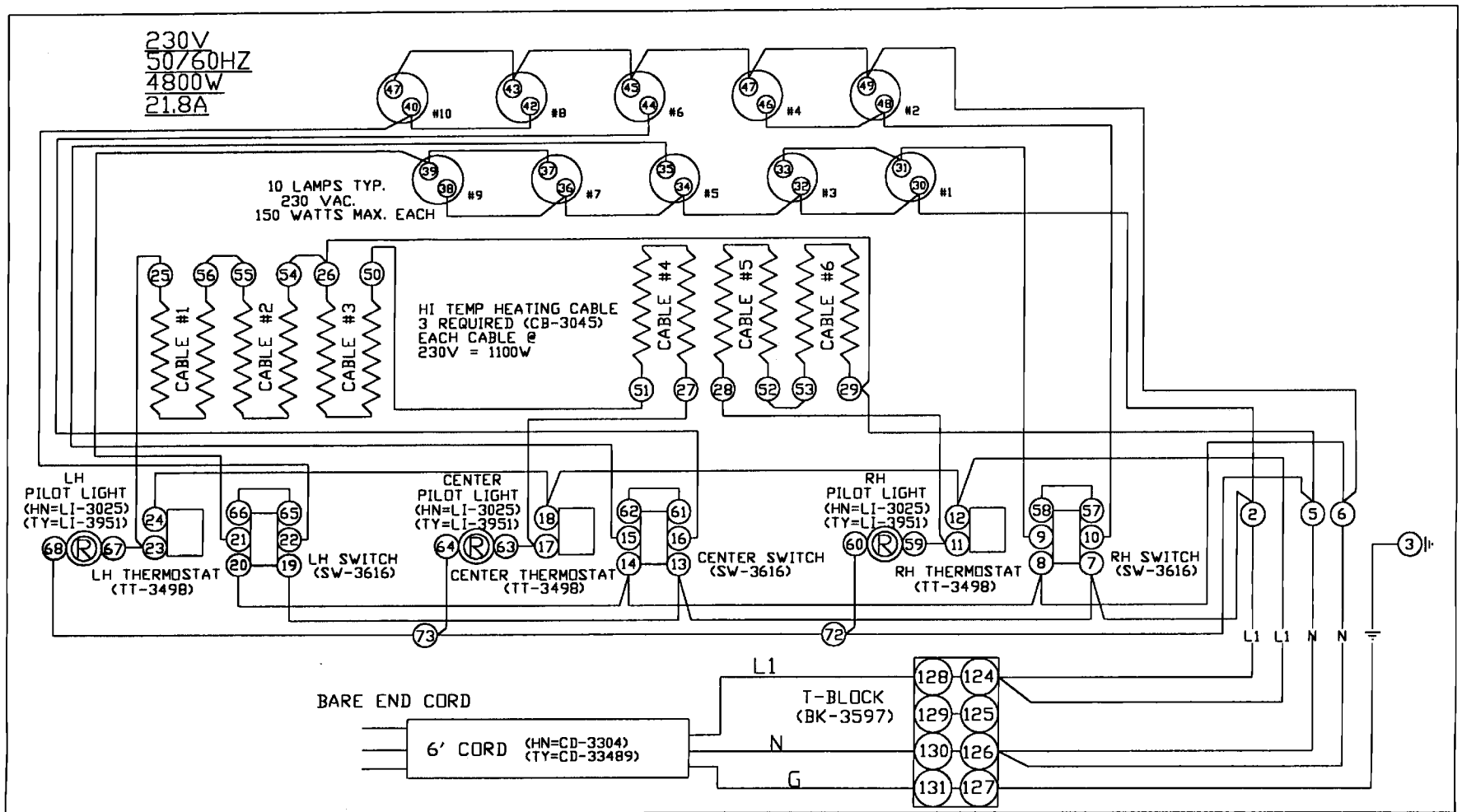
REVISIONS		
NO.	DATE	BY
1	04/04/94	LRP
2	07/19/94	RS
3	02/06/97	RS
4	01/15/01	NWW
5		

HN,TY-72,72/P 120/208-240V

WIRING DIAGRAM

ALTO-SHAAM INC.
MENDMONEE FALLS, WISCONSIN

DRAWN BY RS	SCALE 1/2"=1"	DWG. NO. A-7362
APP'D DAR	DATE 09/15/93	



REVISIONS		
NO.	DATE	BY
1	02/06/97	RS
2	06/18/98	RS
3	03/02/99	JMM
4		
5		

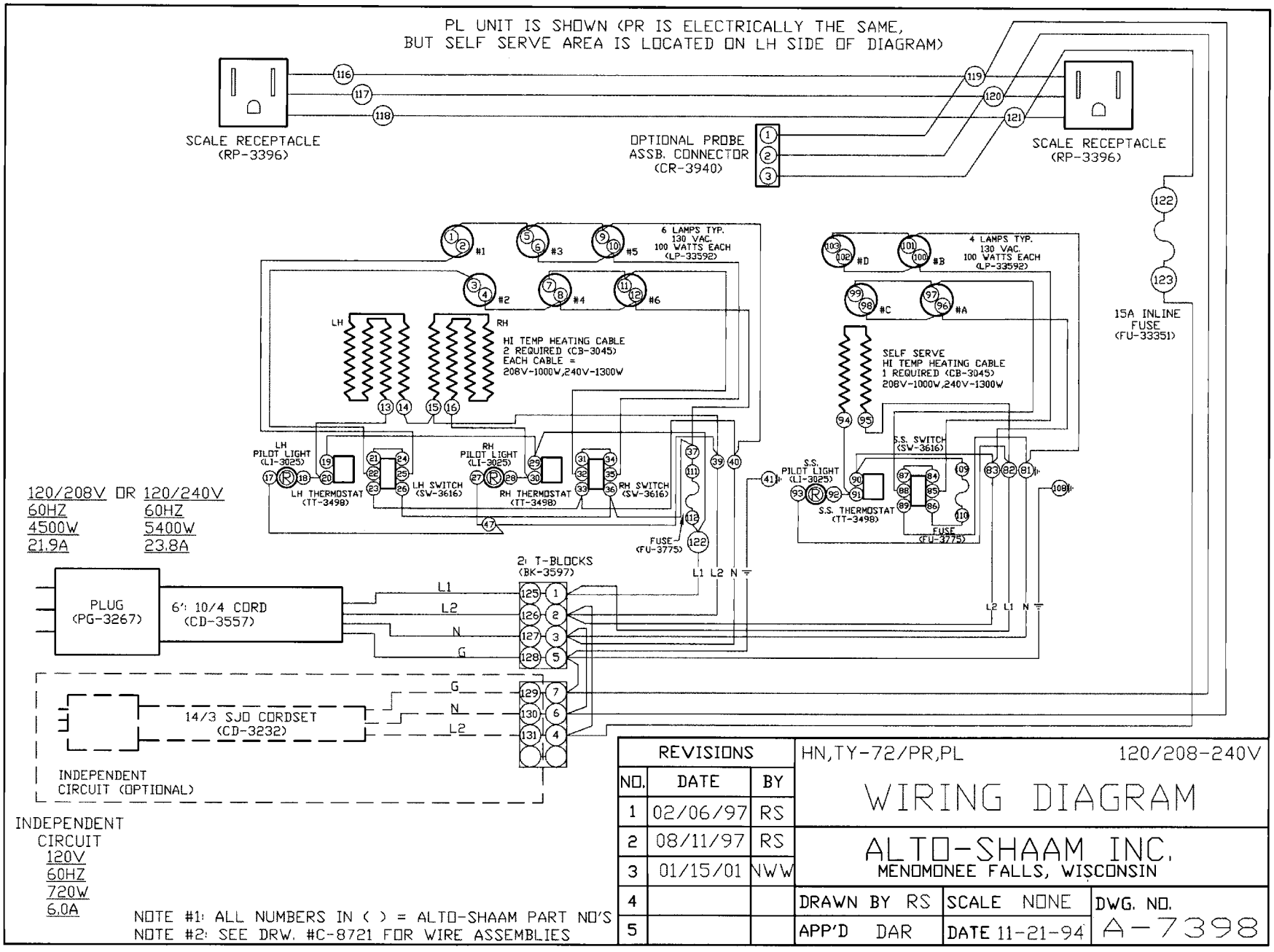
HN,TY-72,72/P (230V) 50/60HZ

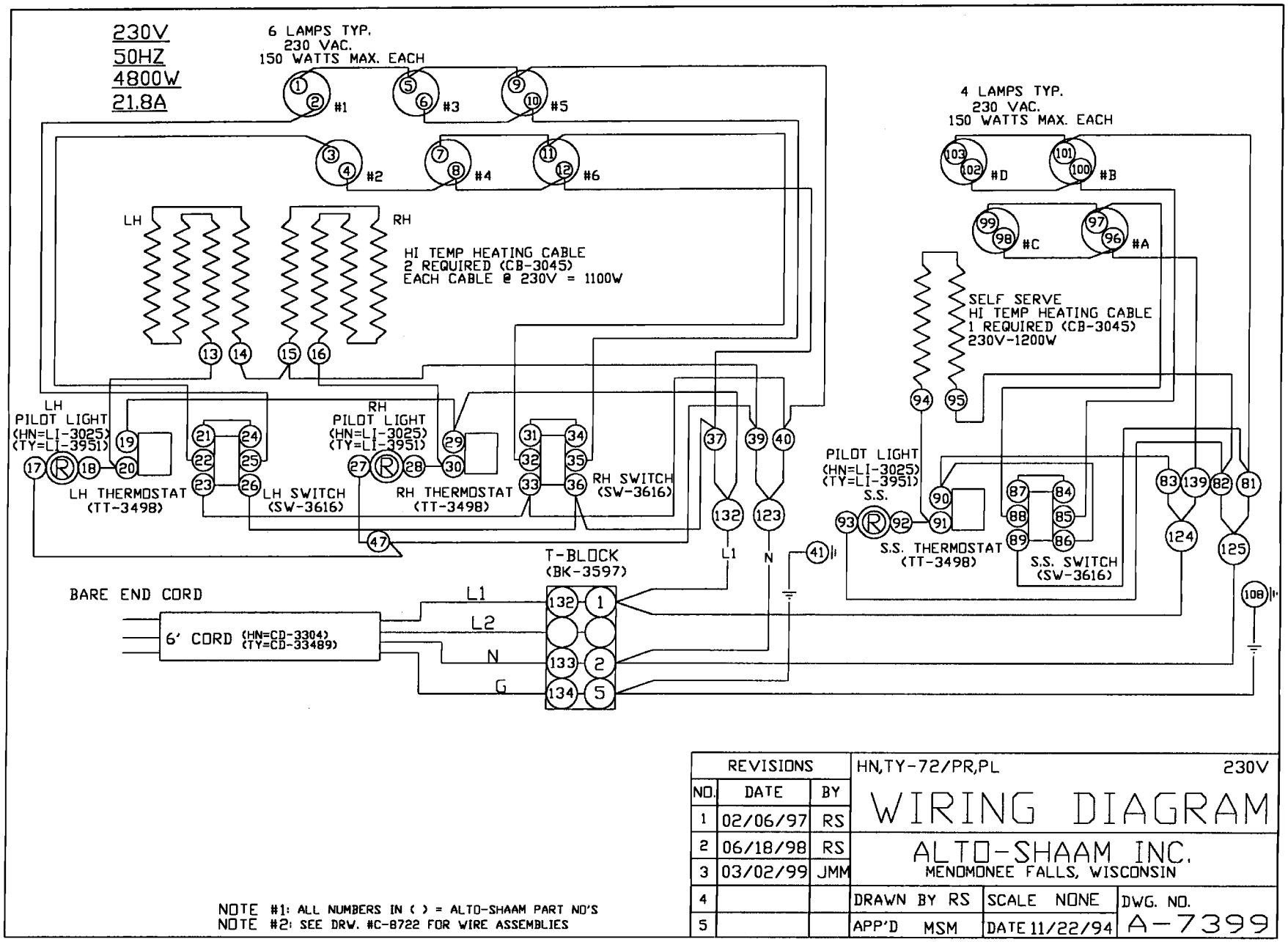
WIRING DIAGRAM

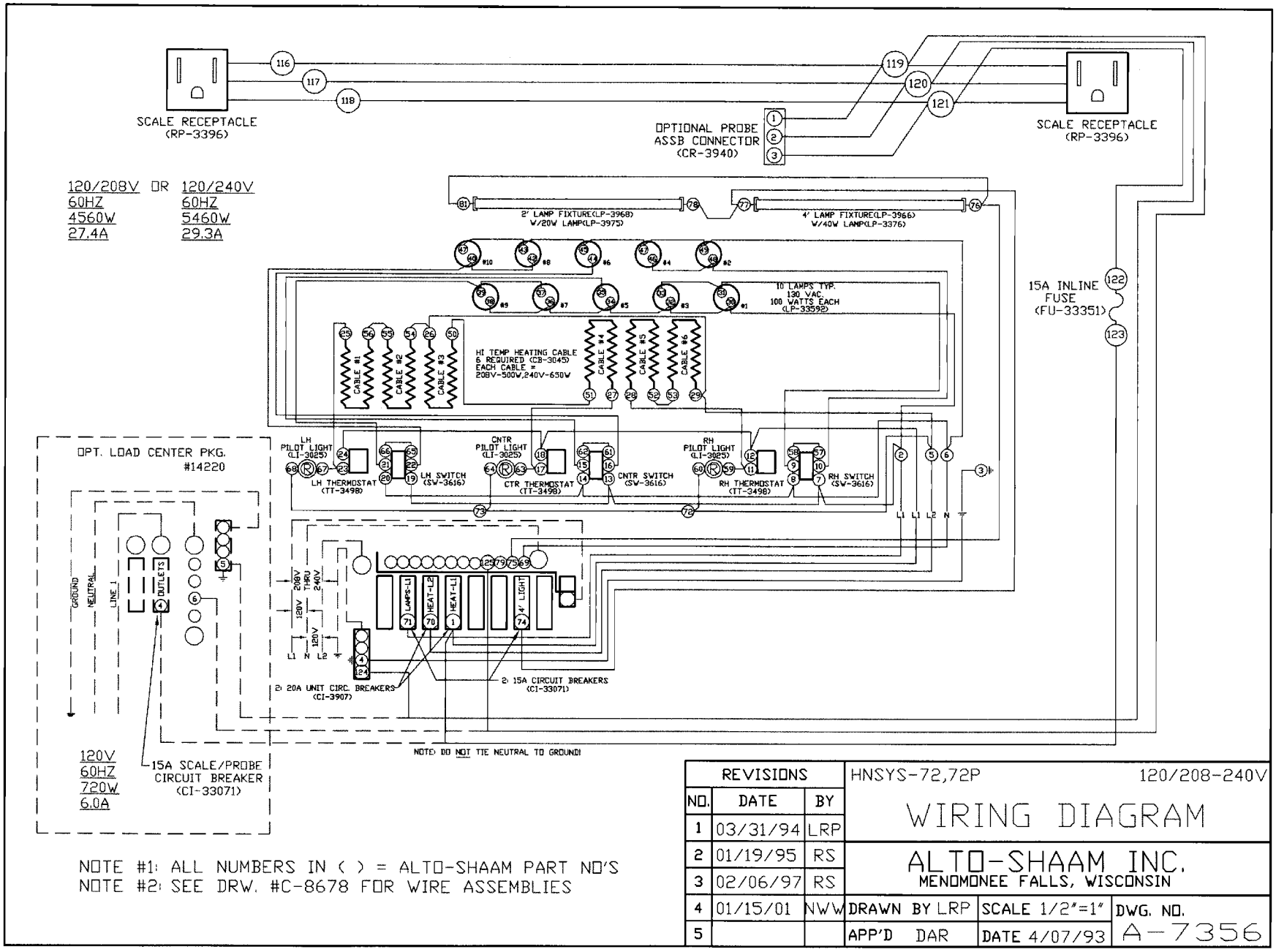
ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN

DRAWN BY RS	SCALE NONE	DWG. NO.
APP'D MSM	DATE 11-21-94	A-7397

NOTE #1: ALL NUMBERS IN () = ALTO-SHAAM PART NO'S
NOTE #2: SEE DRW. #C-8720 FOR WIRE ASSEMBLIES


PL UNIT IS SHOWN (PR IS ELECTRICALLY THE SAME,
BUT SELF SERVE AREA IS LOCATED ON LH SIDE OF DIAGRAM)
SCALE RECEPTACLE
(RP-3396)
OPTIONAL PROBE
ASSB. CONNECTOR
(CR-3940)
SCALE RECEPTACLE
(RP-3396)
6 LAMPS TYP.
130 VAC.
100 WATTS EACH
(LP-33592)
4 LAMPS TYP.
130 VAC.
100 WATTS EACH
(LP-33592)
HI TEMP HEATING CABLE
2 REQUIRED (CB-3045)
EACH CABLE =
208V-1000W,240V-1300W
SELF SERVE
HI TEMP HEATING CABLE
1 REQUIRED (CB-3045)
208V-1000W,240V-1300W
15A INLINE
FUSE
(FU-33351)
LH
PILOT LIGHT
(LI-3025)
LH THERMOSTAT
(TT-3498)
LH SWITCH
(SW-3616)
RH
PILOT LIGHT
(LI-3025)
RH THERMOSTAT
(TT-3498)
RH SWITCH
(SW-3616)
S.S. SWITCH
(SW-3616)
S.S.
PILOT LIGHT
(LI-3025)
S.S. THERMOSTAT
(TT-3498)
FUSE
(FU-3775)
FUSE
(FU-3775)
120/208V OR 120/240V
60HZ 60HZ
4500W 5400W
21.9A 23.8A
2 T-BLOCKS
(BK-3597)
PLUG
(PG-3267)
6' 10/4 CORD
(CD-3557)
L1
L2
N
G
14/3 SJO CORDSET
(CD-3232)
INDEPENDENT
CIRCUIT (OPTIONAL)
INDEPENDENT
CIRCUIT
120V
60HZ
720W
6.0A
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S
NOTE #2: SEE DRW. #C-8721 FOR WIRE ASSEMBLIES
REVISIONS
NO. DATE BY
1 02/06/97 RS
2 08/11/97 RS
3 01/15/01 NWW
4
5
HN,TY-72/PR,PL
120/208-240V
WIRING DIAGRAM
ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN
DRAWN BY RS
SCALE NONE
DWG. NO.
APP'D DAR
DATE 11-21-94
A-7398


230V
50HZ
4800W
21.8A
6 LAMPS TYP.
230 VAC.
150 WATTS MAX. EACH
#1
#2
#3
#4
#5
#6
4 LAMPS TYP.
230 VAC.
150 WATTS MAX. EACH
#A
#B
#C
#D
LH
RH
HI TEMP HEATING CABLE
2 REQUIRED (CB-3045)
EACH CABLE @ 230V = 1100W
SELF SERVE
HI TEMP HEATING CABLE
1 REQUIRED (CB-3045)
230V-1200W
LH
PILOT LIGHT
(HN=LI-3025)
(TY=LI-3951)
RH
PILOT LIGHT
(HN=LI-3025)
(TY=LI-3951)
PILOT LIGHT
(HN=LI-3025)
(TY=LI-3951)
S.S.
LH THERMOSTAT
(TT-3498)
LH SWITCH
(SW-3616)
RH THERMOSTAT
(TT-3498)
RH SWITCH
(SW-3616)
S.S. THERMOSTAT
(TT-3498)
S.S. SWITCH
(SW-3616)
T-BLOCK
(BK-3597)
L1
N
BARE END CORD
6' CORD (HN=CD-3304)
(TY=CD-33489)
L1
L2
N
G
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S
NOTE #2: SEE DRW. #C-8722 FOR WIRE ASSEMBLIES
REVISIONS
NO. DATE BY
1 02/06/97 RS
2 06/18/98 RS
3 03/02/99 JMM
4
5
HN,TY-72/PR,PL
230V
WIRING DIAGRAM
ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN
DRAWN BY RS
SCALE NONE
DWG. NO.
APP'D MSM
DATE 11/22/94
A-7399



NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S
NOTE #2: SEE DRW. #C-8678 FOR WIRE ASSEMBLIES

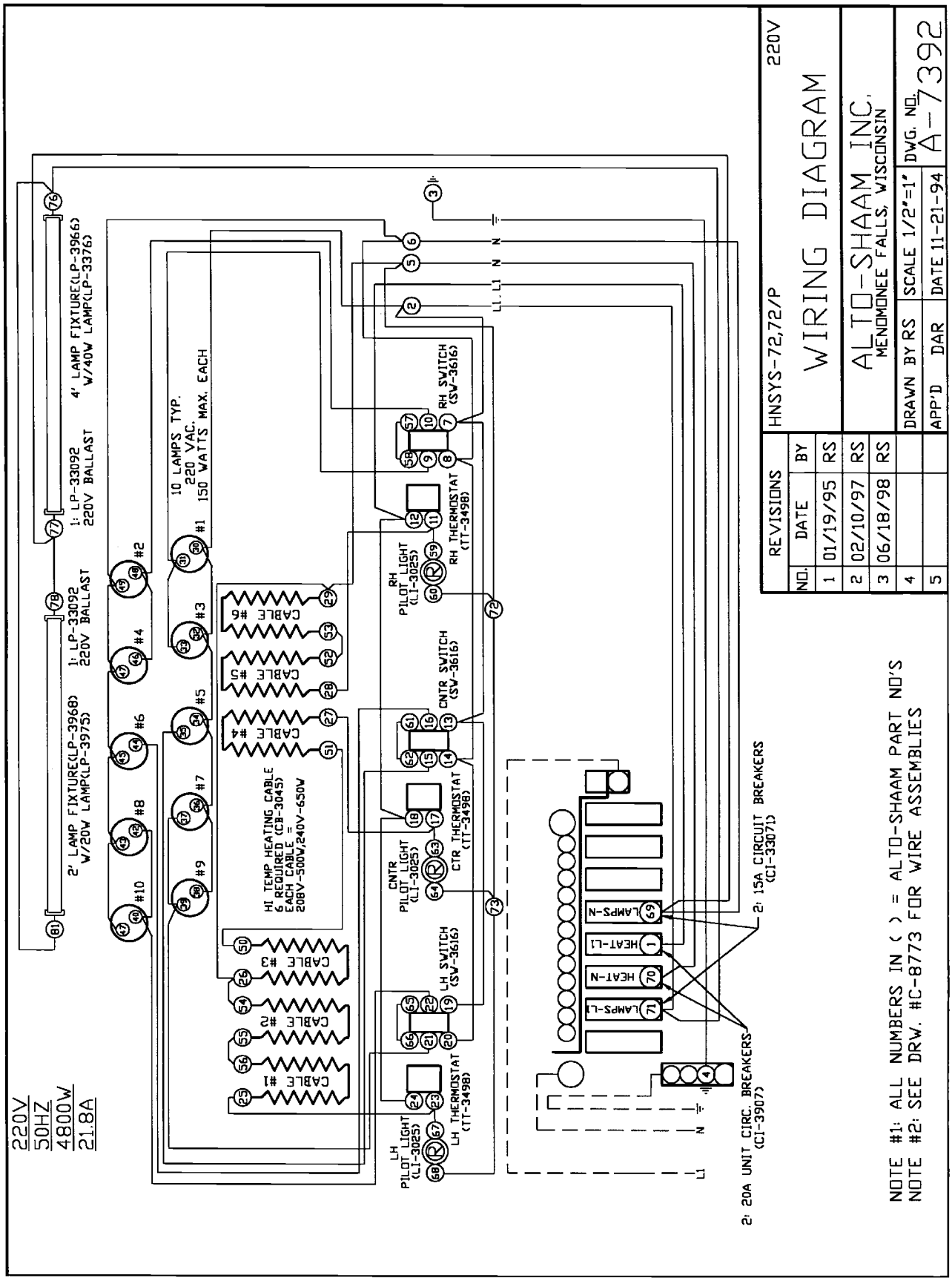
REVISIONS		
NO.	DATE	BY
1	03/31/94	LRP
2	01/19/95	RS
3	02/06/97	RS
4	01/15/01	NWW
5		

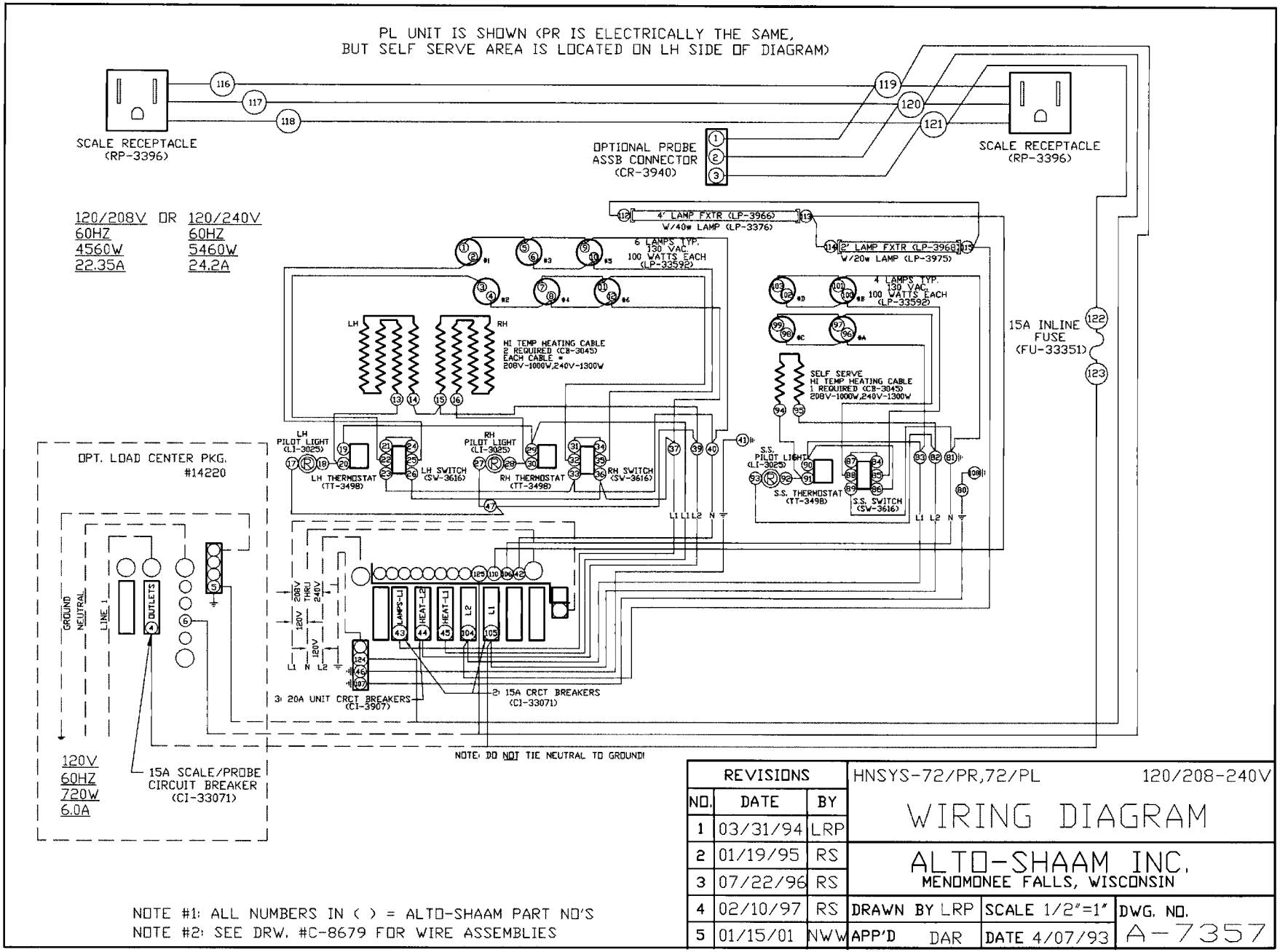
HNSYS-72,72P 120/208-240V

WIRING DIAGRAM

ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN

DRAWN BY LRP	SCALE 1/2"=1"	DWG. NO.
APP'D DAR	DATE 4/07/93	A-7356


220V
50HZ
4800W
21.8A
2' LAMP FIXTURE(LP-3968)
W/20W LAMP(LP-3975)
1: LP-33092
220V BALLAST
4' LAMP FIXTURE(LP-3966)
W/40W LAMP(LP-3376)
10 LAMPS TYP.
220 VAC.
150 WATTS MAX. EACH
#1
#2
#3
#4
#5
#6
#7
#8
#9
#10
CABLE #1
CABLE #2
CABLE #3
CABLE #4
CABLE #5
CABLE #6
HI TEMP HEATING CABLE
6 REQUIRED (CB-3045)
EACH CABLE =
208V-500W,240V-650W
LH THERMOSTAT
(TT-3498)
LH PILOT LIGHT
(LI-3025)
LH SWITCH
(SV-3616)
CTR THERMOSTAT
(TT-3498)
CNTR PILOT LIGHT
(LI-3025)
CNTR SWITCH
(SV-3616)
RH THERMOSTAT
(TT-3498)
RH PILOT LIGHT
(LI-3025)
RH SWITCH
(SV-3616)
L1
N
L1
N
L1, L1
N
LAMPS-N
HEAT-L1
HEAT-N
LAMPS-L1
2: 15A CIRCUIT BREAKERS
(CI-33071)
2: 20A UNIT CIRC. BREAKERS
(CI-39071)
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S
NOTE #2: SEE DRW. #C-8773 FOR WIRE ASSEMBLIES
REVISIONS
NO. DATE BY
1 01/19/95 RS
2 02/10/97 RS
3 06/18/98 RS
4
5
HNSYS-72,72/P
220V
WIRING DIAGRAM
ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN
DRAWN BY RS
SCALE 1/2"=1'
DWG. NO.
APP'D DAR
DATE 11-21-94
A-7392



NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S
NOTE #2: SEE DRW. #C-8679 FOR WIRE ASSEMBLIES

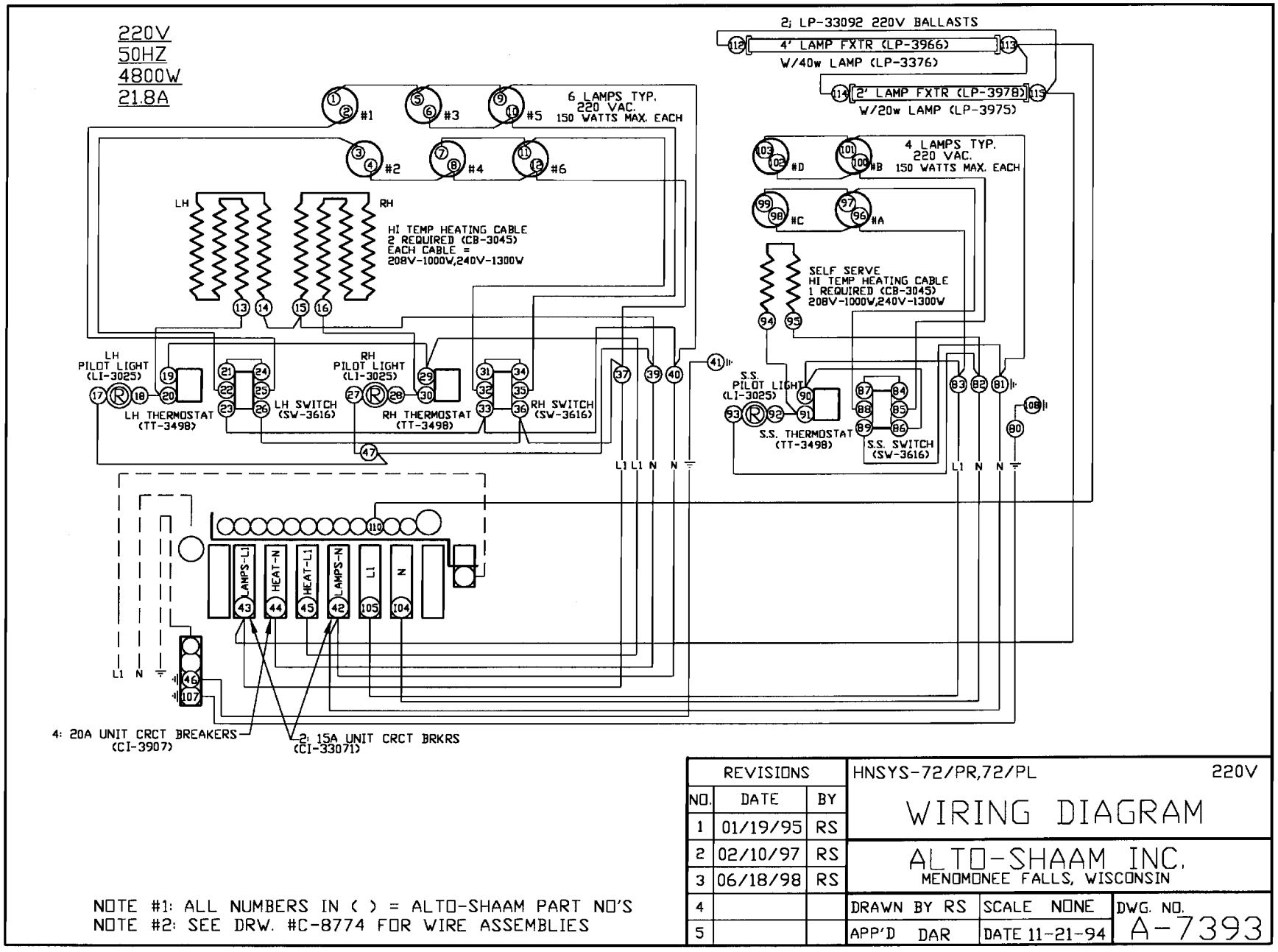
REVISIONS		
NO.	DATE	BY
1	03/31/94	LRP
2	01/19/95	RS
3	07/22/96	RS
4	02/10/97	RS
5	01/15/01	NWW

HNSYS-72/PR,72/PL 120/208-240V

WIRING DIAGRAM

ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN

DRAWN BY LRP	SCALE 1/2"=1"	DWG. NO.
APP'D DAR	DATE 4/07/93	A-7357



NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S
NOTE #2: SEE DRW. #C-8774 FOR WIRE ASSEMBLIES

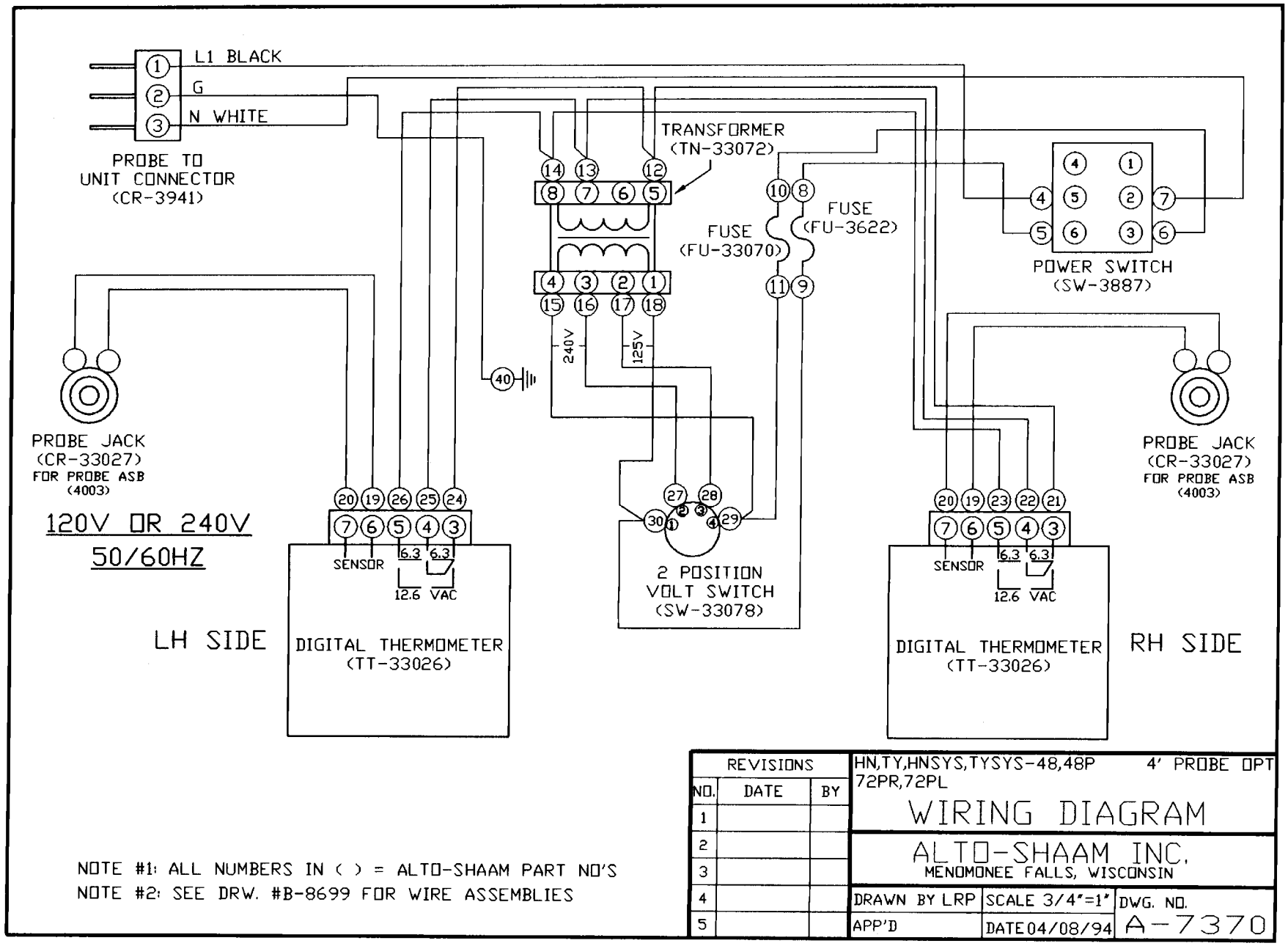
REVISIONS		
NO.	DATE	BY
1	01/19/95	RS
2	02/10/97	RS
3	06/18/98	RS
4		
5		

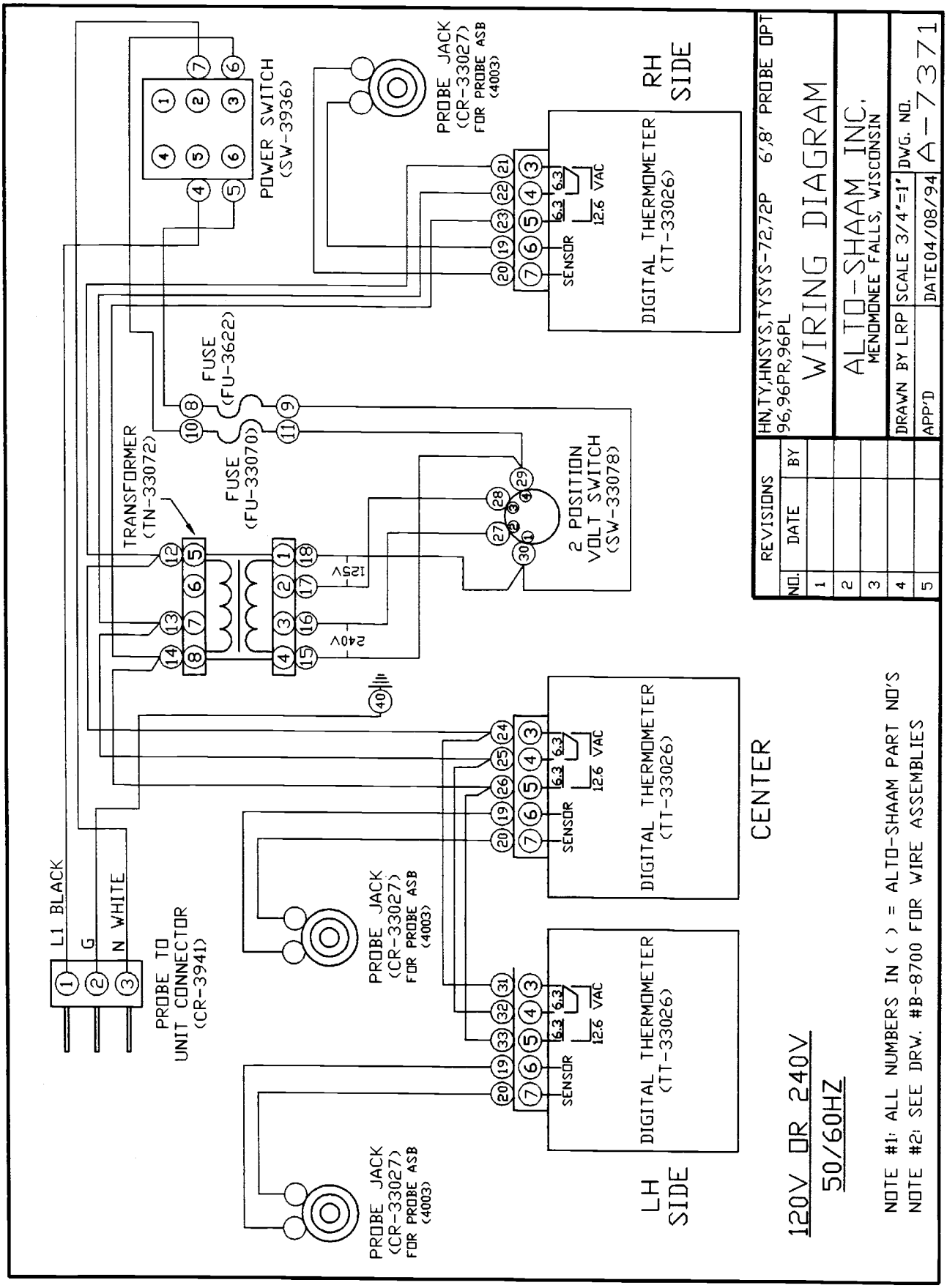
HNSYS-72/PR,72/PL 220V

WIRING DIAGRAM

ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN

DRAWN BY RS	SCALE NONE	DWG. NO.
APP'D DAR	DATE 11-21-94	A-7393


L1 BLACK
G
N WHITE
PROBE TO
UNIT CONNECTOR
(CR-3941)
TRANSFORMER
(TN-33072)
FUSE
(FU-33070)
FUSE
(FU-3622)
POWER SWITCH
(SW-3887)
240V
125V
PROBE JACK
(CR-33027)
FOR PROBE ASB
(4003)
120V OR 240V
50/60HZ
SENSOR
6.3
6.3
12.6 VAC
LH SIDE
DIGITAL THERMOMETER
(TT-33026)
2 POSITION
VOLT SWITCH
(SW-33078)
PROBE JACK
(CR-33027)
FOR PROBE ASB
(4003)
SENSOR
6.3
6.3
12.6 VAC
DIGITAL THERMOMETER
(TT-33026)
RH SIDE
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S
NOTE #2: SEE DRW. #B-8699 FOR WIRE ASSEMBLIES
REVISIONS
NO. DATE BY
1
2
3
4
5
HN,TY,HNSYS,TYSYS-48,48P 72PR,72PL 4' PROBE OPT
WIRING DIAGRAM
ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN
DRAWN BY LRP
SCALE 3/4"=1"
DWG. NO.
APP'D
DATE 04/08/94
A-7370


L1 BLACK
G
N WHITE
PROBE TO UNIT CONNECTOR (CR-3941)
TRANSFORMER (TN-33072)
FUSE (FU-3622)
FUSE (FU-33070)
POWER SWITCH (SW-3936)
2 POSITION VOLT SWITCH (SW-33078)
125V
240V
PROBE JACK (CR-33027) FOR PROBE ASB (4003)
DIGITAL THERMOMETER (TT-33026)
SENSOR
6.3
12.6 VAC
LH SIDE
CENTER
RH SIDE
120V OR 240V
50/60HZ
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S
NOTE #2: SEE DRW. #B-8700 FOR WIRE ASSEMBLIES
REVISIONS
NO. DATE BY
HN,TY,HNSYS,TYSYS-72,72P 6',8' PROBE OPT
96,96PR,96PL
WIRING DIAGRAM
ALTO-SHAAM INC.
MENOMONEE FALLS, WISCONSIN
DRAWN BY LRP
SCALE 3/4"=1'
DWG. NO.
APP'D
DATE 04/08/94
A-7371

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 • USA

PHONE: 262.251.3800 **FAX: 262.251.7067 • 800.329.8744 U.S.A./CANADA** **WEBSITE:**

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support@parthubz.com

parthubz.com