

# Holding Cabinet

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## Deluxe or Simple Control



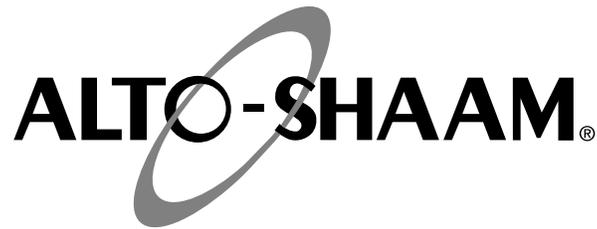
**Models:**  
**300-S**  
**500-S**  
**750-S**  
**1000-S**  
**1200-S**  
**1000-UP**  
**1200-UP**

- **INSTALLATION**
- **OPERATION**
- **MAINTENANCE**



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Delivery . . . . . 1  
Unpacking. . . . . 1  
Safety Procedures and Precautions . . . . . 2

**Installation**

Installation Requirements . . . . . 3  
Clearance Requirements. . . . . 3  
Dimension Drawings, weights & capacities . . . . 4-7  
Universal Pan Slides/Side Racks and Shelves. . . . 8  
Options and Accessories . . . . . 9  
Stacking Instructions . . . . . 10  
Leveling . . . . . 11  
Restraint Requirements - Mobile Equipment . . . . 11  
Drip Tray Installation . . . . . 12  
Electrical Specifications . . . . . 13-14  
User Safety Information . . . . . 15  
Before Initial Use . . . . . 15  
Heating Characteristics . . . . . 15

**Operating Instructions**

Simple Control Operation . . . . . 16  
Deluxe Control Identification. . . . . 17  
Deluxe Control Set-Up . . . . . 17  
Deluxe Control Operation . . . . . 18  
Heat Recovery . . . . . 18  
Dough Proofing Instructions . . . . . 18  
Deluxe Control Timer Programming . . . . . 19  
General Holding Guidelines . . . . . 20

**Care and Cleaning**

Cleaning and Preventative Maintenance . . . . . 21  
Protecting Stainless Steel Surfaces . . . . . 21  
Cleaning Agents. . . . . 21  
Cleaning Materials . . . . . 21  
Clean Daily. . . . . 22

**Sanitation**

Sanitation/Food Safety . . . . . 23  
Internal Food Product Temperatures. . . . . 23

**Service**

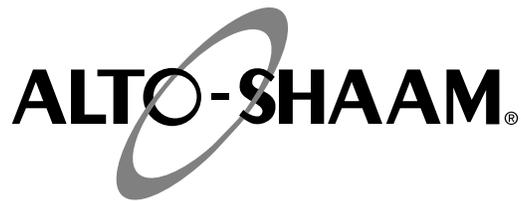
Thermostat Accuracy . . . . . 24  
Trouble Shooting . . . . . 25  
Exterior Service View and Parts  
300-S . . . . . 26-27  
500-S, 750-S, 1000-S, 1200-S. . . . . 28-29  
1000-UP, 1200-UP. . . . . 30-31  
Electronic Components . . . . . 32-33  
Cable Heating Kits . . . . . 34  
Door Latch View and Parts . . . . . 34

**Wire Diagrams**

Always refer to the wire diagram(s) included with the unit for most current version.

**Warranty**

Transportation Damage and Claims . . . . Back Cover  
Limited Warranty . . . . . Back Cover



## DELIVERY

This Alto-Shaam appliance has been thoroughly tested and inspected to ensure only the highest quality unit is provided. Upon receipt, 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.*

This appliance, complete with unattached items and accessories, may have been delivered in one or more packages. Check to ensure that all standard items and options have been received with each model as ordered.

Save all the information and instructions packed with the appliance. Complete and return the warranty card to the factory as soon as possible to ensure prompt service in the event of a warranty parts and labor claim.

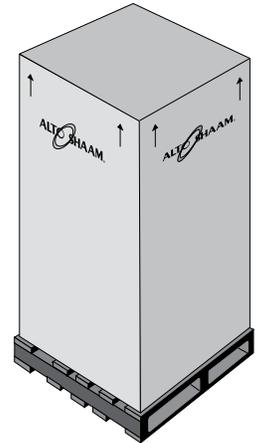
This manual must be read and understood by all people using or installing the equipment model. Contact the Alto-Shaam Tech Team Service Department if you have any questions concerning installation, operation, or maintenance.

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

## UNPACKING

1. Carefully remove the appliance from the carton or crate.

**NOTE:** Do not discard the carton and other packaging material until you have inspected the unit for hidden damage and tested it for proper operation.



2. Read all instructions in this manual carefully before initiating the installation of this appliance.

**DO NOT DISCARD THIS MANUAL.**

This manual is considered to be part of the appliance and is to be provided to the owner or manager of the business or to the person responsible for training operators. *Additional manuals are available from the Alto-Shaam Tech Team Service Department.*

3. Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.

# SAFETY PROCEDURES AND PRECAUTIONS

Knowledge of proper procedures is essential to the safe operation of electrically and/or gas energized equipment. In accordance with generally accepted product safety labeling guidelines for potential hazards, the following signal words and symbols may be used throughout this manual.

<b>DANGER</b>	
	<b>Used to indicate the presence of a hazard that WILL cause severe personal injury, death, or substantial property damage if the warning included with this symbol is ignored.</b>

<b>WARNING</b>	
	<b>Used to indicate the presence of a hazard that CAN cause personal injury, possible death, or major property damage if the warning included with this symbol is ignored.</b>

<b>CAUTION</b>	
	<b>Used to indicate the presence of a hazard that can or will cause minor or moderate personal injury or property damage if the warning included with this symbol is ignored.</b>

<b>CAUTION</b>	
<b>Used to indicate the presence of a hazard that can or will cause minor personal injury, property damage, or a potential unsafe practice if the warning included with this symbol is ignored.</b>	

<b>NOTE:</b> Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.
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1. This appliance is intended to cook, hold or process foods for the purpose of human consumption. No other use for this appliance is authorized or recommended.
2. This appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users.
3. Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified technical personnel.
4. This manual should be considered a permanent part of this appliance. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the appliance if the item is sold or moved to another location.

<b>NOTE</b>	
	<b>For equipment delivered for use in any location regulated by the following directive: DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.</b>

	<b>Used to indicate that referral to operating instructions is a mandatory action. If not followed the operator could suffer personal injury.</b>
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	<b>Used to indicate that referral to operating instructions is recommended to understand operation of equipment.</b>
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# INSTALLATION

## DANGER



**IMPROPER INSTALLATION, ALTERATION, ADJUSTMENT, SERVICE, OR MAINTENANCE COULD RESULT IN SEVERE INJURY, DEATH, OR CAUSE PROPERTY DAMAGE.**

**READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.**

## CAUTION



**TO PREVENT PERSONAL INJURY, USE CAUTION WHEN MOVING OR LEVELING THIS APPLIANCE.**

## CAUTION



**METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.**



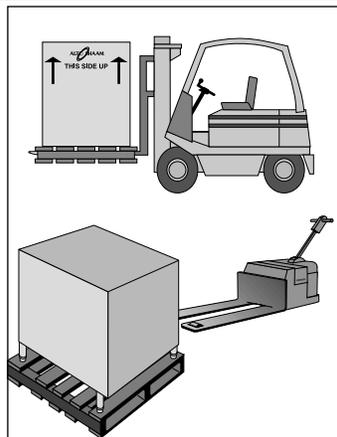
## DANGER



**DO NOT store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.**

# SITE INSTALLATION

The Alto-Shaam Holding Cabinet must be installed in a location that will permit the oven to function for its intended purpose and to allow adequate clearance for ventilation, proper cleaning, and maintenance access.



1. The oven must be installed on a stable and level surface.
2. **DO NOT** install this appliance in any area where it may be affected by any adverse conditions such as steam, grease, dripping water, high temperatures, or any other severely adverse conditions.
3. **DO NOT** store or use any flammable liquids or allow flammable vapors in the vicinity of this oven or any other appliance.
4. This appliance must be kept free and clear of any combustible materials.
5. This appliance must be kept free and clear of any obstructions blocking access for maintenance or service.

Emissions testing conducted by Underwriters Laboratories, Inc.® was found to be in compliance with the applicable requirements of NFPA96: 2004 Edition, Par. 4.1.1.2. U.L emissions sampling of grease laden vapor resulted in a total of 0.55 milligrams per cubic meter with no visible smoke and is considered representative of all oven models in the line. Based on these results, hood installation and/or outside venting should not be a requirement in most areas. Verify local codes for locations where more restrictive codes are applicable.

### MINIMUM CLEARANCE REQUIREMENTS

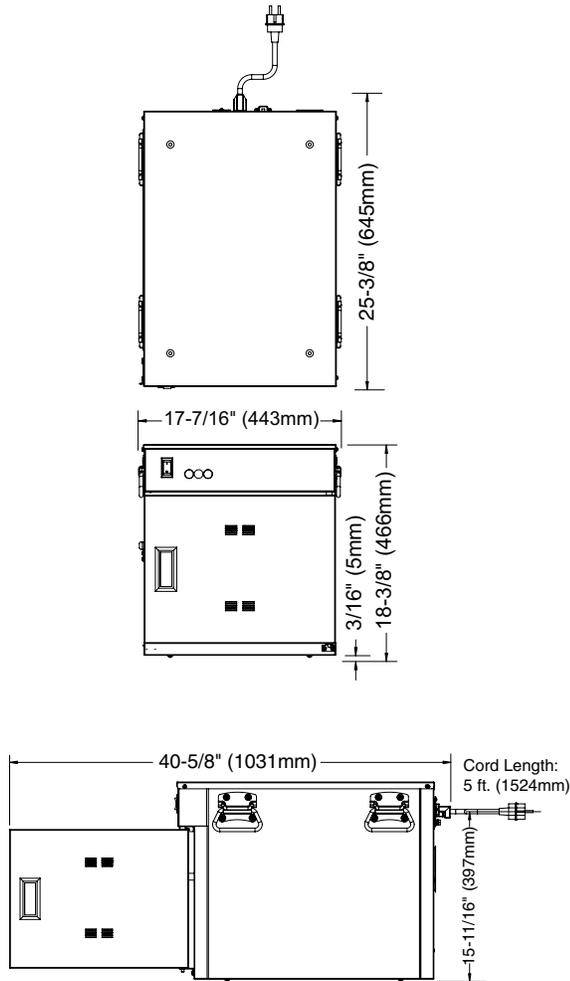
BACK	3" (76mm)
LEFT SIDE	1" (25mm)
RIGHT SIDE	1" (25mm)
TOP	2" (51mm)

## NOTE

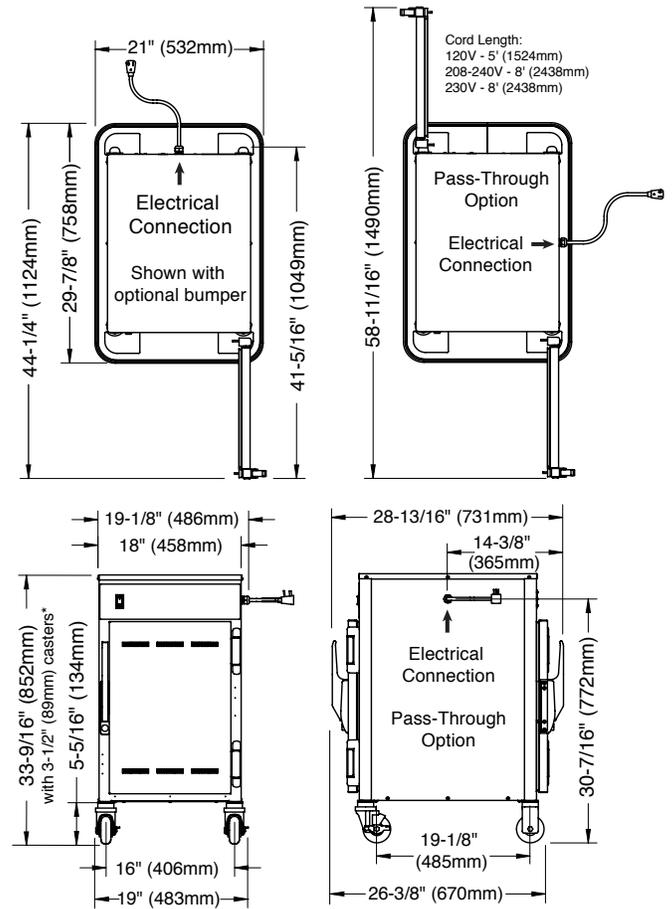
**If the appliance has been unplugged for an extended period of time, the Real Time Clock may require recharging. Turn main breaker to the unit off for 10 seconds and then restore power. For more information, see Error Code E-60 in the Troubleshooting section of this manual.**

# INSTALLATION

**Model 300-S**



**Model 500-S**



- \*31-7/8" (809mm) - with optional 2-1/2" (64mm) casters
- \*35-1/4" (895mm) - with optional 5" (127mm) casters
- \*33-15/16" (861mm) - with optional 6" (152mm) legs

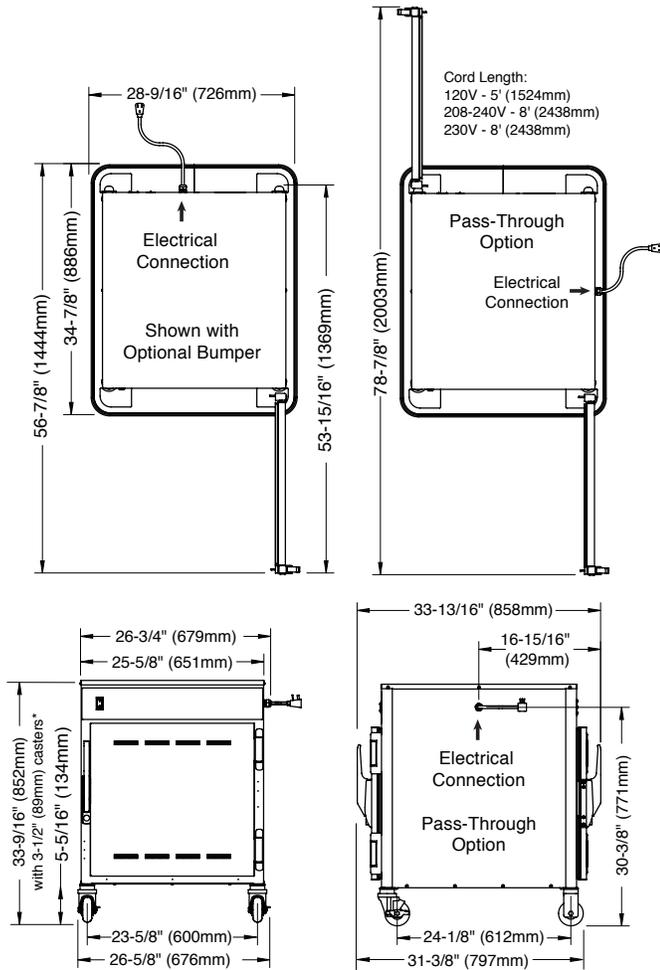
## WEIGHTS AND CAPACITIES

<b>300-S</b>	
<b>WEIGHT</b>	
NET	65 lb (29 kg)
SHIP	125 lb (57 kg)
<b>CAPACITY</b>	
36 lbs (16 kg) MAXIMUM	
VOLUME MAXIMUM: 22.5 QUARTS (28,5 LITERS)	
<b>FULL-SIZE PANS: GASTRONORM 1/1:</b>	
Three (3)	20" x 12" x 2-1/2" (530mm x 325mm x 65mm)
Two (2)	20" x 12" x 4" (530mm x 325mm x 100mm)
ON WIRE SHELVES ONLY	
<b>HALF-SIZE PANS:</b>	
Six (6)	10" x 12" x 2-1/2" (265mm x 325mm x 65mm)
Four (4)	10" x 12" x 4" (265mm x 325mm x 100mm)

<b>500-S</b>	
<b>WEIGHT</b>	
NET	110 lb (50kg) EST.
SHIP	150 lb (68kg)
<b>CAPACITY</b>	
60 lbs (27 kg) MAXIMUM	
VOLUME MAXIMUM: 50 QUARTS (47.5 LITERS)	
<b>FULL-SIZE PANS: GASTRONORM 1/1:</b>	
Six (6)	20" x 12" x 2-1/2" 530mm x 325mm x 65mm
Three (3)	20" x 12" x 4" 530mm x 325mm x 100mm
<b>HALF-SIZE SHEET PANS:</b>	
Eleven (11)	18" x 13" x 1" 457mm x 330mm x 25mm

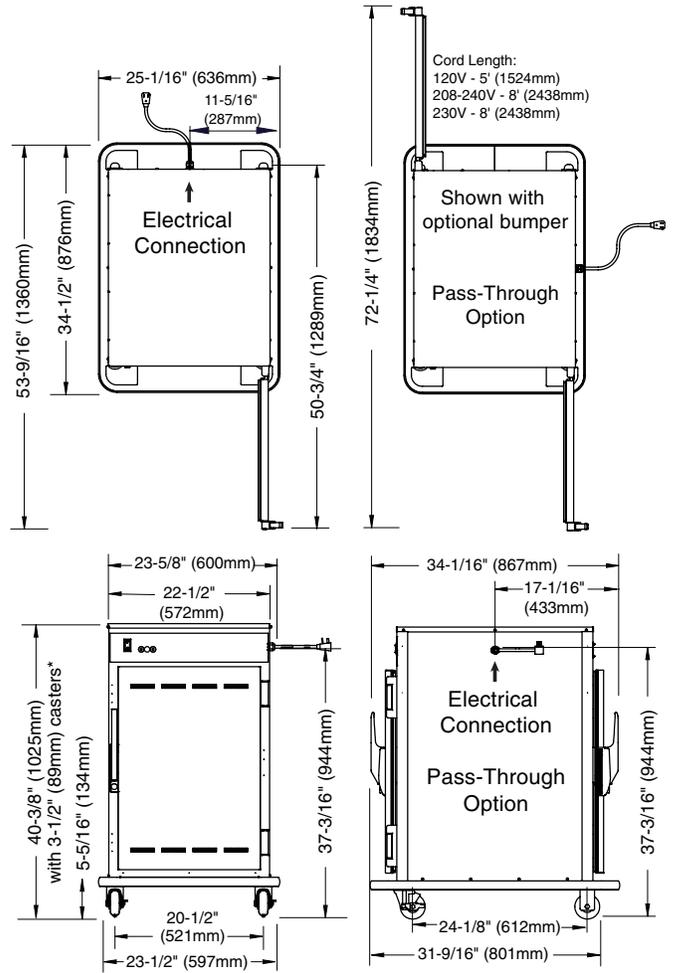
# INSTALLATION

## Model 750-S



\*31-7/8" (809mm) - with optional 2-1/2" (64mm) casters  
 \*35-1/4" (895mm) - with optional 5" (127mm) casters  
 \*33-15/16" (861mm) - with optional 6" (152mm) legs

## Model 1000-S



\*38-11/16" (982mm) - with optional 2-1/2" (64mm) casters  
 \*42-1/16" (1068mm) - with optional 5" (127mm) casters  
 \*40-3/4" (1034mm) - with optional 6" (152mm) legs

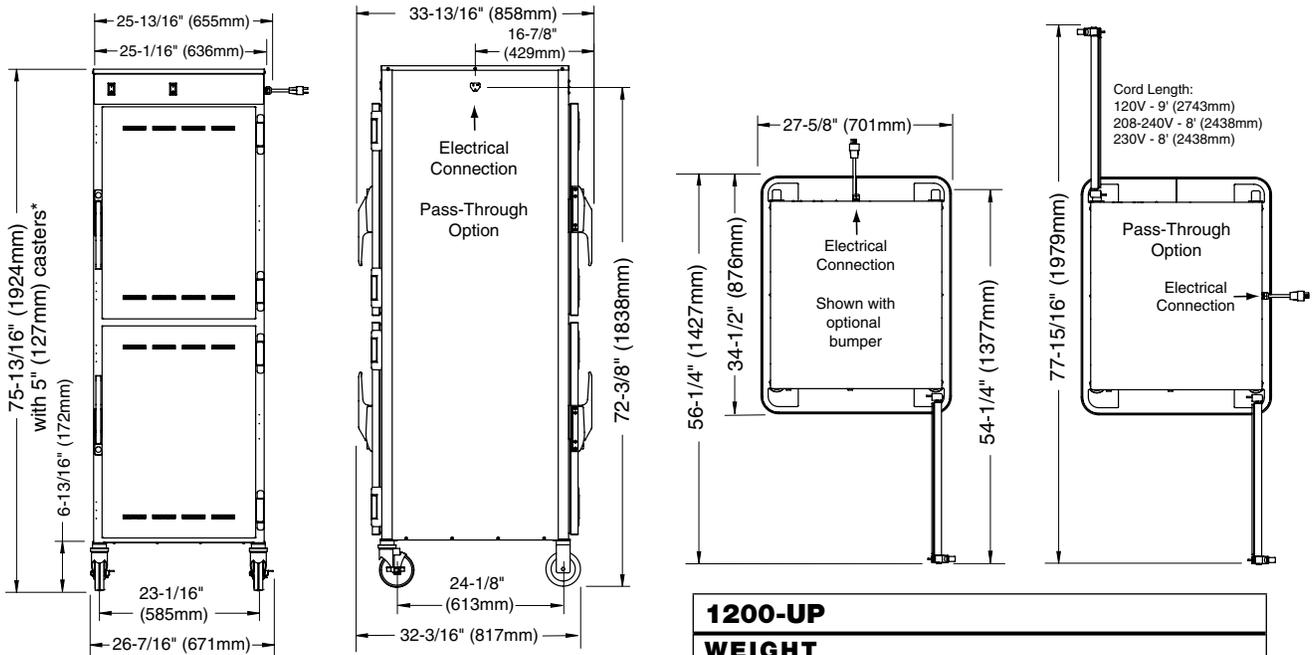
# WEIGHTS AND CAPACITIES

750-S		1000-S	
<b>WEIGHT</b>		<b>WEIGHT</b>	
NET	157 lb (69kg)	NET	175 lb (79kg) EST.
SHIP	228 lb (103kg) EST.	SHIP	223 lb (101kg) EST.
<b>CAPACITY</b>		<b>CAPACITY</b>	
120 lbs (54 kg) MAXIMUM		120 lbs (54kg) MAXIMUM	
VOLUME MAXIMUM: 100 QUARTS (95 LITERS)		VOLUME MAXIMUM: 60 QUARTS (76 LITERS)	
<b>FULL-SIZE PANS:</b>		<b>FULL-SIZE PANS:</b>	
Ten (10)	20" x 12" x 2-1/2" 530mm x 325mm x 65mm	Four (4)	20" x 12" x 2-1/2" 530mm x 325mm x 65mm
Six (6)	20" x 12" x 4" 530mm x 325mm x 100mm	— ON OPTIONAL WIRE SHELVES ONLY	
Four (4)	20" x 12" x 6" 530mm x 325mm x 150mm		
<b>FULL-SIZE SHEET PANS (ON WIRE SHELVES ONLY):</b>		<b>FULL-SIZE SHEET PANS:</b>	
Up to Six (6) 18" x 26" x 1" - WITH ADDITIONAL SHELVES		Eight (8) 18" x 26" x 1"	



# INSTALLATION

## Model 1200-UP



\*74-1/16" (1881mm) - with optional 3-1/2" (89mm) casters

\*75-5/8" (1921mm) - with optional 6" (152mm) legs

<b>1200-UP</b>	
<b>WEIGHT</b>	
NET:	333 lb (151 kg)
SHIP: (EST.)	393 lb (178 kg)

## 1200-S, 1200-UP CAPACITIES

<b>CAPACITY - 1200-S, 1200-UP (PER COMPARTMENT)</b>		
192 lbs (87kg) MAXIMUM • VOLUME MAXIMUM: 120 QUARTS (152 LITERS)		
<b>Pan slides (2 per set) - 1-3/4" (44mm) centers</b>		
Pan Size	Four (4) sets of pan slides provided	Maximum capacity with additional pan slides
FULL SIZE: 20" x 12" x 2-1/2" GN1/1: 530mm x 325mm x 65mm	Eight (8) pans - 2 per set of slides	Sixteen (16) pans - with 4 additional sets of pan slides
FULL SIZE: 20" x 12" x 4" GN1/1: 530mm x 325mm x 100mm	Eight (8) pans - 2 per set of slides	NO ADDITIONAL CAPACITY
FULL SIZE: 20" x 12" x 6" 530mm x 325mm x 150mm	Eight (8) pans - 2 per set of slides	NO ADDITIONAL CAPACITY
FULL SIZE SHEET PANS: 18" x 26" x 1"	Four (4) pans - 1 per set of slides	Sixteen (16) pans - with 12 additional sets of pan slides
<b>Side Racks and Shelves</b>		
Pan Size	Three (3) shelves provided	Maximum capacity with additional shelves
FULL SIZE: 20" x 12" x 2-1/2" GN1/1: 530mm x 325mm x 65mm	Sixteen (16) pans - 2 per side rack	NO ADDITIONAL CAPACITY
FULL SIZE: 20" x 12" x 4" GN1/1: 530mm x 325mm x 100mm	Eight (8) pans - 2 per side rack	NO ADDITIONAL CAPACITY
FULL SIZE: 20" x 12" x 6" GN1/1: 530mm x 325mm x 150mm	Eight (8) pans - 2 per side rack	NO ADDITIONAL CAPACITY
FULL SIZE SHEET PANS: 18" x 26" x 1"	Three (3) pans - 1 per shelf	Eight (8) pans with 5 additional shelves

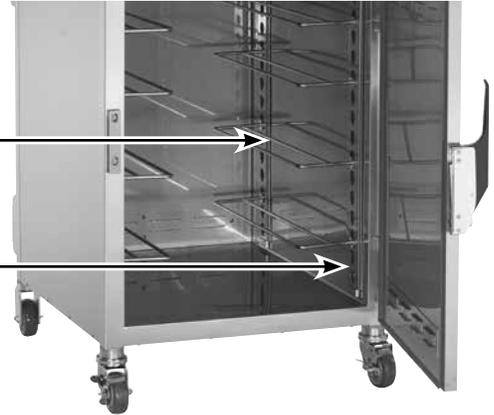
# INSTALLATION

## UNIVERSAL PAN SLIDES

Shown with universal pan slides.  
Two (2) slides needed per pan.

**Universal Pan Slides,**  
SR-24762, stainless steel  
SR-24447, chrome plate

**Side Rail**  
1011741



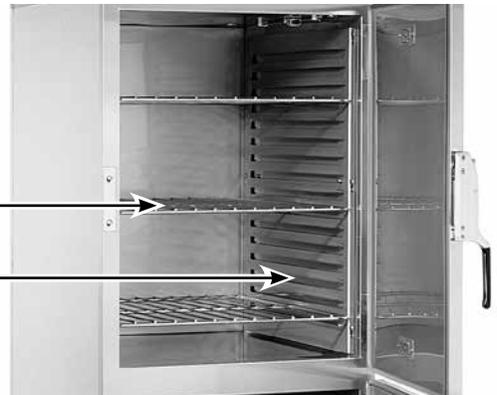
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## SIDE RACKS AND SHELVES (optional)

As an alternative to universal pan slides, this unit can be ordered as a "side rack" model which is equipped with two (2) side racks and three (3) chrome plated wire shelves. It will accommodate full and half size US hotel and European gastronorm pans on the side racks or shelves, or sheet pans on shelves.

**Shelf**  
SH-23738, stainless steel  
SH-2733, chrome plate

**Side Rack**  
1011743



# INSTALLATION

## OPTIONS AND ACCESSORIES

MODEL >	300-S	500-S	750-S	1000-S	1200-S	1000-UP	1200-UP
DESCRIPTION	PART NUMBER						
Bumper, Full Perimeter	—	5011161	5010371	5009767	5012932	5009767	5012932
Carving Holder, Prime Rib	HL-2635	HL-2635	HL-2635	—	—	—	—
Carving Holder, Steamship (Cafeteria) Round	—	4459	4459	—	—	—	—
Caster Package	2-1/2" (64mm)	—	5008022	5008022	5008022	—	—
	3-1/2" (89mm)	—	STANDARD	STANDARD	STANDARD	5008017	5008017
	5" (127mm)	—	5004862	5004862	5004862	STANDARD	STANDARD
Door Assembly, Window	—	—	5013129	5012806	5012822	5012806	5012822
Door Lock with Key	—	LK-22567	LK-22567	LK-22567	LK-22567	LK-22567	LK-22567
Drip Pan	with Drain	—	14813	14831	5005616	5014448	5005616
	without Drain	PN-2122	11898	—	11906	—	11906
Drip Tray, Door	—	5010736	5010391	5009716	—	—	—
Deluxe Control (FACTORY INSTALLED)	—	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
Exterior Color Options	Stainless Steel	—	STANDARD	—	—	—	—
	Burgundy	—	AVAILABLE	—	—	—	—
	Custom Color	—	AVAILABLE	—	—	—	—
Handle Kit, Push/Pull (SET OF FOUR)	STANDARD	55662	55662	55662	55662	55662	55662
Legs, 6" (152mm), Flanged	—	5011149	5011149	5011149	5011149	5011149	5011149
Pan Grid, Wire 18" x 26" (457mm x 660mm)	—	—	PN-2115	PN-2115	PN-2115	PN-2115	PN-2115
Probe, Internal Product Temp. (DELUXE ONLY)	—	PR-36065	PR-36065	PR-36065	PR-36065	PR-36065	PR-36065
Security Panel with Key Lock	—	5013939	5013936	5013934	5013936	5013934	5013936
Shelf	Chrome Wire	SH-2107	SH-2107	SH-2105	—	SH-2733	—
	Chrome Wire, Pass-Through	—	—	SH-2327	—	—	—
	Stainless Steel Wire	—	SH-2326	SH-2324	SH-2325	SH-23738	SH-2325
	Stainless Steel, Rib Rack	—	—	SH-2743	—	—	—
Stainless Steel, Pass-Through	—	—	—	SH-2346	—	SH-2346	—
Side Rack Kit (FACTORY INSTALLED)	—	—	—	—	AVAILABLE	—	AVAILABLE
Stacking Hardware	—	5004864	5004864	5004864	5004864	—	—
Universal Angle Pan Slides	Chrome	—	—	—	—	SR-24447	—
	Stainless Steel	—	—	—	—	SR-24762	—
Water Reservoir, Pan	—	—	—	1775	1775	1775	1775
Water Reservoir, Pan Cover	—	—	—	1774	1774	1774	1774

## CAUTION

**Pass-through models with same side door hinging must be installed with flanged feet bolted to the floor to avoid tipping hazards.**

# INSTALLATION

## STACKING INSTRUCTIONS

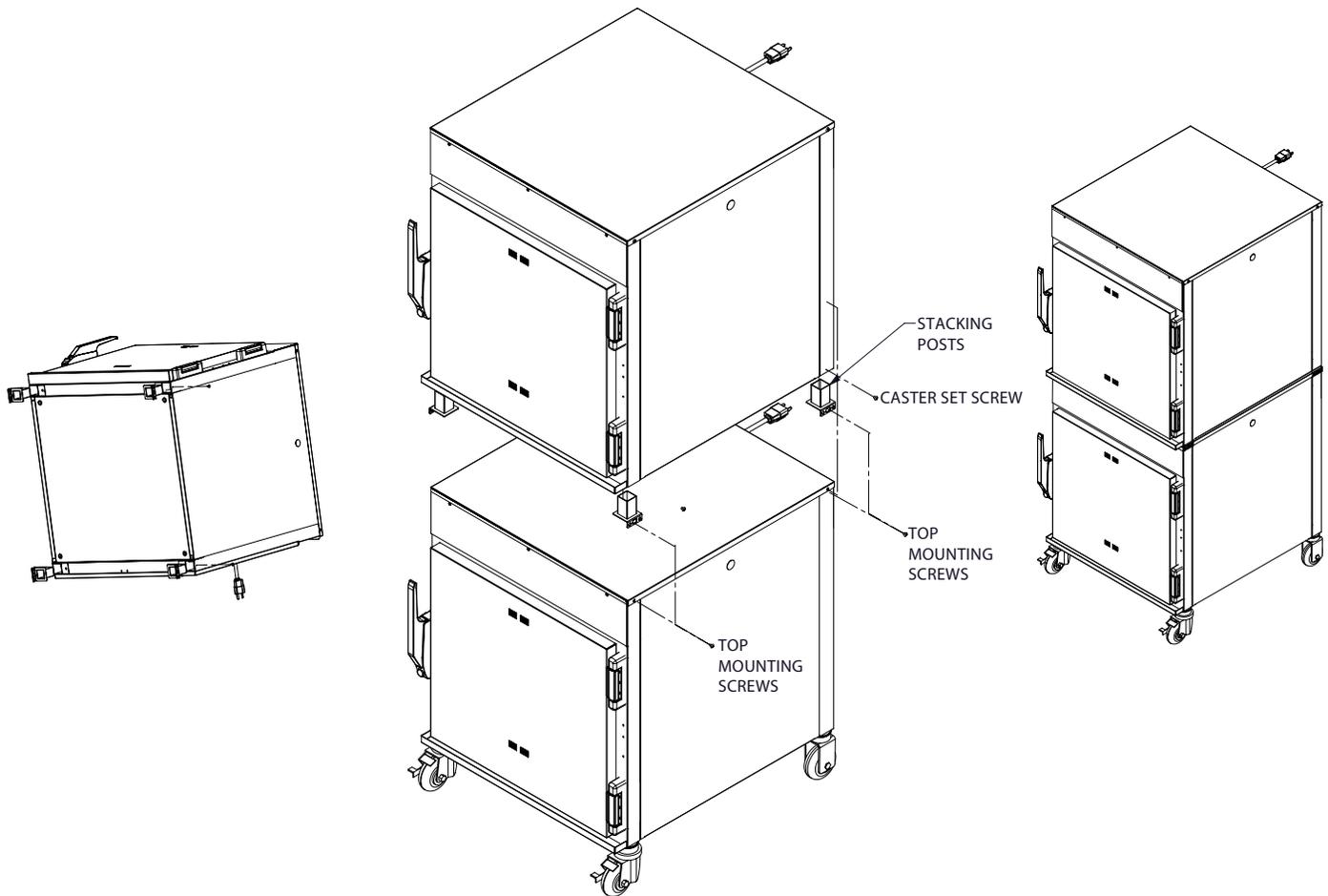
- 1) If the two appliances were shipped together from the factory, the top unit will have the casters already removed. A stacking kit will be included with the shipment.**

If casters need to be removed, lay the unit on its back, and using a rubber or non-marring hammer, tap on the top and underside of the caster, alternating sides, until the caster slides out.

- 2) While appliance is laid on its back, insert one stacking post in each of the four corners of the upper unit. Secure the stacking posts using one screw and two flat washers that come with the stacking kit.**

**Note:** The flange on the stacking posts must face the outside of the unit.

- 3) Remove the four top mounting screws from the lower unit. Place the upper appliance, which has the stacking posts installed, on top of the bottom unit. Center the top unit from front to back. Re-install the four screws through the flange of the four stacking posts.**



Stacking Configurations	
Model	Can be stacked with:
300-S	300-S or 300-TH/III No Stacking Hardware needed. Align dimples at top and bottom of units. It is recommended that the legs be removed from the top unit before stacking.
500-S	500-S, 500-TH-II or 500-TH/III
750-S	750-S, 750-TH-II, 750-TH/III, 767-SK or 767-SK/III
1000-S	1000-S, 1000-TH/III, 1000-SK/II or 1000-SK/III

# INSTALLATION

## SITE INSTALLATION

A number of adjustments are associated with initial installation and start-up. It is important that these adjustments be conducted by a qualified service technician. Installation and start-up adjustments are the responsibility of the dealer or user. These adjustments include but are not limited to thermostat calibration, door adjustment, leveling, electrical hook-up and installation of optional casters or legs.

### LEVELING



Level the oven from side-to-side and front-to-back with the use of a spirit level. For ovens installed with casters, it is important that the installation surface be level due to the probability of frequent oven repositioning.

We recommend checking the level of the oven periodically to make certain the floor has not shifted nor the oven moved.

**NOTE:** Failure to properly level this oven may result spills from a semi-liquid product.

### RESTRAINT REQUIREMENTS —MOBILE EQUIPMENT

 <b>WARNING</b>	
	<b>RISK OF ELECTRIC SHOCK.</b> <b>Appliance must be secured to building structure.</b>

Any appliance that is not furnished with a power supply cord but that includes a set of casters must be installed with a tether. Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit. The following requirements apply:

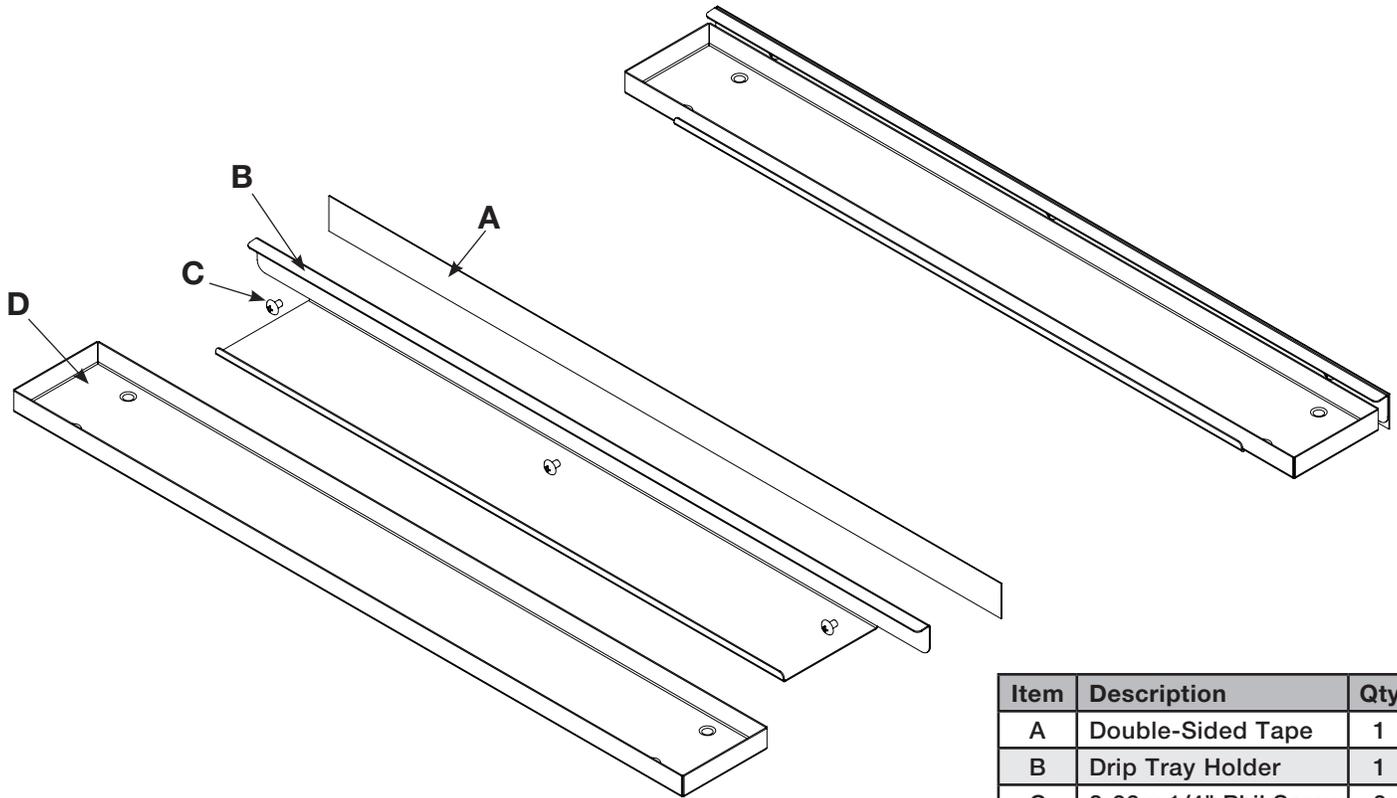
1. Maximum height of casters is 6" (152mm).
2. Two of the casters must of be the locking type.
3. Such mobile appliances or appliances on mobile stands must be installed with the use of a flexible connector secured to the building structure.

A mounting connector for a restraining device is located on the upper back flange of the appliance. A flexible connector is not supplied by nor is it available from the factory.

# INSTALLATION

## SITE INSTALLATION

### DRIP TRAY INSTALLATION INSTRUCTIONS



Item	Description	Qty
A	Double-Sided Tape	1
B	Drip Tray Holder	1
C	8-32 x 1/4" Phil Screw	3
D	Drip Tray	1

1. Poke holes through double-sided tape **A** which is attached to the back of drip tray holder **B**.
2. Remove backing on double-sided tape **A**.
3. Put screws **C** through holes and attach drip tray holder **B** to unit.
4. Optional - apply a line of food-grade silicone caulk along top edge of drip tray holder **B** to seal.
5. Place drip tray **D** in drip tray holder **B**.

	<b>WARNING</b>
	<b>FAILURE TO PROPERLY INSTALL THE DRIP TRAY CAN OR WILL CAUSE MAJOR EQUIPMENT DAMAGE AND WILL RESULT IN A LEAKAGE HAZARD THAT CAN CAUSE PERSONAL INJURY.</b>

# INSTALLATION

## ELECTRICAL

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.  
Arcing will occur when connecting or disconnecting the unit unless all controls are in the "OFF" position.
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.



**For CE approved units:** To prevent an electrical shock hazard between the appliance and other appliances or metal parts in close vicinity, an equalization-bonding stud is provided. An equalization bonding lead must be connected to this stud and the other appliances/metal parts to provide sufficient protection against potential difference. The terminal is marked with the following symbol.



### Hard wired models:

Hard wired models must be equipped with a country certified external allpole disconnection switch with sufficient contact separation.

If a power cord is used for the connection of the product an oil resistant cord like H05RN or H07RN or equivalent must be used.

**NOTE:** Where local codes and CE regulatory requirements apply, appliances must be connected to an electrical circuit that is protected by an external GFCI outlet.

## CAUTION

THIS SECTION IS PROVIDED FOR THE ASSISTANCE OF QUALIFIED SERVICE TECHNICIANS ONLY AND IS NOT INTENDED FOR USE BY UNTRAINED OR UNAUTHORIZED SERVICE PERSONNEL.



## DANGER



ENSURE POWER SOURCE MATCHES VOLTAGE IDENTIFIED ON APPLIANCE RATING TAG.

## DANGER



To avoid electrical shock, this appliance **MUST** be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/NFPA No. 70. In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1 or local codes.

# INSTALLATION

## ELECTRICAL

### ELECTRICAL SPECIFICATIONS (Wire diagrams are located inside the bonnet of the unit)

Voltage	Phase	Hz	Amps	kW	 NEMA 5-15P 15A-125V PLUG	 NEMA 5-20P 20A-125V PLUG	 NEMA 6-15P 15A-250V PLUG	 CEE 7/7 PLUG RATED 250V	 CH2-16P PLUG RATED 250V	 BS1363 PLUG RATED 250V	
<b>300-S</b>											
120V	1	60	6.7	.80	✓						
230V	1	50/60	3.9	.80				✓	✓	✓	
<b>500-S</b>											
120V	1	60	8.4	1.0	✓						
208V 240V	1	60	3.7 4.2	.76 1.0			✓				
230V	1	50/60	4.1	.95				✓	✓	✓	
<b>750-S</b>											
120V	1	60	9.0	1.1	✓						
208V 240V	1	60	3.9 4.5	.81 1.1			✓				
230V	1	50/60	4.3	1.0				✓	✓	✓	
<b>1000-S</b>											
120V	1	60	8.0	.96	✓						
208V 240V	1	60	3.5 4.0	.72 .96			✓				
230V	1	50/60	3.9	.88				✓	✓	✓	
<b>1200-S</b>											
120V	1	60	8.0	.96	✓						
208V (1000W) 240V (1000W)	1	60	3.5 4.0	.72 .96			✓				
208V (2000W) 240V (2000W)	1	60	6.9 8.0	1.4 1.9	NO CORD OR PLUG						
230V (1000W)	1	50/60	3.9	.88				✓	✓	✓	
230V (2000W)	1	50/60	7.7	1.8				✓	✓	✓	
<b>1000-UP</b>											
120V	1	60	16.0	1.9		✓					
208V 240V	1	60	7.0 8.0	1.4 1.9			✓				
230V	1	50/60	7.7	1.8				✓	✓	✓	
<b>1200-UP</b>											
120V	1	60	16.0	1.9		✓					
208V (2000W) 240V (2000W)	1	60	7.0 8.0	1.4 1.9			✓				
208V (4000W) 240V (4000W)	1	60	14.0 16.0	2.9 3.8	NO CORD OR PLUG						
230V (2000W)	1	50/60	7.7	1.8				✓	✓	✓	
230V 4000W)	1	50/60	15.4	3.5				✓	✓	✓	

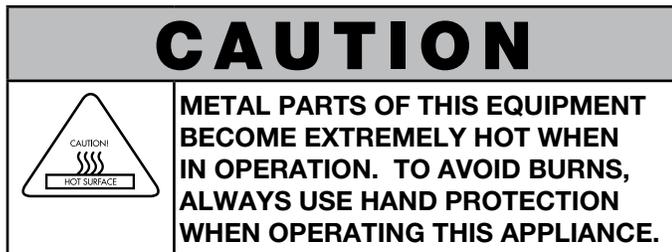
# INSTALLATION

## USER INFORMATION

### USER SAFETY INFORMATION

This appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users.

1. Unit must be connected to the appropriate power source.
2. Use hand protection when handling hot items.
3. Preheat the unit for 30 minutes before use.
4. Be certain only hot foods are placed into the unit.



### BEFORE INITIAL USE:

1. Clean both the interior and exterior of the unit with a damp, clean cloth and mild soap solution. Rinse carefully.
2. Clean and install the cabinet side racks. Shelves should be positioned with the curved end up and toward the back of the unit (reach-in models).

### 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.

# OPERATION

## OPERATING INSTRUCTIONS

### 1. PREHEAT AT 200°F (93°C) FOR 30 MINUTES BEFORE LOADING FOOD.

Push power switch to "ON" position. The unit will begin operating at the previous set temperature.

2. Press the **Up or Down Arrow Keys** to 200°F (93°C). Pressing and releasing the Arrow Keys will increase the set point by 1 degree. Pressing and holding the Arrow Key will increase set point by 10 degrees. When Arrow Key is released, a new set point temperature is set. The **Set** temperature will appear in the **Digital Display** and the **Heat Indicator Light** will illuminate. Press the **Temperature Display Key** for three seconds at any time to display the **Actual** inside air temperature.

#### To toggle between Set and Actual:

Factory default is to display **Set** temperature in the **Digital Display**. To display **Actual** temperature:

Press and hold the **Temperature Display Key** and the **Up Arrow Key** for 5 seconds. The control will show **ACT**, then show the **Actual** temperature.

Repeat to toggle to **Set** point **SET**.

Press the **Temperature Display Key** at any time to display the alternate temperature.

3. When the inside air temperature reaches the desired holding temperature, the **Heat Indicator Light** will turn off.

### 4. 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.

5. Check to make certain the cabinet door is securely closed, and using the **Up and Down Arrow Keys**, set the temperature to 160°F (71°C).

**THIS WILL NOT NECESSARILY BE THE FINAL SETTING.**

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

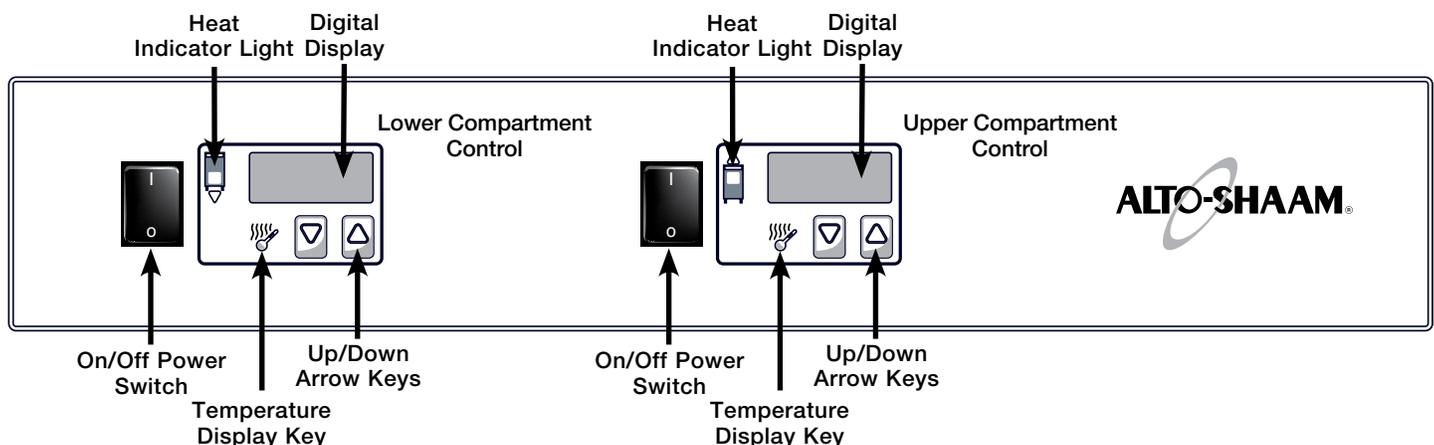
### TO TOGGLE BETWEEN FAHRENHEIT AND CELSIUS

Press the **Temperature Display Key** at any time to display the alternate temperature.

The factory default is Fahrenheit. To change to Celsius:

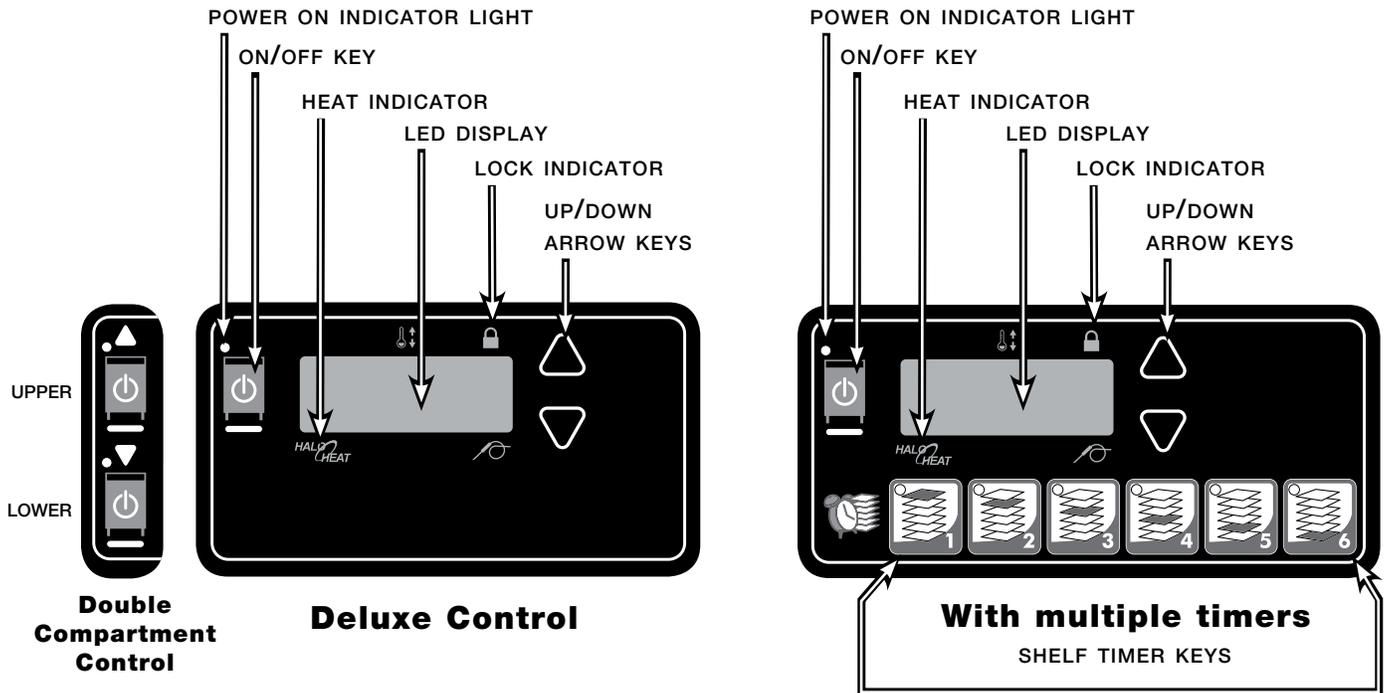
1. Press and hold the **Temperature Display Key** and the **Down Arrow Key** for 5 seconds.
2. The control will show **°C** for 3 seconds to verify selection and then show the temperature. (Set Point or Actual, whichever the user has selected) in °C.
3. Repeat to toggle to Fahrenheit.

*Note: With a power failure, factory test, etc., the control will retain the °C or °F setting selected by the user when power is restored.*



# OPERATION

## DELUXE CONTROL OPTION



## DELUXE CONTROL SET-UP

### ON/OFF KEY



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

### UP/DOWN ARROW KEY



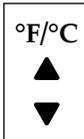
The UP and DOWN arrow keys are used for a variety of settings when selecting the holding temperature. If an arrow key is pressed and released the display will show the current set temperature for four seconds. If an arrow key is held (at least eight seconds), the value will change at a rapid rate. Pressing an arrow key when the set temperature is displayed will increase/decrease the temperature by 1°. Pressing and holding an arrow will increase/decrease the temperature by 10°.

### ENABLE / DISABLE BEEPER



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

### FAHRENHEIT/CELSIUS



With the control off, to choose between Fahrenheit and Celsius, press and hold the UP arrow key until either °F or °C is shown in LED display. Press either arrow key to toggle the temperature scale.

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

### CONTROL LOCK

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



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

# OPERATION

## DELUXE CONTROL OPERATION

### 1. Preheat at 200°F (93°C) for 30 minutes.

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

### 2. Load with hot food only.

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

### 3. Reset the control to 160°F (71°C).

Check to make certain the cabinet door is securely closed, and reset to 160°F (71°C) by using the UP/DOWN keys

**THIS WILL NOT NECESSARILY  
BE THE FINAL SETTING.**

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

### **SureTemp™ Heat Recovery**

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

## DOUGH PROOFING INSTRUCTIONS

### SIMPLE AND DELUXE CABINETS

With the addition of a pan of water, warming cabinets can be used for proofing dough. A water reservoir pan (#1775) and pan cover (#1774) is available as an option from Alto-Shaam.

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

**NOTE:** The above proofing procedure is a suggested guideline only. Due to variation from product to product, including quality and product weight, close adherence the product manufacturer’s instructions is strongly recommended.

# OPERATION

## DELUXE CONTROL TIMER PROGRAMMING

### Timer Programming Information

#### 1. Turn On/Off Control Key OFF.



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

**Note:** The following steps can only be done when the Control is OFF.

#### 2. Set Shelf Timer Keys.



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

Time will display as HH:MM.

#### 3. Set Additional Timer Keys.



Repeat step 2 for each Shelf Timer Key to be programmed.

#### 4. Turn On/Off Power Key ON.



Using the timer, press the On/Off key to turn ON unit. Power Indicator Light will illuminate.

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

#### 5. Press Shelf Timer Key.



Activate the shelf timer by pressing the corresponding button. Shelf LED display will illuminate and the count down will begin. The timer will display as HH:MM when the remaining time is >60 minutes. It will display as MM:SS when the remaining time is <60 minutes.

The timer LED's will illuminate as follows:

- All expired timers will flash quickly (may be more than one)
- The timer with the shortest amount of time remaining will flash slowly.
- All other active timers will be illuminated (may be more than one).

#### 6. Acknowledge expired timers.

The LED will quickly flash when time expires. Press expired Shelf Timer Key to acknowledge expired timer.

#### To Cancel a Timer:

Press and hold desired Shelf Timer Key for two seconds.

#### Power Failure:

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

# OPERATION

## GENERAL HOLDING GUIDELINES

Chefs, cooks and other specialized food service personnel employ varied methods of cooking. Proper holding temperatures for a specific food product must be based on the moisture content of the product, product density, volume, and proper serving temperatures. Safe holding temperatures must also be correlated with palatability in determining the length of holding time for a specific product.

Halo Heat maintains the maximum amount of product moisture content without the addition of water, water vapor, or steam. Maintaining maximum natural product moisture preserves the natural flavor of the product and provides a more genuine taste. In addition to product moisture retention, the gentle properties of Halo Heat maintain a consistent temperature throughout the cabinet without the necessity of a heat distribution fan, thereby preventing further moisture loss due to evaporation or dehydration.

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. To preserve the safety and quality of freshly cooked foods however, a maximum of 1 to 2 minutes must be the only time period allowed for the initial heat to be released from the product.

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.

HOLDING TEMPERATURE RANGE		
MEAT	FAHRENHEIT	CELSIUS
BEEF ROAST — Rare	130°F	54°C
BEEF ROAST — Med/Well Done	155°F	68°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	130°F	54°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	140° — 165°F	60° — 74°C
SAUCES	140° — 200°F	60° — 93°C
SOUP	140° — 200°F	60° — 93°C
VEGETABLES	160° — 175°F	71° — 79°C
<b>THE HOLDING TEMPERATURES LISTED ARE SUGGESTED GUIDELINES ONLY. ALL FOOD HOLDING SHOULD BE BASED ON INTERNAL PRODUCT TEMPERATURES. ALWAYS FOLLOW LOCAL HEALTH (HYGIENE) REGULATIONS FOR ALL INTERNAL TEMPERATURE REQUIREMENTS.</b>		

# CARE AND CLEANING

## CLEANING AND PREVENTATIVE MAINTENANCE

### PROTECTING STAINLESS STEEL SURFACES



It is important to guard against corrosion in the care of stainless steel surfaces. Harsh, corrosive, or inappropriate chemicals can completely destroy the protective surface layer of stainless steel. Abrasive

pads, steel wool, or metal implements will abrade surfaces causing damage to this protective coating and will eventually result in areas of corrosion. Even water, particularly hard water that contains high to moderate concentrations of chloride, will cause oxidation and pitting that result in rust and corrosion. In addition, many acidic foods spilled and left to remain on metal surfaces are contributing factors that will corrode surfaces.

Proper cleaning agents, materials, and methods are vital to maintaining the appearance and life of this appliance. Spilled foods should be removed and the area wiped as soon as possible but at the very least, a minimum of once a day. Always thoroughly rinse surfaces after using a cleaning agent and wipe standing water as quickly as possible after rinsing.

### CLEANING AGENTS

Use non-abrasive cleaning products designed for use on stainless steel surfaces. Cleaning agents must be chloride-free compounds and must not contain quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel surfaces. Always use the proper cleaning agent at the manufacturer's recommended strength. Contact your local cleaning supplier for product recommendations.

### CLEANING MATERIALS

The cleaning function can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods must be employed, use a non-abrasive scouring pad on difficult areas and make certain to scrub with the visible grain of surface metal to avoid surface scratches. Never use wire brushes, metal scouring pads, or scrapers to remove food residue.

 <b>CAUTION</b>	
	<b>TO PROTECT STAINLESS STEEL SURFACES, COMPLETELY AVOID THE USE OF ABRASIVE CLEANING COMPOUNDS, CHLORIDE BASED CLEANERS, OR CLEANERS CONTAINING QUATERNARY SALTS. NEVER USE HYDROCHLORIC ACID (MURIATIC ACID) ON STAINLESS STEEL. NEVER USE WIRE BRUSHES, METAL SCOURING PADS OR SCRAPERS.</b>
	
	

# CARE AND CLEANING



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

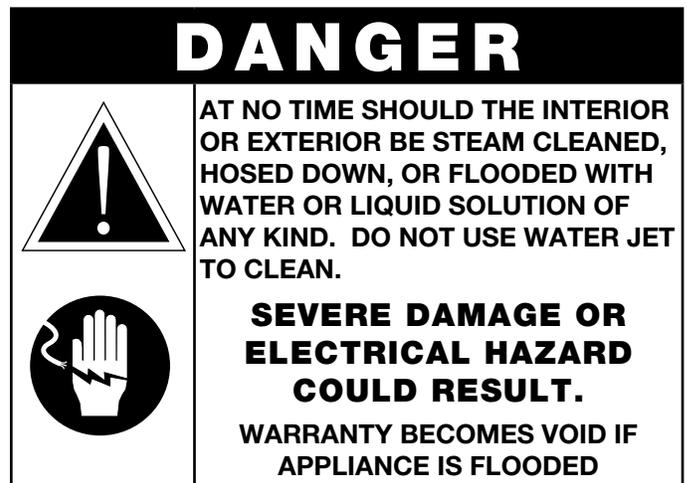
## CLEAN THE HOLDING CABINET DAILY:

1. Disconnect unit from power source, and let cool.
2. Remove all detachable items such as shelves, side racks, and drip pan. Clean these items separately with a good grease solvent or commercial detergent. Rinse well and dry.
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 by wiping with a sponge and clean warm water to remove all residue. Remove excess water with sponge and wipe dry with a clean cloth or air dry. Replace side racks and shelves.
4. Clean control panel, door vents, door handles, and door gaskets thoroughly since these areas harbor food debris. Rinse by wiping with sponge and clean warm water. Wipe dry with a clean cloth.
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.



**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.

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



# 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 not 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 through 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 is 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		
<b>HOT FOODS</b>		
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)
<b>COLD FOODS</b>		
DANGER ZONE	ABOVE 40°F	(ABOVE 4°C)
SAFE ZONE	36° TO 40°F	(2° TO 4°C)
<b>FROZEN FOODS</b>		
DANGER ZONE	ABOVE 32°F	(ABOVE 0°C)
CRITICAL ZONE	0° TO 32°F	(-18° TO 0°C)
SAFE ZONE	0°F or below	(-18°C or below)

# SERVICE

## THERMOSTAT ACCURACY

The electronic thermostat is a precise instrument and is designed to offer trouble free service. If you suspect the temperature inside the holding compartment does not match the temperature indicated on the digital display, follow the instructions listed below.

1. Check to make certain the unit voltage matches the power source. A power source less than that required to operate the unit will result in inaccurate temperatures.
2. Verify the temperature inside the holding compartment with a quality thermal indicator.
  - a. With the exception of the wire shelves, completely empty the holding compartment.
  - b. Make certain the holding cabinet sensor, located inside the holding compartment at the left side of the unit, is completely clean.
  - c. Suspend the thermal indicator in the center of the holding compartment.
  - d. Allow the temperature set on the electronic thermostat to stabilize for a minimum of one hour before comparing the digital display with the reading on the thermal indicator.

DO NOT OPEN THE CABINET DOOR(S) DURING THE TEMPERATURE STABILIZATION PERIOD.

If the reading on the thermal indicator does not match the digital display, there may be a problem with the air sensor. See troubleshooting guide in this manual; or call the factory service department for advice.



## DANGER



**DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.**

## CAUTION

**THIS SECTION IS PROVIDED FOR THE ASSISTANCE OF QUALIFIED SERVICE TECHNICIANS ONLY AND IS NOT INTENDED FOR USE BY UNTRAINED OR UNAUTHORIZED SERVICE PERSONNEL.**



## TROUBLESHOOTING

*This section is provided for the assistance of qualified technicians only and is not intended for use by untrained or unauthorized service personnel. If your Alto-Shaam® unit is not operating properly, check the following before calling your Authorized Alto-Shaam Service Agent:*

- Check main power circuit breaker to the unit and verify that the circuit breaker on the back of the unit is turned on, if applicable.

*Do not attempt to repair or service the unit beyond this point. Contact Alto-Shaam for the nearest authorized service agent. Repairs made by any other service agents without prior authorization by Alto-Shaam® will void the warranty on the unit.*



## DANGER



**DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.**

## CAUTION

**THIS SECTION IS PROVIDED FOR THE ASSISTANCE OF QUALIFIED SERVICE TECHNICIANS ONLY AND IS NOT INTENDED FOR USE BY UNTRAINED OR UNAUTHORIZED SERVICE PERSONNEL.**

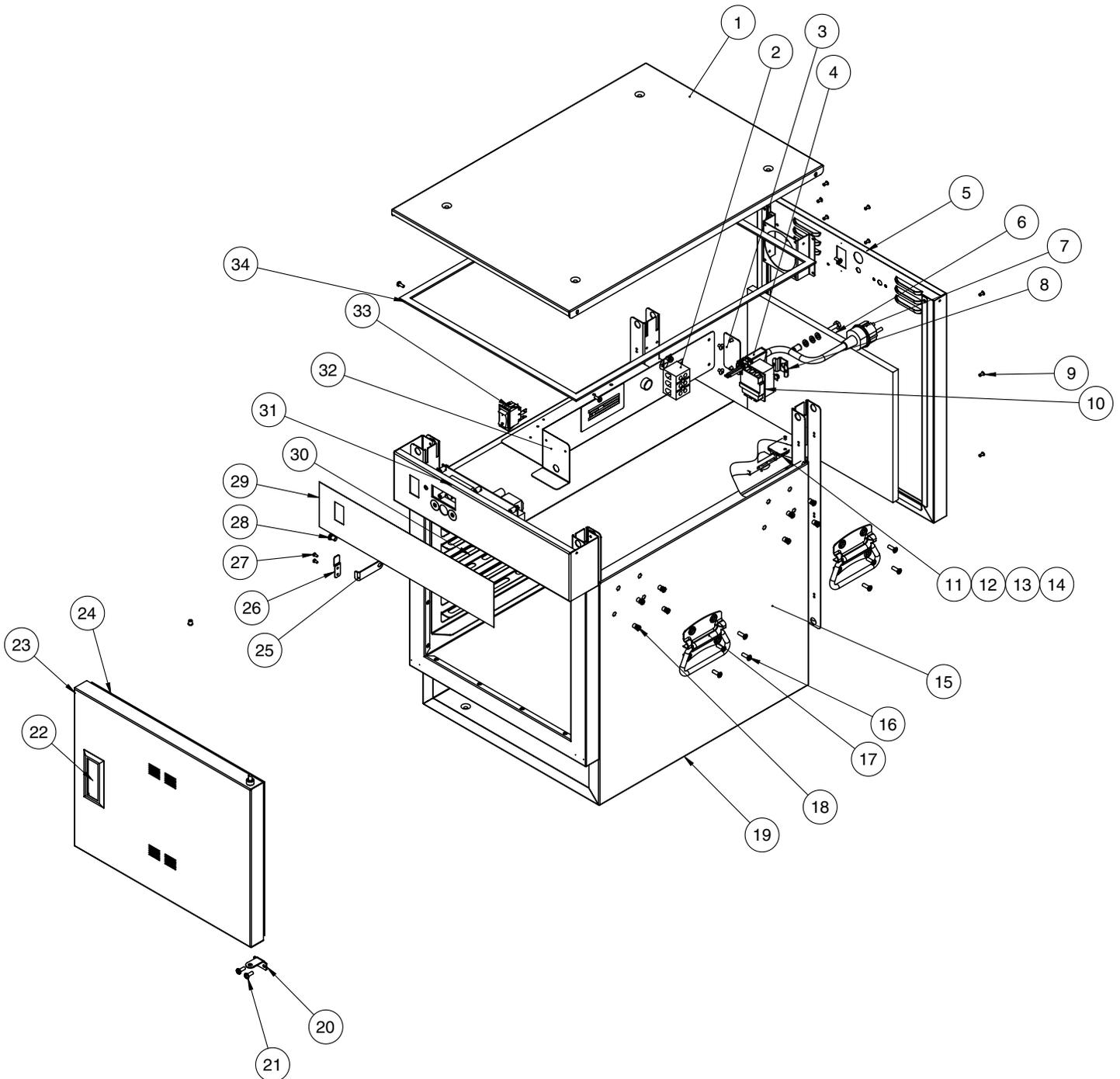
# SERVICE

## TROUBLESHOOTING

Code	Description	Possible Cause
E-10	<b>Cavity air sensor shorted</b>	Cavity air sensor reading < 5°F (-15°C). Verify sensor integrity. See sensor test instructions below.
E-11	<b>Cavity air sensor open</b>	Cavity air sensor reading > 517°F (269°C). Verify sensor integrity. See sensor test instructions below.
E-20	<b>Product probe is shorted</b> <i>Oven will cook in time only</i>	Product probe reading < 5°F (-15°C). Verify sensor integrity. See sensor test instructions below.
E-21	<b>Product probe is open</b> <i>Oven will cook in time only</i>	Product Probe reading > 517°F (269°C). Verify sensor integrity. See sensor test instructions below.
E-30	<b>Under temperature</b>	Unit has not reached (set-point - 25°F (4°C)) for more than 90 minutes.
E-31	<b>Over temperature</b>	Unit has been higher than 60°F (16°C) above the maximum cavity set-point for more than 3 minutes. <b>Note:</b> Holding Cabinets with this error code are more than 145°F (63°C) higher than the maximum set-point.
E-32	<b>Safety switch open (Aux hi-limit switch)</b>	Contact factory.
E-38	<b>Internal software error</b>	Contact factory.
E-39	<b>Sensor error</b>	Contact factory.
E-50	<b>Temp. measurement error</b>	Contact factory.
E-51	<b>Temp. measurement error</b>	Contact factory.
E-60	<b>Real time clock error</b>	Data set to factory default. Ensure that date and time are correct if applicable.
E-61	<b>Real time clock error</b>	Contact factory.
E-64	<b>Clock is not oscillating</b>	Contact factory.
E-70	<b>Configuration connector error (DIP switch)</b>	Refer to wiring diagram for the particular model and ensure dip switches on the control match the settings called out on the WD. If the dip switch settings are correct according to the print replace the control.
E-78	<b>Voltage low</b>	Voltage below 90 VAC on a 125 VAC unit, or below 190 VAC on a 208-240 VAC unit. Correct voltage.
E-79	<b>Voltage high</b>	Voltage over 135 VAC on a 125 VAC unit, or over 250 VAC on a 208-240 VAC unit. Correct voltage.
E-80	<b>EEPROM Error</b>	Ensure that all temperatures and times are properly set. Contact factory if problem persists.
E-81	<b>EEPROM Error</b>	Contact factory.
E-82	<b>EEPROM Error</b>	Contact factory.
E-83	<b>EEPROM Error</b>	Contact factory.
E-85	<b>EEPROM Error</b>	All timers, if previously on, are now off. Possible bad EEPROM.
E-86	<b>EEPROM Error</b>	Stored HACCP memory corrupted. HACCP Address reset to 1. Possible bad EEPROM. Contact factory if problem persists.
E-87	<b>EEPROM Error</b>	Stored offsets corrupted. Offsets reset to 0. Control may need a recalibration. Possible bad EEPROM. Contact factory if problem persists.
E-88	<b>EEPROM Error</b>	All timer set-points are reset to 1 minute. Timers, if previously on, are now off. Possible bad EEPROM.
E-90	<b>Button stuck</b>	A button has been held down for > 60 seconds. Adjust control. Error will reset when the problem has been resolved.
E-91	<b>Input failure</b>	Contact factory.
E-dS	<b>Datakey error</b>	Datakey digital signature incompatible. Cycle power, and install compatible Datakey if error persists.
E-dT	<b>Datakey error</b>	Datakey incompatible with control. Install compatible Datakey.
E-dU	<b>Datakey unplugged</b>	Install Datakey and cycle power to control to clear error.
dLto	<b>Datalogger has timed out</b>	Cycle power. Contact factory if error persists.
dLSD	<b>Micro SD card not plugged in</b>	Plug in SD card and cycle power. Contact factory if error persists.

# SERVICE

## SINGLE COMPARTMENT - 300-S



Part numbers and drawings are subject to change without notice.

# SERVICE

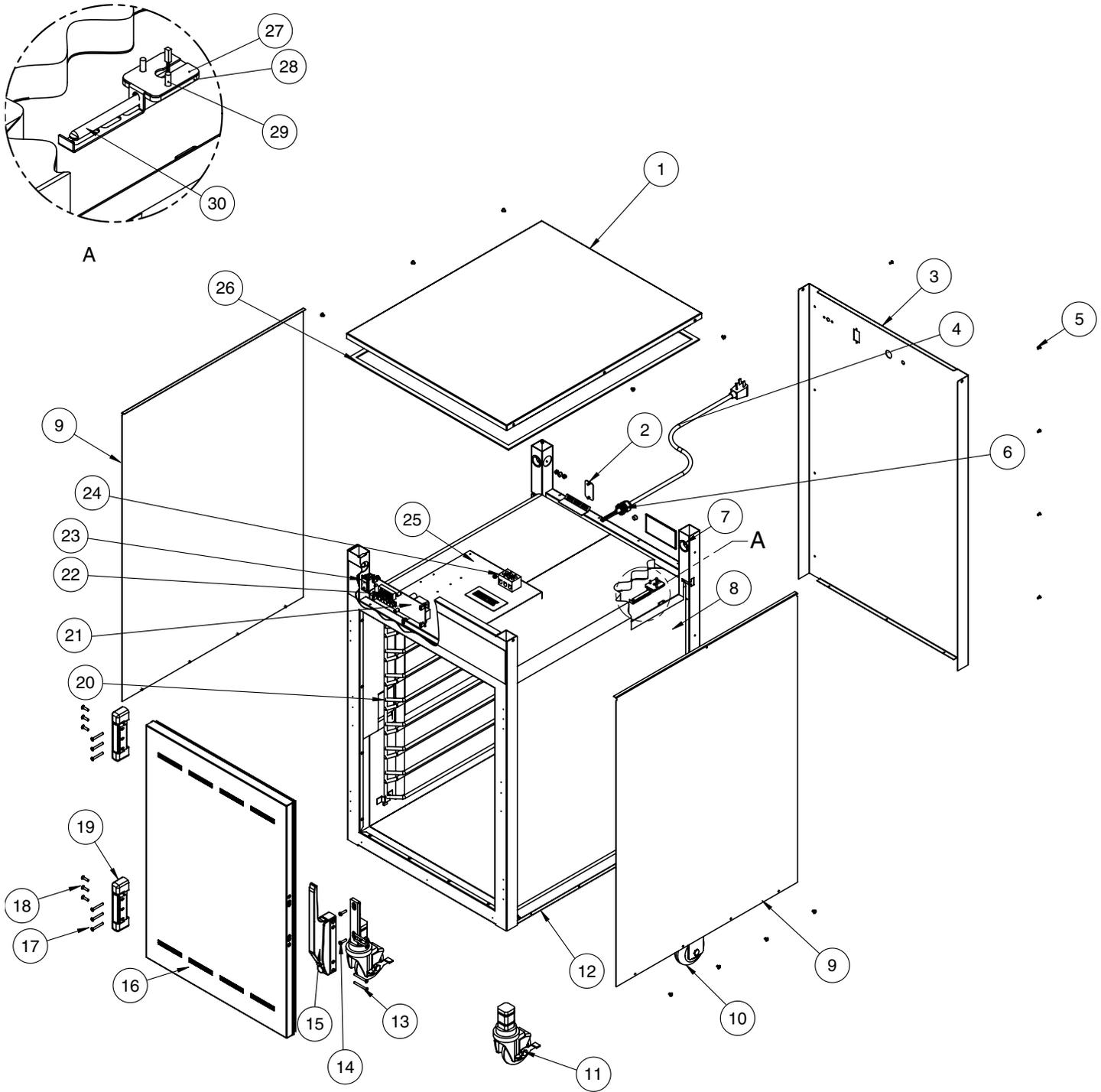
## SINGLE COMPARTMENT - 300-S

ITEM	DESCRIPTION	PART NO.	QTY	
1	TOP COVER	1012831	1	
2	T-BLOCK	BK-3019	1	
3	BREAKER SWITCH CUTOFF COVER	11133	1	
4	BUSHING, STRAIGHT, STRAIN RELIEF	BU-34898	1	
5	REAR TRIM	5014525	1	
6	INSULATION	IN-2003	1	
7	CORDSET	120V CD-3232	1	
		230V (CEE 7/7)	CD-3922	1
		230V (CH2-16P)	CD-36231	1
		230V (BS 1363)	CD-33925	1
8	HI-LIMIT PROTECTION COVER	1003936	1	
9	RIVET, BLIND, #44, S/S	RI-2100	16	
10	HI-LIMIT THERMOSTAT	TT-33476	1	
11	SENSOR MOUNTING BRACKET	1008272	1	
12	BLOCK, SENSOR	BK-29606	1	
13	SCREW, 6-32 X 1/2, NC PHIL, FLAT	SC-2254	2	
14	SENSOR, OVEN TEMPERATURE	PR-34494	1	
15	INSULATION	IN-22364	1	
16	SCREW, M5 X 0.8 X 16MM FLAT	SC-22281	16	
17	TRANSPORT HANDLE	HD-2021	4	
18	NUT, HEX INSERT M5	NU-23909	16	
19	OUTER CASING SPOT	5014538	1	
20	HINGE PLATE, BOTTOM	RIGHT HAND 1012999	1	
		LEFT HAND*	1014661	1
21	SCREW, 8-32 X 1/4" TRH PHH	SC-2459	12	
22	HANDLE, PULL, RECESSED	HD-28789	1	
23	DOOR ASSEMBLY	5014458	1	
24	DOOR GASKET	GS-35092	1	
25	DOOR LATCH	1013803	1	
26	DOOR LATCH RECEIVER	1013809	1	
27	SCREW, M3 X 0.5 X 6MM PAN	SC-22266	2	
28	STUD, SHOULDER, SHORT, S/S	ST-2546	1	
29	PANEL, OVERLAY	PE-35188	1	
30	SIDE RACKS	1012872	2	
31	CONTROL	CC-34970	1	
32	ELECTRIC CHASSIS SPOT	5014530	1	
33	SWITCH, ROCKER, 125-277V, 20A	SW-34769	1	
34	GASKETS, ADHESIVE,.125X.375	GS-23622	1	
35*	PROBE COVER	1008807	1	
36*	BUSHING, 3/4" SNAP	BU-3008	1	
37*	NUT, 6-32 HEX, S/S	NU-2361	4	
38*	SCREW, 10-32 X 1/4 PAN HD GROUND	SC-2190	1	
39*	SCREWS, M4-0.7 X 6MM PHIL	SC-22271	2	
40*	SCREW, HHCS M6 X 20, W/NO MKGS	SC-22924	1	
41*	SCREW, 6-32 X 1-1/4" ROUND HD	SC-2365	2	
42*	SCREW, M6 X 1.0 X 10 PAN	SC-27078	2	
43*	SHELVES	SH-2107	2	
44*	SPACER, SNAP-IN, 7/16", CONTROL	SP-29392	6	
45*	WASHER, FLAT	WS-22297	2	
46*	WASHER, SPLIT LOCK	WS-22302	2	
47*	WASHER, 6-32, FLAT, NYL	WS-23148	4	
48*	WASHER, STAR LOCK	WS-2467	1	
49*	FOIL PAD HEATER, 230V	EL-29740	1	
	FOIL PAD HEATER, 120V	EL-35173	1	

\*NOT SHOWN

# SERVICE

## SINGLE COMPARTMENT - 500-S, 750-S, 1000-S, 1200-S (1000-S Shown)



Part numbers and drawings are subject to change without notice.

# SERVICE

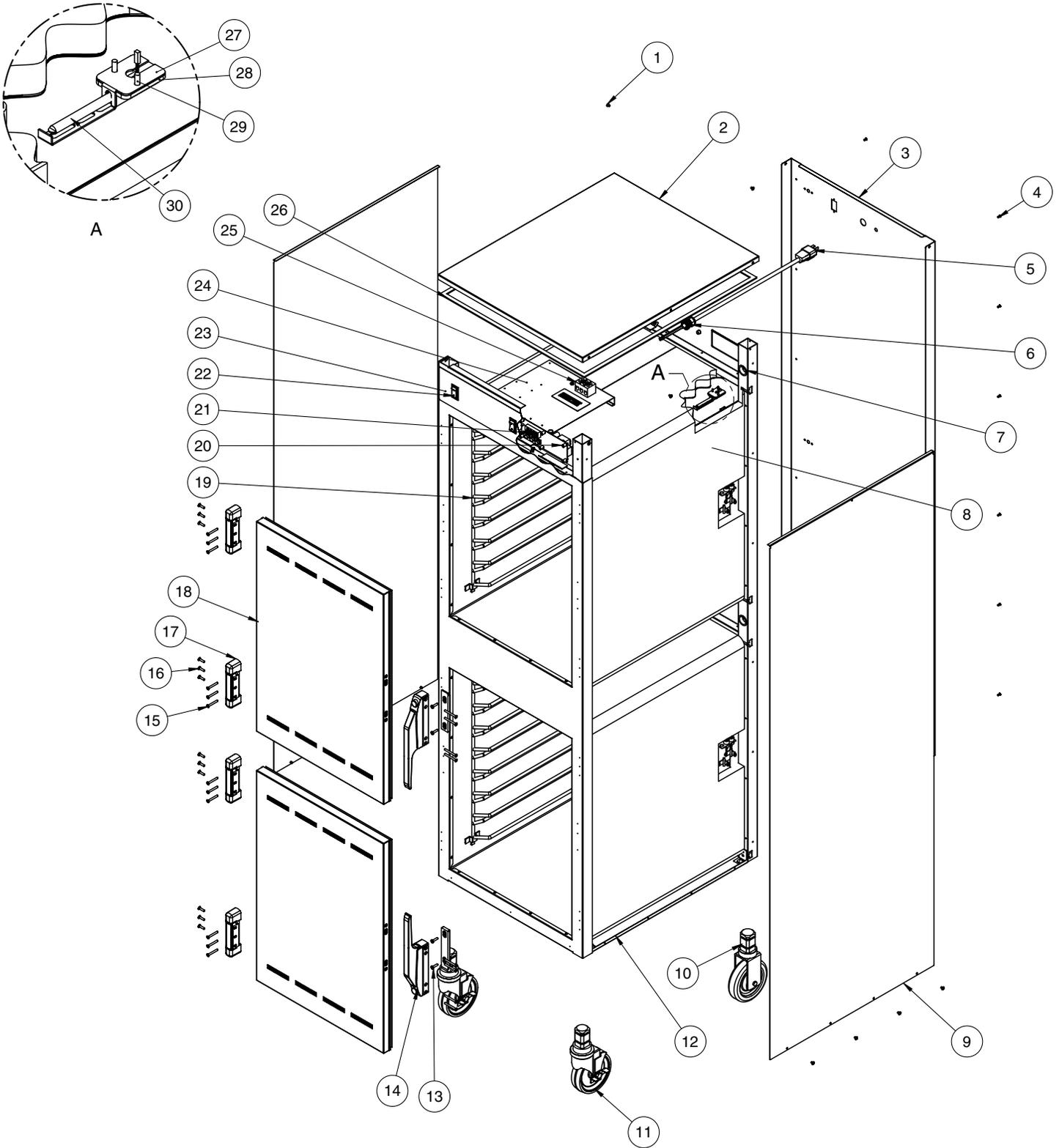
## SINGLE COMPARTMENT - 500-S, 750-S, 1000-S, 1200-S

ITEM	DESCRIPTION	MODEL >		500-S		750-S		1000-S		1200-S	
		PART NO.	QTY								
1	TOP COVER	1011946	1	1011872	1	1011534	1	1011653	1		
2	BREAKER SWITCH CUTOFF COVER	1011697	1	1011697	1	1011697	1	1011697	1		
3	REAR TRIM	1011944	1	1011873	1	1011618	1	1011752	1		
4	CORDSET, 120V	CD-3232	1	CD-3232	1	CD-3232	1	CD-3232	1		
	208-240V	CD-3551	1	CD-3551	11	CD-3551	1	CD-3551	1		
	230V (CEE 7/7)	CD-3922	1	CD-3922	1	CD-3922	1	CD-3922	1		
	230V (CH2-16P)	CD-36231	1	CD-36231	1	CD-36231	1	CD-36231	1		
	230V (BS 1363)	CD-33925	1	CD-33925	1	CD-33925	1	CD-33925	1		
5	RIVET, BLIND, #44, S/S	RI-2100	24	RI-2100	24	RI-2100	24	RI-2100	24		
6	BUSHING, STRAIGHT, STRAIN RELIEF	BU-3964	1	BU-3964	1	BU-3964	1	BU-3964	1		
7	BUSHING, 1-1/8" SNAP	BU-3378	4	BU-3378	4	BU-3378	4	BU-3378	4		
8	INSULATION	IN-22364	1	IN-22364	1	IN-22364	1	IN-22364	1		
9	SIDE PANEL	5015081	2	5015083	2	5015088	2	5015092	2		
10	CASTER PACKAGE, 3-1/2" (89mm)	5014422	1	5014422	1	5014422	1	—	—		
	- CASTER, 3-1/2" (89mm) RIGID	CS-25674	2	CS-25674	2	CS-25674	2	—	—		
	- CASTER, 3-1/2" (89mm) SWIVEL WITH BRAKE	CS-25675	2	CS-25675	2	CS-25675	2	—	—		
	- SHIM	1012735	4	1012735	4	1012735	4	—	—		
11	CASTER PACKAGE, 5" (127mm)	—	—	—	—	—	—	5014421	1		
	- CASTER, 5" (127mm) RIGID	—	—	—	—	—	—	CS-24874	2		
	- CASTER, 5" (127mm) SWIVEL WITH BRAKE	—	—	—	—	—	—	CS-24875	2		
	- SHIM	—	—	—	—	—	—	1012735	4		
12	BOTTOM PANEL	1010774	1	1010394	1	1009941	1	1011650	1		
13	SCREW, 10-32X1-3/4, NF, PHIL, FLAT M/S, 18-8 S/S	SC-29387	4	SC-29387	4	SC-29387	4	SC-29387	4		
14	SCREW, 10-32X3/4 PHILLIPS PAN HD	SC-2071	2	SC-2071	2	SC-2071	2	SC-2071	2		
15	HANDLE, OFFSET MAG LATCH	HD-27080	1	HD-27080	1	HD-27080	1	HD-27080	1		
16	SOLID DOOR (STANDARD)	5013132	1	5012938	1	5012801	1	5012663	1		
	WINDOWED DOOR (OPTION)	—	—	5013129	1	5012806	1	5012822	1		
	DOOR GASKET	GS-23790	1	GS-22951	1	GS-22952	1	GS-22952	1		
17	SCREW, 10-32X1-1/2, NF, PHIL, FLAT M/S, 18-8 S/S	SC-2073	6	SC-2073	6	SC-2073	6	SC-2073	6		
18	SCREW, 10-32X3/4, NF PHIL, FLAT M/S, 18-8 S/S	SC-2072	6	SC-2072	6	SC-2072	6	SC-2072	6		
19	HINGE, 1-3/8" OFFSET, PAIR, CHROME	HG-22338	2	HG-22338	2	HG-22338	1	HG-22338	1		
20	SIDE RACK	SR-28402	2	SR-28404	2	SR-2120	2	—	—		
	*PAN SLIDES	—	—	—	—	—	—	SR-24447	8		
	*PAN SLIDE RAIL	—	—	—	—	—	—	1011741	4		
21	FRONT TRIM, CONTROL	5013104	1	5012940	1	5012285	1	5012731	1		
22	CONTROL	CC-34970	1	CC-34970	1	CC-34970	1	CC-34970	1		
23	SWITCH, ROCKER, 125-277V, 20A	SW-34769	1	SW-34769	1	SW-34769	1	SW-34769	1		
24	T-BLOCK	BK-3019	1	BK-3019	1	BK-3019	1	BK-3019	1		
25	ELECTRIC CHASSIS	5012122	1	5012122	1	5012122	1	5012122	1		
26	GASKETS, ADHESIVE, .125X.375 [lin ft]	GS-23622	1	GS-23622	1	GS-23622	1	GS-23622	1		
27	BRACKET, SENSOR MTG.	1008272	1	1008272	1	1008272	1	1008272	1		
28	BLOCK, SENSOR	BK-29606	1	BK-29606	1	BK-29606	1	BK-29606	1		
29	SCREW, 6-32 X 1/2, NC PHIL, FLAT	SC-2254	2	SC-2254	2	SC-2254	2	SC-2254	2		
30	SENSOR, OVEN TEMPERATURE	PR-34494	1	PR-34494	1	PR-34494	1	PR-34494	1		
31*	NON-PRODUCT PROBE SEAL	1006871	1	1006871	1	1006871	1	1006871	1		
32*	INNER BACK PANEL	1011938	1	1011861	1	1011529	1	1011654	1		
33*	NUT, M4-0.7 HEX 18-8	NU-22286	2	NU-22286	2	NU-22286	2	NU-22286	2		
34*	NUT, HEX #8-32	NU-2296	2	NU-2296	2	NU-2296	2	NU-2296	2		
35*	NUT, 6-32 HEX, S/S	NU-2361	4	NU-2361	4	NU-2361	4	NU-2361	4		
36*	PANEL, OVERLAY	PE-29399	1	PE-29398	1	PE-29396	1	PE-29397	1		
37*	PLUG, 3/8" HOLE	PG-25574	2	PG-25574	2	PG-25574	2	PG-25574	2		
38*	SCREW, 10-32 X 1/4 PAN HD GROUND	—	—	SC-2190	1	SC-2190	1	SC-2190	1		
39*	SCREWS, M4-0.7 X 6MM PHIL	SC-22271	2	SC-22271	2	SC-22271	2	SC-22271	2		
40*	SCREW, 1/4-20 X 1/2, NC SLOT RND	SC-2332	4	SC-2332	4	SC-2332	4	SC-2332	4		
41*	SCREW, 6-32 X 1-1/4" ROUND HD	—	—	SC-2365	2	SC-2365	2	SC-2365	2		
42*	SCREWS, 8-32 X 1/2" PHIL S/S	SC-2425	6	SC-2425	6	SC-2425	6	SC-2425	6		
43*	SPACER, SNAP-IN, 7/16", CONTROL	SP-29392	6	SP-29392	6	SP-29392	6	SP-29392	6		
44*	SHELF, CHROME PLATED	SH-2107	2	SH-2105	2	—	—	—	—		
45*	TAPE, 1/2" WIDE X 25 MIL VHB	TA-24637	9	TA-24637	9	TA-24637	9	TA-24637	18		
46*	WASHER, 6-32, FLAT, NYL	WS-23148	4	WS-23148	4	WS-23148	4	WS-23148	4		
47*	WASHER, STAR LOCK	WS-2467	1	WS-2467	1	WS-2467	1	WS-2467	1		

\*NOT SHOWN

# SERVICE

## DOUBLE COMPARTMENT - 1000-UP, 1200-UP (1000-UP SHOWN)



Part numbers and drawings are subject to change without notice.

# SERVICE

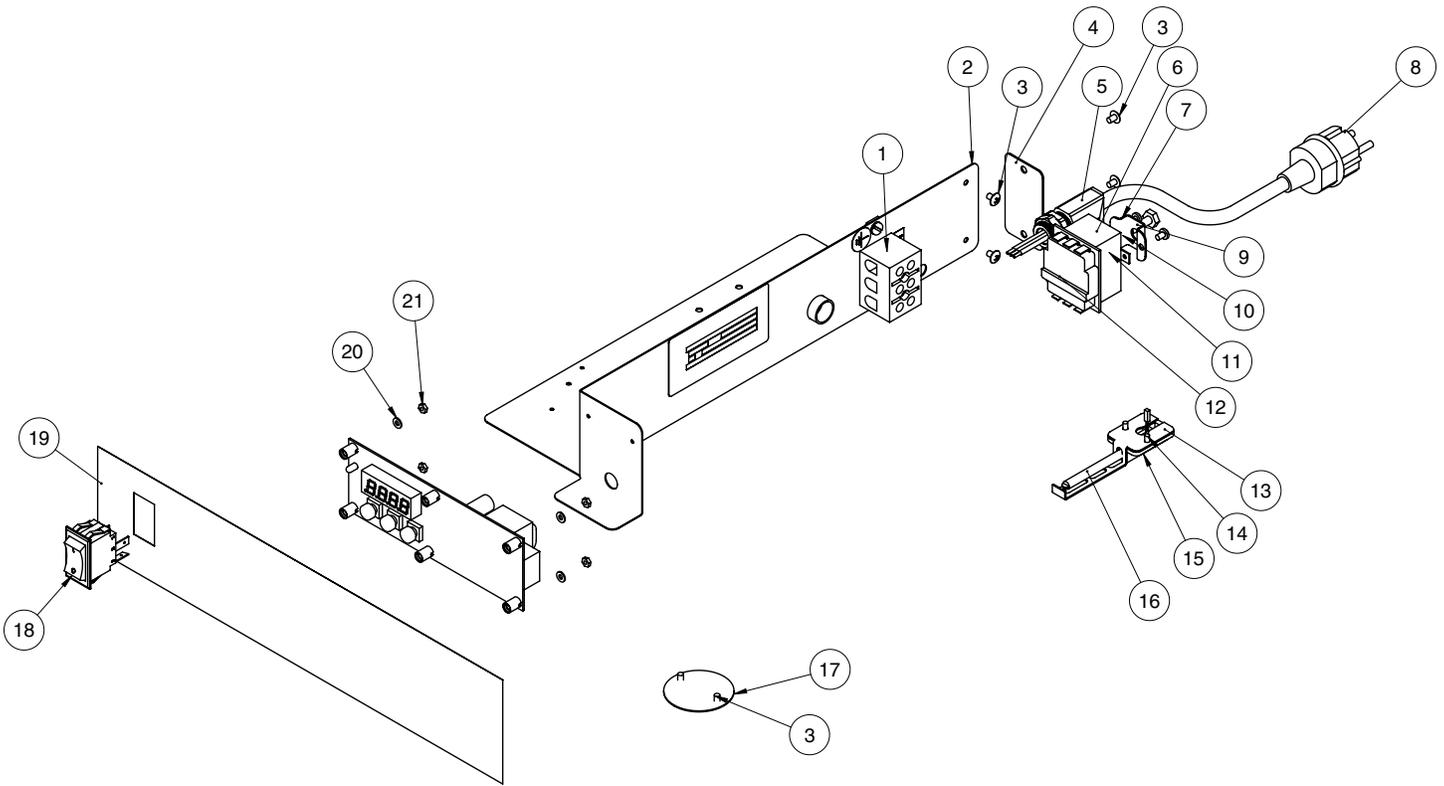
## DOUBLE COMPARTMENT - 1000-UP, 1200-UP

ITEM	DESCRIPTION	MODEL >	1000-UP		1200-UP	
			PART NO.	QTY	PART NO.	QTY
1	SCREW, 8-32 X 1/4" PHIL		SC-2459	30	SC-2459	32
2	TOP COVER		1011534	1	1011653	1
3	REAR TRIM		1011532	1	1011652	1
4	RIVET, BLIND, #44, S/S		RI-2100	44	RI-2100	44
5	CORDSET	120V	CD-33824	1	CD-33824	1
		208-240V	CD-3551	1	CD-3551	1
		230V (CEE 7/7)	CD-3922	1	CD-3922	1
		230V (CH2-16P)	CD-36231	1	CD-36231	1
		230V (BS 1363)	CD-33925	1	CD-33925	1
6	BUSHING, STRAIGHT, STRAIN RELIEF		BU-3964	1	BU-3964	1
7	BUSHING, 1 1/8" SNAP		BU-3378	8	BU-3378	8
8	INSULATION		IN-22364	1	IN-22364	1
9	SIDE PANEL		5015105	2	5015105	2
10	CASTER, 5" (127mm) RIGID		CS-24874	2	CS-24874	2
11	CASTER, 5" (127mm) SWIVEL WITH BRAKE		CS-24875	2	CS-24875	2
12	BOTTOM PANEL		1009941	1	1011650	1
13	SCREW, 10-32 X 3/4 PHILLIPS PAN HD		SC-2071	4	SC-2071	4
14	HANDLE, OFFSET MAG LATCH		HD-27080	2	HD-27080	2
15	SCREW, 10-32 X 1-1/2, NF, PHIL, FLAT M/S, 18-8 S/S		SC-2073	12	SC-2073	12
16	SCREW, 10-32 X 3/4, NF PHIL, FLAT M/S, #18-8 S/S		SC-2072	12	SC-2072	12
17	HINGE, 1-3/8 OFFSET, PAIR, CHROME		HG-22338	2	HG-22338	2
18	SOLID DOOR (STANDARD)		5012801	2	5012663	2
	WINDOWED DOOR (OPTION)		5012806	1	5012822	1
	DOOR GASKET		GS-22952	1	GS-22952	1
19	SIDE RACK		SR-2120	4	—	—
20	FRONT TRIM, CONTROL		5012113	1	5012345	1
21	CONTROL		CC-34970	2	CC-34970	2
22	SWITCH, ROCKER, 125-277V, 20A		SW-34769	2	SW-34769	2
23	PANEL, OVERLAY		PE-29394	1	PE-29395	1
24	ELECTRIC CHASSIS		5012122	1	5012122	1
25	T-BLOCK		BK-3019	1	BK-3019	1
26	GASKETS, ADHESIVE, .125X.375 [linear ft]		GS-23622	1	GS-23622	1
27	BRACKET, SENSOR MTG.		1008272	2	1008272	2
28	BLOCK, SENSOR		BK-29606	2	BK-29606	2
29	SCREW, 6-32 X 1/2, NC PHIL, FLAT		SC-2254	2	SC-2254	2
30	SENSOR, OVEN TEMPERATURE		PR-34494	2	PR-34494	2
31	NON-PRODUCT PROBE SEAL		1006871	2	1006871	2
32*	INNER BACK PANEL		1011529	2	1011654	2
33*	BREAKER SWITCH CUTOFF COVER		1011697	1	1011397	1
34*	NUT, M4-0.7 HEX 18-8		NU-22286	4	NU-22286	4
35*	NUT, HEX #8-32		NU-2296	2	NU-2296	2
36*	NUT, 6-32 HEX, S/S		NU-2361	8	NU-2361	8
37*	PLUG, 3/8" HOLE		PG-25574	3	PG-25574	3
38*	SCREW, 10-32 X 1/4 PAN HD GROUND		SC-2190	1	SC-2190	1
39*	SCREWS, M4-0.7X6MM PHIL		SC-22271	4	SC-22271	4
40*	SCREW, 1/4-20 X 1/2, NC SLOT RND		SC-2332	4	SC-2332	4
41*	SCREW, 6-32 X 1 1/4" ROUND HD		SC-2365	2	SC-2365	2
42*	SCREW, 10-32 X 1-3/4, NF, PHIL, FLAT M/S, 18-8 S/S		SC-29387	8	SC-29387	8
43*	SPACER, SNAP-IN, 7/16", CONTROL		SP-29392	12	SP-29392	12
	*PAN SLIDE		—	—	SR-24447	16
	*PAN SLIDE RAIL		—	—	1011741	8
44*	TAPE, 1/2" WIDE X 25 MIL VHB		TA-24637	2	—	—
45*	WASHER, 6-32, FLAT, NYL		WS-23148	8	WS-23148	8
46*	WASHER, STAR LOCK		WS-2467	1	WS-2467	1

\*NOT SHOWN

# SERVICE

## ELECTRONIC COMPONENTS - 300-S



Part numbers and drawings are subject to change without notice.

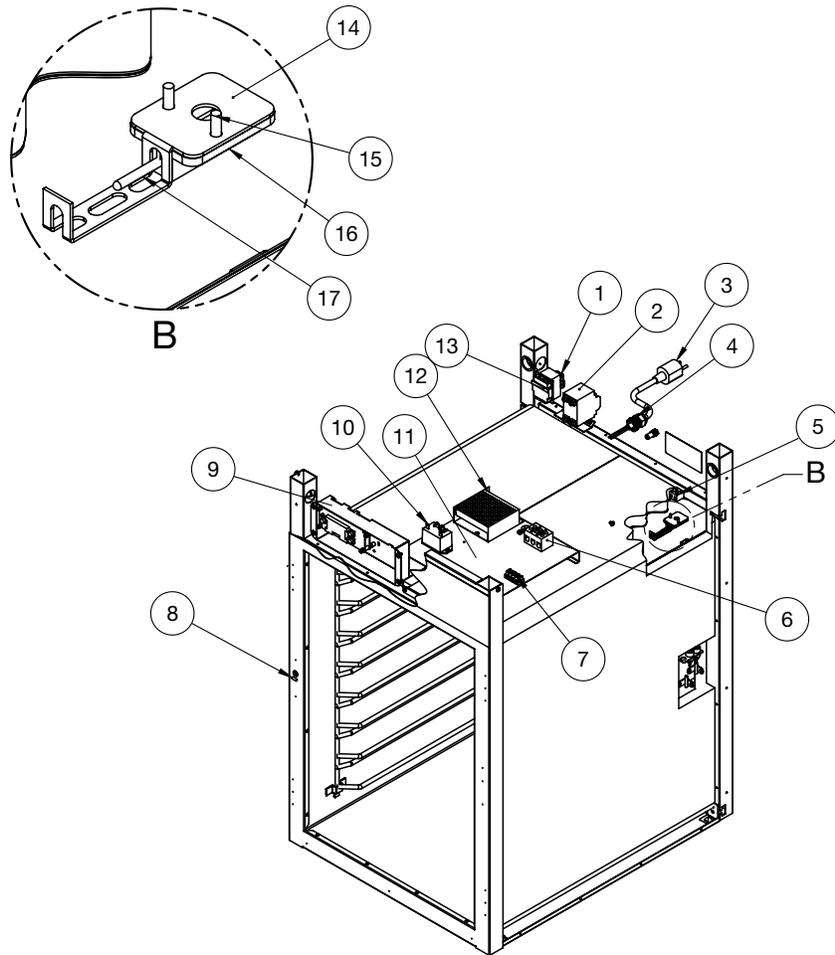
ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.	QTY
1	T-BLOCK	BK-3019	1	11	WASHER, SPLIT LOCK	WS-22302	2
2	ELECTRIC CHASSIS ASSEMBLY	5015058	1	12	NUT, THREADED INSERT, M6	NU-22770	1
3	SCREW, 8-32 X 1/4" PHIL	SC-2459	4	13	BRACKET, SENSOR MTG.	1008272	1
4	SWITCH COVER	11133	1	14	SCREW, 6-32 X 3/8" RND PHH	SC-2254	2
5	BUSHING, STRAIN RELIEF, 90°, BLK	BU-34898	1	15	SENSOR BLOCK	BK-29606	1
6	HI-LIMIT THERMOSTAT	TT-33476	1	16	SENSOR, OVEN TEMPERATURE	PR-34494	1
7	HI-LIMIT PROTECTION COVER	1003936	1	17	PROBE COVER	1008807	1
8	CORDSET	230V (CEE 7/7) CD-3922	1	18	SWITCH, ROCKER, 125-277V, 20A	SW-34769	1
		230V (CH2-16P) CD-36231	1	19	PANEL, OVERLAY, 300-S SIMPLE	PE-35188	1
		230V (BS 1363) CD-33925		20	WASHER, 6-32, FLAT, NYLON	WS-23148	4
9	SCREW, HHCS, M6 X 20, NO MKGS	SC-22924	1	21	NUT, 6-32 HEX, S/S	NU-2361	4
10	WASHER, FLAT	WS-22297	2	22*	SCREWS, M4-0.7 X 6MM PHIL	SC-22271	2

\*NOT SHOWN



# SERVICE

## DELUXE CONTROL ELECTRONIC COMPONENTS



Part numbers and drawings are subject to change without notice.

ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.	QTY
1	HI-LIMIT PROTECTION COVER	1003936	1	8	REED SWITCH (PER DOOR)	SW-33559	1
2	SWITCH, CIRCUIT BREAKER	SW-34769	1	9	CONTROL WITHOUT TIMERS	5012946	1
3	CORDSET	120V CD-3232	1	10	RELAY	RL-33558	1
		208-240V CD-3551	1	11	ELECTRIC CHASSIS	5012122	1
		230V (CEE 7/7) CD-3922	1	12	POWER SUPPLY BOARD	BA-36144	1
		230V (CH2-16P) CD-36231	1	13	T-STAT, HI-LIMIT	TT-33476	1
		230V (BS 1363) CD-33925	1	14	SENSOR GUARD	1493	1
4	BUSHING, STRAIGHT, STRAIN RELIEF	BU-3964	1	15	SCREW, 6-32 X 1/2, NC PHIL, FLAT	SC-2254	2
5	TERMINAL BLOCK, SENSOR	BK-33546	1	16	BLOCK, MOUNTING SENSOR	BK-29605	1
6	T-BLOCK	BK-3019	1	17	SENSOR	SN-33541	1
7	TERMINAL STRIP	TM-33560	1				

DANGER

**DISCONNECT UNIT FROM  
POWER SOURCE BEFORE  
CLEANING OR SERVICING.**

DANGER

**LOCK-OUT OR POST  
BREAKER PANEL UNTIL  
SERVICE WORK HAS  
BEEN COMPLETED.**

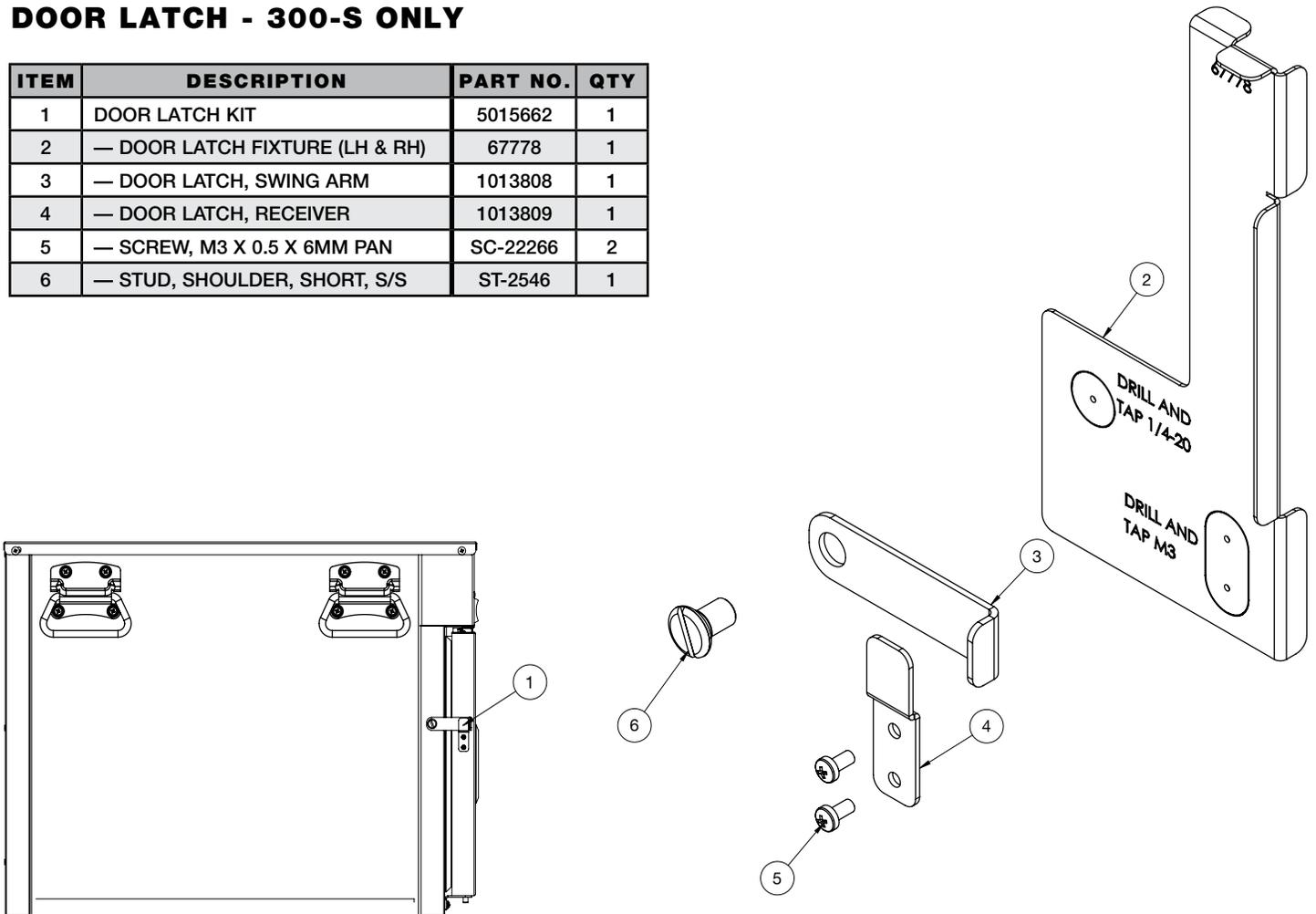
# SERVICE

## CABLE HEATING SERVICE KITS

<b>CABLE HEATING KIT &gt;</b> (ONE KIT REQUIRED PER CAVITY)		<b>#4874</b> (500, 750, 1000)	<b>#4881</b> (1200 - 4000W)	<b>#4878</b> (1200 - ALL EXCEPT 4000W)
<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>QTY</b>	<b>QTY</b>
CB-3045	CABLE HEATING ELEMENT	---	210 feet (6401cm)	90 feet (2591cm)
CB-3044	CABLE HEATING ELEMENT	120 feet (3658cm)	---	---
CR-3226	RING CONNECTOR	4	12	4
IN-3488	INSULATION CORNER	1 foot (30,5cm)	1 foot (30,5cm)	1 foot (30,5cm)
BU-3105	SHOULDER BUSHING	4	12	4
BU-3106	CUP BUSHING	4	12	4
ST-2439	STUD	4	12	4
NU-2215	HEX NUT	8	24	8
SL-3063	INSULATING SLEEVE	4	12	4
TA-3540	ELECTRICAL TAPE	1 roll	1 roll	1 roll

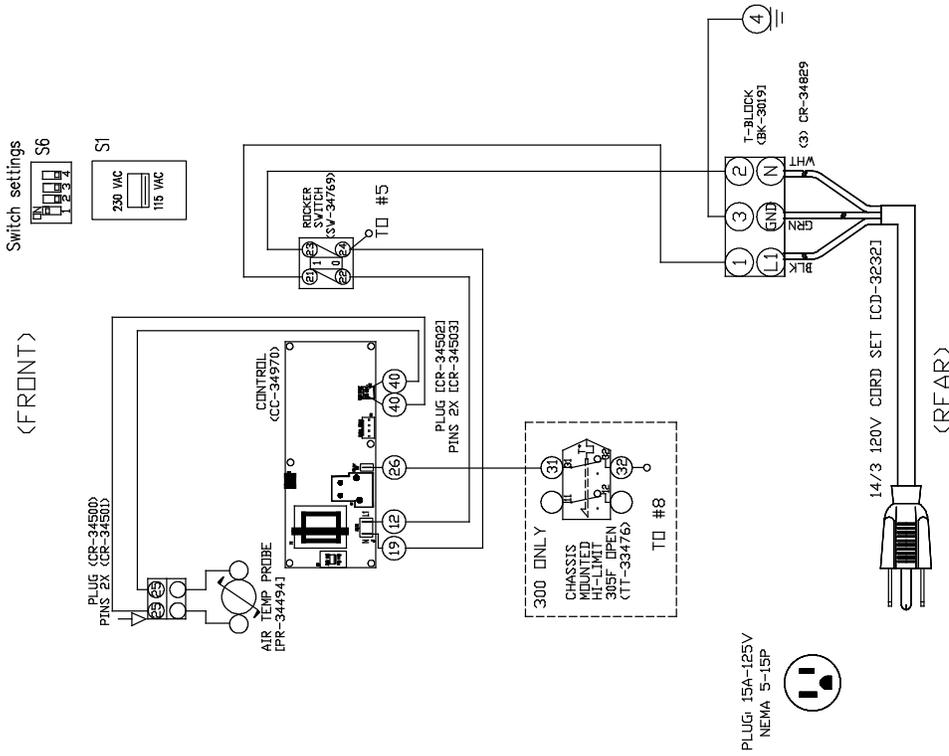
## DOOR LATCH - 300-S ONLY

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>PART NO.</b>	<b>QTY</b>
1	DOOR LATCH KIT	5015662	1
2	— DOOR LATCH FIXTURE (LH & RH)	67778	1
3	— DOOR LATCH, SWING ARM	1013808	1
4	— DOOR LATCH, RECEIVER	1013809	1
5	— SCREW, M3 X 0.5 X 6MM PAN	SC-22266	2
6	— STUD, SHOULDER, SHORT, S/S	ST-2546	1

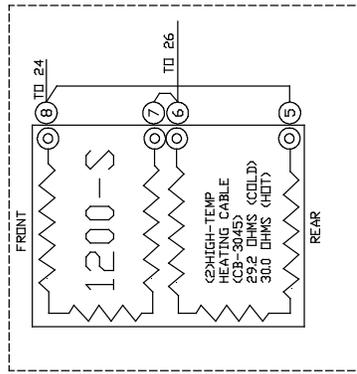
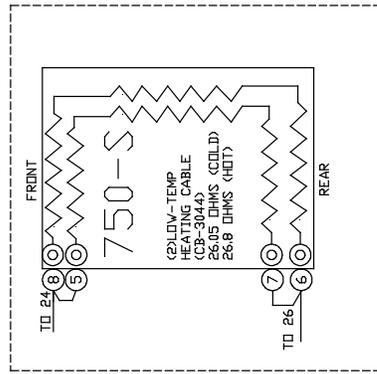
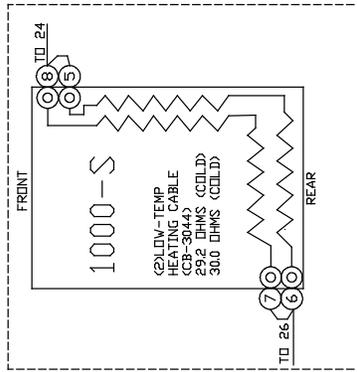
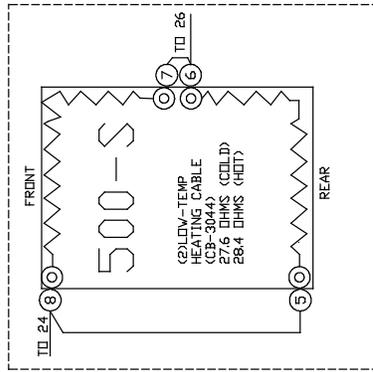
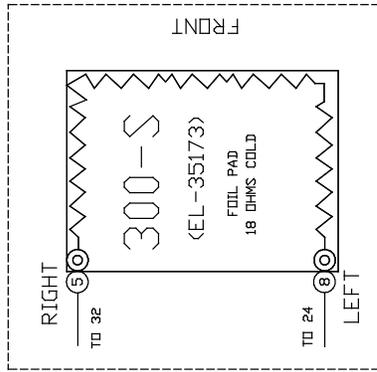


Part numbers and drawings are subject to change without notice.

VIEW FROM REAR OF BONNET



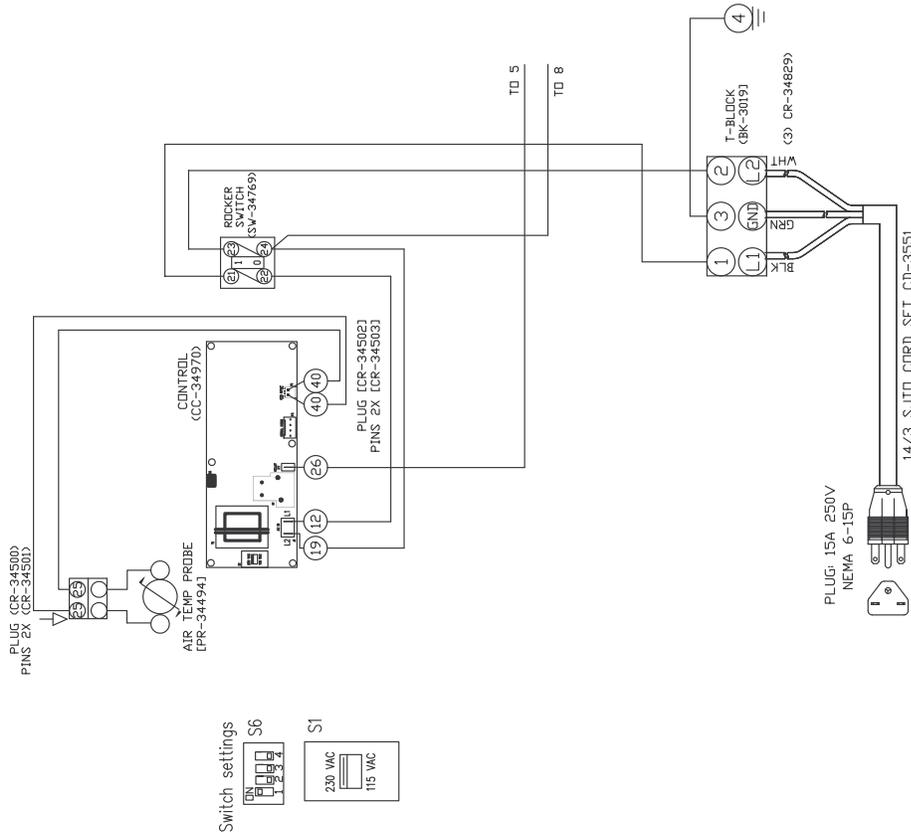
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAM PART NUMBERS  
 NOTE #2: SEE DRW. 5015444 FOR MAIN WIRE ASSEMBLY [ FOR 300 ]  
 SEE DRW. 5015445 FOR 120V WIRE ASSEMBLY [ FOR 300 ]  
 SEE DRW. 5012835 FOR MAIN WIRE ASSEMBLY [ FOR 500, 750, 1000 AND 1200 ]  
 SEE DRW. 5012836 FOR 120V WIRE ASSEMBLY [ FOR 500, 750, 1000 AND 1200 ]



12	6761	Condensate wire set	9/16/13	TJG
11	6514	300/Hi Series placed on 77822	10/18/12	TJG
10	6527	Add 300-S HI-LIMIT OMIT ENTH	4/29/12	TJG
REV	ECO	DESCRIPTION	DATE	APP
300, 500, 750, 1000, 1200-S, 120V 60HZ				
<b>ALTO-SHAM</b>			<b>WIRING DIAGRAM</b>	
BY: JPK/DAE 1/16/08			DWG: 77194	
			SHEET	
			1 OF 1	

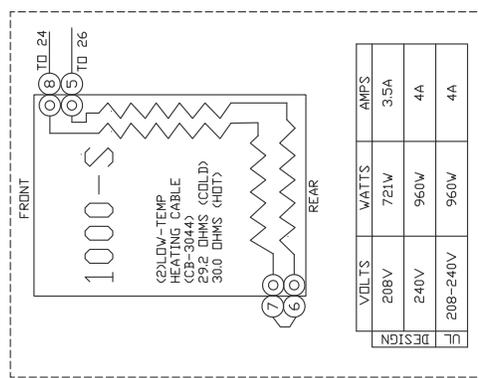
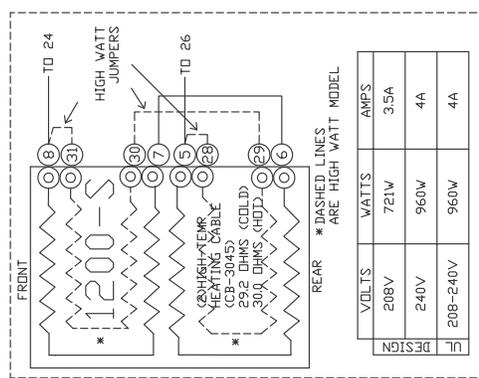
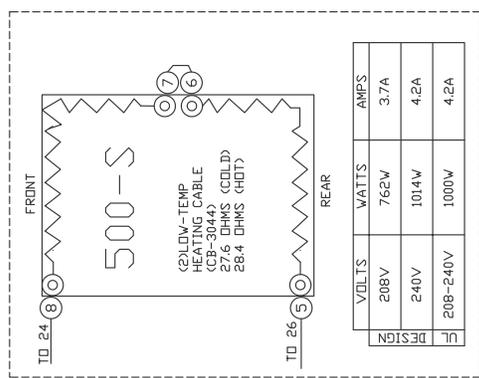
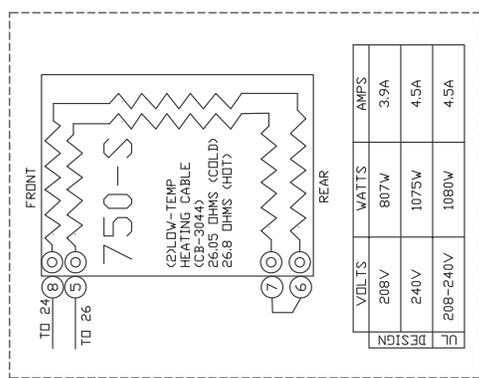
VIEW FROM REAR OF BONNET

(FRONT)



(REAR)

NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS  
 NOTE #2: SEE DRW. 5012835 FOR MAIN WIRE ASSEMBLY  
 SEE DRW. 5012837 FOR 208-240V WIRE ASSEMBLY  
 SEE DRW. 5007592 FOR HIGH WATT JUMPERS



REV	ECO	DESCRIPTION	DATE	APP
8	5904	REDUCE 1200-S WATTS	2-18-11	JPK
7	5727	FIX WIRE ASSEMBLY TYPO	1-20-10	JPK
6	-	HTG CBL POST CHNG	1-4-11	JPK

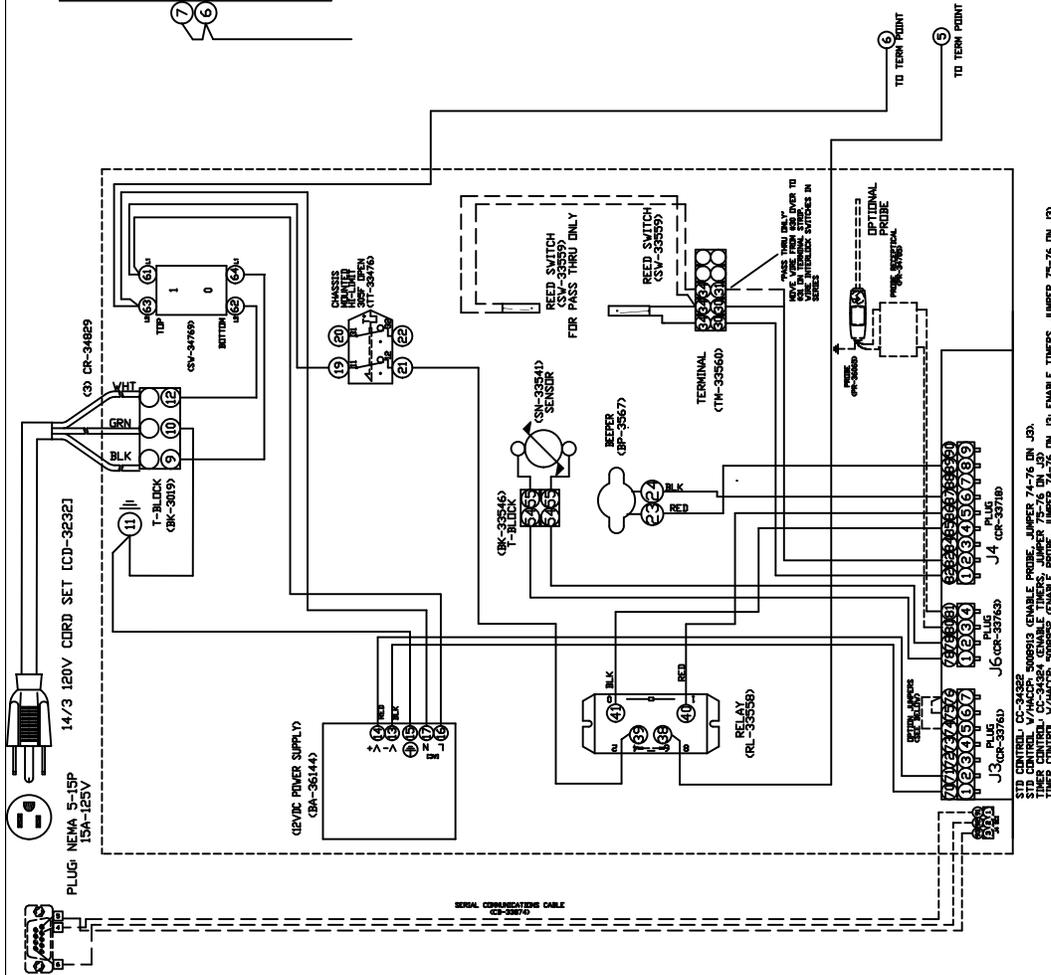
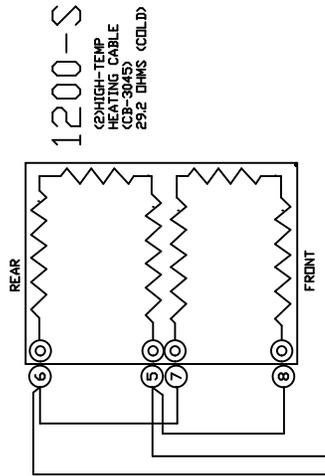
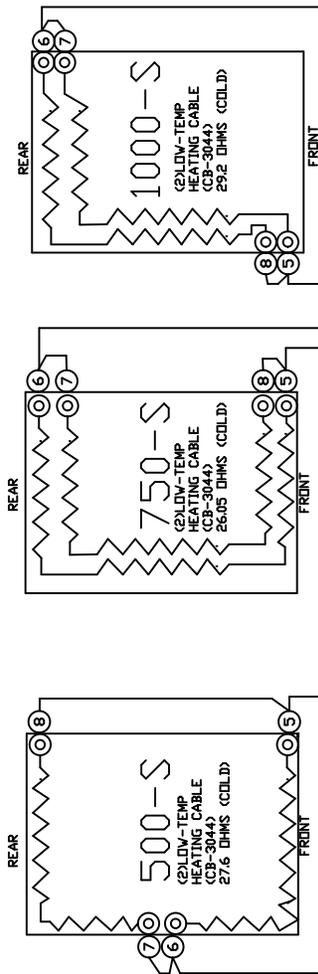
500,750,1000,1200-S 208-240V 60HZ

**WIRING DIAGRAM**  
 DWG: 77195  
 SHEET 1\_OF\_1

1200-S 2000W MODEL		
VOLTS	WATTS	AMPS
208V	1442W	6.9A
240V	1920W	8A
208-240V	1920W	8A



TOP VIEW OF CABLE CONFIGURATION



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

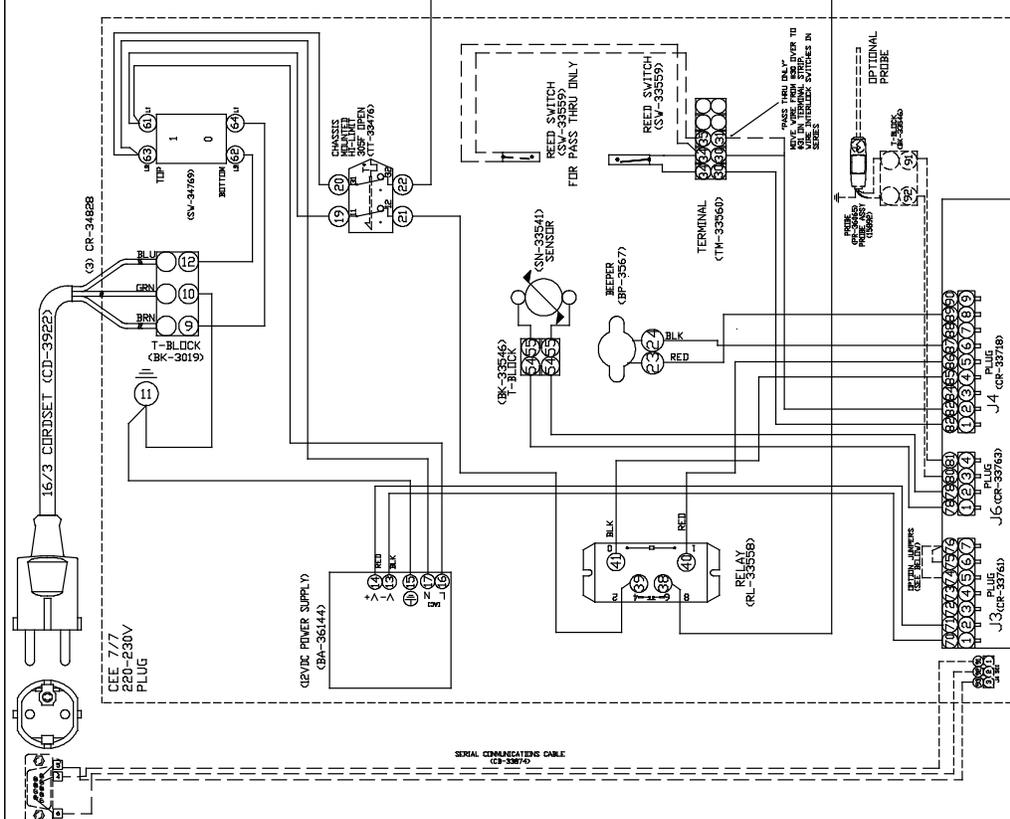
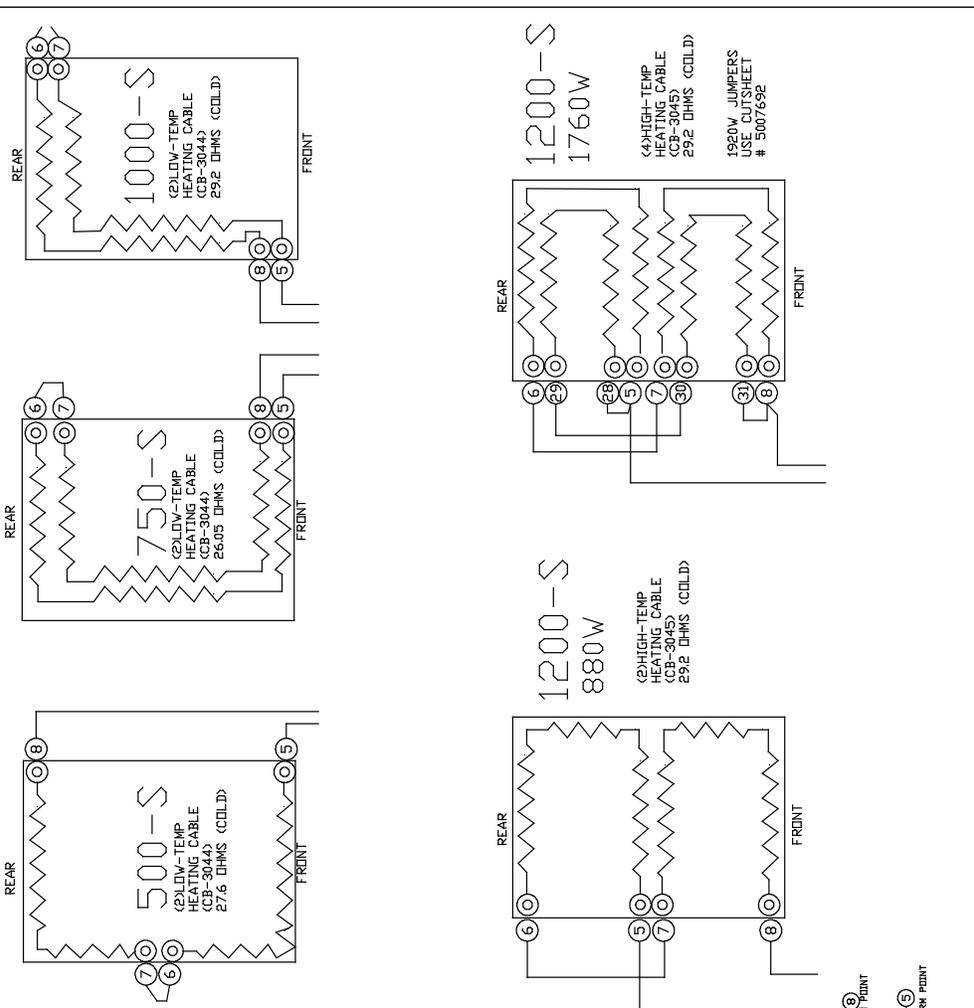
NOTE #2: SEE DRW. 5006457  
FOR WIRE ASSEMBLIES

NOTE #3: USE FIXTURE 67956

16	6722	Power Supply Illustration	9/09/13	TJG
15	6732	Door Switch Upgrade	6/16/13	TJG
14	6740/6738	PROBE / POWER SUPPLY UPGRADES	6/08/13	TJG
REV	ECO	DESCRIPTION	DATE	APP
500.7750.1000.1200-S ELEC 120V 60HZ				
<b>ALTO-SHAAM</b>			<b>WIRING DIAGRAM</b>	
BY: MS DATE: 02/13/07			DWG: 7862	
			SHEET 1_DF_1	



TOP VIEW OF CABLE CONFIGURATION



15	6722	Power Supply Illustration	9/09/13	TJG
14	6732	Door Switch Upgrade	6/16/13	TJG
13	6707B	Probe/ Power Supply Upgrade	6/08/13	TJG
REV	ECO	DESCRIPTION	DATE	APP
		500,750,1000,1200-S ELEC 230V 50HZ		
<b>ALTO-SHAAM</b>				
BY: E.D.F. DATE: 3/20/07				DWG: 7863
				SHEET 1_OF_1

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

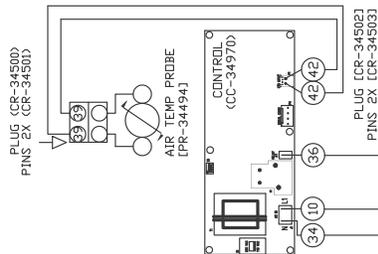
NOTE #2: SEE DRW. 5006488 FOR WIRE ASSEMBLIES

NOTE #3: Use fixture 67956

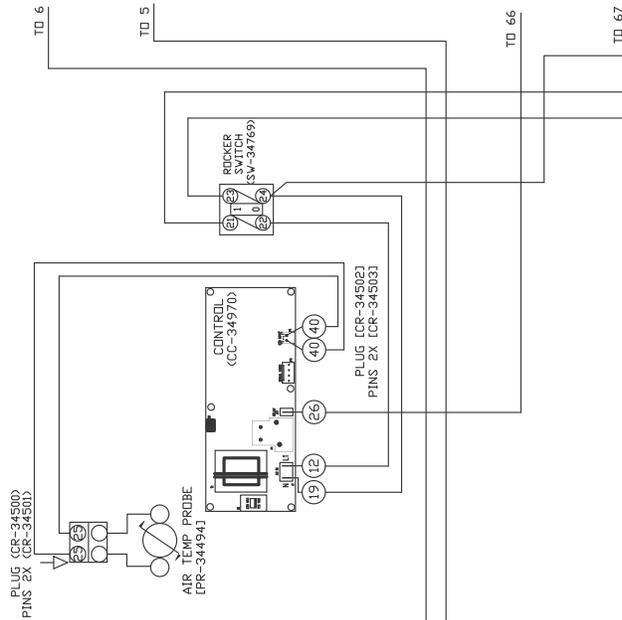
VIEW FROM REAR OF BONNET

(FRONT)

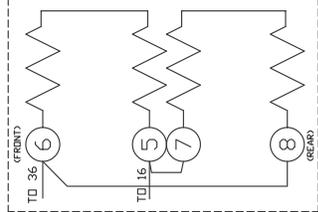
UPPER CONTROLS



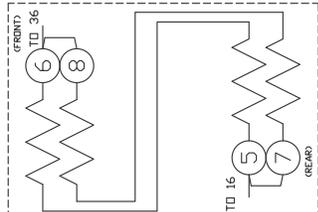
LOWER CONTROLS



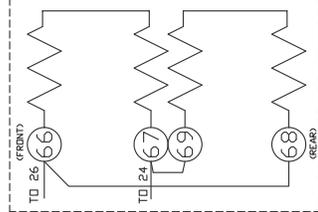
1200-UP UPPER  
HI-TEMP  
HEATING CABLE  
2 LENGTHS OF (CB-3045)  
29.2 OHMS EA COLD  
30 OHMS EA HOT



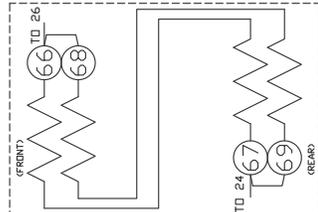
1000-UP UPPER  
LOW-TEMP  
HEATING CABLE  
2 LENGTHS OF (CB-3044)  
29.2 OHMS EA COLD  
30 OHMS EA HOT



1200-UP LOWER  
HI-TEMP  
HEATING CABLE  
2 LENGTHS OF (CB-3045)  
29.2 OHMS EA COLD  
30 OHMS EA HOT

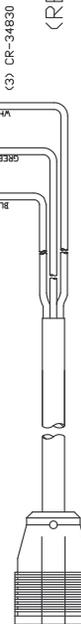


1000-UP LOWER  
LOW-TEMP  
HEATING CABLE  
2 LENGTHS OF (CB-3044)  
29.2 OHMS EA COLD  
30 OHMS EA HOT



DESIGN	VOLTS	WATTS	AMPS
F	120V	1920W	16A
C	120V	1920W	16A

PLUG, NEMA 5-20P  
20 AMP 125 VOLTS



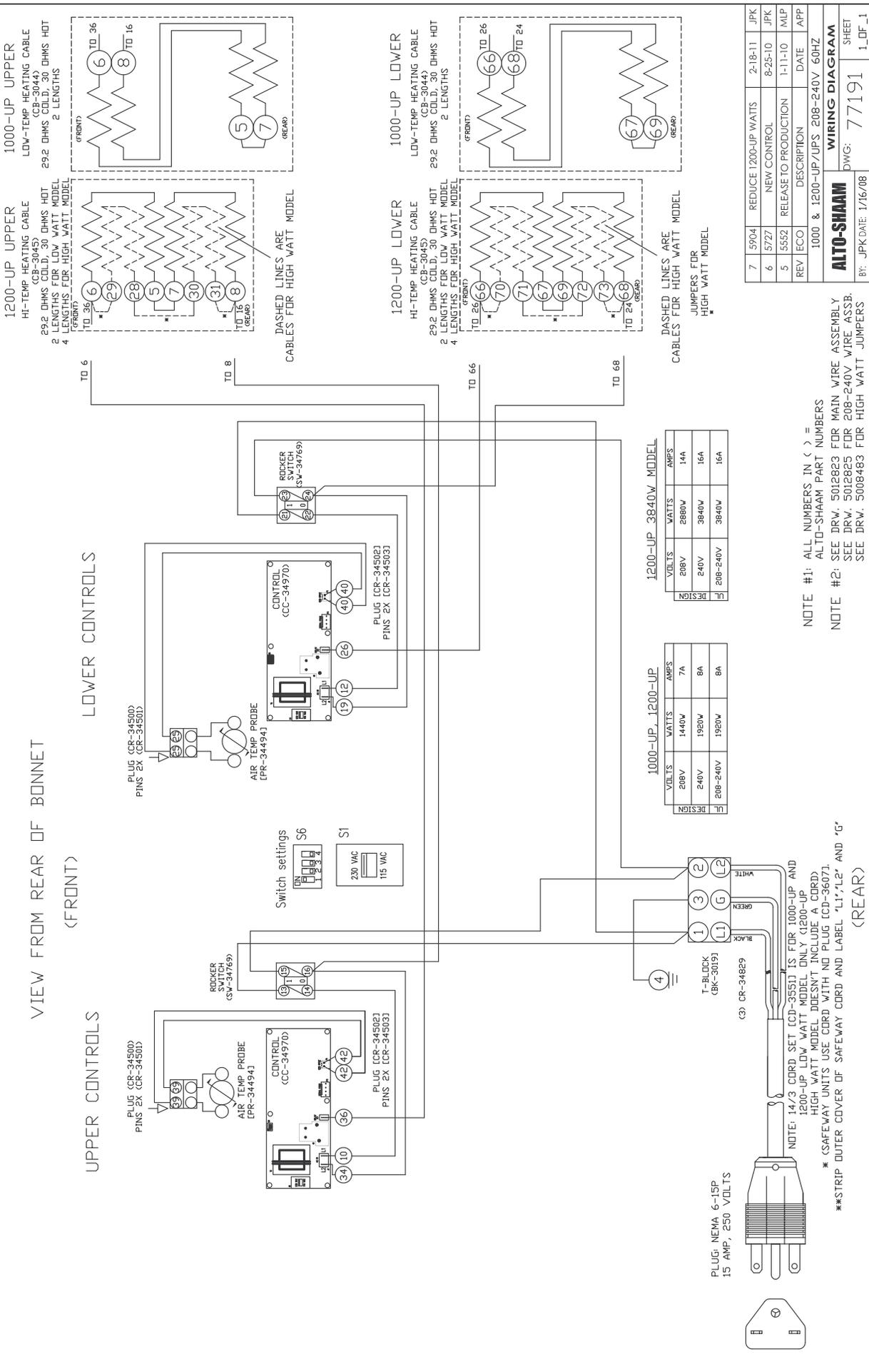
(REAR)

NOTE #1: ALL NUMBERS IN ( ) =  
ALTO-SHAM PART NUMBERS  
NOTE #2: SEE DRW. 5012823 FOR MAIN WIRE ASSEMBLY  
SEE DRW. 5012824 FOR 120V WIRE ASSEMBLY

REV	ECO	DESCRIPTION	DATE	APP
6	5904	REMOVE HTG CABLE LENGTHS	2-18-11	JPK
5	5727	NEW CONTROL	8-25-10	JPK
4	5552	RELEASE TO PRODUCTION	1-11-10	MJP
3				
2				
1				

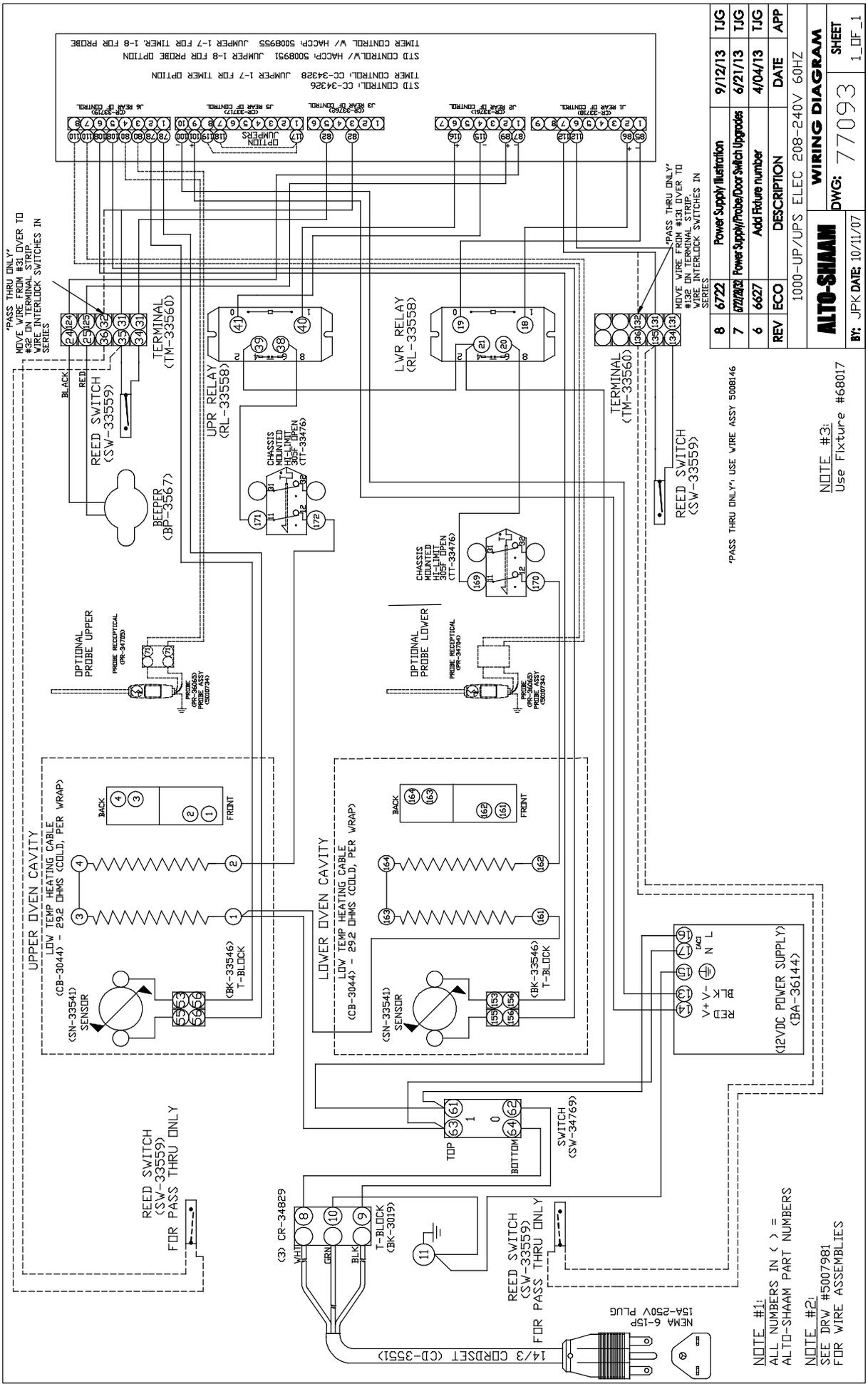
1000 & 1200-UP/UPS 120V 60HZ

**ALTO-SHAM** WIRING DIAGRAM  
BY: JPK DATE: 1/16/08 DWG: 77190 SHEET 1\_DF\_1









REV	ECO	DESCRIPTION	DATE	APP
8	6722	Power Supply Illustration	9/12/13	TJG
7	6722/23	Power Supply/Probe/Door Switch Upgrade	6/21/13	TJG
6	6627	Add Fixture number	4/04/13	TJG

REV	ECO	DESCRIPTION	DATE	APP
1000-UP/UPS	ELEC	1000-UP/UPS ELEC 208-240V 60HZ		

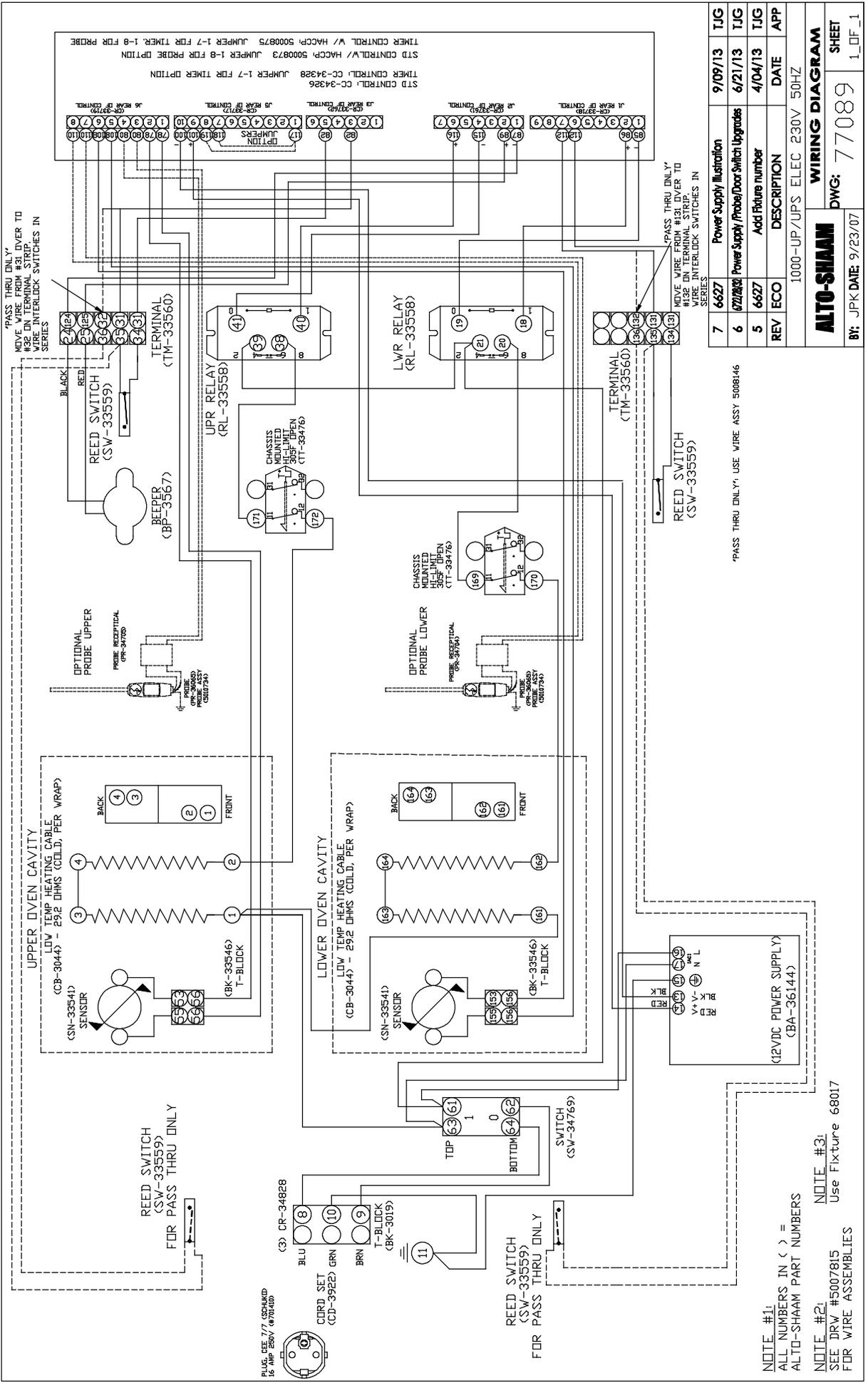
  

<b>WIRING DIAGRAM</b>	
DWG: 77093	SHEET 1_OF_1

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

NOTE #2:  
SEE DRW #5007981  
FOR WIRE ASSEMBLIES

NOTE #3:  
Use Fixture #68017



Power Supply Illustration	9/09/13	TJG		
6627	6/21/13	TJG		
6727/2828	4/04/13	TJG		
5		APP		
REV	ECO	DESCRIPTION	DATE	APP
		1000-UP/UPS	ELEC. 230V 50HZ	

**ALTO-SHAAM**  
 DWG: 77089  
 WIRING DIAGRAM  
 BY: JPK DATE: 9/23/07  
 SHEET 1\_OF\_1

\*PASS THRU ONLY\* USE WIRE ASSY 5008146

\*PASS THRU ONLY\* MOVE WIRE FROM #31 OVER TO #132 ON TERMINAL STRIP. USE INTERLOCK SWITCHES IN SERIES.

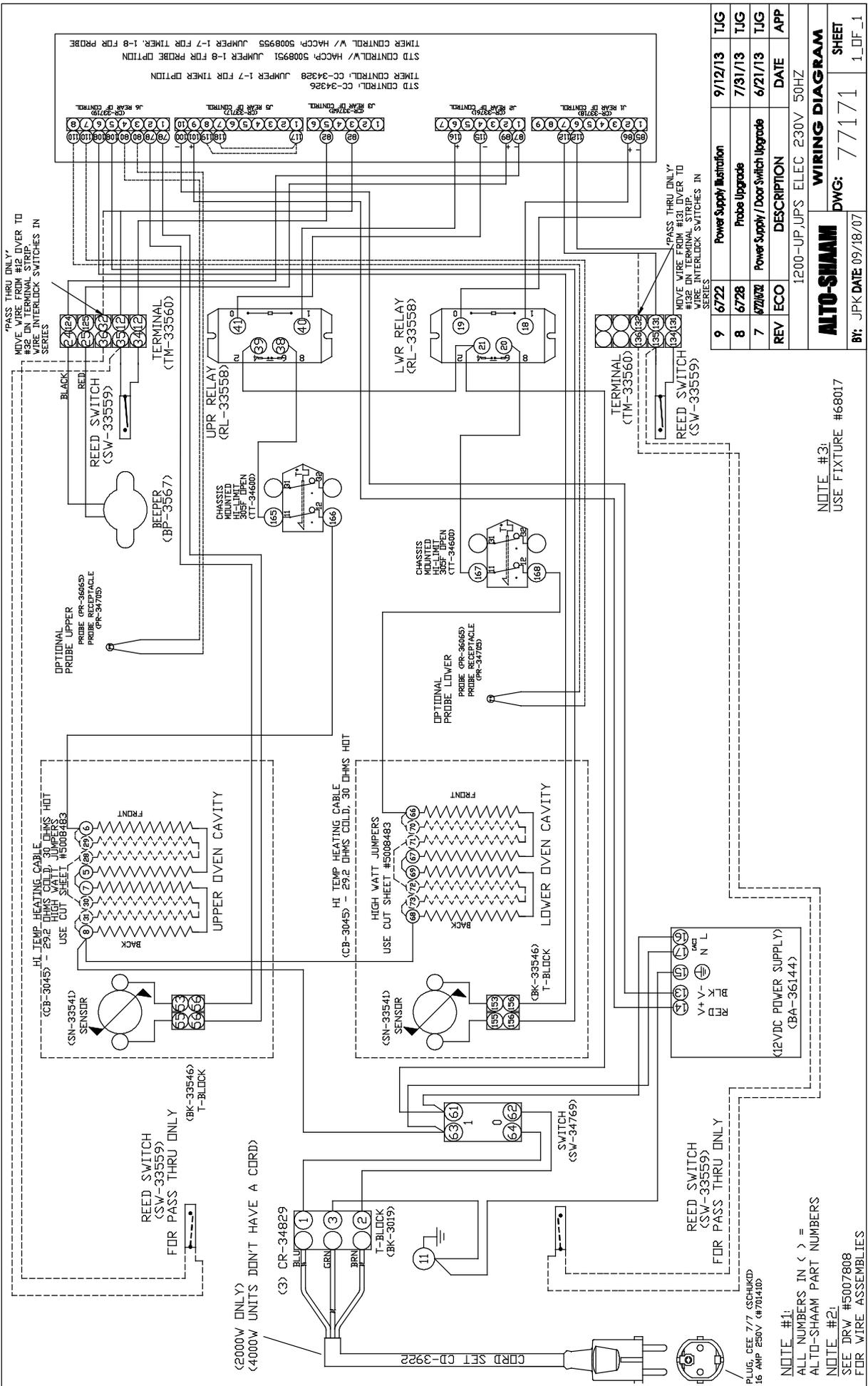
NOTE #1:  
 ALL NUMBERS IN ( ) =  
 ALTO-SHAAM PART NUMBERS

NOTE #2:  
 SEE DRW #5007815  
 FOR WIRE ASSEMBLIES

NOTE #3:  
 Use Fixture 68017







REV	ECO	DESCRIPTION	DATE	APP
9	6722	Power Supply Illustration	9/12/13	TJG
8	6728	Probe Upgrade	7/31/13	TJG
7	672073	Power Supply / Door Switch Upgrade	6/21/13	TJG

REV	ECO	DESCRIPTION	DATE	APP
1200-UP,UPS	ELEC	230V 50HZ		

WIRING DIAGRAM	
DWG:	77171
SHEET	1_OF_1

# 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.

## LIMITED WARRANTY

Alto-Shaam, Inc. warrants to the original purchaser only that any original part that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

### The original parts warranty period is as follows:

For the refrigeration compressor on Alto-Shaam Quickchillers™, five (5) years from the date of installation of appliance.

For the heating element on Halo Heat® cooking and holding ovens, as long as the original purchaser owns the oven. This excludes holding only equipment.

For all other original parts, one (1) year from the date of installation of appliance or fifteen (15) months from the shipping date, whichever occurs first.

The labor warranty period is one (1) year from the date of installation or fifteen (15) months from the shipping date, whichever occurs first.

Alto-Shaam will bear normal labor charges performed during standard business hours, excluding overtime, holiday rates or any additional fees.

To be valid, a warranty claim must be asserted during the applicable warranty period. This warranty is not transferable.

### THIS WARRANTY DOES NOT APPLY TO:

1. Calibration.
2. Replacement of light bulbs, door gaskets, and/or the replacement of 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, including but not limited to, equipment subjected to harsh or inappropriate chemicals, including but not limited to, compounds containing chloride or quaternary salts, poor water quality, or equipment with missing or altered serial numbers.
5. Damage incurred as a direct result of poor water quality, inadequate maintenance of steam generators and/or surfaces affected by water quality. Water quality and required maintenance of steam generating equipment is the responsibility of the owner/operator.
6. Damage caused by use of any cleaning agent other than Alto-Shaam's Combitherm® Cleaner, including but not limited to damage due to chlorine or other harmful chemicals. **Use of Alto-Shaam's Combitherm® Cleaner on Combitherm® ovens is highly recommended.**
7. Any losses or damage resulting from malfunction, including loss of product, food product, revenue, or consequential or incidental damages of any kind.
8. 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, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. In no event shall Alto-Shaam be liable for loss of use, loss of revenue or profit, or loss of product, or for any indirect, special, incidental, or consequential damages. No person except an officer of Alto-Shaam, Inc. is authorized to modify this warranty or to incur on behalf of Alto-Shaam any other obligation or liability in connection with Alto-Shaam equipment.



Effective November 1, 2012

RECORD THE MODEL AND SERIAL NUMBER OF THE APPLIANCE FOR EASY REFERENCE.

ALWAYS REFER TO BOTH MODEL AND SERIAL NUMBER IN ANY CONTACT WITH ALTO-SHAAM REGARDING THIS APPLIANCE.

Model: \_\_\_\_\_ Date Installed: \_\_\_\_\_  
Voltage: \_\_\_\_\_ Purchased From: \_\_\_\_\_  
Serial Number: \_\_\_\_\_

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

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