ALTO-SHAAM®

Hot Food Holding Cabinet
Deluxe or Simple Control

ecosmart®



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

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

W164 N9221 Water Street • P.O. Box 450
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www.alto-shaam.com

Consult instructions for operation and use.

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

HALO HEAT®

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Wire Diagrams
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Warranty
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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 be delivered in one or more packages. Ensure all standard items and options have been received with each model as ordered.

Save all the information packed with the appliance. Register online at www.alto-shaam.com 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.

1-800-558-8744; servicedept@alto-shaam.com

Serial number is required for all inquiries.

Always include both model and serial number(s) in any correspondence regarding the appliance.

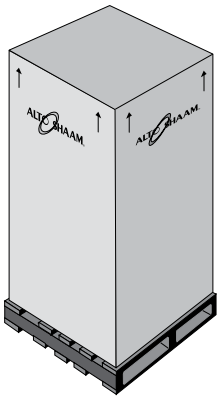
Model: _____

Serial Number: _____

Purchased From: _____

Date Installed: _____ **Voltage:** _____

Unpacking



- Carefully remove the appliance from the carton or crate.

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

- Read all instructions in this manual carefully before installing this appliance, using the appliance or performing routine maintenance. Following procedures other than those indicated in this guide to use and clean the appliance is considered inappropriate and may cause damage, injury or fatal accidents, in addition to invalidating the guarantee and relieving Alto-Shaam of all liability.
- DO NOT DISCARD THIS MANUAL.
  This manual is considered part of the appliance and is provided for the owner or manager of the business and for training personnel. ***Additional manuals are available from the Alto-Shaam Tech Team Service Department.***
- 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.

CAUTION



Appliance and accessories may be heavy. To prevent serious injury, **always** use a sufficient number of trained and experienced workers when moving or leveling appliance and handling accessories.

ENVIRONMENTAL CONDITIONS

- Operational Environmental Conditions
- Unit must acclimate to room temperature in the environment it is placed. 24 hours is recommended.
- Ambient temperature range of 60°F to 110°F (16°C to 43°C).
- Relative humidity of less than 95% non-condensation.
- Atmospheric pressure range of 50KPa to 106KPa.

Safety Procedures and Precautions

- This appliance is intended to cook, hold or process foods for the purpose of human consumption. No other use for this appliance is authorized and is therefore considered dangerous. The appliance must not be used to cook food containing flammable materials (such as food with alcohol). Substances with a low flash point can ignite spontaneously and cause a fire.
- 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. We recommend regular training of your staff to avoid the risk of accident or damage to the unit. Operators must also receive regular safety instructions.
- Any trouble shooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified and trained technicians.
- 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.

NOTICE: **For equipment delivered for use in any location regulated by the following directive: 2012/95/EC WEEE**



DO NOT dispose of electrical or electronic equipment with other municipal waste.

Knowledge of proper procedures is essential to the safe operation of electrically and/or gas energized equipment. The following hazard signal words and symbols may be used throughout this manual.

DANGER



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.

WARNING



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.

CAUTION



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.

CAUTION

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.

NOTICE: **Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.**



Used to indicate that referral to operating instructions is a mandatory action. If not followed the operator could suffer personal injury.



Used to indicate that referral to operating instructions is recommended to understand operation of equipment.

Additional Safety Procedures and Precautions

- To prevent serious injury, death or property damage, your appliance should be inspected and serviced at least every twelve (12) months by an authorized service partner or trained technician.
- ONLY allow an authorized service partner or trained technician to service or to repair your appliance. Installation or repairs that are not performed by an authorized service partner or trained technician, or the use of non-factory authorized parts will void the warranty and relieve Alto-Shaam of all liability.
- When working on this appliance, observe precautions in the literature, on tags, on labels attached to or shipped with the appliance and other safety precautions that may apply.
- If the appliance is installed on casters freedom of movement of the appliance must be restricted so that utility connections (including gas, water, and electricity) cannot be damaged when the unit is moved. If the appliance is moved, make sure that all utility connections are properly disconnected. If the unit is returned to its original position, make sure that any retention devices and utility connections are properly connected.
- ONLY use the appliance when it is stationary. Mobile oven racks, mobile plate racks, transport trolleys, and appliances on casters can tip over when being moved over an uneven floor or threshold and cause serious injury.
- ALWAYS apply caster brakes on mobile appliances or accessories when these are not being moved. These items could move or roll on uneven floors and cause property damage or serious injury.
- Be extremely careful when moving appliances because the food trays may contain hot fluids that may spill, causing serious injury.
- ALWAYS open the appliance door very slowly. Escaping hot vapors or steam can cause serious injury or death.

WARNING



To prevent **serious personal injury**, **death**, or **property damage**:

The appliance must be cleaned thoroughly to avoid deposits of grease and or food residues inside the appliance that may catch fire. If fat deposits and/or food waste inside the appliance ignite, shut down the appliance immediately and keep the appliance door closed to extinguish the fire. If further extinguishing is required, disconnect the appliance from the main power and use a fire extinguisher (do not use water to extinguish a grease fire!). Failure to clean the appliance properly invalidates the warranty and relieves Alto-Shaam of all liability.

WARNING



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

INSTALLATION

WARNING



Improper installation, alteration, adjustment, service, cleaning, or maintenance could result in PROPERTY DAMAGE, SEVERE INJURY, or DEATH.

Read and understand the installation, operating and maintenance instructions thoroughly before installing, servicing, or operating this equipment.

CAUTION



Appliance and accessories may be heavy. To prevent serious injury, **always** use a sufficient number of trained and experienced workers when moving or leveling appliance and handling accessories.

CAUTION



To prevent **personal injury** or **property damage**:

Always use hand protection when operating this appliance to avoid burns. Metal parts of this equipment become extremely hot when in operation.

WARNING

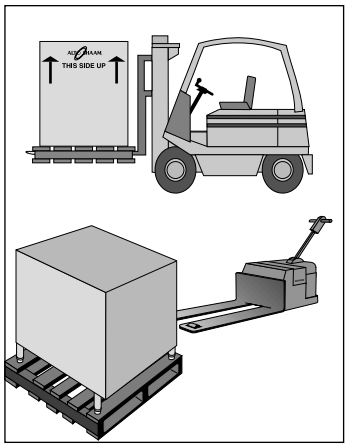


For your safety

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.



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.

1. The appliance must be installed on a stable and level surface free of vibration and suitably strong enough to support the combined weights of the unit plus the maximum product load weight.
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. This appliance must be kept free and clear of any combustible materials.
4. This appliance must be kept free and clear of any obstructions blocking access for maintenance or service.

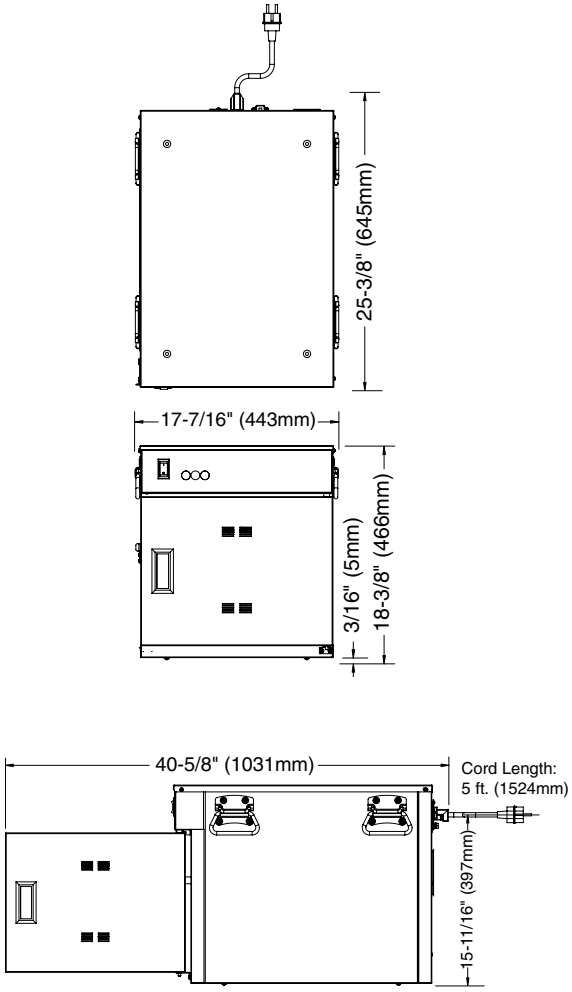
MINIMUM CLEARANCE REQUIREMENTS	
BACK	3" (76mm)
LEFT SIDE	1" (25mm)
RIGHT SIDE	1" (25mm)
TOP	2" (51mm)

NOTICE

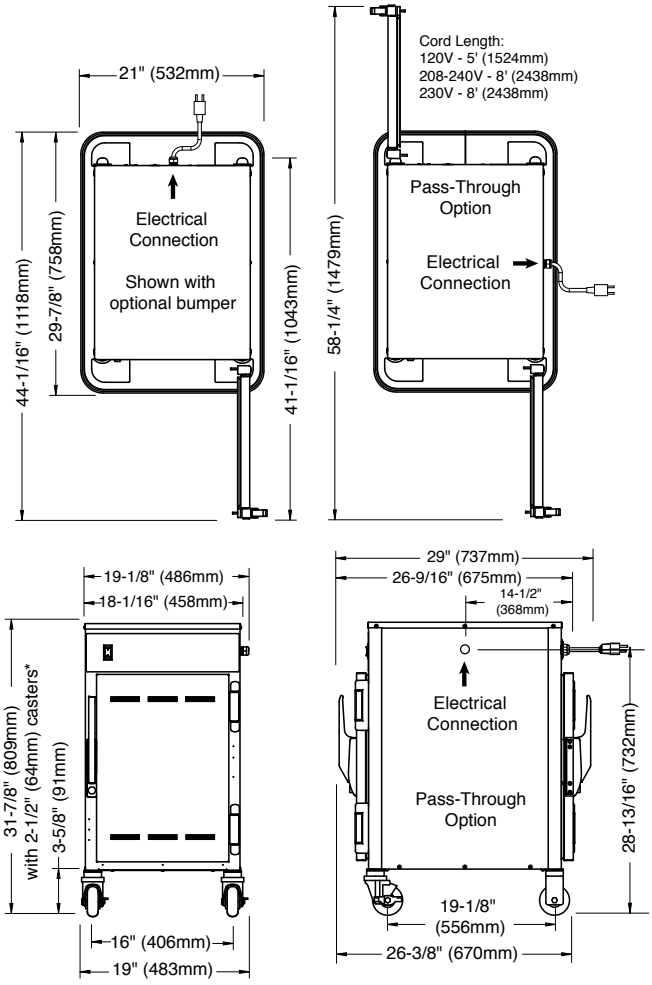
If the appliance has been unplugged for an extended period of time, the Real Time Clock may require recharging. Turn main breaker to the unit off for 10 seconds and then restore power. For more information, see Error Code E-60 in the Troubleshooting section of this manual.

INSTALLATION

Model 300-S



Model 500-S



*33-3/8" (848mm) - with optional 3-1/2" (89mm) casters
*35-1/4" (894mm) - with optional 5" (127mm) casters
*33-3/4" (857mm) - with optional 6" (152mm) legs

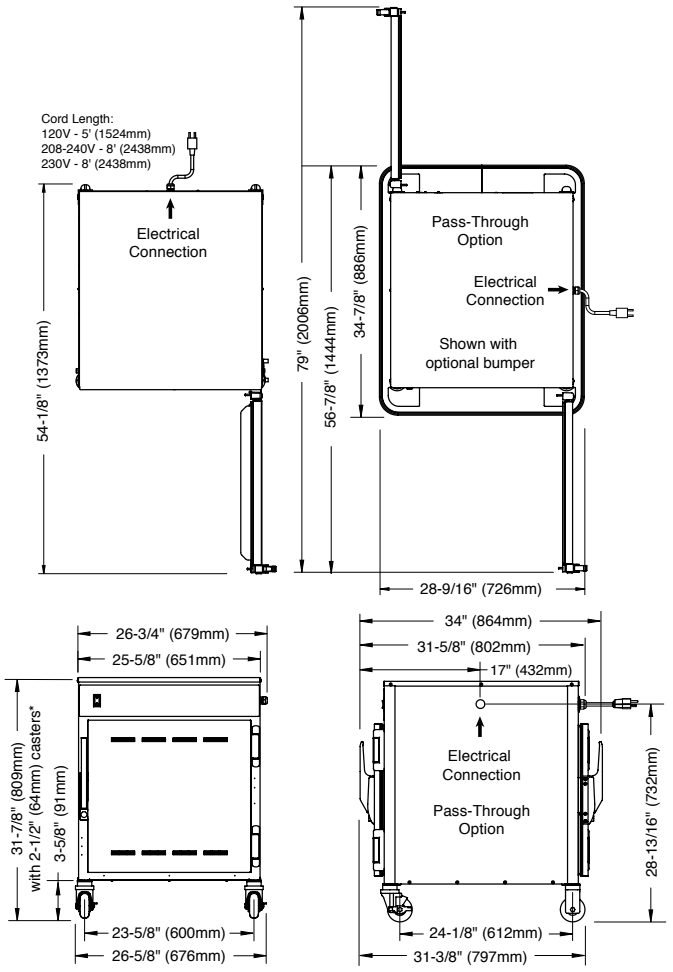
WEIGHTS AND CAPACITIES

300-S		
WEIGHT		
NET	65 lb (29 kg)	
SHIP	125 lb (57 kg)	
CAPACITY		
36 lbs (16 kg) MAXIMUM		
VOLUME MAXIMUM: 22.5 QUARTS (28,5 LITERS)		
	FULL-SIZE PANS:	**GASTRONORM 1/1:**
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		
	HALF-SIZE PANS:	
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)

500-S		
WEIGHT		
NET	110 lb (50kg) EST.	
SHIP	150 lb (68kg)	
CAPACITY		
60 lbs (27 kg) MAXIMUM		
VOLUME MAXIMUM: 50 QUARTS (47.5 LITERS)		
FULL-SIZE PANS:		**GASTRONORM 1/1:**
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
HALF-SIZE SHEET PANS:		
Eleven (11)	18" x 13" x 1"	457mm x 330mm x 25mm

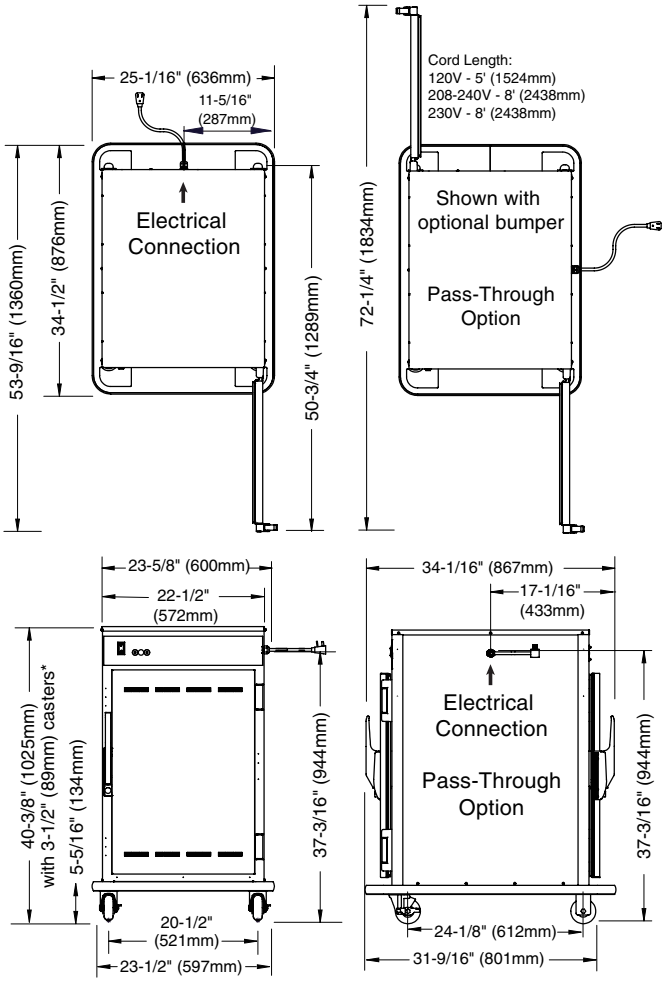
INSTALLATION

Model 750-S



*33-3/8" (848mm) - with optional 3-1/2" (89mm) casters
*35-1/4" (894mm) - with optional 5" (127mm) casters
*33-3/4" (857mm) - 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

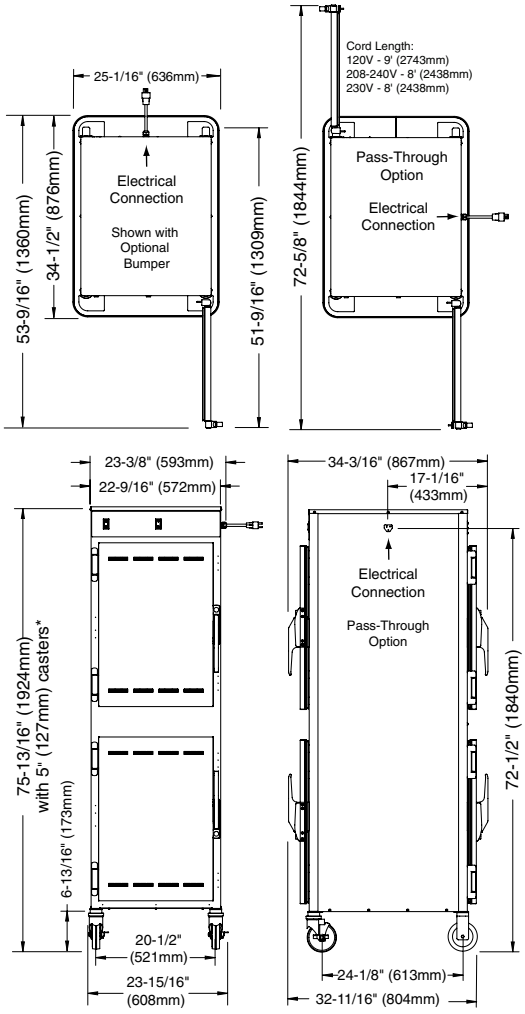
WEIGHTS AND CAPACITIES

750-S	
WEIGHT	
NET	157 lb (69kg)
SHIP	228 lb (103kg) EST.
CAPACITY	
120 lbs (54 kg) MAXIMUM	
VOLUME MAXIMUM: 100 QUARTS (95 LITERS)	
FULL-SIZE PANS:	**GASTRONORM 1/1:**
Ten (10) 20" x 12" x 2-1/2"	530mm x 325mm x 65mm
Six (6) 20" x 12" x 4"	530mm x 325mm x 100mm
Four (4) 20" x 12" x 6"	530mm x 325mm x 150mm
FULL-SIZE SHEET PANS (ON WIRE SHELVES ONLY):	
Up to Six (6) 18" x 26" x 1" – *WITH ADDITIONAL SHELVES*	

1000-S	
WEIGHT	
NET	175 lb (79kg) EST.
SHIP	223 lb (101kg) EST.
CAPACITY	
120 lbs (54kg) MAXIMUM	
VOLUME MAXIMUM: 60 QUARTS (76 LITERS)	
FULL-SIZE PANS:	**GASTRONORM 1/1:**
Four (4) 20" x 12" x 2-1/2"	530mm x 325mm x 65mm
— ON OPTIONAL WIRE SHELVES ONLY	
FULL-SIZE SHEET PANS:	
Eight (8) 18" x 26" x 1"	

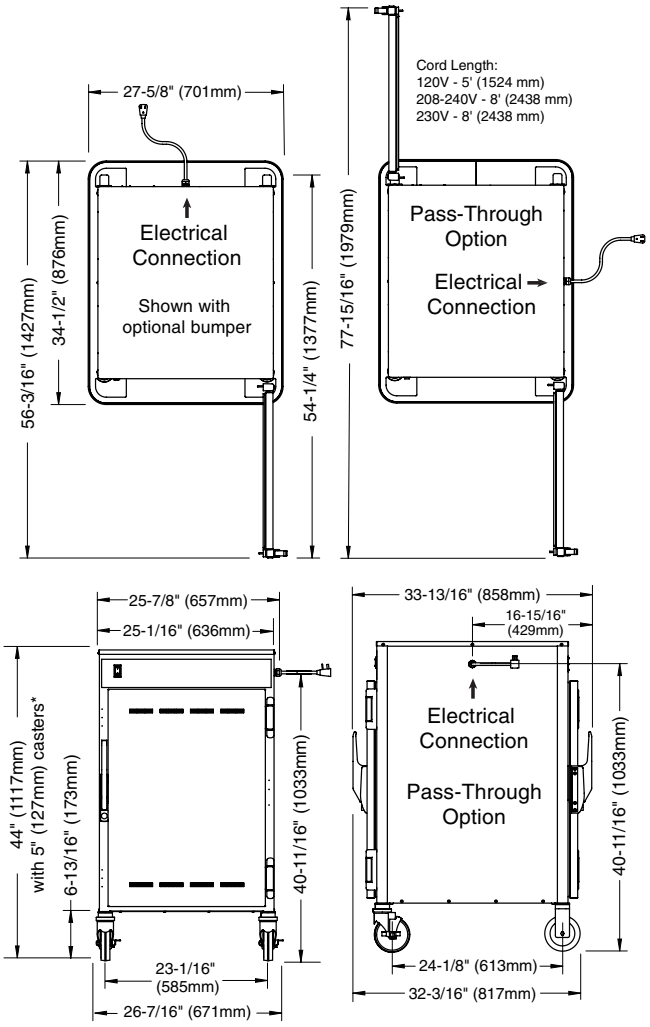
INSTALLATION

Model 1000-UP



*74-1/16" (1881mm) - with optional 3-1/2" (89mm) casters
*75-5/8" (1921mm) - with optional 6" (152mm) legs

Model 1200-S



*45-11/16" (1161mm) - with optional 3-1/2" (89mm) casters
*43-7/8" (1113mm) - with optional 6" (152mm) legs

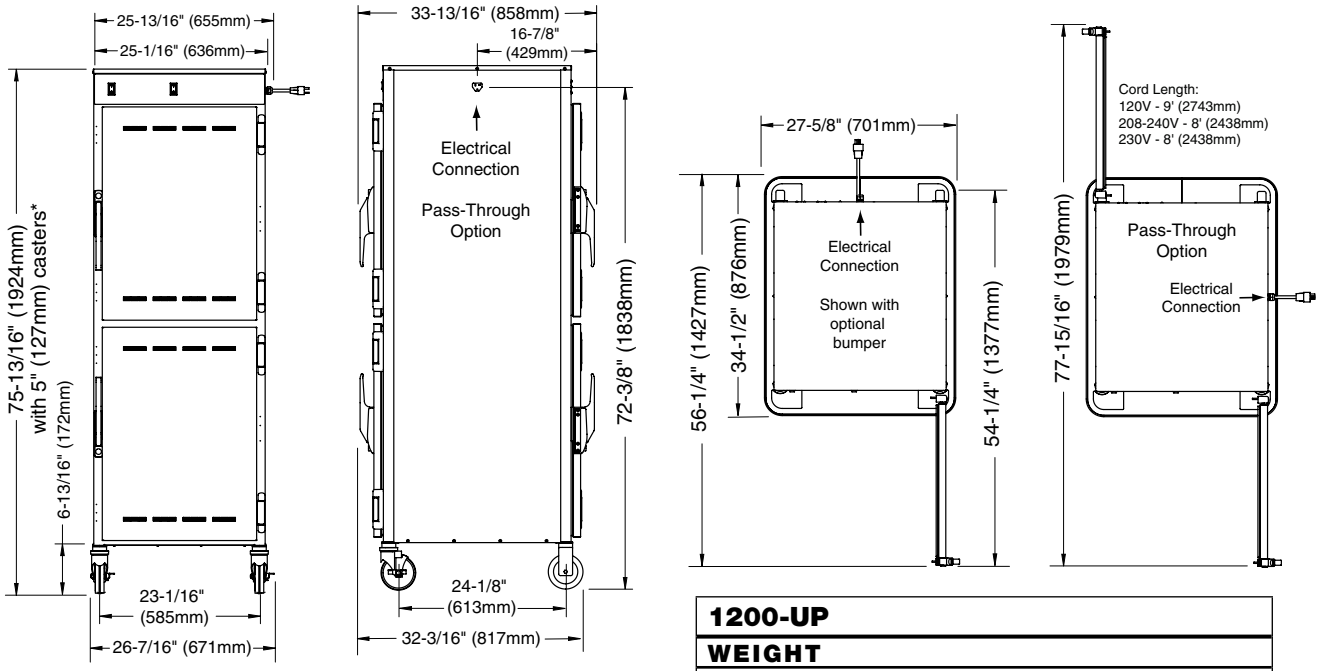
WEIGHTS AND CAPACITIES

1000-UP	
WEIGHT	
NET	282 lb (128kg)
SHIP	360 lb (163kg) EST.
CAPACITY (PER COMPARTMENT)	
120 lbs (54kg) MAXIMUM VOLUME MAXIMUM: 60 QTS (76 LITERS)	
FULL-SIZE PANS: Four (4) 20" x 12" x 2-1/2" — ON OPTIONAL WIRE SHELVES ONLY	GASTRONORM 1/1: 530mm x 325mm x 65mm
FULL-SIZE SHEET PANS: Eight (8) 18" x 26" x 1"	

1200-S	
WEIGHT	
NET	179 lb (81kg) EST.
SHIP	224 lb (102kg) EST.
CAPACITY	
SEE NEXT PAGE	

INSTALLATION

Model 1200-UP



*74-1/16" (1881mm) - with optional 3-1/2" (89mm) casters
*75-5/8" (1921mm) - with optional 6" (152mm) legs

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

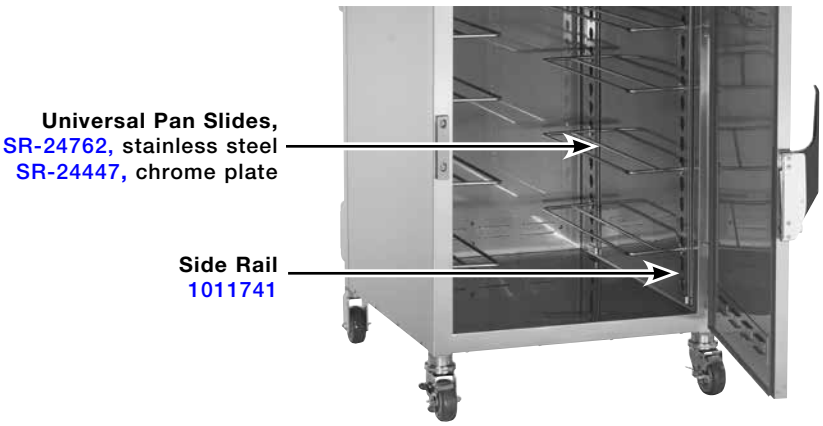
1200-S, 1200-UP CAPACITIES

CAPACITY - 1200-S, 1200-UP (PER COMPARTMENT)		
192 lbs (87kg) MAXIMUM • VOLUME MAXIMUM: 120 QUARTS (152 LITERS)		
Pan slides (2 per set) - 1-3/4" (44mm) centers		
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
Side Racks and Shelves		
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

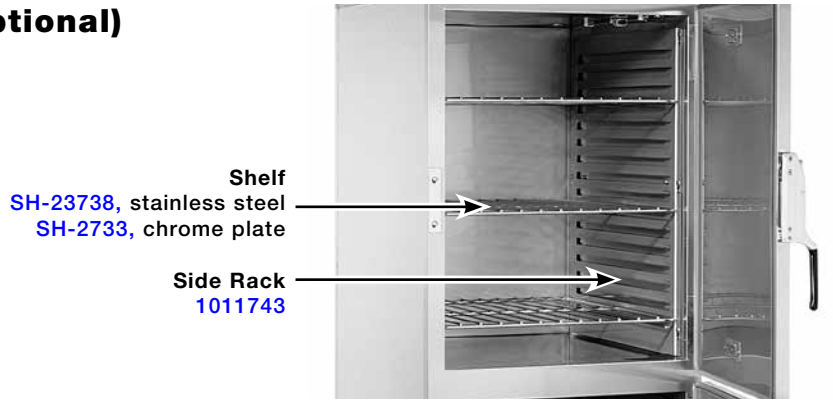
UNIVERSAL PAN SLIDES

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



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.



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).

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)	—	STANDARD	STANDARD	5008022	—	—	—
Caster Package 3-1/2" (89mm)	—	5008017	5008017	STANDARD	5008017	5008017	5008017
Caster Package 5" (127mm)	—	5004862	5004862	5004862	STANDARD	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	5014448
Drip Pan without Drain	PN-2122	11898	1014684	11906	—	11906	—
Drip Tray, Door	—	5010736	5010391	5009716	—	—	—
Deluxe Control (FACTORY INSTALLED)	—	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
Exterior Color Options Stainless Steel	—	STANDARD	—	—	—	—	—
Exterior Color Options Burgundy		AVAILABLE					
Exterior Color Options 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	—	SH-2733
Chrome Wire, Pass-Through	—	—	SH-2327	—	—	—	—
Stainless Steel Wire	—	SH-2326	SH-2324	SH-2325	SH-23738	SH-2325	SH-23738
Stainless Steel, Rib Rack	—	—	SH-2743	—	—	—	—
Stainless Steel, Pass-Through	—	—	—	SH-2346	—	SH-2346	—
Side Rack Kit (FACTORY INSTALLED)	—	—	—	—	AVAILABLE	—	AVAILABLE
Stacking Hardware S-Series over S-Series	—	5004864	5004864	5004864	5004864	—	—
XL-300 over S-Series	—	—	5019677	5019677	—	—	—
XL-400 over S-Series	—	—	5019678	—	—	—	—
CTX4-10 over S-Series	—	—	5019679	5019679	—	—	—
Universal Angle Pan Slides Chrome	—	—	—	—	SR-24447	—	SR-24447
Universal Angle Pan Slides Stainless Steel	—	—	—	—	SR-24762	—	SR-24762
Water Reservoir, Pan	—	—	—	1775	1775	1775	1775
Water Reservoir, Pan Cover	—	—	—	1774	1774	1774	1774

INSTALLATION

STACKING INSTRUCTIONS

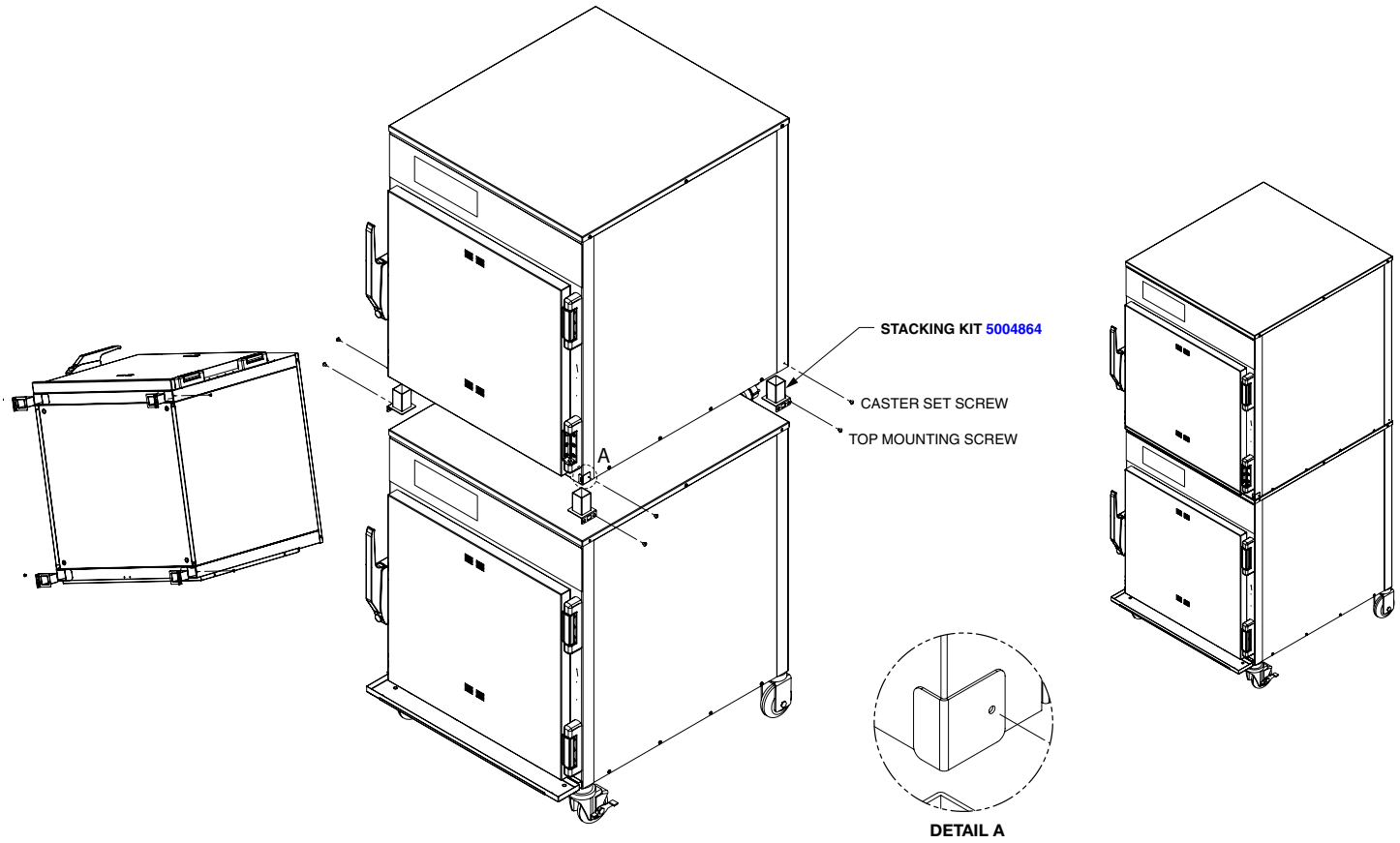
1) If the two appliances were shipped together from the factory, the top unit will have the casters already removed. A stacking kit will be included with the shipment.

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. Use template 68696 to locate set screw hole. Drill with #30 Bit and Tap 8-32.

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.



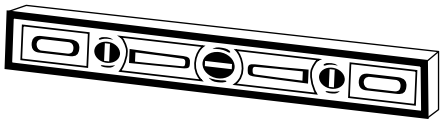
Stacking Configurations	
Model	**Can be stacked with:**
300-S	300-S or 300-TH/III No Stacking Hardware needed. Align dimples at top and bottom of units. It is recommended that the legs be removed from the top unit before stacking.
500-S	500-S, 500-TH-II or 500-TH/III
750-S	750-S, 750-TH-II, 750-TH/III, 767-SK, 767-SK/III, XL-300, XL-400, CTX4-10
1000-S	1000-S, 1000-TH/III, 1000-SK/II, 1000-SK/III, XL-300, CTX4-10
1200-S	1200-S

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



Place the oven on a stable, non-combustible level horizontal surface. For ovens installed with casters, it is important that the floor surface be level due to the probability of frequent oven repositioning.

Level the oven from side-to-side and front-to-back with the use of a spirit level.

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

RESTRAINT REQUIREMENTS —MOBILE EQUIPMENT

WARNING



ELECTRIC SHOCK HAZARD.

To prevent SERIOUS INJURY or DEATH, your appliance must be secured to building structure to prevent unintended movement.

Any appliance that is not furnished with a power supply cord but 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:

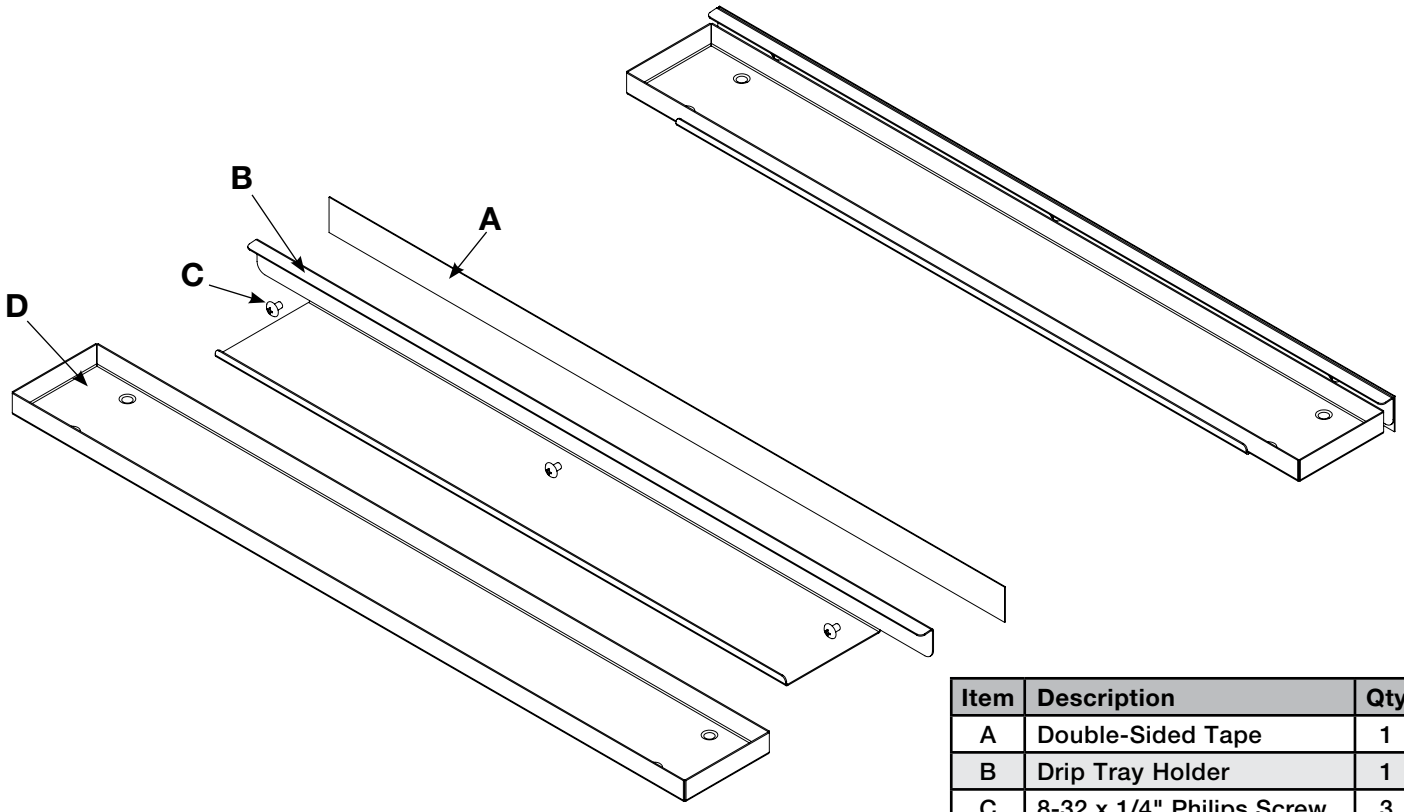
1. Casters must be a maximum height of 6" (152mm).
2. Two of the casters must be the locking type.
3. Such mobile appliances or appliances on mobile stands must be installed with the use of a flexible connector secured to the building structure.

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" Philips 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 the front of the appliance.
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**.

⚠ WARNING



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.

INSTALLATION

ELECTRICAL

This section is provided for the assistance of qualified and trained service technicians only and is not intended for use by untrained or unauthorized service personnel. Failure to observe this precaution may void the warranty.

CAUTION

Power source must match voltage identified on appliance rating tag. The rating tag provides essential technical information required for any appliance installation, maintenance or repairs. Do not remove, damage or modify the rating tag.

WARNING

To prevent SERIOUS INJURY, DEATH, or PROPERTY DAMAGE:

All electrical connections must be made by a qualified and trained service technician in accordance with applicable electrical codes.

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.

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.



For CE approved appliances: 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.

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

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	 AS/NZS 3112 PLUG RATED 250V
300-S											
120V	1	60	6.7	.80	✓						
230V	1	50/60	3.9	.80				✓	✓	✓	
500-S											
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				✓	✓	✓	✓
750-S											
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				✓	✓	✓	✓
1000-S											
120V	1	60	8.0	.96	✓						
208V 240V	1	60	3.5 4.0	.72 .96			✓				
230V	1	50/60	3.9	.88				✓	✓	✓	✓
1200-S											
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				✓	✓	✓	✓
1000-UP											
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				✓	✓	✓	✓
1200-UP											
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				✓	✓	✓	✓

Other plugs are available. Contact factory for more information.

Cord Length: 120V - 6 ft. (1.8m) 208-240V - 9 ft. (2.7m) 230V - 8ft. (2.5m)

OPERATION

SIMPLE CONTROL

1. Preheat at 200°F (93°C) for 30 minutes before loading hot food.

Press power switch to ON. The unit will begin operating at the previous set temperature. Closing the vents on the inside of the door will speed the preheating process.

2. Using the Up or Down arrows, set the temperature to 200°F (93°). Pressing and releasing the arrows will increase the set point by 1 degree. Pressing and holding the arrows will increase set point by 10 degrees. When arrow 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** button 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** button at any time to display the alternate temperature.

When the inside air temperature reaches the set holding temperature, the **Heat Indicator** light will turn off.

3. 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°F to 160°F (60°C to 71°C). All food not within the proper temperature range should be heated before loading into the holding cabinet.

4. Reset the control to 160°F (71°C).

Check to ensure the cabinet door is securely closed, and reset to 160°F (71°C) by using the Up or Down arrows.

THIS WILL <u>NOT</u> 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. 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 ensure maintenance of the proper temperature range. Reset the holding temperature accordingly.

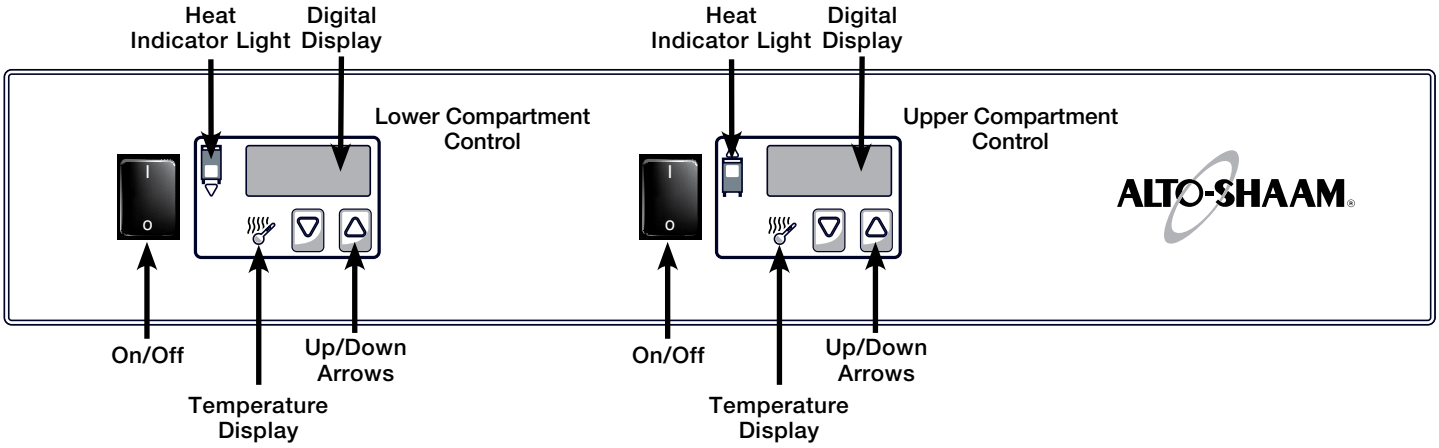
To toggle between Fahrenheit and Celsius

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

The factory default is Fahrenheit. To change to Celsius:

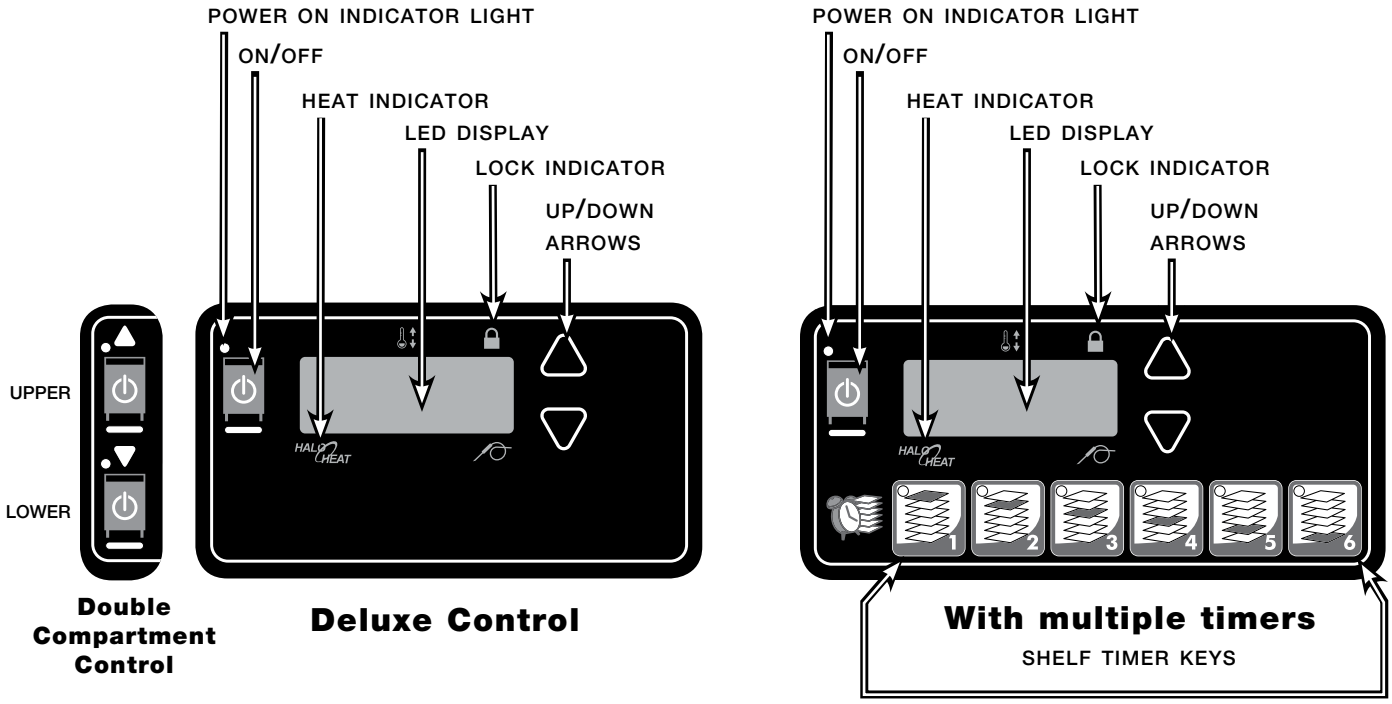
1. Press and hold the **Temperature Display** button and the **Down Arrow** for 5 seconds.
2. The control will show [°C] for 3 seconds to verify selection and then show the temperature. (Set Point or Actual, whichever the user has selected) in °C.
3. Repeat to toggle to Fahrenheit.

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 Button



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

Up/Down Arrows



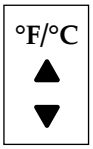
The Up or Down arrows are used for a variety of settings when selecting the holding temperature. If an arrow button is pressed and released the display will show the current set temperature for four seconds. If an arrow button is held (at least eight seconds), the value will change at a rapid rate. Pressing an arrow button when the set temperature is displayed will increase/decrease the temperature by 1°. Pressing and holding an arrow button 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 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 until either °F or °C is shown in LED display. Press either arrow button 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 button and the Up Arrow at the same time. The lock LED will illuminate. When the lock LED is illuminated, additional programming will not be functional other than the button sequence required to unlock the panel.

To unlock the display, press and hold the On/Off button and the Down Arrow at the same time. The lock LED will extinguish. The panel buttons will resume normal function.

OPERATION

DELUXE CONTROL OPERATION

1. **Preheat at 200°F (93°C) for 30 minutes before loading hot food.**
   Press power switch to On. The unit will begin operating at the previous set temperature.

2. Using the Up or Down arrows, set the temperature to 200°F (93°). Allow a minimum of 30 minutes preheating time before loading the holding cabinet with hot 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.

3. **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°F to 160°F (60°C to 71°C). All food not within the proper temperature range should be heated before loading into the holding cabinet.

4. **Reset the control to 160°F (71°C).**
   Check to ensure the cabinet door is securely closed, and reset to 160°F (71°C) by using the Up or Down arrows.

   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. 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 ensure maintenance of the proper temperature range. Reset the holding temperature accordingly.

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 accessory 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°F to 180°F (60°C 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 Oven Off.



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

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

2. Set Shelf Timer Buttons.



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

Time will display as HH:MM.

3. Set Additional Timer Buttons.



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

4. Turn On/Off Power Button ON.



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

The Multiple Shelf Timer Button option is available for hot food holding units with the Deluxe Control. These buttons 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 buttons 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 Button.



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:

a) All expired timers will flash quickly (may be more than one).

b) The timer with the shortest amount of time remaining will flash slowly.

c) 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 button to acknowledge expired timer.

To Cancel a Timer:

Press and hold desired Shelf Timer button for two seconds.

Power Failure:

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

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°F–175°F	71°C–79°C
Corn Beef	160°F–175°F	71°C–79°C
Pastrami	160°F–175°F	71°C–79°C
Prime Rib — Rare	130°F	54°C
Steaks — Broiled/Fried	140°F–160°F	60°C–71°C
Ribs — Beef Or Pork	160°F	71°C
Veal	160°F–175°F	71°C–79°C
Ham	160°F–175°F	71°C–79°C
Pork	160°F–175°F	71°C–79°C
Lamb	160°F–175°F	71°C–79°C
POULTRY		
Chicken — Fried/Baked	160°F–175°F	71°C–79°C
Duck	160°F–175°F	71°C–79°C
Turkey	160°F–175°F	71°C–79°C
General	160°F–175°F	71°C–79°C
Fish/Seafood		
Fish — Baked/Fried	160°F–175°F	71°C–79°C
Lobster	160°F–175°F	71°C–79°C
Shrimp — Fried	160°F–175°F	71°C–79°C
Baked Goods		
Breads/Rolls	120°F–140°F	49°C–60°C
Miscellaneous		
Casseroles	160°F–175°F	71°C–79°C
Dough — Proofing	80°F–100°F	27°C–38°C
Eggs —Fried	150°F–160°F	66°C–71°C
Frozen Entrees	160°F–175°F	71°C–79°C
Hors d'oeuvres	160°F–180°F	71°C–82°C
Pasta	160°F–180°F	71°C–82°C
Pizza	160°F–180°F	71°C–82°C
Potatoes	180°F	82°C
Plated Meals	140°F–165°F	60°C–74°C
Sauces	140°F–200°F	60°C–93°C
Soup	140°F–200°F	60°C–93°C
Vegetables	160°F–175°F	71°C–79°C

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.

CARE AND CLEANING

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 per 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. Failure to observe this precaution will void the warranty. Always use the proper cleaning agent at the manufacturer's recommended strength. Contact your local cleaning supplier for product recommendations.

Cleaning Materials

Cleaning can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods are needed, 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. Failure to observe this precaution will void the warranty.

CAUTION



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.

WARNING



To prevent **serious personal injury**, **death**, or **property damage**:

The appliance must be cleaned thoroughly to avoid deposits of grease and or food residues inside the appliance that may catch fire. If fat deposits and/or food waste inside the appliance ignite, shut down the appliance immediately and keep the appliance door closed to extinguish the fire. If further extinguishing is required, disconnect the appliance from the main power and use a fire extinguisher (do not use water to extinguish a grease fire!). Failure to clean the appliance properly invalidates the warranty and relieves Alto-Shaam of all liability.

CARE AND CLEANING

⚠ DANGER



To prevent serious personal injury, death, or property damage:

Do not steam clean, hose down or flood the interior or exterior with water or liquid solution of any kind. **Do not** use water jet to clean. Failure to observe this precaution will void the warranty.

⚠ WARNING



To prevent serious injury, death, or property damage, **always** disconnect appliance from power source before cleaning or servicing.

CLEAN THE HOLDING CABINET DAILY:

1. Disconnect unit from power source and let cool.
2. Remove all detachable items such as wire shelves, side racks, drip trays, and drip pans. Clean these items separately.
3. Wipe the interior metal surfaces of the oven with a paper towel to remove loose food debris.
4. Clean the interior metal surfaces of the cabinet with a damp clean cloth or sponge and any good commercial detergent.

   NOTICE: Never use abrasive cleaning compounds, chloride-based cleaners, or cleaners containing quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel.
5. Spray heavily soiled areas with a water soluble degreaser and let stand for 10 minutes, then remove soil with a plastic scouring pad.
6. Wipe control panel, door vents, door handles, and door gaskets thoroughly since these areas harbor food debris.
7. Rinse surfaces by wiping with sponge and clean warm water.
8. Remove excess water with sponge and wipe dry with a clean cloth or air dry. Leave doors open until interior is completely dry. Replace side racks, drip trays, and shelves.
9. Wipe door gaskets and control panel dry with a clean, soft cloth.
10. 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.
11. To help maintain the protective film coating on polished stainless steel, clean the exterior of the cabinet with a cleaner recommended for stainless steel surfaces. Spray the cleaning agent on a clean cloth and wipe with the grain of the stainless steel.
12. Clean any glass with a window cleaner.

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

FOOD SAFETY

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.

Most food imparts its own particular aroma and many foods also absorb existing odors. Unfortunately, during this absorption there is not a 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 ensure 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 ensure 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 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.

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°F to 140°F	(4°C to 60°C)
Critical Zone	70°F to 120°F	(21°C to 49°C)
Safe Zone	140°F to 165°F	(60°C 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°F to 32°F	(-18°C to 0°C)
Safe Zone	0°F or Below	(-18°C or Below)

Hazard Analysis (at) Critical Control Points (HACCP), 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. Additional HACCP information is available by contacting:

Center for Food Safety and Applied Nutrition
Food and Drug Administration
PHONE: 1-888-SAFEFOOD
www.foodsafety.gov

SERVICE

THERMOSTAT ACCURACY

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. Ensure the unit voltage matches the power source.
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 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 Alto-Shaam service department for advice.



SERVICE

Preventative Maintenance Checklist	
Daily	
	Perform daily cavity cleaning as stated in the cleaning section of this manual
	Clean out front drip tray as recommended in the cleaning section of this manual
Monthly	
	Inspect door gasket
	Inspect door window gasket
	Inspect cavity door vent slides for proper operation
	Inspect side racks, shelves and shelf supports to ensure nothing is damaged or in need of replacement
	Calibrate removable product probe
	Clean out cooling fan intake and exhaust vents
	Visually inspect the smoke element (Cook & Hold smoker oven only). If any visual signs of deformation, cracks or breaks are seen, remove the oven from service and contact an Alto-Shaam authorized service technician for service.
Every 12 months (Inspection by a factory authorized technician)	
	Open control area and inspect/tighten all wiring
	Inspect all electrical components
	Test elements for electrical short to ground. Replace/repair as needed.
	Visually inspect the cavity for structural integrity
	Inspect door gasket. Replace if needed.
	Visually inspect any door handles and hinges. Replace/repair as needed.
	Remove any loose handle and hinge screws. Loctite and then properly secure the screws.
	Inspect smoke element and smoke element wiring (Cook & Hold smoker oven only)
	Inspect and test product probe and product probe receptacle (where applicable)
	Inspect and test control and control functions
	Inspect temperature control knobs. Replace if needed.
	Inspect casters. Repair/replace as needed.
	Inspect perimeter bumper. Repair/replace as needed.
	Inspect power cord. Tighten cord connection inside the appliance control area
	Replace cooling fans (where applicable)
	Perform cavity temperature calibration per manufacturer's recommended calibration procedures
	Check site voltage
	Set voltage switch (where applicable)
	Test/Replace independent indicator lights (where applicable)
	Confirm proper current draw of heating elements

ALWAYS check the circuit breaker is turned "ON" and your unit is receiving power BEFORE calling your Authorized Alto-Shaam Service Agent.

NOTICE

This section is provided for the assistance of qualified and trained service technicians only and is not intended for use by untrained or unauthorized service personnel. Do not attempt to repair or service the oven 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.

⚠ WARNING



To prevent serious injury, death, or property damage, **always** disconnect appliance from power source before cleaning or servicing.

SERVICE

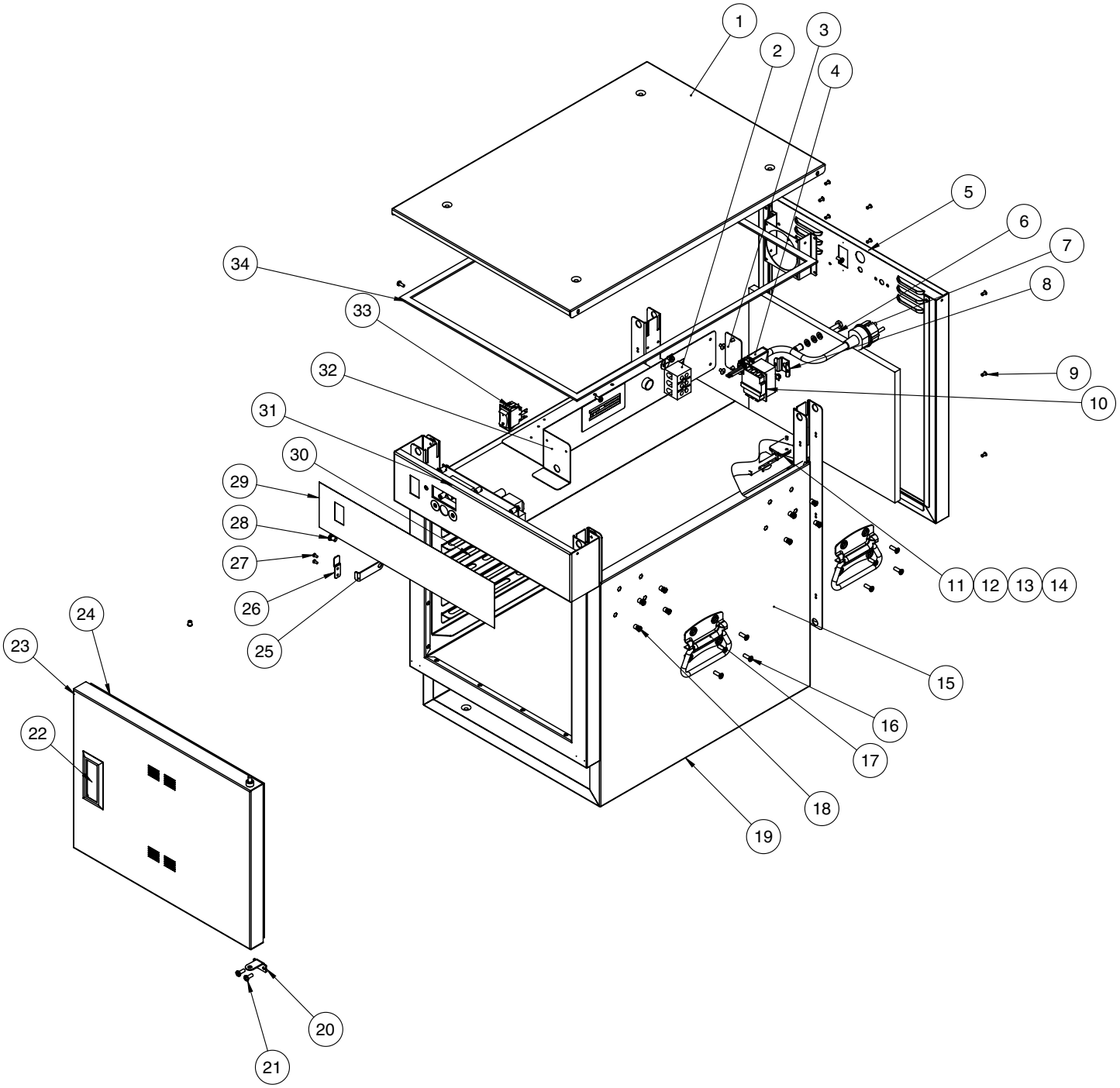
TROUBLE SHOOTING

Code	Description	Possible Causes
E-10	**Cavity air sensor shorted**	Cavity air sensor reading < 5°F (-15°C). Verify sensor integrity. See sensor test instructions below.
E-11	**Cavity air sensor open**	Cavity air sensor reading > 517°F (269°C). Verify sensor integrity. See sensor test instructions below.
E-20	**Product probe is shorted** *Oven will cook in time only*	Product probe reading < 5°F (-15°C). Verify sensor integrity. See sensor test instructions below.
E-21	**Product probe is open** *Oven will cook in time only*	Product Probe reading > 517°F (269°C). Verify sensor integrity. See sensor test instructions below.
E-30	**Under temperature**	Unit has been more than 25°F (14°C) below set point for longer than 90 minutes.
E-31	**Over temperature**	Unit has been more than 60°F (33°C) above the maximum set-point for longer than 3 minutes. ***Notice:*** Holding Cabinets with this error code are more than 145°F (81°C) above the maximum set-point.
E-32	**Safety switch open (Aux hi-limit switch)**	Contact factory.
E-38	**Internal software error**	Contact factory.
E-39	**Sensor error**	Contact factory.
E-50	**Temp. measurement error**	Contact factory.
E-51	**Temp. measurement error**	Contact factory.
E-60	**Real time clock error**	Data set to factory default. Ensure that date and time are correct if applicable.
E-61	**Real time clock error**	Contact factory.
E-64	**Clock is not oscillating**	Contact factory.
E-70	**Configuration connector error (DIP switch)**	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	**Voltage low**	Voltage below 90 VAC on a 125 VAC unit, or below 190 VAC on a 208-240 VAC unit. Correct voltage.
E-79	**Voltage high**	Voltage over 135 VAC on a 125 VAC unit, or over 250 VAC on a 208-240 VAC unit. Correct voltage.
E-80	**EEPROM Error**	Ensure that all temperatures and times are properly set. Contact factory if problem persists.
E-81	**EEPROM Error**	Contact factory.
E-82	**EEPROM Error**	Contact factory.
E-83	**EEPROM Error**	Contact factory.
E-85	**EEPROM Error**	All timers, if previously on, are now off. Possible bad EEPROM.
E-86	**EEPROM Error**	Stored HACCP memory corrupted. HACCP Address reset to 1. Possible bad EEPROM. Contact factory if problem persists.
E-87	**EEPROM Error**	Stored offsets corrupted. Offsets reset to 0. Control may need a recalibration. Possible bad EEPROM. Contact factory if problem persists.
E-88	**EEPROM Error**	All timer set-points are reset to 1 minute. Timers, if previously on, are now off. Possible bad EEPROM.
E-90	**Button stuck**	A button has been held down for > 60 seconds. Adjust control. Error will reset when the problem has been resolved.
E-91	**Input failure**	Contact factory.
E-dS	**Datakey error**	Datakey digital signature incompatible. Cycle power, and install compatible Datakey if error persists.
E-dT	**Datakey error**	Datakey incompatible with control. Install compatible Datakey.
E-dU	**Datakey unplugged**	Install Datakey and cycle power to control to clear error.
dLto	**Datalogger has timed out**	Cycle power. Contact factory if error persists.
dLSD	**Micro SD card not plugged in**	Plug in SD card and cycle power. Contact factory if error persists.
NOTICE: If in doubt, always cycle the power to the control and contact factory if the problem persists.		

To test probe and air sensor:

Test probe and air sensor by placing sensor in ice water bath and using an ohmmeter set on the ohm scale. The reading should be 100 ohms resistance. If it is more than 2 ohms higher or lower, sensor needs to be replaced.

SINGLE COMPARTMENT - 300-S



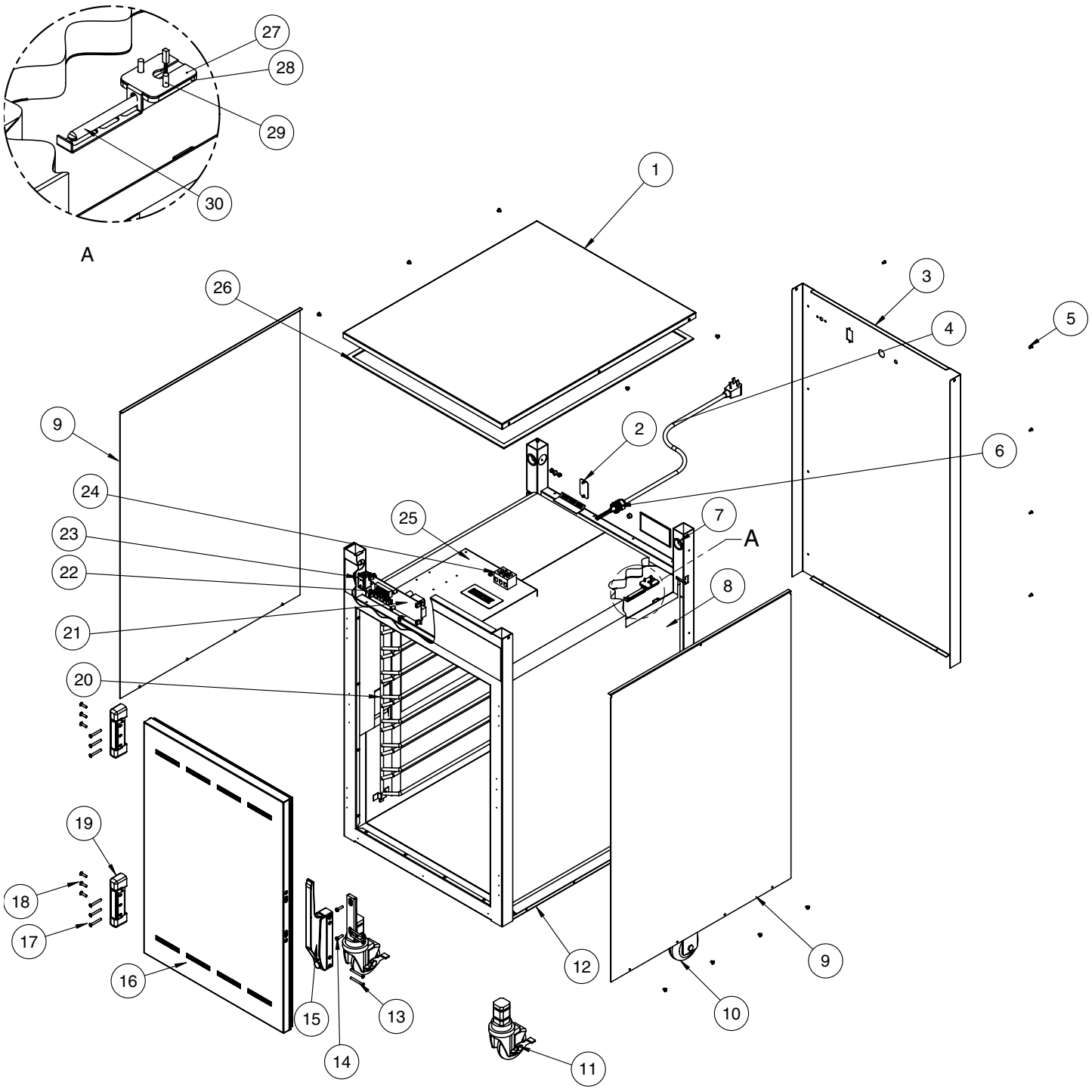
Part numbers and drawings are subject to change without notice.

SINGLE COMPARTMENT - 300-S

ITEM	DESCRIPTION	PART NO.	QTY
1	TOP COVER	1012831	1
2	T-BLOCK	BK-3019	1
3	BREAKER SWITCH CUTOUT 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

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



Part numbers and drawings are subject to change without notice.

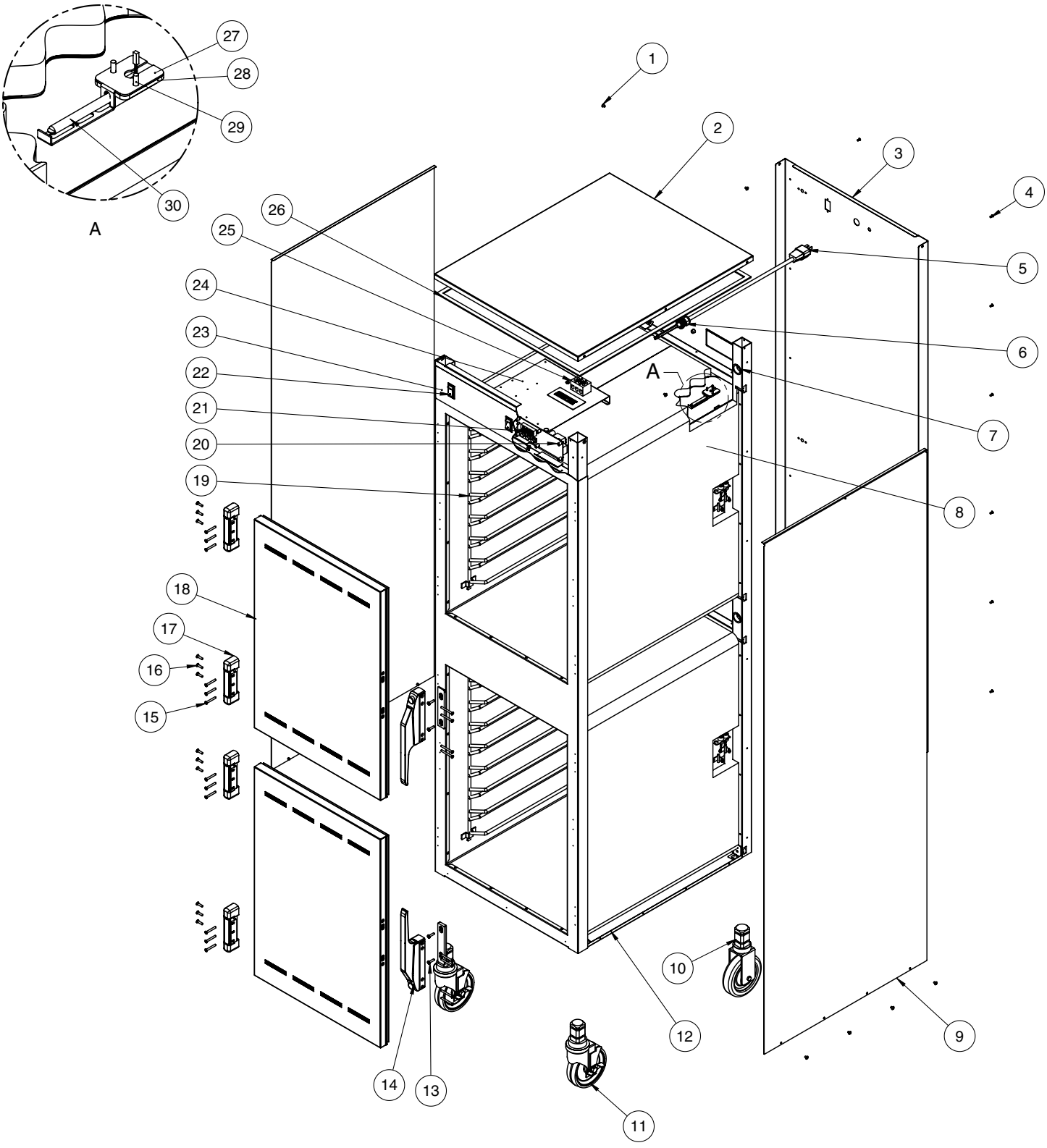
SERVICE

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

	MODEL >	500-S		750-S		1000-S		1200-S	
ITEM	DESCRIPTION	PART NO.	QTY	PART NO.	QTY	PART NO.	QTY	PART NO.	QTY
1	TOP COVER	1011946	1	1011872	1	1011534	1	1011653	1
2	BREAKER SWITCH CUTOUT 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
	230V (AS/NZS 3112)	CD-38149	1	CD-38149	1	CD-38149	1	CD-38149	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	5008022	1	5008022	1	5014422	1	5014421	1
	- CASTER, 5" (127mm) RIGID	——	——	——	——	——	——	CS-24874	2
	- CASTER, 3-1/2" (89mm) RIGID	CS-25674	2	CS-25674	2	CS-25674	2	——	——
	- CASTER, 2-1/2" (64mm) RIGID	CS-28178	2	CS-28178	2	——	——	——	——
11	- CASTER, 5" (127mm) SWIVEL WITH BRAKE	——	——	——	——	——	——	CS-24875	2
	- CASTER, 3-1/2" (89mm) SWIVEL WITH BRAKE	CS-25675	2	CS-25675	2	CS-25675	2	——	——
	- CASTER, 2-1/2" (64mm) SWIVEL WITH BRAKE	CS-28179	2	CS-28179	2	——	——	——	——
	- SHIM	1012735	4	1012735	4	1012735	4	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-22950	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

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



Part numbers and drawings are subject to change without notice.

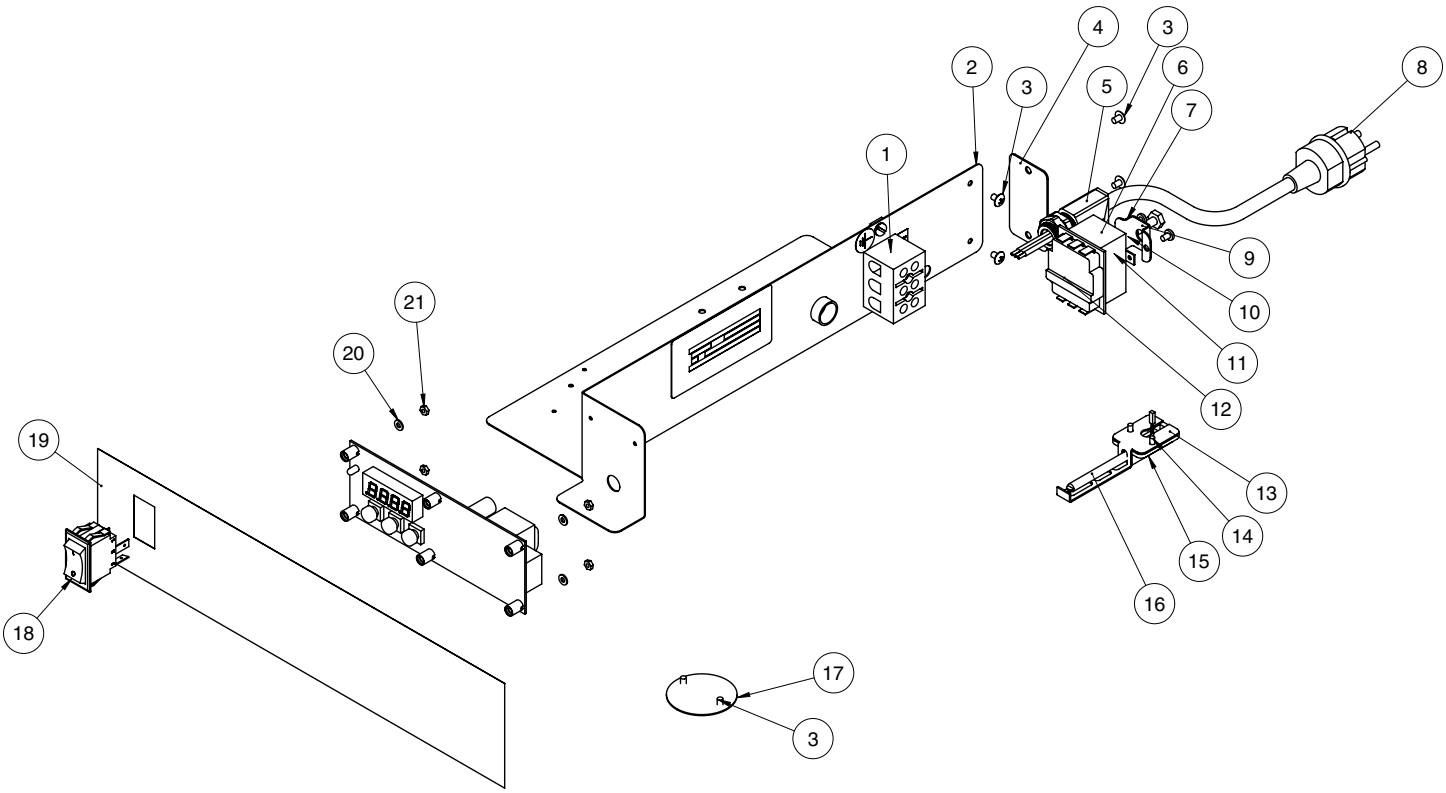
DOUBLE COMPARTMENT - 1000-UP, 1200-UP

	MODEL >	1000-UP		1200-UP	
ITEM	DESCRIPTION	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
	230V (AS/NZS 3112)	CD-38149	1	CD-38149	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 CUTOUT 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 120V	CD-3232	1	18	SWITCH, ROCKER,125-277V, 20A	SW-34769	1
	230V (CEE 7/7)	CD-3922	1	19	PANEL, OVERLAY	PE-35188	1
	230V (CH2-16P)	CD-36231	1	20	WASHER, 6-32, FLAT, NYLON	WS-23148	4
	230V (BS 1363)	CD-33925	1	21	NUT, 6-32 HEX, S/S	NU-2361	4
9	SCREW, HHCS, M6 X 20	SC-22924	1	22*	SCREWS, M4-0.7 X 6MM PHIL	SC-22271	2
10	WASHER, FLAT	WS-22297	2				

*NOT SHOWN

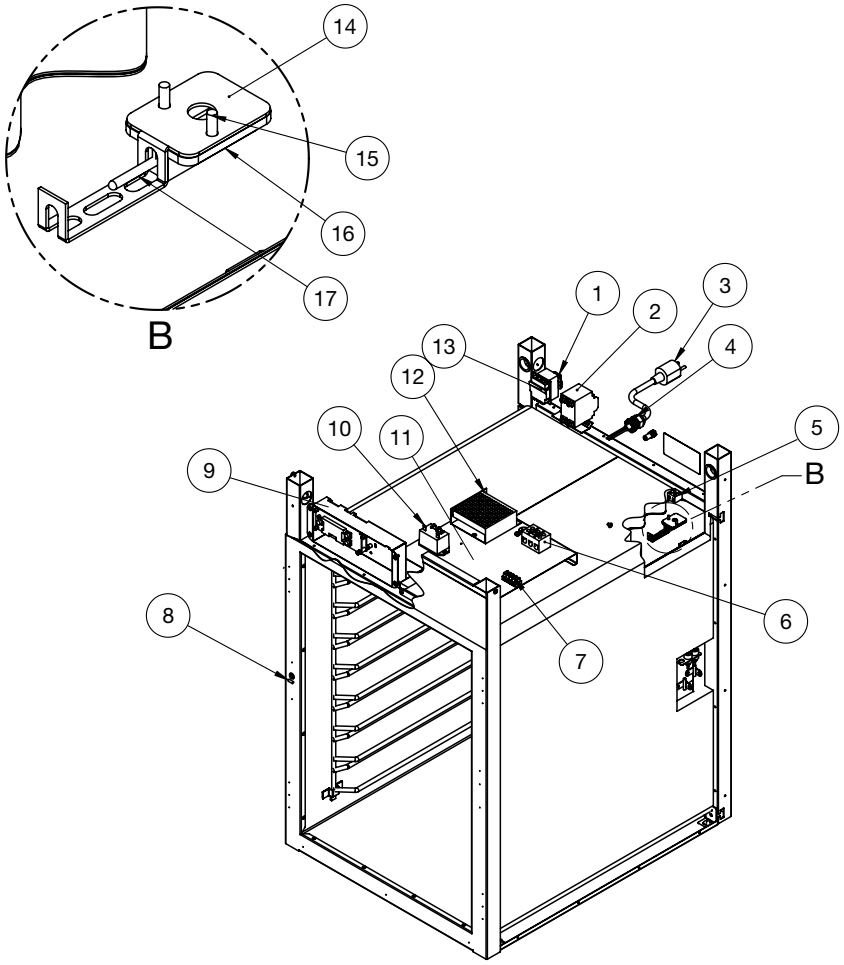
⚠ WARNING

To prevent serious injury, death, or property damage, **always** disconnect appliance from power source before cleaning or servicing.

⚠ DANGER

To prevent serious injury, death, or property damage, **always** lock-out or post breaker panel until service work has been completed.

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	7	TERMINAL STRIP	TM-33560	1
2	SWITCH, CIRCUIT BREAKER	SW-34769	1	8	REED SWITCH (PER DOOR)	SW-33559	1
3	CORDSET 120V	CD-3232	1	9	CONTROL WITHOUT TIMERS	5012946	1
	208-240V	CD-3551	1	10	RELAY	RL-33558	1
	230V (CEE 7/7)	CD-3922	1	11	ELECTRIC CHASSIS	5012122	1
	230V (CH2-16P)	CD-36231	1	12	POWER SUPPLY BOARD	BA-36144	1
	230V (BS 1363)	CD-33925	1	13	T-STAT, HI-LIMIT	TT-33476	1
	230V (AS/NZS 3112)	CD-38149	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

⚠ WARNING

To prevent serious injury, death, or property damage, **always** disconnect appliance from power source before cleaning or servicing.

⚠ DANGER

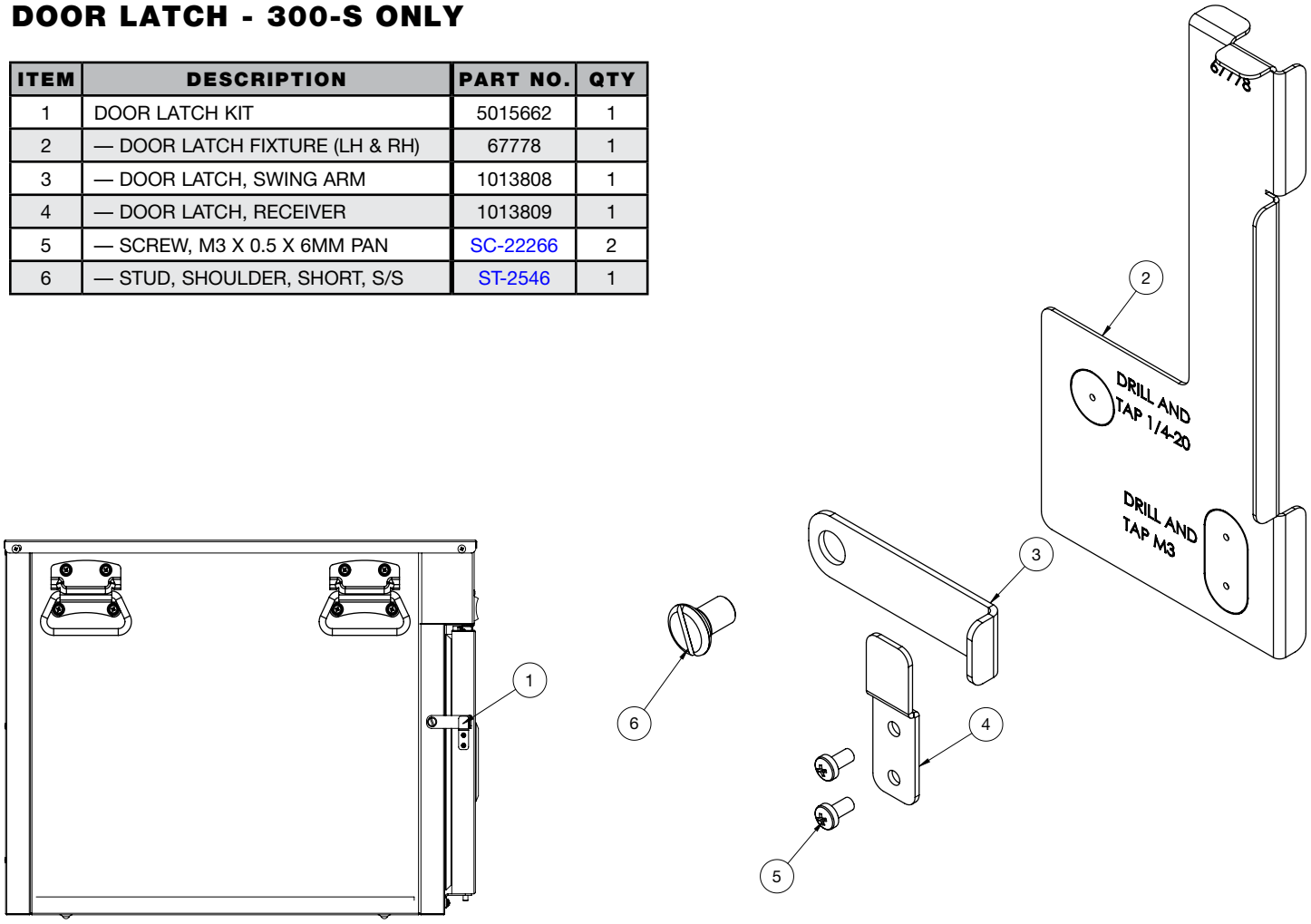
To prevent serious injury, death, or property damage, **always** lock-out or post breaker panel until service work has been completed.

CABLE HEATING SERVICE KITS

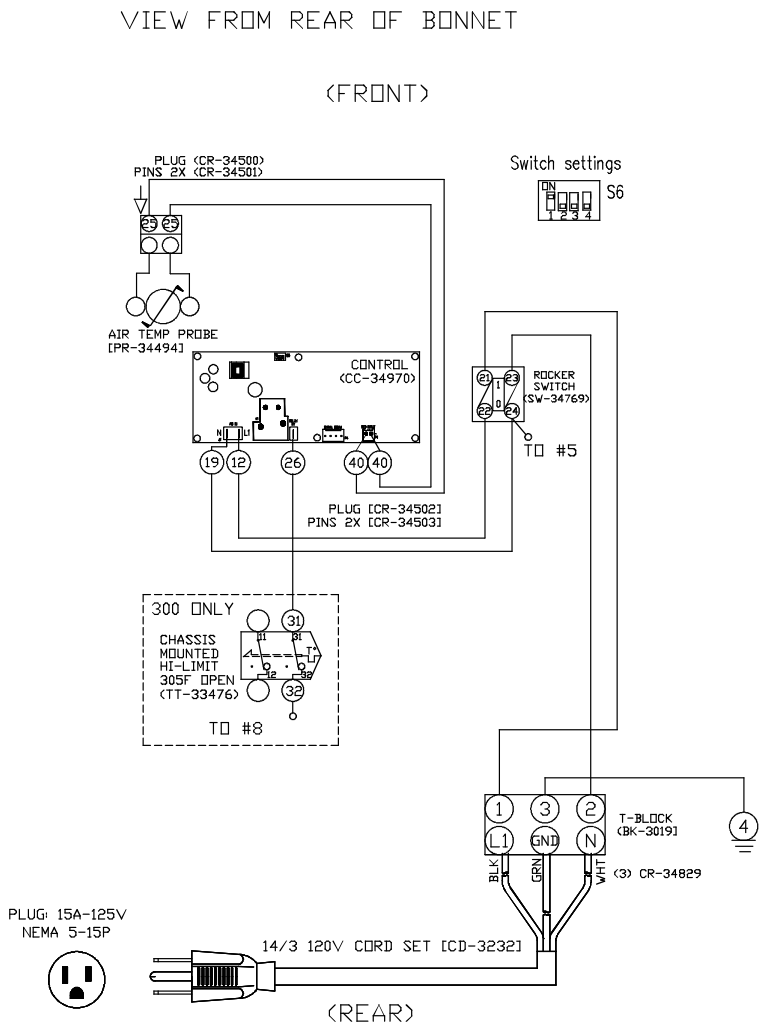
	CABLE HEATING KIT > (ONE KIT REQUIRED PER CAVITY)	#4874 (500, 750, 1000)	#4881 (1200 - 4000W)	#4878 (1200 - ALL EXCEPT 4000W)
PART NO.	**DESCRIPTION**	**QTY**	**QTY**	**QTY**
CB-3045	CABLE HEATING ELEMENT	——	210 feet (6401cm)	90 feet (2591cm)
CB-3044	CABLE HEATING ELEMENT	120 feet (3658cm)	——	——
CR-3226	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

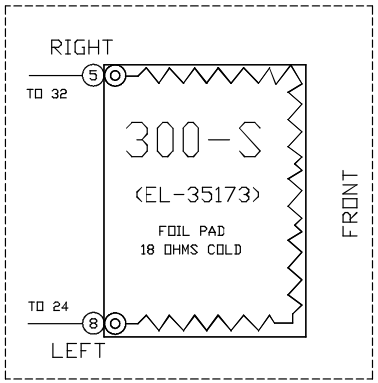
DOOR LATCH - 300-S ONLY

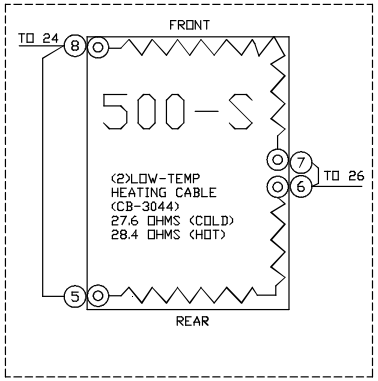
ITEM	DESCRIPTION	PART NO.	QTY
1	DOOR LATCH KIT	5015662	1
2	— DOOR LATCH FIXTURE (LH & RH)	67778	1
3	— DOOR LATCH, SWING ARM	1013808	1
4	— DOOR LATCH, RECEIVER	1013809	1
5	— SCREW, M3 X 0.5 X 6MM PAN	SC-22266	2
6	— STUD, SHOULDER, SHORT, S/S	ST-2546	1

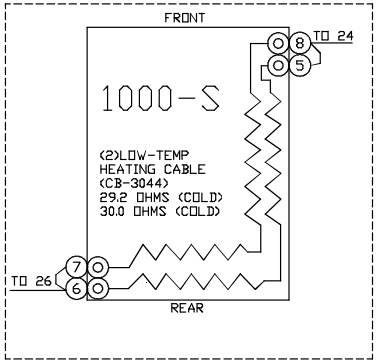


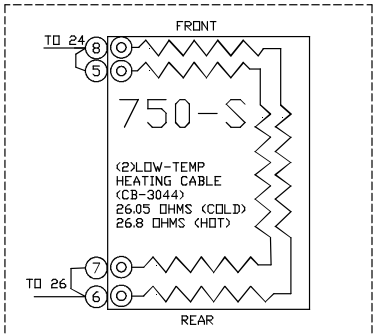
Part numbers and drawings are subject to change without notice.

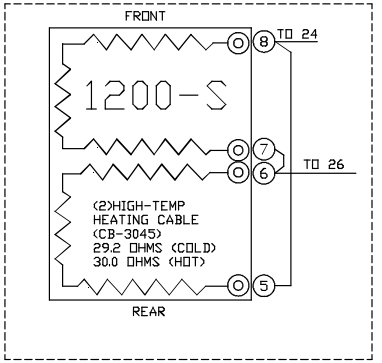












NOTE #1: ALL NUMBERS IN ( ) =
ALTO-SHAAM PART NUMBERS

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]

REV	ECO	DESCRIPTION	DATE	APP
13	7514	Control Upgrade	11/16/15	TJG
12	6761	Condense wire set	9/16/13	TJG
11	6514	300TH/III Series placed on 77522	10/18/12	TJG

300,500,750,1000,1200-S, 120V 60HZ

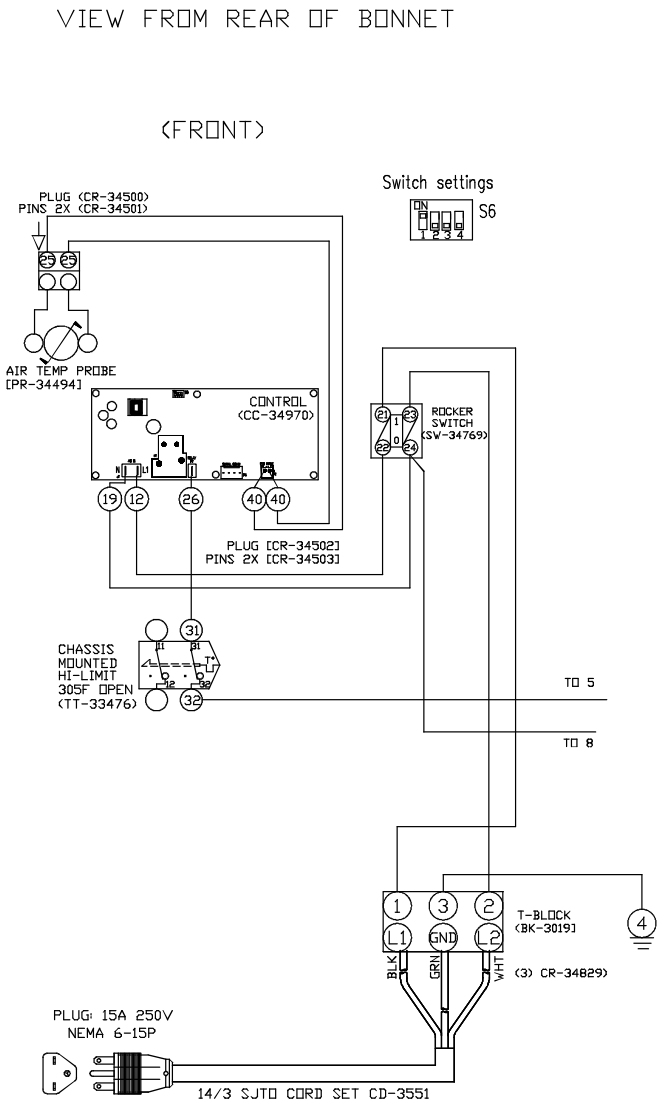
ALTO-SHAAM

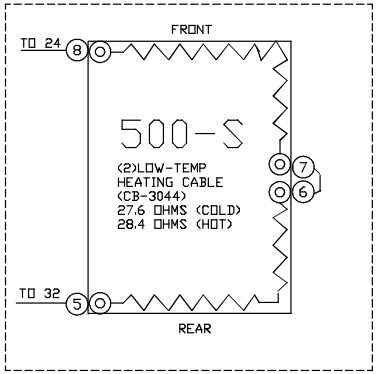
WIRING DIAGRAM

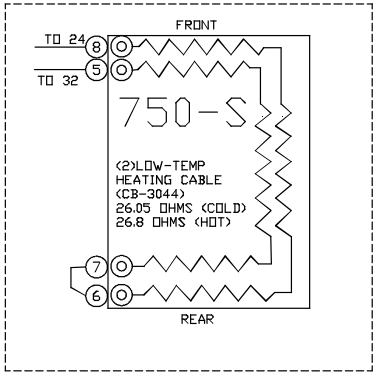
BY: JPK DATE: 1/16/08

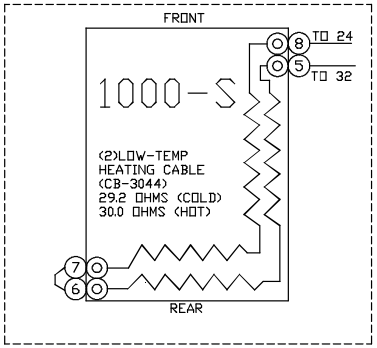
DWG: 77194

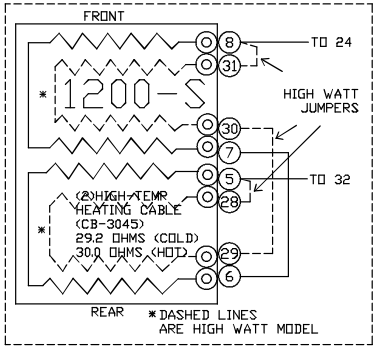
SHEET 1_OF_1











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

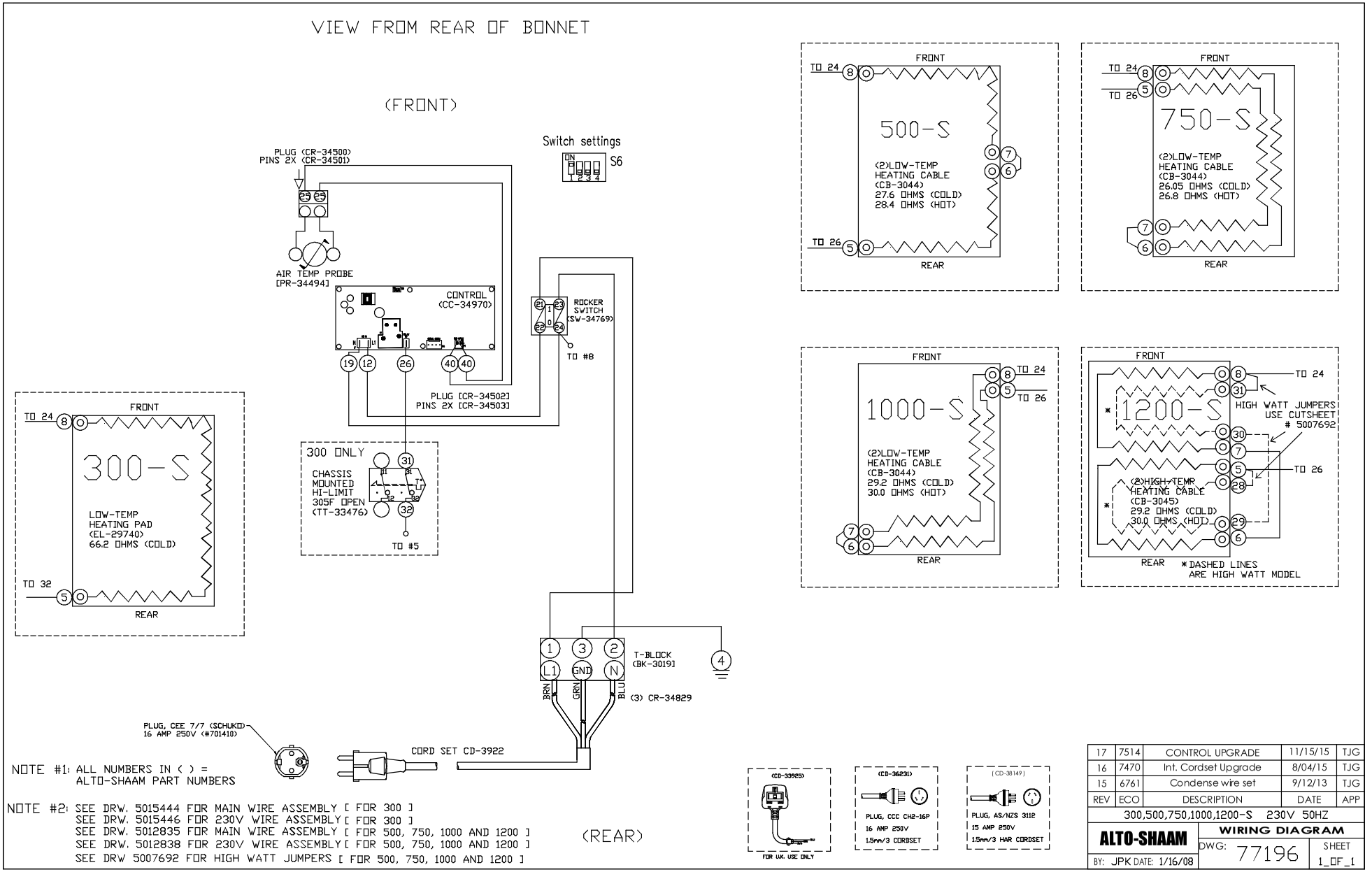
NOTE #2: SEE DRW. 5012835 FOR MAIN WIRE ASSEMBLY
SEE DRW. 5012837 FOR 208-240V WIRE ASSEMBLY
SEE DRW 5007692 FOR HIGH WATT JUMPERS

REV	ECO	DESCRIPTION	DATE	APP
10	7514	CONTROL UPGRADE	11-16-15	TJG
9	6327	ADD HI-LIMIT ,OMIT ENTH	4-25-12	TJG
8	5904	REDUCE 1200-S WATTS	2-18-11	JPK

300,500,750,1000,1200-S 208-240V 60HZ

ALTO-SHAAM — WIRING DIAGRAM

BY: JPK DATE: 1/16/08 — DWG: 77195 — SHEET 1_OF_1

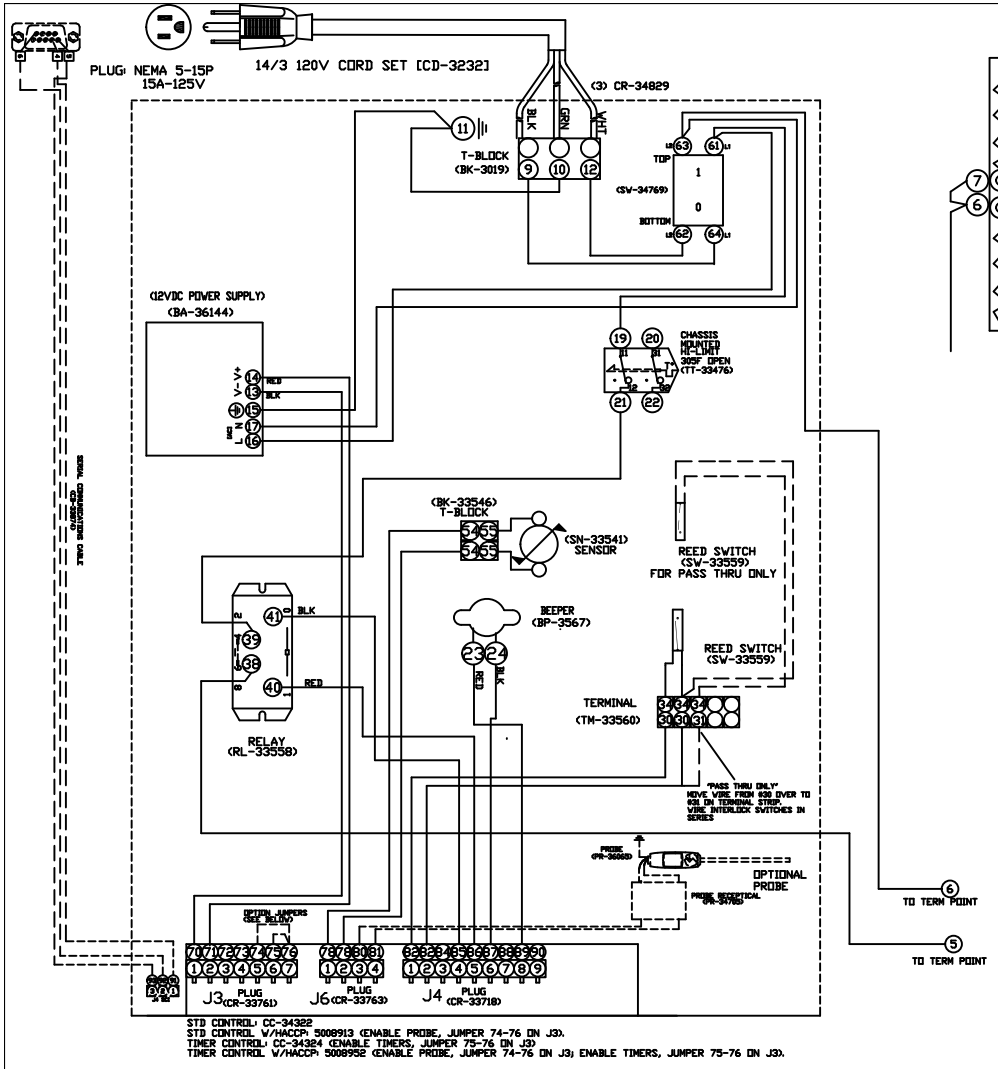


REV	ECO	DESCRIPTION	DATE	APP
17	7514	CONTROL UPGRADE	11/15/15	TJG
16	7470	Int. Cordset Upgrade	8/04/15	TJG
15	6761	Condense wire set	9/12/13	TJG

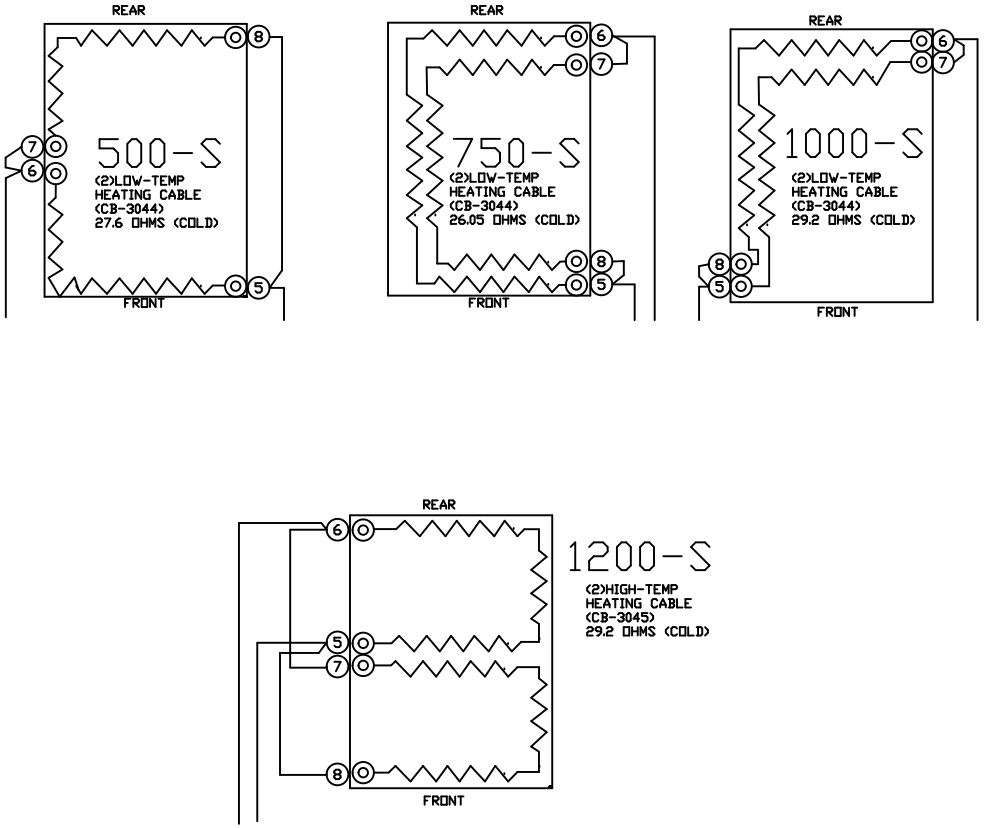
300,500,750,1000,1200-S 230V 50HZ

ALTO-SHAAM | **WIRING DIAGRAM**

BY: JPK DATE: 1/16/08 | DWG: 77196 | SHEET 1_OF_1



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

REV	ECO	DESCRIPTION	DATE	APP
16	6722	Power Supply illustration	9/09/13	TJG
15	6732	Door Switch Upgrade	6/16/13	TJG
14	6720/6728	PROBE /POWER SUPPLY UPGRADES	6/08/13	TJG

500,750,1000,1200-S ELEC 120V 60HZ

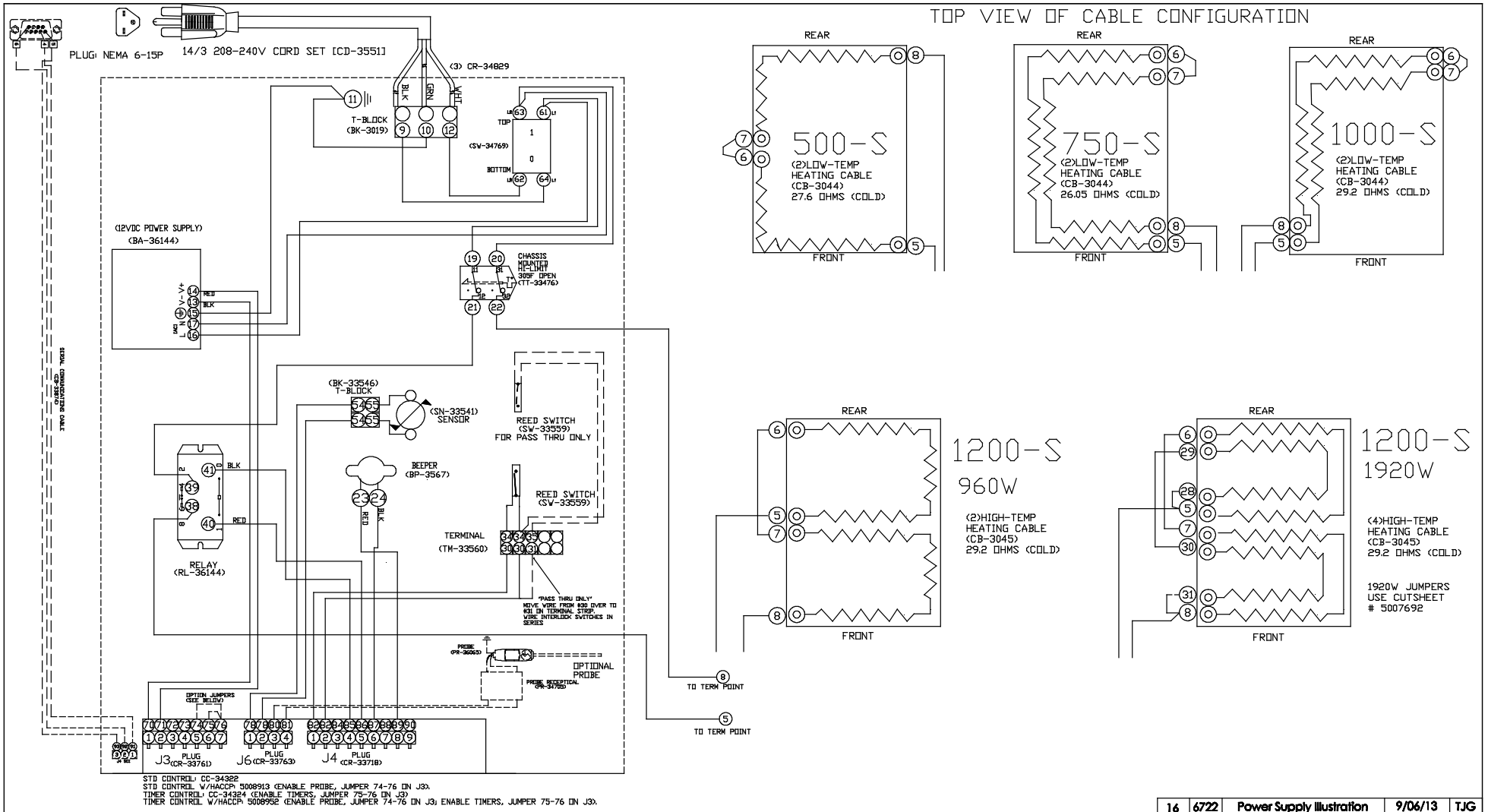
ALTO-SHAAM

WIRING DIAGRAM

BY: MS DATE: 02/13/07

DWG: 7862

SHEET 1_OF_1



TOP VIEW OF CABLE CONFIGURATION

NOTE #1: ALL NUMBERS IN ( ) =

NOTE #2: SEE DRW. 5007701 FOR WIRE ASSEMBLIES

NOTE #3: USE FIXTURE 67956

REV	ECO	DESCRIPTION	DATE	APP
16	6722	Power Supply Illustration	9/06/13	TJG
15	6732	Door Switch Upgrade	6/16/13	TJG
14	6721/6731	Probe / Power supply Upgrades	6/8/13	TJG

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

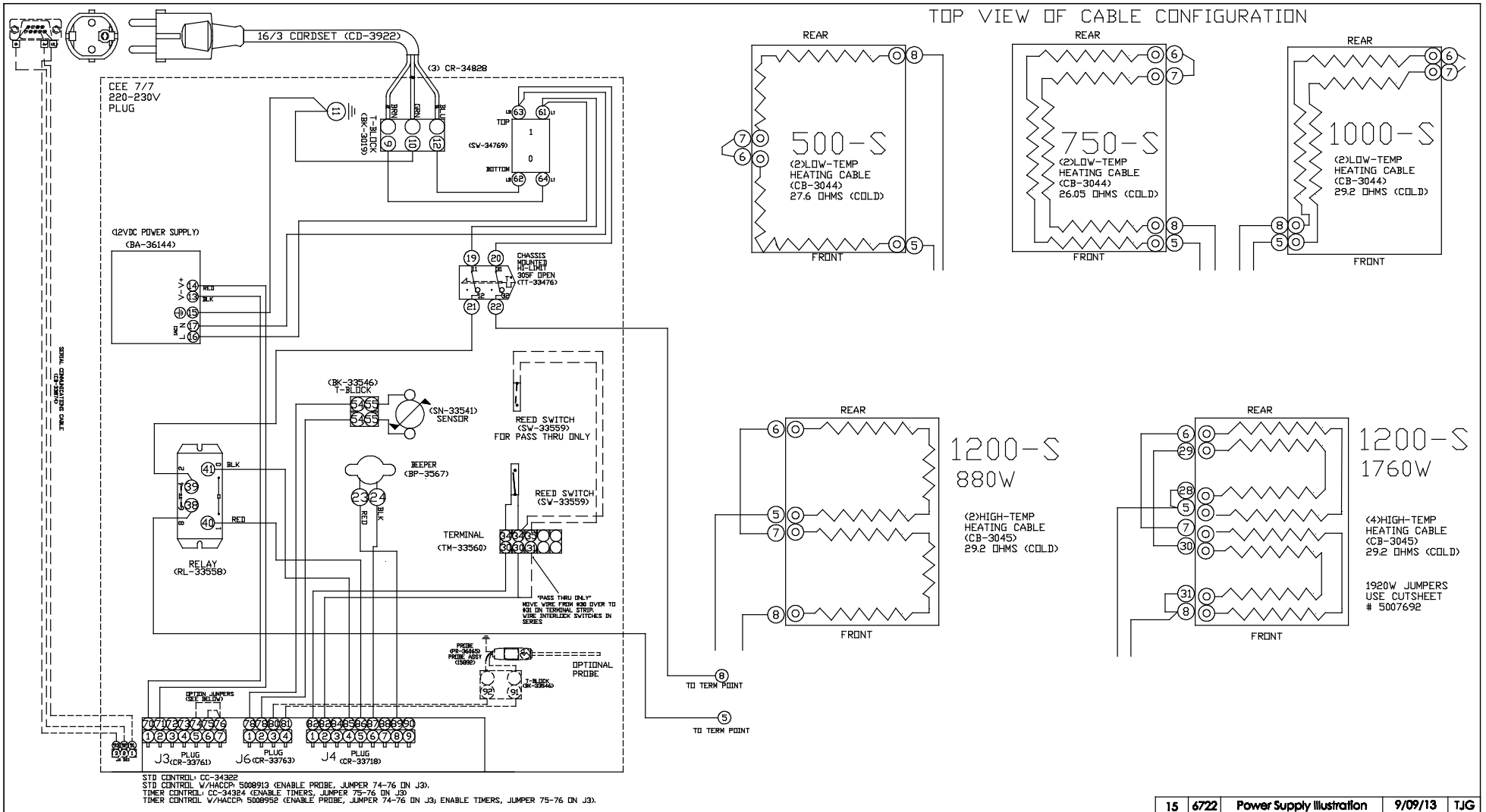
ALTO-SHAAM

WIRING DIAGRAM

BY: MS DATE: 04/25/07

DWG: 77075

SHEET 1_OF_1



TOP VIEW OF CABLE CONFIGURATION

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

NOTE #2: SEE DRW. 5006488 FOR WIRE ASSEMBLIES

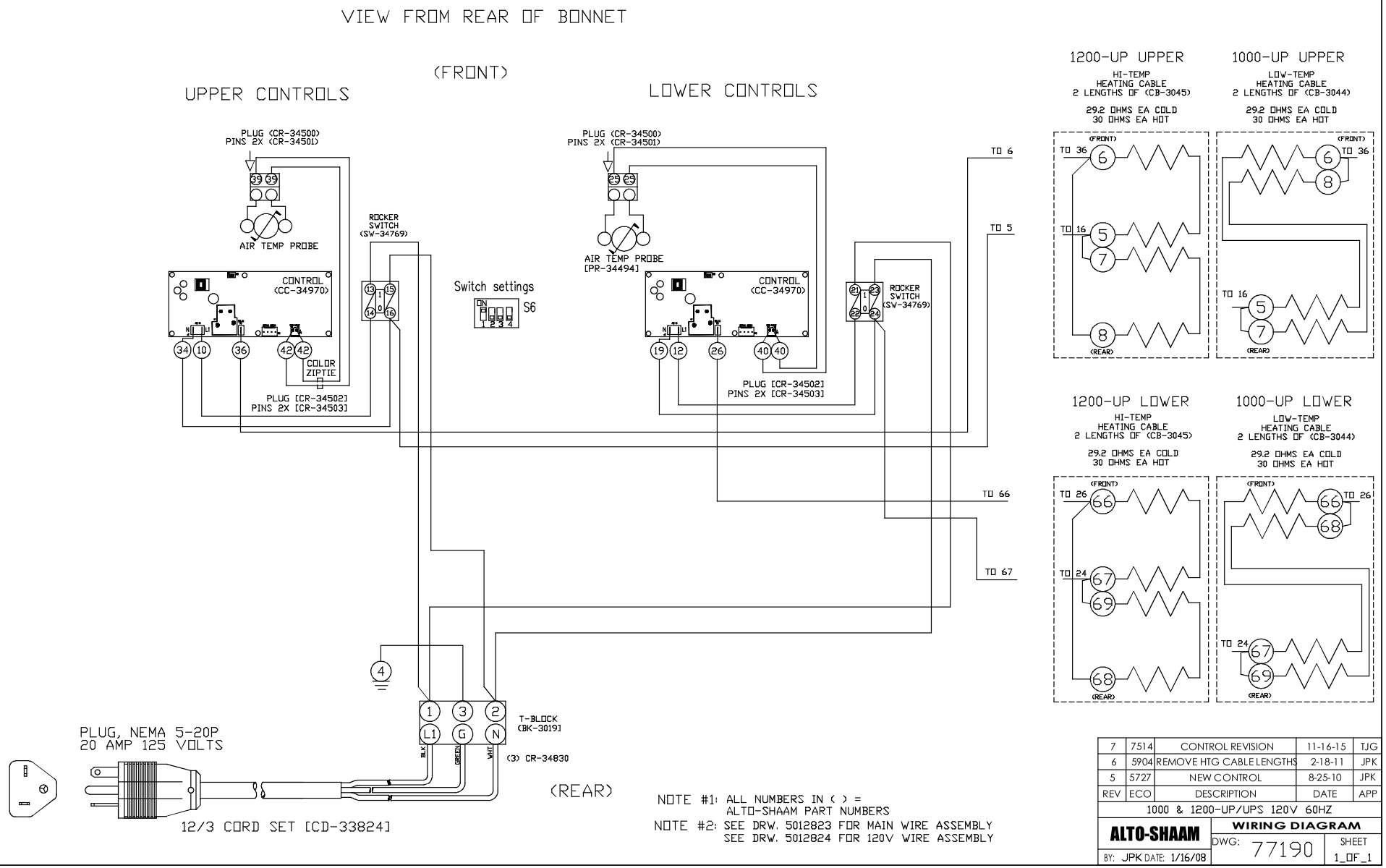
NOTE #3: Use fixture 67956

REV	ECO	DESCRIPTION	DATE	APP
15	6722	Power Supply Illustration	9/09/13	TJG
14	6732	Door Switch Upgrade	6/16/13	TJG
13	6721/6728	Probe/ Power Supply Upgrade	6/08/13	TJG

500,750,1000,1200-S ELEC 230V 50HZ

ALTO-SHAAM — WIRING DIAGRAM

BY: EDF DATE: 3/20/07 — DWG: 7863 — SHEET 1_OF_1



REV	ECO	DESCRIPTION	DATE	APP
7	7514	CONTROL REVISION	11-16-15	TJG
6	5904	REMOVE HTG CABLE LENGTHS	2-18-11	JPK
5	5727	NEW CONTROL	8-25-10	JPK

1000 & 1200-UP/UPS 120V 60HZ

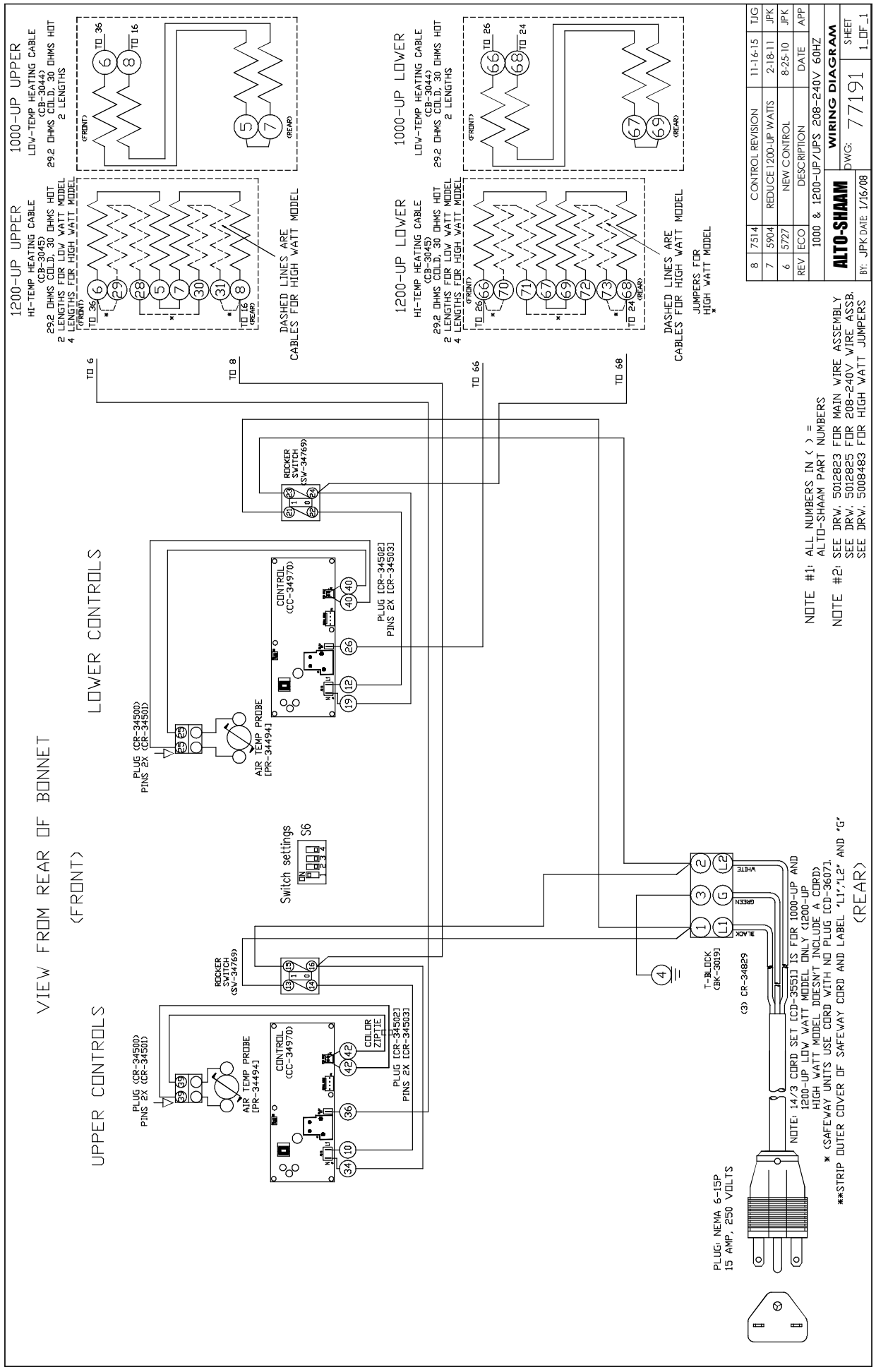
ALTO-SHAAM

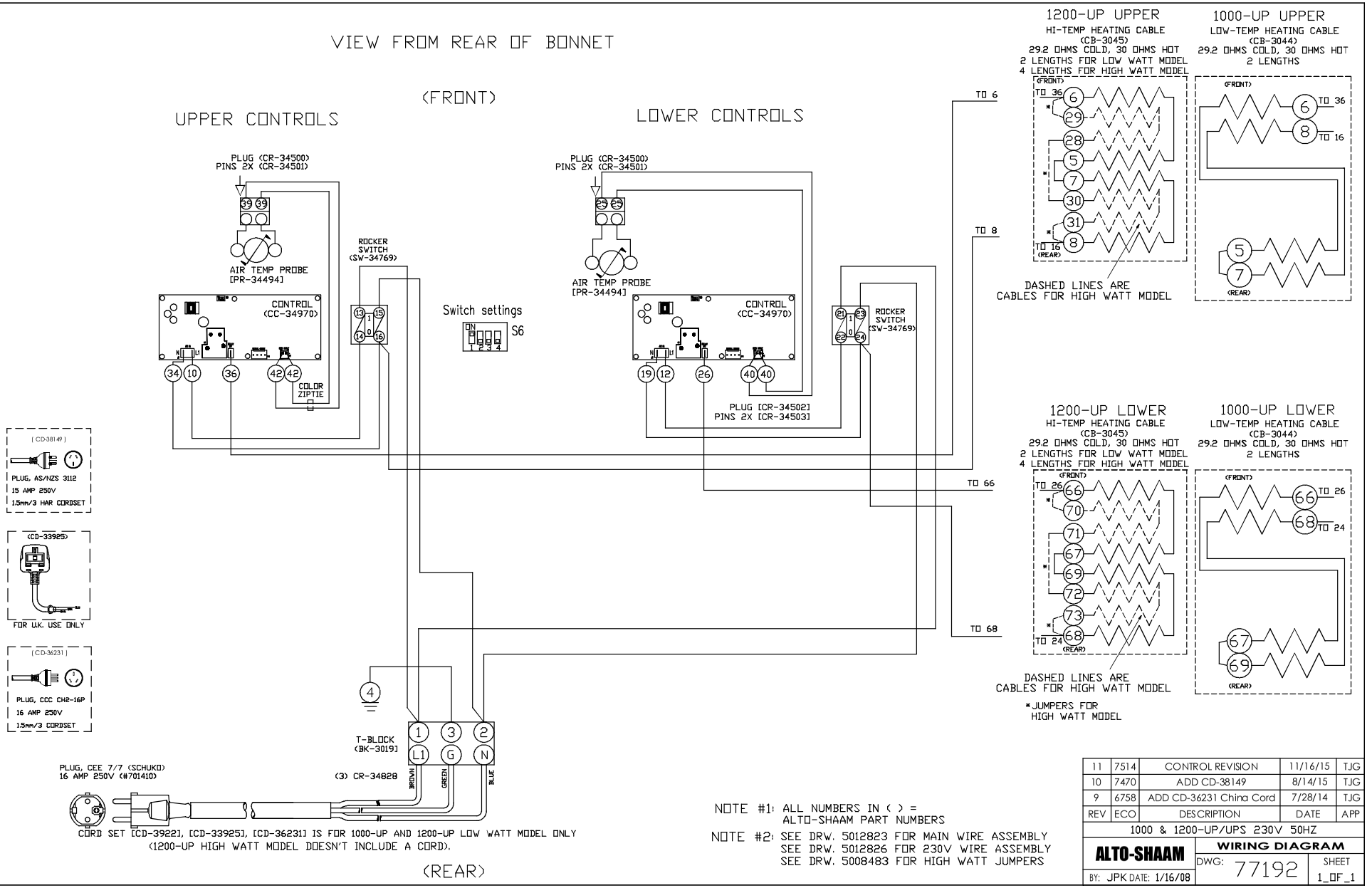
WIRING DIAGRAM

BY: JPK DATE: 1/16/08

DWG: 77190

SHEET 1_OF_1


1000-UP UPPER
LOW-TEMP HEATING CABLE
(CB-3044)
29.2 OHMS COLD, 30 OHMS HOT
2 LENGTHS
1000-UP LOWER
LOW-TEMP HEATING CABLE
(CB-3044)
29.2 OHMS COLD, 30 OHMS HOT
2 LENGTHS
1200-UP UPPER
HI-TEMP HEATING CABLE
(CB-3045)
29.2 OHMS COLD, 30 OHMS HOT
2 LENGTHS FOR LOW WATT MODEL
4 LENGTHS FOR HIGH WATT MODEL
1200-UP LOWER
HI-TEMP HEATING CABLE
(CB-3045)
29.2 OHMS COLD, 30 OHMS HOT
2 LENGTHS FOR LOW WATT MODEL
4 LENGTHS FOR HIGH WATT MODEL
DASHED LINES ARE
CABLES FOR HIGH WATT MODEL
JUMPERS FOR
HIGH WATT MODEL
VIEW FROM REAR OF BONNET
(FRONT)
(REAR)
UPPER CONTROLS
LOWER CONTROLS
CONTROL
(CC-34970)
PLUG (CR-34500)
PINS 2X (CR-34501)
AIR TEMP PROBE
(PR-34494)
PLUG (CR-34502)
PINS 2X (CR-34503)
COLOR
ZIPTIE
ROCKER
SWITCH
(SW-34769)
Switch settings
S6
T-BLOCK
(BK-3019)
(3) CR-34829
WHITE
GREEN
BLACK
NOTE: 14/3 CORD SET (CD-35511 IS FOR 1000-UP AND
1200-UP LOW WATT MODEL ONLY (1200-UP
HIGH WATT MODEL DOESN'T INCLUDE A CORD).
* (SAFEWAY UNITS USE CORD WITH NO PLUG (CD-36071.
**STRIP OUTER COVER OF SAFEWAY CORD AND LABEL "L1","L2" AND "G"
PLUG: NEMA 6-15P
15 AMP, 250 VOLTS
NOTE #1: ALL NUMBERS IN ( ) =
ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5012823 FOR MAIN WIRE ASSEMBLY
SEE DRW. 5012825 FOR 208-240V WIRE ASSB.
SEE DRW. 5008483 FOR HIGH WATT JUMPERS
8 7514 CONTROL REVISION 11-16-15 TJG
7 5904 REDUCE 1200-UP WATTS 2-18-11 JPK
6 5727 NEW CONTROL 8-25-10 JPK
REV ECO DESCRIPTION DATE APP
1000 & 1200-UP/UPS 208-240V 60HZ
ALTO-SHAAM
WIRING DIAGRAM
BY: JPK DATE: 1/16/08
DWG: 77191
SHEET 1_OF_1



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

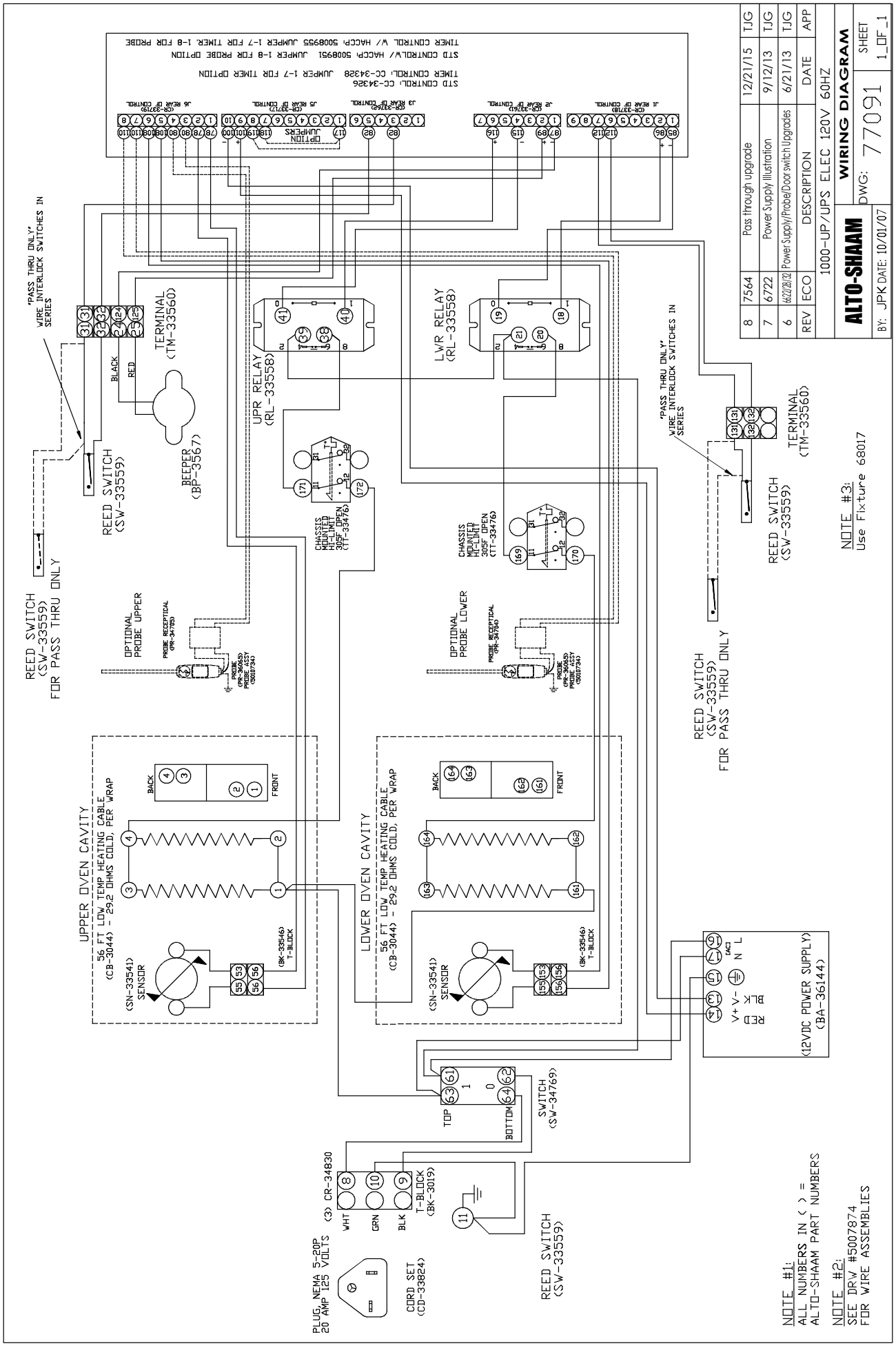
NOTE #2: SEE DRW. 5012823 FOR MAIN WIRE ASSEMBLY
SEE DRW. 5012826 FOR 230V WIRE ASSEMBLY
SEE DRW. 5008483 FOR HIGH WATT JUMPERS

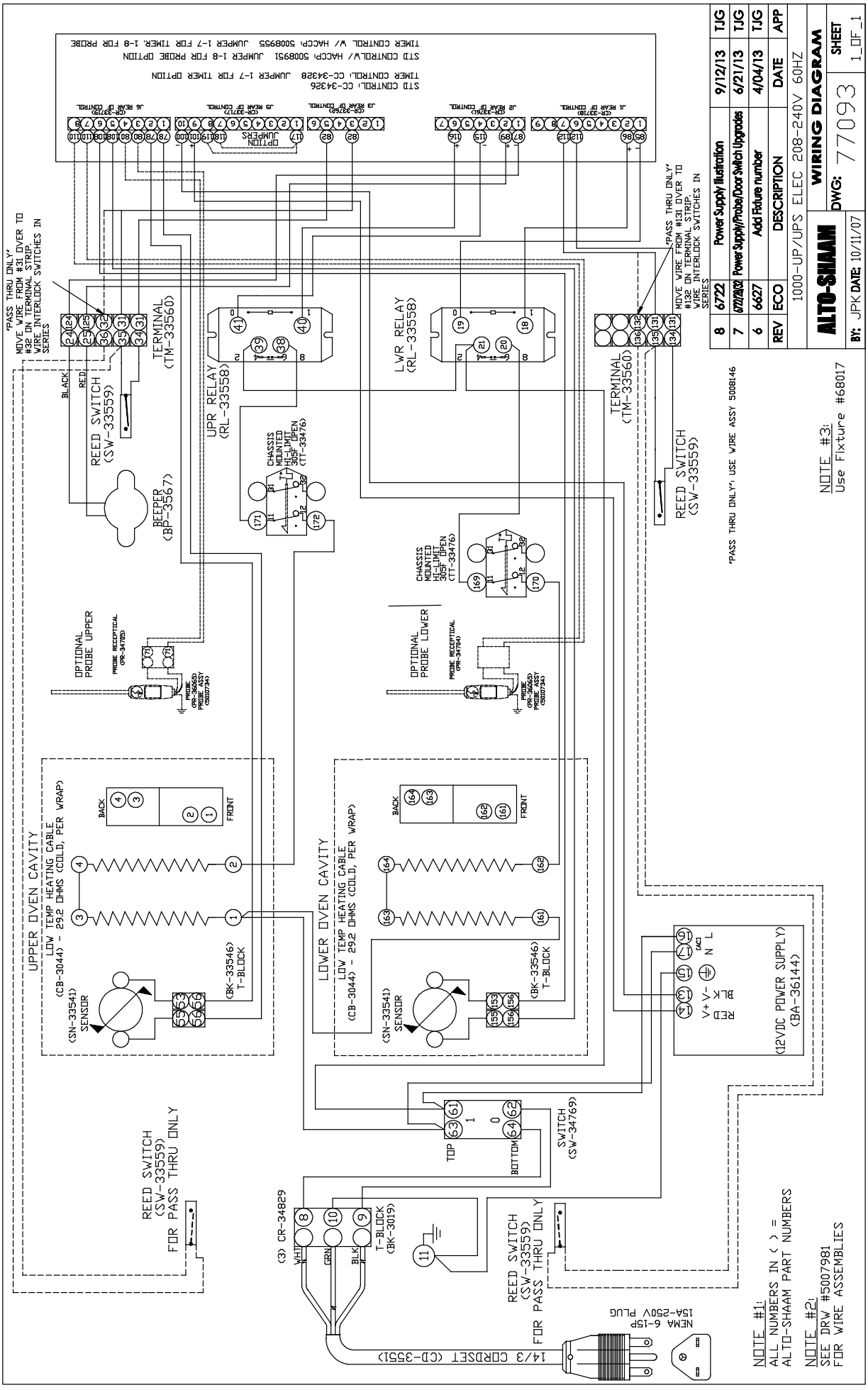
REV	ECO	DESCRIPTION	DATE	APP
11	7514	CONTROL REVISION	11/16/15	TJG
10	7470	ADD CD-38149	8/14/15	TJG
9	6758	ADD CD-36231 China Cord	7/28/14	TJG

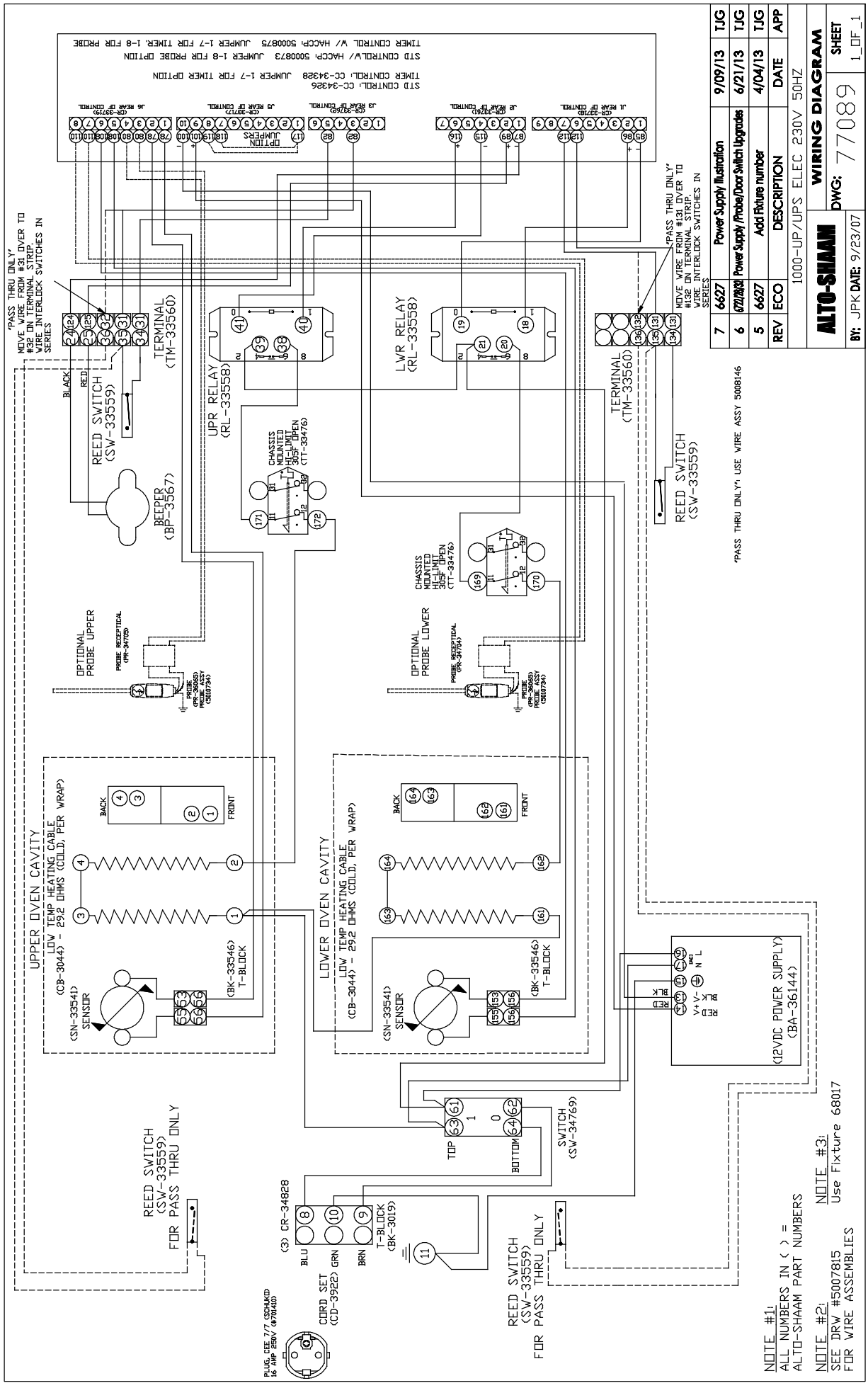
1000 & 1200-UP/UPS 230V 50HZ

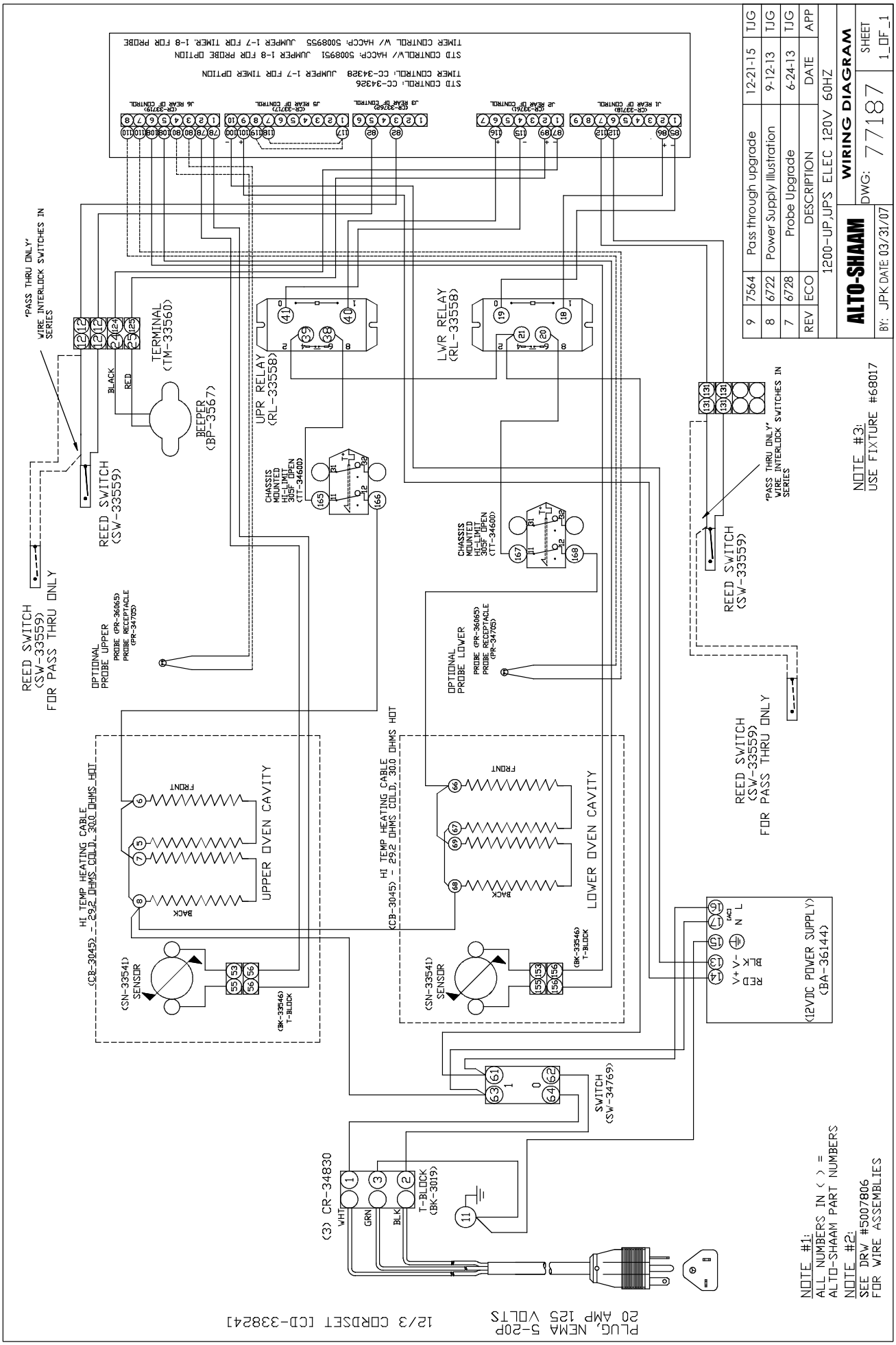
ALTO-SHAAM — **WIRING DIAGRAM**

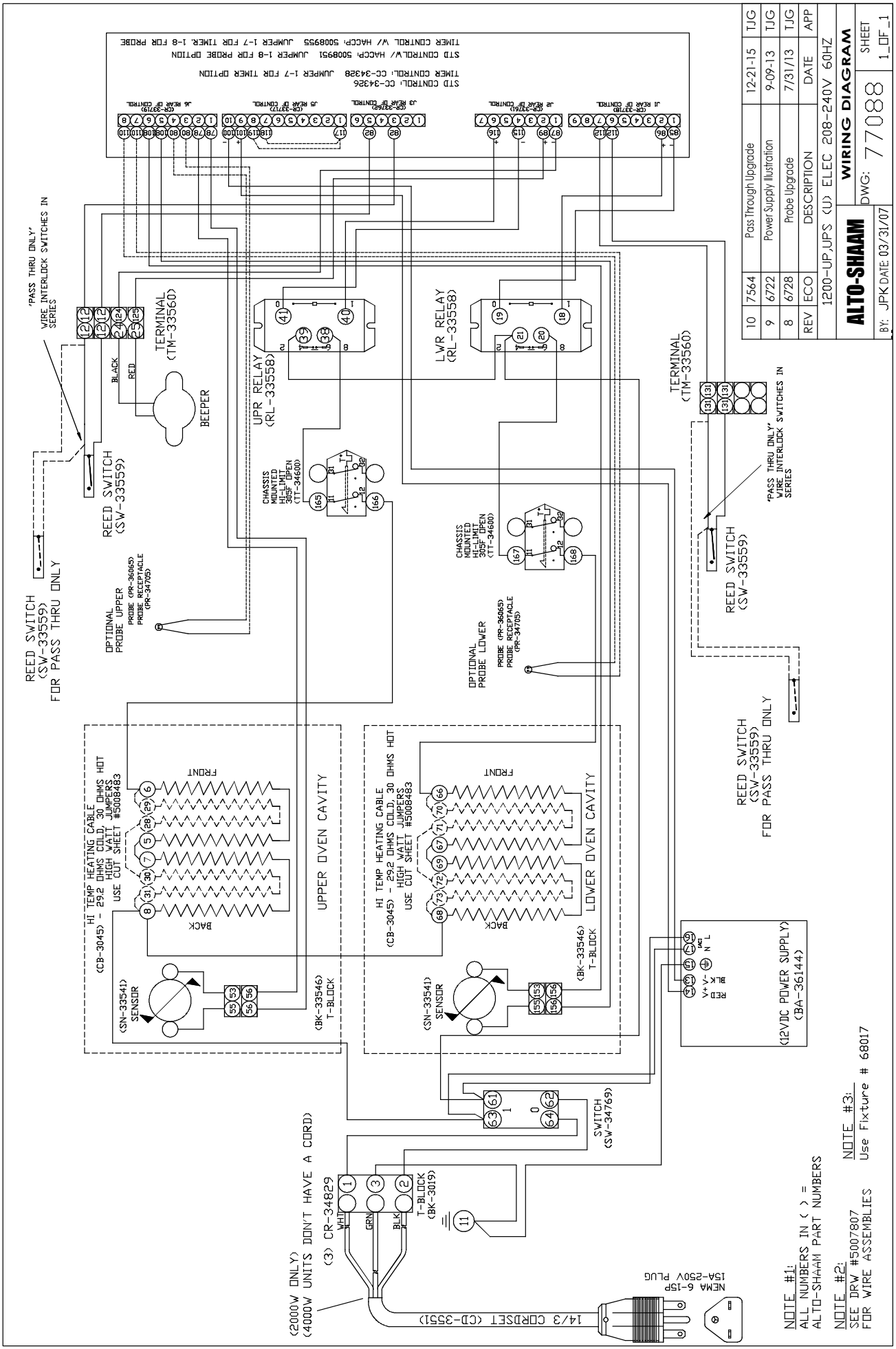
BY: JPK DATE: 1/16/08 — DWG: 77192 — SHEET 1_OF_1

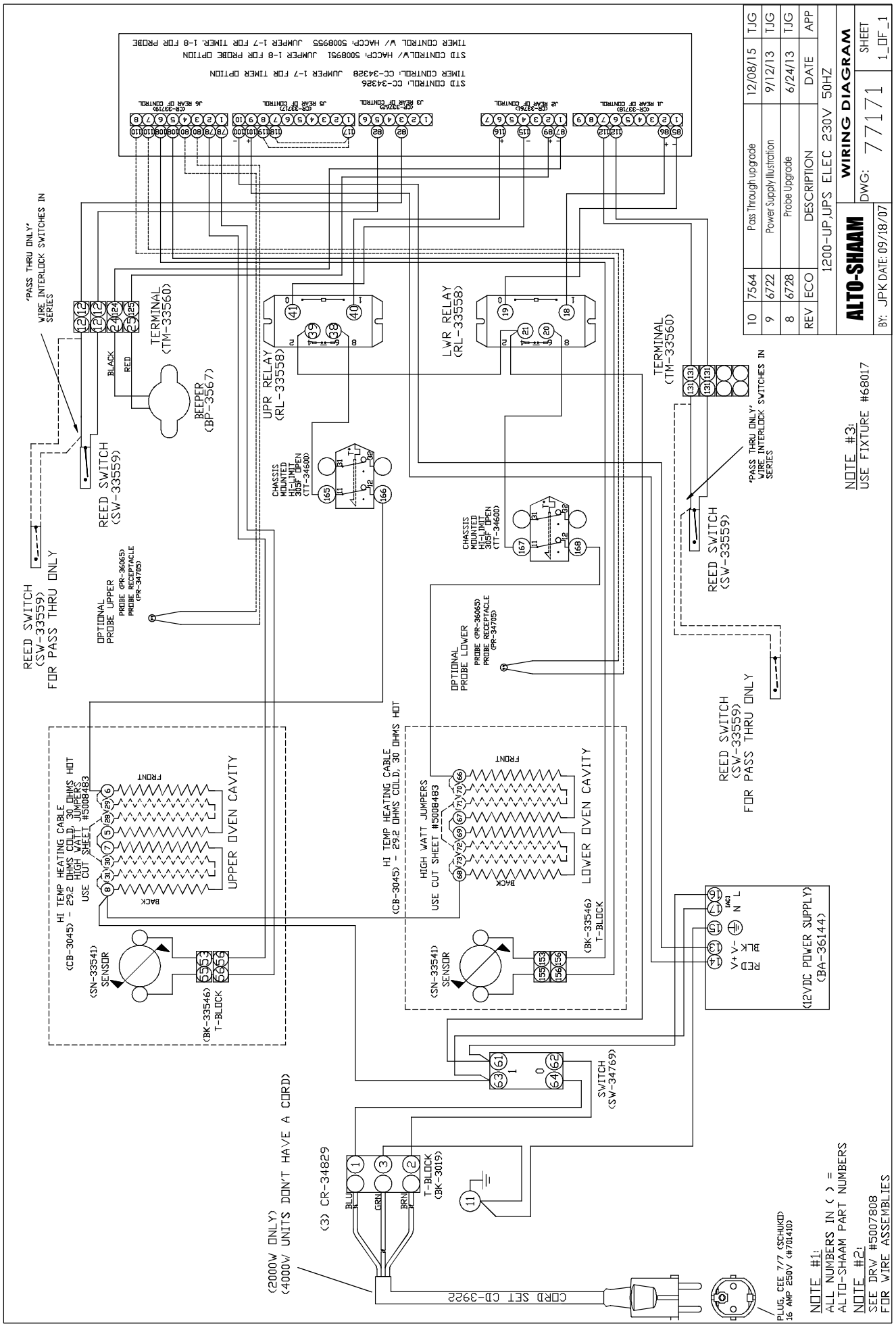

8 7564 Pass through upgrade 12/21/15 TJG
7 6722 Power Supply Illustration 9/12/13 TJG
6 6/22/2012 Power Supply/Probe/Door switch Upgrades 6/21/13 TJG
REV ECO DESCRIPTION DATE APP
1000-UP/UPS ELEC 120V 60HZ
ALTO-SHAAM
WIRING DIAGRAM
DWG: 77091
SHEET 1_OF_1
BY: JPK DATE: 10/01/07
STD CONTROL: CC-34326 TIMER CONTROL: CC-34328 JUMPER 1-7 FOR TIMER OPTION
STD CONTROL W/ HACCP: 5008951 JUMPER 1-8 FOR PROBE OPTION
TIMER CONTROL W/ HACCP: 5008955 JUMPER 1-7 FOR TIMER 1-8 FOR PROBE
J1 REAR DP CONTROL
J2 REAR DP CONTROL
J3 REAR DP CONTROL
J4 REAR DP CONTROL
J5 REAR DP CONTROL
J6 REAR DP CONTROL
OPTION JUMPERS
"PASS THRU ONLY" WIRE INTERLOCK SWITCHES IN SERIES
TERMINAL (TM-33560)
BLACK
RED
BEEPER (BP-3567)
REED SWITCH (SW-33559)
FOR PASS THRU ONLY
UPR RELAY (RL-33558)
LWR RELAY (RL-33558)
CHASSIS MOUNTED HI-LIMIT 305F OPEN (TT-34765)
OPTIONAL PROBE UPPER
OPTIONAL PROBE LOWER
PROBE RECEPTICAL (PR-34765)
PROBE (PR-36065) PROBE ASSY (5008734)
UPPER OVEN CAVITY
56 FT LOW TEMP HEATING CABLE (CB-30443) - 29.2 OHMS COLD, PER WRAP
LOWER OVEN CAVITY
56 FT LOW TEMP HEATING CABLE (CB-30443) - 29.2 OHMS COLD, PER WRAP
BACK
FRONT
(SN-33541) SENSOR
(BK-33546) T-BLOCK
(12VDC POWER SUPPLY) (BA-36144)
RED BLK
V+ V- DAC1 N L
SWITCH (SW-34769)
TOP
BOTTOM
PLUG, NEMA 5-20P 20 AMP 125 VOLTS
(3) CR-34830
WHT GRN BLK
T-BLOCK (BK-3019)
CORD SET (CD-33824)
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW #5007874 FOR WIRE ASSEMBLIES
NOTE #3: Use Fixture 68017


WIRING DIAGRAM
ALTO-SHAAM
DWG: 77093
SHEET 1_OF_1
1000-UP/UPS ELEC 208-240V 60HZ
8 6722 Power Supply Illustration 9/12/13 TJG
7 6722/6630 Power Supply/Probe/Door Switch Upgrades 6/21/13 TJG
6 6627 Add Fixture number 4/04/13 TJG
REV ECO DESCRIPTION DATE APP
BY: JPK DATE: 10/11/07
"PASS THRU ONLY", USE WIRE ASSY 5008146
NOTE #3: Use Fixture #68017
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW #5007981 FOR WIRE ASSEMBLIES
UPPER OVEN CAVITY
LOW TEMP HEATING CABLE (CB-3044) - 29.2 OHMS (COLD, PER WRAP)
LOWER OVEN CAVITY
LOW TEMP HEATING CABLE (CB-3044) - 29.2 OHMS (COLD, PER WRAP)
REED SWITCH (SW-33559) FOR PASS THRU ONLY
REED SWITCH (SW-33559)
TERMINAL (TM-33560)
UPR RELAY (RL-33558)
LWR RELAY (RL-33558)
BEEPER (BP-3567)
CHASSIS MOUNTED HI-LIMIT 305F OPEN (TT-33476)
OPTIONAL PROBE UPPER
OPTIONAL PROBE LOWER
SENSOR (SN-33541)
T-BLOCK (BK-33546)
SWITCH (SW-34769)
TOP
BOTTOM
(3) CR-34829
T-BLOCK (BK-3019)
WHT
GRN
BLK
14/3 CORDSET (CD-35351)
NEMA 6-15P
15A-250V PLUG
(12VDC POWER SUPPLY) (BA-36144)
RED
BLK
V+ V-
L N
"PASS THRU ONLY" MOVE WIRE FROM #31 OVER TO #32 ON TERMINAL STRIP. WIRE INTERLOCK SWITCHES IN SERIES
"PASS THRU ONLY" MOVE WIRE FROM #131 OVER TO #132 ON TERMINAL STRIP. WIRE INTERLOCK SWITCHES IN SERIES
STD CONTROL, CC-34326 TIMER CONTROL, CC-34328 JUMPER 1-7 FOR TIMER OPTION
STD CONTROL W/ HACCP, 5008951 JUMPER 1-8 FOR PROBE OPTION TIMER CONTROL W/ HACCP, 5008955 JUMPER 1-7 FOR TIMER, 1-8 FOR PROBE


WIRING DIAGRAM
ALTO-SHAAM
DWG: 77089
SHEET 1_OF_1
BY: JPK DATE: 9/23/07
1000-UP/UPS ELEC 230V 50HZ
REV | ECO | DESCRIPTION | DATE | APP
5 | 6627 | Add fixture number | 4/04/13 | TJG
6 | 6627 | Power Supply /Probe/Door Switch Upgrades | 6/21/13 | TJG
7 | 6627 | Power Supply Illustration | 9/09/13 | TJG
"PASS THRU ONLY" USE WIRE ASSY 5008146
"PASS THRU ONLY"
MOVE WIRE FROM #131 OVER TO #132 ON TERMINAL STRIP. WIRE INTERLOCK SWITCHES IN SERIES
TERMINAL (TM-33560)
REED SWITCH (SW-33559)
BEEPER (BP-3567)
UPR RELAY (RL-33558)
LWR RELAY (RL-33558)
CHASSIS MOUNTED HI-LIMIT 305F OPEN (TT-33476)
OPTIONAL PROBE UPPER
OPTIONAL PROBE LOWER
PROBE RECEPTICAL (PR-3477)
PROBE ASSY (5001734)
UPPER OVEN CAVITY
LOW TEMP HEATING CABLE (CB-3044) - 29.2 OHMS (COLD, PER WRAP)
LOWER OVEN CAVITY
SENSOR (SN-33541)
T-BLOCK (BK-33546)
FRONT
BACK
TOP
BOTTOM
SWITCH (SW-34769)
(12VDC POWER SUPPLY) (BA-36144)
REED SWITCH (SW-33559) FOR PASS THRU ONLY
(3) CR-34828
CORD SET (CD-3922)
T-BLOCK (BK-3019)
BLU
GRN
BRN
PLUG, CEE 7/7 (SCHUKO) 16 AMP 250V (#7014D)
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW #5007815 FOR WIRE ASSEMBLIES
NOTE #3: Use Fixture 68017


1200-UP,UPS ELEC 120V 60HZ
ALTO-SHAAM
WIRING DIAGRAM
DWG: 77187
SHEET 1_OF_1
BY: JPK DATE: 03/31/07
REV | ECO | DESCRIPTION | DATE | APP
9 | 7564 | Pass through upgrade | 12-21-15 | TJG
8 | 6722 | Power Supply Illustration | 9-12-13 | TJG
7 | 6728 | Probe Upgrade | 6-24-13 | TJG
STD CONTROL, CC-34328 JUMPER 1-7 FOR TIMER OPTION
STD CONTROL W/ HACCP, 5008951 JUMPER 1-8 FOR PROBE OPTION
TIMER CONTROL W/ HACCP, 5008955 JUMPER 1-7 FOR TIMER, 1-8 FOR PROBE
J1 REAR OF CONTROL
J2 REAR OF CONTROL
J3 REAR OF CONTROL
J5 REAR OF CONTROL
J6 REAR OF CONTROL
"PASS THRU ONLY" WIRE INTERLOCK SWITCHES IN SERIES
TERMINAL (TM-33560)
BEEPER (BP-3567)
BLACK
RED
REED SWITCH (SW-33559)
FOR PASS THRU ONLY
UPR RELAY (RL-33558)
LWR RELAY (RL-33558)
CHASSIS MOUNTED HI LIMIT THERMOSTAT (TT-34600)
OPTIONAL PROBE UPPER
PROBE (PR-36065)
PROBE RECEPTACLE (PR-34705)
OPTIONAL PROBE LOWER
HI TEMP HEATING CABLE (CB-3045) - 29.2 OHMS COLD, 300 OHMS HOT
UPPER OVEN CAVITY
LOWER OVEN CAVITY
FRONT
BACK
(SN-33541) SENSOR
(BK-33546) T-BLOCK
SWITCH (SW-34769)
(3) CR-34830
WHT
GRN
BLK
T-BLOCK (BK-3019)
(12VDC POWER SUPPLY) (BA-36144)
RED
BLK
V+ V- N L
NOTE #1:
ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2:
SEE DRW #5007806
FOR WIRE ASSEMBLIES
NOTE #3:
USE FIXTURE #68017
PLUG, NEMA 5-20P
20 AMP 125 VOLTS
12/3 CORDSET (CD-33824)


1200-UP,UPS <U> ELEC 208-240V 60HZ
ALTO-SHAAM
WIRING DIAGRAM
DWG: 77088
SHEET 1_OF_1
BY: JPK DATE 03/31/07
10 7564 Pass Through Upgrade 12-21-15 TJG
9 6722 Power Supply Illustration 9-09-13 TJG
8 6728 Probe Upgrade 7/31/13 TJG
REV ECO DESCRIPTION DATE APP
TERMINAL (TM-33560)
BEEPER
UPR RELAY (RL-33558)
LWR RELAY (RL-33558)
REED SWITCH (SW-33559)
"PASS THRU ONLY" WIRE INTERLOCK SWITCHES IN SERIES
OPTIONAL PROBE UPPER PROBE (PR-36065) PROBE RECEPTACLE (PR-34705)
OPTIONAL PROBE LOWER PROBE (PR-36065) PROBE RECEPTACLE (PR-34705)
CHASSIS MOUNTED HI-LIMIT 305°F OPEN (TT-34600)
HI TEMP HEATING CABLE (CB-3045) - 29.2 OHMS COLD, 30 OHMS HOT USE CUT SHEET #5008483 HIGH WATT JUMPERS
UPPER OVEN CAVITY
LOWER OVEN CAVITY
FRONT
BACK
(SN-33541) SENSOR
(BK-33546) T-BLOCK
(12VDC POWER SUPPLY) (BA-36144)
SWITCH (SW-34769)
(3) CR-34829
T-BLOCK (BK-3019)
(2000W ONLY) (4000W UNITS DON'T HAVE A CORD)
14/3 CORDSET (CD-3551)
NEMA 6-15P 15A-250V PLUG
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW #5007807 FOR WIRE ASSEMBLIES
NOTE #3: Use Fixture # 68017



REV	DESCRIPTION	DATE	APP
10	7564 Pass Through upgrade	12/08/15	TJG
9	6722 Power Supply Illustration	9/12/13	TJG
8	6728 Probe Upgrade	6/24/13	TJG

1200-UP,UPS ELEC 230V 50HZ

ALTO-SHAAM — **WIRING DIAGRAM** — DWG: 77171 — SHEET 1_OF_1

BY: JPK DATE: 09/18/07

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, do not put the appliance into service until the damage has been inspected by an authorized Alto-Shaam service provider.

Should damage occur in shipment, do not put the appliance into service until the damage has been inspected by an authorized Alto-Shaam service provider.

Shipping damages are 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.

ALTO-SHAAM®

Effective November 1, 2012

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