

Cook, Hold, Smoke Oven Manual Control





Model:



767-SK 1767-SK 1000-SK-I 1000-SK/II

- Installation
- Operation
- Maintenance

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& ecosmart



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Warranty and Service Information

PROTECT YOUR ORIGINAL MANUFACTURER'S WARRANTY, REGISTER ONLINE:

www.alto-shaam.com Support > Warranty Registration

Register to ensure prompt resolution of warranty claims

Please register your Alto-Shaam equipment to ensure prompt service in the event of a warranty claim. You'll automatically be entered into a monthly drawing to win an additional year extended warranty!

Registering your equipment will allow you to receive notifications about software updates and additional product information.

NOTE: Your personal information will not be shared with any other company.



Call 800-558-8744 to reach our twentyfour hour emergency service call center for immediate access to local authorized service agencies outside standard business hours. The emergency service access is provided exclusively for Alto-Shaam equipment and is available throughout the United States through Alto-Shaam's toll free number. Emergency service access is available seven days a week, including holidays.



Delivery



This Alto-Shaam appliance has been thoroughly tested and inspected to ensure only the highest quality appliance 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, including unattached items and accessories, may be delivered in one or more packages. Ensure all standard items and options have been received with each appliance as ordered. Save all the information packed with the appliance. Register the appliance online at www.alto-shaam.com/en/support/warranty-registration 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 appliance. 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

The 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:

ACAUTION



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

- Before use, appliance 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.

ALTO-SHAAM.

Transportation and Damage Claims



All Alto-Shaam equipment is sold Free on Board (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.

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 appliance is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the appliance is moved to a storage area.
- 2. Do not sign a delivery receipt or a freight bill until a proper count has been made and inspection of all appliances are received.

- 3. Note all damage to packages directly on the carrier's delivery receipt.
- 4. Make certain the driver signs the delivery receipt. If the driver 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. Contact the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation to the carrier's office with 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.

Alto-Shaam will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. Alto-Shaam cannot, however, file any damage claims, assume the responsibility of any claims, or accept deductions in payment for such claims.

Record the model and serial number of the appliance for easy
reference. Always refer to both model and serial number in
any contact with Alto-Shaam regarding this appliance.

Model:	
Serial Number:	
Date Installed:	
Voltage:	

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

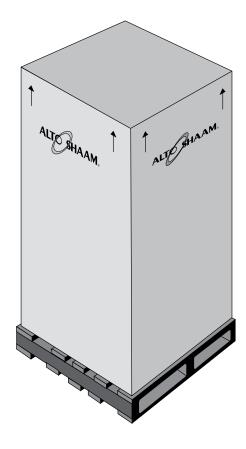
Alto-Shaam has established a twenty-four hour emergency service call center to offer immediate customer access to a local authorized service agency outside of standard business hours. The emergency service access is provided exclusively for Alto-Shaam equipment and is available throughout the United States through the use of Alto-Shaam's toll-free number. Emergency service access is available seven days a week including holidays.

• Carefully remove the appliance from the carton or crate.

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

Do not discard this manual. This manual is considered to be part of the appliance and is to be provided to the owner or manager of the business or to the person responsible for training operators. Additional manuals are available from the manufacturer.

- 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 voiding the warranty and relieving Alto-Shaam of all liability.
- Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.



Safety Procedures

- The 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.
- The 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. Alto-Shaam recommends regular staff training to avoid the risk of accident or damage to the appliance. Operators must also receive regular safety instructions.
- · Any troubleshooting 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 signal words and symbols may be used throughout this manual.

Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

WARNING

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

A CAUTION

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

NOTICE: Indicates information considered important, but not hazard-related (e.g., messages relating to property damage).



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



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

Safety Procedures



- To prevent serious injury, death or property damage, the 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 the 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 appliance is moved. If the appliance is moved, ensure that all utility connections are properly disconnected. If the appliance is returned to its original position, ensure that retention devices and utility connections are properly connected.
- Only use the appliance when it is stationary. Mobile appliance 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.

NWARNING



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

The appliance must be cleaned thoroughly to avoid deposits of grease and or food residue 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.



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.

ACAUTION



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.

riangle 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.

NWARNING

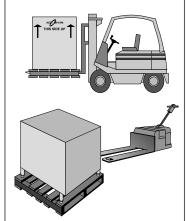


To prevent personal injury, death or property damage:

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 cook and hold oven must be installed in a location that will permit the oven to function for its intended purpose and to allow adequate clearance for ventilation, proper cleaning, and maintenance access.



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

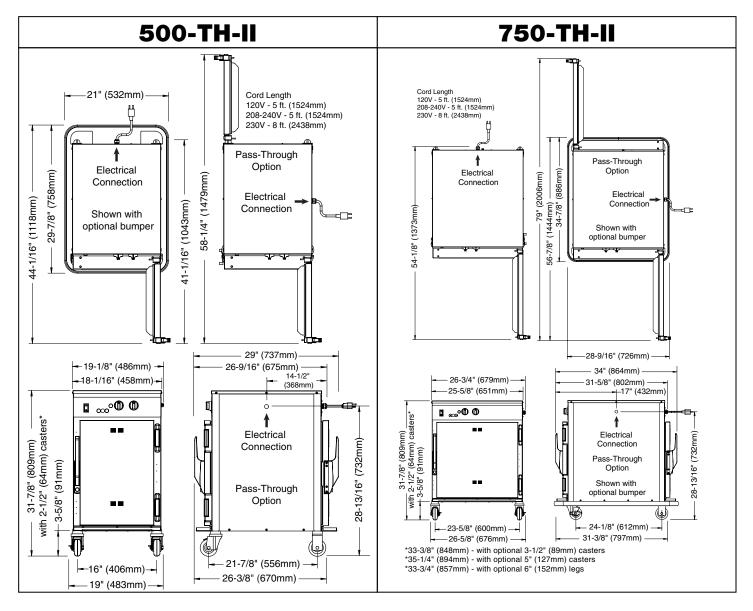
Cook & Hold emissions testing conducted by Underwriters Laboratories, Inc.® was found to be in compliance with the applicable requirements of NFPA96: Eighth Edition, Par. 4.1.1.2. U.L emissions sampling of grease laden vapor resulted in a total of 0.55 milligrams per cubic meter and is considered representative of all oven models in the line.

Smoker resulted in a total of 0.21 milligrams per cubic meter.

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.

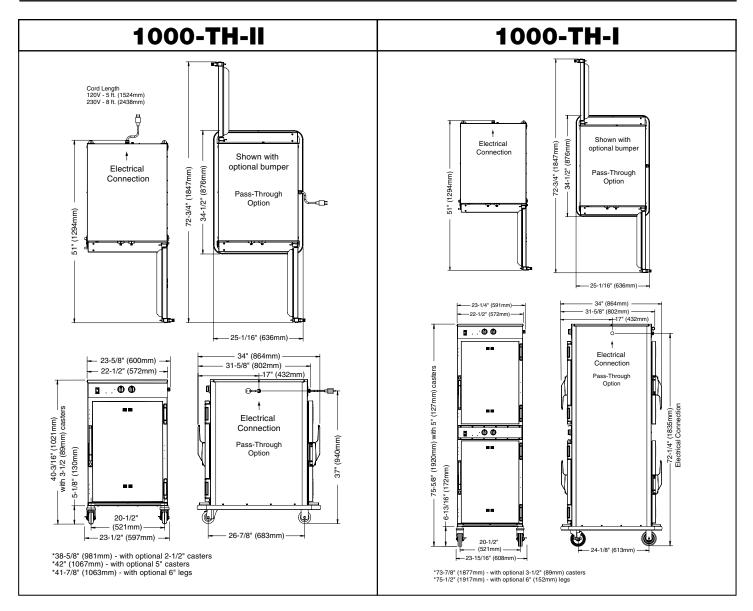
Clearance	Requirements
Rear	3" (76mm) from non-heated surfaces 18" (457mm) from heat producing equipment
Тор	2" (51mm)
Left, Right	1" (25mm)





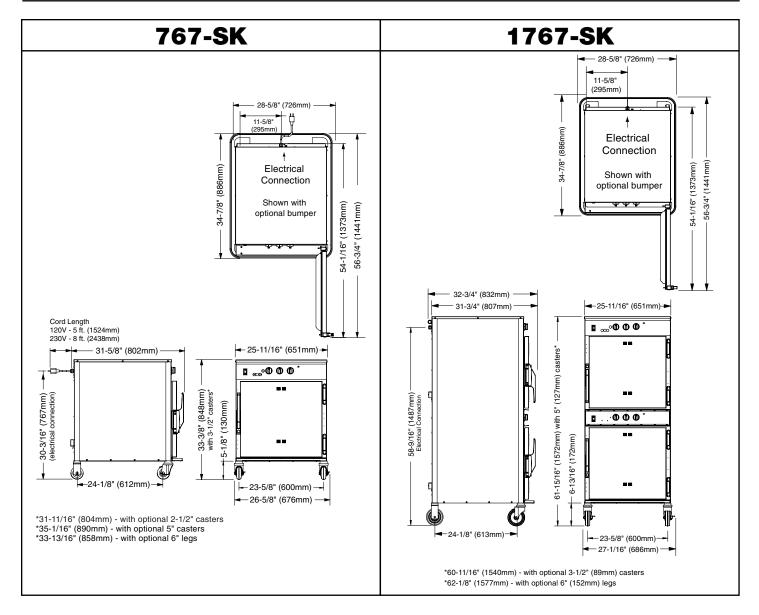
Model >	500-TH-II	750-TH-II
Net Weight	130 lb (59 kg)	194 lb (88 kg)
Ship Weight	166 lb (75 kg) 264 lb (120 kg)	
Product/Pan Capacity	40 lb (18kg) maximum 100 lb (45kg) maximum	
	Volume maximum: 30 quarts (38 liters)	Volume maximum: 75 quarts (95 liters)





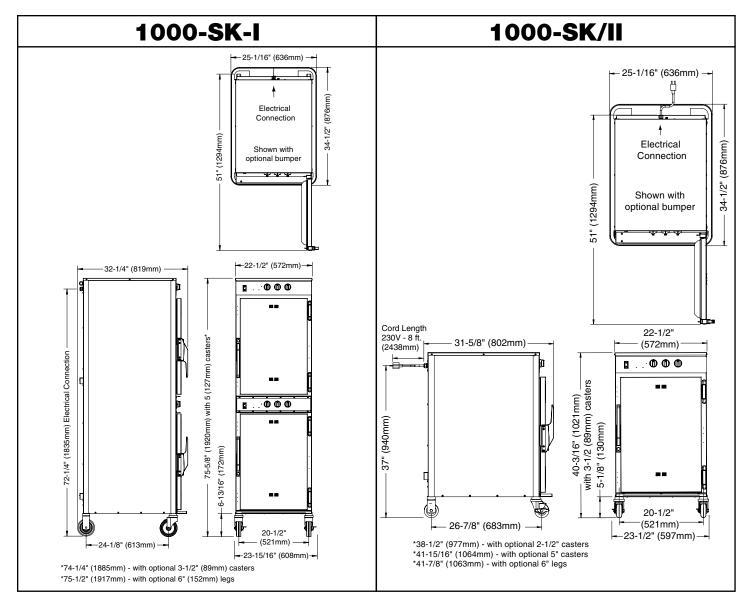
Model >	1000-TH-II	1000-TH-I
Net Weight	200 lb (91 kg)	366 lb (166 kg)
Ship Weight	275 lb (125 kg) 435 lb (197 kg)	
Product/Pan Capacity	120 lb (54 kg) maximum 120 lb (54 kg) maximum	
(per compartment)	Volume maximum: 60 quarts (76 liters)	Volume maximum: 60 quarts (76 liters)





Model >	767-SK	1767-SK
Net Weight	197 lb (89 kg)	356 lb (161 kg)
Ship Weight	265 lb (120 kg)	450 lb (204 kg)
Product/Pan Capacity		
(per compartment)	Volume maximum: 53 quarts (67 liters)	Volume maximum: 53 quarts (67 liters)





Model > 1000-SK-I		1000-SK/II
Net Weight	377 lb (171 kg)	203 lb (92 kg) est.
Ship Weight	445 lb (202 kg) est. 282 lb (101 kg) es	
Product/Pan Capacity	120 lb (54 kg) maximum 120 lb (54 kg) maximum	
(per compartment)	Volume maximum: 60 quarts (76 liters)	Volume maximum: 60 quarts (76 liters)

Installation



Cook & Hold Options and Accessories

Model>	500-TH-II	750-TH-II	1000-TH-II	1000-TH-I
Bumper, Full Perimeter Not available with 2-1/2" (64mm) casters	5011161	5010371	5009767	5009767
Carving Holder, Prime rib Steamship (cafeteria) round	HL-2635 4459	HL-2635 4459	HL-2635 4459	HL-2635 4459
Casters - 2 rigid, 2 swivel w/brake 5" (127mm) 3-1/2" (89mm) 2-1/2" (64mm)	5004862 5008017 standard	5004862 5008017 standard	5004862 standard 5008022	standard 5008017 —
Door with Window Right-hand Left-hand	5010830 5010829	5010948 5010949	5010082 5010076	5010082 5010076
Door Lock with Key	LK-22567	LK-22567	LK-22567	LK-22567
Drip Pan 1-7/8" (48mm) deep with drain 1-11/16" (43mm) deep with drain 1-5/8" (41mm) deep without drain 1-7/8" (48mm) deep without drain 4" (102mm) extra deep	 14831 1014684 		5005616 — — 11906 15929	5005616 — — 11906 15929
Legs, 6" (152mm), Flanged (set of four)	5011149	5011149	5011149	5011149
Pan Grid, Wire - 18" x 26" pan insert	_	PN-2115	PN-2115	PN-2115
Security Panel w/ Key Lock	5013939	5013936	5013934	5013935
Shelf, Stainless Steel Stainless steel, flat wire, reach-in Stainless steel, flat wire, pass-through Chrome, flat wire, pass-through Rib rack	SH-2326 — — — —	SH-2324 — SH-2327 SH-2743	SH-2325 SH-2346 — SH-29474	SH-2325 SH-2346 — SH-29474
Stacking Hardware - Over or under TH, SK, or S-Series Under XL-300 Xcelerate® Under XL-400 Xcelerate® Under CTX4-10 Combitherm®	5004864 — — —	5004864 5019677 5019678 5019679	5004864 5019677 — 5019679	



Smoker Options and Accessories

Model>	767-SK	1767-SK	1000-SK-I	1000-SK/II
Bumper, Full Perimeter (NOT AVAILABLE WITH 2-1/2" (64mm) CASTERS)	5010371	5010371	5009767	5009767
Carving Holder PRIME RIB STEAMSHIP (CAFETERIA) ROUND	HL-2635	HL-2635	HL-2635	HL-2635
	4459	4459	4459	4459
Casters - 2 RIGID, 2 SWIVEL W/BRAKE 5" (127mm) 3-1/2" (89mm) 2-1/2" (64mm)	5004862	standard	standard	5004862
	standard	5008017	5008017	Standard
	5008022	—	—	5008022
Exterior Color Options STAINLESS STEEL BURGUNDY CUSTOM COLOR	STANDARD	STANDARD	STANDARD	STANDARD
	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
Door Lock with Key	LK-22567	LK-22567	LK-22567	LK-22567
Door with Window RIGHT HAND LEFT HAND	5010406	5010406	15879R	15879R
	5010409	5010409	15881R	15881R
Drip Pan 1-7/8" (48mm) deep with drain 1-11/16" (43mm) deep with drain 1-5/8" (41mm) deep without drain 1-7/8" (48mm) deep without drain 4" (102mm) extra deep	— 14831 1014684 — —	14831 1014684 —	5005616 — — 11906 15929	5005616 — — 11906 15929
Legs, Flanged, 6" (152mm) - SET OF FOUR	5011149	5011149	5011149	5011149
Pan Grid, Wire - 18" x 26" PAN INSERT	PN-2115	PN-2115	PN-2115	PN-2115
Security Panel with key lock	5013936	5013938	5013935	5013934
Shelf, Stainless Steel FLAT WIRE, REACH-IN RIB RACK	SH-2324	SH-2324	SH-2325	SH-2325
	SH-2743	SH-2743	SH-29474	SH-29474
Stacking Hardware - OVER OR UNDER TH, SK, OR S-SERIES UNDER XL-300 XCELERATE® UNDER XL-400 XCELERATE® UNDER CTX4-10 COMBITHERM®	5004864	_	_	5004864
	5019677	_	_	5019677
	5019678	_	_	—
	5019679	_	_	5019679
Wood Chips, bulk pack - 20 lb. (9 kg) APPLE CHERRY HICKORY MAPLE	WC-22543	WC-22543	WC-22543	WC-22543
	WC-22541	WC-22541	WC-22541	WC-22541
	WC-2829	WC-2829	WC-2829	WC-2829
	WC-22545	WC-22545	WC-22545	WC-22545



Stacking Instructions

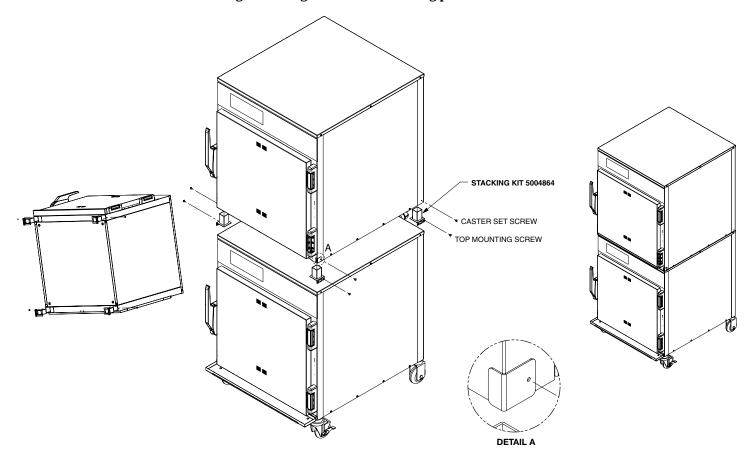
1) If the two appliances were shipped together from the factory, the top appliance will have the casters already removed. A stacking kit will be included with the shipment.

If casters need to be removed, lay the appliance 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 appliance. Secure the stacking posts using one screw and two flat washers that are included 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 appliance.

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



Stacking Configurations		
Model	Can be stacked with:	
500-TH-II	500-TH/III, 500-TH-II or 500-S	
750-TH-II or 767-SK	750-TH/III, 750-TH-II, 750-S, 767-SK, 767-SK/III	
1000-TH-II or 1000-SK/II	1000-TH/III, 1000-SK/III, 1000-SK/II, 1000-S	



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

Leveling



Level the oven from side-to-side

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

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

NOTICE: Failure to properly level this oven can cause improper function and will result in the uneven baking with products consisting of semi-liquid batter.

Restraint requirements — mobile equipment

WARNING

RISK OF ELECTRIC SHOCK.



Appliance must be secured to building structure. Failure to observe this precaution may result in damage to the equipment and severe personal injury.

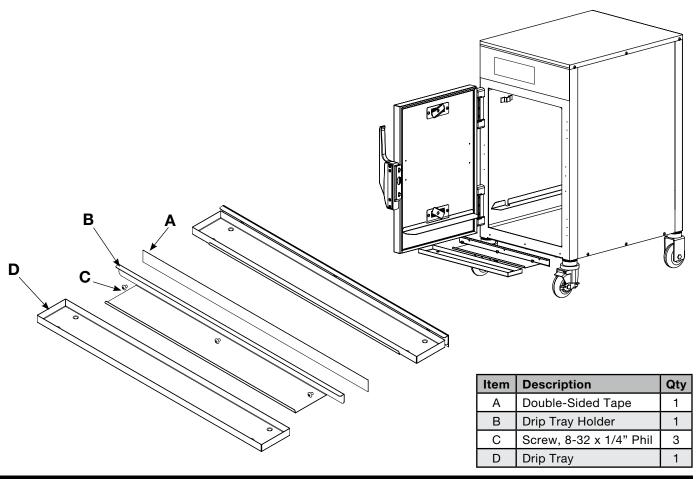
Any appliance that is not furnished with a power supply cord but that includes a set of casters must be installed with a tether. Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit. The following requirements apply:

- 1. 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.

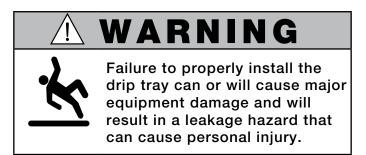
A mounting connector for a restraining device is located on the upper back flange of the appliance. A flexible connector is not supplied by nor is it available from the factory.



Drip tray installation instructions



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





⚠ WARNING



Appliances without a cord provided by the factory must be equipped with a cord of sufficient length to permit the appliance to be moved for cleaning.

Always use the correct AWG wire size based on the electrical requirements for the appliance.

The appliance must be installed by a qualified service technician. The oven must be properly grounded in accordance with the National Electrical Code and applicable local codes.

Plug the unit into a properly grounded receptacle **only**, positioning the unit so that the plug 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.

Proper receptacle or outlet configuration or permanent wiring for this unit must be installed by a licensed electrician in accordance with applicable local electrical codes.

Cook & Hold, and Smoker models at 208-240V are dual rated units with a conversion switch mounted under an access cover on the rear of the oven, near the power cord.

With the voltage conversion switch in the 200-208V (upper) position, the oven will function properly with a source voltage of between 200 and 208.

With the voltage conversion switch in the 220-240V (lower) position, the unit will function properly with a source voltage of between 220 and 240.

NOTICE: All 208-240V units are shipped from the factory with the voltage conversion switch in the 220-240V position.

All 125V rated units will function properly with a source voltage of between 100 and 125, 60 Hz.

The 125V rated units are provided with a cord and plug [NEMA #5-20P]. Have a licensed electrician install the proper outlet configuration as required for the unit in accordance with applicable, local electrical codes. This will assure a safe and trouble-free installation.

A 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.



CE-approved appliances include an equipotential-bonding terminal marked with the symbol shown on the left. Provisions for earthing are to be made in accordance with IEC:2010 60335-1 section 27 or local codes.

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.

Electrical Connection



		P C C		•		ated Inside The Bonn			
Voltage	Phase	Hz	Amps	kW	NEMA 5-20P 20a-125V plug	CEE 7/7 Plug rated 250V	CH2-16P Plug rated 250V	BS1363 Plug rated 250V	AS/NZS 3112 Plug rated 250V
500-TH					-	<u> </u>			l.
120	1	60	16.0	1.9	✓				
208 240	1	60	11.2 12.5	2.7 3.0		,	No cord or plug		
230	1	50/60	12	2.8		✓	✓	✓	✓
750-TI	1-11								
120	1	60	14.2	1.7	✓				
208 240	1	60	14.5 11.2	3.0 2.7			No cord or plug		
230	1	50/60	10.4	2.4		✓	✓	✓	✓
1000-1	ГН-ІІ								
120	1	60	17.0	1.9	✓				
208 240	1	60	14.5 11.5	3.0 2.7			No cord or plug		
230	1	50/60	10.5	2.4		✓	✓	✓	✓
1000-1	ГН-І								
208 240	1	60	28.9 22.2	6.0 5.3			No cord or plug		
230	1	50/60	21.3	4.9			No cord or plug		
767-SI	(ï	,						
120	1	60	16.0	1.9	✓				
208 240	1	60	16.0 13.0	3.3 3.0			No cord or plug		
230	1	50/60	12.2	2.8		✓	✓	✓	✓
1767-9	K								
208 240	1	60	31.0 25.0	6.4 6.0			No cord or plug		
230	1	50/60	24.3	5.6		✓	✓	✓	
1000-5	K-I	,							
208 240	1	60	31.4 24.3	6.5 5.8			No cord or plug		
230	1	50/60	24.1	5.5			No cord or plug		
1000-5	SK/II								
208 240	1	60	15.3 12.1	3.2 2.9			No cord or plug		
230	1	50/60	12.2	2.8		✓	✓	✓	✓

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)



A 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.

This appliance is intended for use in commercial establishments by qualified operating personnel 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.

Start-Up Operation

Before initial use or after removing the appliance from storage:

- 1. Remove all packing material from the appliance.
- Remove and wash any detachable items such as wire shelves, side racks, pans, and drip pans with hot, soapy water. Dry with a clean damp lint-free cloth.
- 3. Remove all visible grease or oil from the appliance.
- 4. Clean the interior and exterior of the appliance with a mild soap and water solution. Apply the solution with a clean damp cloth. Do not use commercial or household cleaners that contain ammonia. Wipe with a clean, damp cloth to remove all detergent residue. Dry with a clean, lint-free cloth.
- 5. Clean the appliance glass with glass cleaner or distilled vinegar.
- 6. Install the side racks and wire shelves position shelves with the curved end up and toward the rear of the appliance. Re-install drip pan.
- 7. Operate the oven without food for a period of two (2) hours at a temperature of 300°F (149°C) to remove surface oils and any accompanying odor.

The appliance is now ready for operation.

MARNING



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.

Fahrenheit (°F) / Celsius (°C):

The factory default is Fahrenheit. To change to Celsius:

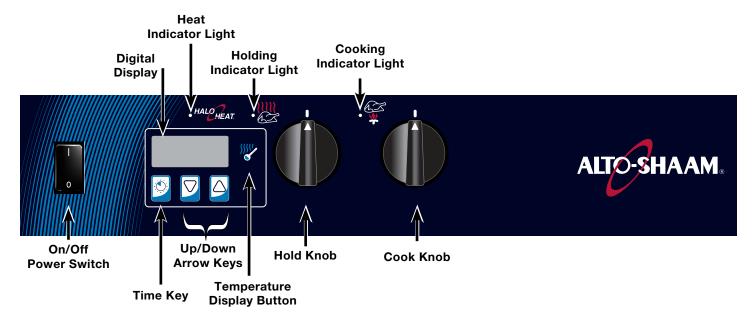
- 1. Press and hold the **Temperature Display** button and the **Down Arrow** key for 5 seconds.
- 2. The control will show for 3 seconds to verify selection and then show the temperature in °C.
- 3. Repeat to toggle to Fahrenheit.

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

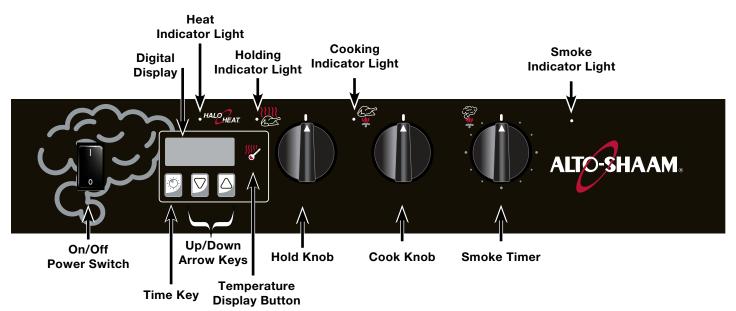
NOTICE: With a power failure, factory test, etc., the control will retain the °C or °F setting selected by the user when power is restored.



Cook & Hold



Cook/Hold/Smoke





1. Push power switch to ON (I) position.

Control will display 0°F or 0°C.

2. Set the holding temperature - 60°F to 205°F (16°C to 96°C)

- Rotate the hold knob to the desired holding temperature. The set temperature will appear in the Digital Display 140F and the Temperature Display button will illuminate.
- The Holding Indicator light will illuminate while in hold mode.

3. Set the cooking temperature - 200°F to 325°F (94°C to 160°C)

- Rotate the cook knob to the desired temperature.
 The set temperature will appear in the Digital
 Display 250F and the temperature display
 button will illuminate.
- The Cooking Indicator light will illuminate while in cook mode.

Notice: Cooking mode not active unless timer is running.

4. Set timer.

- Press Up or Down arrows when cook knob is set to begin cooking.
- Press Up or Down arrows to adjust the time while cooking.
- Hold Timer button for 3 seconds when in cook mode to *cancel* timer (display shows).

5. PREHEAT oven for 30 minutes before loading food. The Heat Indicator light will illuminate and will remain lit as long as the oven is calling for heat. When the oven temperature reaches the set temperature, the Heat Indicator light will turn off.

6. Load the oven with food and adjust cooking timer as needed.

WARNING



Fire Hazard

The use of improper materials for the smoke function could result in a fire which may lead to personal injury or property damage.

Do not use sawdust for smoking. **Do not** use wood chips smaller than 1/2" (13mm) diameter.

Use Alto-Shaam approved wood chips for the smoke function in this appliance.

7. Load wood chip container (Smoker only).

Take one container load of dry wood chips and soak the chips in water for 15 to 20 minutes. Shake excess water off wood chips. Remove wood chip container from the interior back panel of the smoker. Place the moistened chips in the wood chip container and replace the container in the oven.

8. Set the Smoke Timer (Smoker only).

The Smoke Timer activates the heating element located within the wood chip container. When the wood chip container is full and the Smoke Timer is turned clockwise as far as it will turn, the wood chips will smoke for approximately forty-five minutes to one hour.

- To set the Smoke Timer, turn the smoking timer knob past the required length of time, then immediately bring it back to the correct setting.
- Smoke Indicator light will illuminate.
- Keep the oven door completely closed during the smoking cycle.

NOTICE:

- When cold smoking, cook temperature must be set to 0°F (0°C) before setting smoke time in order for the smoke process to work.
- Press and hold the Temperature Display button for 3 seconds at any time to display the *Actual* oven temperature 190F.



General Holding Guideline

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

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.

When product is removed from a high temperature cooking environment for immediate transfer into equipment with the lower temperature required for hot food holding, condensation can form on the outside of the product and on the inside of plastic containers used in self-service applications. Allowing the product to release the initial steam and heat produced by high temperature cooking can alleviate this condition. 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°F and 200°F (16°C to 93°C). If the unit is equipped with vents, close the vents for moist holding and open the vents for crisp holding.

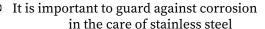
Holding Temperature Range					
Meat	Fahrenheit	Celsius			
Beef Roast — Rare	130°F	54°C			
Beef Roast — Med/Well Done	155°F	68°C			
Beef Brisket	160°F-175°F	71°C-79°C			
Corn Beef	160°F-175°F	71°C-79°C			
Pastrami	160°F-175°F	71°C-79°C			
Prime Rib — Rare	130°F	54°C			
Steaks — Broiled/Fried	140°F-160°F	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.



Cleaning and Preventative Maintenance

Protecting Stainless Steel Surfaces



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.

NOTICE







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 residue 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.

Cleaning and Preventative Maintenance



MARNING



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 the appliance from the power source before cleaning or servicing.

Clean Daily

- 1. Disconnect unit from power source, and let cool.
- 2. Remove all detachable items such as wire shelves, side racks, 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, door vents, and front drip tray with a damp clean cloth or sponge and any good commercial detergent.

NOTICE: Never use of 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 and shelves.

- 9. Wipe door gaskets and control panel dry with a clean, soft cloth.
- 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.

Do not use oven if controls are not properly functioning

Refer to the Troubleshooting Guide located in this manual or call an authorized service technician.



Cleaning and Preventative Maintenance

Daily

 $\hfill\Box$ Perform daily oven cleaning as stated in this guide.

 $\hfill\Box$ Inspect the casters. Repair/replace as needed.

□ Clean front drip tray as recommended in this guide.

M	on	ıth	ıly
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	Inspect the door gasket for signs of cracking, deformation, or damage and replace as needed.
	Inspect the door window gasket for proper seal.
	Inspect the cavity door vent slides for proper operation.
	Inspect the side racks, shelves and shelf supports for damage and replace as needed.
	Calibrate removable product probe (if applicable).
	Clean the cooling fan intake area and exhaust vents.
	Visually inspect the smoke element (if applicable). If any visual signs of deformation, cracks or breaks are seen, remove the oven
	from service and contact a factory authorized service technician for service.
Eve	ery 12 months (Inspection by a factory authorized technician)
	Open the control area and inspect and tighten all electrical connections.
	Inspect all electrical components.
	Inspect the smoke element and smoke element wiring (if applicable).
	Visually inspect the smoke element (if applicable). If any visual signs of deformation, cracks or breaks are seen, remove the oven
	from service and contact a factory authorized service technician for service.
	Confirm proper current draw of heating elements.
	Test heating elements for electrical short to ground. Replace/repair as needed.
	Inspect the condition of the plug and cord and replace if damaged.
	Tighten the cord connection inside the appliance control area.
	Test/replace independent indicator lights (where applicable).
	Replace the control cooling fans (if applicable).
	Check the site voltage.
	Set the voltage switch (where applicable).
	Inspect and test the product probe and product probe receptacle.
	Inspect and test the control and control functions.
	Replace the control knobs.
	Visually inspect the cavity for structural integrity.
	Replace the door gasket.
	Visually inspect any door handles and hinges. Replace/repair as needed.
	Remove any loose handle and hinge screws. Apply Loctite and then properly secure the screws.
	Inspect the perimeter bumper. Repair/replace as needed.

□ Perform cavity temperature calibration per manufacturer's recommended calibration procedures.

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, 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 undesireable 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 food temperatures from the time the food is received through the time the food is served.

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 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



A DANGER



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

How to verify sensor integrity

Place the sensor in ice water. Test with an ohmmeter set to the ohm scale.

Air sensor $1000 \text{ ohms} \pm 20$

If the reading is more than \pm 20 ohms, replace sensor.

MARNING



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

Ensure that 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.

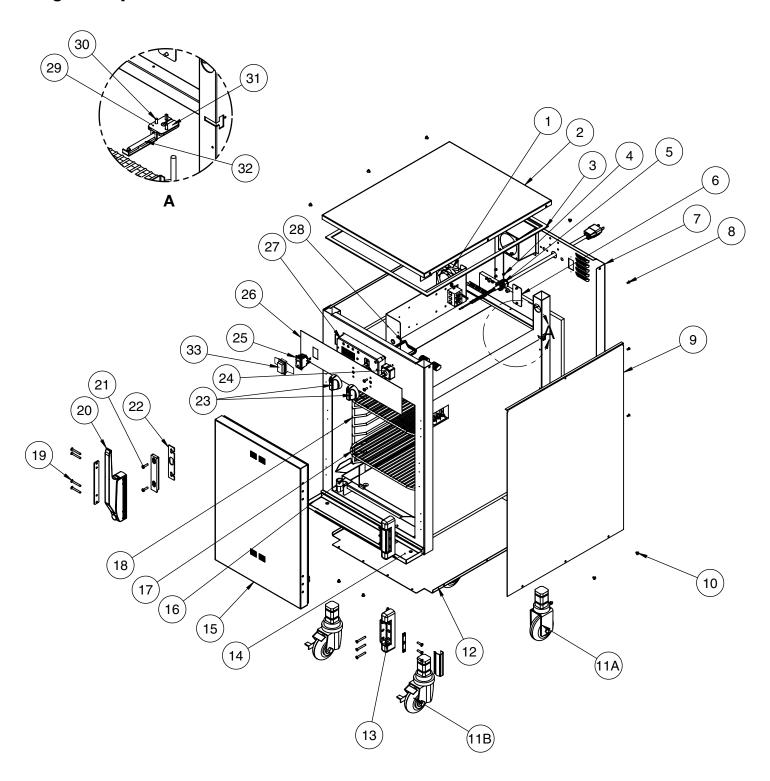


Troubleshooting - Error Codes

Code	Description	Possible Causes
E-10	Cavity air sensor shorted	Cavity air sensor reading < 5°F (-15°C). Verify sensor integrity.
E-11	Cavity air sensor open	Cavity air sensor reading > 517°F (269°C). Verify sensor integrity.
E-20	Product probe is shorted Oven will cook in time only	Product probe reading < 5°F (-15°C). Verify sensor integrity.
E-21	Product probe is open Oven will cook in time only	Product Probe reading > 517°F (269°C). Verify sensor integrity.
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. 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.
	NOTE: If in doubt, always cyc	ele the power to the control and contact factory if the problem persists.



Single Compartment Cook & Hold - 500-TH-II 230V SHOWN



Part numbers and drawings are subject to change without notice.

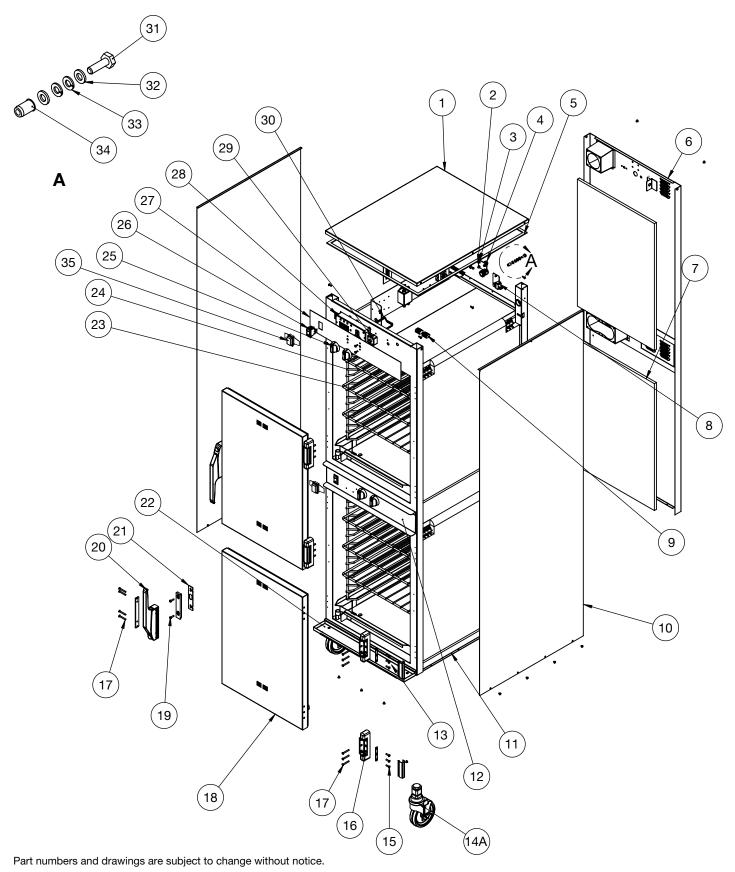


Single Compartment Cook & Hold

	MODEL >	500-TH	-11	750-TH	-11	1000-TH	<u>-11</u>
ITEM	DESCRIPTION	PART NO.	QTY	PART NO.	QTY	PART NO.	QTY
1	FAN, BOX, 115V, 34CFM	FA-3973	1	FA-3973	1	FA-3973	1
	FAN BOX, 208-240V, 230V	FA-34524	1	FA-34524	1	FA-34524	1
2	TOP COVER	1011946	1	1011872	1	1011534	1
3	GASKET ADHESIVE 0.125 X 0.375 [linear ft]	GS-23622	1	GS-23622	1	GS-23622	1
4	PLUG, DOME, .187" HOLE	PG-28439	6	PG-28439	6	PG-28439	6
5	BUSHING, STRAIN RELIEF	BU-3964	1	BU-3964	1	BU-3964	2
6	SWITCH COVER	11133	1	11133	1	11133	1
7	REAR TRIM, SPOT	5014004	1	5014081	1	5014172	1
8	RIVET, BLIND, #44 STAINLESS STEEL	RI-2100	6	RI-2100	6	RI-2100	6
9	PANEL, SIDE	5015081	2	5015083	2	5015088	2
10	SCREW, M4 X 0.7 X 6mm PAN	SC-22271	17	SC-22271	19	SC-22271	25
11	CASTER PACKAGE	5008022	1	5008022	1	5014422	1
11A	- CASTER, 3-1/2" (89mm) RIGID	_	<u> </u>	_		CS-25674	2
1 17 (- CASTER, 2-1/2" (64mm) RIGID	CS-28178	2	CS-28178	2		
11B	- CASTER, 3-1/2" (89mm) SWIVEL W/ BRAKE					CS-25675	2
טוו		CS-28179	2	CS-28179	2	03-23073	
110*	- CASTER, 2-1/2" (64mm) SWIVEL W/ BRAKE	03-20179		US-20179		1012735	
11C*	- SHIM	1010774	_	1010204			4
12	BOTTOM PANEL	1010774	1	1010394	1	1009941	1
13	HINGE, PAIR	HG-22338	1	HG-22338	1	HG-22338	1
14	DRIP TRAY KIT	5010736	1	5010391	1	5009716	1
	- DRIP TRAY HOLDER	1010782	1	1010584	1	1010584	1
	- DRIP TRAY	1010783	1	1010585	1	1010585	1
15	DOOR ASSEMBLY, RH	5010828	1	5010946	1	5010081	1
	DOOR ASSEMBLY, LH	5010829	1	5010947	1	5010071	1
	DOOR GASKET	GS-22950	1	GS-22951	1	GS-22952	1
16	DRIP PAN WELD	14813	1	14831	1	5005616	1
17	SHELF, STAINLESS STEEL	SH-2326	2	SH-2324	3	SH-2325	3
18	SIDE RACK, CHROME	SR-28403	2	SR-28405	2	SR-2266	2
	PAN SLIDES, 230V ONLY	1010880	2	1010813	2	_	_
19	SCREW, M5 X 0.8 X 30mm FLAT	SC-22853	10	SC-22853	10	SC-22853	10
20	HANDLE, OFFSET MAG. LATCH	HD-27080	1	HD-27080	1	HD-27080	1
21	SCREW, M5 X 0.8 X 20mm PAN	SC-22779	2	SC-22779	2	SC-22779	2
22	SHIM, HANDLE	13947	1	13947	1	13947	1
23	KNOB, THERMOSTAT	KN-26568	2	KN-26568	2	KN-26568	2
24	THERMOSTAT, COOK	TT-34910	1	TT-34910	1	TT-34910	1
25	SWITCH,ROCKER, 125-277V, 20A	SW-34769	1	SW-34769	1	SW-34769	1
26	PANEL OVERLAY	PE-29362	1	PE-29360	1	PE-28685	1
27	CONTROL	CC-34488	1	CC-34488	1	CC-34488	1
28	CABLE, WIRE HARNESS	CB-34945	1	CB-34945	1	CB-34945	1
29	SENSOR GUARD	1493	1	1493	1	1493	1
30	SCREW, M3 X 0.5 X 10mm FLAT	SC-23102	2	SC-23102	2	SC-23102	2
31	BLOCK, CONTROL SENSOR	BK-29605	1	BK-29605	1	BK-29605	1
32	PROBE, OVEN TEMP.	SN-38111	1	SN-38111	1	SN-38111	1
33	SWITCH COVER (230V ONLY)	CV-38297	1	CV-38297	1	CV-38297	1
34*	NON-PRODUCT PROBE SEAL	1006871	1	1006871	1	1006871	1
35*	CONNECTOR	CR-34559	1	CR-34559	1	CR-34559	1
36*	CONNECTOR-5 CONDUCTOR	CR-34646	1	CR-34646	1	CR-34646	1
37*	INSULATION	IN-2003	1	IN-2003	1	IN-2003	1
38*			2		2		2
	NUT, HEX, M4-0.7 18-8	NU-22286	•	NU-22286		NU-22286	
39*	PLUG, 3/8" HOLE	PG-25574	2	PG-25574	2	PG-25574	2
40*	SCREW, M5 X 0.8 X 20mm FLAT	SC-23868	6	SC-23868	6	SC-23868	6
41*	8-32 X 2 SLOT PAN HEAD 18-8 S/S	SC-23154	2	SC-23154	2	SC-23154	2
42*	SCREW, M3 X 0.5 X 16mm PAN	SC-22270	8	SC-22270	8	SC-22270	2
43*	WASHER M4 SPLIT LOCK S/S 18-8	WS-22300	2	WS-22300	2	WS-22300	2



Double Compartment Cook & Hold - 1000-TH-I Shown





Double Compartment Cook & Hold

ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.	QTY
1	TOP COVER	1011534	1	23	SHELF, NICKEL CHROME	SH-2325	6
2	SCREW, M5 X 0.8 X 16mm FLAT	SC-22281	4	24	SIDE RACK, CHROME	SR-2266	4
3	NUT, CT, M5-0.8 HEX NUT 18-8	NU-22289	4	25	KNOB, THERMOSTAT	KN-26568	2
4	TETHER BRACKET	BT-26884	1	26	SWITCH, ROCKER, 20A	SW-34769	1
5	GASKET	GS-23622	8	27	PANEL OVERLAY	PE-28685	1
6	REAR TRIM SPOT	5014268	1	28	CONTROL	CC-34488	1
7	INSULATION	IN-2003	2	29	THERMOSTAT, COOK	TT-34910	2
8	SWITCH COVER	11133	1	30	CABLE, WIRE HARNESS	CB-34945	1
9	CONNECTOR, CONDUCTOR	CR-34646	3	31	SCREW, HHCS, M6 X 20	SC-22924	1
10	PANEL, SIDE	5015105	2	32	WASHER, FLAT, M6 DIN 125	WS-22297	2
11	BOTTOM PANEL	1009941	1	33	WASHER, M6 SPLIT LOCK S/S 18-8	WS-22302	2
12	MIDDLE BONNET ASSEMBLY	SEE PG. 36	1	34	NUT, THREADED INSERT	NU-22770	1
13	DRIP PAN WELD ASSY	5005616	2	35	SWITCH COVER (230V ONLY)	CV-38297	2
14	CASTER PACKAGE	5014421	1	36*	BUSHING, STRAIN RELIEF	BU-3964	1
14A	- CASTER, 5" (127mm) RIGID	CS-24874	2	37*	BUSHING, SNAP	BU-3378	4
14B*	- CASTER, 5" (127mm) SWIVEL W/ BRAKE	CS-24875	2	38*	SENSOR BLOCK	BK-29605	2
14C*	- SHIM	1012735	4	39*	CONNECTOR	CR-34559	2
15	SCREW,10-32 X 3/4, NF PHIL	SC-2072	12	40*	FAN, BOX	FA-34524	4
16	HINGE	HG-22338	2	41*	NON-PRODUCT PROBE SEAL	1006871	2
17	SCREW, M5 X 0.8 X 30mm FLAT	SC-22853	20	42*	BRACKET, SENSOR MOUNTING	1493	2
18	SLAB DOOR ASSY. , RH (STANARD)	5010081	2	43*	AIR SHIELD	1011925	1
	SLAB DOOR ASSY. , LH (OPTION)	5010071	2	44*	NUT, M4-0.7 HEX 18-8	NU-22286	2
	WINDOW DOOR, RH (OPTION)	5010082	2	45*	PLUG, DOME, .187" HOLE	PG-28439	4
	WINDOW DOOR, LH (OPTION)	5010076	2	46*	PLUG, 3/8" HOLE	PG-25574	1
	— DOOR GASKET	GS-22952	2	47*	PROBE, CAVITY SENSOR	SN-38111	2
19	SCREW, M5 X 0.8 X 20mm PAN	SC-22779	4	48*	SCREW, M3 X 0.5 X 10mm FLAT	SC-23102	6
20	HANDLE, OFFSET MAGNETIC LATCH	HD-27080	2	49*	SCREW, 8-32 X 2 SLOT, PAN 18-8 S/S	SC-23154	8
21	SHIM, HINGE	13947	2	50*	SCREW, M3 X 0.5 X 16mm PAN	SC-22270	20
22	DRIP TRAY KIT	5009716	1	51*	SCREW, M4 X 0.7 X 6mm PAN	SC-22271	20
	— TRAY HOLDER	1010188	1	53*	SWITCH, TOGGLE	SW-3528	1
	— DRIP TRAY	1010189	1	54*	WASHER, M4 SPLIT LOCK S/S 18-8	WS-22300	2
	— MOUNTING SCREWS	SC-22271	3				

^{*}NOT SHOWN

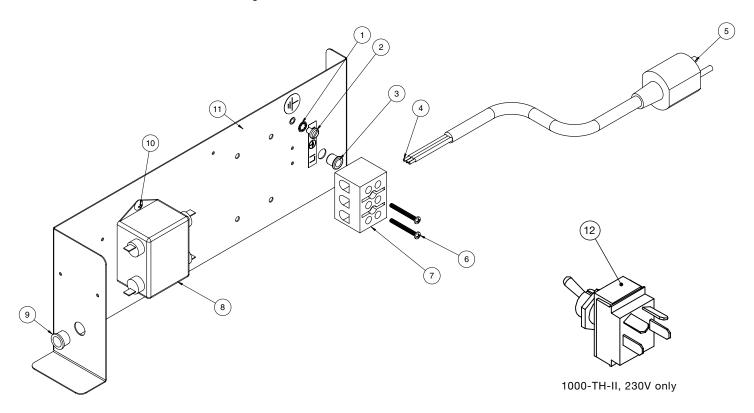








Cook & Hold Electronic Components

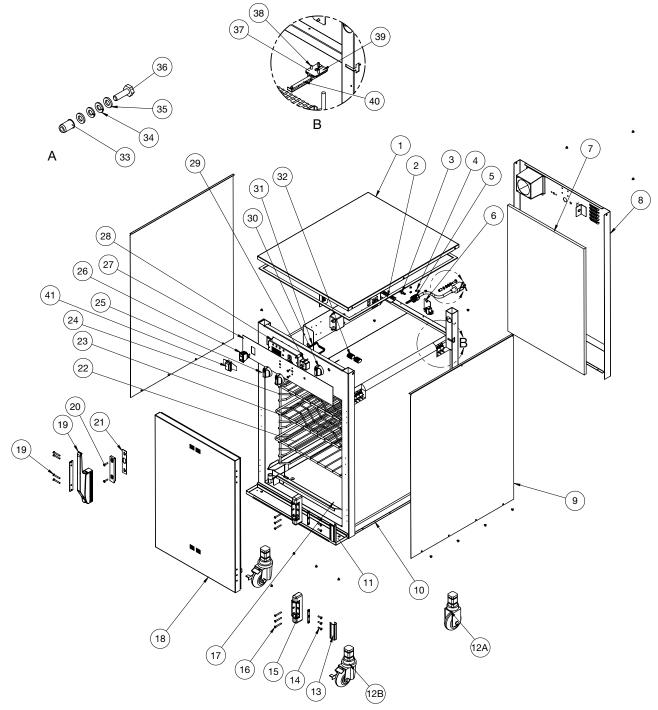


Part numbers and drawings are subject to change without notice.

ITEM	DESCRIPTION	PART NO.	QTY
1	STAR LOCK WASHER	WS-2467	1
2	SCREW, 10-32 X 1/4" PAN HD GROUND	SC-2190	1
3	BUSHING, 3/8" BLACK HOLE	BU-3419	1
4	CONNECTOR, #16 FERRULE - 230V	CR-34828	3
	CONNECTOR, #12 FERRULE - 120V	CR-34830	3
5	CORDSET 120V	CD-3397	1
	230V (CEE 7/7)	CD-3922	1
	230V (CH2-16P)	CD-36321	1
	230V (BS1363)	CD-33925	1
	230V (AS/NZS 3112)	CD-38149	1
6	SCREW, 6-32 X 1 1/4" ROUND HD	SC-2365	2
7	T-BLOCK	BK-3019	1
8	LINE FILTER, 115/250V 50/60HZ - 230V ONLY	FI-33225	1
9	1/2" HOLE BUSHING	BU-3006	1
10	SCREW, M4 X 0.7 X 6mm PAN	SC-22271	2
11	AIR SHIELD SPOT WELD ASSB 500	5013997	1
	750, 1000	5014097	1
12	SWITCH, VOLTAGE, 20A (1000-TH-II, 230V ONLY)	SW-3528	1



Single Compartment Cook/Hold/Smoke - 1000-SK/II Shown



Part numbers and drawings are subject to change without notice.



panel until service work has been completed.

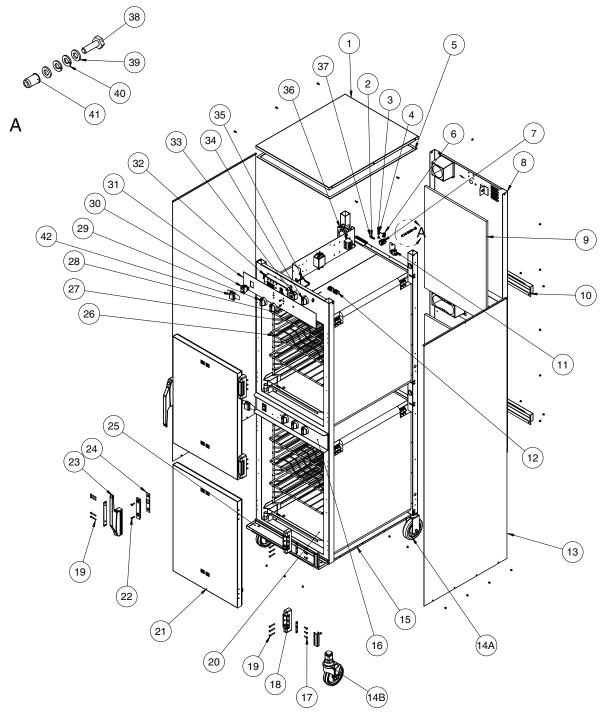




	MODELS	767-SI	(1000-SK	/II
ITEM	DESCRIPTION	PART NO.	QTY	PART NO.	QTY
1	TOP COVER	1011872	1	1011534	1
2	GASKETS, ADHESIVE, .125 X .375 [linear ft]	GS-23622	1	GS-23622	1
3	PLUG, HOLE 3/8"	PG-25574	1	PG-25574	1
4	PLUG, DOME, 187" HOLE	PG-28439	6	PG-28439	6
5	BUSHING, STRAIN RELIEF	BU-3964	1	BU-3964	1
6 7	SWITCH COVER INSULATION	11133 IN-2003	1	11133 IN-2003	1 1
8	REAR TRIM, SPOT	5014137	1	5014204	1
9	PANEL, SIDE	5015083	2	5015088	2
10	BOTTOM PANEL	1010394	1	1009941	1 1
11	DRIP TRAY KIT	5010391	1	5009716	1
	- DRIP TRAY	1010584	1	1010189	1
	- DRIP TRAY BRACKET	1010585	1	1010188	1
12	CASTER PACKAGE	5014422	1	5014422	1
12A	- CASTER, 3-1/2" (89mm) RIGID	CS-25674	2	CS-25674	2
12B	- CASTER, 3-1/2" (89mm) SWIVEL WITH BRAKE	CS-25675	2	CS-25675	2
12C*	- SHIM	1012735	4	1012735	4
13	HINGE COVER	CV-22171	2	CV-22171	2
14 15	SCREW, M5 X 0.8 X 20mm FLAT HINGE, 1-3/8" OFFSET, PAIR, CHROME	SC-23868 HG-22338	6	SC-23868 HG-22338	6 2
16	SCREW. M5 X 0.8 X 30mm FLAT	SC-22853	6	SC-22853	6
17	DRIP PAN WELD	14831	1	5005616	1
18	DOOR ASSEMBLY, RH (STANDARD)	5013154	1	5013154	1
	DOOR ASSEMBLY, LH (OPTION)	5013155	1	5013155	1
	DOOR GASKET	GS-22952	1	GS-22952	1
19	HANDLE, OFFSET MAGNETIC LATCH	HD-27080	1	HD-27080	1
20	SCREW, M5 X 0.8 X 20mm PAN	SC-22779	2	SC-22779	2
21	SHIM, HANDLE	13947	1	13947	1
22	SHELF, STAINLESS STEEL	SH-2324	2	SH-2325	2
23	SHELF, RIB RACK	SH-2743	1	SH-29474	1
24 *	SIDE RACKS	SR-28405	2	SR-2266	2
25	PAN SLIDES KNOB	1010813 KN-26568	3	— KN-26568	3
26	SWITCH, ROCKER, 20A	SW-34769	1	SW-34769	1
27	PANEL OVERLAY	PE-29361	1	PE-29383	1 1
28	CONTROL	CC-34488	1 1	CC-34488	1 1
29	THERMOSTAT, COOK	TT-34910	1	TT-34910	1
30	TIMER, 1 HR, 208-240V	TR-34539	1	TR-34539	1
	TIMER, 1 HR, 120V	TR-34540	1	TR-34540	1
31	CABLE HARNESS	CB-34945	1	CB-34945	1
32	CONNECTOR-5 CONDUCTOR	CR-34646	2	CR-34646	2
33	NUT, THREADED INSERT, M6, 230V ONLY	NU-22770	1	NU-22770	1
34	WASHER, M6 SPLIT LOCK S/S 18-8, 230V ONLY	WS-22302	2	WS-22302	2
35	WASHER, FLAT, M6, DIN 125, 230V ONLY	WS-22297	2	WS-22297	2
36 37	SCREW, HHCS, M6 X 20, 230V ONLY SENSOR GUARD	SC-22924 1493	1	SC-22924 1493	1 1
38	SCREW, M3 X 0.5 X 10mm FLAT	SC-23102	2	SC-23102	2
39	BLOCK, CONTROL SENSOR	BK-29605	1	BK-29605	1
40	PROBE, OVEN TEMP	SN-38111	1	SN-38111	1
41	SWITCH COVER (230V ONLY)	CV-38297	1	CV-38297	1
42*	NON-PRODUCT PROBE SEAL	1006871	1	1006871	1
43*	SMOKE ELEMENT, 208-240V, 230V	EL-38104	1	EL-38104	1
	SMOKE ELEMENT, 120V	EL-38532	1	EL-38532	1
44*	ELEMENT COVER, SMOKE	1010409	1	1011813	1
45*	CHIP TRAY WELD	4652	1	4652	1
46* 47*	BRACKET, CHIP TRAY SMOKE HEATER PLATE WELD	BT-29217 5023426	1	BT-29217 5023426	1 1
48*	BLOCK, SENSOR	BK-29605	1	BK-29605	1
49*	BLOCK, TERMINAL, PORCELAIN	BK-33546	1	BK-33546	1
50*	BUSHING, BLACK, 5/8" SNAP	BU-3611	2	BU-3611	2
51*	SENSOR, OVEN TEMPERATURE	SN-38111	1	SN-38111	1
52*	FAN, BOX, 120V	FA-3973	1	FA-3973	1
	FAN BOX, 208-240V, 230V	FA-34524	1	FA-34524	1
53*	PILOT LIGHT, 208-240V	LI-3951	1	LI-3951	1
	PILOT LIGHT, 120V	LI-3027	1	LI-3027	1
54*	SWITCH, TOGGLE, VOLTAGE	SW-3528	1	SW-3528	1
55*	SENSOR, OVEN TEMPERATURE	SN-38111	1	SN-38111	1



Double Compartment Cook/Hold/Smoke - 1000-SK-I Shown



Part numbers and drawings are subject to change without notice.



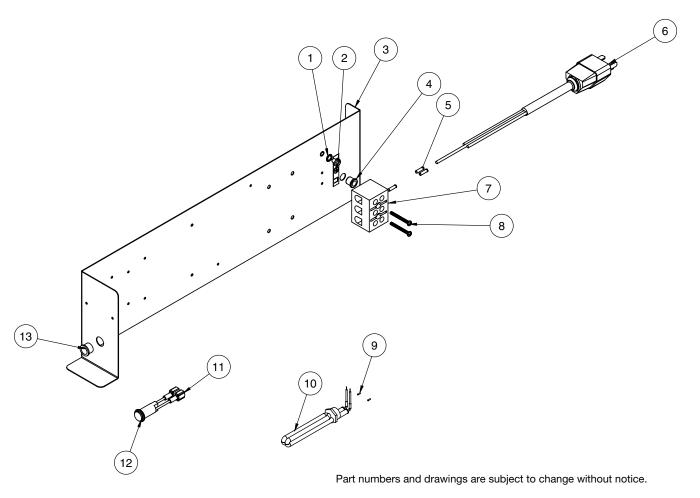




	MODEL >	1767-9	K	1000-S	K-I
ITEM	DESCRIPTION	PART NO.	QTY	PART NO.	QTY
1	TOP COVER	1011872	1	1011534	1
2	PLUG, HOLE 3/8"	PG-25574	2	PG-25574	2
3	SCREW, M5 X 0.8 X 16mm FLAT	SC-22281	4	SC-22281	4
4	NUT, 10-32, NF HEX MS, #18-8 S/S	NU-22289	4	NU-22289	4
5	GASKETS, ADHESIVE, .125 X .375 [linear ft]	GS-23622	1	GS-23622	1
6	BRACKET, TETHER	BT-26884	1	BT-26884	1
7	BUSHING, STRAIGHT, STRAIN RELIEF	BU-3964	1	BU-3964	1
8	REAR TRIM	5014223	1	5014293	1
9	INSULATION	IN-2003	2	IN-2003	2
10	ELEMENT COVER, SMOKER	1010409	2	1011813	2
11	SWITCH COVER	11133	1	11133	1
12	CONNECTOR-5 CONDUCTOR	CR-34646	2	CR-34646	3
13	SIDE PANEL	5015102	2	5015105	2
14	CASTER PACKAGE	5014421	1	5014421	1
14A	- CASTER, 5" (127mm) RIGID	CS-24874	2	CS-24874	2
14B	- CASTER, 5" (127mm) SWIVEL WITH BRAKE	CS-24875	2	CS-24875	2
14C*	- SHIM	1012735	4	1012735	4
15	BOTTOM PANEL	1010394	1	1009941	1
16	MIDDLE BONNET ASSEMBLY	5022032	1	5022031	1
17	SCREW, M5 X 0.8 X 20mm FLAT	SC-23868	12	SC-23868	12
18	HINGE, 1-3/8" OFFSET, PAIR, CHROME	HG-22338	2	HG-22338	2
19	SCREW, M5 X 0.8 X 30mm FLAT	SC-22853	20	SC-22853	20
20	DRIP PAN WELD	14831	2	5005616	2
21	DOOR ASSEMBLY, RH (STANDARD)	5011828	1	5013154	1
	DOOR ASSEMBLY, LH (OPTION)	5011829	1	5013155	1
	DOOR GASKET	GS-22951	1	GS-22952	1
22	SCREW, M5 X 0.8 X 20mm PAN	SC-22779	4	SC-22779	4
23	HANDLE, OFFSET MAGNETIC LATCH	HD-27080	2	HD-27080	2
24	SHIM, HANDLE	13947	2	13947	2
25	DRIP TRAY KIT	5010391	1	5009716	1
	- DRIP TRAY	1010584	1	1010189	1
	- DRIP TRAY BRACKET	1010585	1	1010188	1
26	SHELF, RIB RACK	SH-2743	2	SH-29474	2
27	SIDE RACK	SR-28405	4	SR-2266	4
	PAN SLIDES, 230V ONLY	1010813	4	_	—
28	SHELF, STAINLESS STEEL	SH-2324	4	SH-2325	4
29	KNOB	KN-26568	3	KN-26568	3
30	SWITCH, ROCKER, 20A	SW-34769	1	SW-34769	1
31	PANEL OVERLAY	PE-29361	1	PE-29383	1
32	CONTROL	CC-34488	1	CC-34488	1
33	THERMOSTAT, COOK	TT-34910	1	TT-34910	1
34	TIMER, 1 HR	TR-34539	1	TR-34539	1
35	CABLE WIRE HARNESS	CB-34945	1	CB-34945	1
36	FAN, BOX, 208-240V, 230V	FA-34524	3	FA-34524	3
37	PLUG, DOME, 187" HOLE	PG-28439	4	PG-28439	4
38	SCREW, HHCS, M6 X 20, W/NO MARKING	SC-22924	1	SC-22924	1
39	WASHER, FLAT, M6, DIN 125	WS-22297	2	WS-22297	2
40	WASHER, M6 SPLIT LOCK S/S 18-8	WS-22302	2	WS-22302	2
41	NUT, THREADED INSERT, M6	NU-22770	1	NU-22770	1
42	SWITCH COVER (230V ONLY)	CV-38297	2	CV-38297	2
43*	CHIP TRAY WELD	4652	2	4652	2
44*	BRACKET, PILOT LIGHT	1004360	1	1004360	1
45*	NON-PRODUCT PROBE SEAL	1006871	2	1006871	2
46*	BRACKET, SENSOR MOUNTING	1493	2	1493	2
47*	AIR SHIELD	1011925	1	1011925	1
48*	SMOKE HEATER PLATE WELD	5023426	2	5023426	2
49*	BLOCK, SENSOR	BK-29605	2	BK-29605	2
50*	BLOCK, TERMINAL, PORCELAIN	BK-33546	2	BK-33546	1
51*	BRACKET, CHIP TRAY	BT-29217	2	BT-29217	2
52*	BUSHING, SNAP 1-1/8"	BU-3378	8	BU-3378	8
53*	BUSHING, BLACK, 5/8" SNAP	BU-3611	4	BU-3611	4
54*	CONNECTOR	CR-34559	2	CR-34559	2
55*	SENSOR, OVEN TEMPERATURE	SN-38111	2	SN-38111	2
56*	SWITCH, TOGGLE, VOLTAGE	SW-3528	1	SW-3528	1
			<u> </u>		<u> </u>



Cook/Hold/Smoke Electronic Components



ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.	QTY
1	STAR LOCK WASHER	WS-2467	1	8	SCREW, 6-32 X 1-1/4" ROUND HD	SC-2365	2
2	GROUND SCREW	SC-2190	1	9	CONNECTOR, FERRULE #18	CR-34827	2**
3	ELECTRIC CHASSIS	5014097	1	10	ELEMENT, SMOKE 208-240V, 230V	EL-38104	1**
4	BUSHING, 3/8" BLACK HOLE	BU-3419	1		120V	EL-38532	1**
5	CONNECTOR, FERRULE #12	CR-34830	3	11	CONNECTOR, QUICK DISCONNECT	CR-34638	2
6	CORDSET 120V (NEMA 5-20)	CD-3397	1	12	PILOT LIGHT 208-240V, 230V	LI-3951	1
	230V (CEE 7/7)	CD-3922	1		120V	LI-3027	1
	230V (CH2-16P)	CD-36321	1	13	BUSHING, 1/2" HOLE	BU-3006	1
	230V (BS1363)	CD-33925	1	14*	LINE FILTER (230V ONLY)	FI-33225	1
	230V (AS/NZS 3112)	CD-38149	1	15*	SCREW, M4 X 0.7 X 6mm PAN	SC-22271	2
7	T-BLOCK	BK-3019	1				

^{*}NOT SHOWN **C

^{**}QUANTITY PER COMPARTMENT





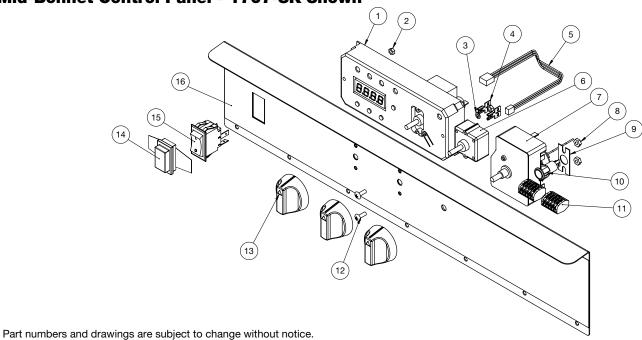
To prevent serious injury, death, or property damage, **always** lock-out or post breaker panel until service work has been completed.

MARNING





Mid-Bonnet Control Panel - 1767-SK Shown



ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.
1	CONTROL	CC-34488	1	9	BRACKET, PILOT LIGHT MTG	1004360
2	NUT, M4-0.7 HEX 18-8	NU-2296	2	10	PILOT LIGHT, WHITE, 250V	LI-3951
_	WARLIED MA OBLIT LOOK 0/0 40 0	14/0 00000			COMMENTAR F COMPLICATOR	00 04040

3	WASHER, M4 SPLIT LOCK S/S 18-8	WS-22300	2	11	CONNECTOR-5 CONDUCTOR	CR-34646	2
4	CONNECTOR	CR-34826	2	12	SCREW, M3 X 0.5 X 16mm PAN	SC-22270	2
5	CABLE, WIRE HARNESS	CB-34945	1	13	KNOB, T-STAT CONTROL	KN-26568	3
6	THERMOSTAT,COOK	TT-34910	1	14	SWITCH COVER (230V ONLY)	CV-38297	1
7	TIMER, 1HR, 120V	TR-34540	1	15	SWITCH, ROCKER, 125-277V, 20A	SW-34769	1
Ω	NUIT HEY #8-32	NI I-2206	2	16	DANIEL OVERLAY	DE_20///1	-1

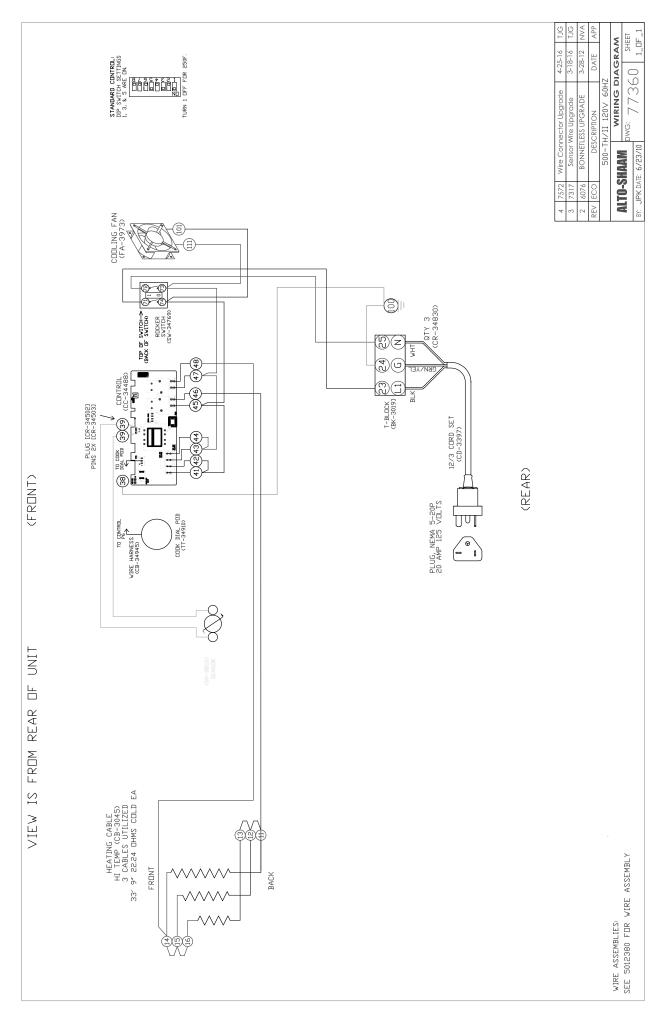
Cable Heating Kits

	CABLE HEATING KIT > (ONE KIT REQUIRED PER CAVITY)	#4879 500, 750, 1000, 767 - 120V 500, 750 - 120V, 208-240V	#4881 1000, 767, 1767 - 208-240V ALL 230V
ITEM	DESCRIPTION	QTY	QTY
CB-3045	CABLE HEATING ELEMENT	112 FT.	210 FT.
CR-3226	RING CONNECTOR	6	12
IN-3488	INSULATION CORNER	1 FT.	1 FT.
BU-3105	SHOULDER BUSHING	6	12
BU-3106	CUP BUSHING	6	12
ST-2439	STUD	6	12
NU-2215	HEX NUT	12	24
SL-3063	INSULATING SLEEVE	6	12
TA-3540	ELECTRICAL TAPE	1 ROLL	1 ROLL

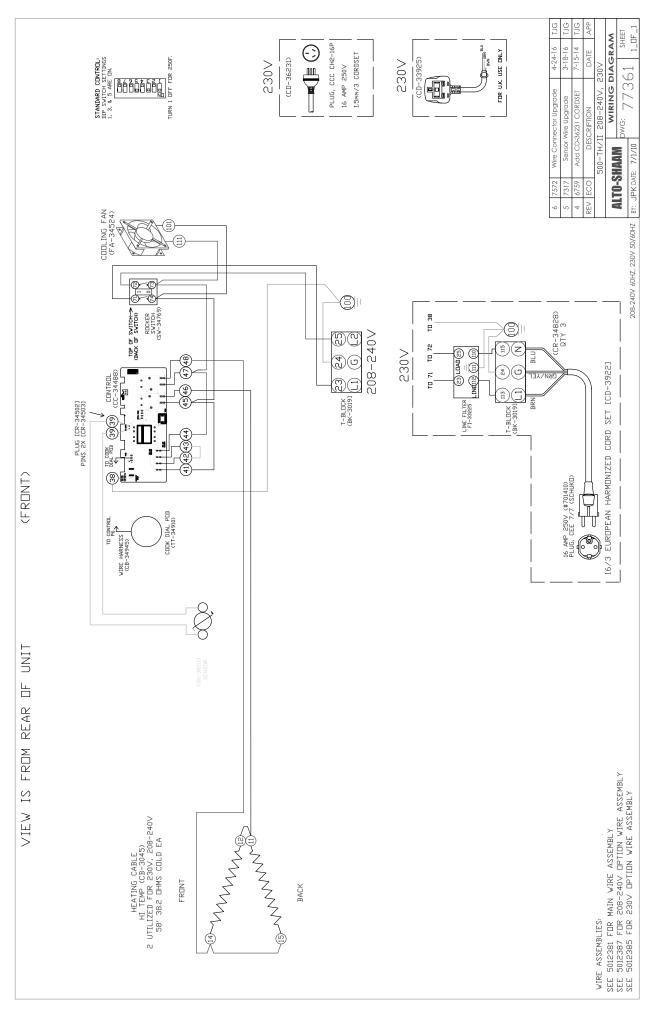


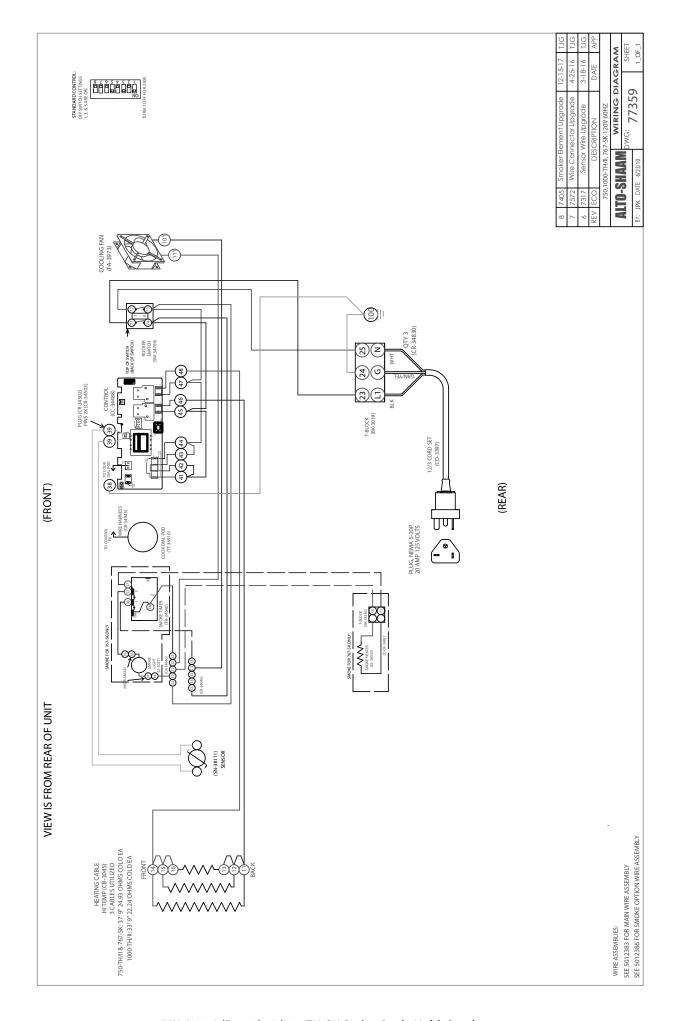


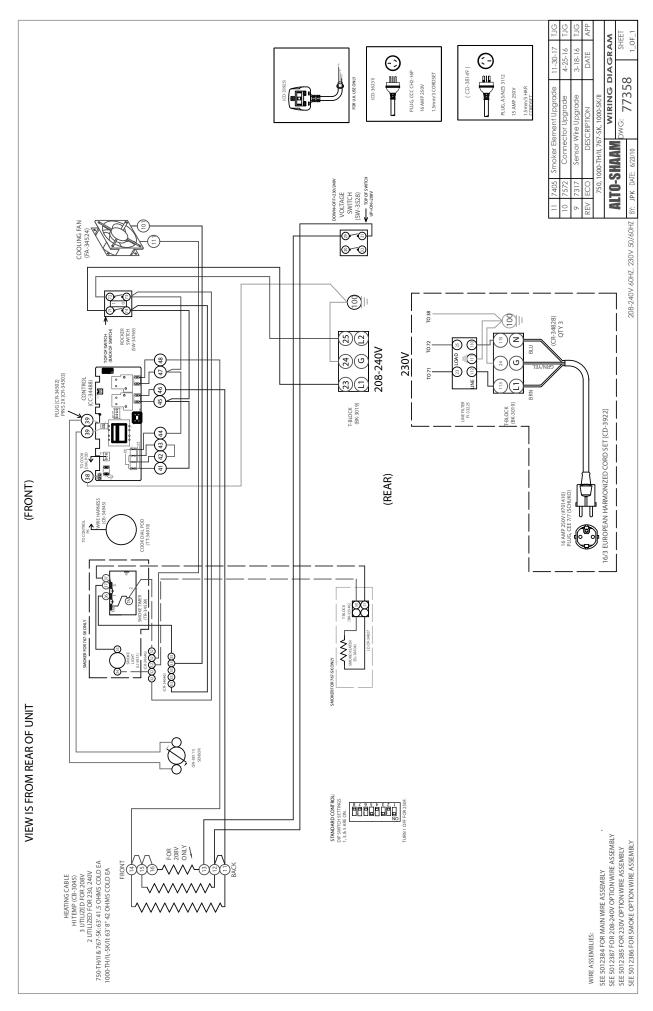


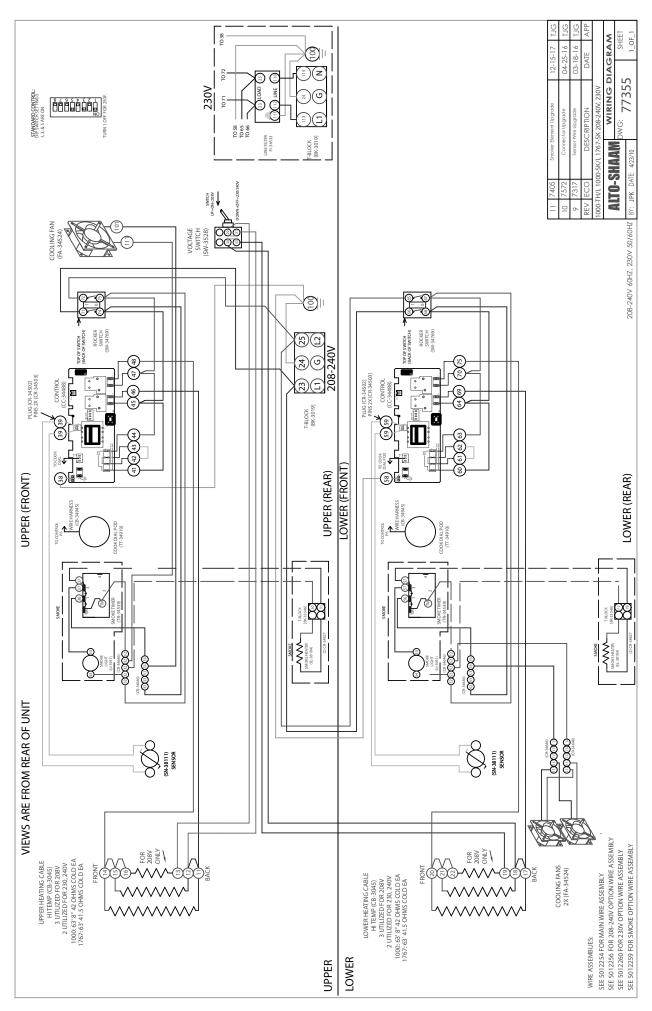


MN-29756 (Rev. 5) 12/17 • TH-SK Series Cook, Hold, Smoke • 42











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

The original parts warranty period is as follows:

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

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

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

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

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

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

This warranty does not apply to:

- 1. Calibration.
- 2. Replacement of light bulbs, door gaskets, and/or the replacement of glass due to damage of any kind.
- 3. Equipment damage caused by accident, shipping, improper installation or alteration.
- 4. Equipment used under conditions of abuse, misuse, carelessness or abnormal conditions, including but not limited to, equipment subjected to harsh or inappropriate chemicals, including but not limited to, compounds containing chloride or quaternary salts, poor water quality, or equipment with missing or altered serial numbers.
- 5. Damage incurred as a direct result of poor water quality, inadequate maintenance of steam generators and/or surfaces affected by water quality. Water quality and required maintenance of steam generating equipment is the responsibility of the owner/operator.
- 6. Damage caused by use of any cleaning agent other than Alto-Shaam's Combitherm® Cleaner, including but not limited to damage due to chlorine or other harmful chemicals. **Use of Alto-Shaam's Combitherm® Cleaner on Combitherm® ovens is highly recommended.**
- 7. Any losses or damage resulting from malfunction, including loss of product, food product, revenue, or consequential or incidental damages of any kind.
- 8. Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.

This warranty is exclusive and is in lieu of all other warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. In no event shall Alto-Shaam be liable for loss of use, loss of revenue or profit, or loss of product, or for any indirect, special, incidental, or consequential damages. No person except an officer of Alto-Shaam, Inc. is authorized to modify this warranty or to incur on behalf of Alto-Shaam any other obligation or liability in connection with Alto-Shaam equipment.

Effective November 1, 2012