SERVICE MANUAL

MOBILE HOT HOLDING CABINET

MODEL: 1000-MH1

ALTO SHAAM.

OPERATION and CARE MANUAL



Mobile Hot Holding Cabinet Models: 1000-MH1

COOK/HOLD/SERVE SYSTEMS

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262.251.7067 • 800.329.8744 U.S.A. ONLY 262.251.1907 INTERNATIONAL WEBSITE: www.alto-shaam.com

DELIVERY/UNPACKING

DELIVERY

This Alto-Shaam appliance has been thoroughly tested and inspected to insure only the highest quality unit is provided. Upon receipt, check for any possible shipping damage and report it at once to the delivering carrier. See Transportation Damage and Claims section located in this manual.

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

Save all the information and instructions packed with the appliance. Complete and return the warranty card to the factory as soon as possible to assure 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 service department if you have any questions concerning installation, operation, or maintenance.

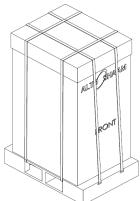
NOTE: All claims for warranty must include the full model number and serial number of the unit.

UNPACKING

 a) Carefully remove the appliance from the carton or crate.

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

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



DO NOT DISCARD THIS MANUAL.

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

c) 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.

Alto-Shaam Mobile Hot Holding Cabinet

1.0 INTRODUCTION

This technical manual provides information on the installation, operation, maintenance and inspection of this unit. A complete parts breakdown is provided.

EQUIPMENT DESCRIPTION

The unit consist of the following: Storage compartment: The insulated food storage compartment is clear storage area Included in this area are the adjustable shelves.

Doors: Access to the storage compartment is through a hinged-mounted insulated door.

1.2 EQUIPMENT SUPPLIED

The unit is shipped from the factory fully assembled except the adjustable shelving that will require positioning on the side racks. The complete assembly is palletized and crated to reduce the possibility of damage in shipping and storage.

1.3 LEADING PARTICULARS

Heater: 2 x 750 Watt

Electrical: 1000-MH1

220-240VAC 50 Hz, 1∅ 7.0 Amps



UL#PS-204N 15A, 250V Plug



SG #MP5004

Net 268±22 lb (122±10kg) **Shipping** 303±22 lb (138±10kg)

2.0 FUNCTIONAL DESCRIPTION

This unit is self-contained, automatically controlled, continuous duty perishable food storage system. It is designed with the intent and purpose of storing hot food items. The operating temperature is automatically monitored by controls that are factory-set to maintain a predetermined, adequate condition.

The unit consists of two basic compartment assemblies:

Storage Compartment which consists of the insulated clear storage area for perishable food items requiring a temperature range 60° to 71°C. The clear storage area includes adjustable shelving.

2.1 SYSTEM OPERATION

The primary focus for the design of the hot cabinet is for the safe storage of food products which require hot.

Considerable engineering attention was placed on the qualities of function and serviceability.

3.0 START UP PROCEDURE

The hot system is completely factory-assembled, pre-charged and ready for operation. The control has been set to display temperature in degree Celsius as specified on the original order. To energize the system, it is only necessary to locate the power supply cord and connect it to a proper electrical supply source. Once the supply cord has been connected to a power source, the unit can be started by switching the power control switch to the "ON" position.

3.1 SHUT-DOWN PROCEDURE

To shut-down, place the power control in the "OFF" position and open the door to allow the cabinet interior temperature to equalize with the room temperature.

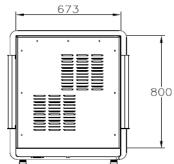
Use a mild detergent diluted in warm water to wash the interior and exterior surfaces of the cabinet.

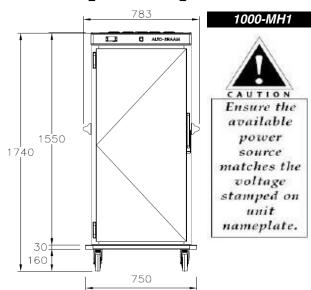
Procedures

3.2 CONTROL AND INDICATION					
NAME	TYPE	FUNCTION			
Thermostat	Contact Points	Cycles the Hot system(automatic)			
Power Control Switch(ON/OFF)	Contact Points	Therminates power to the unit			
LCD display		Indicates continuous cabinet temperature			

3.3 EXTENDED PERIOD OF INACTIVITY

This unit is designed for continued use at automatically cycled intervals. In case of an extended shut-down, the food storage compartment must be cleaned and wiped dry to minmize the potential of odor build-up during shutdown.





START-UP PROCEDURE OPERATION

Before operating the unit, clean both the interior and exterior of the unit with a clean, damp cloth and mild soap solution.

Rinse carefully.Clean and install the shelf slides.

Become familiar with the operation of the controls. Read this manual and keep it in a secure locations.

The appliance is equipped with a special heating cable. Through this Hot concept, the heating cable is mounted against the wall of the unit to provide an evenly applied heat source controlled by a thermostat. The design and operational characteristics of the unit eliminate the need for a moisture pan or a heat circulating fan. Through even heat application, the quality of food products is maintained up to several hours or more.

START - UP

- 1. Connect the electric cord to an appropriate power outlet.
- Close the compartment vents located on the inside of each compartment door.
- 3. Press the power ON for the appropriate compartments. The power button will illuminate.
- 4. Set temperature for use.
- The temperature display light will illuminate when the inside air reaches the desired holding temperature.



HOW TO SEE THE SETPOINT

- Push and immediately release the SET key: the display will show the Set point value;
- Push and immediately release the SET key or wait for 5 seconds to display the probe value again.

HOW TO CHANGE THE SETPOINT

- Push the SET key for more than 2 seconds to change the Set point value ;
- 2. The value of the set point will be displayed and the "O" or "OF" LED starts blinking;
- 3. To change the Set value push the or arrows within 10 sec.
- To memories the new set point value push the SET key again or wait 10sec. Created by factory

OPERATION HOLDING PROCEDURE

4.0 OPERATING PROCEDURES

a) Preheat at 90° C for 30 minutes.

Allow a minimum of 30 minutes for preheating before loading the banquet cart with product.

b) Load the cart with hot food only.

The purpose of the Hot Holding Cabinet is to maintain hot food at proper serving temperature. Only hot food should be placed into the Hot Holding Cabinet.

Before loading the cart with food, use a food thermometer to make certain all products have reached an internal temperature range of 60° To 71°C. Any food product not within the proper temperature range should be heated before loading into the Hot Holding Cabinet.

For best results, use a Hot Low Temperature Cooking and Holding Oven set at 121° To 135°C, or a Combitherm oven, to bring the product

c) Load covered plates or carriers into the Mobile Hot Holding Cabinet.

After the food has reached proper serving temperature :

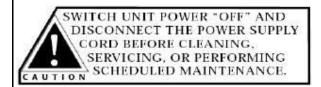
within the correct temperature range.

- Use HEATED plates only.
- Load each series of four (4) plates into the Mobile Hot Holding Cabinet as soon as assembled and as quickly as possible to retain maximum heat.
- Load the plates in the upper section of the Mobile
 Hot Holding Cabinet first.
- Securely close the doors of the Mobile Hot Holding Cabinet after loading each series of plates.

d) Reset the thermostat to desired temperature.

After the cart has been completely filled with product, check to make certain the doors are securely closed, and reset the thermostat to the desired holding temperature or the suggested 82°C

The proper temperature range for the products being held, and whether or not to open or close the door vents, will depend on the type and quantity of product. When holding food for prolonged periods, it is advisable to periodically check the internal temperature of each item with a food thermometer to assure maintenance of the proper temperature range of 60° to 71°C



GENERAL OPERATION

5.0 OPERATING 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.

Mobile Hot Holding Cabinet 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 Mobile Hot Holding Cabinet maintain a consistent temperature throughout the cabinet without the necessity of a heat distribution fan, 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 Mobile Hot Holding Cabinet equipment is provided with a thermostat control between 30° to 80°C If the unit is equipped with vents, close the vents for moist holding and open the vents for crisp holding.

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

HOLDING TEMPERATURE RANCE				
MEAT	FAHRENHEIT	CELSIUS		
BEEF ROAST – Rare	140ºF	60ºC		
BEEF ROAST – Med / Well Done 160°F 71°C				
BEEF BRISKET	160º - 175ºF	71º- 79ºC		
CORN BEEF	160º - 175ºF	71º- 79ºC		
PASTRAMI	160º - 175ºF	71º- 79ºC		
PRIME RIB – Rare	140ºF	60ºC		
STEAKS - Broiled / Fried	160º - 175ºF	71º- 79ºC		
RIBS – Beef or Pork	160ºF	71ºC		
VEAL	160º - 175ºF	71º- 79ºC		
HAM	160º - 175ºF	71º- 79ºC		
PORK	160º - 175ºF	71º- 79ºC		
LAMB	160º - 175ºF	71º- 79ºC		
POULTRY				
CHICKEN – Fried / Baked	160º - 175ºF	71º- 79ºC		
DUCK	160º - 175ºF	71º- 79ºC		
TURKEY	160º - 175ºF	71º- 79ºC		
GENERAL	160º - 175ºF	71º- 79ºC		
FISH / SEAFOOD				
FISH – Baked / Fried	160º - 175ºF	71º- 79ºC		
LOBSTER	160º - 175ºF	71º- 79ºC		
SHRIMP – Fried	160º - 175ºF	71º- 79ºC		
BAKED GOODS				
BREADS / ROLLS	120º - 140ºF	49º- 60ºC		
MISCELLANEOUS				
CASSEROLES	160º - 175ºF	71º- 79ºC		
DOUGH – Fried	180º - 100ºF	27º- 38ºC		
EGGS – Fried	150º - 1760F	66º- 71ºC		
FROZEN ENTREES	160º - 175ºF	71º- 79ºC		
HORS D'OEUVERS	160º - 180ºF	71º- 82ºC		
PASTA	160º - 180ºF	71º- 82ºC		
PIZZA	160º - 180ºF	71º- 82ºC		
POTATOES	180ºF	82ºC		
PLATED MEALS	180°F	82ºC		
SAUCES	140º - 200ºF	60º- 93ºC		
SOUP	140º - 200ºF	60º- 93ºC		
VEGETABLES	160º - 175ºF	71º- 79ºC		
The holding temperatures listed are suggested guidelines only.				

CARE AND CLEANING

6.0 THOROUGHLY CLEAN THE UNIT DAILY

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

- a) Disconnect unit from power source, and let cool.
- b) Remove all detachable items such as plate carriers, shelves and side racks. Clean these items separately with a good grease solvent or commercial detergent. Rinse well and dry.
- c) Clean interior metal surfaces of the unit with a damp, clean cloth and any good commercial detergent or grease solvent at the recommended strength. Spray heavily soiled areas with a water soluble degreaser and let stand for 10 minutes, then remove soil with a plastic scouring pad. Rinse by wiping with a sponge and clean warm water to remove all residue. Remove excess water with sponge and wipe dry with a clean cloth or air dry. Replace side racks and shelves.
- d) Clean control panel, door vents, door handles, and door gaskets thoroughly since these areas harbor food debris. Rinse by wiping with sponge and clean warm water. Wipe dry with a clean cloth.
- e) 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.
- f) To help maintain the protective film coating on polished stainless steel, clean the exterior of the unit with a cleaner recommended for stainless steel surfaces.



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

NOTE: Avoid the use of abrasive cleaning, compounds, chloride based cleaners, or cleaners containing quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel.







AT NO TIME SHOULD THE INTERIOR OR EXTERIOR BE STEAM CLEANED, HOSED DOWN, OR FLOODED WITH WATER OR LIQUID SOLUTION OF ANY KIND. DO NOT USE WATER JET TO CLEAN.

SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED.

CARE AND CLEANING

7.0 CLEANING AND PREVENTIVE MAINTENANCE

PROTECTING STAINLESS STEEL SURFACES It is important to guard against corrosion in the



e of stainless steel surfaces. sh, corrosive, or inappropriate micals can completely destroy protective surface layer of inless steel. Abrasive pads,

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

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

CLEANING AGENTS

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

CLEANING MATERIALS

The cleaning function can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods must be employed, use a non – abrasive scouring pad on difficult areas and make certain to scrub with the visible grain of surface metal to avoid surface scratches.

Never use wire brushes, metal scouring pads, or scrapers to remove food residue.



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.

MAINTENANCE

8.0 THERMOSTAT ACCURACY

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

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

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

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





SANITATION

Food flavor and aroma are usually so closely related that it is difficult, if not impossible, to separate them. There is also an important, inseparable relationship between cleanliness and food flavor. Cleanliness, top operating efficiency, and appearance of equipment contribute considerably to savory, appetizing foods. Good equipment that is kept clean, works better and lasts longer.

Most food imparts its own particular aroma and many foods also absorb existing odors. Unfortunately, during this absorption, there is no distinction between GOOD and BAD odors. The majority of objectionable flavors and odors troubling food service operations are caused by bacteria growth. Sourness, rancidity, mustiness, stale or other OFF flavors are usually the result of germ activity.

The easiest way to insure full natural food flavor is through comprehensive cleanliness. This means good control of both visible soil (dirt) and invisible soil (germs). A thorough approach to sanitation will provide essential cleanliness. It will assure an attractive appearance of equipment, along with maximum efficiency and utility. More importantly, a good sanitation program provides one of the key elements in the prevention of food-borne illnesses.

A controlled holding environment for prepared foods is just one of the important factors involved in the prevention of food-borne illnesses. Temperature monitoring and control during receiving, storage, preparation, and the service of foods are of equal importance.

The most accurate method of measuring safe temperatures of both hot and cold foods is by internal product temperature. A quality thermometer is an effective tool for this purpose, and should be routinely used on all products that require holding at a specific temperature.

A comprehensive sanitation program should focus on the training of staff in basic sanitation procedures. This includes personal hygiene, proper handling of raw foods, cooking to a safe internal product temperature, and the routine monitoring of internal temperatures from receiving through service.

Most food-borne illnesses can be prevented through proper temperature control and a comprehensive program of sanitation. Both these factors are important to build quality service as the foundation of customer satisfaction. Both these factors are important to build quality service as the foundation of customer satisfaction. Safe food handling practices to prevent food-borne illness is of critical importance to the health and safety of your customers. HACCP, an acronymfor Hazard Analysis (at) Critical Control Points, is a quality control program of operating procedures to assure food integrity, quality, and safety. Taking steps necessary to augment food safety practices are both cost effective and relatively simple. While HACCP guidelines go far beyond the scope of this manual, additional information is available by contacting:

Center for Food Safety and Applied Nutrition Food and Drug Administration 1-888-SAFEFOOD

INTERNAL FOOD PRODUCT TEMPERATURES				
HOT FOODS				
DANGER ZONE	40° TO 140°F	(4° TO 60°€)		
CRITICAL ZONE	70° TO 120°F	(21° TO 49°C)		
SAFE ZONE	140° TO 165°F	(60° TO 74°C)		
COLD FOODS				
DANGER ZONE	ABOVE 40°F	(ABOVE 4°C)		
SAFE ZONE	36°F TO 40°F	(2°C TO 4°C)		
FROZEN FOODS				
DANGER ZONE	ABOVE 32°F	(ABOVE 0°C)		
CRITICAL ZONE	0° TO 32°F	(18° TO 0°C)		
SAFE ZONE	0° F OR BELOW	(18°C or below)		

SAFETY PROCEDURES AND PRECAUTIONS

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

A 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.

AWARNING

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.

ACAUTION

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.

NOTE:

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

- a) This appliance is intended to cook, hold or process foods for the purpose of human consumption.
 No other use for this appliance is authorized or recommended.
- b) 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.
- c) Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified technical personnel.
- d) 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.

NOTE



For equipment delivered for use in any location regulated by the following directive:

DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.

SERVICE PARTS (MH1)

