

Cold Food Drop-In Wells



100-CW



300-CW



500-CW

100-CW

200-CW

300-CW

400-CW

500-CW

600-CW

- **Installation**
- **Operation**
- **Maintenance**

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www.alto-shaam.com



Consult instructions
for operation and use.



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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


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:** _____



CAUTION



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

Environmental Conditions

Operational Environmental Conditions

- 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.

Transportation Damage and 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: _____

Purchased From: _____



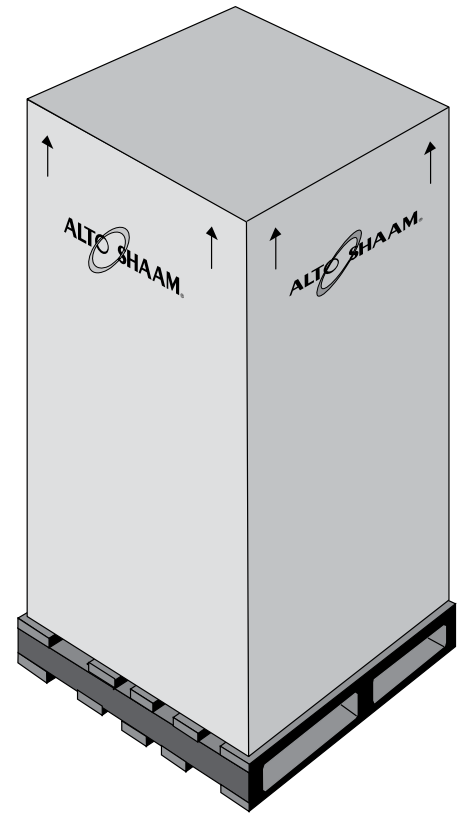
Alto-Shaam has established a twenty-four hour emergency service call center to offer immediate customer access to a local authorized service agency outside of standard business hours. The emergency service access is provided exclusively for Alto-Shaam equipment and is available throughout the United 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 for use in commercial establishments only, and is intended to hold previously prepared food for human consumption. Food is to be held cold. No other use for this appliance is authorized by the manufacturer or its agents and is therefore considered dangerous.
- 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.

⚠ DANGER

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.


⚠ 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.

- 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.

WARNING

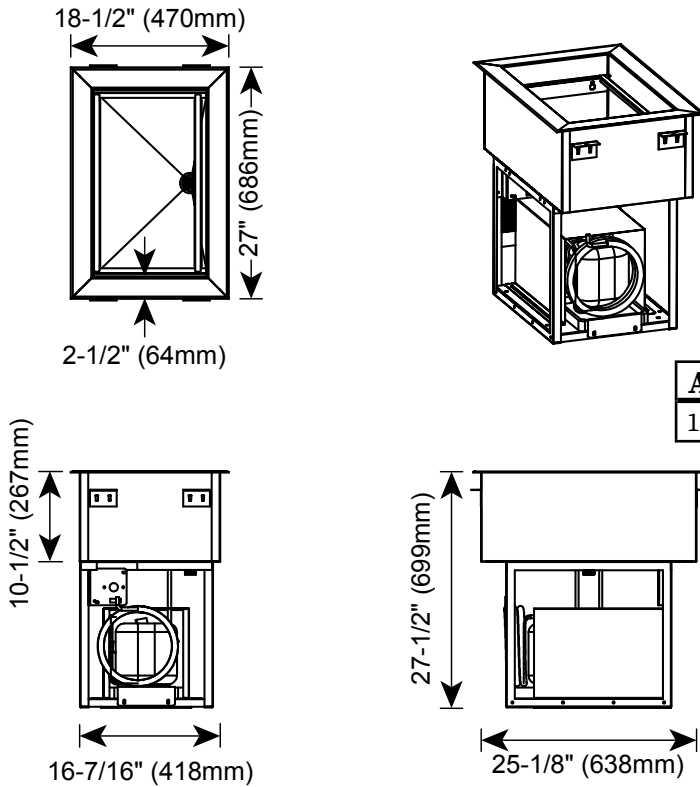


This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by person responsible for their safety.

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

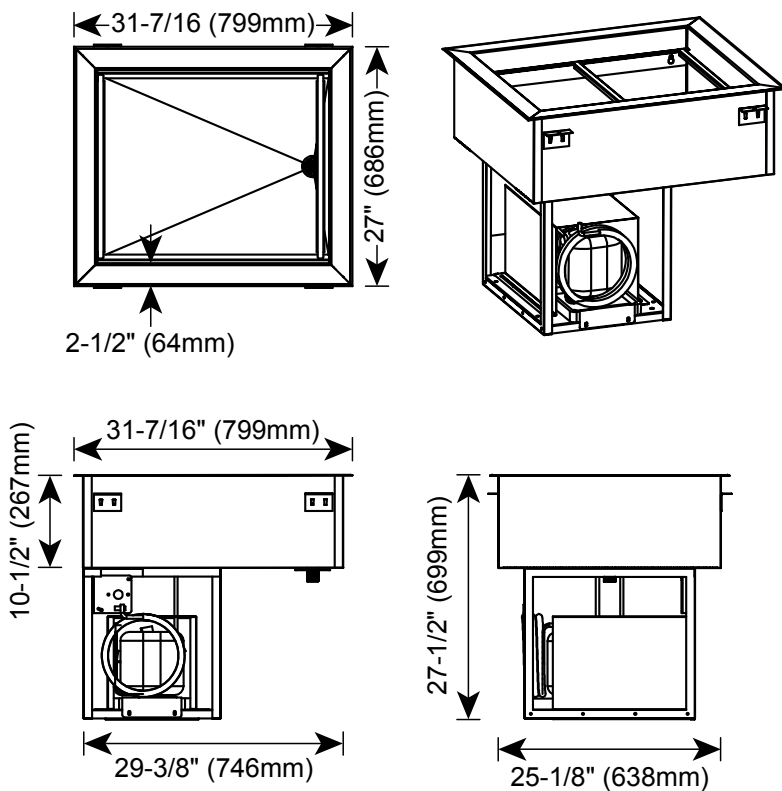
Dimensions

100-CW

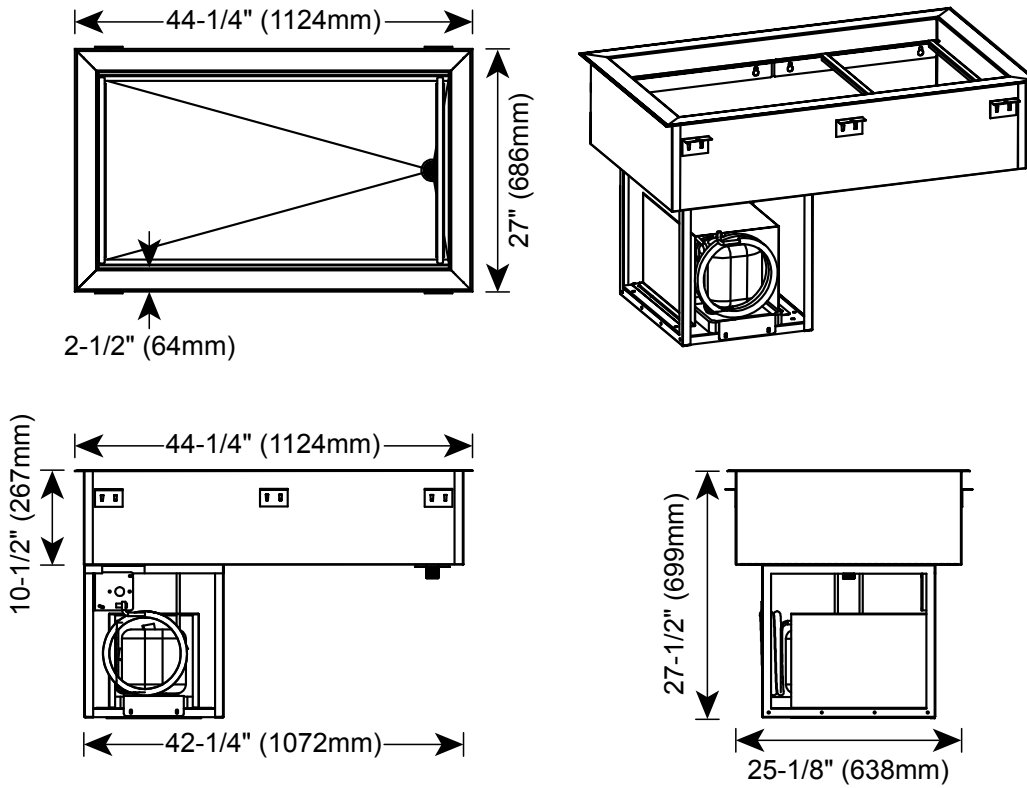


Accessories	
12" (305mm) Half Size / Third-Size Divider Bars	1014395

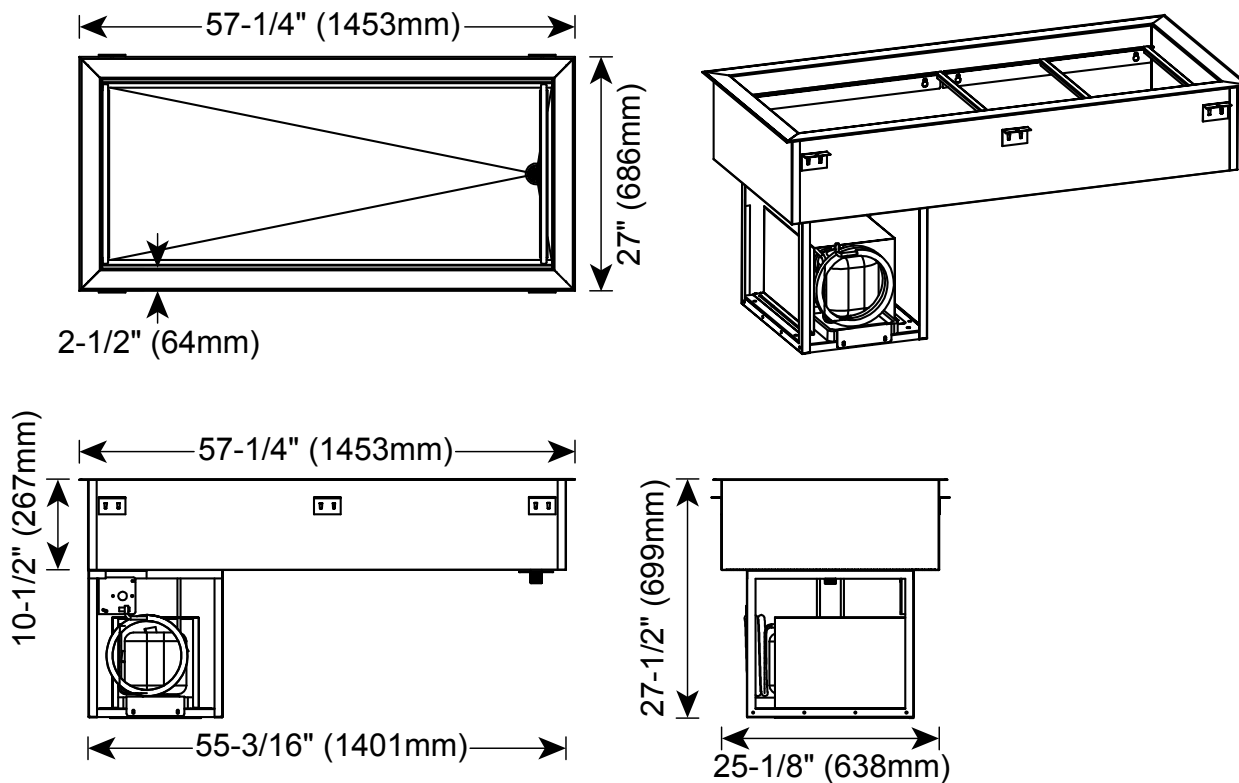
200-CW



300-CW

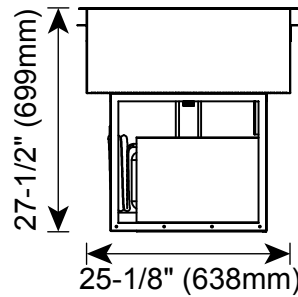
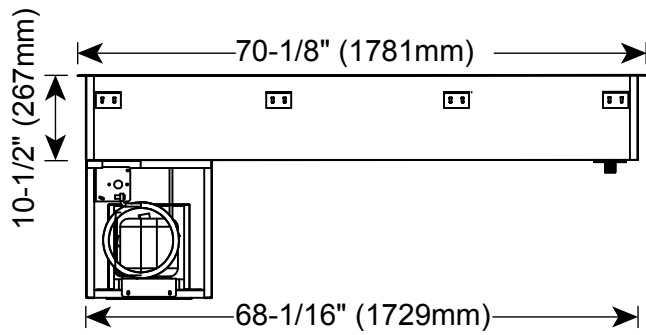
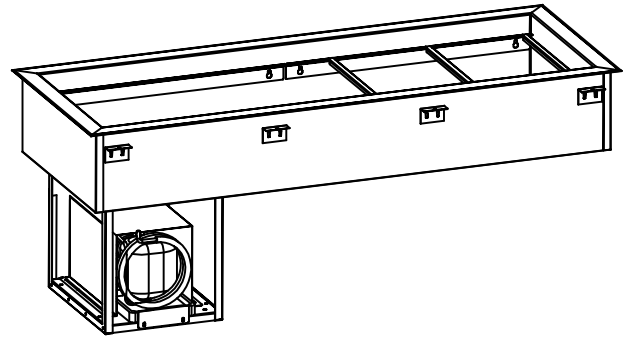
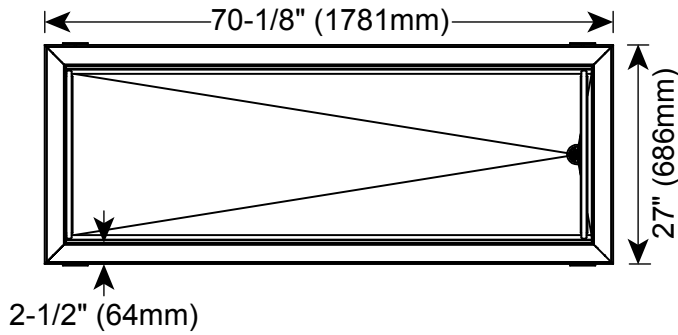


400-CW

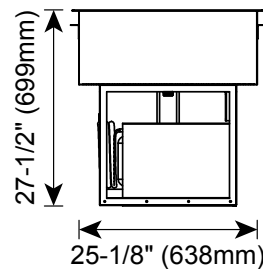
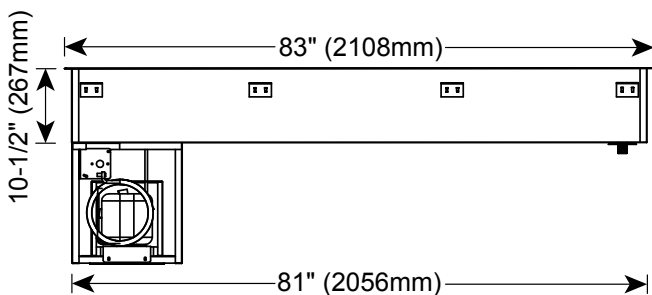
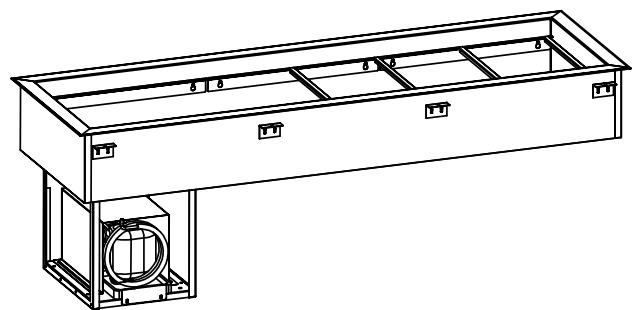
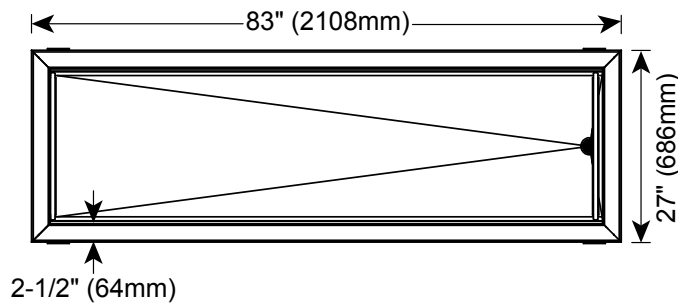


Dimensions

500-CW



600-CW



Rough Cut Openings

Model	Countertop Opening	Air Louver Opening
100-CW (one pan)	16-7/8" L x 25-1/2" W (429mm x 648mm)	21" H x 16" W (533mm x 406mm)
200-CW (two pan)	29-7/8" L x 25-1/2" W (759mm x 648mm)	21" H x 16" W (533mm x 406mm)
300-CW (three pan)	42-3/4" L x 25-1/2" W (1085mm x 648mm)	21" H x 16" W (533mm x 406mm)
400-CW (four pan)	55-5/8" L x 25-1/2" W (572mm x 648mm)	21" H x 16" W (533mm x 406mm)
500-CW (five pan)	68-1/2" L x 25-1/2" W (1740mm x 648mm)	21" H x 16" W (533mm x 406mm)
600-CW (six pan)	81-1/2" L x 25-1/2" W (2070mm x 648mm)	21" H x 16" W (533mm x 406mm)

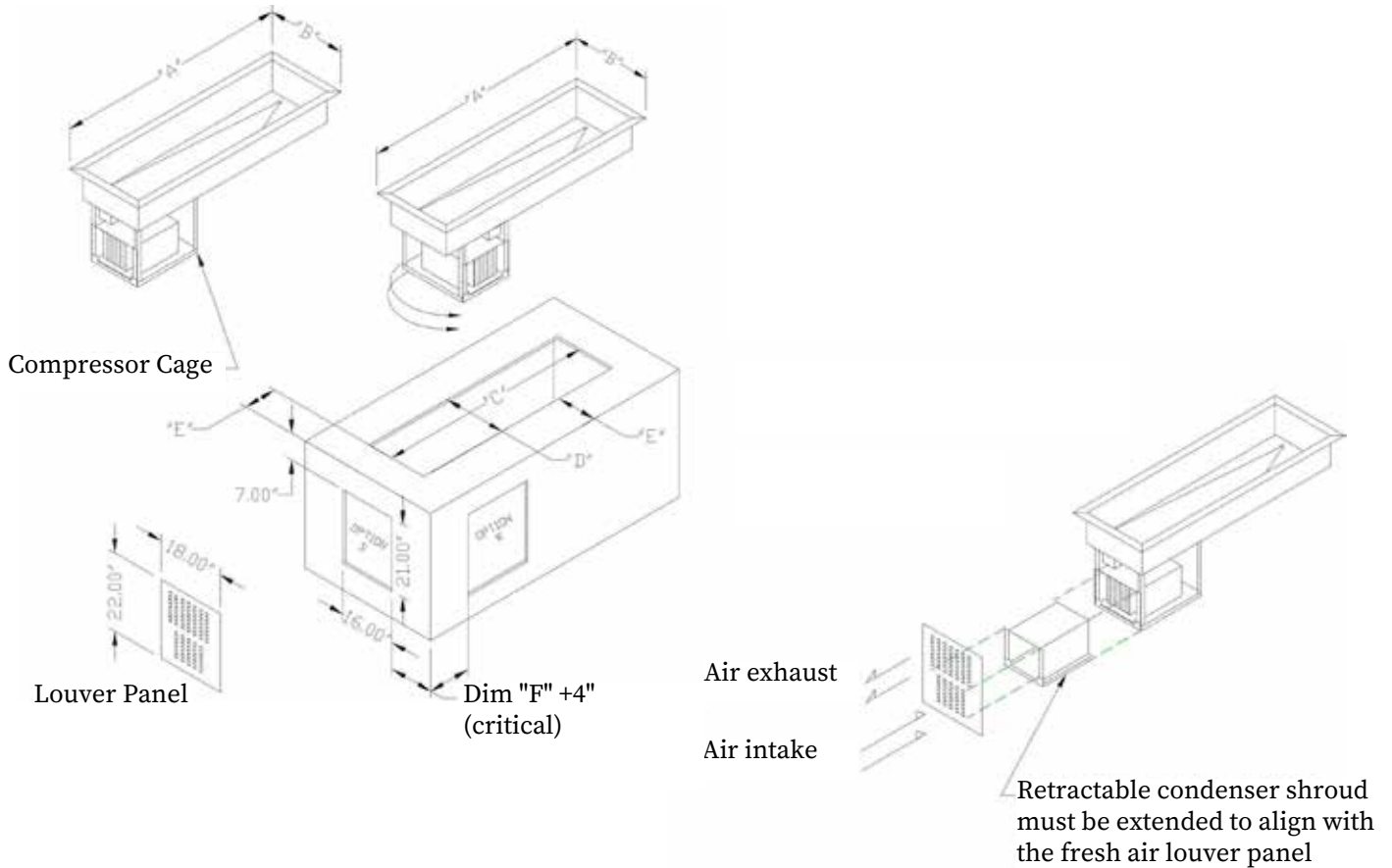
Product/Pan capacity (based on 6" [176mm] deep pans)

	100-CW	200-CW	300-CW	400-CW	500-CW	600-CW
Maximum Capacity	36 lb (16.3 kg)	72 lb (32.6 kg)	108 lb (48.9 kg)	144 lb (65.2 kg)	180 lb (81.5 kg)	216 lb (97.8 kg)
Maximum Volume	22 qt (21 L)	44 qt (42 L)	66 qt (62 L)	88 qt (84 L)	110 qt (105 L)	132 qt (126 L)
Full-Size Pans* - 12" x 20" x 6" GN 1/1 (325mm x 530mm x 176mm)	1	2	3	4	5	6
Half-Size Pans* - 12" x 10" x 6" GN 1/2 (325mm x 265mm x 176mm)	2	4	6	8	10	12
Third-Size Pans* - 12" x 6" x 6" GN 1/3 (325mm x 176mm x 176mm)	3	6	9	12	15	18

*Will accept 2-1/2" (65mm) deep pans and 4" (102mm) deep pans

Installation

Placement Details



Model	A	B	C	D	F
100-CW (one pan)	18-1/2" (470mm)	27" (686mm)	16-7/8" (429mm)	25-1/2" (648mm)	1-1/2" - 7-1/2" (38mm - 191mm)
200-CW (two pan)	31-7/16" (799mm)	27" (686mm)	29-7/8" (759mm)	25-1/2" (648mm)	1-1/2" - 7-1/2" (38mm - 191mm)
300-CW (three pan)	44-1/4" (1124mm)	27" (686mm)	42-3/4" (1085mm)	25-1/2" (648mm)	1-1/2" - 7-1/2" (38mm - 191mm)
400-CW (four pan)	57-1/4" (1453mm)	27" (686mm)	55-5/8" (572mm)	25-1/2" (648mm)	1-1/2" - 7-1/2" (38mm - 191mm)
500-CW (five pan)	70-1/8" (1781mm)	27" (686mm)	68-1/2" (1740mm)	25-1/2" (648mm)	1-1/2" - 7-1/2" (38mm - 191mm)
600-CW (six pan)	83" (2108mm)	27" (686mm)	81-1/2" (2070mm)	25-1/2" (648mm)	1-1/2" - 7-1/2" (38mm - 191mm)

! WARNING



Improper installation, alteration, adjustment, service, cleaning, or maintenance could result in property damage, severe injury, or death.

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

! AVERTISSEMENT



Une installation, des modifications, le réglage, l'entretien, le nettoyage ou une maintenance inadéquats peuvent endommager le matériel ou entraîner des blessures graves ou mortelles.

Lisez attentivement et assimilez les consignes d'installation, d'utilisation et d'entretien avant d'installer, d'entretenir ou d'utiliser ce matériel.

Site Installation

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

Installation Requirements

The countertop material must be water resistant.

A distance of 3/4" (19mm) or more is required between the top rims of the wells to ensure easy cleaning.

The cold well must be installed level.

The cold well must not be installed in any area where the cold well may be directly affected by steam, grease, dripping water, high temperatures, or any other severely adverse conditions.

The cold well must not be installed under a hood.

Avoid installing the cold well under a 4-way ceiling diffuser.

Outdoor use is not recommended.

A water drain or a water catch basin is required for the cold well.

LED lighting is recommended for overhead lighting.

Clearance Requirements

4" (102mm) in front of dual air movement louver.

! WARNING



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.

! CAUTION



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

Weight

Net: 361 lb (164 kg) Ship: 451 lb (205 kg)

Crate dimensions: (L x W x H)

53" x 45" x 49" (1346mm x 1143mm x 1243mm)

NOTICE: To prevent property damage: Check the dimensions of the doorways and aisles before attempting to move the appliance and pallet to the installation site.

Installation

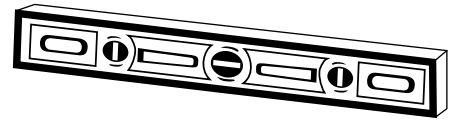
Adjustments are required with initial installation and start-up. It is important that these adjustments be completed by a qualified service technician. Installation and start-up adjustments are the responsibility of the dealer or user. These adjustments include but are not limited to leveling, electrical hook-up and fresh air intake.

1. The cold well must be installed on a stable and level surface - free of vibration and suitably strong enough to support the combined weights of the appliance plus the maximum product load weight.
2. **Do not** install this appliance in any area where it may be affected by any adverse conditions. Avoid placing the appliance in direct sunlight, near heat generating equipment such as ovens, ranges, heaters, fryers, steam kettles, dripping water, high temperatures, or any other severely adverse conditions. Avoid locating the appliance in an unheated room or where the room temperature may drop below 55°F (13°C) or above 86°F (30°C).
3. Drop the cold well into the counter and secure the drop-in cold well to the counter using the supplied brackets.
 - a. Locate square openings on the exterior body of the appliance. Insert securing bracket. Tighten the screw to anchor the appliance tightly to cabinet top.
 - b. Apply a bead of food-grade silicone sealant along the bottom of the cold well decor flange to seal the flange of the cold well to the counter top.
4. The air cooled self contained cold well requires a sufficient amount of cool clean air. The mechanical housing (except on 100-CW appliances) can be rotated to align the condenser air intake with the cabinet fresh air opening. *(see illustration)*
 - a. Loosen the wing nuts located under the cold pan body and rotate the carriage to the desired location.
 - b. Tighten the wing nuts.
 - c. Loosen the wing nuts on each side of the retractable condenser shroud and extend the shroud to align with the fresh air louver panel.
 - d. Tighten the wing nuts.
 - e. Install the fresh air louver panel.

Cross ventilation inside the cabinet is recommended to maintain an ambient temperature of 86°F (30°C) or less.

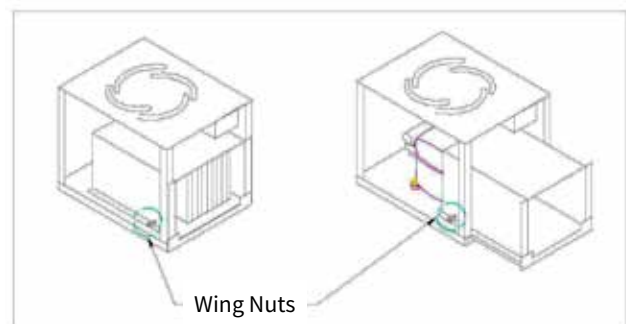
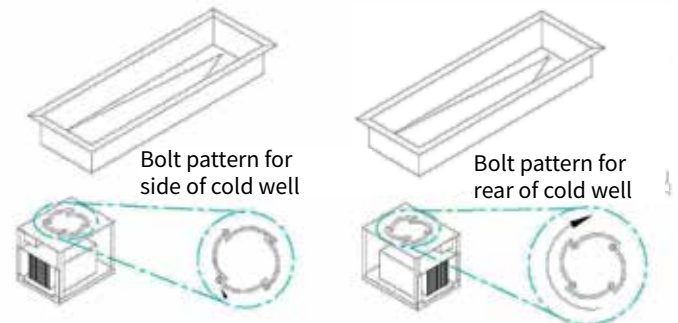
LEVELING

The cold well should be leveled before the electrical supply is connected. Level the appliance from side-to-side and front-to-back with the use of a spirit level.




NOTE: It is important to apply a bead of food-grade silicone sealant along the bottom of the cold well decor flange to seal the flange of the cold well to the counter top.

Illustration




Electrical and Plumbing Installation

⚠ 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.

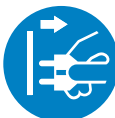
⚠ WARNING



Electrical Grounding Instructions:
This appliance may be equipped with a three-pronged (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle.


Do not cut or remove the grounding prong from this plug. Removing the grounding prong may result in serious injury, death or property damage.

⚠ WARNING




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

⚠ 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.

Electrical					
V	Ph	Hz	A	kW	Plug
115	1	60	5.0	.6	 NEMA 5-15P 15a-125v plug 9' (229mm) long cord

An identification tag is permanently mounted on the front control panel of the appliance.

Permanent wiring or electrical outlets for this appliance must be installed by a licensed electrician in accordance with local, country, or national codes.

NOTE: *The appliance should have its own dedicated line. Condensing appliances are designed to operate with a voltage fluctuation of plus or minus 10% of the voltage indicated on the appliance data tag. Burn out of a condensing appliance due to exceeding voltage limits will void the warranty.*

Position the appliance to allow easy access to the power supply cord in the event of an emergency.

Plug the appliance into a properly grounded receptacle **only**. Arcing will occur when connecting or disconnecting the unit unless all controls are in the **off** position.

It is important that a voltage reading be made at the compressor motor electrical connections while the appliance is in operation to verify that the correct voltage required by the appliance is being supplied. Low or high voltage can detrimentally affect operation and void the warranty.

Plumbing Connection

The drain in the bottom of the cold well is intended to funnel melting frost when the appliance is off or any waste water used to clean the appliance.

Melting frost is equal to a pint of water per day. Water used to clean the appliance varies.

Plumbing connections must be performed by a qualified plumber in compliance with all Federal, State, and Local Codes and Ordinances.



WARNING

To prevent serious injury and property damage from slippery floor conditions, ensure that the drain is connected properly and not blocked.

Installation Checklist

Prior to start-up
Locate nameplate and record the serial number. The serial number is required when ordering replacement parts or requesting warranty service.
Follow the cut out dimensions provided for specific models to properly size the opening.
The condenser coil must face a ventilated opening in the cabinet.
Inspect the condition of the plug and cord and replace if damaged.
Ensure that all refrigeration lines are not obstructed before, during, and after installation in the counter.
Check all sheet metal surrounding the mechanical compartment to ensure that damage has not occurred in these areas.
The cold well should have a dedicated electrical supply line.
Plumbing connections have been performed by a qualified plumber in compliance with all Federal, State, and Local Codes and Ordinances.
Plug in unit and press the On/Off power switch to the on (I) position.
Allow the appliance to cool down to temperature. A layer of frost will form and remain around the inside perimeter of the rail.
Confirm that the appliance is holding temperature. Set the control to the desired temperature.

NOTE: Failure to follow installation guidelines and recommendations may void the warranty on the appliance.

1. Do not add water to the cold well.
Alto-Shaam cold wells do not require the addition of water. Adding water is not recommended since water will accelerate the deterioration of the product, damage the appliance, and void the warranty.

2. Place pan dividers and empty pans in the wells.

NOTE: *Pan separator bars or divider bars must be used to close all gaps between pans, and all gaps between the pans and the edges of the wells. If these gaps are not closed, cold air escapes, distribution is uneven, and a uniform temperature is difficult to maintain. This is a **very** important requirement to follow whenever this appliance is in use.*

The On/Off switch is located on the base near the compressor.

3. Press the On/Off switch to the **on** (I) position.
The cold temperature control is preset at the factory.

Due to varying conditions (i.e. elevation, food product, type of operation, etc.) adjustments can be made (within limits) by turning the control dial until the desired temperature is reached.

Please allow 24 hours between adjustments.



The control knob is located on the appliance base by the compressor. Turning the knob clockwise will result in increased cooling. Keep the arrow on the knob pointed within the green arc. Turning the knob clockwise beyond the green arc results in freeze-up, while turning it counterclockwise beyond the green arc turns the compressor off.

NOTE: *If the cold pan temperature remains too warm and the temperature control is at the maximum setting, please contact a service technician.*

The appliance should be pre-chilled for a minimum of 30 minutes before loading the appliance with chilled food. If the appliance begins operating from the full off position, 30-45 minutes may be necessary for appliance to reach the set chilled temperature.

4. Load chilled foods into the cold well.
After pre-chilling the appliance, place cold foods into the pre-chilled pans located in the appliance or exchange the pans with pre-filled product pans. This appliance is designed for the purpose of cold food holding. Product being placed in the pre-chilled pans must be at 40°F (4°C) or less.

All required pan divider bars must be utilized at all times with the pan configuration chosen. Before loading food into the appliance, use a pocket-type thermometer to ensure that all products are within the cold safe zone with an internal temperature of 36°F to 40°F (2°C to 4°C).

5. Check food temperatures.
After all products are loaded into the appliance, periodically use a pocket thermometer to check each food item to ensure that correct temperatures are being maintained. The proper temperature range is between 36°F to 40°F (2°C to 4°C).

6. Serve fresh, cold food.
Keep cold foods looking fresh. Occasionally stir or rotate food as needed. Wipe spills immediately.

7. Evening shutdown
Remove product at the end of the day's preparation. Press the On/Off switch to the **off** (O) position. Clean the appliance after the frost has melted off the rail surface.

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 undesirable 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

Protecting Stainless Steel Surfaces



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

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

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

Cleaning Agents

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

Cleaning Materials

Cleaning can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods are needed, use a non-abrasive scouring pad on difficult areas and make certain to scrub with the visible grain of surface metal to avoid surface scratches. Never use wire brushes, metal scouring pads, or scrapers to remove food residue. Failure to observe this precaution will void the warranty.

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



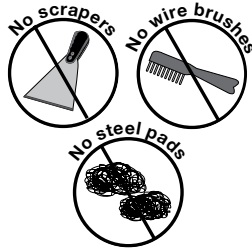
To prevent **serious personal injury, death, or property damage:**

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

Cleaning and Preventative Maintenance

Clean the appliance daily

1. Press the On/Off switch to the **off** (O) position. Disconnect the appliance from the power source. Allow the frost on the rail of the appliance to melt.
2. Remove, cover or wrap, and store food product under refrigeration.
3. Remove and wash any detachable items such as pans and divider bars with hot, soapy water. Dry with a clean, damp lint-free cloth.
4. Drain water from the appliance.
5. Remove any food scraps.



NOTICE: Never use of abrasive cleaning compounds, chloride based cleaners, or cleaners containing quaternary salts.

Never use hydrochloric acid (muriatic acid) on stainless steel.

6. 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.
7. Wipe the interior surfaces with a sanitizing solution. This solution must be approved for use on food contact surfaces.
8. Clean the control panel, thermostat knob, and air intake louvers.

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

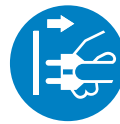
⚠ WARNING



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.

Preventative Maintenance Program

(perform monthly)

1. Clean all condenser coils.

Condenser coils are a critical components in the life of the compressor and must remain clean to ensure proper air flow and heat transfer.

Clean the condenser coils with a coil cleaner and/or a vacuum, cleaner, and a brush. Brush the coil in the direction of the fins.

2. Clean the fan blade on the condensing unit.

The fan blade collects dust and transfers the dust into the condenser coils. Clean the fan blade with a vacuum, cleaner, and a brush.

3. Inspect the condition of the plug and cord and replace if damaged.
4. Check the condition of the control panel overlay. Are there any tears or excessive wear on the graphic? Replace if necessary.

NOTICE: Do not use sharp utensils.

Use of any filter over the condenser coil may result in poor performance of the appliance.

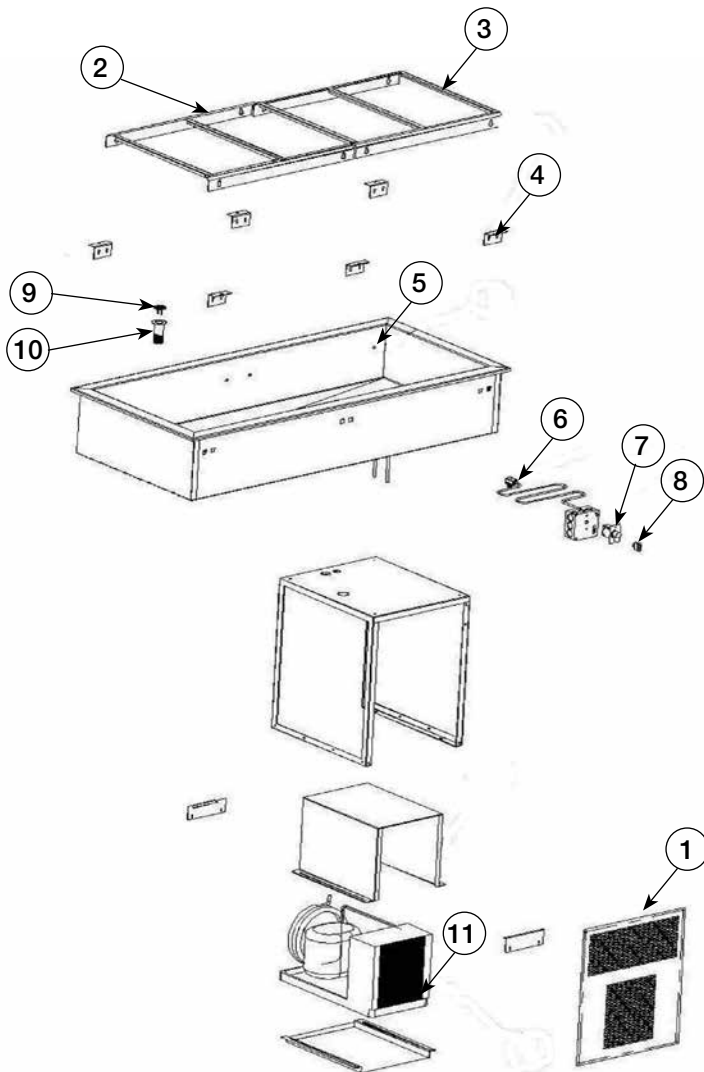
The factory does not recommend the use of any auxiliary filter. Any failures of the appliance as a result of an auxiliary filter will not be covered under warranty.

Troubleshooting



Problem	Possible Cause(s)	Remedy
The appliance will not cool.	The thermostat is off.	Press the On/Off switch to the on (I) position.
	The appliance is unplugged.	Plug in the appliance.
	The circuit breaker is tripped.	Replace the circuit breaker.
	The problem is unknown.	Call the Alto-Shaam service agency.
The appliance does not operate.	There is no power to the appliance.	Plug in the appliance and check the power switch.
	The temperature control is off.	Check the temperature control.
	The temperature control is faulty.	Test the temperature control.
	The compressor is overheated.	Clean the condenser coil.
	The condenser fan is faulty.	Service the condenser fan.
	The overload protector is faulty.	Test the overload.
	The compressor relay is faulty.	Test the compressor relay.
	The compressor is faulty.	Call the Alto-Shaam service agency.
The appliance short cycles.	The condenser coil is dirty.	Clean the condenser coil.
	The condenser fan is faulty.	Service the condenser fan and motor.
	The compressor is faulty.	Call the Alto-Shaam service agency.
	The overload is repeatedly tripping.	Check the outlet voltage.
The appliance condenser runs continuously.	The condenser coil is dirty.	Clean the condenser coil.
	The condenser fan is faulty.	Service condenser motor
	The appliance is low on refrigerant.	Call service agency
The appliance is too cold.	The temperature control is set too low.	Adjust the temperature control to a higher setting.
	The temperature control is faulty.	Test the temperature control.
The appliance is noisy.	The compressor mountings are loose or hardened.	Tighten or replace the compressor mountings.
	The condenser fan is damaged or hitting the fan shroud.	Inspect the condenser fan for interference or damage.

Exterior Service View (400-CW shown)



⚠ WARNING

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

Item	Description	Part No.
1	Panel, Louvered Flat 18" x 22"	PE-35919
2	Clips, Pan Rail, CW-100	CL-35911
	Clips, Pan Rail, CW-200	CL-35912
	Clips, Pan Rail, CW-300	CL-35913
	Clips, Pan Rail, CW-400	CL-35914
	Clips, Pan Rail, CW-500	CL-35915
	Clips, Pan Rail, CW-600	CL-35916
3	Adapter Bar	PN-35917
4	Hold Down Clips	CL-35910
5	Pin, Key Pan Rail	PI-35908

Item	Description	Part No.
6	Power Cord, 9' (2743mm) & Plug	CD-35920
7	Temperature Control	CC-35921
8	Rocker Switch	SW-35923
9	Drain Screen	DA-35918
10	Gate Valve, 1" Threaded	VA-35909
11	Coil, Condenser, 1/4 HP	RE-35924
*	Capillary Tube with Drier	CP-35927
*	Cord, 14 GA 18", Female	CD-35922
*	Condenser Fan Motor, Blade, and Guard Assembly	MO-35928
*	Filter Dryer	FI-35926

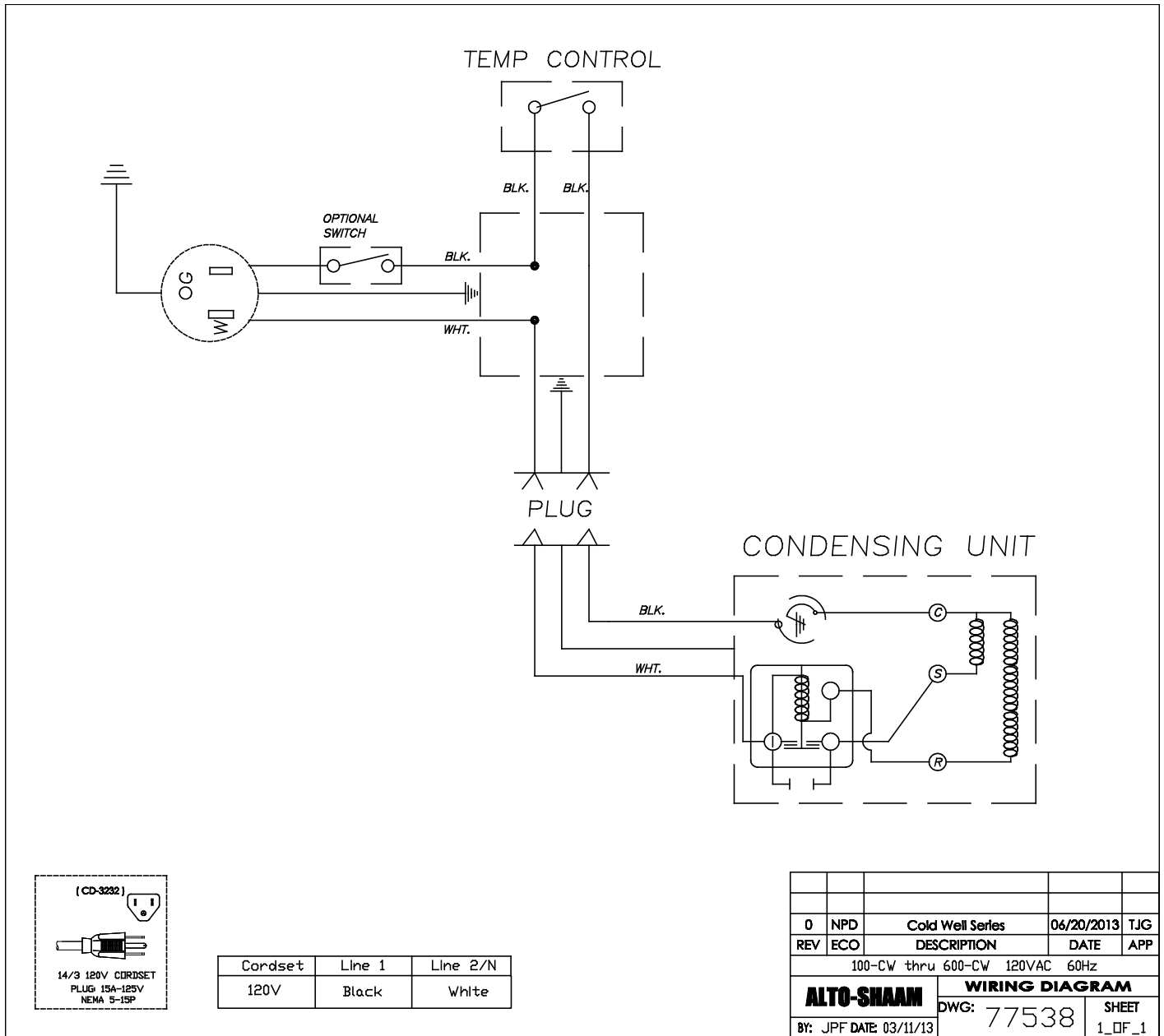
* not shown

Serial number is required for all inquiries.
Part numbers and drawings are subject to change without notice.

Wiring Diagram

WARNING

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



Serial number is required for all inquiries.
Part numbers and drawings are subject to change without notice.

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

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