



TENDERCHEF FOOD CURING CABINET

MODEL TC100

OWNER / OPERATOR'S MANUAL

MANUFACTURED BY:

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Before using, familiarize yourself with the heater controls. Read entire manual before operating this cabinet.



TC100



CAUTION: EQUIPMENT ELECTRICAL DAMAGE
Do not plug in or use this appliance until all Installation Instructions are read and followed.

This manual is considered to be a permanent part of this appliance and must remain with the appliance if it is sold or moved to another location

GENERAL INFORMATION

- This appliance is intended for use in commercial establishments, where all operators are familiar with the appliance use, limitations and associated hazards.
- Operating instructions and warnings must be read and understood by all operators and users.
- This appliance is intended for aging/curing large cuts of beef, cheese and charcuterie. No other use is recommended or authorized by the manufacturer or its agents.
- Cleanliness of this appliance is essential to good sanitation. Read and follow all included cleaning instructions and schedules to ensure the safety of the food product.
- All included instructions, component views and parts lists are included for general reference, and are intended for use by qualified service personnel.
- Knowledge of proper installation, operation and maintenance procedures is essential to ensure the safe operation of this cabinet.

SERVICE / SAFETY

- Always have dry hands prior to using the piece of equipment.
- Turn OFF the unit anytime the cabinet is not in use.
- If an electrical shock is felt when touching the cabinet, disconnect the power immediately and call Carter-Hoffmann Technical Service for assistance.
- If the power cord is frayed or the plug damaged, DO NOT plug into the electrical power receptacle. If it is already plugged in, turn off the main circuit breaker, usually located in the building's breaker box, then disconnect the plug.
- Disconnect the power cord before attempting any repairs to the cabinet.
- Repairs to this unit must be by qualified personnel.
- DO NOT SPRAY WITH WATER OR CLEANING SOLUTIONS, or submerge the appliance. Components and wiring present a high shock hazard when wet.

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UNPACKING AND INSTALLATION



CAUTION: Electric Shock Hazard

All servicing requiring access to non-insulated components must be performed by qualified service personnel. Do not open any access panels which require the use of tools. Failure to heed this warning can result in electrical shock. Disconnect this appliance from electrical power before performing any maintenance or servicing.



WARNING: Injury Hazard

All installation procedures must be performed by qualified personnel with full knowledge of all applicable electrical codes. Failure could result in property damage and personal injury.



WARNING Electric Shock Hazard

Appliance must be plugged into a properly grounded receptacle to prevent possible shock hazard. Electrical shock will cause death or serious injury.



WARNING: Risk of personal injury

Installation procedures must be performed by a qualified technician with full knowledge of all applicable electrical codes. Failure can result in personal injury and property damage.



CAUTION: Electrical Shock Hazard

The ground prong of the power cord is part of a system designed to protect you from electric shock in the event of internal damage. DO NOT cut off the large round ground prong or twist a blade to fit an existing receptacle.



IMPORTANT:

Power cord is 10' long. If necessary, contact a licensed electrician to install an appropriate 15 amp electrical circuit with NEMA 5-15R receptacle. DO NOT use an extension cord.



IMPORTANT:

Damage to unit due to being connected to the wrong voltage or phase is **NOT** covered by warranty.



IMPORTANT:

Place the cabinet in a space that is 80°F (27°C) or below. Temperatures above 80°F (27°C) may affect performance.



Unpack the cart and any accessories included. Ensure that all packing materials and protective plastic has been removed from the unit. Inspect all components for completeness and condition.

NOTE: DO NOT discard the carton or other packing materials until you have inspected the appliance for hidden damage and tested it for proper operation. Refer to *SHIPPING DAMAGE CLAIM PROCEDURE* on PAGE 8 of this manual.

Appliance should be thoroughly cleaned before use. See *CLEANING INSTRUCTIONS*, page 3-4.

Plug the cabinet into a properly grounded NEMA 5-15R electrical receptacle. **DO NOT MODIFY CORD PLUG.**

INSTALLATION CLEARANCES: the top and rear of unit must remain open and unobstructed. A clearance of 6" minimum must be maintained on the back of the unit.



Before using, familiarize yourself with the heater controls. Read entire manual before operating this cart.

Electrical Information
NEMA Plug Type

NEMA 5-15P

120 volts
60 Hz
Single Phase
5.35 Amps



GROUNDING INSTRUCTIONS

This appliance is equipped with a cord having a grounding wire with a grounding plug which must be plugged into an outlet that is properly installed and grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electrical current.

WARNING-Improper use of the grounding can result in a risk of electric shock. Consult a qualified electrician or service agent if the grounding instructions are not completely understood, or if doubt exists as to whether the appliance is properly grounded.

CLEANING



WARNING: ELECTRIC SHOCK HAZARD

Unplug the unit from electric power before performing cleaning or maintenance.



WARNING: ELECTRIC SHOCK HAZARD

DO NOT spray or splash water on the control panel or wiring.



CAUTION: CART DAMAGE

Do not tip cart onto the doors to drain excess water. Permanent damage to the doors and hinges will result. Use a clean dry cloth to mop any excess water inside cabinet after cleaning.

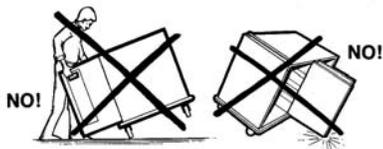


Fig 1. Humidity pan



Fig 2. Remove rear duct



Fig 3. Evaporator cover screws in rear corners (2)



Fig 4. Evaporator cover screws in front (3)

Routine cleaning on a regular basis is vital to the proper operation and overall performance of your cabinet. Follow these procedures to keep your cabinet sanitary and running at peak performance.

For ALL cleaning procedures, turn the main power switch OFF and unplug the cabinet to before cleaning. DO NOT spray or splash water on the electrical components, control panel, timer or wiring. Cleaning should be performed when aging/curing is not in process.

1. Racks or shelves are easily removed without tools for cleaning, Simply lift up and pull out. They may be hand washed or run through an automatic washer.
2. To clean stainless steel surfaces use only cleansers, detergents, degreasers, or sanitizers that are certified to be "chloride-free" and "phosphate-free," and cleansers, degreasers, or sanitizers only in the recommended concentrations*. DO NOT exceed recommended concentrations or mixing ratios. After cleaning and sanitizing, rinse all exposed surfaces thoroughly with large amounts of clean, clear water. Wipe off any standing liquid or residue from all surfaces, corners and rear edges.
3. Vinyl trim should be washed with a chlorine-free detergent and water. Rinse thoroughly with clear water and allow to dry. Never use abrasive cleaners, waxes, car polish, or substances containing strong aromatic solvents or alcohol. Use of **direct steam / hot water** cleaning at temperatures above **190°F** may result in "bubbling" or loosening of vinyl adhesive.

REMOVING AND CLEANING THE REAR DUCT AND EVAPORATOR COVER Two people are required for this job.

1. Remove the humidity pan that is located at the bottom rear of the cabinet. (Fig. 1). Pull out the pan from the sides and unplug the fan. Empty pan if needed.
2. Remove the rear duct (Fig. 2) by lifting up from the bottom and then pulling forward. Clean the duct with chloride-free or phosphate-free cleaning solution.
3. Locate both screws at the rear corners of the evaporator cover (top rear of cabinet) and remove them (Fig. 3)
4. Locate the three screws on the front of the evaporator cover and remove them (Fig. 4). The cover will now be free—use caution as it will drop.
5. Remove the cover from the cabinet and clean with chloride or phosphate-free cleaning solution.
6. Dry all parts thoroughly with a clean dry towel and reinstall in reverse order.

***IMPORTANT:** Cleansers, detergents, degreasers, sanitizers or bleaching agents that contain **chlorides or phosphates will cause permanent damage** to stainless steel products. This damage appears as pits, eruptions, voids, small holes, cracks, severe discolorations or dulling of the metal finish. Water with a high chlorine content can also damage stainless steel. If unsure of your water quality, we recommend you have it tested. **THIS DAMAGE IS PERMANENT, COSTLY TO REPAIR, AND IS NOT COVERED BY WARRANTY.**



WARNING: ELECTRIC SHOCK HAZARD

Unplug the unit from electric power before performing cleaning or maintenance.



WARNING: ELECTRIC SHOCK HAZARD

DO NOT spray or splash water on the control panel or wiring.



Fig 1. Control panel screws (right end)



Fig 2. Phillips screws at top of door



Fig 3. Pin plate



Fig 4. Lift door/bottom pin

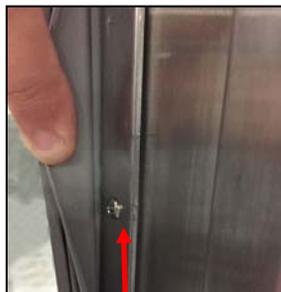


Fig 5. Compression bracket with screws



Fig 6. Screws for air returns

CLEANING (continued)

REMOVING AND CLEANING THE DOOR (GLASS OR SOLID)

Two people are required for this job.

1. Locate the four screws that secure the control panel, two on left end and two on right end, (Fig.1), remove them and place the panel on top of the cabinet.
2. At the top of the door, find two Philips screws (Fig.2); if the door is hinged on the right the screws will be located on the right; if the door is hinged on the left, the screws will be located on the left.
3. Have one person hold the door, while the other removes the screws.
4. Remove the pin plate (Fig. 3) and allow the door to come forward.
5. Lift the door until it is fully removed from the bottom pin (Fig. 4)
6. Set the door on a large flat surface. Wipe it down with water and a chloride-free or phosphate-free cleaning solution.
7. If the door has glass, an alcohol-based solution can be used to clean the glass.
8. Wipe off any excess water and cleaning solution with a clean damp towel and then dry with a clean dry towel.
9. Replace the door by following instructions in the reverse order.

CLEANING THE DOOR GASKET (GLASS OR SOLID DOOR)

Two people are required for this job.

1. See the instructions to remove the door (above). Gasket removal will be the easiest with the door off the cabinet.
2. With the door on a large flat surface, front side down, lift the gasket from the outside to reveal a compression bracket with Phillips head screws (Fig. 5)
3. Remove all screws around the border of the gasket to free it.
4. Using a stiff bristled cleaning wand, soap and water, clean in all of the crevices of the gasket. Rinse with clean water and ensure there aren't any suds remaining.
5. Clean the aluminum with a chloride or phosphate-free cleaning solution. Rinse with clean water and with a dry with a clean cloth.
6. Reinstall gasket by following instructions in the reverse order.

CLEANING THE SIDE AIR RETURNS

1. Locate the screws behind the air returns at the front of the cabinet on each side (Fig. 6)
2. Remove the screws with a Phillips head screw driver.
3. Remove the side air returns and clean them with a chloride or phosphate-free cleaner. Rinse with clean damp cloth and then dry with clean cloth.
4. Reinstall the side air returns.

DAILY OPERATION



TC100

Tenderchef is capable of cooling to a temperature of 30°F (-1°C). Pre-cooling time to 40°F (4°C) is approximately 30 minutes. Only product that has been chilled should be placed into the cabinet. Do not place unrefrigerated or warm product into the cabinet.

Since various products require different settings for the best curing, do not mix products. See table below for recommended settings.

This cabinet must be placed in an ambient controlled area under 80°F (27°C).

1. Pre-chill empty cabinet with the door closed for approximately 30 minutes. Always keep the door closed, except when actually loading or unloading the cabinet. Do not load the cabinet until the proper operating temperature has been reached.
2. Loops are located at the top for hanging products. Racks below are for additional products. Load hanging products first.
3. **Keep door closed at all times, unless loading or unloading product.**

Remember: the unit must be at proper temperature before the door is opened and product is placed in the cabinet.

The cabinet will not lower food temperatures with the door open.



Condensation Pan
(lower rear interior)

The cabinet is equipped with condensation pan located at the bottom rear of the cabinet. This pan will provide humidity if desired. Note: when too much condensate enters the pan, there is an overflow pan in the rear. This can also be redirected to a floor drain. Check periodically to empty and clean. Cleaning instructions are on page 3.

RECOMMENDED SETTINGS*

Product	Temperature Range	Humidity Range
Sub-Primal Beef Cuts (short loin, prime rib, tomahawk prime rib) ¹	30° to 39°F (-1° to 4°C)	80-85%
Charcuterie	55° to 65°F (13° to 18°C)	70%
Cheese	50° to 55°F (10° to 13°C)	75-95%

*Settings are considered safe according to internet sources. Individuals experienced with dry-aging and curing may have their own preferences. We encourage you to research settings prior to using this product. Carter-Hoffmann assumes no liability.

RESOURCES

¹ <https://www.usmef.org/guidelines-for-u-s-dry-aged-beef-for-international-markets/>

² <https://cooking.stackexchange.com/questions/8087/when-curing-sausage-which-is-more-important-temperature-or-humidity>

³ <http://www.artisancheesemakingathome.com/cheesemaking-ripening.html>

TOUCHSCREEN CONTROLS



Idle Screen

Touch anywhere to be taken to the home screen



Home Screen

Main screen to access all other setting screens

TOUCHSCREEN CONTROLS

Home Screen



Home Screen From the Home Screen you can:

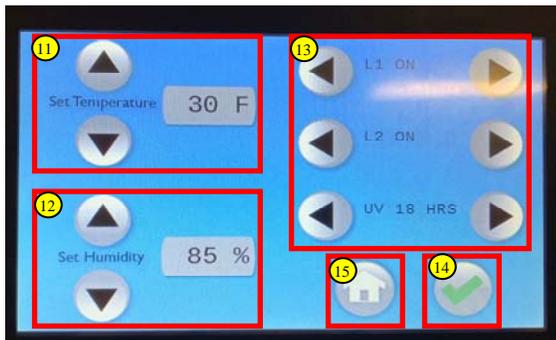
- 1 View the current temperature and humidity.
- 2 Select a product and change setpoints for temperature, humidity and lighting
- 3 Start a cycle
- 4 Change the time and date

Product Selection Screen



- 1 **View Current Temperature and Humidity**
Press TEMP or HUMIDITY on the Home Screen. The actual temperature or humidity will appear. The screen will automatically revert to the current settings after five seconds
- 3 **To Select a Product and Start a New Aging or Curing Cycle**
On the Home Screen select a product. You will be taken to the Product Selection Screen.
- 5 Select a product. The product name will change from Black to White lettering to note your selection.
- 6 Press RESET to revert the day counter back to 000.
- 7 Press START to complete your selection.
- 8 On the Confirmation Screen, you will be asked if you are sure. Press ✓ for yes and X for no.

Settings Screen

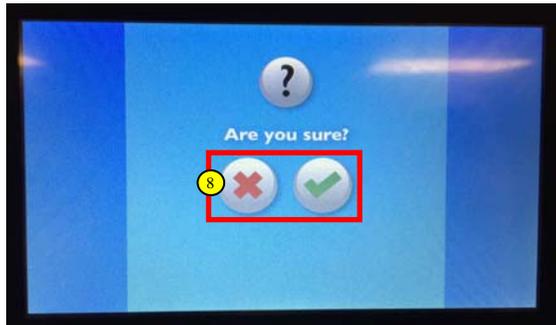


- To Change Setpoints for Temperature, Humidity or Lighting Cycles**
- 2 On the Home Screen, press SETTINGS and Settings Screen will appear.
- 11 Arrow UP or DOWN to set the temperature
- 12 Arrow UP or DOWN to set the humidity
- 13 There are three separate lights: two visible lights for viewing the interior (L1 on the bottom right and L2 on the upper left side of the door) and one UV light for sanitation (it is not visible). You can set the lighting for each of them at 12 hours/day, 18 hours/day, ON (24 hours/day) or OFF. Arrow UP or DOWN to set each one. You will be asked if you are sure. Press ✓ for yes and X for no.
- 14 Press ✓ to set temperature and humidity
- 15 Press HOME to cancel changes and return to the Home Screen

To Set the Date and Time

- 4 On the Home Screen, press the TIME button and the Time and Date Screen will appear.
- Arrow UP or DOWN to set the time 9 and 10 date.
- 16 Press DONE when you are finished. You will be asked if you are sure. Press ✓ for yes and X for no.

Confirmation Screen

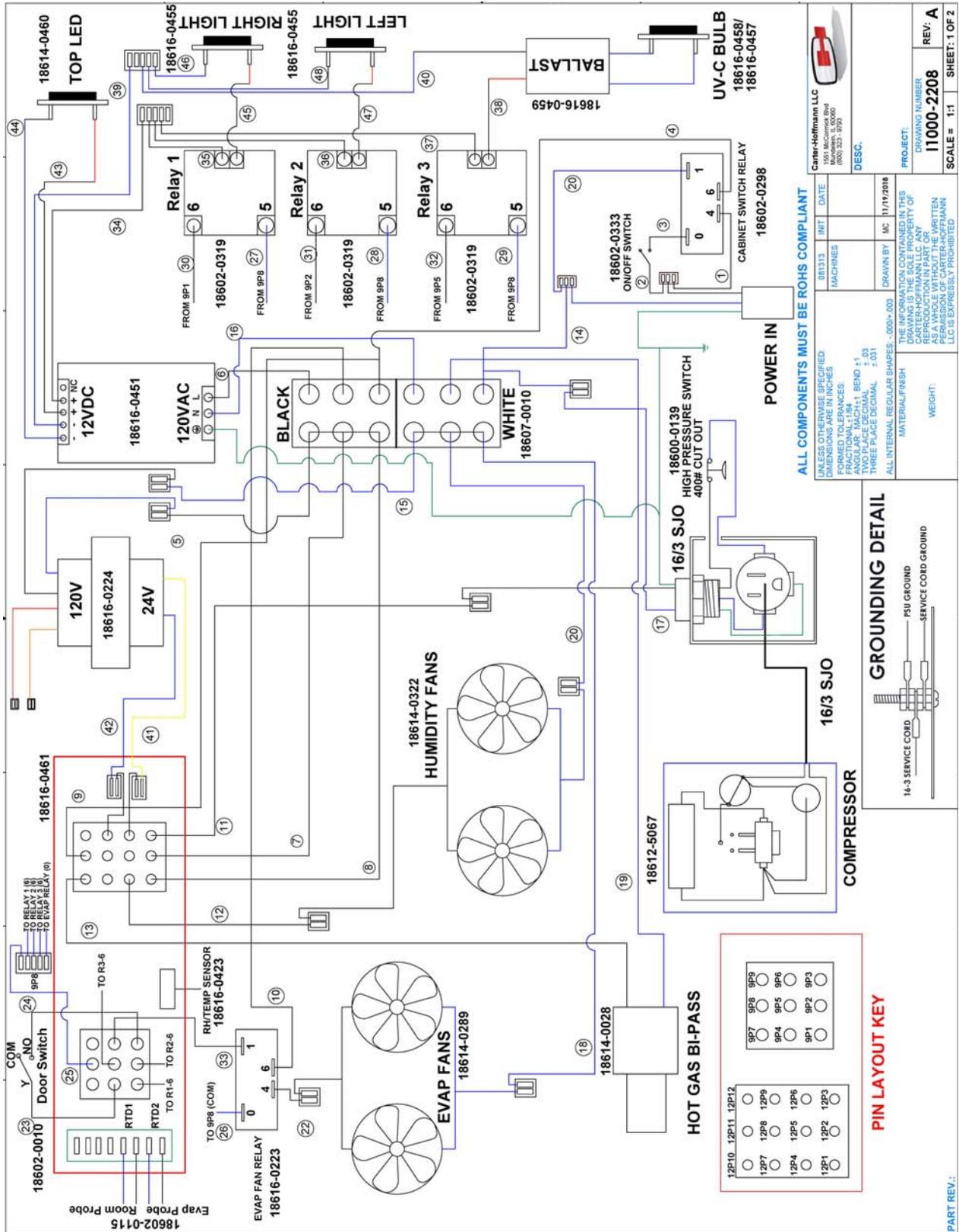


Product Time and Date Screen



WIRING DIAGRAM

TC100 Curing Cabinet
 115v, 5A, 600 watts 60Hz, NEMA 5-15P
 Standard Electric



GENERAL MAINTENANCE INSTRUCTIONS



WARNING

Never move cabinet unless all doors are securely closed. Serious damage to hinges and doors may result if bumped into walls, tables, or other equipment when the doors are open.

Contact factory with your model and serial number for replacement components.



WARNING

Use only (OEM) original equipment manufacturer replacement parts. Using unauthorized parts may cause serious injury. Replacement parts should be installed by a qualified technician.

DOORS

Never tip cabinet forward or open doors to drain water during or after washing. This can cause serious damage to the hinges, doors and latches.

DOOR ADJUSTMENT/REVERSING THE HINGES

Your cabinet comes with spacers on the bottom hinge for door adjustment, removal or replacement. The door is field reversible.

- 1) Remove the 4 screws on the left and right ends of the control panel; lift the panel and place it on top of the cabinet
- 2) Locate the 2 screws on top of the hinge and remove them
- 3) Remove the top pin plate and brace the door as it loosens and falls forward
- 4) Lift the door up to free it from the bottom pin
- 5) Remove the hinge brackets from the front of the cabinet
- 6) Mount the brackets on the opposite corners, i.e. if a bracket was originally on the top right, mount it on the bottom left.
- 7) Pre-mount the bottom hinge plate before mounting the door
- 8) Place the door onto the bottom hinge and latch the door
- 9) Install the top hinge pin and fasten
- 10) Adjust the door forward or back for proper gasket seal

REPLACEMENT PARTS

Factory Recommended Charge of Refrigerant:

24 oz. R134A

Part Number	Description
18602-0013	Push button switch, #E6900A
18602-0298	Relay, AC 100/120V
18602-0319	Relay, 24 DC coil, 30A, cont.
18602-0333	Low profile, 250V/5A button switch
18606-0104	C13 panel mount conn. socket
18606-0105	C14 male plug
18606-0290	5-15R single 125V
18612-5067	Condensing unit, R134A
18614-0028	Solenoid Valve, A3S120 1/4 120V
18614-0050	Accumulator
18614-0062	Filter drier
18614-0085	TXV EFJ-1/4-C 2SX3 SAE30"
18614-0289	Evaporator coil, high efficiency, 120-230V
18614-0316	Muffin fan cord, 40"
18614-0322	Muffin fan, 120V
18616-0115	RTD, sealed, 1000 OHM
18616-0223	Relay, SPST-NO, 140V, 24VAC
18616-0224	Transformer, 120/208/240, 24V40VA
18616-0423	Temperature/RH sensor with housing
18616-0446	USB Panel, mount to 5-pin socket
18616-0451	Power supply, 12VDC, 120VAC
18616-0455	LED lights, 3 array
18616-0456	7" display w/ WIFI card
18616-0457	UV-C light bulb
18616-0458	UV-C bulb socket w/leads
18616-0459	UV-C bulb ballast
18616-0460	LED light 9-array
18616-0461	LRE2B w/733 IO Board
18600-0139	Press SW Refrig #400
18603-0040	7" display harness
18615-0065	Extended end access valve

SERVICE EXPECTATIONS

SERVICE PHILOSOPHY

For almost sixty years, Carter-Hoffmann has enjoyed a reputation for manufacturing rugged, dependable foodservice equipment that permits foodservice professionals serve more food products to more people, and thus, to grow their business.

Our goal is not only to provide the best food service equipment for the price, but also to back it up with after-sale service that is responsive fast, efficient and professional. To ensure a clear understanding of our goals, expectations, and responsibilities, we have prepared this brief document.

Carter-Hoffmann products are innovative and efficient. They are easy to use, easy to clean and easy to maintain. Although the products are quite reliable they are also designed for easy repair. We believe that a malfunction to a Carter-Hoffmann product should cause as little inconvenience to the customer as possible. Our aim is to provide "same day"/first time fix" repair service on all of our products. We are dedicated to making every aspect of our customer service the standard by which others are judged.

END-USER RESPONSIBILITIES

While we all strive to serve our mutual customers as well as possible that does not mean that the end-user (including his employees) does not share some responsibilities.

1. All shipping damage must be noted on the freight bill when the shipment is received. Any freight damages must be collected from the Freight Company, NOT Carter-Hoffmann.
2. The end-user should be advised beforehand to carefully unpack and inspect all products when they are received **BEFORE SIGNING THE SHIPPER'S RECEIPT OF DELIVERY.**
3. The end-user must provide a safe, dry, level surface for the equipment to be placed upon.
4. The end-user must provide the proper electrical supply. All in-wall electrical modifications are to be completed by a licensed electrician. All building modifications are the responsibility of the end-user.
5. The end-user must operate, clean and maintain the equipment in accordance with the procedures described in the Operation Manual.
6. Carter-Hoffmann is NOT responsible for any loss of the customer's income, loss of food product, extra labor charges, or any other incidental or consequential costs as a result of the malfunction of our product.
7. The end-user shall allow for on-premises repair of the equipment to be completed at a mutually convenient place and time.

WARRANTY SERVICE

1. Warranty service is to be **initiated** by authorized Carter-Hoffmann personnel only.
2. The service provider is **NOT** authorized to change or extend any of the terms or conditions of our warranty.
3. Initial freight damage is **NOT** covered by the product warranty.

CONFIDENTIALITY

1. The end user and all his employees and sub-agents shall protect and keep confidential Carter-Hoffmann's proprietary designs, information, and knowledge.
2. All literature and informational materials provided by Carter-Hoffmann are to be considered confidential; they remain Carter-Hoffmann's property; and are not to be reproduced without our prior written consent.

SHIPPING DAMAGE CLAIM PROCEDURE

NOTE: For your protection, please note that equipment in this shipment was carefully inspected and packaged by skilled personnel before leaving the factory. Upon acceptance of this shipment, the transportation company assumes full responsibility for its safe delivery.

IF SHIPMENT ARRIVES DAMAGED:

1. **VISIBLE LOSS OR DAMAGE:** Be certain that any visible loss or damage is noted on the freight bill or express receipt, and that the note of loss or damage is signed by the delivery person.
2. **FILE CLAIM FOR DAMAGE IMMEDIATELY:** Regardless of the extent of the damage.
3. **CONCEALED LOSS OR DAMAGE:** if damage is unnoticed until the merchandise is unpacked, notify the transportation company or carrier immediately, and file "CONCEALED DAMAGE" claim with them. This should be done within ten (10) days from the date the delivery was made to you. **Be sure to retain the container for inspection.**
4. Carter-Hoffmann cannot assume liability for damage or loss incurred in transit. We will, however, at your request, supply you with the necessary documents to support your claim.

WARRANTY

Carter-Hoffmann Warranty:

Carter-Hoffmann ("CARTER-HOFFMANN") warrants to the initial purchaser of its standard Carter Line Products that CARTER-HOFFMANN will, at its option, repair or replace, during the warranty period set forth below, any part of such products made necessary due to a defect in material or workmanship which is present when the product leaves its factory and which manifests itself during the warranty period under normal use and service.

*This warranty applies only to original equipment owned and possessed by the initial purchaser and the warranty period begins on the date of original shipment from the CARTER-HOFFMANN factory and extends as follows: **to component parts and labor for 12 months (36 months on hotLOGIX and VAPORPRO holding cabinets and cook & hold cabinets); to refrigeration compressor unit for one year** (limited to replacement only - not to include labor for removal, repair or replacement).*

Repair or replacements under this warranty will be performed, unless otherwise authorized in writing by CARTER-HOFFMANN, at its factory. All parts or components to be repaired or replaced under this warranty are to be shipped prepaid to CARTER-HOFFMANN, with reimbursement credit for such part or component to be given if found by CARTER-HOFFMANN to be defective.

CARTER-HOFFMANN neither makes nor assumes and does not authorize any other person to make or assume any obligation or liability in connection with its products other than that covered in this warranty. This warranty applies only within the continental United States and Canada. In Alaska and Hawaii, this warranty applies only to and is limited to the supply of replacement parts.

Warranty Exclusions and Limitations:

Any implied warranty of merchantability or fitness for a particular purpose is hereby specifically disclaimed by CARTER-HOFFMANN. There are no warranties, expressed or implied, which extend beyond the description on the face hereof. This warranty does not cover and CARTER-HOFFMANN shall not under any circumstances be liable for any incidental, consequential or other damages (such as injury to persons or property, loss of time, inconvenience, loss of business or profits, or other matters not specifically covered) arising in connection with the use of, inability to use, or failure of these products.

Specifications subject to change through product improvement and innovation.

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CFESA

Proud Member

NAFEM
North American Association of
Food Equipment Manufacturers