

# GRIDLESS HEATED TRANSPORT CART MODELS GTH7 & GTH12 OWNER / OPERATOR'S MANUAL



MANUFACTURED BY:

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**Read entire manual before  
operating this cart.**



**CAUTION: EQUIPMENT ELECTRICAL  
DAMAGE**

DO NOT plug in or use this appliance until all *Installation Instructions* are read and followed. Damage to the appliance may occur if these instructions are not followed.

This manual is considered to be a permanent part of this appliance.

This manual must remain with the appliance if it is sold or moved to another location.



GTH12

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## GENERAL SAFETY INFORMATION



### **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.



### **CAUTION: Burn Hazard**

Interior surfaces of the appliance may be HOT to the touch, and can cause serious burns.

## 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 use in holding pre-cooked foods for human consumption. No other use is recommended or authorized by the manufacturer or its agents.
- When battery reaches 0%, it is no longer safe to hold potentially hazardous foods.
- 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 trouble shooting guides, 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 appliance.

## 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 proper circuit breaker, usually located in the building's breaker box, then disconnect the plug.
- Disconnect the power cord before attempting any repairs to the appliance.
- Repairs to this unit must be by qualified personnel.
- DO NOT SPRAY WITH WATER OR CLEANING SOLUTIONS, or submerge the heating unit. Components and wiring present a high shock hazard when wet.
- Disconnect heating unit when cleaning cabinet or heating unit.
- Both the interior and exterior surfaces of this appliance can be hot to the touch and may cause burns.

## BATTERY SAFETY INFORMATION

This appliance contains two 12 volt AGM (absorbed glass mat) batteries to power the heating system and controls on DC power when the cabinet is unplugged from AC power. They are valve regulated lead acid (VRLA) rechargeable batteries. Installation and servicing of batteries should be performed or supervised by personnel knowledgeable of lead acid batteries and required personal and equipment safety precautions. Adhere to all safety precautions as directed by the manufacturer of the batteries. Material Data Safety Sheets are available from the battery manufacturer. Carter-Hoffmann assumes no liability for damage (property or personal) or injuries do to incorrect handling, misuse or abuse of the batteries.



### **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**

Battery systems present a risk of electrical shock and high short circuit current. Remove metal objects (e.g. watches and rings); use insulated tools; wear eye protection and rubber gloves. Observe circuit polarities and do not make or break live circuits.



### **CAUTION: Chemical Hazard**

Any gelled or liquid emissions from a battery are electrolyte which contains dilute sulfuric acid which is harmful to the skin and eyes; is electrically conductive and is corrosive. If electrolyte contacts the skin, wash immediately and thoroughly. If electrolyte enters the eyes, also seek medical attention. Neutralize spilled electrolyte with a solution of 1 lb. bicarbonate of soda (baking soda) to one gallon of water.



### **CAUTION: Fire, Explosion and Heat Hazards**

Batteries can contain an explosive moisture of hydrogen gas which can vent under overcharging conditions. Do not smoke or cause sparks in the vicinity of the battery. Do not install and charge batteries in a sealed container. Mount the individual batteries with a minimum of 0.5" (13mm) between units to allow for convection cooling. If contained, assure the container or cabinet and room have adequate ventilation to prevent accumulation of potentially vented gas. Refer to the current issue of the National Electric Code.



### **CAUTION: Proper Disposal Required**

Lead acid batteries must be recycled. Batteries contain lead acid and immobilized dilute sulfuric acid. Dispose of in accordance with Federal, State and local regulations. DO NOT dispose of in a landfill, lake or other unauthorized location.



### **CAUTION: Health Hazard**

Causes severe skin burns and eye damage. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, protective clothing and eye/face protection.



**Environmental Hazard**



**Explosive Chemical**



**Keep away from heat, sparks, open flame**



**Health Hazard: Skin and eye irritant, respiratory tract irritant, poison**



**Wear eye protection**



**Highly Flammable**

**For more information, contact battery manufacturer For additional battery handling and safety information, including Material Safety Data Sheet (MSDS)**

**C&D Technologies, Inc.  
215.619.2700 or 800.543.8630  
www.cdtechinfo.com**

## SPECIFICATIONS



The Gridless heated transport cart can operate under both AC (wall power) or DC (battery) power. All components, including elements, fan and controls are powered by either source, keeping food hot and fresh during transport. The cabinets have large, bright displays and are easy to operate. They are all stainless steel double wall cabinets with heavy-duty features for rugged transport. Four to six hour run time on DC power, with a six-hour battery charging time.



Model	Capacity		Slide Pairs	Inside Working Height	Height In (mm)	Depth In (mm)	Width In (mm)	Caster Diameter In (mm)	Shipping Weight Lbs (kg)
	12"x20"	18"x26"							
GTH7	14	7	7	26-1/8 (664)	62-3/8 (1584)	37-3/8 (949)	32-5/8 (828)	6 (162)	285 (130)
GTH12	28	14	14	43-5/8 (1108)	79-1/2 (2029)	33-3/8 (949)	32-5/8 (828)	6 (162)	440 (200)

**CONSTRUCTION...** Completely welded cabinet construction with outer cabinet formed and welded to base. All seams turned in to eliminate raw edges. All stainless steel; polished exterior.

**BASE FRAME...** 12 gauge stainless steel extended full depth bolsters.

**CASTERS...** 6" red balloon casters. Plate mounted and bolted to base in offset wheel-ahead pattern. Delrin sleeve axle bearings and double ball bearing swivel. Zerk grease fittings. Two casters fitted with brakes.

**BUMPER...** Non-marking red vinyl bumper set in heavy-duty 3/16" thick extruded aluminum frame with reinforced corner "cut-outs."

**INSULATION...** High density fiberglass, full 2" thick continuous wrap-around type in top and sides.

**THERMOMETER...** Digital type with remote sensing bulb.

**BATTERY CHARGE...** Digital battery charge level meter and % display.

**DOOR...** Welded double panel stainless steel pocket door. Polished exterior. Filled with 2" thick high density fiberglass insulation. Donut bumper for protection.

**HINGES...** Heavy-duty strap hinges, bolted to door and cabinet.

**DOOR CLOSURE...** Double wall pocket-style door. Edge-mount lever style latch with magnetic closure.

**HANDLES...** Two 1" stainless steel tubular handles mounted to sides of cabinet. One stainless steel handle mounted to rear, with donut bumpers mounted to each end.

**RACK ASSEMBLIES...** Stainless steel baffles with stainless steel universal tray slides. Fully adjustable at 1-3/4" spacing. Standard spacing at 3-1/2" centers.

**HEATING SYSTEM...** Top mounted blower heater for even heat distribution. High efficiency DC motor with cooling fans. Full range thermostat with on/off switch and AC or DC power indicator. Two batteries for DC power operation and NEMA 5-20P plug for AC power operation.

**DC POWER SYSTEM...** Two on board batteries to power all electronics, including heating elements, blower motor, cooling fans and control board. Full battery charge will provide 4-6 hours of operation. Robust power converter and charge controller for seamless transition from AC wall power and DC battery power and vice versa. Cart can be left to charge for as long as the user wants and will switch to a power saving

mode when fully charged. Cart will operate while being charged or can be charged while the unit is cold. Battery life 3-5 years depending on number of charge cycles.

**ELECTRICAL CHARACTERISTICS...** Operates on 120 volts, 60 cycle, single phase, 1300 watts, 10.8 amps. Ten foot 3 wire rubber cord with 3 prong grounding plug. NEMA 5-20P. Bright LED digital temperature and battery charge. Adjustable brightness for indoor or outdoor viewing.

**PERFORMANCE...** GTH12: preheat to 160°F (71°C) in approximately 50 minutes; 180°F in 60 minutes (82°C); 200°F (93°C) in 80 minutes. GTH7: preheat to 160°F (71°C) in 25 minutes; 180°F (82°C) in 40 minutes; 200°F (93°C) in 50 minutes. Temperature range of 160°F to 200°F (71°C to 93°C). Batteries can be charged in 4 hours or less and have a 4-6 hour run time.

**ACCESSORIES/OPTIONS...**

- Alternate caster sizes and types
- Four wheel brakes
- Menu card holder (5"x7" or 8.5"x11")
- 6" extended width tray slides
- Alternate electrical configuration



## UNPACKING AND INSTALLATION



### **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 20 amp electrical circuit with NEMA 5-20R 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.



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

Unpack the cart and heating unit. 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 14 of this manual.

Appliance should be thoroughly cleaned before use. See *CLEANING INSTRUCTIONS*, page 6.

The cabinet is shipped with the batteries already installed and pre-charged. Prior to use, batteries will require a 24-hour refreshing charge to ensure best operation.

Plug the heating unit into a properly grounded NEMA 5-20R electrical receptacle. **DO NOT MODIFY CORD PLUG.**

Charge batteries for 24 hours.

For first time operation of the cabinet, run on AC (wall) power for 60 minutes. Do not load product into the cabinet. Allow the heat to remove any residual oils which may adhere to inside metal surfaces. A slight emission of smoke is common during the first few hours of operation.

### **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.

### **ELECTRICAL INFORMATION:**

120 volts, 60 Hz, single phase, 1300 watts, 10.8 Amps. Ten foot 3 wire rubber cord with 3 prong grounding plug. NEMA 5-20P.

### **BATTERY INFORMATION:**

DC (battery) Power: Two 12 volt 539 watts/cell batteries. Non-spillable Absorbed Electrolyte type; Electrical Storage Valve Regulated Lead-Acid (VRLA) Battery with Absorbed Glass Mat (AGM)

## CLEANING



**WARNING: ELECTRIC SHOCK HAZARD**

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



**WARNING: BURN HAZARD**

Allow the unit to cool before performing any cleaning or maintenance procedures.



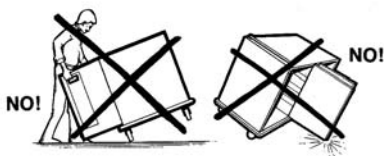
**WARNING: ELECTRIC SHOCK HAZARD**

DO NOT spray or splash water on the heater, control panel, timer 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.



Turn the main power switch OFF, unplug and allow the unit to cool before cleaning. DO NOT spray or splash water on the heater, control panel, timer, wiring or in the battery compartment.

1. Racks or shelves are easily removed without tools for cleaning, Simply lift up and pull out. The tray racks 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.
4. After all parts are dry, reinstall them and then replace the heating unit.

**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.**

### RECOMMENDED "TIPS" FOR CLEANING STAINLESS STEEL

PURPOSE	FREQUENCY	CLEANING AGENT	METHOD OF APPLICATION
Routine cleaning	Daily	Soap, ammonia, detergent and water	Swab with cloth. Rinse with clear water, wipe dry.
Smears and fingerprints	As needed	Stainless steel cleaner, similar products	Rub with cloth as directed on package. Rub in direction of grain of stainless steel. <b>Do not</b> use on vinyl trim or control panel.
Stubborn spots and stains	Daily or as needed	Any chloride-free or phosphate-free cleanser	Apply with damp sponge or cloth. Rub in direction of grain. Rinse thoroughly. <b>Do not</b> use on vinyl trim or control panel.
Hard water spots	Daily or as needed	Vinegar	Swab with cloth. Rinse with clear water, wipe dry.

## DAILY OPERATION



### CAUTION: SAFE FOOD HOLDING PRACTICES RECOMMENDED

Cooking food to a safe temperature, holding at a temperature of at least 140°F is critical in the prevention of foodborne illness. Hold only cooked, hot food at 140°F or higher. This cabinet is not intended to cook or reheat food. Food must be at appropriate temperature before being placed into cabinet.



### IMPORTANT:

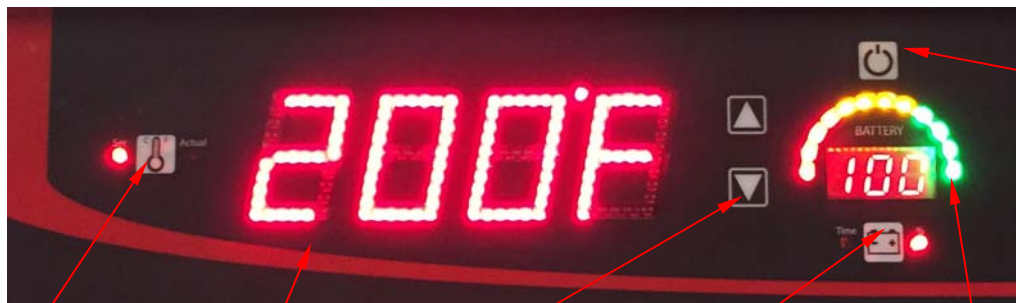
Cabinet AC power requires a 15 amp electrical circuit with NEMA 5-20R receptacle. DO NOT use a receptacle that is not rated and grounded for 20 amp service and do not use an extension cord. Verify electrical specifications on the serial tag located on the cabinet.

### PREHEAT TIMES & TEMPERATURES

**GTH7:** preheat to 160°F (71° C) in 25 minutes; 180°F (82°C) in 40 minutes; 200°F (93°C) in 50 minutes.

**GTH12:** preheat to 160°F (71° C) in approximately 50 minutes; 180° F in 60 minutes (82°C); 200°F (93° C) in 80 minutes.

- 1) With the unit turned "Off", plug the power cord into an AC socket.
- 2) Press the Power Button located on the front of the control board to turn the unit "On".
- 3) Using Up and Down Arrows, set cabinet desired temperature. NOTE: Display will show cabinet temperature setting. Press the Temperature Button to view the actual cabinet temperature.
- 4) The display will show "PrE" until the unit has reached the desired set point. Pre-heat to desired temperature (see preheat times and temperatures for each model in box to the left). When preheat is complete, it will display the set temperature.
- 5) The actual temperature of the food compartment can be seen by pressing the Set/Actual Button once.
- 6) Load product into the cabinet, starting from the bottom up.
- 7) To disconnect from AC wall power and go to DC battery power for transport, turn off cabinet, unplug from AC and then turn the cabinet back on. It will now run on battery power. Run time will be about 4 hours on a full battery charge.
- 8) When removing product from the cart, start at the bottom and work to the top position. This keeps food hotter and eliminates spillage onto lower items.
- 9) Once the battery requires charging or the user wants to begin charging the battery again, the unit should first be turned "Off" then plugged into the wall socket. The unit can then be left "Off" to charge more quickly or it can be turned "On" again to maintain active temperature and charge the battery which will take more time.
- 10) It is recommended that the unit be fully charged before unplugging and running on battery to maximize the life of the battery over time.



Set/Actual Temperature Button: press to view actual temperature

Temperature display

Up and Down Arrow buttons to set temperature

Battery Button: press to display % or time remaining on battery charge

Battery charge level (displays % or hours remaining)

**TO DIM THE DISPLAY** Press and hold the Battery Button and push the DOWN ARROW until desired level of brightness is displayed.

**TO BRIGHTEN THE DISPLAY** Press and hold the Battery Button and press the UP ARROW until the desired level of brightness is displayed.

## GENERAL MAINTENANCE INSTRUCTIONS



**WARNING:** The batteries used in this appliance are large and heavy and pose a risk of personal injury. Use caution when removing/replacing batteries and remove/replace one at a time. Due to the weight, they can cause the appliance to tip. Use extreme care. Do not perform removal or replacement alone.

The batteries contain chemicals that may cause a fire or explosion and pose health hazards if there is accidental exposure to them. See page 2 for further instructions regarding handling of batteries. Use special care when performing any cleaning, maintenance or battery replacement. Get assistance if necessary and use all protective gear noted on page 2.

### CASTERS

Some casters are equipped with Zerk grease fittings so that they may be easily lubricated with a grease gun. Recommended lubrication is at least once every six months. Lubrication will be required more frequently if carts are cleaned with a hot water or steam cleaning system. Casters with special bearings are recommended for frequent cart wash or steam cleaning situations.

### LATCHES

Check frequently to insure that all door latches are secure. Latches may become “sticky” due to residue build-up from daily use and cleaning. Lubricate latches regularly with WD-40, silicone spray, graphite or other commercial lubricants for stainless steel products. Do not use oil.

### PERIMETER BUMPERS

Vinyl which has been dislodged from the channel due to severe bumping or scraping can be pried back into place with a common screwdriver.



## BATTERY REPLACEMENT



### WARNING: ELECTRICAL SHOCK HAZARD

Do not alter or change wiring or Anderson connector configuration. Do not remove terminal covers, rings, terminal screws or wires from battery terminals unless trained. Remove one battery at a time. Completely remove the first battery from the cart and then the second battery.



### SAFETY EQUIPMENT REQUIRED

Gloves and safety glasses must be worn when handling the batteries.



### WARNING: RISK OF PERSONAL INJURY

Batteries are **HEAVY** and weigh 100 lbs (45kg) each. Use caution when lifting. Use handles when lifting. Use proper lifting technique and lift with a straight back and knees. Get assistance if needed.



**CAUTION: MAKE SURE CABINET IS TURNED OFF AND UNPLUGGED BEFORE PERFORMING THESE PROCEDURES. CABINET MUST BE COOL AND ALL FOOD MUST BE REMOVED.**

### REMOVAL

- 1) Make sure the casters are in the locked position prior to removing the battery cover.
- 2) To remove batteries, first, remove the battery cover panel by lifting up using the inset handle. Pull the handle out and away from the cart and then down to completely remove the cover.
- 3) Next, pull the knobs (Fig 1) on the left and right sides of the battery tray towards the center of the cart. Twist the knobs one quarter turn until they remain in the out ("unlocked") position.
- 4) Pull the battery tray away from the cart using the formed metal handle in the center of the battery tray (Fig. 1 and 2).
- 5) Unplug both Anderson Connectors (Fig. 3) before removing the batteries. Do not pull wires. Pull down on the plastic housing to disconnect the batteries.
- 6) Choose one battery to remove first. On the battery latch, flip the turnkey up so that it is horizontal and turn it counter clockwise until the latch released from the lip (Fig. 3). Let the latch fold down and away from the battery.
- 7) Raise the front edge of the battery hold down bracket (Fig. 2) over the front edge of the battery while sliding the battery out of the bracket.
- 8) Before the battery reaches the edge of the battery tray, stop sliding the battery. Continue sliding the battery out while holding both handles. Gently lower the battery to the ground or to a transfer dolly. Make sure ground is level and the dolly is locked in place.
- 9) Repeat battery removal steps for the second battery.

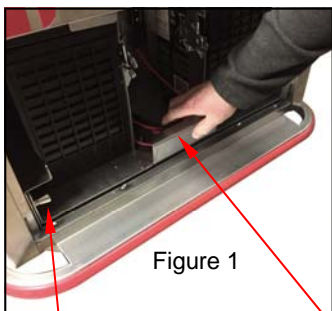


Figure 1

Knobs (one on left side and one on right side)

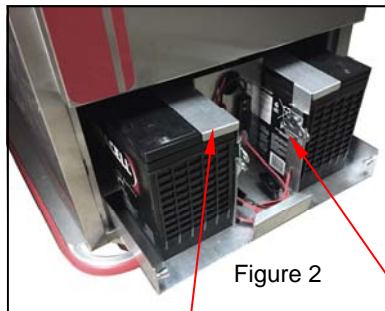


Figure 2

Pull handle for battery tray

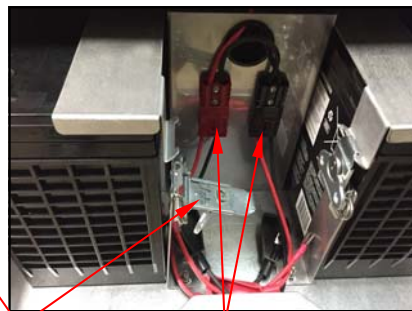


Figure 3

Battery hold down bracket

Turnkey battery latch

Anderson connectors

## BATTERY REPLACEMENT



### WARNING: ELECTRICAL SHOCK HAZARD

Do not alter or change wiring or Anderson connector configuration. Do not remove terminal covers, rings, terminal screws or wires from battery terminals unless trained. Remove one battery at a time. Completely remove the first battery from the cart and then the second battery.



### SAFETY EQUIP- MENT REQUIRED

Gloves and safety glasses must be worn when handling the batteries.



**CAUTION: HEAVY**  
Batteries weight 100 lbs (45kg) each. Use caution when lifting. Use handles when lifting. Use proper lifting technique and lift with a straight back and knees. Get assistance if needed.



**CAUTION: MAKE SURE CABINET IS TURNED OFF AND UNPLUGGED BEFORE PERFORMING THESE PROCEDURES. CABINET MUST BE COOL AND ALL FOOD MUST BE REMOVED.**

### INSTALLATION

- 1) Make sure the casters are in the locked position prior to installing batteries.
- 2) To install batteries, first, remove the battery cover panel by lifting up using the inset handle. Pull the handle out and away from the cart and then down to completely remove the cover.
- 3) Next, pull the knobs on the left and right sides of the battery tray towards the center of the cart. Twist the knobs one quarter turn until they remain in the out ("unlocked") position (Fig. 1).
- 4) Pull the battery tray away from the cart using the formed metal handle in the center of the battery tray (Fig.1).
- 5) Choose one battery to install first. Use the handles on the battery to lift the battery onto the battery tray.
- 6) Slide the battery back into the cart while lifting up on the battery bracket until the battery hits the back of the bracket.
- 7) Lower the front edge of the battery bracket over the front edge of the battery (Fig. 2).
- 8) On the battery latch, fold the latch up and towards the battery until it comes to a vertical position and the latch is centered over the lip (Fig. 2 and 3). Flip the turnkey up so that it is horizontal and turn it clockwise until the latch engaged to the lip and fold the turnkey into the flat, locked position.
- 9) Repeat these steps with the second battery.
- 10) Plug in both Anderson Connectors (Fig. 3).
- 11) Push the battery tray into the cart using the formed metal handle in the center of the battery tray until it is as far back in the cart as it can go.

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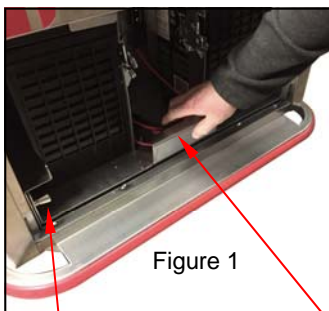


Figure 1

Knobs (one on left side and one on right side)

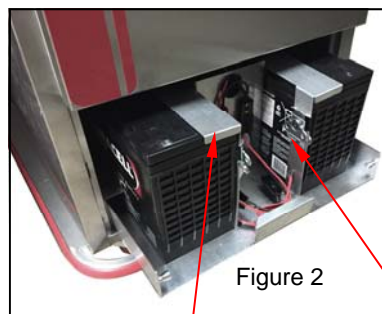


Figure 2

Pull handle for battery tray

Battery hold down bracket

Turnkey battery latch

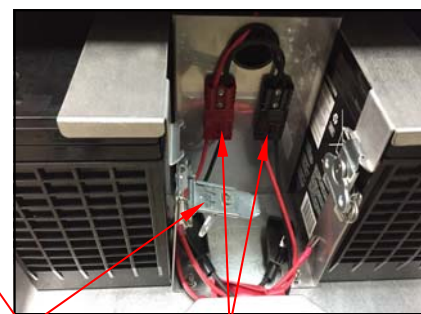


Figure 3

Anderson connectors

## BATTERY REPLACEMENT



### WARNING: ELECTRICAL SHOCK HAZARD

Do not alter or change wiring or Anderson connector configuration. Do not remove terminal covers, rings, terminal screws or wires from battery terminals unless trained. Remove one battery at a time. Completely remove the first battery from the cart and then the second battery.



### SAFETY EQUIP- MENT REQUIRED

Gloves and safety glasses must be worn when handling the batteries.



### CAUTION: HEAVY

Batteries weight 100 lbs (45kg) each. Use caution when lifting. Use handles when lifting. Use proper lifting technique and lift with a straight back and knees. Get assistance if needed.



**CAUTION: MAKE SURE CABINET IS TURNED OFF AND UNPLUGGED BEFORE PERFORMING THESE PROCEDURES. CABINET MUST BE COOL AND ALL FOOD MUST BE REMOVED.**

### INSTALLATION (CONTINUED)

- 12) Next, twist the knobs one quarter turn until they release from the out ("unlocked") position (Fig. 1). Push the knobs on the left and right sides of the battery tray towards the outside of the cart until they are seated in their locating holes.
- 13) Install the battery cover panel by inserting the top edge of the battery cover up and behind the front vail. Swing the bottom edge of the cover panel down and towards the cart until the tabs of the panel are lined up with the slots on the cart.
- 14) Let the panel fall down into its secured position.
- 15) Make sure to unlock the casters in order to move the cabinet.

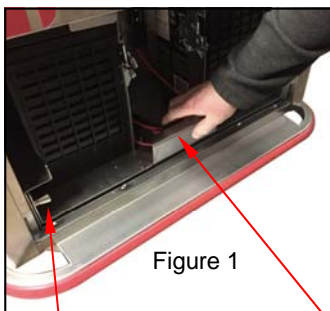


Figure 1

Knobs (one on left side and one on right side)

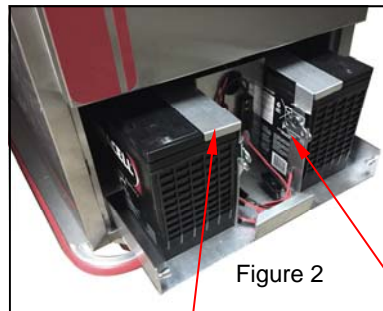


Figure 2

Pull handle for battery tray

Battery hold down bracket

Turnkey battery latch

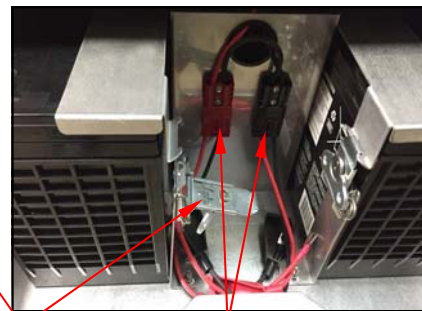


Figure 3

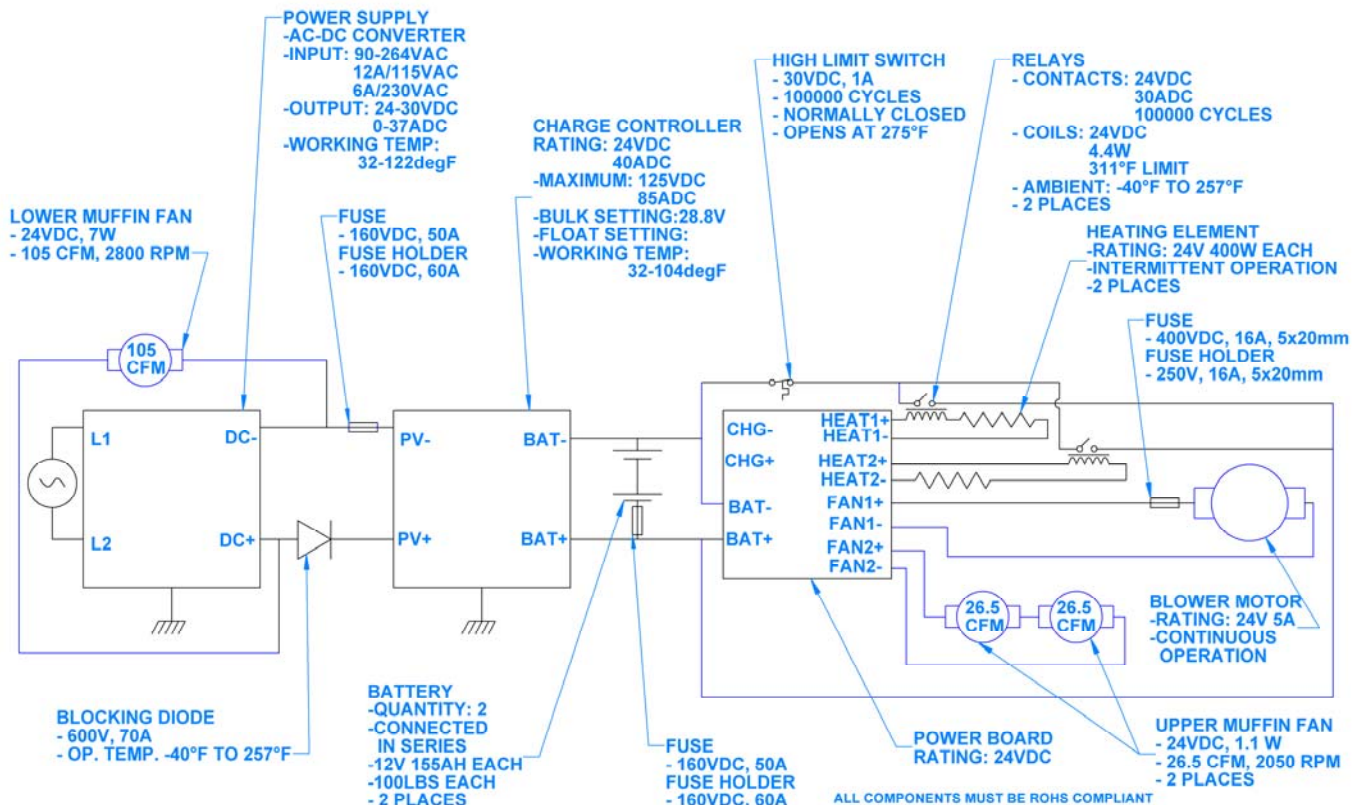
Anderson connectors

## WIRING DIAGRAM & PARTS LIST

Part Number	Description
18100-0159	Locking Spring Plunger
18301-5284	6" Red Rigid Caster
18301-5293	6" Red Swivel Caster with Brake
18301-8321	Threaded Stem Ball Caster
18302-0110	Link Lock Spring
18303-0082	Snap-in Pocket Pull
18312-0671	Battery Compartment Overlay
18312-0673	Control Overlay
18600-0142	275F Hi-Limit-Auto QC Gold
18602-0309	Fuse 16 Amp, 400VDC, 5x20mm
18602-0312	Fuse Holder, 16A, 32VDC
18602-0317	Class - Fuse, 50A
18602-0318	Fuse Holder, Class-T 300V
18602-0319	Relay-24VDC Coil, 30A cont.
18603-0004	Wiring Kit
18603-0006	3' Patch Cord
18603-0007	AC Detection Cord
18603-5018	Fan Blade

Part Number	Description
18605-0017	14/3 HSJO Cord w/ 5-20 Plug
18607-0019	Terminal Block 6 pos. #603
18612-0162	Hoop Element #1 400W
18612-0163	Hoop Element #2 400W
18614-0272	Fan Guard, #SC120-W15
18614-0275	Fan Guard, #SC80-W2
18614-0303	Muffin Fan, 24VDC, 26 CFM
18614-0392	Blower Motor, 24VDC, 1500 RPM
18614-0393	4.72"x1.57" 24VDC 105 CFM
18616-0399	Xantrex C40 CHR9 Controller
18616-0401	12V, 540WPC 155AH Battery
18616-0402	Gridless Hot Display Board
18616-0404	Gridless Hot Power Board
18616-0405	Thermistor, 50K, 4" Probe
18616-0406	Blocking Diode, 600V, 70A
18616-0408	Power Converter, 1200W, 30VDC
18616-9998	Cord Grip
29034-0282	Silicone Sponge

1300W, 120V,  
10.8A, 60Hz, single  
phase, NEMA 5-20P



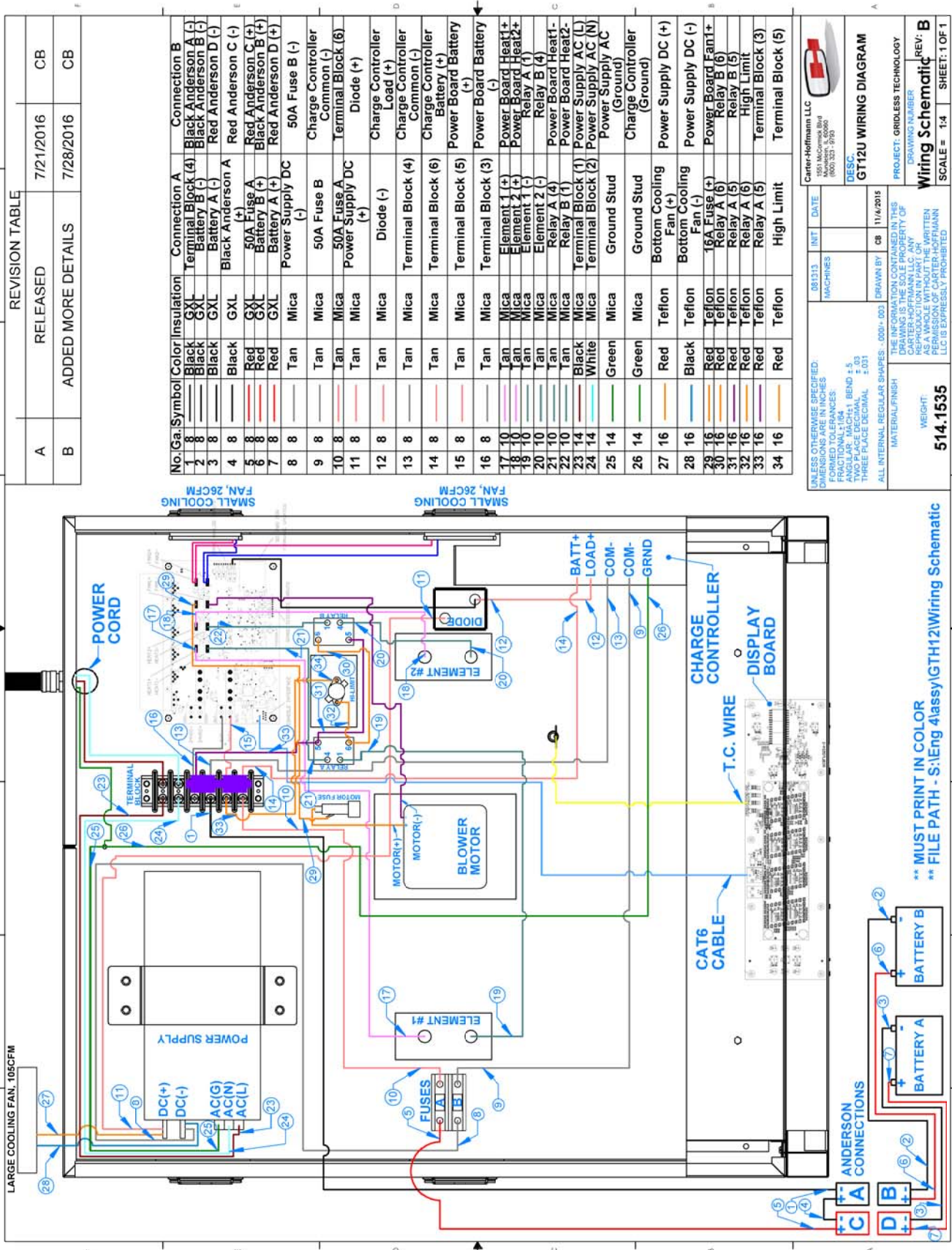
### NOTE:

The technical content of this manual, including any wiring diagrams, schematics, parts breakdown illustrations and / or adjustment procedures, is **intended for use ONLY by qualified technical personnel.**

### NOTE:

For warranty service, call Carter-Hoffmann direct at 800-323-9793 for authorization, we will dispatch the nearest authorized service agency.

# WIRING SCHEMATIC



REVISION TABLE	DATE	DESCRIPTION
A	7/21/2016	RELEASED
B	7/28/2016	ADDED MORE DETAILS

**UNLESS OTHERWISE SPECIFIED:**  
 DIMENSIONS ARE IN INCHES  
 FRACTIONAL: 1/64 BEND ± .03  
 TWO PLACE DECIMAL ± .01  
 THREE PLACE DECIMAL ± .001

**MATERIAL FINISH:**  
 ALL INTERNAL REGULAR SHAPES - 0001-003  
 DRAWN BY: CB 11/6/2015

**WEIGHT:**  
**514.1535**

**PROJECT: GRIDLESS TECHNOLOGY**  
**DRAWING NUMBER:**  
**Wiring Schematic REV: B**  
**SCALE = 1:4**  
**SHEET: 1 OF 1**

**THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF CARTER-HOFFMANN LLC. ANY REPRODUCTION OR TRANSMISSION AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF CARTER-HOFFMANN LLC IS EXPRESSLY PROHIBITED.**

**\*\* MUST PRINT IN COLOR \*\***  
**\*\* FILE PATH - S:\Eng 4\assy\GTH12\Wiring Schematic**

## TROUBLESHOOTING SUGGESTIONS

PROBLEM	PROBABLE CAUSE	POSSIBLE REMEDY
No power to unit, No light on display Motor not running	Not plugged in or circuit breaker off or tripped	Plug into receptacle. Reset circuit breaker, check facility circuit breaker
	Main switch damaged	Check main power switch, replace if damaged
	Anderson battery plug to disconnected	Reconnect Anderson plug
	Damaged power cord	Replace cord
	Bad fuse. Note: this indicates further malfunction with another component. Do not attempt to replace fuse.	Call service technician
	Dead battery	Replace both batteries
	Hi-limit safety tripped	Allow unit to cool, hi-limit will reset automatically, or replace
Unit does not hold temperature	Damaged door gasket	Replace gasket
	Damaged door latch	Replace defective latch
	Temp probe damaged	Replace probe
	Door gap, out of alignment	Adjust door hinging and strike
Unit does not heat	Cabinet temp above setpoint (setpoint too low)	Turn thermostat setpoint up Check thermometer calibration
	Dead battery	Replace both batteries
	Damaged wiring	Repair wiring
	Damaged relay	Replace relay
	Damaged controller	Replace controller
	Damaged heating element	Perform ohm reading, Replace element
Unit overheats	Setpoint too high	Change setpoint
	Thermostat damaged	Replace thermostat
	Defective hi-limit control	Replace hi-limit
	Blower fan jammed	Find source of fan binding
Blower motor not running	Damaged fan motor	Replace motor
	Fuse blown	Call service technician
	Blower fan jammed	Find source of fan binding
Relay is "chattering"	Check proper wiring to switch	Repair wiring or replace switch
Red malfunction light is illuminated	Appliance malfunction	Call service technician
Display reads "E002" or "CHrg BAtt"	Dead batteries	Recharge batteries
Not charging or battery life is diminished	Damaged power supply	Replace power supply
	Damaged charge controller	Replace charge controller and make sure both cooling fans are working properly
	Door is open too much or not sealed	Replace door gasket or realign door
	Damaged batteries	Replace both batteries
	Damaged diode	Replace diode and make sure both cooling fans are working properly
	50A fuse blown	Replace blown fuse and check ALL wiring and components for shorts

## 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.

## CARTER-HOFFMANN WARRANTY

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 one year; to refrigeration compressor unit for one year (limited to replacement of the unit only-not to include the labor for removal, repair or replacement). Repair or replacement 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, express or implied, which extend beyond the description on the face thereof.

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 use, 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.

Note: Due to our continuous process of product improvement and innovation, all listed specifications subject to change.

### ***Carter-Hoffmann***

**1551 McCormick Ave.**

**Mundelein, Illinois, 60060 USA**

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