

OPERATOR MANUAL/USER GUIDE

IMPORTANT INFORMATION, KEEP FOR OPERATOR

This manual provides information for:

CONDUVECTION SERVING CART

- Two Compartments, each with Capability for:
 - Refrigeration*
 - Rethermalization*
 - Hot Holding*
- Available Capacities: *10-pan (pictured)*
5-pan
- Options: *Central Management Control System*



THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE. READ, UNDERSTAND AND FOLLOW THE INSTRUCTIONS AND WARNINGS CONTAINED IN THIS MANUAL.

NOTIFY CARRIER OF DAMAGE AT ONCE

It is the responsibility of the consignee to inspect the container upon receipt of same and to determine the possibility of any damage, including concealed damage. Unified Brands suggests that if you are suspicious of damage to make a notation on the delivery receipt. It will be the responsibility of the consignee to file a claim with the carrier. We recommend that you do so at once.

Manufacture Service/Questions 888-994-7636.

Information contained in this document is known to be current and accurate at the time of printing/creation. Unified Brands recommends referencing our product line websites, unifiedbrands.net, for the most updated product information and specifications.

PART NUMBER CONDSC REV C (02/11)

The logo for "à la cart" featuring a stylized white 'c' with a dot inside, followed by the text "à la cart" in a serif font with a trademark symbol.

The logo for "unified brands" featuring three interlocking circles to the left of the text "unified brands" in a sans-serif font with a trademark symbol.

A **BOVER** COMPANY

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Product Information



10-Tray Cart

Physical Dimensions

69-1/2" wide x 38" high (service top) x 30-1/4" deep

Individual Compartment Size

13-3/4" wide x 26-3/4" high x 25" deep

Construction

304 stainless steel; compartments insulated with resin bonded fiberglass

Service Top

Equipped with glass sneeze guard and side panels; three independently controlled conduction heaters with wire frame to hold pans

Mobility

Two 5" swivel casters with brake; two 5" swivel casters without brake; and two 5" fixed casters

Power Requirements

208V, 3 phase, 5 wire (ground & neutral), 30 amp service, NEMA plug #L21-30R

Refrigeration System

1 HP low-temp condensing unit, rated 4,950 BTUH; uses environmentally safe R404A refrigerant; separate evaporator for each compartment

Electronic Control System

8 bit, embedded micro-controller with 4 x 20 display; software code controls operating parameters of each compartment independently; software controls all conduction heating elements (in compartments and serving area) independently; controller allows operator to set automatic retherm start for three meals a day.

Capacity

Up to ten 2-1/2" hotel pans or twenty 10-1/2" dishes; or a combination of pans/dishes

PRODUCT DESCRIPTION

The Conduction Serving Cart is a mobile cart that provides a range of heating, retherm, and refrigeration functions. It can hold food cold, heat food from a cold state, and hold food hot. A heated serving space on top allows for utilizing the cart as a serving station. It accommodates plated meals and standard stainless steel hotel pans, allowing for both plated meal service and bulk meal service from the cart.

The cart utilizes a combination of conduction and convection heating for rethermalization of chilled foods, allowing moist evenly heated food. Each shelf can be individually controlled for the intensity of the conduction heating, allowing different densities of food to be heated together in the cart. This is done by using the cart's electronic controls to program customized settings for the menu. The cart can also be programmed to start retherm of chilled foods automatically, approximately 105 minutes for bulk pans or 90 minutes for plated meals, prior to serving time.

The **10-pan cart** (part #27000-1) contains 10 shelves below the serving top, divided into two compartments of 5 shelves each. Each shelf can hold the equivalent of one full-size standard 2 1/2" hotel pan or 20 standard plates, 2 per shelf. The two-compartment design of the cart allows for utilizing both compartments for heating and holding hot foods, or designating one compartment for heating and hot holding and the other compartment for cold holding. On top of the cart there are three conduction heaters for holding serving pans that can be set on high, medium, or low heat intensity settings.

The **5-pan cart** (part #27280-1) contains 5 shelves below the serving top, in a single compartment. Each shelf can hold the equivalent of one full-size standard 2 1/2" hotel pan or 20 standard plates, 2 per shelf. On top of the cart there are three conduction heaters for holding serving pans that can be set on high, medium, or low heat intensity settings.

The cart is controlled by a microprocessor and includes an automatic self-diagnostic system that checks for proper functioning of heating and cooling systems in the cart each time it is loaded, providing instant feedback to the operator of the cart's performance. Should a problem occur, fault tracking software provides a message on the cart's display panel for food service and engineering personnel.

For technical specifications, refer to the Conduction Serving Cart Specification Sheet at the end of this section.

Product Information

CENTRAL MANAGEMENT CONTROL SYSTEM (CMCS)

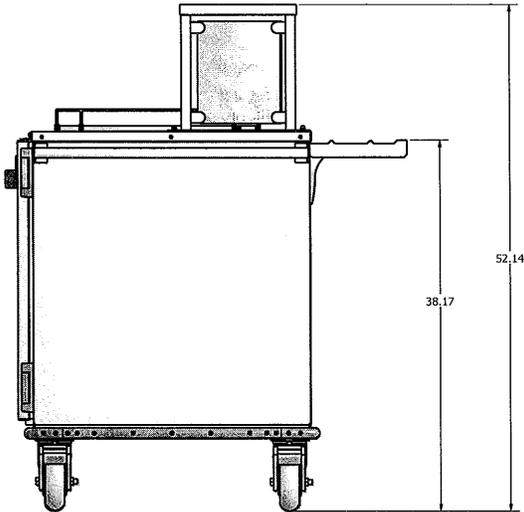
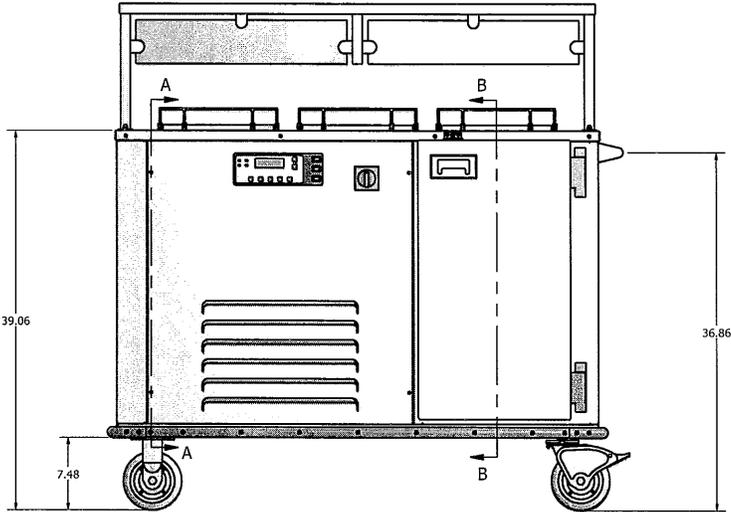
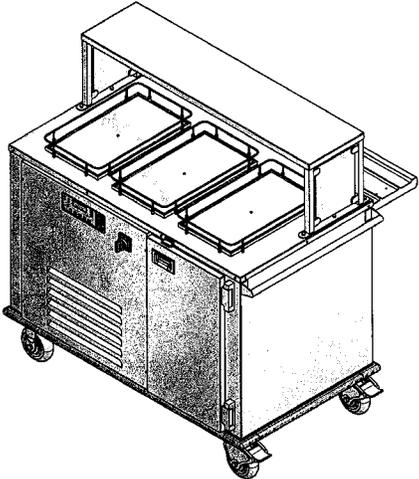
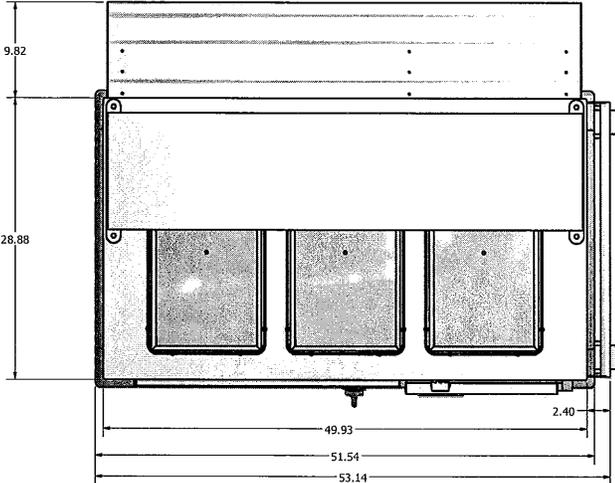
An OPTIONAL computer monitoring system is available for this cart called the Central Management Control System (CMCS). This monitoring system is designed to assist the food service management team in managing the rethermalization and holding of meals from a central computer. The CMCS system allows for viewing real-time status of the equipment using a standard Windows based computer system, and also allows for remote changes to all equipment parameters from the PC. It also assists in compliance with HACCP guidelines and can provide documentation required by regulatory agencies with reports. Up to 90 days of data can be stored in the reports.

The CMCS system is comprised of three equipment components:

- The first is the `A la Cart “controller” which is a microprocessor based control system using embedded firmware control and a RS-485 interface.
- The second component is a RS-485 two-wire network which connects all of the carts together in a networked configuration. The RS-485 network utilizes standard Category 5 cabling and connections for ease of installation. Network repeaters are utilized for network runs exceeding 1000 meters. A repeater is required beyond 1000 meters of cable use. The Network uses node addressing and built-in fault detection to ensure reliable communication.
- The final component is a proprietary Windows based PC Application which displays a graphic user interface for real-time status and control of the carts. This Windows base application collects real-time data from each cart and displays it on the user interface. Varying menu options let the user display and change cart set-up parameters real-time. The PC Application also logs real-time cart information for later viewing through various reporting features included in the software package. The PC Application also allows for direct factory support via a standard phone line and 56K modem.

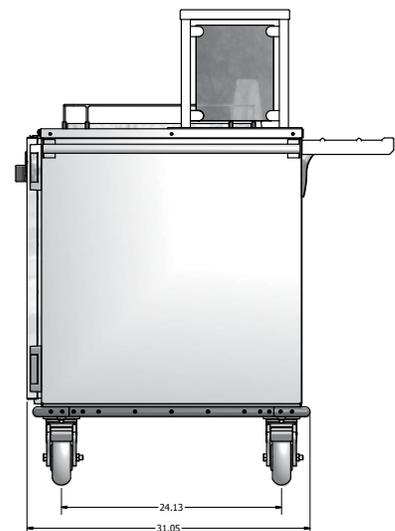
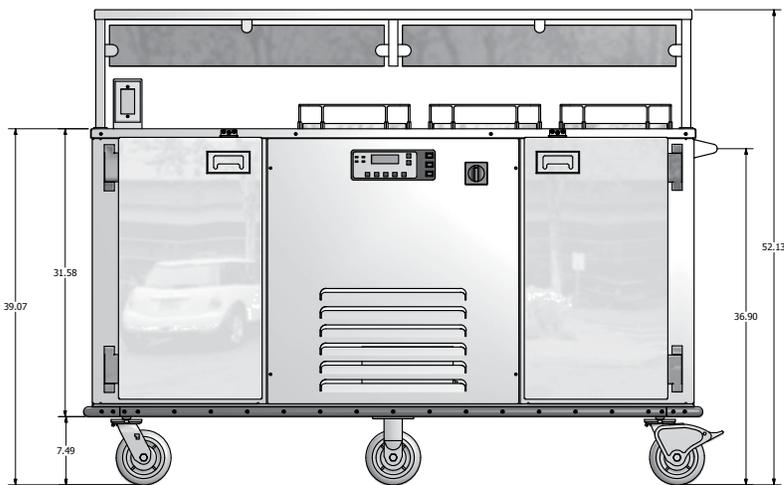
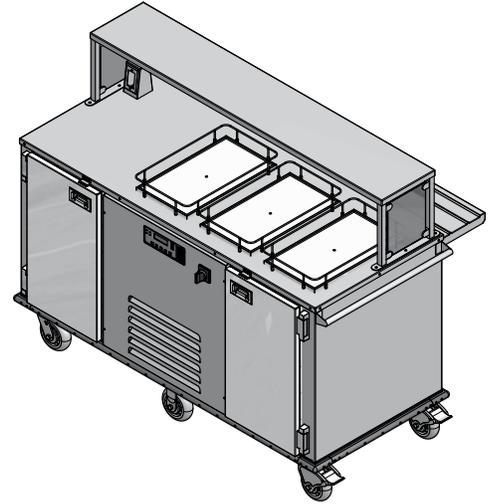
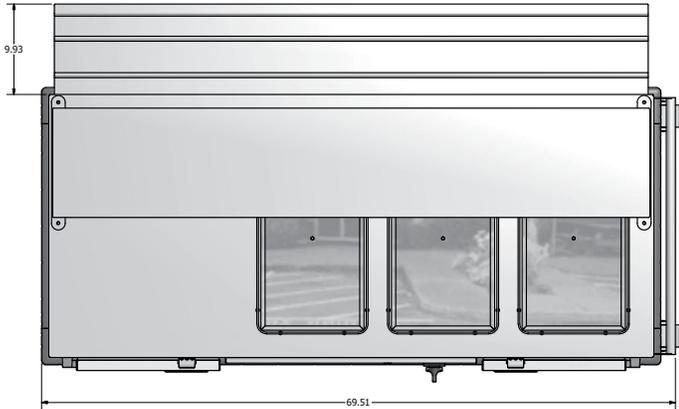
Product Information

5-PAN UNIT (#27280-1)



Product Information

10-PAN UNIT (#27000-1)



Operating Instructions: Cook/Chill

OPTIONS OF USE

The Convection Serving Cart provides vast flexibility in the way it can be used, as described under Product Description in Section 1-A of this user's guide. The two-compartment design below the serving top allows for both compartments to retherm at the same time or for retherm and chilling to occur simultaneously in separate compartments, as each compartment can be programmed separately.

The following options describe how the Convection Serving Cart is most typically used in a cook/chill operation. These options can be further customized or varied to meet the needs of your particular operation:

Option 1: (Bulk retherm, 10 full size pans or equivalent - up to 40 people)

- The cart serves up to 40 people per cart in a dining room or similar setting.
- The cart is programmed to retherm in both compartments, utilizing up to the equivalent of 10 full size hotel pans with a maximum depth of 2 ½", 1 pan or equivalent per shelf.
- Hot food menu items are transported in bulk pans and loaded into the serving cart at the point of service and held cold until retherm.
- Cold food menu items are preportioned in the kitchen, transported and held in air-curtain or reach-in refrigerators at the point of service.
- Soup is heated in the kitchen, poured into a soup kettle and transported and plugged in at the point of service.
- Hot beverages are portioned and served at the point of service.

Option 2: (Bulk retherm & bulk cold hold, 5 pans each; or plated retherm, 20 plates - up to 20 people)

- The cart serves up to 20 people per cart in a dining room or similar setting.
- For bulk retherm, the cart is programmed to retherm in one compartment, utilizing up to the equivalent of 5 full size hotel pans with a maximum depth of 2 ½", 1 pan or equivalent per shelf. The other compartment is used for cold holding of bulk cold food menu items in 2 ½" depth pans. Both hot food and cold food menu items are transported in bulk pans and loaded into the serving cart at the point of service and held cold until retherm. The cold food menu items are preportioned prior to serving.
- For plated retherm, the cart is programmed to retherm in both compartments, utilizing up to 20 standard 9" plates, 2 per shelf. The preplated hot food menu items are transported and loaded into the serving cart at the point of service and held cold until retherm. Cold food menu items are preportioned in the kitchen, transported and held in air-curtain or reach-in refrigerators at the point of service.
- Soup is heated in the kitchen, poured into a soup kettle, and transported to serving area. It may be plugged into auxiliary outlet on the top of the Convection Serving Cart.
- Hot beverages are portioned and served at the point of service.

Operating Instructions: Cook/Chill



FRONT DISPLAY PANEL OVERVIEW

The Conduction Serving Cart is programmed and operated using the display panel located on the center panel of the cart. The display panel features and functions are described below.

The 4 Line LCD Display:

Line 1 (bottom line) displays time/date, fault information, and the Cart temperatures as necessary. The other 3 lines are used to display meal start times and operator messages as well as setup information.

REHERM Button - Starts/Stops a manual retherm cycle when pressed.

HOLD Button - Starts/Stops a manual hold cycle when pressed.

BACKLIGHT Button - Illuminates/De-illuminates the display backlight when pressed.

OPTIONS Button - Accesses the options/set-up menus when pressed.

ENTER Button - Used to confirm options and set parameters.

Up/Down Arrow Buttons - Used to navigate through the options menus.

Chill Light (Blue) - Illuminates when cart is in chill mode.

Retherm Light (Red) - Illuminates when a retherm cycle is in process.

Ready Light (Green) - Illuminates when retherm is ended and a hold cycle is in process.

Fault Light (Yellow) - Illuminates when a fault has been detected.

Operating Instructions: Cook/Chill

SET UP RETHERM CYCLE (Bulk or Plated Foods)

STEP 1: Select Heat & Chill Options

STEP 2: Set/Change Retherm Start Times (HH:MM AM/PM)

STEP 3: Set/Change Length of Retherm (Minutes of Time)

STEP 4: Set/Change Heater Intensity (high/Med/Low)

INSTRUCTIONS FOR PROGRAMMING CART

The serving cart comes from the factory programmed with default settings that may require customizing or changing for your operation. Once the cart is programmed with your desired settings it is NOT necessary to reset the cart each time it is used unless changes are needed. The cart can simply be loaded and allowed to start the retherm cycle automatically or can be started manually by pushing the “Retherm” button, then the “Enter” button on the display panel.

The diagram to the left illustrates the steps required to program the cart for a RETHERM cycle.

Using The Display Panel:

Step 1: Select Chill and Heat Options

- Press OPTIONS key.
- “Quick Setup” is selected, press ENTER.
- In the “Chill Left or Right” screen use the UP/DOWN arrow key to select “Left” or “Right” or “Left + Right” or “Neither”, to choose which compartments to chill, then press OPTIONS.
- “Quick Setup” is selected, press ENTER.
- In the “Heat Left or Right” screen use the UP/DOWN arrow key to select “Left” or “Right” or “Left + Right” or “Neither” to choose which compartments to heat, then press OPTIONS.
- Press OPTIONS again to save and exit.

Step 2: Set/Change Retherm Start Times

- Press OPTIONS key.
- Use the DOWN arrow key and select “Advanced Setup”, then press ENTER.
- “Meal Parameters” is selected, press ENTER.
- Use the DOWN arrow key and select desired meal start time to edit, then press ENTER.
- Use the ENTER button to move from hour to minute and AM/PM, and use the UP/DOWN arrow key to change time.
- Press OPTIONS to save and exit.
- Repeat above as needed for each meal start time.

Note: For manual retherm set meal start time(s) to 00:00 using UP/DOWN arrow key, then press OPTIONS.

Step 3: Set/Change Length (Minutes) of Retherm

(Use 105 minutes for bulk retherm and 90 minutes for plated retherm)

- Press OPTIONS key.
- Use the DOWN arrow key and select “Advanced Setup”, then press ENTER.
- “Meal Parameters” is selected, press ENTER.
- Use the UP/DOWN arrow key and select “Left Retherm Time” to edit, then press ENTER.
- Use the ENTER button to move across the number digits, and use the UP/DOWN arrow key to change the digits to the number of minutes desired.
- Press OPTIONS to save.
- Repeat the above steps to change “Right Retherm Time”, as necessary.

Operating Instructions: Cook/Chill

Step 4: Select/Change Heater Intensity Temperature Setting

(The default setting is “medium” for all shelves)

- Press OPTIONS key.
- Use the DOWN arrow key and select “Advanced Setup”, then press ENTER.
- Use the DOWN arrow key and select “Heater Parameters”, then press ENTER.

To set all shelves the same for Retherm:

- Use the DOWN arrow key and select “Set All Shelves Same”, then press ENTER.
- Use the UP/DOWN arrow key to select the desired setting (high, med, low), then press ENTER.
- Press OPTIONS to save and exit.

To set each shelf differently for Retherm:

- Use the DOWN arrow key and select “Set each Shelf Diff”, then press ENTER.
- Set “Shelf Temp 1” by selecting high, med, or low using the UP/DOWN arrow keys, then press OPTIONS to save. (Shelves 1 thru 5 are Left side; Shelves 6 thru 10 are Right side.)
- Continue for each shelf until all 10 are set.
- When all shelves have been set, press OPTIONS to save.
- Use the DOWN arrow key to select “Shelf Temperature Option” and verify setting is “ON”; if not, change setting using the UP/DOWN arrow keys.
- Press OPTIONS to save and exit.

LOADING THE CART

1. Chill the cart to 40°F. before loading it. To cool the cart more quickly after use, open the compartment doors for 15 minutes, then close them once the temperature on the display panel is under 170°F. The cart cannot chill if the internal temperature is over 170°F. The cart will chill down within 60 minutes or less.
2. Place the pans or plates of chilled food on the appropriate shelf ensuring they are sitting directly flat on the heater surface. The cart recognizes the Left compartment as shelves 1 thru 5 and the Right compartment as shelves 6 thru 10. This is important when the heat intensity is set differently for each shelf. If all shelves are set the same, any organization/order of loading will work.
3. Preplated meals can be placed on a flat metal tray or full size stainless steel pan lid, then placed on a shelf for ease of loading before retherm and unloading after retherm. Do not overlap plates.
4. A mix of pan sizes (not to exceed 2 ½” deep) equivalent to 1 full size hotel pan can be placed together on the same shelf if all products require the same heating intensity.
5. When finished loading, close the cart doors securely. If the cart is programmed to start retherming automatically, it is not necessary to push any buttons. If retherm is to be started manually, press the RETHERM button, then ENTER to start retherm in time for the planned meal service time.

Operating Instructions: Cook/Chill

USING THE CART TOP FOR SERVING HOT FOODS

On the top surface of the cart there are three conduction heaters for holding serving pans that can be activated once the cart is in the HOLD cycle.

1. Place serving pan (s) onto heaters on top of the cart to serve food product. The serving heaters will be activated if the switches are turned ON, as indicated by a red light. (To turn the heater ON press the heater ON/OFF switch to the ON position. Switches are located to the right of the display panel.)
2. When all foods are removed from cabinet below, activate the “Serve” mode to cool the cabinets for the next meal while continuing to hold food hot on top. Press the HOLD key, then press ENTER to activate the “Serve” mode. The display will show “Serve in Progress” and the number of minutes that have elapsed. (The Hold/Serve mode time is 120 minutes total.) To end “Serve” mode press HOLD key again, then ENTER.
3. Cool cabinets after each heat cycle by leaving cabinet doors open until the display panel is below 170°F. (approximately 15 minutes). Then close the doors and refrigeration will cool the cabinets to 40°F. or less with 45 to 60 minutes, prior to loading the next batch of food.

INSTRUCTIONS FOR CART CLEANING

To clean soiled heater shelves, use a non-caustic degreaser/cleaner such as Oasis 133 by Ecolab. Spray the degreaser directly on the cart shelf; let it sit to penetrate the soiled area and then wipe clean.

Use an all-purpose sanitizer such as Oasis 146 by Ecolab to sanitize the inside of the cart. Simply spray and wipe.

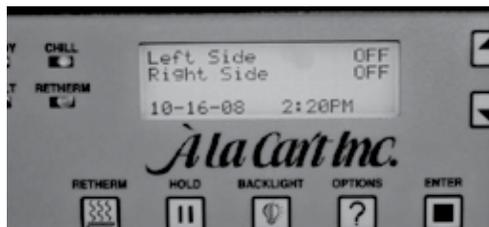
Stainless steel polish can be used on the cart exterior.

DO NOT SPRAY HOSE THE CART!!

Operating Instructions: Cook/Chill



CONDUVECTION SERVING CART TOP TEN STEPS FOR SUCCESS!



1. Insure Proper Power Allocations:

Dedicated 120/208V, 30 amp, 3 Phase, 4P 5-Wire Grdg.
Plug configuration, NEMA L21-30P Turnlok
Cart Dimensions: 38 in. High, 69.5 in. Wide, 30.25 in. Deep

2. Designate location for cart, plug into appropriate outlet, and leave plugged in. "Idle" LED display screen shows cart is off and ready for use.

3. Use 2-1/2 inch full sized pans filled with no more than 8 lbs. of food product per pan. Smaller 2-1/2 inch pans may be combined on each shelf such as 2 half pans, 3 third pans, etc. Cart accommodates 10 full size pan equivalents.

4. Spray pans with non stick cooking spray before filling with food product.

5. All pans of food product should be covered with foil, with the exception of fried and crisp items. These may be left uncovered to maintain crispness.

6. Add 1/2 to 1 cup of water to starchy food items such as rice and pasta prior to covering and heating.

7. Retherm duration is 105 minutes- Transportation of food should be scheduled to allow loading of food product 2 hrs. prior to meal service time.

8. Review Heater Setting Guidelines: Most foods will heat on "medium" intensity. Hard-to-heat foods that are dense such as potatoes or lasagna require "high" intensity. Easy-to-heat foods such as breakfast breads, vegetables or fish require "low" intensity.

9. At the end of the retherm cycle, the hold cycle begins. The serving heaters on top will be activated if the switches are turned on, and the food inside the cabinet will stay warm at a lower intensity in the "Hold" mode. Place serving pans on the cart's top 3 heaters to serve food product. When all food pans are removed from cabinet, activate the "Serve" mode to cool the cabinets for the next meal while continuing to hold food hot on top.

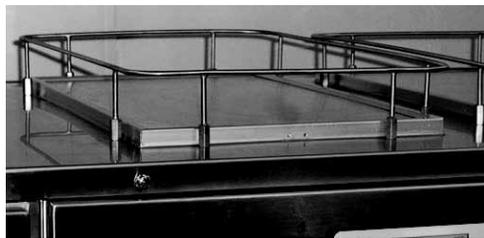
10. Cool cabinets after each heat cycle by leaving cabinet doors open until temperature is below 170° (approximately 15 min.) Close doors and refrigeration will cool the cabinet to 40° or below in cold mode or "Serve" mode within 45-60 min. prior to loading next batch of food.

Notes:

Auxilliary outlet may be used for soup warming kettle, toaster, or other small appliance to supplement menu options.

Cleaning: Use non-caustic degreaser/cleaner such as Ecolab Oasis 133. Spray directly onto cart heater shelves and wipe clean. An all purpose sanitizer such as Ecolab Oasis 146 may be used to sanitize the inside of the cart. Stainless steel polish may be used on the exterior of the cart.

Advanced Menu: Review section on Advanced Menu for Programming beginning on pg. 24 for additional programming information.



Operating Instructions: Cook/Serve

OPTIONS OF USE

The Convection Serving Cart can be used in a conventional cook/serve operation to hold and serve hot foods at appropriate temperatures in a dining room without the use of ovens or steam tables. The two-compartment design below the serving top allows for both compartments to hold foods hot or for hot holding and chilling to occur simultaneously in separate compartments, as each compartment can be programmed separately.

The following options describe how the Convection Serving Cart is most typically used in a cook/serve operation and can be further customized or varied to meet the needs of your particular operation:

Option 1: (Bulk hot hold, 10 pans - up to 40 people)

- The cart serves up to 40 people in a dining room or similar setting.
- The cart holds food hot in both compartments up to the equivalent of 10 full size hotel pans with a maximum depth of 2 ½", 1 pan or equivalent per shelf.
- Hot foods are transported in bulk pans and loaded into the serving cart at the point of service and held hot until serving time. At serving time up to 3 pans can be transferred from the hot compartments below to the serving top. The pans are replenished on top during serving by pulling the back-up pans, as needed, from below.
- Cold food menu items are preportioned in the kitchen, transported and held in air-curtain or reach-in refrigerators at the point of service.
- Soup is heated in the kitchen, poured into a soup kettle and transported and plugged in at the point of service.
- Hot beverages are portioned and served at the point of service.

Option 2: (Bulk hot hold & cold hold, 5 pans each; or plated hot/cold - up to 20 people)

- The cart serves up to 20 people in a dining room or similar setting.
- The cart holds food hot in one compartment and cold in the other compartment, up to the equivalent of 5 full size hotel pans with a maximum depth of 2 ½", 1 pan or equivalent per shelf in each compartment.
- Hot foods are transported in bulk pans and loaded into one compartment of the serving cart at the point of service and held hot until serving time. At serving time up to 3 pans can be transferred from the hot compartment below to the heated serving top and replenished from below as needed.
- Cold food menu items are transported in bulk pans and loaded into the other compartment of the serving cart and held cold until time to portion or serve.
- Soup is heated in the kitchen, poured into a soup kettle and transported and plugged in at the point of service.
- Hot beverages are portioned and served at the point of service.

Operating Instructions: Cook/Serve



FRONT DISPLAY PANEL OVERVIEW

The Convection Serving Cart is programmed and operated using the display panel located on the center panel of the cart. The display panel features and functions are described below.

The 4 Line LCD Display:

Line 1 (bottom line) displays time/date, fault information, and the Cart temperatures as necessary. The other 3 lines are used to display meal start times and operator messages as well as setup information.

REHERM Button - Starts/Stops a manual retherm cycle when pressed.

HOLD Button - Starts/Stops a manual hold cycle when pressed.

BACKLIGHT Button - Illuminates/De-illuminates the display backlight when pressed.

OPTIONS Button - Accesses the options/set-up menus when pressed.

ENTER Button - Used to confirm options and set parameters.

Up/Down Arrow Buttons - Used to navigate through the options menus.

Chill Light (Blue) - Illuminates when cart is in chill mode.

Retherm Light (Red) - Illuminates when a retherm cycle is in process.

Ready Light (Green) - Illuminates when retherm is ended and a hold cycle is in process.

Fault Light (Yellow) - Illuminates when a fault has been detected.

Operating Instructions: Cook/Serve

SET UP HOT HOLD ONLY (Bulk or Plated Foods)

STEP 1:
Turn Off Chill Options/
Select Heat Options

STEP 2:
Set/Change Heater Intensity
(Seconds per minute heaters ON)

Press "HOLD", then "ENTER"
to Start & Stop Hold Cycle

INSTRUCTIONS FOR PROGRAMMING CART

The serving cart comes from the factory programmed with default settings that may require customizing or changing for your operation. Once the cart is programmed with your desired settings it is NOT necessary to reset the cart each time it is used unless changes are needed.

The diagram to the left illustrates the steps required to program the cart for HOT HOLD only.

Once programmed, the cart can simply be loaded and allowed to start heating by pushing the "HOLD" button, then the "ENTER" button on the display panel. The cart will stay in HOLD until the heating is manually stopped by pressing "HOLD" again, then "ENTER".

Using The Display Panel:

Step 1: Turn Off Chill Options (this is required to turn off the refrigeration in both compartments)/Select Heat Options

- Press OPTIONS key.
- "Quick Setup" is selected, press ENTER.
- In the "Chill Left or Right" screen use the UP/DOWN arrow key to select "Neither" to turn off the refrigeration in both compartments, then press OPTIONS
- "Quick Setup" is selected, press ENTER.
- In the "Heat Left or Right" screen use the UP/DOWN arrow key to select "Left + Right" to heat both compartments, OR select "Left" or "Right" to heat one compartment, then press OPTIONS.
- Press OPTIONS again to exit and save.

Step 2: Set/Change Heater Intensity of Hold

(The default setting is "10" seconds per minute that heaters stay on during hold)

- Press OPTIONS key.
- Use the DOWN arrow key and select "Advanced Setup", then press ENTER.
- Use the DOWN arrow key and select "Heater Parameters", then press ENTER.
- Use the DOWN arrow key and select "Hold Shelf Temperature", then press ENTER.
- Use UP/DOWN arrow key to set/change the heat intensity (=seconds per minute that heaters are on during hold) higher or lower, then press ENTER.
- Press OPTIONS to save and exit.

To Start/Stop Hold Cycle:

- To start heating, press HOLD key, then press ENTER. Repeat to stop heating.

Operating Instructions: Cook/Serve

SET UP HOT HOLD/COLD HOLD ONLY (Bulk or Plated Foods)

STEP 1: Select Heat & Chill Options

STEP 2: Turn Off Automatic Retherm Start Times (HH:MM)

STEP 3: Set/Change Hold Time (Minutes of Time)

STEP 4: Set/Change Heater Intensity (Seconds per minute heaters ON)

Press "HOLD", then "ENTER" to Start & Stop Hold Cycle

The diagram to the left illustrates the steps required to program the cart for HOT HOLD/COLD HOLD (1 compartment each).

Once programmed, the cart can simply be loaded and allowed to start heating by pushing the "HOLD" button, then the "ENTER" button on the display panel. The cart will stay in HOLD until the hold time expires OR heating is manually stopped by pressing "HOLD" again, then "ENTER".

Using The Display Panel:

Step 1: Select Chill and Heat Options

- Press OPTIONS key.
- "Quick Setup" is selected, press ENTER.
- In the "Chill Left or Right" screen use the UP/DOWN arrow key to select "Left or Right", to choose the compartment to chill, then press OPTIONS.
- "Quick Setup" is selected, press ENTER.
- In the "Heat Left or Right" screen use the UP/DOWN arrow key to select "Left" or "Right" to choose the compartment to heat, then press OPTIONS.
- Press OPTIONS again to save and exit.

Step 2: Turn Off Automatic Retherm

(optional, but recommended to bypass Retherm)

- Press OPTIONS key.
- Use the DOWN arrow key and select "Advanced Setup", then press ENTER.
- "Meal Parameters" is selected, press ENTER.
- Use the DOWN arrow key and select Breakfast meal start time to edit, then press ENTER.
- Use the ENTER button to move from hour to minute and AM/PM, and use the UP/DOWN arrow key to change time to 00:00.
- Press OPTIONS to save.
- Repeat above for Lunch and Dinner meal start times, setting the time to 00:00.
- Press OPTIONS to save and exit.

Step 3: Set/Change Hold Time

- Press OPTIONS key.
- Use the DOWN arrow key and select "Advanced Setup", then press ENTER.
- "Meal Parameters" is selected, press ENTER.
- Use the UP/DOWN arrow key and select "Hold Time" to edit, then press ENTER.
- Use the ENTER button to move across the number digits, and use the UP/DOWN arrow key to change the digits to the number of minutes desired.
- Press OPTIONS to save and exit.

Operating Instructions: Cook/Serve

SET UP HOT HOLD/COLD HOLD ONLY (Bulk or Plated Foods)

STEP 1:
Select Heat & Chill Options

STEP 2:
Turn Off Automatic Retherm Start Times (HH:MM)

STEP 3:
Set/Change Hold Time (Minutes of Time)

STEP 4:
Set/Change Heater Intensity (Seconds per minute heaters ON)

Press "HOLD", then "ENTER" to Start & Stop Hold Cycle

Step 4: Set/Change Heater Intensity of Hold or Serve

(The default setting is "10" seconds per minute that heaters stay ON during hold)

- Press OPTIONS key.
- Use the DOWN arrow key and select "Advanced Setup", then press ENTER.
- Use the DOWN arrow key and select "Heater Parameters", then press ENTER.
- Use the DOWN arrow key and select "Hold Shelf or Serve Shelf Temp", then press ENTER.
- Use the UP/DOWN arrow key to set/change the heat intensity (=seconds per minute that heaters are on during hold) higher or lower, then press ENTER.
- Press OPTIONS to save and exit.

To Start/Stop Hold Cycle:

- To start heating, press HOLD key, then press ENTER. Repeat to stop heating.

LOADING THE CART

1. Place the pans or plates of food on a shelf ensuring they are sitting directly flat on the heater surface.
2. Preplated meals can be placed on a flat metal tray or full size stainless steel pan lid, then placed on a shelf for ease of loading before and after heating and serving. Do not overlap plates.
3. A mix of pan sizes (not to exceed 2 ½" deep) equivalent to 1 full size hotel pan can be placed together on the same shelf.
4. When finished loading, close the cart doors securely. Press the HOLD button, then ENTER to start the hot holding cycle.

USING THE CART TOP FOR SERVING HOT FOODS

On the top surface of the cart there are three conduction heaters for holding serving pans that can be activated once the cart is in the HOLD cycle.

1. Place serving pan (s) onto heaters on top of the cart to serve food product. The serving heaters will be activated if the switches are turned ON, as indicated by a red light. (To turn the heater ON press the heater ON/OFF switch to the ON position. Switches are located to the right of the display panel.)
2. When all foods are removed from cabinet below, activate the "Serve" mode to cool the cabinets for the next meal while continuing to hold food hot on top. Press the HOLD key, then press ENTER to activate the "Serve" mode. The display will show "Serve in Progress" and the number of minutes that have elapsed. (The Hold/Serve mode time is 120 minutes total.) To end "Serve" mode press HOLD key again, then ENTER.
3. Cool cabinets after each heat cycle by leaving cabinet doors open until the display panel is below 170° F. (approximately 15 minutes). Then close the doors and refrigeration will cool the cabinets to 40° F. or less with 45 to 60 minutes, prior to loading the next batch of food.

Operating Instructions: Cook/Serve

INSTRUCTIONS FOR CART CLEANING

To clean soiled heater shelves, use a non-caustic degreaser/cleaner such as Oasis 133 by Ecolab. Spray the degreaser directly on the cart shelf; let it sit to penetrate the soiled area and then wipe clean. Use an all purpose sanitizer such as Oasis 146 by Ecolab to sanitize the inside of the cart. Simply spray and wipe. Stainless steel polish can be used on the cart exterior.

DO NOT SPRAY HOSE THE CART!!

Panning & Plating Guidelines for Retherm

PANNING INSTRUCTIONS AND TIPS FOR BULK RETHERM

- In general, most foods retherm well at a medium heater intensity setting (heater on 45 sec./min) for 105 minutes. Extra dense food items (“hard-to-heat”) such as thick gravies, lasagna, or baked potatoes may need a high heater intensity setting (heaters on 60 sec./min.). A low heater intensity (heaters on 30 sec./min.) is generally adequate for fish, vegetables, rolls, muffins, soft breadsticks, and other bread items (“easy-to-heat”).
- All foods should be precooked and chilled prior to panning. This includes fish and eggs.
- Use standard 2 ½” deep stainless steel hotel pans or foil pans for retherm. Any combination of half, third, or quarter pans can be used on the same shelf.
- Any combination of pan sizes (i.e. 1/2, 1/3, 1/4) can be used together on one shelf if all foods included are to retherm at the same heater intensity (high, med, or low).
- Spray all pans with a nonstick cooking spray prior to adding food. Convenience products already in foil pans can be heated from a thawed/chilled state directly in the pan.
- Avoid overfilling the pans. For best results, limit weight to 8 lbs or less in full size pans.
- If a more crisp and golden product is desired (such as French fries, onion rings, hash browns, breaded chicken strips, etc.), leave the pan uncovered during retherm.
- For moist products, cover pan with stainless steel lid or foil during retherm.
- For starchy items such as cooked cereals, mashed potatoes, rice products, pasta dishes, and bread dressing, add ½ to 1 cup of water over food in the pan prior to covering to facilitate heating. (Note: rice may need to be additionally “massaged” with some water if it is dry in the chilled state.)
- For meat type entrees such as sliced roast beef, turkey, and chicken breasts, top with gravy or sauce and ½ cup water to facilitate heating.
- French toast and pancakes can be layered/shingled in rows, covered with paper towels that have been sprayed with nonstick cooking spray, then covered with lid or foil. This enhances moistness and softness without adding water. It also works well with dinner rolls, tortillas, burritos, and enchiladas not topped with sauces.

Panning & Plating Guidelines for Retherm

PLATING INSTRUCTIONS AND TIPS FOR PLATED RETHERM

- In general, most preplated meals retherm well at a medium heater intensity setting (heater on 45 sec./min) for 90 minutes. For heat delicate items (such as eggs or pureed foods) or very small portions, a low heater intensity setting (heater on 30 sec/min.) may be more appropriate.
- Preplated meals that are to be rethermed at the same intensity can be grouped together on the same shelf. Each shelf will hold 2 to 3 meals depending on size and shape of plates.
- Foods should be plated in a chilled and NOT FROZEN state except pancakes, French toast, and muffins which can be plated frozen if desired.
- All foods should be precooked and chilled prior to plating. This includes fish and eggs.
- Vegetables should be well drained of water when plated.
- Bacon, sausage, and breakfast meats should be well drained of fat when plated.
- Rice and pasta should be moist, not dried out.
- Sauces and gravies should be limited to 1 oz. for best retherm plate quality.
- Preplated meals should be covered with an oven proof cover or foil during retherm, unless a crisp product is desired for the entire plate (such as breaded fish and chips/French fries, etc.).

Panning & Plating Guidelines for Retherm

CART LOADING WORKSHEET & TEMPERATURE LOG FOR RETHERM

DAY:	MEAL:
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Shelve #	Heat Intensity Setting (High, Med, Low)	Left/Right	Menu Items	Input Temp °F	End Retherm Temp °F	Comments
1		LEFT				
2		LEFT				
3		LEFT				
4		LEFT				
5		LEFT				
6		RIGHT				
7		RIGHT				
8		RIGHT				
9		RIGHT				
10		RIGHT				

Advanced Menus for Programming Cart

SETTING UP OR CHANGING EQUIPMENT PARAMETERS & DEFAULT SETTINGS

All menus that are necessary for programming and changing equipment parameters are accessible in “Advanced Setup”. The parameters are grouped into 3 categories: Meal Parameters, Heater Parameters, and Factory Parameters. The Network Address setting for the optional CMCS remote data collection system is also found in “Advanced Setup”.

To access any/all menus in “Advanced Setup”, follow these general steps:

- Press OPTIONS key.
- Use the DOWN arrow key to select “Advanced Setup”, then press ENTER.
- Use the UP/DOWN arrow key to select “Meal Parameters”, “Heater Parameters”, or Factory Parameters”, then press ENTER.
- Use the UP/DOWN arrow key to select the parameter to change.
- Press OPTIONS to save and exit.

The following tables detail the menu items found within each grouping of parameters and their factory default settings:

MEAL PARAMETERS MENU:

Menu Item	Description	Default Setting
Breakfast Time	Retherm start time	6:00 AM
Lunch Time	Retherm start time	10:00 AM
Dinner Time	Retherm start time	3:30 PM
Retherm Minutes	Timer in minutes	105 minutes
Hold Minutes	Timer in minutes	120 minutes
Current Time	Time of Day	12:00 AM
Current Date	Today s Date	
Daylight Savings	Auto adjust for DST	ON

HEATER PARAMETERS MENU:

Menu Item	Description	Default Setting
Left Temperature	Convection temperature	221 F (105 C)
Right Temperature	Convection temperature	221 F (105 C)
Set Low, Med, High	Set duty cycle for each	30/45 /60
Set All Shelves Same	Common setting for all	Medium
Set each Shelf Different	Unique setting for each	Medium (all 10 shelves)
Shelf Temperature Option	Common or unique	ON
Hold Shelf Temperature	Set duty cycle for hold cycle	10
Serve Shelf Temperature	Set duty cycle for serve	High (60)

Advanced Menus for Programming Cart

FACTORY PARAMETERS MENU:

Menu Item	Description	Default Setting
Fault Log	View errors	None
Enter Password	Prevents access to setup	000
Cooler Temperature	Sets cold temperature	37 F. (3 C)
Defrost Interval	Time between defrosts	90 minutes
Max Defrost Time	Length of defrost	10 minutes
Heater Current	Diagnostics limits	800 ma / 1400 ma
Temperature Scale	Choose Fahrenheit or Celsius	Fahrenheit
Temperature Display	Show temps on display line four	ON
Manual Heating	Allows Manual Start Retherm	ON
Download Software	Upgrade programming code	None
Factory Reset	Restore defaults to all parameters	

SETTING OR CHANGING PASSWORD

The “Enter Password” is found in the Factory Parameters menu and is used for setting a new password, as follows:

- Press OPTIONS key.
- Use the DOWN arrow key to select “Advanced Setup”, then press ENTER.
- Use the DOWN arrow key to select “Factory Parameters”, then press ENTER.
- Use the DOWN arrow key to select “Enter Password”, then press ENTER.
- Enter the 3-digit numeric password by using the ENTER key to move on the digits and the UP/DOWN arrow key to change numeric values.
- Press OPTIONS to save.
- Press OPTIONS to exit.

If changing a password, first press OPTIONS, then enter old password, then press ENTER, then follow the steps above to set a new password.

VIEWING THE ERROR LOG AND CLEARING FAULTS

The “Fault Log” is found in the Factory Parameters menu by following the steps for accessing the “Advanced Setup”. If cart has been unplugged, plug the cart back in, then open and close both compartment doors first before clearing the fault from the display panel.

- Press OPTIONS key.
- Use the DOWN arrow key to select “Advanced Setup”, then press ENTER.
- Use the DOWN arrow key to select “Factory Parameters”, then press ENTER.
- “Fault Log” is selected, press ENTER to view and record error messages. Repeat until display reads “Error Log Empty” and the yellow fault light turns off.
- Press OPTIONS to exit.

Troubleshooting Guide

ISSUE/FAULT MESSAGES	POTENTIAL CAUSE(S)	DIAGNOSTIC OR CORRECTIVE ACTION
Cart does not retherm at specified time.	Programmed start time or AM/PM setting is incorrect for the Meal Start Time.	Check display and/or go to the Advanced Setup under the Meal Parameters menu to verify that Meal Start Time and AM/PM designation is correct. Reset as needed.
Cart will not chill or does not chill quickly after retherm or hold.	Internal temperature of cart is >170 F.	Open doors for approximately 10 minutes to cool down cart more quickly. Cart should chill to below 40 F. within 60 minutes.
Food is not hot enough at end of retherm.	Pans are overfilled with greater than 8 lb. Food is panned frozen. Not enough liquid to facilitate heating. Heater intensity setting is set too low. Retherm cycle is not long enough.	Limit weight of food to less than 8 lb. for full size pan. Food should be chilled, not frozen, when panned. Add -1 cup water or liquid to starches and meat items. Set heater intensity to high for extra dense food items. (Go to Advanced Setup under Heater Parameters to check/change setting.) Retherm cycle should be 105 minutes for bulk pans, 90 minutes for plates. (Go to Advanced Setup under Meal Parameters to verify Retherm Minutes.)
Power failed during chill more than 90 min. Food May be Ruined.	Cart was in the chill mode. After the cart door is closed, the system checks the number of minutes that cart door was open while in chill mode. If it was open longer than 90 minutes, the system calls it a power failure. The error will remain in the error log until it is viewed. May also see this message if the cart has been unplugged for longer than 90 minutes. For this reason, you will almost always see upon first use.	Open and close the cart doors. For newer carts, turn the switch off and on at the display panel. Unplug and replug the cart. If cart is loaded, check the food temperature to insure it is still in safe temperature zone.
Cart Door Opened Auto End In: # min. (counts down) RETHERM= Force Stop (#=5 min factory default).	The cart door has remained open longer than the maximum interruption time allowed (10 minutes) during the retherm cycle, and the system is notifying you that the food may be compromised.	Close the door and the retherm cycle will resume, or the cycle can be ended manually by pressing the RETHERM button. Once the 10 minutes has elapsed, the retherm cycle will automatically end and have to be reset.
Cart Door Opened Auto End In: # min. (counts down) Hold=Force Stop.	The cart door has remained open longer than the maximum interruption time allowed (10 minutes) and the system is notifying you that the food may be compromised.	Close the door and the hold cycle will resume, or the cycle can be ended manually by pressing the HOLD button. Once the 10 minutes has elapsed, the hold cycle will automatically end.
Cart Aux HTR Failure.	This occurs during retherm or hold when the cart does not achieve the temperature set point. Doors may be opening and closing excessively and heat escaping, not allowing temp to be achieved. (Retherm-221 F, Hold-180 F)	Service may be required.

Troubleshooting Guide

ISSUE/FAULT MESSAGES	POTENTIAL CAUSE(S)	DIAGNOSTIC OR CORRECTIVE ACTION
Left Side or Right Side. A Door is Open. Hit ENTER to ignore.	Door has opened or, sensor chip in door has slipped out of position & not reading door as closed.	Service may be required to adjust door.
Shelf # OPEN CKT.	The cart performs a self-diagnostic heater check (within 30 seconds) of all heater shelves prior to each use. If the cart door is opened during the heater check false heater faults can occur. OR, conduction heater shelf has failed.	Review the Error Log (Go to Advanced Setup under Factory Parameters) to read and record error messages, and clear the fault. If the same error/fault reappears with the next use, call for service.
Left or Right Heating Fault.	The air temperature did not reach the minimum requirement of the temperature set point within a specified time frame during retherm or hold.	Check food temperatures with probe. If you judge the food to be compromised, then discard and replace food. Clear the fault (Go to Advanced Setup under Factory Parameters). If the same error/fault reappears with next use, call for service.
Left or Right Cooler Fault. Service is Required	This occurs when certain HACCP temperature parameters are not met within a specified time frame.	Open and close the cart doors to stop the beeping. For newer carts, turn the switch off and on at the display panel. Unplug and replug the cart. If cart is loaded, check the food temperature to insure it is still in safe temperature zone. If the problem reoccurs, call for service.



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