

Visual Holding Cabinet (MHC)

Original Instructions Installation, Operation and Maintenance Manual

This manual is updated as new information and models are released. Visit our website for the latest manual.



Safety Notices

⚠ Warning

Read this manual thoroughly before operating, installing or performing maintenance on the equipment. Failure to follow instructions in this manual can cause property damage, injury or death.

⚠ DANGER

Do not install or operate equipment that has been misused, abused, neglected, damaged, or altered/modified from that of original manufactured specifications.

⚠ DANGER

Keep power cord AWAY from HEATED surfaces. DO NOT immerse power cord or plug in water. DO NOT let power cord hang over edge of table or counter.

⚠ Warning

Authorized Service Representatives are obligated to follow industry standard safety procedures, including, but not limited to, local/national regulations for disconnection / lock out / tag out procedures for all utilities including electric, gas, water and steam.

⚠ Warning

Do Not Store Or Use Gasoline Or Other Flammable Vapors Or Liquids In The Vicinity Of This Or Any Other Appliance. Never use flammable oil soaked cloths or combustible cleaning solutions, for cleaning.

⚠ Warning

This product contains chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm. Operation, installation, and servicing of this product could expose you to airborne particles of glasswool or ceramic fibers, crystalline silica, and/or carbon monoxide. Inhalation of airborne particles of glasswool or ceramic fibers is known to the State of California to cause cancer. Inhalation of carbon monoxide is known to the State of California to cause birth defects or other reproductive harm.

⚠ Warning

Do not use electrical appliances or accessories other than those supplied by the manufacturer.

⚠ Warning

Use caution when handling metal surface edges of all equipment.

⚠ Warning

This appliance is not intended for use by children under the age of 16 or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by a person responsible for their safety. Do not allow children to play with this appliance.

⚠ Warning

DO NOT use this product near water – for example, near a kitchen sink, in a wet basement, near a swimming pool, or similar locations.

NOTE: Proper installation, care and maintenance are essential for maximum performance and trouble-free operation of your equipment. Visit our website www.mercoproducts.com for manual updates, translations, or contact information for service agents in your area.

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Section 1

General Information

Model Numbers

Models	Description
MHC22SNT1T	2x2 - Front Display
MHC22SNL1T	2x2 - Front Display Landscape
MHC24SNT2T	2x4 - Front and Rear Display
MHC52SNT1T	5x2 - Front Display
MHC54SNT1T	5x4 - Front Displays

Serial Number Information

MHC visual holding cabinet serial and model numbers are located on the data plate. The data plate is located on the top right rear of the unit.

Always have the serial number of your unit available when calling for parts or service.

Service Personnel

All service on Merco equipment must be performed by qualified, certified, licensed, and/or authorized or service personnel.

Qualified service personnel are those who are familiar with Merco equipment and who have been authorized by Merco to perform service on the equipment. All authorized service personnel are required to be equipped with a complete set of service and parts manuals, and to stock a minimum amount of parts for Merco equipment. A list of Merco Factory Authorized Servicers (FAS's) is located on the Merco website at <http://www.mercoproducts.com/Service#Service>. Failure to use qualified service personnel will void the Merco warranty on your equipment.




Warranty Information

Visit <http://www.mercoproducts.com/Service#Warranty> to:

- Register your product for warranty.
- Verify warranty information.
- View and download a copy of your warranty.

Regulatory Certifications

Models are certified by:

-  Underwriters Laboratories Sanitation
-  Underwriters Laboratories (UL)
-  Underwriters Laboratories of Canada (CUL)

FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1) l'appareil ne doit pas produire de brouillage;
- 2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

In order to comply with FCC/ISED RF Exposure requirements, this device must be installed to provide at

least 5mm separation from the human body at all times.

Afin de se conformer aux exigences d'exposition RF FCC / ISED, cet appareil doit être installé pour fournir au moins 5mm de séparation du corps humain en tout temps.

The FCC ID numbers:

Reader Board:

FCC ID: 2AQ4D-RFIDREADER

IC: 24291-RFIDREADER

Wi-Fi:

VVXLM808-0407

CAN ICES-3 (B)/NMB-3(B)

Shipping Damage Claim Procedure

Your Merco equipment was carefully inspected and packed before leaving the factory. The transportation company assumes full responsibility for safe delivery upon its acceptance of the equipment for transport.

What to do if your equipment arrives damaged:

1. File a claim for damages immediately, regardless of the extent of damages.
2. Inspect for and record all visible loss or damage and ensure that this information is noted on the freight bill or express receipt and is signed by the person making the delivery.
3. Concealed loss or damage that was unnoticed until the equipment was unpacked should be recorded and reported to the freight company or carrier immediately upon discovery. A concealed damage claim must be submitted within 5 days of the date of delivery. Ensure that the shipping container is retained for inspection.

MERCO DOES NOT ASSUME RESPONSIBILITY FOR DAMAGE OR LOSS INCURRED IN TRANSIT

Section 2 Installation

⚠ DANGER

Installation must comply with all applicable fire and health codes in your jurisdiction.

⚠ DANGER

Carts must be installed and the carts must be screwed in completely.

⚠ DANGER

Use appropriate safety equipment during installation and servicing.

⚠ Warning

Only trained and authorized service personnel or store manager should access the service screens. If changes to these settings are made incorrectly they will cause the unit to malfunction.

Location

⚠ Warning

This equipment must be positioned so that the plug is accessible unless other means for disconnection from the power supply (e.g., circuit breaker or disconnect switch) is provided.

⚠ Warning

Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit.

⚠ Warning

To avoid instability the installation area must be capable of supporting the combined weight of the equipment and product. Additionally the equipment must be level side to side and front to back.

⚠ Warning

This equipment is intended for indoor use only. Do not install or operate this equipment in outdoor areas.

The location selected for the equipment must meet the following criteria. If any of these criteria are not met, select another location.

- Holding cabinets are intended for indoor use only.
- The location **MUST** be level, stable and capable of supporting the weight of the equipment.
- The location **MUST** be free from and clear of combustible materials.
- Equipment **MUST** be level both front to back and side to side.
- Position the equipment so it will not tip or slide.
- Recommended air temperature is 41° - 86°F (5° - 30°C) .

Weight of Equipment

Domestic Model	Weight
MHC22SNT1T	38lbs (17kg)
MHC22SNL1T	38lbs (17kg)
MHC24SNT2T	64lbs (29kg)
MHC52SNT1T	147lbs (67kg)
MHC54SNT1T	245lbs (111kg)

Clearance Requirements

⚠ DANGER

Minimum clearance requirements are the same for noncombustible locations as for combustible locations. The flooring under the appliance must be made of a noncombustible material.

⚠ DANGER

Risk of fire/shock. All minimum clearances must be maintained. Do not obstruct vents or openings.

Sides/Back

1.0" (25mm)

Dimensions

Domestic Model	Width	Depth	Height
MHC22SNT1T	20.70" (52.58cm)	12.10" (30.73cm)	11.50" (29.21cm)
MHC22SNL1T	15.60" (39.62cm)	12.10" (30.73cm)	15.40" (39.12cm)
MHC24SNT2T	37.50" (95.25cm)	12.10" (30.73cm)	11.50" (29.21cm)
MHC52SNT1T	20.70" (52.58cm)	22.30" (56.64cm)	21.80" (55.37cm)
MHC54SNT1T	32.80" (83.31cm)	22.40" (56.89cm)	27.50" (69.85cm)

RATED VOLTAGES, CYCLES, PHASES, WATTAGE, AMPERAGES & POWER CORD CHART

Units with plugs are supplied with approximately 9ft cords, maximum 10ft.

Domestic Model	Voltage, Cycle, Phase	Watts	Amps	Plug
MHC22SNT1T	120V, 60H, 1Ph	660	5.5	5-15P
MHC22SNL1T	120V, 60H, 1Ph	660	5.5	5-15P
MHC24SNT2T	120V, 60H, 1Ph	1320	11.0	5-15P
MHC52SNT1T	120V, 60H, 1Ph	1920	16.0	5-20P
MHC54SNT1T	120V, 60H, 1Ph	2880	24.0	L5-30P

Electrical Service

⚠ DANGER

Check all wiring connections, including factory terminals, before operation. Connections can become loose during shipment and installation.

⚠ DANGER

Copper wire suitable for at least 167°F (75°C) must be used for power connections.

⚠ Warning

This appliance must be grounded and all field wiring must conform to all applicable local and national codes. Refer to rating plate for proper voltage. It is the responsibility of the end user to provide the disconnect means to satisfy the authority having jurisdiction.

VOLTAGE

All electrical work, including wire routing and grounding, must conform to local, state and national electrical codes. The following precautions must be observed:

- The equipment must be grounded.
- A separate fuse/circuit breaker must be provided for each unit.
- A qualified electrician must determine proper wire size dependent upon location, materials used and length of run (minimum circuit ampacity can be used to help select the wire size).
- The maximum allowable voltage variation is $\pm 10\%$ of the rated voltage at equipment start-up (when the electrical load is highest).
- Check all green ground screws, cables and wire connections to verify they are tight before start-up.

Section 3 Operation

⚠ DANGER

The on-site supervisor is responsible for ensuring that operators are made aware of the inherent dangers of operating this equipment.

⚠ DANGER

Do not operate any appliance with a damaged cord or plug. All repairs must be performed by a qualified service company.

⚠ DANGER

Never stand on the unit! They are not designed to hold the weight of an adult, and may collapse or tip if misused in this manner.

⚠ Warning

Do not contact moving parts.

⚠ Warning

All covers and access panels must be in place and properly secured, before operating this equipment.

⚠ Warning

Do not put heat sealed containers or plastic bags in holding cabinet. Food or liquid could expand quickly and cause container or bag to break. Pierce or open container or bag before heating.

⚠ Warning

Racks, utensils, rack guides, and holding cabinet surfaces may become hot during or after use. Use utensils or protective clothing, like pan grips or dry oven mitts, when necessary to avoid burns.

⚠ Warning

DO NOT use the cavity for storage. DO NOT leave paper products, cooking utensils, or food in the cavity when not in use.

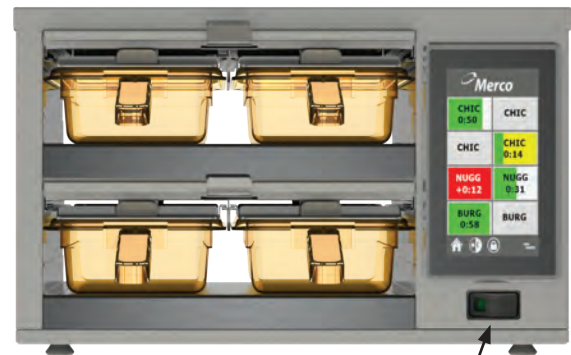
⚠ Caution

DO NOT cover racks or any other part of the holding cabinet with metal foil.

The Merco Visual Holding Cabinet has been designed to afford food service operators the ability to cook menu components in advance and then gently store that product in the holding bins until an order is received. Once that order has been placed, the crew can assemble the order using hot and fresh menu components from the holding bins. This allows for operators to serve to order, helping increase speed of service while maintaining high product quality standards.

Power Switch

The power switch is located on the front of the cabinet. Flip the power switch to turn the unit on or off.



Power Switch on Front

User Interface

PASSWORD

- A user can access all necessary screens for daily operation without a password.
- The factory default manager password is 2580.

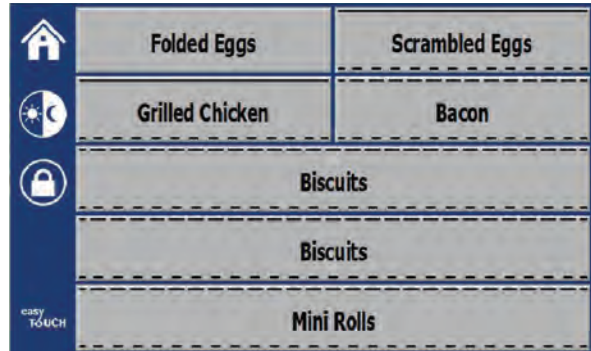
PRESS & GO SCREENS

When the unit is turned on zone pre-heating will begin. The press and go screen will be displayed.



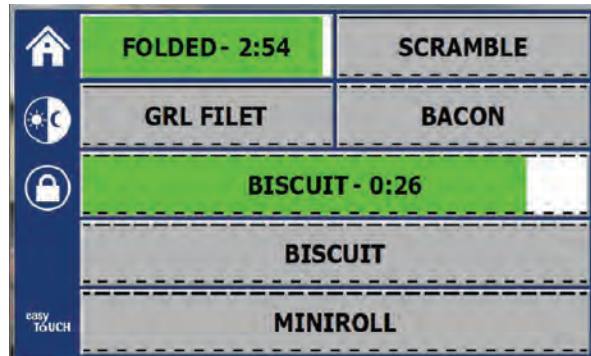
Press & Go Screen Pre-Heating

The unit will beep signaling that all holding zones are pre-heated and ready for use.



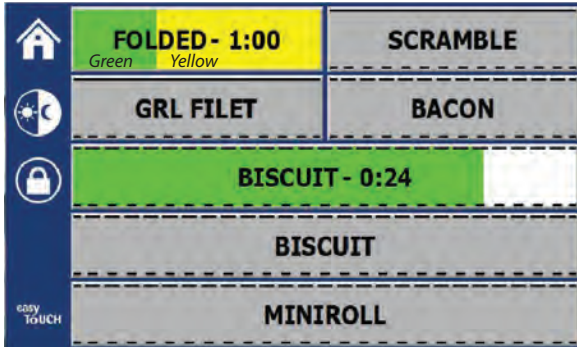
Press & Go Screen

Each product tray must be wrapped with the correct identification band. As the trays are loaded and recognized they will be highlighted in green and the product timer will start.



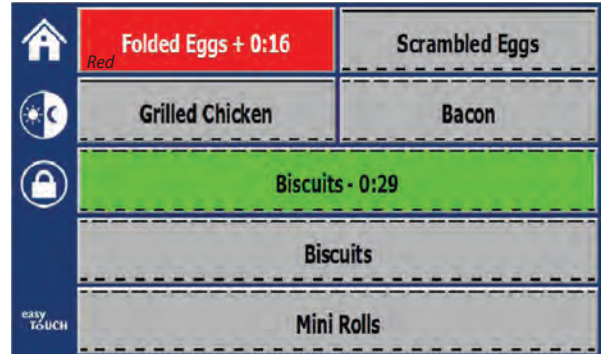
Press & Go Screen with Active Timers

The green portion of the tray timer represents the remaining time. Each menu item has a programmed warning time. When the warning time is reached the elapsed time will fill in with yellow and the alarm will beep.



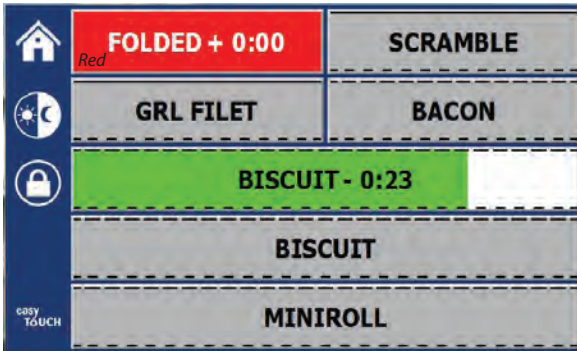
Top Left Zone (#9) Reaches the Warning Time

The alarm will beep for 10 seconds. The timer will display time the product is being held past programmed hold time. Tray and food should be removed. Reset the expired tray timer by selecting it.



Top Left Zone (#9) Runs Over Hold Time

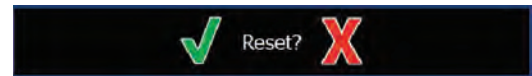
Each menu item has a programmed hold time. When the times runs out the corresponding tray timer will turn red and the alarm will beep.



Top Left Zone (#9) Runs out of Hold Time

As the trays are removed and returned to the same cabinet or between communicating holding cabinets, they will be detected. Their timer will continue whether they are sitting on the counter or traveling between hot holding cabinets.

When necessary select a tray timer to reset it before the hold time has expired. The question Reset? will pop up. Select the green check to reset. Select the red X to resume.

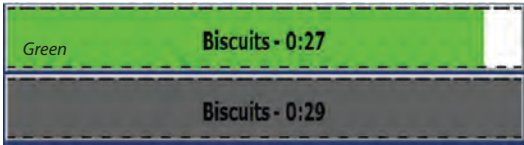


Reset Pop Up

TRAY SPECIFICATIONS

Use First For Identical Products

When two identical products are active, the one with the least time remaining will be highlighted in green, the others in gray. There is no change in countdown or timer behavior. When the first item is canceled or reset, the next one in order will turn green.



Use Highlighted Tray First

Lid Requirements

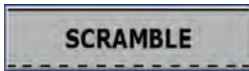
- No line above the product name means no lid.



- A dashed line above the product name represents a vented lid.

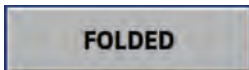


- A solid line above the product represents a solid lid.

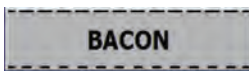


False Bottom Requirements

- No line below the product name means no false bottom or a trivet is in the tray.

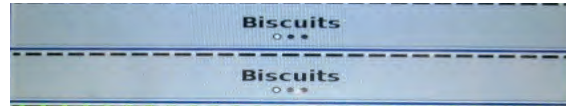


- A dashed line below the product name means to use a false bottom.



A Group in the Menu

A product in the menu is part of a group if there are dots underneath it or arrow heads on either side of it. Select the menu item with the dots and the other items in the group will pop up and can be selected. Swipe a product with arrow heads to choose another item from the group.



Press & Go Screen Icons

On the press and go screen are five icons:

- Home
- Day part
- Lock
- WiFi
- Easy touch logo



Press & Go Screen Five Icons

Select the home icon to bring up the home screen.



Home Icon

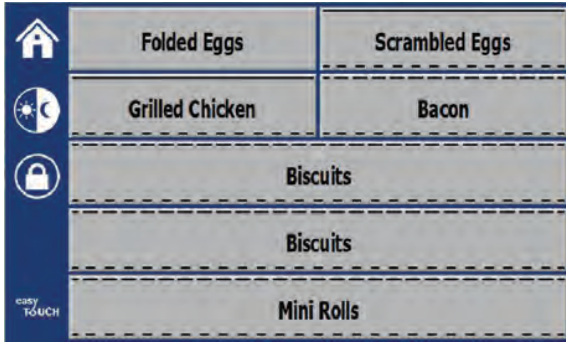


Home Screen

From the home menu selecting the press & go icon to return to the press and go screen.



Press & Go Icon



Press & Go Screen

Touch the daypart selection icon to choose a different menu. The menu options will pop up.

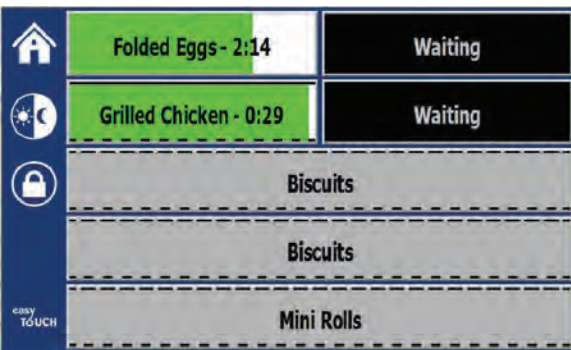


Daypart Selection Icon



Menu Pop Up

Active timers are carried over into the new menu. Once the item is reset the new product will show up. Waiting is displayed when the menu changes and the zone temperature is changing but there is still an active timer in the zone at the old temperature. The shelf is waiting to warm up to the new temperature until all active timers at the old temperature are cleared.

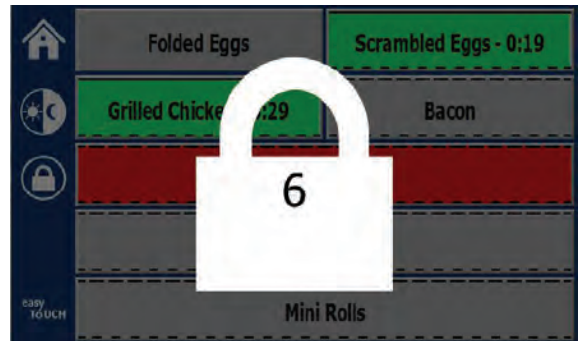


New Menu with Active Timers from Last Menu Highlighted

On press and go screen the lock icon disables the touch screen for 10 seconds. The lock icon must be held for 1 second to disable the screen. In the center of the lock graphic the 10 seconds will be counted down. Ten seconds of disabled screen allows time for the touch screen to be cleaned.



Lock Icon



Press & Go Screen Locked for Screen Cleaning

The Wi-Fi Icon indicates the Wi-Fi and local network status of the machine and others in the kitchen.



Wi-Fi Icon

A zero with a line through it indicates the unit is not connected to the Wi-Fi.

A one means the unit is connected to Wi-Fi and the local area network and that it is the only MHC unit connected to that network.

Numbers two and higher indicate the quantity of units that are connected to Wi-Fi and that local area network.

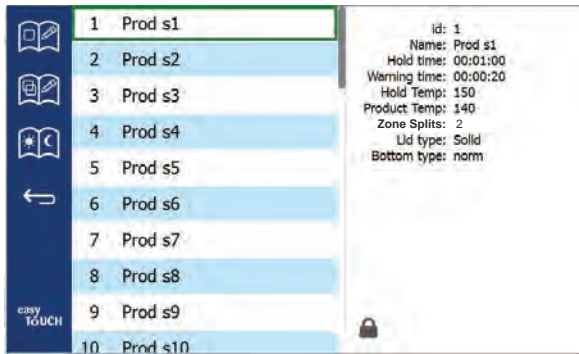
MENU SCREENS

From the home screen selecting the menu icon brings up the menu screen. The menu screen lists the products saved in the hot holding unit. 100 products can be saved.

To make changes on the three menu pages a passcode must be entered. Select the lock on the bottom left of the screen. Enter a passcode on the pop-up number pad. If the passcode is accepted the lock icon will appear unlocked. To return to the home screen select the back arrow.



Menu Icon



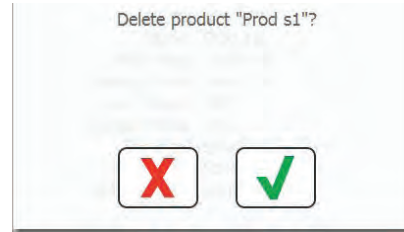
Menu Screen

If the pages are unlocked, the delete, edit and add icons will display on the menu screen.



Unlocked, Delete, Edit & Add Icons

Select the unwanted product and then the delete icon, X. A confirmation window will pop up. Select the green check to delete the product. Select the red X to return to the menu screen.

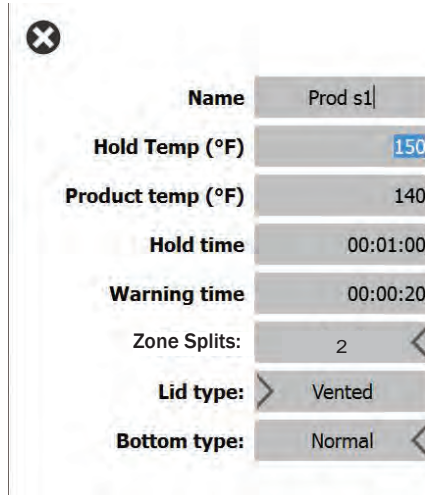


Delete Product Confirmation Window

When a product is edited or added, required specifications include:

- Name:
- Hold Temp: tray temperature maintained $\pm 5^{\circ}\text{F}$
- Product temp: reference only, not measured
- Hold time: maximum time product can be held & served
- Warning time: alarm will sound when the tray has this length of time *remaining*. The elapsed time on the timer bar changes color from white to yellow
- Zone Splits: 2 represents a full size pan (full zone), 1 represents a 1/3 size pan (half zone)
- Lid type: None, Solid or Vented
- Bottom type: Normal or False

Save the edit or product addition by selecting the check. Select the x to cancel edits and return to product list.



Product Edit or Addition Screen

On the menu screen are navigation icons.

- The first icon returns you to the product list screen.
- The second takes you to the group list screen .
- The third takes you to the day part edit screen.
- To return to the home screen select the back arrow.



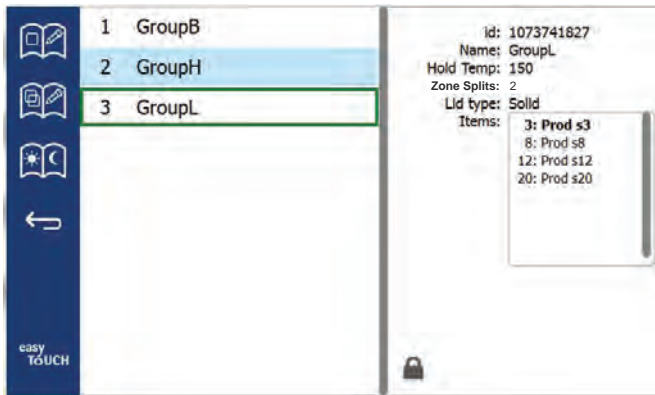
Menu, Group, Day Part & Home Navigation Icons

Groups of products can be defined. The products must have the same lid type, zone split and hold temp. Hold time, warning time and product temp and can vary within a group.

From the menu screen, select the group icon. The group page lists programmed groups. For the highlighted group, group ID, group name, hold temperature, zone split, lid type and products included in the group are listed.



Group Icon



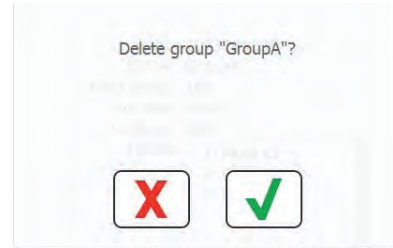
Group Screen

If the group page is unlocked, the delete, edit and add icons will display on the group screen.



Unlocked, Delete, Edit & Add Icons

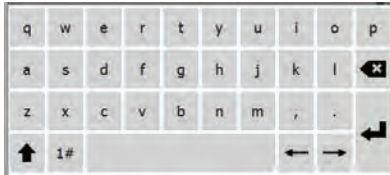
Select the unwanted group and then the delete icon, X. A confirmation window will pop up. Select the green check to delete the group. Select the red X to return to the group screen.



Delete Group Confirmation Window

Select the group to be edited and the edit icon, a pencil. In the pop up window the group will appear. You can edit the group name and add or remove products.

Click inside the name box and a keyboard will appear. When the group name is edited select the return key (bottom right).

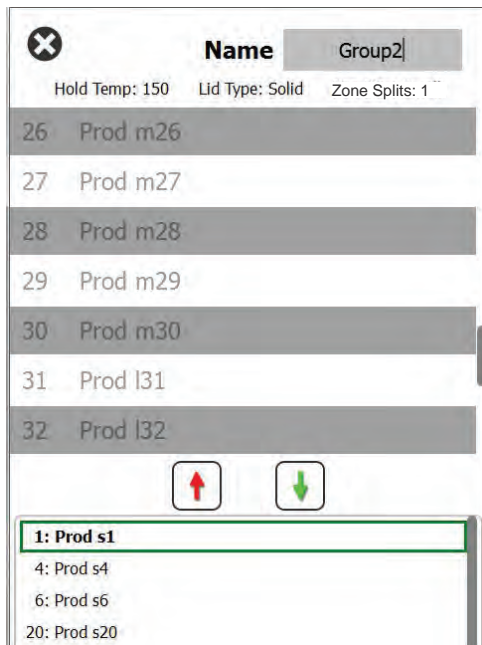


Pop Up Keyboard

Under the name are the group specifications. Only products that match will be highlighted and available for adding.

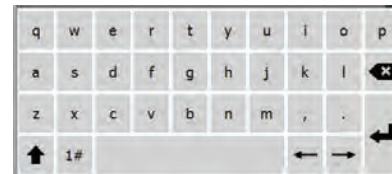
- Select a new product for the group and the green arrow to add it.
- Select an existing product in the group and the red arrow to remove it.
- To select the default product for the group (product to be displayed when the daypart is selected), hold your finger on that product for three seconds.
- While the unit is in the Press & Go mode the names can be scrolled from left to right in the same order as they are listed in the group top to bottom. Delete products and add them back in to create the desired order.

When the edits are complete return to the group screen by selecting the X in the top left corner.



To add a group, select the group page add icon, +. A pop up window will appear. Click inside the name box and use the keyboard to enter the group name. Select the return key (bottom right) and the keyboard will close.

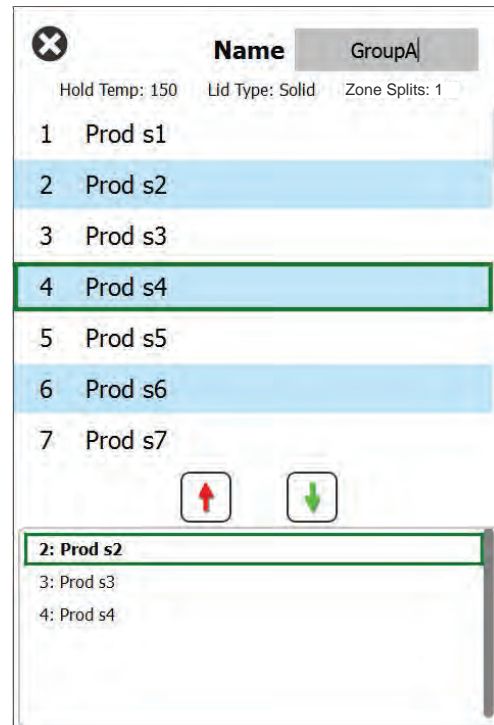
NOTE: Name groups so they are recognizable as groups, perhaps starting with G or Group. When editing the day parts to add the group, the name is all that is displayed in the scrolling list. If it does not stand out as a group it will appear as just another product.



Pop Up Keyboard

Select a product for the group and the green arrow to add it. That first product will determine the group specifications, listed under the group name. Going forward product with the wrong specifications, not available to be added to the group, will be grayed out. Continue to add products to the group. To remove a product, select it and the red arrow.

When the group is complete save it and return to the group screen by selecting the X in the top left corner.

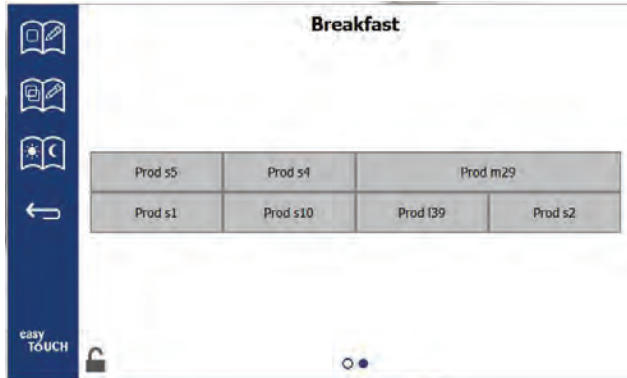


On the menu screen are navigation icons. Next to the back arrow is the day part edit icon.



Day Part Edit Icon

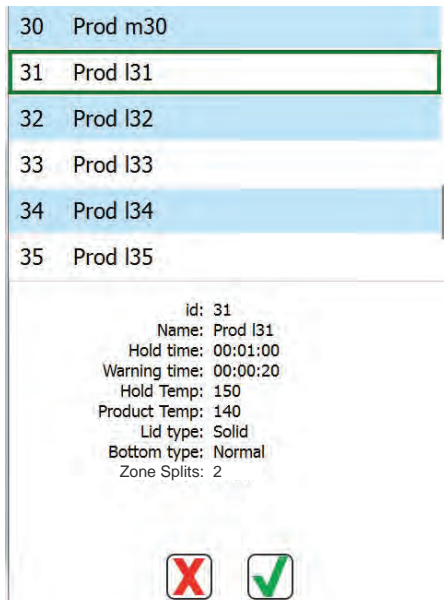
Select the day part edit icon and the breakfast products appears first. Swipe the screen to move between breakfast and lunch/dinner.



Breakfast Products

To delete a product from a zone hold your finger on the product for three seconds. A pop-up window confirms the request to delete.

Select a hot holding zone to add a product or change the product. From the pop up window select the product you want to add to the zone. Groups can also be added. Zone split and zone temperatures will eliminate certain products. Products not available will be grayed out. Select the green check to save and return.



Selecting A Product For Breakfast Zone 3

SETTING SCREENS

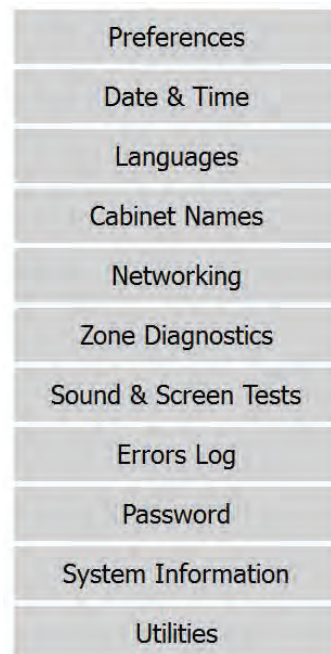
From the home screen selecting the settings icon brings up the preferences screen. This is the first of eleven setting screens. There are eleven solid dots across the bottom of the service screens, the empty circle represents the current page. Touch the dots to bring up a menu. Select and navigate to a specific screen from the menu. Or navigate between the screens by swiping the screen to the right or left.



Settings Icon



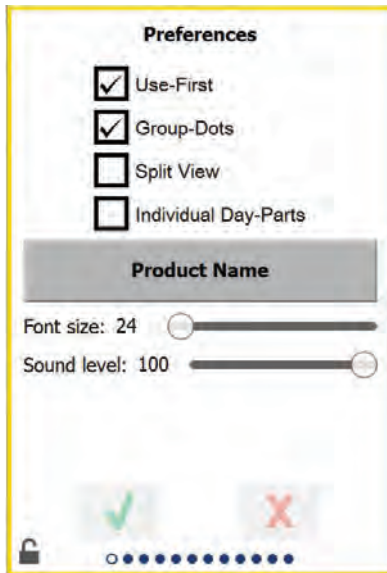
Preferences Screen With Row of Dots



Settings Screens Menu

PREFERENCES SCREEN

To make changes on the preferences screen a passcode must be entered. Select the lock on the bottom left of the screen. Enter a passcode on the pop-up number pad. If the passcode is accepted there will be a yellow ring around the screen.



Preferences Screen

- Select the green check to implement changes, red cross to discard.
- Use First – When checked the first tray of common product will be highlighted in green, second tray will be gray until the first tray is gone or time runs out. Unchecked, both trays of the common product will be green.
- Group Dots - When checked the number of dots indicate the number of products in that group. The empty circle indicates the position of the current product. Select different products by swiping the screen right or left.
- Split View - When checked displays both items when a group has only two items, the display is split in half. It is not necessary to swipe between the two items. The screen space to select the item has been halved, be careful to choose the desired item. Unchecked the two item group will display like other groups.
- Individual Day-Parts - This feature is only applicable to the MHC 5x4 unit. It allows each display and associated holding zones to be switched from breakfast to lunch/dinner independently. If unchecked switching day-parts in the press & go screen from either display will switch the entire holding cabinet
- Font size can be adjusted between 24-48.
- Volume can be adjusted between 10-100.

DATE & TIME SCREEN

To make changes on the this screen a passcode must be entered. Select the lock on the bottom left of the screen. Enter a passcode on the pop-up number pad. If the passcode is accepted there will be a yellow ring around the screen.

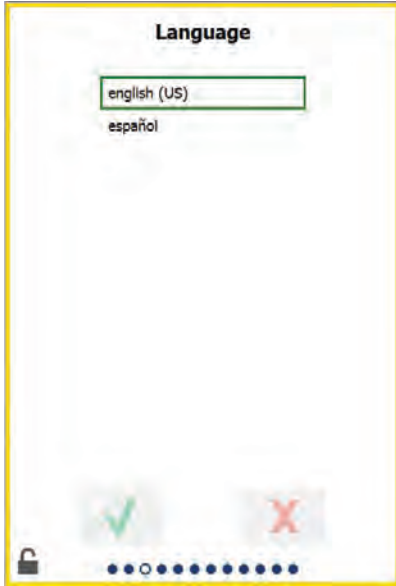


Date & Time Screen

- If the NTP box is checked and the MHC unit is connected to the internet via the local WiFi, the date and time will be set automatically. Be sure to set the UTC to the appropriate setting (i.e. Eastern Standard time is UTC -5:00, Central Time is UTC -6:00). If the MHC unit is not connected to the internet or if the NTP box is unchecked the time and date will need to be set manually.
- Top right of the screen provides the choice between a 24hr/military and AM/PM civilian time display.
- Select the month and year by the arrow heads and the date via the calendar.
- If the DST enabled box is checked the time on the clock will be moved ahead by 1 hour. If the box is checked and then unchecked the time on the clock will move back one hour. Proper use of this feature is to check the box on the first day of daylight savings time and uncheck the box on the day after daylight savings time ends.
- Time Zone - Use the drop down box to select the time zone the equipment is being used in. This only has an effect on the date and time setting if the Use NTP box is checked.

LANGUAGE SCREEN

To make changes on the this screen a passcode must be entered. Select the lock on the bottom left of the screen. Enter a passcode on the pop-up number pad. If the passcode is accepted there will be a yellow ring around the screen.



Language Screen

Available languages are listed to choose from. Store or company created menu items will not change to the new language. Only the headings and descriptions will change to the new language (i.e. service page titles, calendar month names, product parameters, and menu page titles).

CABINET NAMES SCREEN

To make changes on the this screen a passcode must be entered. Select the lock on the bottom left of the screen. Enter a passcode on the pop-up number pad. If the passcode is accepted there will be a yellow ring around the screen.

Choices for cabinet name are Reserve Cabinet and Point-of-Use Cabinet. Cabinet Index is a choice of numbers one through ten. Scroll left or right to make selections.

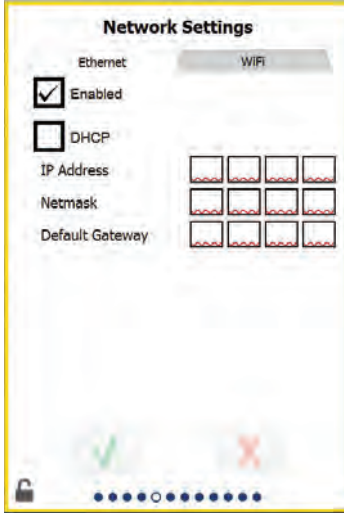


Cabinet Names Screen

All cabinets that are connected to the local WiFi and talking to the other cabinets will be listed in the box. If there are no other cabinets on the local network and this cabinet is connected to the WiFi only this cabinet will be in the list.

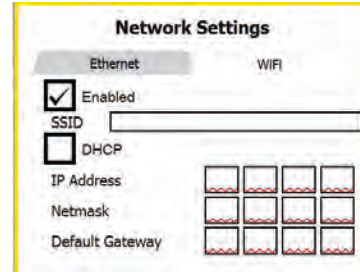
NETWORKING SCREENS

To make changes on the this screen a passcode must be entered. Select the lock on the bottom left of the screen. Enter a passcode on the pop-up number pad. If the passcode is accepted there will be a yellow ring around the screen.



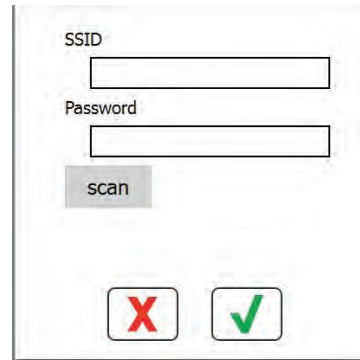
Ethernet Network Screen

Ethernet connectivity is for firmware development purposes and is not available to the typical user. The Enable box should always be UN-Checked. Having the Ethernet Enable box checked can create WiFi connectivity problems.



Wi-Fi Network Screen

To connect the Holding Cabinet to the local WiFi check both the Enable box and the DHCP box, then touch the box just to the right of SSID. That will open a new window that will allow you to enter the name and password of the WiFi network you would like the holding cabinet to connect to. See screen shot below.



Wi-Fi Pop-up For Scanning

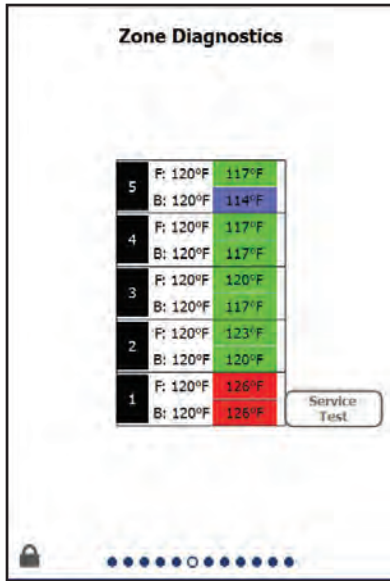
Touching the scan button will display a list of all WiFi SSIDs as well as their signal strength, that the cabinet is aware of. Touching the SSID box will bring up an alphanumeric keyboard with which you can enter the SSID of the WiFi network you wish to connect to. Touch the return button to return to the WiFi Pop-up For Scanning screen. Touch the Password box to enter the network password (special characters can be found on the 1# keyboard. Once on the 1# keyboard, more special characters can be found by touching the up-arrow key.

When finished entering SSID and Password touch the green check button to save your entries. Touch the green check button to connect to the WiFi network. Once connected the fields IP Address, Netmask, and Default Gateway will be populated, if these fields are not populated the holding cabinet is not connected to the WiFi network.

ZONE DIAGNOSTICS SCREENS

Holding cabinet temperatures can be monitored on this screen, no password is required to observe current heating element temperatures.

To run service tests on the this screen a service passcode must be entered. Select the lock on the bottom left of the screen. Enter a service passcode on the pop-up number pad. If the passcode is accepted there will be a yellow ring around the screen.



Zone Diagnostics Screen

Zone diagnostic screen shows set temperature and current unit temperature for each heating element. Current temperature will be highlighted green if +/- 5°F of the set temperature. Current temperatures are highlighted red if hotter than and blue if colder than set temperature.

1. Test the machine by changing set temperatures. The screen will have a red border while the testing.
 - Select Service Test to change the set temperatures to factory determined test temperatures.

OR

- Touch the a zone set temperature, highlighted in white. On the displayed numeric key pad, enter the desired temperature then touch the green check.

Note: Entering a temperature of 360 deg F or higher will cause the heating element to be ON all the time. Entering a temperature of zero deg F will turn the heating element OFF. The set temperature of both heating elements in the zone will be set to the same temperature.

2. Select Cancel Test when complete, the screen border will change to yellow.

SOUND & SCREEN TESTS

This screen does not require a passcode.



Sound & Screen Tests

Screen is for testing sound and screen function.

Three beeps should sound when the speaker icon is selected.

When the screen icon is selected three screens will cycle to help diagnose screen function.

UI Customization button not available to users.

ERRORS LOG SCREEN

This screen does not require a passcode.

Errors Log			
Date/Time	ID	Error name	
2016/07/18 11:37:30	4.0.0.0	Secondary UI communication loss.	
2016/07/18 11:18:45	4.0.0.0	Secondary UI communication loss.	
2016/07/18 11:15:12	4.0.0.0	Secondary UI communication loss.	
2016/06/10 12:22:00	4.0.0.0	Secondary UI communication loss.	
2016/06/10 13:29:15	4.0.0.0	Secondary UI communication loss.	
2016/06/10 13:27:52	4.0.0.0	Secondary UI communication loss.	
2016/06/10 13:17:25	4.0.0.0	Secondary UI communication loss.	

Number of records: 7

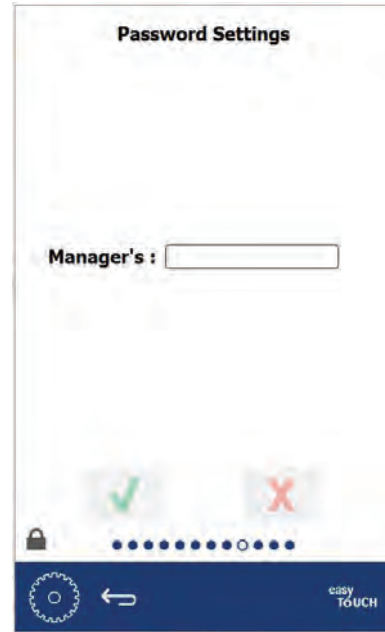
First record: Last record:

Refresh Clear All

Errors Log Screen

Clear all button removes all entries on the errors log screen. Touching the Refresh button will update the error list. Swiping away from this page and then swiping back will also refresh the error log list with any new errors.

PASSWORD SETTINGS SCREEN



Password Settings Screen

There is a factory default manager passcode. It can be changed on the password service screen. Select the open box after Manager's: and a new pin # number pad will pop up. Enter the new manager's passcode and the green check to confirm.



New Pin # Number Pad

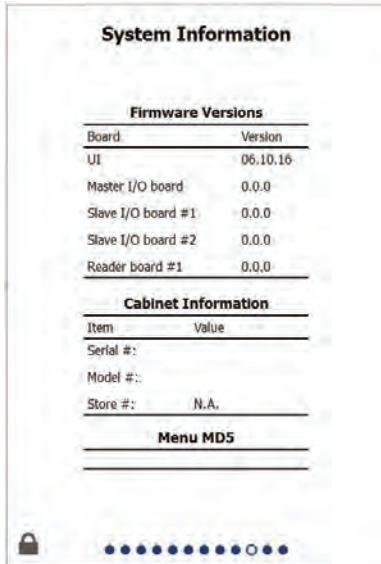
To reset the passcode back to the factory default quickly touch the easy touch logo 10 times in a row. At the end of 5 taps the menu bar will turn black, continue to tap. A pop up display will confirm the manager's pin # was reset.



Easy Touch Logo

SYSTEM INFORMATION SCREEN

This screen does not require a passcode, there are no actions available on this screen.



System Information Screen

This screen lists the cabinet serial number, model number and current firmware versions.

UTILITIES SCREEN

To run demo mode on the utility screen a service passcode must be entered. Select the lock on the bottom left of the screen. Enter a service passcode on the pop-up number pad. If the passcode is accepted there will be a yellow ring around the screen.

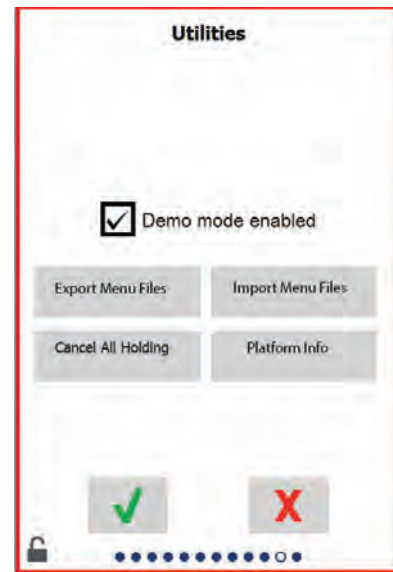
The demo mode will turn off all heaters and simulates operation at a lower amp draw. The unit will continue in Demo mode until returned to normal operation via this screen, regardless of being powered off and on.

Export Menu Files - Remove the USB port cover and the WiFi dongle. Plug a USB drive into your master/external port. Press the Export Menu Files button. Restart unit.

Import Menu Files - Remove the USB port cover and the WiFi dongle. Plug a USB drive with exported menu files into your master/external port. Press the Import Menu Files button. Unit will only look for and import a file type that was exported from the utilities screen.

Cancel All Holding - If a tray with an active timer is removed and not returned to the unit, the active timer information will be stored in memory. Service may push the Cancel All Holding button to clear unnecessary information from the memory.

Platform Info - A pop up screen lists firmware specifications including linux kernel and board support package, etc.



Utilities Screen

Load New Software Via USB

UI BOARD UPDATE

1. Firmware update files work for all models.
2. Verify the files and file names are correct on the UI USB.
 - MHC software file folder name: vhcupdate
 - MHC software file name: vhc1fb
 - Product menu file name: productsList.txt
3. Turn the MHC on and wait until the power-up sequence is complete.
4. Remove the USB port cover and the WiFi dongle.
5. Plug the UI USB flash drive into the USB port on the back of the unit.
6. Wait approximately 10 seconds.
7. The display will flash twice and return to the default screen when the software update is complete.
8. Remove the flash drive.
9. Model MHC54, remove the cover of the unit, insert UI USB into the secondary UI receptacle (on the right side from the front) in the top of the UI. Then complete steps 6-8.
10. Reinstall WiFi dongle, USB port cover and unit cover.

I/O BOARD UPDATE

The likelihood that the I/O software will need to be updated is low.

1. Turn the MHC on and wait until the power-up sequence is complete.
2. Remove the USB port cover and the WiFi dongle.
3. Plug the I/O USB flash drive into the USB port on the back of the unit.
4. Locate and touch the display home page USB icon. Menu update will pop up, slide to select firmware update. Select file name.
5. The UI display will flash twice and return to the default screen when the software update is complete.
6. Remove the I/O USB flash drive.

Section 4 Maintenance

⚠ DANGER

All utility connections and fixtures must be maintained in accordance with Local and national codes.

⚠ DANGER

It is the responsibility of the equipment owner to perform a Personal Protective Equipment Hazard Assessment to ensure adequate protection during maintenance procedures.

⚠ DANGER

Failure to disconnect the power at the main power supply disconnect could result in serious injury or death. The power switch DOES NOT disconnect all incoming power.

⚠ DANGER

Disconnect electric power at the main power disconnect for all equipment being serviced. Observe correct polarity of incoming line voltage. Incorrect polarity can lead to erratic operation.

⚠ Warning

When using cleaning fluids or chemicals, rubber gloves and eye protection (and/or face shield) must be worn.

⚠ Caution

Maintenance and servicing work other than cleaning as described in this manual must be done by an authorized service personnel.

⚠ Caution

Cleansers, detergent, degreasers, sanitizers, or bleaching agents that contain chlorides or phosphates will cause permanent damage to stainless steel products. The damage appears as pits, eruptions, voids, small holes, severe discoloration or dulling of the metal finish. Water with high chloride 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 THE WARRANTY.

Cleaning and Sanitizing Procedures

GENERAL

You are responsible for maintaining the equipment in accordance with the instructions in this manual. Maintenance procedures are not covered by the warranty.

Maintenance	Daily	After Prolonged Shutdown	At Start-Up
Exterior	X	X	X
Interior	X	X	X
Tray, Lid, False Bottom & Tray Seal	X	X	X
Plastic Tray	X	X	X
RFID Band	X	X	X
RFID Collar	X	X	X
RFID Carrier	X	X	X

EXTERIOR CLEANING

⚠ Warning

Never use a high-pressure water jet for cleaning or hose down or flood interior or exterior of units with water. Do not use power cleaning equipment, steel wool, scrapers or wire brushes on stainless steel or painted surfaces.

⚠ Caution

Never use an acid based cleaning solution on exterior panels! Many food products have an acidic content, which can deteriorate the finish. Be sure to clean the stainless steel surfaces of ALL food products.

The stainless steel outer case requires nothing more than a daily wiping with a damp cloth. If, however, an excessive amount of food particles/grease are allowed to collect, a non-abrasive cleaner (hot sudsy water) may be used. Wipe dry with a clean, soft cloth.

Always rub with the "grain" of the stainless steel to avoid marring the finish. Never use steel wool or abrasive pads for cleaning. Never use chlorinated, citrus based or abrasive cleaners.

Stainless steel exterior panels have a clear coating that is stain resistant and easy to clean. Products containing abrasives will damage the coating and scratch the panels. Daily cleaning may be followed by an application of stainless steel cleaner which will eliminate water spotting and fingerprints. Early signs of stainless steel breakdown are small pits and cracks. If this has begun, clean thoroughly and start to apply stainless steel cleaners in attempt to restore the steel.

INTERIOR CLEANING**⚠ Caution**

Do not use caustic cleaners on any part of the holding cabinet or holding cabinet cavity. Use mild, non abrasive soaps or detergents, applied with a sponge or soft cloth. Never use sharp implements or harsh abrasives on any part of the holding cabinet.

The product tray, RFID band, RFID collar, RFID carrier, lid, false bottom and tray seal may be cleaned via dishwasher or with warm soapy water. Care must be taken to prevent water or cleaning compounds from getting on internal parts, especially the switches on the control panel.

PLASTIC TRAY CLEANING**⚠ Caution**

Environmental stress cracking can occur, proper dilution and rinsing per detergent manufacturers' directions are mandatory.

Food-approved detergents can be used if they are diluted per manufacturers' directions and adequately rinsed away prior to high temp drying cycle. Basic alcohols such as isopropyl are acceptable for hard-to-remove stains. Otherwise, do not use organic solvents.

DAILY CLEANING INSTRUCTIONS

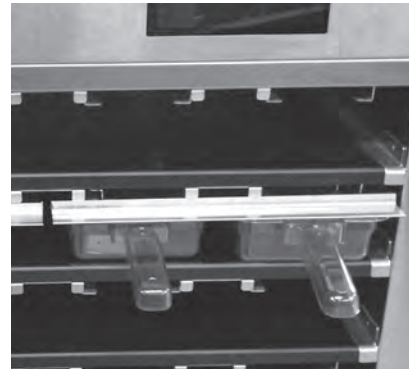
1. You will need a damp cloth and hot soapy water.
2. Turn the unit off.



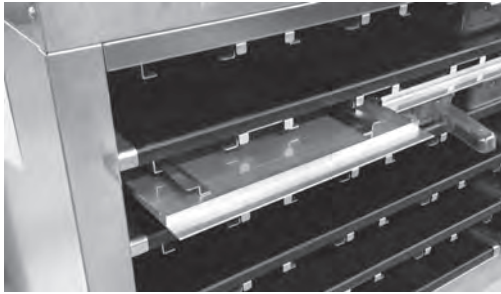
3. Unplug the unit.



4. Allow unit to cool for approximately 30 minutes. If it is necessary to continue before it has completely cooled wear heat resistant gloves.
5. Remove the trays. Remove RFID band, RFID collar and RFID carrier, from each tray.



- 6. Remove the tray seals.



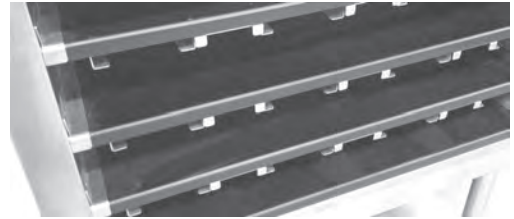
- 7. Clean the trays, RFID bands, RFID collars, RFID carriers, lids, false bottoms and tray seals in a dishwasher or with warm soapy water.



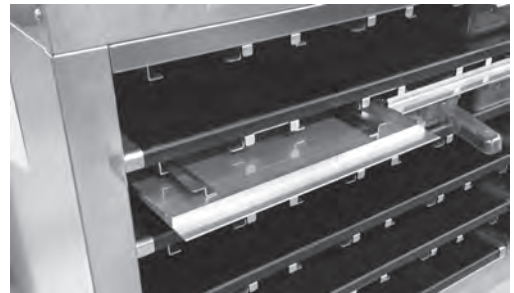
- 8. With a damp cloth wipe the touch screens and around the power switch. Be careful not splash water or cleaning compounds around electrical parts.
- 9. Wipe the stainless steel exterior with a damp cloth, rubbing with the grain of the steel. If an excessive amount of food particles/grease has collected, hot sudsy water (non-abrasive) may be used.



- 10. Wipe the interior with a damp cloth; clean from the front and the back to reach all surfaces. Pay attention to the ledges that support tray seals. If an excessive amount of food particles/grease has collected, hot sudsy water (non-abrasive) may be used.



- 11. Allow holding cabinet, trays, RFID bands, RFID collars, RFID carriers and tray seals to dry.
- 12. Reinstall the cleaned tray seals.



- 13. Reinstall the RFID bands by gently stretching it around each tray. Reinstall the RFID collar by gently snapping the lock together around each tray. Reinstall the RFID carrier by sliding the tray on top of it until it slides in place.
- 14. Reinstall the cleaned trays.
- 15. Plug the unit in.



Section 5 Troubleshooting

Troubleshooting Chart

Problem	Cause	Correction
Cabinet not running	Fuse blown or circuit breaker tripped.	Replace fuse or reset circuit breaker.
	Power cord unplugged.	Plug in power cord.
	Main power switch turned off.	Turn main power switch on.
Display has cross hatch in heating zone/disabling timer	Heating pad connector is loose.	Replace heater pad.
	Heating pad has failed.	Replace heater pad.
	Heating pad I/O circuit board is defective.	Replace I/O board.
	Thermocouple wire connections are defective.	Replace heater pad.
	Shorted thermocouple wire to chassis.	Replace heater pad.
	Open thermocouple wire.	Replace heater pad.

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