

Hoshizaki America, Inc.

Commercial Kitchen Equipment

Model

Refrigerated Prep Table with Raised Rail



“A Superior Degree
of Reliability”

www.hoshizaki.com

INSTRUCTION MANUAL



Issued: 1-12-2009
Revised: 5-10-2011

IMPORTANT

Only qualified service technicians should attempt to install, service, or maintain this unit. No installation, service, or maintenance should be undertaken until the technician has thoroughly read this Instruction Manual. Likewise, the owner/manager should not proceed to operate the unit until the installer has instructed them on its proper operation. Failure to install, operate, and maintain the equipment in accordance with this manual may adversely affect safety, performance, component life, and warranty coverage.

Hoshizaki provides this manual primarily to assist qualified service technicians in the installation, maintenance, and service of the unit.

Should the reader have any questions or concerns which have not been satisfactorily addressed, please call, write, or send an e-mail message to the Hoshizaki Technical Support Department for assistance.

HOSHIZAKI AMERICA, INC.
618 Highway 74 South
Peachtree City, GA 30269

Attn: Hoshizaki Technical Support Department

Phone: 1-800-233-1940 Technical Support
(770) 487-2331

Fax: 1-800-843-1056
(770) 487-3360

E-mail: techsupport@hoshizaki.com

Web Site: www.hoshizaki.com

NOTE: To expedite assistance, all correspondence/communication MUST include the following information:

- Model Number _____
- Serial Number _____
- Complete and detailed explanation of the problem.

IMPORTANT

This manual should be read carefully before the unit is installed and operated. Only qualified service technicians should install, service, and maintain the unit. Read the warnings contained in this booklet carefully as they give important information regarding safety. Please retain this booklet for any further reference that may be necessary.

CONTENTS

Important Safety Information	5
I. Installation Instructions	6
A. Location	6
B. Checks Before Installation.....	6
C. Setup.....	7
D. Electrical Connection	10
E. Accessing the Controls.....	11
F. Final Checklist.....	11
II. Operating Instructions.....	12
A. Operation	12
B. Startup	13
C. Cabinet and Rail Temperature.....	13
1. Temperature Display.....	13
2. Adjusting the Temperature Setpoint.....	13
3. Rail Cooling Switch.....	14
4. Changing the Temperature Display Scale (°F or °C)	14
D. Defrost.....	14
1. Cabinet Defrost	14
2. Rail Defrost.....	14
E. Food Storage.....	15
1. Cabinet.....	15
2. Rail	15
F. Safety Devices	16
1. High Pressure Switch	16
2. Compressor Short Cycle Timer.....	16
3. Compressor Protector	16
4. Defrost Protection	16
a) Cabinet	16
b) Rail.....	16
G. Alarm Codes	17
H. Cooling Performance	18
1. Cabinet.....	18
2. Rail	18
I. Condensation	18

III. Cleaning and Maintenance Instructions.....	19
A. Cleaning.....	19
1. Work Surface.....	19
2. Rail and Rail Cover.....	20
3. Exterior.....	20
4. Cabinet Interior.....	20
5. Door/Drawer Gaskets.....	20
6. Shelves (if applicable).....	20
7. Drawers (if applicable).....	20
B. Maintenance.....	21
1. Rail Condensate Pan.....	21
2. Air Filter.....	21
3. Condenser.....	21
4. Power Supply Connection.....	21
C. Shutdown and Long Storage.....	22

Important Safety Information

Throughout this manual, notices appear to bring your attention to situations which could result in death, serious injury, or damage to the unit.

⚠ WARNING Indicates a hazardous situation which could result in death or serious injury.

CAUTION Indicates a situation which could result in damage to the unit.

IMPORTANT Indicates important information about the use and care of the unit.

⚠ WARNING

This unit should be destined only to the use for which it has been expressly conceived. Any other use should be considered improper and therefore dangerous. The manufacturer cannot be held responsible for eventual damage caused by improper, incorrect, and unreasonable use.

To reduce the risk of death, electric shock, serious injury, or fire, follow basic precautions including the following:

- This unit requires an independent power supply. See the nameplate for proper voltage and breaker/fuse size. Failure to use a proper breaker or fuse can result in a tripped breaker, blown fuse, or damage to existing wiring. This could lead to heat generation or fire.
- **THIS UNIT MUST BE GROUNDED.** This unit is equipped with a 3-prong grounding plug to reduce the risk of potential shock hazards. It must be plugged into a properly grounded, independent 3-prong wall outlet. If the outlet is a 2-prong outlet, it is your personal responsibility to have a qualified electrician replace it with a properly grounded, independent 3-prong wall outlet. Do not remove the ground prong from the power cord and do not use an adapter plug.
- Do not use an extension cord.
- Make sure the power switch is in the "OFF" position before plugging in or unplugging the unit to reduce the risk of electric shock.
- Do not use a unit with a damaged power cord. The power cord should not be altered, jerked, bundled, weighed down, pinched, or tangled. Such actions could result in electric shock or fire. To unplug the unit, be sure to pull the plug, not the cord, and do not jerk the cord.
- To reduce the risk of electric shock, do not touch the plug or power switch with damp hands.
- This unit should be disassembled or repaired only by qualified service personnel to reduce the risk of electric shock, injury, or fire.
- Do not make any alterations to the unit. Alterations could result in electric shock, injury, fire, or damage to the unit.

I. Installation Instructions

WARNING

1. This unit must be installed in accordance with all applicable national, state, and local regulations.
2. Unit is heavy. Use care when lifting or positioning. Work in pairs when needed to prevent injury or damage. Hold the bottom of the unit. Do not hold doors/drawers; they could become deformed or come off. Do not tilt the unit more than 45°.

A. Location

WARNING

This unit is not intended for outdoor use. Normal operating ambient temperature should be within 45°F to 86°F (7°C to 30°C). Operation of the unit, for extended periods, outside of this normal temperature range may affect unit performance.

For best operating results:

- The unit should not be located next to ovens, grills, or other high heat producing equipment.
- The location should provide a firm and level foundation for the unit.
- The unit should not be located in a corrosive environment.
- The unit may be safely installed and operated flush with walls, but for maximum performance, install a minimum of 4 inches (102 mm) from all walls.
- Allow at least 20 inches (50 cm) at the front for proper air circulation.

B. Checks Before Installation

WARNING

Refer to the nameplate for electrical specifications. The nameplate is located on the right side wall of the cabinet interior. For more electrical connection details, see "I.D. Electrical Connection." We reserve the right to make specification and design changes without prior notice.

- Visually inspect the exterior of the shipping package and immediately report any damage to the carrier. Upon opening the package, any concealed damage should also be immediately reported to the carrier.
- Remove the shipping carton, tape, and packing material. Remove the stainless steel rail cover(s) from the worktop and set aside to avoid damage.
- Remove all accessory containers before discarding the packing materials. Dispose of all packing materials in a proper and environmentally responsible manner.
- Check for missing or damaged accessories.

C. Setup

1. Remove the Unit from the Pallet and Remove the Plastic Film

- 1) Move as close to the final location as possible.
- 2) Remove the bolts that secure the cabinet to the pallet. Using safe lifting practices, slide the unit forward from the pallet and gently lower it to the floor. Do not allow doors or drawers to bear the weight of the unit when lowering.
- 3) Remove the protective plastic film from the exterior and interior, including the rail cover. If the unit has been exposed to the sun or to heat, remove the film after the unit cools.

2. Install the Rail Condensate Pan

Slide the rail condensate pan into place on the brackets under the front of the unit. See Fig. 1. Make sure the pan contacts the rear stops.

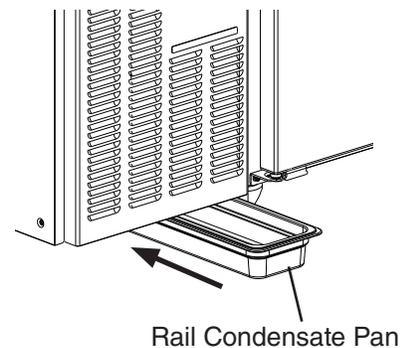


Fig. 1

3. Check the Refrigeration Circuit

- 1) Visually check that the refrigerant lines do not rub or touch other lines or surfaces and that the condenser fan blade and rail fan blades turn freely.
- 2) Check that the compressor is snug on all mounting pads.

4. Position the Unit and Lock the Front Casters

The front casters on the unit are lockable. After positioning the unit in its final location, lock the front casters.

5. Install the Shelves (if applicable)

Shelf support clips are provided in the accessory pack.

1. Place the shelf support clips into the pilasters and air duct (4 shelf support clips per shelf). See Fig. 2.
2. Place the shelves in position on the shelf support clips.

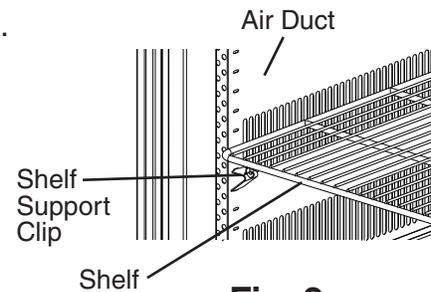


Fig. 2

6. Prepare the Rail

- 1) Install the rail cover brackets in the orientation shown using the 5×10 stainless steel machine screws provided. See Fig. 3.

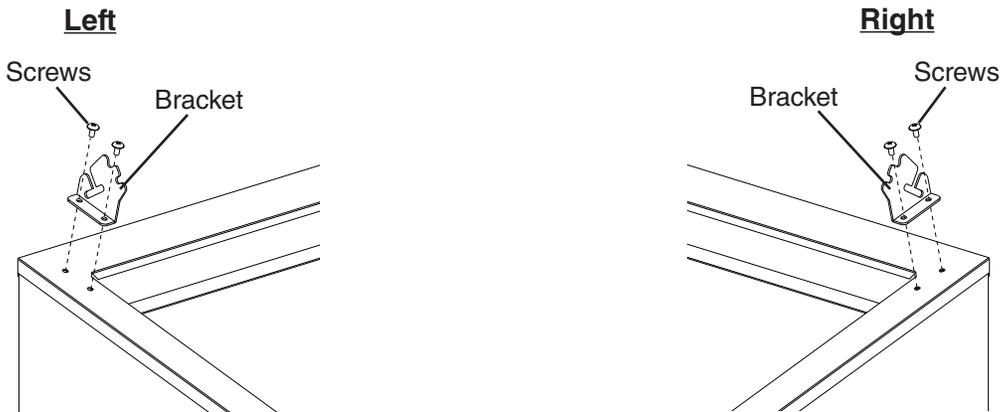


Fig. 3

- 2) Insert the rail cover's rear pins into the rear slots on both brackets, then use the rail cover's front pins and the notches on the brackets to place the rail cover in the open position. You can use either set of notches. The hollow side of the rail cover should face down. See Fig. 4.

⚠ WARNING

When the rail cover is open, make sure the rear pins on both sides of the rail cover are securely in the rear slots and the front pins are resting securely in the notches. Otherwise, the rail cover could close suddenly and cause injury.

- 3) Place rail dividers (sold separately) and empty pans (sold separately) on the rail. On the HPR100A(-D), place the divider included with the unit as shown in Fig. 5. When operating the rail, the entire rail must be covered by rail dividers and pans. Otherwise, the rail will not cool properly. Use pans with a depth of up to 6" (15 cm). Do not use damaged rail dividers or pans.

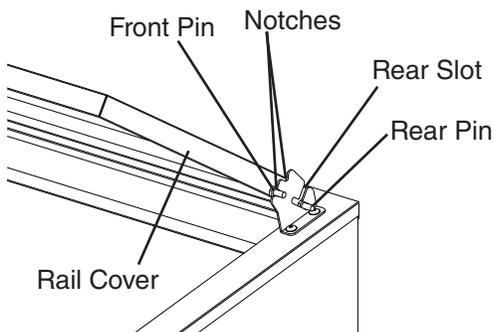


Fig. 4

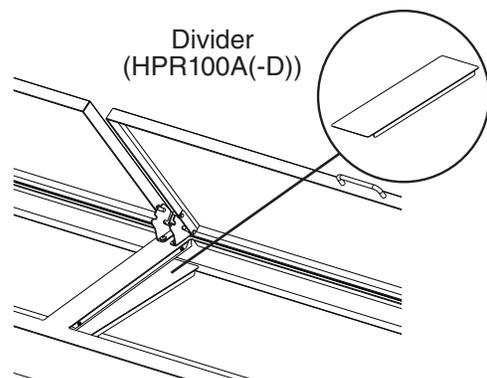


Fig. 5

7. Attach the Cutting Board

- 1) Attach the cutting board brackets to the ends of the worktop using the 4x8 stainless steel sheet-metal screws provided. Snug the screws, but do not tighten. See Fig. 6.
- 2) Slide the cutting board (sold separately) under the cutting board brackets. To secure the cutting board, slide the cutting board brackets down onto the cutting board and tighten the screws. See Fig. 7.

⚠ WARNING

Make sure the cutting board is secure. Otherwise, the cutting board could come off and cause injury.

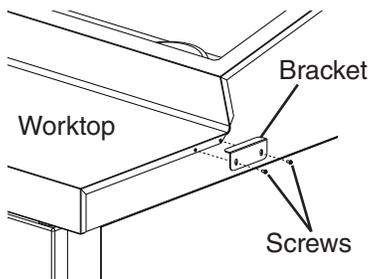


Fig. 6

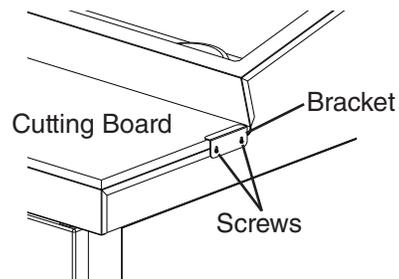


Fig. 7

D. Electrical Connection

WARNING

1. Electrical connection must meet national, state, and local electrical code requirements. Failure to meet these code requirements could result in death, electric shock, serious injury, fire, or severe damage to equipment.
 2. This unit requires an independent power supply. See the nameplate for proper voltage and breaker/fuse size. Failure to use a proper breaker or fuse can result in a tripped breaker, blown fuse, or damage to existing wiring. This could lead to heat generation or fire.
 3. **THIS UNIT MUST BE GROUNDED:** This unit is equipped with a 3-prong grounding plug to reduce the risk of potential shock hazards. It must be plugged into a properly grounded, independent wall outlet. If the outlet is a 2-prong outlet, it is your personal responsibility to have a qualified electrician replace it with a properly grounded, independent 3-prong wall outlet. Do not remove the ground prong from the power cord and do not use an adapter plug. Failure to follow these instructions may result in death, electric shock, or fire.
 4. Do not use an extension cord.
 5. Make sure the power switch is in the "OFF" position before plugging in or unplugging the unit to reduce the risk of electric shock. The power switch is located behind the front panel. See Fig. 8 in "I.E. Accessing the Controls."
 6. Do not use a unit with a damaged power cord. The power cord should not be altered, jerked, bundled, weighed down, pinched, or tangled. Such actions could result in electric shock or fire. To unplug the unit, be sure to pull the plug, not the cord, and do not jerk the cord.
 7. To reduce the risk of electric shock, do not touch the plug or power switch with damp hands.
 8. The GREEN ground wire in the factory-installed power cord is connected to a screw on the evaporator case. If it becomes necessary to remove or replace the power cord, be sure to connect the power cord's ground wire.
- Usually an electrical permit and services of a licensed electrician are required.
 - The maximum allowable voltage variation is ± 10 percent of the nameplate rating.
 - This unit should be disassembled or repaired only by a qualified service technician to reduce the risk of electric shock or fire.

E. Accessing the Controls

The controls are located behind the front panel. See Fig. 8. To open the front panel, grip the outer edge of the front panel near the bottom and top and pull open approximately 1/2 inch (13 mm) until it is disengaged. To remove the front panel, swing the panel open completely and lift up approximately 1/2 inch (13 mm).

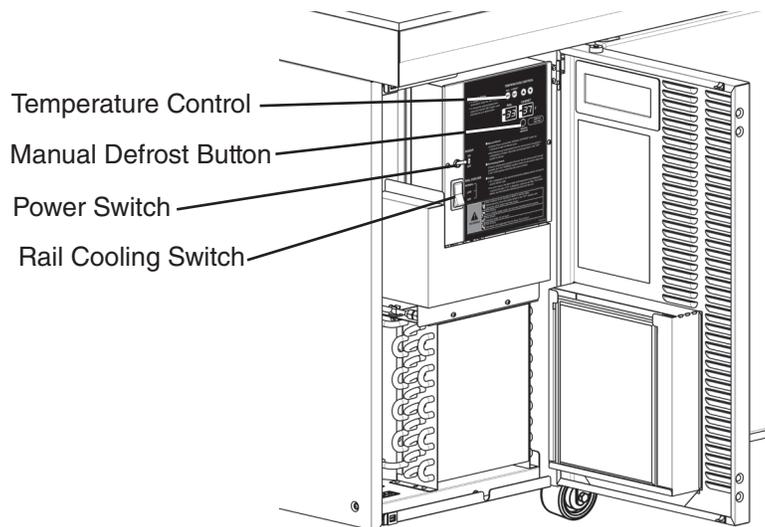


Fig. 8

F. Final Checklist

- 1) Is the unit level and are the front casters locked?
- 2) Is the unit in a site where the ambient temperature is within 45°F to 86°F (7°C to 30°C) all year around?
- 3) Is there at least 20" (50 cm) at the front for proper air circulation?
- 4) Have the protective plastic film, shipping carton, tape, and packing material been removed from the unit?
- 5) Have the unit and accessories been checked for shipping damage?
- 6) Has the power supply voltage been checked or tested against the nameplate rating? Is the power supply a properly grounded, independent 3-prong wall outlet? Does the electrical connection meet all national, state, and local code and regulation requirements.
- 7) Has the rail condensate pan been installed and slid back until it contacts the rear stops?
- 8) Have the refrigerant lines been checked to make sure they do not rub or touch other lines or surfaces? Have the condenser fan blade and rail fan blades been checked to make sure that they turn freely? Are the compressor hold-down bolts snug?
- 9) Have the shelves (if applicable) been properly installed?
- 10) Have rail dividers, pans (empty until the unit cools down), and a cutting board (all sold separately) been properly installed? Has the divider included with the HPR100A(-D) been properly installed?
- 11) Has the end user been given the instruction manual, and instructed on how to operate the unit and the importance of the recommended periodic maintenance?
- 12) Has the end user been given the name and telephone number of an authorized service agent?
- 13) Has the warranty card been filled out and forwarded to the factory for warranty registration?

II. Operating Instructions

A. Operation

CAUTION

1. Do not leave the doors/drawers open.
2. Open and close the doors/drawers with care. Doors/drawers opened too quickly or forcefully may cause injury or damage to the unit or surrounding equipment.
3. To prevent deformation or cracks, do not spray insecticide onto the plastic parts or let them come into contact with oil.
4. To avoid damage to the gasket, use only the door/drawer handle (do not grab the top of the door/drawer directly) when opening and closing.

⚠ WARNING

For All Units

1. To reduce the risk of electric shock, do not touch the attachment plug or switches with damp hands.
2. Do not hang on or push down on the doors/drawers. The doors/drawers might be damaged, fall off, or the unit could tip over, causing injury.
3. Do not store any volatile or flammable substances, such as benzene, ether, alcohol, adhesives, or LPG in the unit. They are potential sources of explosion or fire.
4. Do not throw anything onto the shelves or load any single shelf with more than 120 lb (54.5 kg) of product. They might fall off and cause injury.
5. Do not store food or food containers near the air outlet. They might freeze up and crack or break causing a risk of injury or contamination of other food.
6. Do not use combustible spray or place volatile and flammable substances near the unit. They might catch fire.
7. Do not pour or spray water into the rail area. The rail drain is for condensate only. Excessive liquid in the rail area could result in electric shock.
8. Do not operate the unit with fan shrouds removed. Keep hands clear of fan shrouds when the unit is operating. The rotating fans may cause injury.
9. Do not put anything into the machine compartment or the condenser air inlet/outlet. The fan rotating rapidly inside might cause injury or heat generation.

Additional Warning For Units with Drawers

1. Do not hang on or push down on the drawers, and do not load any single drawer with more than 150 lb (68 kg) of product.
2. Depending on the weight of product in the drawers, secure the unit as necessary to prevent it from overturning.
3. Do not open more than one drawer at a time and *never* stand on the drawers.

B. Startup

⚠ WARNING

All parts are factory-adjusted. Improper adjustments may adversely affect safety, performance, component life, and warranty coverage.

Supply power to the unit. Open the front panel to access the controls. See "I.E. Accessing the Controls." Move the rail cooling switch to the "NORMAL" position, then move the power switch to the "ON" position. Allow the unit to cool down prior to loading it with food. Pans (leave empty until the unit cools down) should be in place and cover the entire rail. Otherwise, the rail will not cool properly. Close the rail cover while waiting for the rail to cool down.

⚠ WARNING

When the rail cover is open, make sure the rear pins on both sides of the rail cover are securely in the rear slots and the front pins are resting securely in the notches. Otherwise, the rail cover could close suddenly and cause injury.

IMPORTANT

At startup, there is a 2 minute delay before the compressor starts.

C. Cabinet and Rail Temperature

1. Temperature Display

- The rail and cabinet temperatures are displayed on the control panel. See Fig. 9. The control panel is located behind the front panel. The display default is °F, but it can be changed to read °C. To change, see "II.C.4. Changing the Temperature Display Scale (°F or °C)."
- The temperatures are updated every 30 seconds.

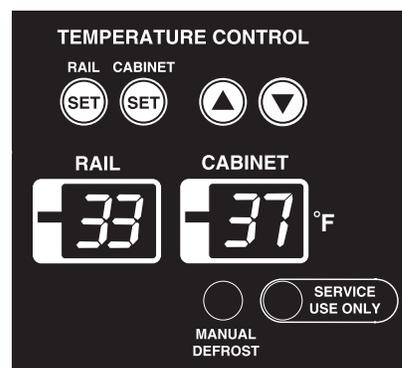


Fig. 9

2. Adjusting the Temperature Setpoint

The temperature setpoint is the temperature at which the compressor comes on. The factory default is 37°F (3°C) for the cabinet and 33°F (1°C) for the rail. The temperature differential for the compressor to turn off is -3.6°F (-2°C). If necessary, adjust the setpoint temperatures as follows:

- 1) Press the appropriate "SET" button to display the current rail or cabinet setpoint temperature.
- 2) To change the setpoint, press and hold the appropriate "SET" button while pressing the up or down button. The cabinet temperature is adjustable between 21°F and 53°F (-6°C and +12°C). The rail temperature is adjustable between -13°F and +53°F (-25°C and +12°C).
- 3) After 10 seconds, the new setpoint will be saved automatically.

3. Rail Cooling Switch

The rail cooling switch is used to adjust the intensity of cooling. When the rail cooling switch is in the "NORMAL" position, the rail fans operate continuously. When the rail cooling switch is in the "LOW" position, the rail fans operate continuously when the rail is cooling down and intermittently when rail cool down is achieved. The "NORMAL" position is recommended when the rail is actively being used. The "LOW" position is recommended when not actively preparing food and the rail cover is closed. If not actively preparing food for a long period such as overnight, seal pans with plastic wrap in addition to closing the rail cover. Alternatively, seal ingredients and store them in a refrigerator or freezer.

4. Changing the Temperature Display Scale (°F or °C)

The factory setting is °F. To change the display to °C, follow the steps below.

- 1) Press and hold both the "SET" button and the "SERVICE USE ONLY" button for 5 seconds. "F5" appears in the display window. (If "F0" is displayed, press the up or down button repeatedly until "F5" appears.)
- 2) Press the "SET" button to display the current setting (default: "°F"). Press the up or down button to switch to °C. Press the "SET" button to save the setting.
- 3) Press and hold both the "SET" button and the "SERVICE USE ONLY" button for 5 seconds. The cabinet temperature will be displayed using the newly saved temperature scale.
- 4) Affix the "°C" label supplied with the unit to the display panel, covering "°F" but not the display window.

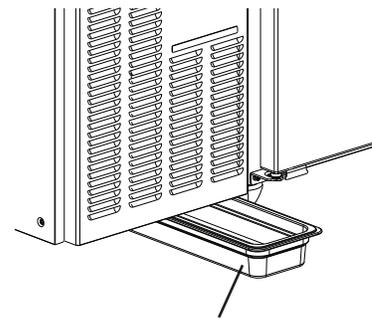
D. Defrost

1. Cabinet Defrost

This unit is preset at the factory to defrost every 6 hours for general conditions, with the first defrost occurring 6 hours after the unit is turned on. Note that the defrost is a heated defrost, and therefore will have a tendency to raise the cabinet temperature. Cabinet temperature is not displayed during defrost; "dF" is displayed in its place. After defrost, there is a 5 minute delay before the compressor will start. Defrost may be initiated manually by holding down the "MANUAL DEFROST" button for 5 seconds.

2. Rail Defrost

Defrost the rail once a week or more often if needed, depending on conditions. To defrost the rail, first remove all pans from the rail and store the contents properly in a refrigerator or freezer. Move the rail cooling switch to the "OFF" position and allow the rail to defrost at room temperature. Do not pour or spray water into the rail area or try to heat the rail. Once the frost has melted, wipe the interior of the rail with a clean, damp sponge or cloth. Empty the rail condensate pan, then replace it in its proper position. See Fig. 10. When reinstalling the pan, make sure to slide it back until it contacts the rear stops.



Rail Condensate Pan

Fig. 10

Set empty pans in place in the rail. Pans must cover the entire rail or the rail will not cool properly. Move the rail cooling switch to the "NORMAL" position and allow the rail to cool down prior to loading it with ingredients. Close the rail cover while waiting for the rail to cool down.

E. Food Storage

1. Cabinet

- This unit is designed only for temporary storage of food. Employ sanitary methods. Use for any other purposes (for example, storage of chemicals or medical supplies such as vaccine and serum) could cause deterioration of stored items.
- Do not block the cabinet air inlet or outlet, otherwise cooling performance may be reduced.
- Do not tightly pack the cabinet with food. Allow some space between items/containers to ensure good air flow. Also allow space between food and interior surfaces.
- Do not put warm or hot food in the cabinet. Let it cool first, or it will raise the cabinet temperature and could deteriorate other food in the cabinet or overload the unit.
- All food should be wrapped in plastic film or packed in a container. Otherwise food may dry up, pass its smell onto other food, cause frost to develop, result in poor unit performance, or increase the likelihood of cross-contamination. Certain dressings and food ingredients, if not stored in containers, may accelerate corrosion of the evaporator, resulting in failure.

2. Rail

- When operating the rail, the entire rail must be covered by rail dividers and pans. Otherwise, the rail will not cool properly.
- Use pans with a depth of up to 6" (15 cm). Do not use damaged pans.
- Only load ingredients that have been pre-chilled to 37°F (3°C) or less.
- The rail is for cooling ingredients while preparing food. When not actively preparing food, the rail cover can be closed and the rail cooling switch moved to the "LOW" position. If not actively preparing food for a long period such as overnight, seal pans with plastic wrap in addition to closing the rail cover and moving the rail cooling switch to the "LOW" position. Alternatively, seal ingredients and store them in a refrigerator or freezer.

F. Safety Devices

1. High Pressure Switch

If pressure on the high-side of the unit exceeds Hoshizaki specifications, a high pressure switch activates and interrupts power to the compressor relay. This shuts down the compressor until the pressure returns to an acceptable level.

2. Compressor Short Cycle Timer

There is a 2-minute minimum off-time for the compressor.

3. Compressor Protector

If combined temperature/amperage value is above the limit specified by the compressor manufacturer, the compressor protector operates independently to turn off the compressor. The compressor protector shuts down the compressor until the temperature/amperage value returns to an acceptable level.

4. Defrost Protection

a) Cabinet

Primary defrost termination is controlled by the defrost thermistor. However, two additional safeties are also present:

- Defrost Time Termination - 1 hour 40 minute maximum
- Defrost Backup Temperature Termination - Controlled by a thermostat that is in-line with the heater and independent of the control board.

b) Rail

For rail defrost information, see "II.D.2. Rail Defrost."

G. Alarm Codes

⚠ WARNING

1. This unit should be disassembled or repaired only by a qualified service technician to reduce the risk of injury, electric shock, or fire.
2. In case of insufficient refrigeration performance, move food into another unit to prevent its deterioration.

If an error occurs, the alarm code and cabinet temperature are displayed in 1-second intervals. When an error occurs, check the alarm code and follow the instructions below.

Alarm Code	Problem	Reset Options
E1	High Temperature Alarm (cabinet only) Cabinet temperature has exceeded the setpoint temperature by 18°F (10°C) for more than x hours. The default value of x is "2".	When the temperature returns to the setpoint range, alarm code "E1" clears. If the temperature does not return to the proper range, and obvious corrections such as closing doors/drawers and cleaning the air filter and/or condenser do not bring the temperature back in range, call a qualified service technician.
E2	Low Temperature Alarm (cabinet only) Cabinet temperature has remained below the setpoint by 9°F (5°C) for more than y hours. The default value of y is "1".	When the temperature returns to the setpoint range, alarm code "E2" clears. If the temperature does not return to the proper range, and obvious corrections do not bring the temperature back in range, call a qualified service technician.
E3	Defrost Alarm (cabinet only) Cabinet defrost has taken longer than 1 hour 40 minutes. The control board has terminated defrost.	Call a qualified service technician. Note that E3 may alternate with "dF" instead of the temperature.
E7	Clogged Filter Alarm (high condenser temperature) Condenser temperature is outside of normal operating range. The condenser air filter and/or condenser require cleaning.	Clean the air filter and/or condenser. Allow time for the sensor to reset, then move the power switch to the "OFF" position and then back to "ON" again to clear the alarm. If this alarm occurs frequently, call a qualified service technician. Failure to take action when this alarm activates could result in damage to the compressor.
E8	Defrost Temperature Sensor Malfunction Alarm (defrost thermistor) Defrost temperature sensor has failed.	Call a qualified service technician.
E9	Clogged Filter Sensor Malfunction Alarm (condenser thermistor) Clogged filter sensor has failed.	Call a qualified service technician.
EA	EEPROM Write Alarm Control board has failed.	Call a qualified service technician.
ED	EEPROM Verification or Read Alarm Control board has failed.	Call a qualified service technician.

H. Cooling Performance

Be sure the unit is properly installed and located for optimum cooling performance. If cooling performance is not at its optimum level, check the following items:

1. Cabinet

- Door(s)/drawer(s) opened too often.
- Door(s)/drawer(s) left open. Close.
- Too tightly packed with food or cabinet air inlet/outlet blocked. Allow some space between items/containers to ensure good air flow.
- Warm or hot food inside. Take it out until it cools down more.
- Ambient temperature too high. Avoid installation near high heat producing equipment or exposure to direct sunlight.
- Cabinet temperature setting too high. Readjust to a lower temperature. See "II.C. Cabinet and Rail Temperature."
- Unit in defrost cycle. The cabinet temperature may rise temporarily during defrost cycle, but this will not affect the food inside.

2. Rail

- Pans and rail dividers not in place. Pans must cover the entire rail or the rail will not cool properly.
- Warm or hot ingredients inside. Only load ingredients that have been pre-chilled to 37°F (3°C) or less.
- Ambient temperature too high. Avoid installation near high heat producing equipment or exposure to direct sunlight.
- Rail temperature setting too high. Readjust to a lower temperature. See "II.C. Cabinet and Rail Temperature."
- Rail cover open when not actively preparing food. When not actively preparing food, close the rail cover.

I. Condensation

In the event condensation develops on the unit exterior, check the following items:

- Door(s)/drawer(s) left open. Close.
- Ambient humidity too high. Wipe off occasionally.

III. Cleaning and Maintenance Instructions

A. Cleaning

⚠ WARNING

1. Before cleaning the unit, move the power switch to the "OFF" position and unplug the unit to prevent electric shock by unexpected entrance of water into the unit or injury by moving parts.
2. Before cleaning the unit, move all food into another clean refrigerator or freezer.
3. Do not splash water directly onto the unit. This might cause short circuit, electric shock, corrosion, or failure.
4. Do not pour or spray water into the rail area. The rail drain is for condensate only. Excessive liquid in the rail area could result in electric shock. Be sure to keep the fans dry.
5. Metal edges can cause cuts. Use care and wear protective gloves when cleaning.
6. Keep hands clear of fan shrouds when the unit is operating. The rotating fans might cause injury.
7. Before using a sanitizer such as inert soap and sodium hypochlorite (chlorine bleach), thoroughly read the manufacturer's instructions on its proper usage.

IMPORTANT

1. To prevent damage to the painted or plastic surfaces, do not use the following: thinner, benzine, alcohol, petroleum, soap powder, polishing powder, alkaline cleaner, acid, scouring pad, and especially those strong cleaners for use on a ventilating fan or a cooking range. Also, to prevent corrosion, do not use a chlorine bleach such as sodium hypochlorite on the stainless steel surfaces.
2. Use a clean cloth for cleaning.

1. Work Surface

Clean the cutting board as often as necessary to maintain a clean, sanitary work surface. Also clean the worktop space underneath the cutting board as often as necessary to maintain a clean, sanitary surface. After cleaning, be sure to properly secure the cutting board with the brackets on the ends of the worktop. See Fig. 11. Slide the brackets down onto the cutting board and tighten the screws.

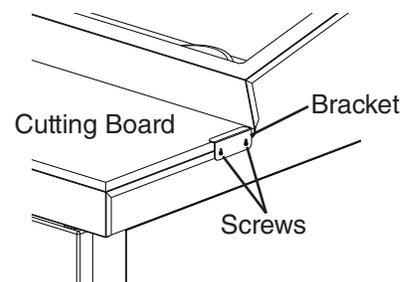


Fig. 11

⚠ WARNING

Make sure the cutting board is secure. Otherwise, the cutting board could come off and cause injury.

2. Rail and Rail Cover

Spills and splashes should be wiped up promptly to avoid unpleasant odors. Wipe the interior of the rail and the rail cover occasionally with a clean, damp sponge or cloth containing a neutral cleaner. Do not pour or spray water into the rail area.

WARNING

1. Be sure to support the rail cover when cleaning. Otherwise, the rail cover could close suddenly and cause injury.
2. Metal edges can cause cuts. Use care and wear protective gloves when cleaning.

3. Exterior

Wipe the exterior occasionally with a clean, soft cloth. Use a damp cloth containing a neutral cleaner to wipe off oil or dirt build up.

4. Cabinet Interior

Spills and splashes should be wiped up promptly to avoid unpleasant odors. The cabinet interior should be cleaned periodically with a mild soap or detergent and warm water.

5. Door/Drawer Gaskets

Door/drawer gaskets should be cleaned regularly with mild soap and warm water to remove dirt and grease.

6. Shelves (if applicable)

Remove and clean regularly.

7. Drawers (if applicable)

The drawers can be removed for cleaning either individually or as an entire assembly.

- To remove an individual drawer, first remove all food from the drawer. Pull the drawer out to its fully extended position and lift up on the handle to disengage the drawer. Before removing the drawer, carefully support the rear and front of the drawer and then slowly remove it from the cabinet.
- To remove the drawer frame assembly, first remove the drawers and then remove the fasteners in the thermal break and in the rear of the cabinet. Carefully slide the frame out of the cabinet, making sure not to damage the thermal break. Reinstall in the reverse order, making sure not to overtighten the screws in the thermal break.
- To remove the drawer slide (center slide containing rollers) for cleaning, rotate the top of the slide away from the frame while the slide is completely inside the cabinet. Drawer slides do not require lubrication, but slides should be kept clean and free of food.

Note: Drawer slides are dishwasher safe.

B. Maintenance

1. Rail Condensate Pan

The rail condensate pan collects condensate water from the rail. Empty the pan as often as necessary depending on conditions. Clean the pan at least once a month with a clean, damp sponge or cloth containing a neutral cleaner. When reinstalling the pan, make sure to slide it back until it contacts the rear stops.

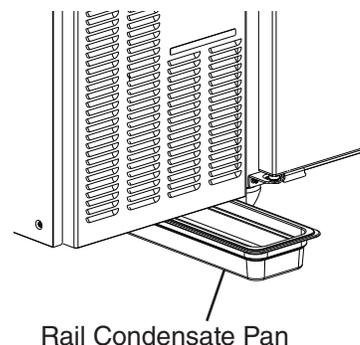


Fig. 12

2. Air Filter

The plastic mesh air filter (located behind the front panel) removes dirt and dust from the air, and keeps the condenser from getting clogged. As the air filter gets clogged, the unit's performance will be reduced. Check the air filter at least twice a month. When clogged, use warm water and a neutral cleaner to wash the air filter.

3. Condenser

Check the condenser once a year, and clean if required by following the steps below. More frequent cleaning may be required depending on location.

⚠ WARNING

1. Before cleaning the condenser, move the power switch to the "OFF" position and unplug the unit to prevent electric shock or injury by moving parts.
2. Before cleaning the condenser, move all food into another clean refrigerator or freezer.
3. Condenser fins are sharp. Use care when cleaning.

- 1) Remove and clean the air filter as outlined in "III.B.2. Air Filter."
- 2) Use a brush attachment on a vacuum cleaner to gently clean the condenser fins. Do not use too much force, otherwise the fins could be damaged.
- 3) Replace the air filter in its proper position.

4. Power Supply Connection

If the plug or power cord is damaged, contact your local Hoshizaki service representative immediately and ask for repairs.

All other maintenance or service on this unit should be performed in accordance with the Hoshizaki Service Manual by a qualified service technician.

C. Shutdown and Long Storage

⚠ WARNING

1. When preparing the unit for long storage, prevent the doors/drawers from closing to reduce the risk of children getting trapped.
2. To reduce the risk of electric shock, do not touch the attachment plug or switches with damp hands.
3. To unplug the unit, be sure to pull the attachment plug and do not jerk the power cord. It could be damaged and cause fire or electric shock.
4. When shutting down the unit for more than one week, move the power switch to the "OFF" position and unplug the unit.
5. Do not plug in/unplug the unit to start/stop operation. Make sure the power switch is in the "OFF" position before plugging in or unplugging the unit to help reduce the risk of electric shock.

- 1) Before shutting down the unit, move food into another refrigerator or freezer.
- 2) Open the front panel and move the power switch to the "OFF" position. The unit will shut down.
- 3) Unplug the unit.
- 4) Close the rail cover and the front panel.

IMPORTANT

When preparing the unit for long storage, perform the cleaning and maintenance operations detailed in "III. Cleaning and Maintenance Instructions."

HOSHIZAKI AMERICA, INC.

618 Hwy. 74 S., Peachtree City, GA 30269 USA | TEL (770) 487-2331 | FAX (770) 487-3360 | www.hoshizaki.com | 91A3EQ10C