



## Vertical Open Air Merchandisers (MACs)

### Models:

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193MAC26HCB

193MAC48HCB

193MAC26HCW

193MAC48HCW

193MAC36HCB

193MAC36HCW

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### Note:

Please read the manual thoroughly prior to equipment setup, operation, and maintenance.

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## Safety

### Warning

**DANGER** – RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT USED. TO BE REPAIRED ONLY BY TRAINED SERVICE PERSONNEL. DO NOT PUNCTURE REFRIGERANT TUBING.

**PELIGRO** – RIESGO DE INCENDIO O EXPLOSION. REFRIGERANTE INFLAMABLE UTILIZADO. PARA SER REPARADO SOLAMENTE POR PERSONAL DE SERVICIO CALIFICADO. NO PINCHAR LA TUBERÍA REFRIGERANTE.

**DANGER** – RISQUE DE FEU OU D'EXPLOSION. LE FRIGORIGÈNE EST INFLAMMABLE. CONFIER LES RÉPARATIONS À UN TECHNICIEN SPÉCIALISÉ. NE PAS PERFORER LA TUBULURE CONTENANT LE FRIGORIGÈNE.

**CAUTION** – RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT USED. CONSULT REPAIR MANUAL/ OWNER'S GUIDE BEFORE ATTEMPTING TO SERVICE THIS PRODUCT. ALL SAFETY PRECAUTIONS MUST BE FOLLOWED.

**ATENCIÓN** – RIESGO DE INCENDIO O EXPLOSIÓN. REFRIGERANTE INFLAMABLE UTILIZADO. CONSULTE EL MANUAL DE REPARACIÓN / GUÍA DEL PROPIETARIO ANTES DE INTENTAR DAR SERVICIO A ESTE PRODUCTO. DEBEN CUMPLIR CON TODAS LAS PRECAUCIONES DE SEGURIDAD.

**ATTENTION** – RISQUE DE FEU OU D'EXPLOSION. LE FRIGORIGÈNE EST INFLAMMABLE. CONSULTER LE MANUEL DU PROPRIÉTAIRE/GUIDE DE RÉPARATION AVANT DE TENTER UNE RÉPARATION. TOUTES LE MESURES DE SÉCURITÉ DOIVENT ÊTRE RESPECTÉES.

**CAUTION** – RISK OF FIRE OR EXPLOSION DUE TO PUNCTURE OF REFRIGERANT TUBING; FOLLOW HANDLING INSTRUCTIONS CAREFULLY. FLAMMABLE REFRIGERANT USED.

**ATENCIÓN** – RIESGO DE INCENDIO O EXPLOSIÓN DEBIDO A LA PERFORACION DE LA TUBERÍA REFRIGERANTE; SIGA LAS INSTRUCCIONES DE MANIPULACIÓN CON CUIDADO. REFRIGERANTE INFLAMABLE UTILIZADO.

**ATTENTION** – RISQUE DE FEU OU D'EXPLOSION SI LA TUBULURE CONTENANT LE FRIGORIGÈNE EST PERFORÉE; SUIVRE LES INSTRUCTIONS DE MANUTENTION AVEC SOIN. LE FRIGORIGÈNE EST INFLAMMABLE.

**CAUTION** – RISK OF FIRE OR EXPLOSION DUE TO FLAMMABLE REFRIGERANT USED. FOLLOW HANDLING INSTRUCTIONS CAREFULLY IN COMPLIANCE WITH LOCAL GOVERNMENT REGULATIONS.

**ATENCIÓN** – RIESGO DE INCENDIO O EXPLOSIÓN DEBIDO A REFRIGERANTE INFLAMABLE UTILIZADO. SIGA LAS INSTRUCCIONES DE MANIPULACIÓN CON CUIDADO CONFORME A LAS REGLAS DE LA MUNICIPALIDAD.

**ATTENTION** – RISQUE DE FEU OU D'EXPLOSION SI LE FRIGORIGÈNE EST INFLAMMABLE. SUIVRE LES INSTRUCTIONS DE MANUTENTION AVEC SOIN CONFORMÉMENT AUX RÈGLEMENTATION GOUVERNEMENTALE LOCAUX.

## Installation

**Please read this manual thoroughly prior to equipment setup, operation, and maintenance.**

**This unit is intended for use in a temperature-controlled environment less than 75°F and 55% relative humidity. Malfunction due to improper conditions is not covered under warranty.**

**IMPORTANT** – Please Read Before Installation:

- If the unit has recently been transported on its side, please let the unit stand upright for a minimum of 24 hours before plugging it in.
- Make sure the unit has reached the desired temperature before loading the unit with products. This unit is meant for keeping cold products cold, not chilling warm products.
- Make sure all accessories are installed (shelves, shelf clips, etc.) before plugging in the unit.
- Do not attempt to remove or repair any component of the unit. Consult an authorized service technician for servicing / repair.
- Do not stand inside the unit.
- Please read through this manual in its entirety.
- This refrigerator is designed to perform in a temperature-controlled environment at 55% relative humidity. The unit should be located away from doors, air ducts, and fans that could disrupt air flow and negatively impact performance.

## Cabinet Location Guidelines

- Install the unit on a strong and leveled surface.
  - If the surface is uneven, the unit may be noisy.
  - The unit may malfunction if the surface is uneven.
- Install the unit in an indoor, well ventilated area away from doors, air ducts, and fans.
  - For best performance, maintain 6" of clearance on the back of the unit at all times.
  - Do not use outdoors. For indoor use only.
  - Avoid direct sunlight.
- Avoid installation in a high humidity and / or dusty area.
  - High humidity can cause the unit to rust and may decrease efficiency.
  - Dust collected on the condenser coil may cause unit to malfunction.
  - Malfunction due to high ambient temperatures, humidity, or improperly maintained condenser coil will void the warranty.
- Select a location away from heat and moisture-generating equipment.
  - High ambient temperatures may cause the compressor to malfunction.
  - Malfunction due to high ambient temperatures and humidity will void the warranty.

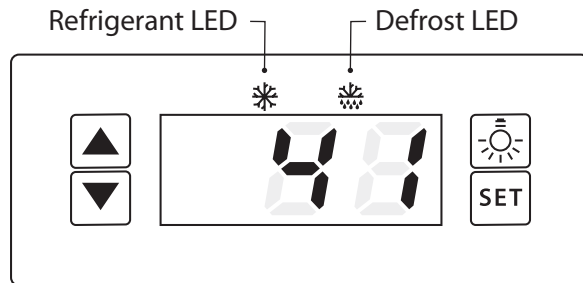
Position the merchandiser at its final location before removing the shipping skid. There are four bolts at the bottom of the merchandiser that secure the shipping skid. Keep the unit lifted, remove all four bolts to remove the skid.

## Electrical

- Please ensure that the required voltage is being supplied at all times.
- The unit should be plugged into a grounded and properly-sized electrical outlet with appropriate over-current protection. Please refer to the electrical requirements on the unit's nameplate.
- The unit should have its own dedicated outlet.
- Do not use extension cords.
- Ensure the unit is not resting on or against the electrical cord.
- If the unit is not in use for a long period of time, please unplug the unit from the outlet.
- To avoid shock and fire hazards, do not plug in or unplug the unit with wet hands.
- After unplugging the unit, wait at least 10 minutes before plugging it back in. Failure to do so could cause damage to the compressor.

## Use and Caution

Your new refrigerator is already factory-set to run at optimum temperatures for food safety and should require no adjustments.



### Digital Temperature Controller

#### Front Panel Operation

1. Set temperature:


Press **SET** button, the set temperature is displayed.

Press **▲** or **▼** to modify the displayed value.

Press **SET** button, to exit the adjustment and display the unit's current temperature.

2. If no buttons are pressed within 10 seconds, the unit's current temperature will be displayed.

3. Lights: Press  button to turn lights 'on' or 'off'.

Manual start/stop defrost: Press  button and hold for 6 seconds to defrost or stop defrost.

4. Refrigerant LED: When the compressor is running, the LED is on; when the refrigerator temperature is constant, the LED is off. During the delay start, the LED flashes.
5. Defrost LED: during the defrost cycle, the LED is on; when it stops defrosting, the LED is off. During the delayed display of defrost, the LED flashes.

## Defrost System

Refrigerator coils are kept below the freezing point (32 degrees Fahrenheit). During compressor downtime, the evaporator fan continues to circulate air through the evaporator coil. This air circulation raises the coil temperature above the freezing point, melting any accumulated frost. Run-off water is drained into the evaporator pan and evaporated. Automatic defrost timers automatically initiate at pre-set intervals and for a pre-determined duration.

To use the merchandiser more safely and energy efficiently, it is strongly recommended that the drainage pipe behind the unit is connected to a physical drainage line. The drip tray may flood at high humidity circumstance! If you find the unit is leaking water, please check if the drip tray floods. Please connect with drainage outlet to avoid flooding.

## Safety/Warning

Please pay close attention to the safety notices in this section. Disregarding these notices may lead to serious injury and/or damage to the unit.

### ATTENTION

- To minimize shock and fire hazards, be sure not to overload outlet. Please designate one outlet for your unit.
- Do not use extension cords.
- Do not put your hands under the unit while it is being moved.
- When the unit is not in use for a long time, please unplug the unit from the outlet.
- After unplugging the unit, wait at least 10 minutes before plugging it back in. Failure to do so could cause damage to the compressor.

### UNPLUG CORD

- To minimize shock and fire hazards, please do not plug or unplug the cord with wet hands.
- During maintenance and cleaning, please unplug the unit.

### PROPER GROUNDING REQUIRED

- To minimize shock and fire hazards, make sure that the unit is properly grounded.

### WARNING

- Do not attempt to remove or repair any component unless instructed by factory.
- Make sure that the unit is not resting on or against the electrical cord and plug.
- To minimize personal injury, do not hang on the doors.
- Do not store any flammable and explosive gas or liquids inside the unit.
- Do not attempt to alter or tamper with the electrical cord.

## Operation / Maintenance

**DISCONNECT THE POWER CORD BEFORE CLEANING ANY PARTS OF THE UNIT.**

**NOTE:** We strongly recommend that any servicing be performed by an authorized service technician.

### Loading Product

- Do not block the air vents.
- Make sure there is at least 4" of clearance from the evaporator.
- Ensure all shelves are sitting level and properly secured before loading products.
- Do not store flammable and explosive gas or liquids inside the unit.

### Cleaning the Condenser Coil

- For efficient operation, keep the condenser surface free of dust, dirt, and lint.
- We recommend cleaning the condenser coil at least once per month.

**A dusty condenser may lead to high energy consumption, less cooling effectiveness, and compressor damage.**

#### Condenser Coil Cleaning Instructions

The condenser coil is located on the back behind the panel.

1. Disconnect the electrical power from the unit.
2. Remove the back cover and base cover with screwdriver.
3. Using a soft brush and/or vacuum, remove the dirt, lint, etc. from the finned condenser coil in a vertical direction.
4. Clean the condenser with a commercial condenser coil cleaner, available from any kitchen equipment retailer. Ex. Nobel Chemical Tech Line.
5. When finished, be sure to reinstall the back cover and base cover.
6. Reconnect the electrical power to the unit.

### Cleaning the Fan Blades and Motor

- If necessary, clean the fan blades and motor with a soft cloth.
- If it is necessary to wash the fan blades, cover the fan motor to prevent moisture damage.

### Cleaning the Interior of Unit

- When cleaning the cabinet interior, use a solvent of warm water and mild soap.
- Do not use steel wool, caustic soap, abrasive cleaners, or bleach that may damage the interior finish.
- Periodically remove the shelves and shelf brackets from the unit, and clean them with a mild soap and warm water.



## Troubleshooting

Problem	Possible Solution
The Unit is Making Noise Under the Bottom Shelf	<b>Fan blade is broken</b> Replace fan blade.
The Unit is not Cooling	<b>Unit is turned off</b> Turn unit on. <b>Defrost cycle is running</b> End defrost cycle. <b>Refrigerant leaking</b> Contact a licensed service technician.
High Cabinet Temperature Caused by Weak Air Flow	<b>Evaporator coil is frosted over</b> Run a manual defrost cycle. <b>Fan is damaged</b> Replace the fan. <b>The set point on the controller is too high</b> Set the controller to a lower temperature. The set temperature is the lowest temperature the refrigerator will reach. <b>Air flow is blocked by product</b> Rearrange or remove product to allow for complete air flow.
High Cabinet Temperature with Normal Air Flow	<b>Refrigerant leaking</b> Contact a licensed service technician. <b>The set point on the controller is too high</b> Set the controller to a lower temperature. The set temperature is the lowest temperature the refrigerator will reach. <b>Expansion valve failed</b> Contact a licensed service technician. <b>The air curtain is being disturbed by strong air flow.</b> Make sure the cabinet is located away from doors, windows, and other air vents. <b>High ambient temperature or humidity</b> This refrigerator is designed to perform in temperature-controlled environment up to 75°F and 55% relative humidity.

## Troubleshooting

Problem	Possible Solution
Cabinet Temperature is Fluctuating	<p><b>Condenser coil is dirty</b> Clean the condenser coil.</p> <p><b>Unit has improper air flow</b> Make sure the unit has at least 6" of clearance on the back and that the front vents are not obstructed.</p> <p><b>Expansion valve blocked or failed</b> Contact a licensed service technician.</p> <p><b>Temperature controller failed</b> Contact a licensed service technician.</p>