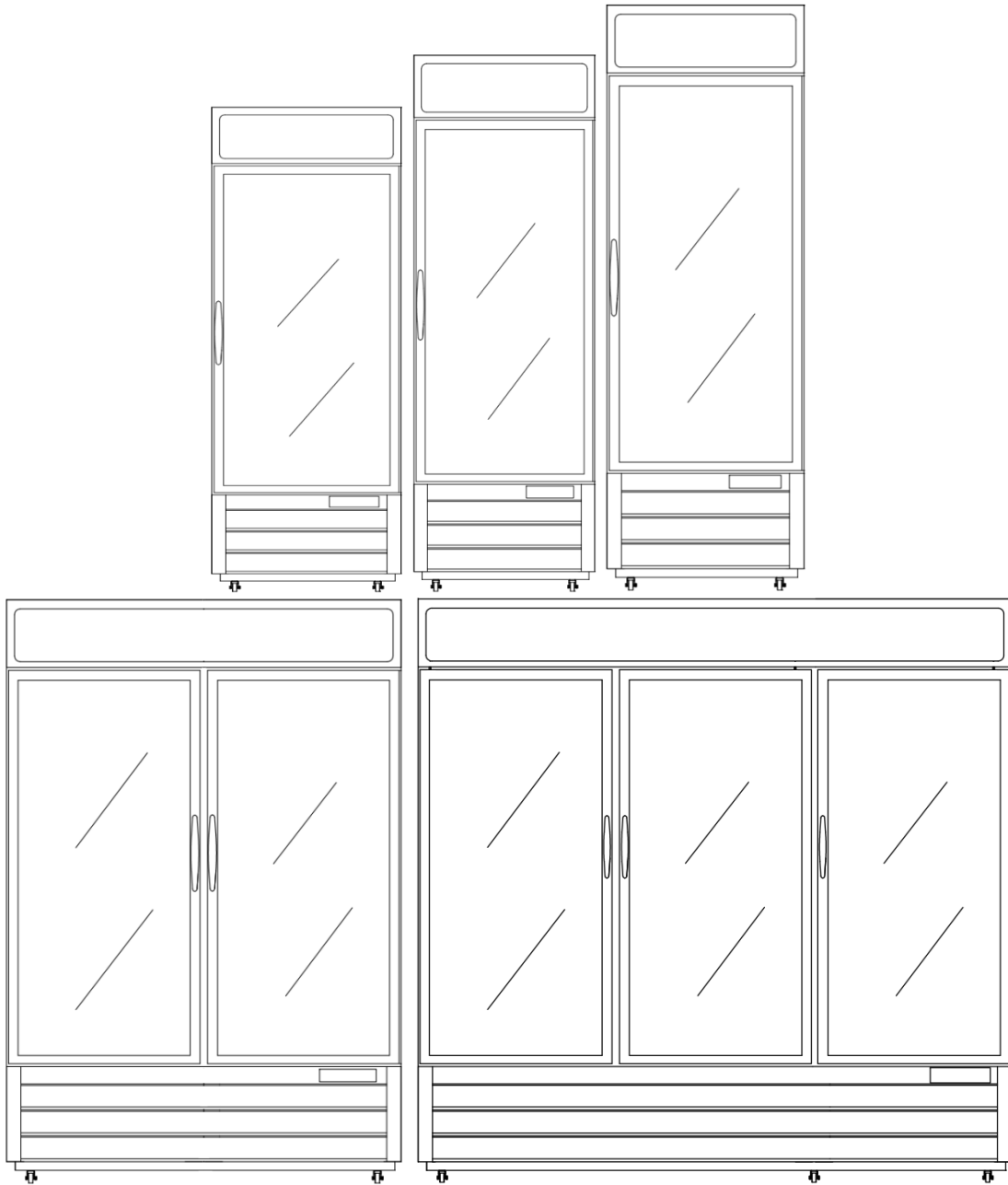


# NORIOTA

## INSTALLATION AND INSTRUCTION MANUAL



**NMR SERIES  
GLASS DOOR MERCHANDISER REFRIGERATORS**

**NMF SERIES  
GLASS DOOR MERCHANDISER FREEZERS**

## QUICK START AND KEY OPERATING REMINDERS

Before operating this equipment, review the following key points to help ensure proper performance, product quality, and long service life.

### Installation and Startup

- Install indoors only in a well-ventilated area.
  - Maintain required clearances:
    - Rear: at least 51 mm (2 in)
    - Top: at least 305 mm (12 in)
  - Ensure the unit is level and stable. Engage front caster brakes.
  - After installation, allow the unit to reach operating temperature before loading product.
- 

### Product Loading and Airflow

- Do not block the top rear air discharge or lower return airflow path.
  - Do not place product directly against the rear interior wall.
  - Do not pack the cabinet so full that air cannot circulate.
  - Load only properly chilled (refrigerators) or properly frozen (freezers) product.
  - Do not place hot or warm product into the cabinet.
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### Daily Operation

- Minimize door openings and avoid leaving doors open.
  - Temporary temperature fluctuations are normal during loading, door openings, and defrost cycles.
  - Freezer models are more sensitive to humidity and frequent door openings.
- 

### Cleaning and Maintenance

- Clean condenser coil every 90 days (30 days in dirty environments).
  - Keep door gaskets clean and properly sealed.
  - Keep interior surfaces and glass clean for visibility and performance.
  - Inspect airflow paths regularly and correct product placement as needed.
- 

### When to Contact Service

Contact qualified service personnel if:

- The unit does not reach or maintain temperature
  - Excessive frost or condensation persists
  - Water accumulation is observed
  - Unusual noise or vibration occurs
  - Alarm conditions do not clear
- 

### Important

This manual contains important safety, installation, and operating instructions. Read the full manual before installing or operating this equipment.

### Need Help

For product support, manuals, or service assistance:



Website  
[www.noriota.ca](http://www.noriota.ca)



Phone  
1-877-NORIOTA



Email  
[support@noriota.ca](mailto:support@noriota.ca)

Please have your model and serial number available when contacting support.

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## INTRODUCTION

Thank you for choosing NORIOTA commercial glass door merchandisers. This user manual provides important information for the safe installation, operation, and maintenance of NORIOTA commercial glass door merchandiser refrigerators and freezers. These units are designed and manufactured for commercial foodservice, retail display, and light commercial applications, and are intended to hold properly loaded food and beverage products at appropriate storage and display temperatures when installed and operated in accordance with this manual.

This manual applies to NORIOTA glass door merchandiser models, including both refrigerator and freezer configurations, and both swing door and sliding door models where applicable. Model-specific specifications may vary by model. Refer to the unit rating label and current product documentation for model-specific technical information.

Unlike refrigeration intended primarily for back-of-house cold storage, glass door merchandisers are commonly used in customer-facing or high-access environments where product visibility, frequent door openings, ambient conditions, and loading practices can have a greater effect on temperature recovery, frost accumulation, condensation, and overall performance. For that reason, proper installation, airflow management, loading practice, and routine maintenance are especially important for merchandiser equipment.

### Important Information for Owners and Operators

- Read this manual completely before installing or operating the equipment.
- Keep this manual in a readily accessible location for reference by operators and service personnel.
- Installation, electrical connection, and servicing should be performed by qualified personnel in accordance with applicable local codes and regulations.
- Improper installation, use, loading practice, or maintenance may result in equipment damage, reduced performance, temperature instability, increased frost or condensation, or personal injury.
- Glass door merchandisers depend on proper airflow inside the cabinet and adequate ventilation around the cabinet. Blocking air passages, overloading product, or operating in unsuitable ambient conditions may reduce performance and increase service issues.
- Freezer merchandisers are especially sensitive to humidity, frequent door openings, and warm product loading. Understanding normal operating behaviour will help reduce unnecessary service calls and improve product holding performance.

### Intended Use

NORIOTA glass door merchandiser refrigerators and freezers are designed and manufactured for commercial foodservice, retail display, and light commercial environments, including convenience stores, cafes, restaurants, bars, grocery and specialty food retail, commissaries, and similar applications. This equipment is designed for indoor use only and is intended for the display and storage of properly loaded, properly packaged food and beverage products under normal commercial operating conditions.

These units are designed to combine product visibility with refrigerated or frozen holding performance. Because glass door merchandisers are commonly installed in customer-facing or high-access environments, operating conditions such as ambient temperature, humidity, door opening frequency, product loading, and airflow management can materially affect performance. Proper installation, product loading, ventilation, and routine maintenance are required for safe operation and reliable temperature control.

In some cases, this equipment may be installed in non-commercial settings. When installed outside of a commercial foodservice or retail environment, the owner is responsible for ensuring that the installation location, electrical supply, ventilation, ambient conditions, and operating practices are suitable for the equipment and comply with all applicable local codes and regulations.

This equipment is not intended for outdoor use or for use as a residential household appliance, and it must not be used in any manner inconsistent with the instructions and limitations provided in this manual. Improper use or installation may result in reduced performance, excessive frost or condensation, equipment damage, or unsafe operating conditions.

### Residential Installation Considerations

This equipment is designed and manufactured for commercial foodservice, retail display, and light commercial environments and is not intended as a residential household appliance. In some cases, the unit may be installed in residential or other non-commercial settings. When installed outside of a commercial environment, differences in ventilation, ambient temperature, humidity, electrical supply, usage patterns, and installation constraints may

## **INTRODUCTION (continued)**

affect performance, operation, and service life.

Residential or non-commercial installations must meet all requirements outlined in this manual, including airflow clearances, electrical specifications, leveling, ventilation, and environmental conditions. Installation must comply with all applicable local building, electrical, and safety codes. The owner and installer are responsible for verifying that the installation location, utilities, and operating conditions are suitable for the equipment.

This equipment may operate at higher noise levels, experience more noticeable temperature recovery times, and reject more heat than typical residential appliances. These characteristics are normal for commercial merchandiser equipment and do not indicate a defect. Glass door merchandisers, especially freezer models, may also be more sensitive to humidity, frequent door openings, and warm product loading than residential appliances.

Improper installation, inadequate ventilation, unsuitable ambient conditions, or operation outside recommended use conditions may result in reduced performance, excessive frost or condensation, equipment damage, or unsafe operating conditions, and may affect warranty coverage.

### **Manual Scope and Updates**

Please read this manual in its entirety before installing, operating, or servicing this equipment.

This manual contains important safety information and operating instructions. Reviewing these instructions will help you understand proper use of the equipment, recognize potential hazards, and reduce the risk of injury or damage.

Always follow the safety instructions and procedures outlined in this manual. Failure to do so may result in personal injury, equipment damage, or unsafe operating conditions.

This manual reflects the configuration and specifications of the equipment at the time of publication. NORIOTA reserves the right to make changes to product design, specifications, or documentation without notice. While reasonable efforts are made to ensure the accuracy of the information provided, users should always follow applicable local codes and regulations and consult qualified professionals when installing or servicing the equipment.

## RECEIVING AND INSPECTING THE EQUIPMENT

Carefully inspect the equipment immediately upon delivery and before signing the carrier's delivery receipt.

Inspect the exterior packaging for visible signs of damage, including dents, punctures, crushed corners, broken glass, pallet damage, or evidence of mishandling. If any damage is observed, note the damage clearly on the delivery receipt and request that the carrier acknowledge it. Retain a copy of the signed delivery receipt for your records.

After the unit has been delivered and unpacked, inspect the equipment itself for concealed damage. Check the cabinet exterior, glass, doors, interior, shelving, and visible components for shipping-related damage or missing parts. If concealed damage is discovered, notify the delivering carrier promptly and request an inspection. All freight damage claims must be filed with the carrier, as shipping damage is the responsibility of the carrier and is not covered under warranty.

Do not install, load, or place the unit into service until the inspection process is complete. Retain all packaging materials until any freight damage claim has been resolved or carrier inspection has been waived.

### Important Handling Notes

- Do not remove the unit from the delivery location or install the equipment before completing the inspection.
- If the carrier is unable or unwilling to allow adequate time for inspection, note this on the delivery receipt before signing.
- Retain all packaging materials until the inspection process is complete.

### Reporting Damage

- **Visible damage:** Must be noted on the delivery receipt at the time of delivery.
- **Concealed damage:** Must be reported to the carrier immediately upon discovery.

Failure to follow these procedures may affect the ability to file a freight damage claim.

### Before Installation

Confirm that:

- The model number matches your purchase order.
- The unit has not been damaged during transit.
- All accessories and components are present.

Do not proceed with installation until the equipment has been fully inspected and any issues have been resolved.

### Serial Number Information

The serial number is located inside the cabinet, on the interior wall near the upper portion of the cabinet. Always have the model number and serial number available when contacting NORIOTA or an authorized service provider for parts, service, or technical support.

## SAFETY INFORMATION

This section contains important safety information intended to reduce the risk of personal injury, property damage, or equipment damage. Read and follow all safety instructions before installing, operating, or servicing this equipment.



This is the Safety Alert Symbol. This symbol alerts you to potential hazards that can injure or kill you and others. All safety messages will follow the Safety Alert Symbol and either the words **“DANGER”**, **“WARNING”** or **“CAUTION”**.

**DANGER** means that failure to heed this safety statement may result in death or severe personal injury.

**WARNING** means that failure to heed this safety statement may result in extensive product damage, serious personal injury, or death.

**CAUTION** means that failure to heed this safety statement may result in minor or moderate personal injury, or property or equipment damage.

All safety messages identify the hazard, explain how to reduce the risk, and describe the possible consequences if instructions are not followed.

## SAFETY INFORMATION (continued)

### General Safety Instructions

- This equipment must be installed, operated, and maintained in accordance with this manual.
- Installation and servicing must be performed by **qualified personnel** familiar with commercial refrigeration equipment and in accordance with applicable codes.
- Use this equipment **indoors only**.
- Do not use mechanical devices, sharp tools, or other means to accelerate defrost unless specifically recommended by NORIOTA.
- Do not use this equipment for purposes other than its intended use.
- Do not operate the unit if it has been damaged, is malfunctioning, or is not operating properly.
- Do not modify, remove, or bypass any safety devices or factory-installed components.
- This equipment is not intended for use by children or by persons unable to operate it safely without proper supervision and instruction.

### Flammable Refrigerant Safety



#### DANGER

Fire or Explosion

- This unit contains **R290 (propane) refrigerant**, which is flammable.
- Do not puncture, cut, or damage refrigeration tubing.
- Do not use mechanical devices or sharp tools to remove ice or frost.
- Keep open flames, sparks, and ignition sources away from the unit.
- Servicing of the refrigeration system must be performed by **qualified service personnel** only.
- Failure to follow these instructions may result in fire, explosion, or serious injury.

### Electrical Safety



#### WARNING

Electric Shock Hazard

- This equipment must be **properly grounded** in accordance with applicable electrical codes.
- Do not remove, cut, or bypass the grounding prong on the power cord.
- Do not use extension cords, adapters, or power strips with this equipment.
- Ensure the electrical supply matches the voltage, frequency, and phase specified on the unit rating label.
- Do not operate the unit with a damaged power cord or plug.
- Disconnect power before cleaning, servicing, or performing maintenance.
- Adjusting temperature controls does not disconnect electrical power. Disconnect power at the circuit breaker or by unplugging the unit before servicing.

Failure to follow electrical safety instructions may result in electric shock, fire, serious injury, or death.



#### CAUTION

Equipment Protection

- Allow at least 10 minutes after unplugging the unit or after a power outage before reconnecting power. This delay allows system pressures to equalize and prevents compressor damage. Failure to do so may result in compressor damage.
- Ensure the unit is not resting on, pinching, or straining the power cord.

### Handling and Installation Safety



#### WARNING

Tip-Over and Injury Hazard

- The unit is heavy and may tip if not handled correctly.
- Do not lift or move the unit by doors, panels, shelving, or internal components.
- Use appropriate material handling equipment and sufficient personnel (2 or more people) when moving or positioning the unit.
- Do not attempt to lift or move the unit without assistance.

## SAFETY INFORMATION (continued)

- Ensure the unit is placed on a **level, stable surface** capable of supporting the fully loaded weight of the unit.
- Level the unit using the adjustable feet or casters as instructed.
- Do not install the unit in an area subject to excessive moisture, standing water, or outdoor conditions.

Improper handling or installation may result in personal injury, equipment damage, or unstable operation.

### Operating Safety



#### WARNING

Injury Hazard

- Do not climb on, stand on, or use shelving as a ladder.
- Keep all ventilation openings clear of obstruction at all times.
- Do not block air circulation around or inside the unit.
- Do not store explosive, flammable, or hazardous materials inside the equipment.
- Do not stand on the unit or place heavy objects on top of it.
- Do not allow children or unauthorized persons to operate, access, or play around the equipment.



#### CAUTION

Cold Surface

- Avoid touching interior surfaces with wet or damp hands. Extremely cold surfaces may cause skin to stick.

### Service and Maintenance Safety



#### WARNING

Servicing Hazard

- Disconnect power before servicing or performing maintenance.
- Servicing must be performed by **qualified service personnel** only.
- Do not attempt to repair, modify, or disassemble the unit unless properly trained and authorized.
- Use only approved replacement parts of the correct type and rating.
- Refrigeration system components must be replaced only with like components by **qualified service personnel**.

Improper servicing may result in injury, equipment damage, unsafe operating conditions, or voiding of warranty coverage.

### Modification and Misuse

- Do not modify the unit or its components.
- Do not remove panels, guards, or safety devices.
- Do not use the equipment in any manner inconsistent with this manual.

Unauthorized modification or misuse may create hazardous conditions and is not covered under warranty.

### Save These Instructions

Retain this manual for future reference and provide it to any subsequent owner, installer, or service personnel.

### Final Safety Reminder

Failure to follow the safety instructions and warnings in this manual may result in serious injury, death, or property damage, or unsafe operating conditions. Always operate and service this equipment in accordance with applicable codes, regulations, and accepted safety practices.

## IMPORTANT SAFEGUARDS

The following safeguards are provided to reduce the risk of electric shock, fire, injury, equipment damage, or improper disposal. Read and follow all instructions carefully.

### Electrical Connection



**WARNING**

Electric Shock Hazard

Do not, under any circumstances, cut, remove, or bypass the third grounding prong from the power cord. For personal safety, this unit must be properly grounded.

This unit is equipped with a three-prong grounding plug, which must be connected to a properly grounded three-prong wall outlet. To reduce the risk of electric shock, have the wall outlet and electrical circuit inspected by a qualified electrician to ensure proper grounding and compliance with applicable electrical codes.

The unit must be connected to its own dedicated electrical outlet with a voltage rating that matches the information on the unit rating label. Dedicated electrical supply helps ensure proper performance and reduces the risk of overloaded wiring, which can cause overheating, nuisance tripping, or fire.

Do not operate the unit with a damaged power cord or plug. Power cords that are frayed, cracked, crimped, pinched, or show signs of abrasion or insulation damage must be repaired or replaced immediately. When moving or positioning the unit, take care to avoid pinching, bending, or damaging the power cord.

Do not place or operate electrical devices inside the cabinet unless specifically approved by NORIOTA.

### Power Supply and Circuit Protection

Connecting the unit to an incorrect voltage supply or to improper circuit protection may result in damage to the equipment. Damage caused by improper electrical supply, improper circuit protection, unauthorized electrical components, or modification of the unit's wiring is not covered under warranty.

Use of ground fault interrupter (GFI) or ground fault circuit interrupter (GFCI) outlets or circuit breakers may result in nuisance tripping in commercial refrigeration and merchandiser applications. Consult a **qualified electrician** to determine suitability for your installation.

### Refrigerant Disposal



**CAUTION**

Environmental  
Hazard

If disposing of an old unit, be aware that it may contain refrigerant and other materials regulated for environmental protection. Refrigerant must be recovered and disposed of properly by a **qualified service technician** in accordance with applicable environmental regulations.

### Unit Disposal

When disposing of this unit, follow all applicable local codes and ordinances. To prevent misuse after disposal:

- Disconnect the unit from the electrical supply and cut off the power cord plug.
- Remove the door or doors and render the unit inaccessible for use.
- Remove and discard shelving and internal components as appropriate.

These steps help reduce the risk of accidental entrapment, misuse, or injury after the unit has been removed from service.

## INSTALLATION

Proper installation is critical to safe operation, reliable performance, and long equipment life. Follow all instructions in this section carefully before operating the equipment.



### WARNING

Excessive Weight  
Hazard

Use two or more persons and appropriate material handling equipment to move and install the unit. Failure to do so may result in back injury or other serious injury.

### Pre-Installation Checklist

Before moving the unit into place, confirm the following:

- Installation location is indoors and protected from rain, water spray, dripping water, and wind
- Ambient room temperature is within the allowable limits for the model type
- Electrical supply matches the unit rating label
- Floor is level and capable of supporting the fully loaded weight of the unit
- Required clearances for airflow, service access, and door swing are available
- Delivery path accommodates the cabinet dimensions and weight
- A properly grounded electrical outlet is located within reach of the factory-supplied power cord
- The electrical plug will remain accessible after installation for service disconnection

### Unpacking and Preparation

Unpack the unit carefully to avoid damage to the cabinet, doors, refrigeration system, and electrical components.

**IMPORTANT:** Do not remove, cover, or deface any permanent instruction labels or the unit rating label.

- Remove external packaging materials slowly and methodically.
- Inspect cabinet exterior for dents, distortion, or cosmetic damage.
- Open doors and inspect interior for loose components, broken glass, or shipping damage.
- Verify shelves and shelf supports are present and undamaged.
- Remove all packaging materials, protective film, foam blocks, tape, and adhesives before operating.
- To remove adhesive residue, rub the area gently with your thumb or apply a small amount of mild liquid dish soap using a soft cloth. Rinse with warm water and dry thoroughly.
- Do not use sharp tools, abrasive cleaners, rubbing alcohol, or flammable fluids, as these may damage the unit surface.
- Avoid excessive tilting. Do not lay the unit on its side or back unless unavoidable.

### Compressor Settling Time

**NOTICE:** If the unit was tilted excessively, laid on its side, or transported in a non-upright position, allow the unit to remain upright and disconnected from power for **at least 24 hours** before operating. If the unit remained upright during transport and positioning, allow a minimum of **10 minutes** before powering on.

Do not load product into the cabinet until the unit has been powered on and has reached the set temperature. Product loss or spoilage resulting from improper installation or start-up procedures is not covered under warranty.

### Location Requirements

- This equipment is intended for indoor use only.
- Select a location with a floor capable of supporting the combined weight of the unit and its contents. A fully loaded unit may weigh up to 680 kg (1,500 lb). Reinforce flooring as required to safely support the load. If there is any concern regarding floor strength, consult a **qualified structural professional**.
- Install the unit in a well-ventilated area.
- Do not install the unit:
  - Near ovens, grills, dishwashers, or other heat-producing equipment
  - In direct sunlight
  - In confined spaces without adequate airflow
  - In areas where ambient temperatures fall below 10 °C (50 °F)
- Avoid hot corners, stagnant air locations, and areas exposed to direct HVAC discharge or frequent drafts.
- Allow sufficient clearance for door swing, service access, and ventilation. Maximum door swing clearance may be up to **1448 mm (57 in)**, depending on model.

## INSTALLATION (continued)

### Ambient Temperature and Humidity

- Recommended ambient operating temperature: 10 °C to 30 °C (50 °F to 86 °F).
- If ambient temperature is between 30 °C to 40 °C (86 °F to 104 °F), additional ventilation or auxiliary cooling is required.
- Freezer models are more sensitive to elevated ambient temperatures and may experience reduced performance, longer pull-down times, increased frost accumulation, or more frequent defrost activity under high ambient or high humidity conditions.
- For best performance:
  - Maintain ambient temperature below 30 °C (86 °F)
  - Maintain relative humidity below 65 percent

**NOTE:** High ambient temperature and humidity can increase run time, energy consumption, frost accumulation, and condensation. Additional ventilation or environmental control may be required to maintain performance.

### Leveling, Stability, and Caster Use

Proper leveling is required for door sealing, airflow, condensate management, and stable operation.

- Place the unit on a level surface.
- The floor may slope down from front to rear by up to 6 mm (1/4 in). The floor must not slope rear to front.
- Adjust casters or leveling components as needed to ensure stability and proper door sealing.
- Engage the front caster brakes after positioning.
- The unit must remain stationary during operation.

### Condensate Management

- Units use an internal condensate management system.
- No external drain connection is required. Do not add, or connect any external drain line to the unit.
- The unit must remain level for proper condensate handling and evaporation.

### Airflow and Ventilation

Proper airflow is essential for correct operation, temperature stability, energy efficiency, and long equipment life.

#### Inside the Cabinet

- Do not overfill the cabinet or block airflow.
- Refrigerated air is discharged at the top rear of the cabinet and must circulate freely to the lower return airflow path.
- Blocking airflow may cause evaporator icing, temperature loss, uneven product temperatures, or water overflow from the drain pan.
- Shelves are designed with rear stops to assist airflow; ensure product does not obstruct air discharge or return paths.
- Do not place product directly against the rear interior wall.
- Avoid placing large boxes, tall stacks, or tightly packed product at the bottom of the cabinet where airflow may be restricted.
- Do not load product in a manner that blocks the top rear discharge area or restricts airflow to the lower portion of the cabinet.

#### Outside the Cabinet

- Maintain adequate clearance around the unit to allow heat dissipation and proper ventilation.
- Minimum clearance:
  - Rear: 51 mm (2 in)
  - Top: 305 mm (12 in) clear space above the unit
- Do not block or restrict airflow openings.
- Do not install the unit where surrounding walls, shelving, displays, or other equipment may restrict condenser airflow or trap heat around the cabinet.

### Electrical Connection

Refer to the technical data table, unit rating label, and applicable electrical codes to verify proper electrical supply before connecting the equipment.

- This unit must be connected to a **dedicated electrical circuit**.



#### WARNING

Electric Shock Hazard

The unit must be turned **OFF** and disconnected from the power source before performing any service, maintenance, or cleaning. Failure to do so may result in death or serious injury.

## **INSTALLATION (continued)**

### **Final Installation Checks**

Before powering on, confirm the following:

- All packaging has been removed
- The unit is level and stable
- Doors operate freely and close properly
- Electrical supply has been verified
- Required clearances are maintained
- The electrical plug remains accessible

### **First Power-On Procedure**

- Allow the unit to operate empty until operating temperature is reached. This process typically takes 2 to 4 hours, depending on model, ambient conditions, and whether the unit is a refrigerator or freezer.
- Do not load product until the displayed temperature has stabilized and remained consistent for at least 30 minutes.
- For best results, load only properly chilled product into refrigerator models and only properly frozen product into freezer models.
- Do not load warm product into the cabinet during initial pull-down. Doing so may increase recovery time, reduce performance, and contribute to frost or condensation issues.

### **Installation Responsibility**

Installation must be performed in accordance with this manual and all applicable local codes and regulations. Improper installation may result in reduced performance, equipment damage, unsafe operating conditions, or affected warranty coverage. The following conditions are not covered under warranty:

- Damage resulting from improper unpacking, handling, or installation.
- Electrical issues caused by incorrect power supply, improper grounding, use of GFI or GFCI protection, or other non-compliant electrical installation.
- Compressor damage resulting from improper startup or failure to follow required settling time procedures.
- Performance issues caused by inadequate ventilation, restricted airflow, or excessive ambient temperature or humidity.
- Damage caused by improper leveling, unstable installation, or failure to keep the unit stationary during operation.

## OPERATION

This section explains normal operating behaviour for NORIOTA glass door merchandiser refrigerators and freezers, including refrigeration cycles, defrost operation, temperature control, and recommended daily operating practices. Understanding these behaviours will help support proper performance, product quality, temperature stability, and long service life.

### Normal Operating Behaviour

During normal operation, the refrigeration system cycles on and off automatically to maintain the set temperature. The following behaviours are expected and indicate proper operation:

- The compressor will cycle as needed based on cabinet temperature, product load, door openings, and ambient conditions.
- Evaporator fans may stop when doors are opened or during certain operating cycles, depending on model and control logic.
- Automatic defrost cycles occur at regular intervals.
- Cabinet temperatures may fluctuate slightly during door openings, product loading, or defrost cycles.
- Freezer models may experience more noticeable temperature recovery periods after door openings or loading events.

These behaviours are normal and are required for effective temperature control, humidity management, and frost prevention.

### Operator Best Practices

To help maintain proper performance, temperature stability, and product presentation:

- Allow the unit to fully stabilize at operating temperature before loading product.
- Load product evenly and avoid blocking air supply and return openings.
- Avoid frequent or prolonged door openings, which introduce warm, humid air into the cabinet and may increase run time, defrost frequency, frost accumulation, condensation, and temperature recovery time.
- Do not overload shelving beyond rated capacity.
- Load only properly chilled product into refrigerator models and only properly frozen product into freezer models.
- Avoid loading warm product whenever possible, especially during peak operating periods or immediately after startup.
- Maintain adequate spacing between product and critical airflow areas, especially near the top rear discharge area and lower return path.

### Merchandiser vs Refrigerator Expectation

Glass door merchandisers are designed to combine product visibility with refrigerated or frozen holding performance in customer-facing or high-access environments. Unlike back-of-house reach-in refrigeration, merchandisers are more directly affected by frequent door openings, customer traffic, ambient heat, humidity, and product-loading patterns.

Because of these operating conditions, merchandisers may experience more noticeable temperature recovery periods, more visible condensation under difficult ambient conditions, and greater sensitivity to blocked airflow or improper loading. These characteristics do not necessarily indicate a defect.

For best results, operate the unit in a controlled indoor environment, minimize prolonged door openings, maintain clear airflow paths, and load only properly chilled or properly frozen product as appropriate for the model.

### Product Loading Doctrine

Proper product loading supports temperature stability, proper airflow, frost control, and product presentation.

- Load product evenly throughout the cabinet.
- Do not place product directly against the rear interior wall.
- Do not block the top rear discharge area or lower return airflow path.
- Avoid placing large boxes, tall stacks, or tightly packed product at the bottom of the cabinet where airflow may be restricted.
- Do not overload shelves beyond their intended capacity.
- Do not allow product to extend beyond shelf edges in a way that interferes with airflow or door closing.
- Load only properly chilled product into refrigerator models and only properly frozen product into freezer models.
- Avoid loading warm product whenever possible, especially during initial pull-down, after defrost recovery, or during peak operating periods.

## **OPERATION (continued)**

Improper product loading may result in uneven temperatures, longer recovery times, excessive frost or condensation, increased run time, and unnecessary service calls.

### **Airflow Discipline**

Proper airflow must be maintained at all times for correct operation.

Refrigerated air is discharged from the upper rear portion of the cabinet and must circulate freely throughout the display area before returning through the lower airflow path. If product blocks this circulation pattern, the unit may lose temperature stability and experience icing, condensation, or water overflow conditions.

To maintain proper airflow:

- Keep the top rear discharge area clear.
- Keep lower return airflow areas clear.
- Do not push product tightly against the rear wall.
- Do not create tight product packs that prevent air circulation between items.
- Recheck airflow paths after restocking, shelf adjustment, or promotional product changes.

Airflow problems are one of the most common causes of poor merchandiser performance and may be mistaken for equipment failure.

### **Ambient Sensitivity**

Merchandiser performance is strongly affected by surrounding environmental conditions. High ambient temperature, high humidity, direct sunlight, nearby heat-producing equipment, direct HVAC discharge, open exterior doors, and frequent air movement around the cabinet may all increase run time, slow temperature recovery, increase condensation, and contribute to frost accumulation.

Freezer models are especially sensitive to these conditions and may show more noticeable performance effects than refrigerator models.

For best performance, operate the unit in a temperature-controlled indoor environment with adequate ventilation and minimal exposure to direct heat, humidity, or disruptive air currents.

### **Glass Door Behaviour**

Glass door merchandisers may display temporary condensation, fogging, or visibility changes under certain operating conditions. These effects are more likely during frequent door openings, high humidity, heavy restocking, or periods of elevated ambient temperature.

Light, temporary condensation may be normal and does not necessarily indicate a problem. However, persistent condensation, heavy fogging, or repeated frost buildup may indicate blocked airflow, poor door sealing, excessive humidity, improper loading, or other operating issues that should be corrected.

To help maintain clear visibility:

- Minimize prolonged door openings.
- Keep door gaskets clean and properly sealed.
- Maintain proper airflow inside the cabinet.
- Operate the unit within the recommended ambient conditions.
- Keep glass surfaces clean and dry.

### **Lighting and Retail Use Behaviour**

Merchandiser lighting is intended to support product visibility and presentation during normal use. Cabinet lighting is controlled independently from the refrigeration system and may be turned ON or OFF using the separate light switch.

Lighting does not replace proper loading, airflow, or temperature control. Operators should continue to monitor product arrangement, door usage, and cabinet recovery during busy periods.

In customer-facing environments, frequent browsing, repeated door openings, and repeated restocking may temporarily affect cabinet temperature and visibility. These conditions should be managed through proper loading, door discipline, and regular observation of cabinet performance.

## **OPERATION (continued)**

### **Refrigeration Cycle – Refrigerators (NMR Series)**

During normal operation:

- The compressor cycles automatically to maintain the programmed cabinet temperature.
- Evaporator fans operate during normal refrigeration and may stop when one or more doors are opened to help reduce moisture infiltration.
- Interior lighting is controlled by the separate light switch located adjacent to the controller.
- Cabinet temperature may fluctuate slightly during normal cycling, door openings, and product loading.

### **Automatic Defrost - Refrigerators**

- The unit initiates defrost automatically at regular intervals, approximately every 6 hours.
- During defrost, the compressor stops and the controller displays the defrost indicator.
- Defrost duration varies based on operating conditions and terminates automatically when the programmed defrost conditions are satisfied.
- Cabinet temperature may rise slightly during defrost. This is normal and temporary.
- Normal refrigeration resumes automatically after defrost completion.

### **Temperature Control - Refrigerators**

- Recommended holding temperature: 1 °C to 3 °C (34 °F to 38 °F)
- Factory default setpoint: 1 °C (34 °F)
- Anti-condensation heaters in the door frames operate automatically with the refrigeration system.

### **Refrigeration Cycle – Freezers (NMF Series)**

During normal operation:

- The compressor cycles automatically to maintain the programmed cabinet temperature.
- Evaporator fans operate during normal refrigeration and may stop when one or more doors are opened to help reduce moisture infiltration.
- Fans also stop during defrost cycles.
- Interior lighting is controlled by the separate light switch located adjacent to the controller.
- Freezer merchandisers may experience more noticeable temperature recovery periods after door openings, loading events, or high humidity exposure.

### **Automatic Defrost – Freezers**

- The unit enters defrost automatically at regular intervals, approximately every 6 hours.
- During defrost, the compressor stops and the defrost system operates to remove frost from the evaporator.
- The controller displays the defrost indicator.
- Cabinet temperature may rise slightly during defrost. This is normal and temporary.
- Defrost duration varies based on operating conditions and terminates automatically when the programmed defrost conditions are satisfied.
- A short drip or recovery delay may occur before normal refrigeration resumes.
- Normal refrigeration resumes automatically after defrost completion.

### **Temperature Control - Freezers**

- Recommended holding temperature: -22 °C to -20 °C (-7 °F to -4 °F)
- Factory default setpoint: -22 °C (-7 °F)
- Anti-condensation heaters in the door frames operate automatically with the refrigeration system.

### **Defrost Cycle and What to Expect**

Automatic defrost is a normal part of merchandiser operation. Defrost cycles help remove accumulated frost from the evaporator and support stable long-term refrigeration performance.

During defrost:

- The compressor may stop.
- Fans may stop or operate differently depending on controller logic and model configuration.
- The controller may display a defrost indicator.
- Cabinet temperature may rise slightly for a short period.

These conditions are normal and temporary. Normal refrigeration resumes automatically after defrost is completed and the unit returns to its normal operating cycle.

## OPERATION (continued)

Operators should not attempt to accelerate defrost using sharp tools, heaters, or other unapproved methods. If frost buildup remains excessive after normal operation and defrost recovery, inspect airflow, door sealing, loading practices, and ambient conditions before requesting service.

### Frost and Moisture Behaviour Explained

Moisture enters the cabinet whenever doors are opened. In refrigerator models, this may appear as temporary condensation under difficult ambient conditions. In freezer models, this moisture may freeze and contribute to frost accumulation.

Small temporary changes in visibility, slight moisture formation, or brief recovery periods may be normal during heavy use. Freezer models are more likely to show visible frost effects because of lower operating temperatures and greater sensitivity to humidity and door openings.

Frost and moisture behaviour may become excessive when:

- Doors are opened frequently or left open too long.
- Product loading blocks airflow.
- Warm or unfrozen product is introduced.
- Door gaskets are leaking or damaged.
- Ambient temperature or humidity is too high.
- Defrost recovery is interrupted by repeated door openings or restocking.

Persistent frost, heavy condensation, or repeated water accumulation should not be ignored and should be investigated promptly.

### High Humidity Environment Warnings

High humidity environments place greater demand on merchandiser performance and may increase condensation, frost accumulation, defrost frequency, run time, and recovery time.

Conditions that may increase effective humidity around the cabinet include:

- Frequent door openings.
- Store entrances or open exterior doors nearby.
- HVAC discharge directed toward the cabinet.
- Poor ventilation or stagnant air.
- Steam, vapor, or moisture-producing equipment nearby.
- Heavy restocking of warm or wet product.

Freezer merchandisers are especially sensitive to high humidity conditions. If the unit is operated in a high humidity environment, operators should monitor condensation, frost formation, airflow, door sealing, and temperature recovery more closely.

If these conditions cannot be controlled, the unit may experience reduced performance or require more frequent cleaning, monitoring, and service attention.

### Power Control

Unit operation is controlled through the controller power button.

- Press the controller power button to turn unit operation ON or OFF.
- Turning the unit OFF at the controller stops unit operation but does not disconnect electrical power to the equipment.
- Always disconnect power at the outlet or circuit breaker before servicing, cleaning, or performing maintenance.

### Lighting Control

Cabinet lighting is controlled by the separate light switch located adjacent to the controller.

- Use the light switch to turn cabinet lighting ON or OFF.
- Lighting control is independent of refrigeration operation.
- Turning the lights OFF does not shut down the refrigeration system.

### Digital Controller Overview

The digital controller automatically monitors and manages cabinet temperature, compressor operation, and defrost cycles.

## OPERATION (continued)





The controller also uses a temperature differential to help prevent short cycling and support stable operation. Temperature response may vary based on product load, door openings, ambient conditions, and whether the unit is a refrigerator or freezer.

This user manual covers normal operation and basic temperature setpoint adjustment only. Advanced controller programming, alarm definitions, and parameter changes are intended for **qualified service technicians** or authorized support personnel.






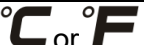
If advanced controller adjustment or alarm troubleshooting is required, contact NORIOTA technical support or a **qualified service provider**.

### Controller Buttons



<b>SET</b>	Displays the setpoint and confirms selections during adjustment.
 (DEF)	Starts a manual defrost when pressed as directed.
 (UP)	Increases the displayed value or scrolls upward through available settings.
 (DOWN)	Decreases the displayed value or scrolls downward through available settings.
 (POWER)	Turns unit operation ON or OFF at the controller.

### Controller Display Indicators

SYMBOL	MODE	INDICATION
	ON	The compressor is operating.
	ON	A defrost cycle is in progress.
	FLASHING	The unit is in a short post-defrost recovery or drain period, depending on controller configuration.
	ON	The evaporator fan is operating.
	FLASHING	Fan restart is delayed after defrost.
	ON	The controller is displaying temperature in Celsius or Fahrenheit.




### Basic Controller Operation

The digital controller allows the operator to view the setpoint, make basic setpoint adjustments, and initiate a manual defrost when needed.

#### View the Setpoint


- Press and release the **SET** button. The display will show the current setpoint.
- Press and release the **SET** button again, or wait approximately 5 seconds, to return to the normal temperature display.

#### Change the Setpoint

- Press and hold the **SET** button for more than 2 seconds until the setpoint value is displayed and the  (DEF) Indicator begins flashing.
- Use the  **UP** or  **DOWN** button to adjust the setpoint within the allowed range.
- Press the **SET** button again to confirm the new setting, or wait approximately 10 seconds for the controller to return to the normal display.

## OPERATION (continued)



### Start a Manual Defrost

- Press and hold the  **DEF** button for more than 2 seconds to start a manual defrost cycle.
- Use manual defrost only when necessary. Normal defrost cycles occur automatically during operation.

### Keypad Lock

The controller keypad can be locked to help prevent unauthorized or accidental changes to the setpoint or controller functions.

#### Lock the Keypad

- Press and hold the  **UP** and  **DOWN** buttons together for more than 3 seconds.
- The display will show “**POF**” to confirm that the keypad is locked.

#### While the Keypad Is Locked

- Basic viewing functions remain available.
- The operator may still view the setpoint or the stored maximum or minimum temperature, depending on controller function and configuration.
- If a locked key is pressed for more than 3 seconds, the display will show “**POF**” again.

#### Unlock the Keypad

- Press and hold the  **UP** and  **DOWN** buttons together for more than 3 seconds.
- Continue holding until “**POF**” is displayed.
- Normal keypad operation will then be restored.

### Common Controller Alarm Codes

The digital controller may display an alarm code when certain operating conditions or faults are detected.



ALARM CODE	DESCRIPTION
HA	High temperature alarm. Cabinet temperature is above the normal operating range.
LA	Low temperature alarm. Cabinet temperature is below the normal operating range.
dA	Door open alarm. Check that the door is fully closed and sealing properly.
P1	Cabinet temperature probe fault. Contact qualified service personnel.
P2	Evaporator probe fault. Contact qualified service personnel.

If an alarm does not clear after normal recovery time, contact NORIOTA technical support or a qualified service provider.

### Alarm Display and Reset

The digital controller may display an alarm code when certain operating conditions or faults are detected. Alarm codes should be reviewed promptly and the cause of the alarm should be corrected before the alarm is reset.

#### View Active Alarm Codes

- Press the  **UP** or  **DOWN** button to display the active alarm code.
- If more than one alarm is present, the controller will display the alarm signals in sequence.

#### Reset a Recorded Alarm

- After the cause of the alarm is corrected, press and hold the **SET** button until the display shows “**rst**”.
- Press the **SET** button again.
- The “**rst**” message will begin flashing, and the controller will return to the normal temperature display.

#### Important Notes

- Resetting an alarm does not correct the underlying cause of the alarm.
- If an alarm returns after reset, or if the unit does not return to normal operation, contact NORIOTA technical support or a qualified service provider.
- Some alarm codes may indicate conditions that require immediate service and should not be ignored.

### Energy and Performance Optimization

To help maintain efficiency, reliability, and consistent product temperatures:

- Keep doors closed when not in use.
- Maintain the recommended installation clearances and ventilation conditions.
- Clean condenser coils regularly.
- Do not operate the unit in ambient conditions exceeding the specified limits.
- Load only properly chilled product into refrigerator models and properly frozen product into freezer models whenever possible.
- Avoid blocking internal airflow with oversized boxes, tightly packed product, or product placed directly against critical airflow areas.

## OPERATION (continued)

### Abnormal Operation Indicators

Contact **qualified service personnel** if any of the following conditions occur:

- The cabinet fails to reach operating temperature after initial startup and adequate stabilization time.
- Excessive frost or ice buildup is observed.
- The compressor runs continuously for an extended period without normal cycling.
- Unusual noise, vibration, or repeated abnormal sounds are observed.
- Temperature alarms do not clear after normal recovery time.
- Water accumulates inside or beneath the unit.
- Doors do not close properly or do not seal correctly.

## CLEANING AND MAINTENANCE

Regular cleaning and preventive maintenance are essential to maintaining proper performance, product quality, energy efficiency, and service life. Failure to follow recommended cleaning and maintenance procedures may result in reduced performance, premature component failure, unsafe operating conditions, excessive frost or condensation, or increased service requirements.



**WARNING**

Electric Shock Hazard

### Safety Notice

**Always turn the unit OFF and disconnect power at the outlet or circuit breaker before performing cleaning, maintenance, or service. Failure to disconnect power may result in serious injury or death.**

### General Maintenance Guidance

Routine cleaning and preventive maintenance help to:

- Maintain consistent product temperatures
- Preserve product quality and cabinet appearance
- Reduce energy consumption
- Extend the operating life of the unit

#### Do not:

- Use bleach or chlorine-based cleaners inside the cabinet
- Spray water directly onto electrical components
- Block interior air vents with product, liners, or packaging materials
- Use pressure washers or steam cleaners

Units operating in high-use, high-humidity, greasy, or high-traffic environments may require more frequent cleaning than the minimum intervals listed.

### Interior and Exterior Cleaning

#### Cleaning Procedure

- Clean interior and exterior surfaces using a soft cloth or microfiber towel.
- Use warm water with a mild dish detergent.
- For heavier soil, fingerprints, or grease, use a non-abrasive degreasing detergent or a non-chlorinated multi-surface cleaner.
- Rinse with clean water and dry thoroughly.

#### Do not use:

- Abrasive cleaners or powders
- Steel wool, wire brushes, or scrapers
- Chloride-based, acid-based, or flammable cleaners or solvents

These materials may damage stainless steel, plastics, breaker strips, door gaskets, glass surfaces, and insulation.

### Glass Door Cleaning and Visibility Care

Glass door merchandisers require regular cleaning to maintain product visibility, cabinet appearance, and proper operation. Dirt, smudges, residue, and moisture buildup on the glass or surrounding frame can reduce visibility and make it more difficult to identify abnormal condensation or frost conditions.

#### Cleaning Procedure

- Clean glass surfaces regularly using a soft cloth or microfiber towel.
- Use warm water with a mild dish detergent or a non-abrasive, non-chlorinated glass-safe cleaner.

## CLEANING AND MAINTENANCE (continued)

- Wipe dry with a clean, soft cloth to reduce streaking and water spotting.
- Clean both the interior and exterior glass surfaces as needed to maintain clear product visibility.
- Clean the surrounding door frame and adjacent surfaces at the same time to remove residue that may affect appearance or visibility.

### Do not use:

- Abrasive pads, scouring powders, or scrapers.
- Chloride-based, acid-based, or flammable cleaners or solvents.
- Sharp tools to remove residue, frost, or adhesive from glass surfaces.

These materials may scratch the glass, damage surrounding finishes, or reduce visibility.

### Visibility and Moisture Observation

- Inspect glass doors regularly for persistent condensation, unusual fogging, or frost buildup.
- Light, temporary condensation may occur under some operating conditions, especially during frequent door openings or in high-humidity environments.
- Persistent condensation, heavy fogging, or frost buildup may indicate blocked airflow, excessive humidity, poor door sealing, or other operating issues that should be corrected promptly.

## Condenser Coil Cleaning

Keeping the condenser coil clean is critical to refrigeration performance, temperature stability, energy efficiency, and compressor life.

### Cleaning Frequency

- Under normal operating conditions: **every 90 days**
- In dusty, greasy, high-lint, or high-traffic environments: **every 30 days or more** as conditions require.

### Cleaning Procedure

- Disconnect power before servicing.
- Remove the lower front access panel to access the condenser.
- For light dust buildup, use a soft brush or vacuum.
- For heavier buildup, use a vacuum or compressed air (dry air or CO<sub>2</sub> only).
- If grease is present, use a condenser coil cleaner approved for refrigeration equipment, then remove residue with compressed air.

### Do not use:

- Water, liquid spray, or high-pressure wash on the condenser
- Wire brushes or stiff bristles that may damage coil fins

Failure to maintain a clean condenser can result in elevated operating temperatures, excessive run times, reduced cooling capacity, more frequent frosting or temperature recovery problems, and compressor failure. Damage caused by neglected condenser maintenance is not covered under warranty.

## Product Loading and Airflow Maintenance Check

Proper product loading and unobstructed airflow are essential to maintaining temperature stability, reducing frost and condensation, and supporting efficient operation. Product placement should be checked regularly as part of normal maintenance, especially in high-traffic or frequently restocked environments.

### Inspection Procedure

- Check that product is not blocking the top rear discharge area or lower return airflow path.
- Check that product is not placed directly against the rear interior wall.
- Check that large boxes, tall stacks, or tightly packed product are not restricting airflow at the bottom of the cabinet.
- Verify that shelves, shelf positions, and product arrangement allow air to circulate freely throughout the cabinet.
- Confirm that product does not extend beyond shelf edges in a way that interferes with airflow or door closing.
- Reorganize product as needed to maintain clear airflow paths and even air circulation.

### Signs of Airflow Restriction

- Uneven product temperatures within the cabinet
- Excessive frost or ice buildup
- Persistent condensation or fogging
- Longer temperature recovery after door openings or loading
- Water accumulation due to improper airflow or icing conditions

If airflow restrictions are found, correct the product arrangement promptly. Continued operation with blocked airflow may reduce performance, increase energy use, and contribute to unnecessary service calls.

## CLEANING AND MAINTENANCE (continued)

### Condensate Pan and Drain Cleaning

During normal operation, moisture removed from the cabinet air collects as condensate and is directed through an internal drain system to the condensate evaporator pan. Heat from the refrigeration system allows this condensate to evaporate without the need for an external drain connection.

Proper maintenance of the condensate pan and internal drain system is essential to help prevent odors, water overflow, and improper drainage. The drain system should also be inspected periodically to confirm that drain tubing remains properly connected and positioned.

#### Cleaning Frequency

- Inspect and clean at least **twice per year**.

Inspect more frequently in high-humidity, heavy-use, or high-traffic applications.

#### Cleaning Procedure

The condensate evaporation system uses a hot gas copper tube to evaporate collected water. This tube may be hot during or shortly after normal operation.



**CAUTION**

Hot Surface

**The copper condensate evaporation tube may be hot and can cause burns. Allow the unit to cool before handling components in this area. Avoid direct contact with the copper tubing.**

1. Disconnect power to the unit at the outlet or circuit breaker.
2. Allow the unit to remain powered OFF for several minutes and ensure internal components have cooled before servicing.
3. Access the condensate pan from the front of the unit. Remove the lower front panel by removing the mounting screws and lifting off.



**Image: Location of condensate pan**

4. Inspect the drain line for debris, residue, restriction, looseness, or disconnection.
5. Confirm that the drain tube is properly connected from the evaporator housing to the condensate evaporator pan and that the outlet remains correctly positioned in the pan.
6. Wash the condensate pan using warm water and a mild detergent.
  - **Avoid contact with the copper evaporation tube.**
  - Do not bend, reposition, or apply force to the tubing.
7. Rinse the pan thoroughly and allow it to dry completely.
8. Reinstall the lower front panel securely and restore power to the unit.

## **CLEANING AND MAINTENANCE (continued)**

### **Important Notes**

- Do not use abrasive cleaners, bleach, or caustic chemicals.
- Do not modify, disconnect, or bypass the condensate evaporation system.
- Damage to the condensate evaporation tubing may result in improper drainage, water overflow, or damage to related system components.
- The unit must remain level for proper condensate drainage and evaporation.
- If excessive water is collecting inside the cabinet, inspect the internal drain line and drain connection.
- If water is collecting underneath the unit, inspect whether the drain outlet remains properly positioned in the condensate pan.
- Obstructions, disconnected drain tubing, damaged tubing, or improper leveling may cause water backup or overflow.

### **Signs of Improper Drainage**

Contact **qualified service personnel** if any of the following are observed:

- Water pooling inside the cabinet or on the floor
- Persistent odors near the unit
- Visible debris or sludge in the condensate pan
- Water not evaporating normally from the pan
- Repeated water overflow after cleaning and inspection.

### **Condensation and Frost Monitoring**

Regular observation of condensation and frost conditions helps identify airflow, loading, humidity, door-sealing, or operating issues before they lead to reduced performance or service calls.

#### **Normal Conditions**

- Light, temporary condensation on glass surfaces or around door openings may occur during frequent door openings, product loading, or periods of high ambient humidity.
- Slight frost formation may occur temporarily on freezer models during heavy use or high-humidity conditions.
- Brief temperature recovery periods after door openings or restocking are normal, especially on freezer models.

#### **Conditions Requiring Attention**

- Persistent condensation, heavy fogging, or water accumulation on glass or surrounding door areas.
- Excessive frost or ice buildup inside the cabinet or around the evaporator airflow path.
- Frost buildup that returns quickly after cleaning or normal defrost cycles.
- Water dripping, pooling, or repeated moisture accumulation inside the cabinet or on the floor.
- Temperature recovery becoming noticeably slower than normal.

#### **Inspection and Corrective Checkpoints**

- Confirm that doors are closing fully and that gaskets are clean, undamaged, and sealing properly.
- Check that product loading is not blocking airflow or restricting the top rear discharge area or lower return path.
- Verify that the unit is operating within the recommended ambient temperature and humidity conditions.
- Reduce frequent or prolonged door openings where possible.
- Confirm that the condensate drain system is clean and functioning properly.
- Verify that automatic defrost cycles are occurring normally.

If abnormal condensation or frost conditions persist after these checks, contact qualified service personnel.

### **Door Gasket Maintenance**

Door gaskets must remain clean, properly seated, and flexible to ensure an effective seal.

#### **Cleaning Procedure**

- Clean gaskets regularly using warm, soapy water and a soft cloth.
- Avoid harsh, abrasive, or full-strength chemical cleaners.
- Do not use sharp tools or knives on gaskets.

Damaged, torn, loose, or hardened gaskets allow warm air infiltration, increasing energy use, condensation, frost accumulation, and temperature instability.

Gaskets are wear components and may be replaced without tools by removing the old gasket from the door groove and pressing the new gasket into place. Apply gasket adhesive every 25 to 30 cm (10 to 12 in) as needed to help ensure proper seating. Door gaskets are not covered under warranty.

Note: Do not force doors open immediately after closing. Allow internal and external air pressure to equalize before reopening.

## CLEANING AND MAINTENANCE (continued)

### Doors and Hinges Maintenance

- Periodically inspect door alignment, hinge condition, and hinge mounting screws.
- Tighten loose hardware promptly.
- Confirm that doors open freely, close properly, and seal evenly against the cabinet.
- Misaligned, loose, or sagging doors may compromise sealing, increase condensation and frost, and cause hinge damage.

If hinge mounting points become stripped or damaged, reinforcement or professional service may be required to restore proper operation.

### Shelf and Shelf Support Inspection

Shelves and shelf supports should be inspected regularly to help maintain safe product loading, proper airflow, and stable product presentation.

#### Inspection Procedure

- Inspect shelves for bending, cracking, corrosion, or other visible damage.
- Inspect shelf supports, clips, brackets, or mounting points for looseness, wear, or damage.
- Confirm that shelves are seated properly and remain stable under normal product loading.
- Verify that product is distributed evenly and that shelving is not overloaded beyond its rated capacity.
- Check that shelf position and product placement do not block critical airflow paths or interfere with door closing.
- Replace damaged or unstable shelves or shelf supports before returning the unit to normal use.

Damaged, overloaded, or improperly positioned shelving may affect airflow, reduce temperature consistency, create product instability, or contribute to premature component wear.

### LED Lighting Inspection and Replacement

Cabinet lighting should be inspected regularly to help maintain product visibility, cabinet appearance, and normal merchandising presentation.

#### Inspection Procedure

- Verify that interior lights turn ON and OFF properly using the light switch.
- Inspect lighting for dim output, flickering, intermittent operation, or complete failure.
- Check that light covers, lenses, and surrounding mounting areas are secure and undamaged.
- Keep lighting surfaces clean so that dirt, residue, or moisture buildup does not reduce visibility.

If lighting performance is reduced or the LED does not illuminate, replacement may be required.

#### Replacement Guidance

- Disconnect power to the unit before inspecting lighting components.
- LED lighting components are replaceable but are not intended for user service.
- Access to lighting components may require removal of door frame panels and disconnection of electrical components. Improper handling may result in electrical hazard, damage to the unit, or reduced sealing performance.
- Replacement of LED lighting components must be performed by qualified service personnel only. If the cause of the lighting issue is unclear, or if replacement requires access beyond normal operator maintenance, contact **qualified service personnel**.

For service, replacement parts, or instructions, contact your authorized NORIOTA dealer or [support@noriota.ca](mailto:support@noriota.ca).

### Cabinet Temperature Verification

- Periodically verify cabinet temperature by measuring product temperature, not air temperature.
- Compare measured product temperature to the controller display. Readings may vary slightly, but product temperature should remain within the intended holding range for the product being stored.
- Use a calibrated digital probe thermometer suitable for commercial foodservice or retail refrigeration applications.
- Do not use infrared thermometers to measure product temperature.
- Calibrate thermometers periodically using a proper ice-water method or other accepted calibration procedure.

### Odor Prevention Tip

To help prevent odors, clean spills promptly, keep products properly packaged or covered where applicable, and maintain a clean condensate pan and drain system.



## TROUBLESHOOTING GUIDE

If the unit does not appear to be operating correctly, review the OPERATION section first. Many concerns are caused by startup conditions, product loading, door usage, airflow restriction, maintenance needs, humidity, or ambient conditions and can often be corrected without service.

Use the guide below to identify common symptoms, likely causes, and recommended corrective actions. If the issue persists after completing the recommended steps, contact **qualified service personnel**.

### Safety Notice

If the issue involves a damaged power cord, electrical odor, smoke, sparking, or a tripped breaker that will not reset, **disconnect power immediately** at the outlet or circuit breaker and contact **qualified service personnel**.

### Before Calling for Service

Confirm the following basic items first:

- The controller is powered ON and the unit is connected to the correct electrical supply.
- The unit has had sufficient time to reach operating temperature after startup or restocking.
- The condenser coil is clean and airflow to the condenser is not blocked.
- Doors are closing fully and gaskets are clean, properly seated, and sealing correctly.
- Product is not blocking interior air discharge or return openings.
- The unit is operating within the recommended ambient temperature and humidity conditions.
- Recent door openings, warm product loading, or heavy traffic have not temporarily affected temperature recovery.

Symptom	Possible Cause	Corrective Action
<b>Power and Controls</b>		
Unit does not power ON	Controller powered OFF	Press the controller power button to turn unit operation ON.
	Unit unplugged	Confirm the power cord is fully seated in the outlet.
	Circuit breaker tripped or fuse blown	Reset breaker or replace the fuse if required.
	Incorrect electrical supply	Verify supply voltage matches the rating label.
	Power cord damaged	Disconnect power and contact <b>qualified service personnel</b> .
Controller display blank or unresponsive	Power interruption or loose connection	Verify power supply, confirm plug connection, and restart the unit.
	Electrical or control fault	Contact <b>qualified service personnel</b> .
<b>Lighting</b>		
Unit runs but interior lights do not turn ON	Light switch OFF	Turn the light switch ON.
	Loose or damaged lighting connection	Contact <b>qualified service personnel</b> .
	Light component failure	Contact <b>qualified service personnel</b> .
	No power to lighting circuit	Verify the unit is powered and operating normally.
<b>Temperature and Performance</b>		
Cabinet temperature too warm	Unit recently powered ON	Allow sufficient time for pull-down to the set temperature.
	Unit recently restocked or heavily loaded	Allow additional recovery time and avoid repeated door openings.
	Doors opened frequently or left open	Minimize door openings and ensure doors close fully.
	Product blocking airflow	Rearrange product to keep air discharge and return openings clear and do not pack the cabinet so full that air cannot circulate.
	Warm product loaded	Load properly chilled product in refrigerator models and properly frozen product in freezer models whenever possible.
	Ambient temperature too high or poor ventilation	Improve ventilation and confirm that ambient conditions are within recommended limits.
	Condenser coil dirty	Clean the condenser coil.
	Temperature setpoint too high	Adjust the setpoint to recommended range.
Door gaskets leaking	Clean, inspect, or replace gaskets as needed.	

Symptom	Possible Cause	Corrective Action
Cabinet temperature too cold	Temperature setpoint too low	Increase the setpoint.
	Control setting incorrect	Refer to controller instructions or contact <b>qualified service personnel</b> .
Unit runs continuously or does not cycle normally	Condenser coil dirty	Clean condenser coil
	High ambient temperature, nearby heat source, or poor ventilation	Improve ventilation and reduce heat load.
	Doors opened frequently or gaskets leaking	Reduce door openings and inspect gasket sealing.
	Heavy loading or warm product introduction	Reduce warm loading and allow recovery time.
<b>Frost, Ice, and Moisture</b>		
Excessive frost or ice buildup	Doors opened frequently or not closing fully	Reduce door openings and ensure doors close fully.
	Product blocking airflow	Rearrange product to maintain airflow.
	Unit not level	Level the unit.
	High humidity environment	Minimize door opening duration and improve surrounding conditions where possible.
	Door gasket leaking or damaged	Inspect, clean, or replace the gasket as needed.
Water collecting inside cabinet	Unit not level	Level the unit.
	Internal drain system obstructed	Inspect and clean internal drain system.
	Excessive moisture infiltration	Reduce door opening frequency and confirm door sealing.
	Airflow blocked inside cabinet	Reorganize product to restore proper airflow.
Water leaking onto floor	Condensate pan or evaporator area dirty	Clean the condensate pan and drain area.
	Unit not level	Level the unit.
	Drain tube loose, obstructed, or out of position	Inspect drain routing and contact qualified service personnel if correction is required.
	Condensate pan displaced or damaged	Contact <b>qualified service personnel</b> .
<b>Noise and Doors</b>		
Excessive noise or vibration	Unit not level	Level the unit.
	Loose shelves, panels, or product load	Secure shelves and panels and reorganize product as needed.
	Unit contacting wall, shelving, or other equipment	Reposition the unit to maintain proper clearance.
Compressor does not start	Unit in defrost cycle	Allow the defrost cycle to complete.
	Power interruption	Verify power supply and restart the unit.
	Restart delay after shutdown or outage	Allow the normal restart delay to pass before checking again.
	Electrical or control fault	Contact <b>qualified service personnel</b> .
Door difficult to open after closing	Pressure equalization delay	Wait several seconds before reopening the door.
Door does not seal properly	Dirty or damaged gasket	Clean or replace the gasket.
	Product interfering with door closure	Reposition product and confirm the door closes freely.
	Unit not level or door misaligned	Level the unit and inspect hinges and door alignment.
<b>Alarms and Error Codes</b>		
Controller displays alarm or error code	Operating condition outside normal limits	Confirm doors are closed, condenser is clean, airflow is clear, and ambient conditions are within range.
	Temporary recovery condition after loading or door openings	Allow normal recovery time and monitor the display.
	Component or probe fault	Refer to controller instructions and contact <b>qualified service personnel</b> if the alarm persists.

### Service Guidance

If the issue cannot be resolved using the steps above, disconnect power and contact **qualified service personnel**. Have the **model number** and **serial number** available when requesting service.

## WARRANTY

For full warranty terms and conditions, including coverage, limitations, and exclusions, please visit:

<https://noriota.ca/pages/warranty-policy>

To activate warranty coverage, register your product online at:

<https://noriota.ca/pages/warranty-registration>

Scan to register your product online:



## SPARE PARTS AND SERVICE INFORMATION

### Spare Parts Identification

Replacement parts diagrams and component lists for NORIOTA equipment are available online to support service, maintenance, and parts ordering.

Spare parts diagrams are provided for reference and identification purposes only. These diagrams are intended to assist **qualified service personnel** and authorized dealers in identifying the correct replacement components.

### Accessing Spare Parts Diagrams

Current spare parts diagrams and part identification resources can be found at:

[www.noriota.ca](http://www.noriota.ca)

Search by model number to locate the appropriate parts documentation.

### Important Notes Regarding Spare Parts

Spare parts diagrams illustrate component locations and assemblies but do not replace professional service training.

Parts availability may vary by model, production run, or revision.

Always verify the model number and serial number before ordering replacement parts.

Use of non-genuine replacement parts may affect performance, safety, and warranty coverage.

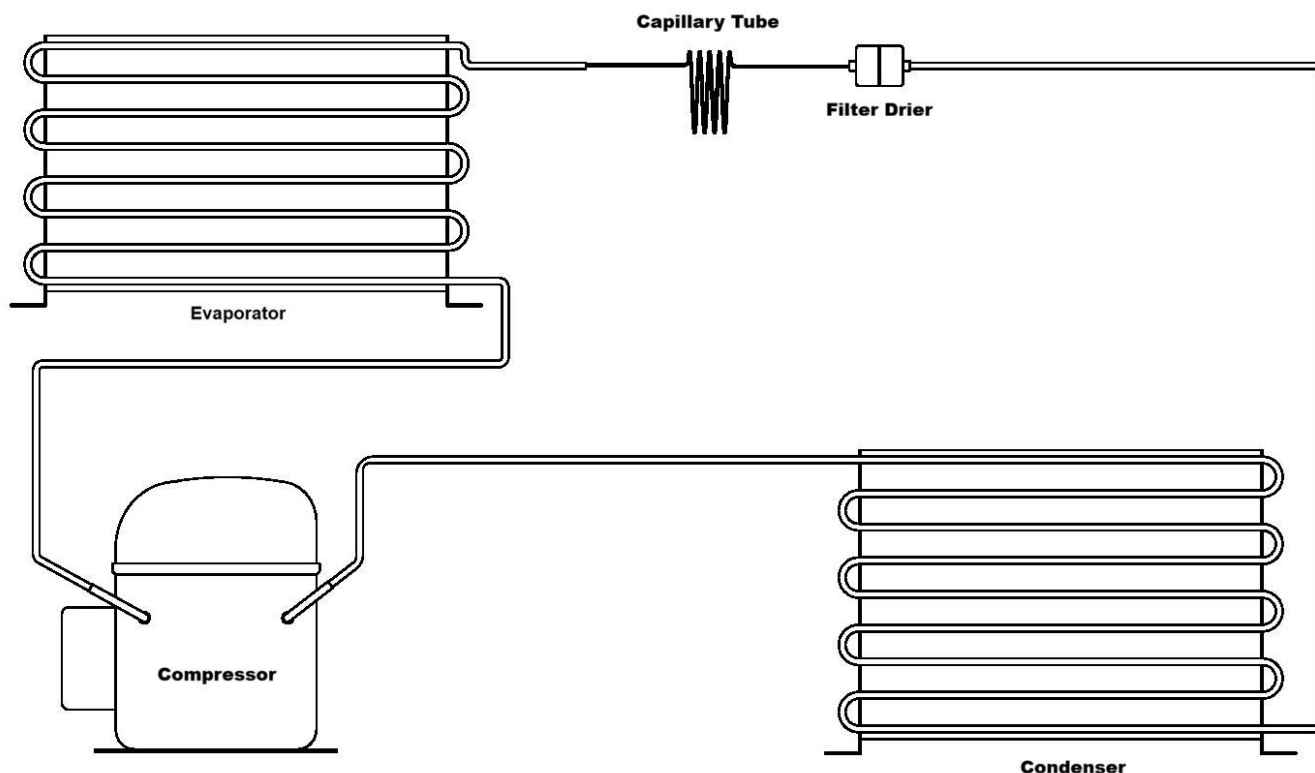
### Service and Parts Ordering Guidance

For parts ordering, warranty inquiries, or service assistance, contact your authorized NORIOTA dealer, email [support@noriota.ca](mailto:support@noriota.ca), or visit [www.noriota.ca](http://www.noriota.ca) for current contact information.

Only **qualified service personnel** should install replacement components. Improper installation may result in equipment damage, unsafe operation, or voided warranty.

## REFRIGERATION DIAGRAM

The diagram below illustrates the basic refrigeration cycle used in NORIOTA glass door merchandiser refrigerators and freezers. This sealed system continuously removes heat from the cabinet interior and rejects it to the surrounding air to help maintain stable cabinet temperatures under normal operating conditions.



### How the Refrigeration System Works

- **Evaporator**
  - Located inside the cabinet, the evaporator absorbs heat from the refrigerated space. As air passes over the evaporator coil, heat is removed and cabinet temperatures are reduced.
- **Capillary Tube**
  - The capillary tube meters refrigerant flow and reduces pressure, allowing the refrigerant to expand and cool before entering the evaporator coil.
- **Compressor**
  - The compressor circulates refrigerant through the system. It compresses low-pressure refrigerant vapor into a high-pressure, high-temperature gas.
- **Condenser**
  - The condenser releases absorbed heat to the surrounding air. As heat is removed, the refrigerant condenses back into a liquid state.
- **Filter Drier**
  - The filter drier removes moisture and contaminants from the refrigerant to help protect system components and support long-term reliability.

This process repeats automatically as required to maintain the set temperature under normal operating conditions.

### Important Operating Notes

- The refrigeration system is factory sealed and requires no routine service by the end user.
- All refrigeration components shown are designed to operate automatically under control of the digital controller.
- Normal system operation includes compressor cycling and periodic defrost events.
- The condenser must be kept clean to help ensure proper heat rejection, stable operation, and system efficiency.

### Service Notice

The refrigeration system contains pressurized refrigerant and must be serviced only by **qualified refrigeration technicians**.

Do not attempt to access, modify, or repair sealed system components.

# COMMISSIONING RECORD

Record the information below at the time of installation. This record helps confirm proper installation conditions, supports future service, and may assist in warranty evaluation. Retain this page for your records.

## UNIT AND PURCHASE INFORMATION

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Purchased From (Dealer / Supplier): \_\_\_\_\_

Dealer Contact (if available): \_\_\_\_\_

## INSTALLATION DETAILS

Installation Date: \_\_\_\_\_

Installation Location (Site / Address): \_\_\_\_\_

Installed By (Company / Technician Name): \_\_\_\_\_

Installer Contact (if available): \_\_\_\_\_

<b>ELECTRICAL VERIFICATION</b> Supply Voltage (measured): _____ Frequency / Phase: _____ Plug Type / Connection: _____ Dedicated Circuit Confirmed: <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>UNIT SETUP AND CONDITIONS</b> Unit Level Confirmed: <input type="checkbox"/> Yes <input type="checkbox"/> No Airflow Clearance Verified: <input type="checkbox"/> Yes <input type="checkbox"/> No Ambient Temp. at Installation: _____ Cabinet Temp. Setpoint: _____ Doors Opening and Seal Properly: <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>DRAIN AND INTERNAL SYSTEM CHECK</b> Internal Drain System Checked: <input type="checkbox"/> Yes <input type="checkbox"/> No Drain Pan Condition Verified: <input type="checkbox"/> Yes <input type="checkbox"/> No No External Drain Connection Required (Internal Drain System Only)	<b>INITIAL OPERATION CHECK</b> Abnormal Noise or Vibration: <input type="checkbox"/> Yes <input type="checkbox"/> No Temperature Pull-Down Verified: <input type="checkbox"/> Yes <input type="checkbox"/> No Lighting Operates Correctly: <input type="checkbox"/> Yes <input type="checkbox"/> No

## NOTES / OBSERVATIONS

\_\_\_\_\_  
\_\_\_\_\_

## INSTALLER CONFIRMATION

Installer Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



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