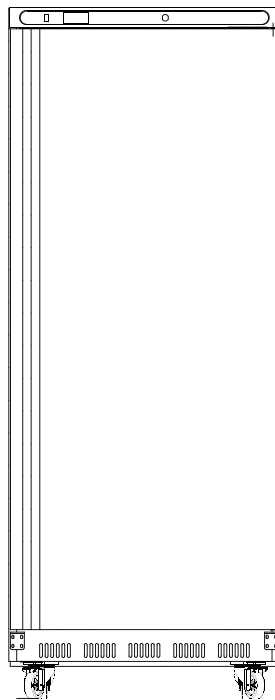


Convertible Refrigerator/Freezer

## KoolMore White Commercial Convertible Reach-In Refrigerator/Freezer

**Model:** KM-RIC-1DWH



***Before using, please read the operating instructions carefully to ensure proper application and achieve satisfactory results.***

For any service-related issues, please contact us:



718-576-6342



support@koolmore.com

***Stay informed with the latest information  
for your KoolMore Appliance.***

**If you need any assistance or have questions, our customer  
support team is here to help.**

# SAFETY

Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.

All safety messages will follow the word "DANGER," "WARNING," or "CAUTION."

## DANGER

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

## WARNING

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

## CAUTION

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 will alert you to what the potential hazard is, tell you how to reduce the chance of injury, and let you know what can happen if the instructions are not followed.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

This appliance can be used by children aged from 8 years and above and persons with reduced physical sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Keep the appliance and its cord out of reach of children less than 8 years.

The appliance may use flammable substances such as aerosol cans with a flammable propellant in this appliance.

Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.

The appliance uses isobutane refrigerant (R600a), a natural gas with high environmental compatibility that is, however, also combustible. When transporting and installing the appliance, be certain to keep the refrigerant circuit undamaged. In the event of damage, keep open flames and potential

sources of ignition well away from the appliance and ventilate the room in which the appliance is situated.

For the regulations of electrical shock and fire safety by qualified persons in order to avoid a hazard with the key factors range from the bottom below GHS categorization or the relevant hazard communication standard.

Please follow the additional safety messages and manufacturer's guidelines to ensure proper use and maintenance of the commercial refrigerator to prevent accidents and ensure a safe working environment.

**WARNING:** Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.

**WARNING:** Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

**WARNING:** Do not damage the refrigerant circuit.

**WARNING:** Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer

Handling, moving, and use of the refrigerator or freezer to avoid either damaging the refrigerant tubing, or increasing the risk of a leak.

**Caution** – Risk of Fire or Explosion due to Flammable Refrigerant Used. Follow Handling Instructions Carefully in Compliance with U.S. Government Regulations. Component parts shall be replaced with like components and that servicing shall be done by factory authorized service personnel, so as to minimize the risk of possible ignition due to incorrect parts or improper service.

**CAUTION** – Risk Of Fire Or Explosion Due To Puncture Of Refrigerant Tubing; Follow Handling Instructions Carefully. Flammable Refrigerant Used.

**DANGER:** Risk of child entrapment. Before you throw away your old refrigerator or freezer: Take off the doors.

Leave the shelves in place so that children may not easily climb inside.

#### SERIAL NUMBER INFORMATION

- The serial number of all self-contained refrigerators and freezers is located inside the unit on the left-hand side near the top on the wall.
- Always have the serial number of your unit available when calling for parts or service.
- This manual covers standard units only. If you have a custom unit, consult the customer service department at the number listed on the last page.

#### RECEIVING AND INSPECTING THE EQUIPMENT

Even though most equipment is shipped crated, care should be taken during unloading so the equipment is not damaged while being moved into the building.

1. Visually inspect the exterior of the package and skid or container. Any damage should be noted and reported to the delivering carrier immediately. If damaged, open and inspect the contents with the carrier.
2. In the event that the exterior is not damaged, yet upon opening, there is concealed damage to the equipment, notify the carrier. Notification should be
3. made verbally as well as in written form.
4. Request an inspection by the shipping company of the damaged equipment. This should be done within 10 days from receipt of the equipment.
5. Be certain to check the compressor compartment housing and visually inspect the refrigeration package. Ensure lines are secure and base is still intact.
6. Freight carriers can supply the necessary damage forms upon request.
7. Retain all crating material until an inspection has been made or waived.

# INSTALLATION

## **Placement**

These units are designed exclusively for indoor application. Ensure the selected location can sustain the combined weight of the unit and its contents, which may reach up to 1500 pounds. Reinforcement of the flooring may be required for optimal load support. Optimal air circulation is crucial for both the interior and exterior of the unit for efficient cooling.

## **Interior Arrangement**

Avoid overfilling the unit to ensure unrestricted airflow. The cool air is released from the unit's upper rear and must flow unimpeded from there to the unit's base. Blockages could lead to frozen evaporator coils, temperature inconsistencies, or water overflow from the evaporator tray. While storing, place goods towards the back but not against the coil to allow air from the mounted fans to circulate efficiently.

## **Exterior Considerations**

Ensure the unit is positioned in a well-ventilated area, steering clear of heat sources and confined spaces. Maintain a minimum of 2 inches of space from any wall and ensure there's at least a foot of clearance above the unit for proper air circulation.

## **Leveling the Unit**

Aligning the unit perfectly horizontal ensures optimal door function and appearance. This can be achieved using a standard leveler. For models with legs, adjust accordingly to stabilize. If the unit comes with casters, no additional leveling is provided, so a flat surface is imperative.

## **Stabilization**

The provided casters facilitate movement and cleaning. However, once in place, the unit should be stabilized, especially the front casters to prevent movement during operation. If repositioning is necessary, give the unit at least a day before restarting to allow the compressor oil to settle, preventing potential damage to the compressor.

## **Maintenance Note**

Improper installation may void warranty claims. Ensure that installation is carried out in accordance with the manufacturer's instructions or by a professional.

## **Electrical Requirements**

Consult the serial tag, adhere to local codes, or reference the National Electrical Code to confirm that the unit is connected to an adequate power source.

## **Safety Precaution**

For any servicing, maintenance, or cleaning activities, ensure that the unit is completely powered off and disconnected from the electrical supply to prevent any risk of electric shock or damage to the unit.

# OPERATION

**CAUTION:** Do not throw items into the storage area. Failure to heed these recommendations could result in damage to the interior of the cabinet.

## Refrigerated cycle

**Refrigerators:** The evaporator fans will operate continuously, even when the door is open. The door switch triggers the interior lights. Every 6 hours, the refrigerator enters a defrost cycle; it turns off to defrost the evaporator coil. If the coil temperature exceeds 41°F or if 20 minutes pass without a temperature drop, the unit will exit the defrost mode. Door frame heaters prevent condensation and work in tandem with the unit's compressor. The default temperature setting ranges from 34° to 38°F.

**Freezers:** Power to the condensing unit and evaporator fan motors is regulated by the controller, which ensures operation whenever the evaporator coil temperature falls below 54°F. The fans continue to run during door openings but stop during defrost cycles. The defrost cycle occurs every 6 hours, initiated when the coil exceeds 45°F or after 20 minutes without a temperature drop. This process involves turning off the unit and starting the defrost mode, signified by a specific symbol on the display. Anti-condensation heaters on the door frames work with the compressor. The standard temperature for freezers is set between -7° to -3°F.

## SOLID-STATE THERMOSTAT DESCRIPTIONS

### 1. FRONT PANEL COMMANDS

SET: To display the target set point; in programming mode, it selects a parameter or confirms an operation.

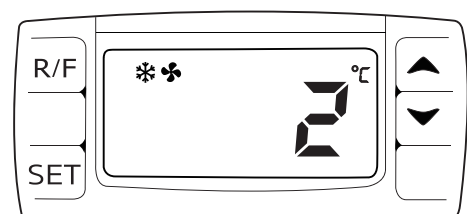
❄️ (DEF) To start a manual defrost.

▲ (UP) To view the latest alarm occurrence; in programming mode, it scrolls through the parameter codes or increases the display value.

▼ (DOWN) To view the latest alarm occurrence; in programming mode, it navigates through the parameter codes or decreases the display value.

### KEY COMBINATION

- ▲ + ▼ : To lock & unlock the keyboard.
- SET + ▼ : To enter programming mode.
- SET + ▲ : To return to the room temperature display.



## LED Functions

LED	MODE	FUNCTION
❄️	ON	Compressor enabled
❄️	Flashing	- Programming Phase (flashing with ❄️) - Anti-short cycle delay enabled
❄️	ON	Defrost enabled
❄️	Flashing	- Programming Phase (flashing with ❄️) - Drip time in progress
🌀	ON	Fans enabled
🌀	Flashing	Fans delay after defrost in progress.
🔊	ON	An temperature alarm happened

## 2. MAIN FUNCTIONS

### 2.1 HOW TO SEE THE SETPOINT

1. Press and immediately release the SET key: the display will show the setpoint value.
2. Push and immediately release the SET key or wait for 5 seconds to display the sensor value again.

### 2.2 HOW TO CHANGE THE SETPOINT

Hold the SET key for more than 2 seconds to change the setpoint value. The value of the set point will be displayed and the LED starts blinking. To change the set value push the UP or DOWN key within 10s. To set a new point value, push the SET key again or wait 10s.

### 2.3 HOW TO START A MANUAL DEFROST

Hold the DEF key for more than 2 seconds and the manual defrost will start.

### 2.4 HOW TO LOCK THE KEYBOARD

Hold the UP and DOWN keys for more than 3s. The "POF" message will be displayed and the keyboard will be locked. At this point, it will be possible only to see the setpoint or the MAX or Min temperature stored.

### 2.5 HOW TO UNLOCK THE KEYBOARD

Hold the UP and DOWN keys together for more than 3s, till the "ROF" message is displayed.

## 3. ALARM SIGNALS

HOW TO SEE THE ALARM AND RESET THE RECORDED ALARM

1. Hold the UP or DOWN key to display the alarm signals.
2. When the signal is displayed, hold the SET key until the "rst" (reset) message is displayed, and then press the SET key again. The "rst" message starts blinking and the normal temperature will be displayed.

Message	Cause	Outputs
"P1"	Room probe failure	Compressor output according to par. "Con" and "COF"
"P2"	Evaporator probe failure	Defrost end is timed
"HA"	Maximum temperature alarm	Outputs unchanged.
"LA"	Minimum temperature alarm	Outputs unchanged.
"dA"	Door open	Compressor and fans restarts
"EA"	External alarm	Output unchanged.
"CA"	Serious external alarm (i1F=bAL)	All outputs OFF.
"CA"	Pressure switch alarm (i1F=PAL)	All outputs OFF

## HOW TO SWITCH BETWEEN FREEZER AND REFRIGERATOR MODE

1. The factory setting for this unit is as a freezer.
2. The controller has an R/F button to switch between freezer and refrigerator modes.

### 2.1 How to Change a Refrigerator to Freezer

1. Press the R/F button for 3 seconds; the controller will then show "Lt" indicating that the unit is now in freezer mode.



### 2.2 How to Change a Freezer to Refrigerator

1. Press the R/F button for 3 seconds; the controller will then show "nt," indicating that the unit is now in refrigerator mode.



# MAINTENANCE

## **Power Disconnection Warning**

Before any maintenance, ensure the appliance is switched off and disconnected from the power supply to avoid the risk of electric shock or injury.

## **Exterior Surface Cleaning**

The outer surfaces can be cleaned with a solution of soap and warm water. Avoid harsh chemicals like ammonia and abrasives that can tarnish the exterior. Always rub stainless steel surfaces in the direction of the grain to prevent scratching.

## **Condenser Coil Maintenance**

The condenser coil should be cleaned regularly, every 90 days is advisable, to prevent accumulation of debris or grease which can occur over time. If only light soil is present, a simple brush can dislodge it. For more significant buildup, a vacuum cleaner or compressed air may be required for effective cleaning.

## **De-greasing Heavy Build-up**

For substantial grease accumulation, there are specialized de-greasing compounds suitable for refrigeration systems. These should be applied with care, followed by a thorough air blow-out to clear any residual cleaner.

## **Overheating Prevention**

Failure to maintain a clean condenser can lead to high temperatures and excessive operational cycles, which may contribute to compressor failure. Always ensure proper airflow to prevent these issues.

## **Caution Against Water**

Avoid using high-pressure water or steam to clean the condenser coils as it can cause damage and should never be used in the cleaning process.

## **Dirt and Grease Removal**

Regular cleaning of the condenser fins is critical for optimal refrigerator performance. This should be done at least once every three months or more frequently if necessary, using a vacuum cleaner or a soft brush. In extreme cases of dirt and grease buildup, a commercial-grade condenser cleaner may be required.

## **Stainless Steel Care**

To clean stainless steel surfaces, opt for non-abrasive tools. Stainless steel cleaners that contain chlorides (like chlorine bleach) should be avoided as they could damage the finish. For routine cleaning, soapy water followed by a rinse and a towel-dry is typically sufficient. When removing smudges, always rub in the direction of the polish lines. For tough spots, a mild baking soda solution can be effective. Ensure to rinse thoroughly and towel-dry afterwards.

## **Warning**

*Never use steel pads, wire brushes, or abrasive cleaning tools on the stainless steel surfaces, as these can scratch and damage the material irreversibly.*

Cleaning solutions need to be alkaline based or non-chloride based. Any cleaner containing chlorides will damage the protective film of the stainless steel. Chlorides are also commonly found in hard water, salts, and household and industrial cleaners. If cleaners containing chlorides are used, be sure to rinse and dry thoroughly.

Routine cleaning of stainless steel can be done with soap and water. Extreme stains or grease should be cleaned with a non-abrasive cleaner and plastic scrub pad. It is always good to rub with the grain of the steel. There are also stainless steel cleaners available which can restore and preserve the finish of the steels protective layer.

Early signs of stainless steel breakdown can consist of small pits and cracks. If this has begun, clean thoroughly and start to apply stainless steel cleaners in attempt to restore the passivity of the steel.

#### **CAUTION**

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

#### **Gasket Maintenance**

Gaskets require regular cleaning to prevent mold and mildew build up and also to keep the elasticity of the gasket. Gasket cleaning can be done with the use of warm soapy water. Avoid full strength cleaning products on gaskets as this can cause them to become brittle and prevent proper seals. Do not use sharp tools or knives to scrape or clean the gasket which could possibly tear the gasket and rip the bellows.

Gaskets can easily be replaced and don't require the use of tools or authorized service technicians. The gaskets are "Dart" style and can be pulled out of the groove in the door and replaced by pressing the new one back into place.

#### **Doors/Hinges**

Over time and with heavy use,

door hinges may become loose. If the door is beginning to sag, tighten the screws that mount the hinge brackets to the frame of the unit. If the doors are loose or sagging, this can cause the hinge to pull out of the frame which may damage both the doors and the door hinges.

#### **Drain Maintenance**

Each unit has a drain located inside the unit which removes the condensation from the evaporator coil and evaporates it into an external condensate evaporator pan. Each drain can become loose or disconnected from moving or bumping the drain. If you notice excessive water accumulation on the inside of the unit, be sure the drain tube is connected from the evaporator housing to the condensate evaporator drain pan. If water starts to collect inside the drain pan, you may want to check the condensate evaporator drain tube to be sure it is still connected underneath the unit. The leveling of the unit is important as the units are designed to drain properly when on a level surface. If your floor is not level this can also cause drain problems. Be sure all drain lines are free of obstructions because this can cause water to back up and overflow the drain pans.



# WARRANTY

## LIMITED WARRANTY

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Koolmore Supply, Inc. extends a limited warranty to the original purchaser, guaranteeing that this Koolmore product is free from manufacturing defects in material or workmanship for one year from the date of purchase. Should you discover any such defect within the warranty period, Koolmore Supply, Inc., reserves the right to repair or replace the product without charge, or to cover the cost of replacement parts and repair labor needed to correct defects present at the time of purchase or resulting from regular usage, when the appliance has been installed, operated, and maintained as per the instructions provided. At its sole discretion, Koolmore Supply Inc. may decide to replace the product. In such an event, your replacement appliance will carry the warranty for the remaining term of the original unit's warranty period. This warranty is valid exclusively to the original purchaser of the product and only applicable within the United States. The warranty commences from the date of original consumer purchase. Proof of the original purchase date will be required to obtain service under this warranty. Under this limited warranty, your sole and exclusive remedy will be product repair, as outlined above. All services must be provided by a Koolmore-designated service company. To claim warranty or request repair service: Email [support@koolmore.com](mailto:support@koolmore.com). Please include your name, address, phone number, warranty repair request, and a copy of your proof of purchase receipt. Alternatively, visit [koolmore.com](http://koolmore.com) and use the contact us page. A Koolmore customer service representative will promptly arrange service for your appliance. We thank you for choosing Koolmore.

## WARRANTY EXCLUSIONS

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This limited warranty will not cover:

1. Failure of the product to perform during power failures or interruptions, or due to inadequate electrical service.
2. Damage incurred during transportation or handling.
3. Damage caused by accidents, vermin, lightning, winds, fire, floods, or acts of God.
4. Damage resulting from accidents, alterations, misuse, abuse, improper installation, repair, or maintenance.

This includes using any external device that alters or converts the voltage or frequency of electricity.

5. Unauthorized product modifications, repairs by unauthorized centers, or use of non-approved replacement parts.
6. Abnormal cleaning and maintenance not aligned with the user's manual.
7. Use of incompatible accessories or components.
8. Any costs associated with repairs or replacements under these excluded circumstances shall be the responsibility of the consumer.

