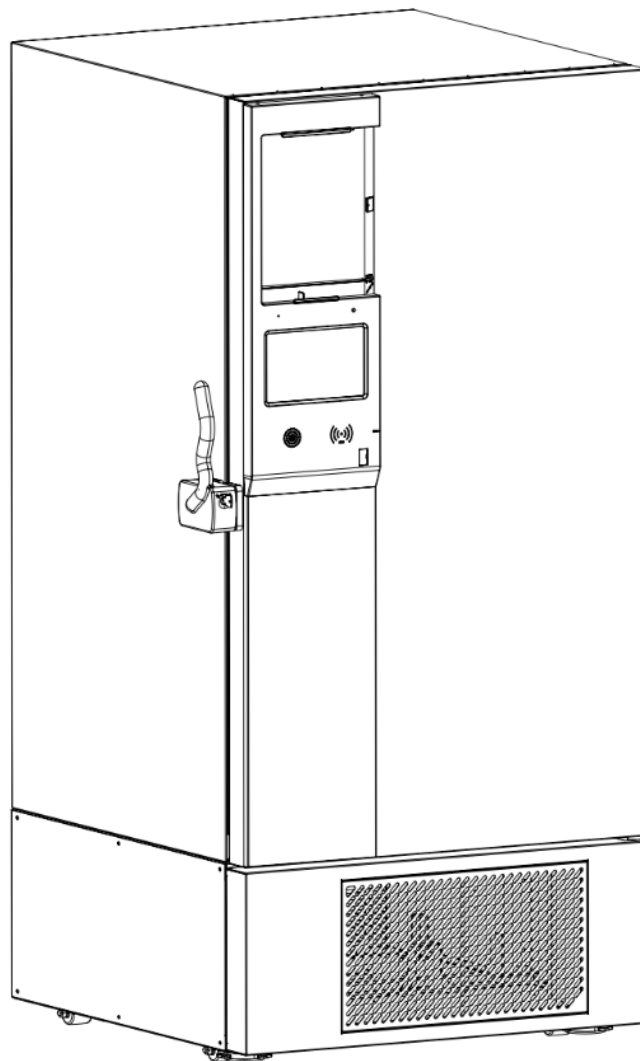




Dual Inverter Ultra Low Temperature Lab Freezer

Models: KM-PHF-20CUL, KM-PHF-25CUL, KM-PHF-30CUL

LAB FREEZER



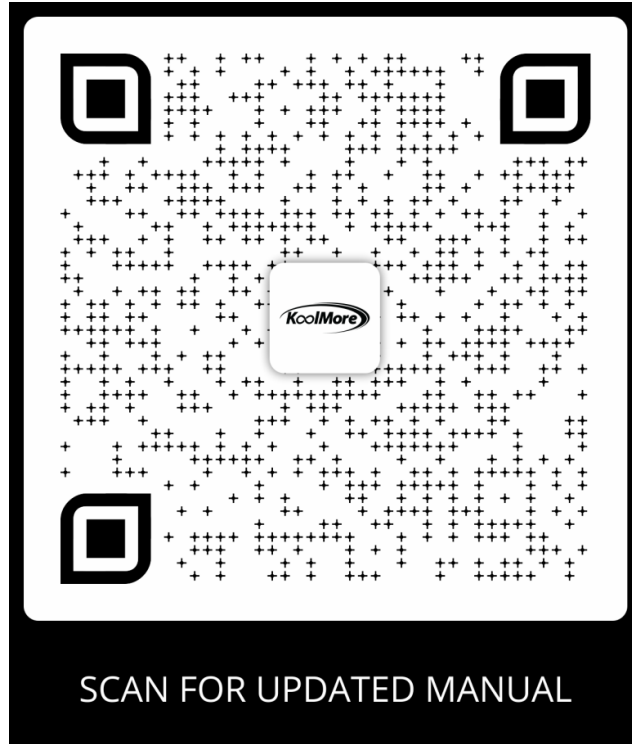
Before using, please read the operating instructions carefully to ensure proper application and achieve satisfactory results.

For any service related issues, please contact us:

☎ 718-576-6342 ✉ support@koolmore.com

Stay informed with the latest information for your KoolMore Appliance.

Scan the QR code below to access the most recent user manual on our website, which is constantly being updated and improved.



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

Phone- 718-576-6342 Email- support@koolmore.com

Please write down the model number and serial number below for future reference. Both numbers are located on the rating label on the back of your unit or inside of the unit and are needed to obtain warranty service. You may also want to staple your receipt to this manual as it is your proof of purchase and may also be needed for service under warranty.

Model Number: _____
Serial Number: _____
Date of Purchase: _____

To better serve you, please do the following before contacting customer service:

If you received a damaged product, immediately contact the retailer or dealer that sold you the product.

Read and follow this User Manual carefully to help you install, use, and maintain your unit.

Refer to the Troubleshooting section of this manual as it will help you diagnose and solve many common issues.

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WARNING: Flammable material.



WARNING: Low temperature/freezing conditions, frostbite HAZARD(MOD).



WARNING: Electrocution Hazard.



WARNING: Crushing of hands.



Frostbite Waring.



Warning.

CYCLOPENTANE

Cyclopentane Foam

Safety

Please carefully read the following information to better understand the Operating Instructions and use this product, so as to prevent personal injury and damage to items.

 **WARNING:** Flammable refrigerant is used in this product.

This unit is intended for use in commercial, industrial, or institutional occupancies as defined in the Safety Standard for Refrigeration Systems, ANSI/ASHRAE 15.

Parts Replacement and Servicing

These installation and operating instructions require that any component parts be replaced only with identical or approved equivalents, and that all servicing be performed by authorized personnel. This ensures proper operation and reduces the risk of ignition caused by incorrect parts or improper service.

WARNING: Ensure all ventilation openings are not obstructed.

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: The packaging base at the bottom of the unit must be removed before use.

WARNING: When moving the unit, take care that the bottom foot does not touch the power cord.

WARNING: The bottom front wheel brake of the unit needs to be locked after moving to the designated position.

WARNING: Before using this unit for the first time, allow it to stand upright for at least 12 hours before plugging it in.

WARNING: After connecting the unit to the power supply, do not load items immediately. Allow the unit to run until the internal temperature reaches the set operating temperature, then add items gradually in batches.

Refrigerant and the cyclopentane foam insulation used in this unit are flammable. When disposing of the unit, keep it away from all ignition sources and ensure it is handled by a licensed recycling or recovery company. The unit must not be incinerated, as improper disposal can cause environmental harm or create safety risks.

The safety of any system that incorporates this equipment is the responsibility of the system's assembler.

IMPORTANT: It is the consumer's responsibility to comply with Federal and Local regulations when disposing of this product.

WARNING: To reduce the risk of fire or flammability hazards, installation of this unit must be performed only by a suitably qualified and authorized technician.

DANGER: Risk of Fire or Explosion. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Puncture Refrigerant Tubing.

CAUTION: Risk of Fire or Explosion. Flammable Refrigerant Used. Consult Repair Manual / Owner's Guide before attempting to install or Service This Equipment. All Safety Precautions Must be Followed.

WARNING: Using the equipment in any way not specified by the manufacturer may compromise its safety features and void the warranty.

Product Overview

Structure

Primarily consists of refrigeration system, electrical control and alarm system, cabinet, and door body.

Scope of Application

Applicable to the low-temperature storage of human examination samples, drugs, vaccines, biological products, reagents, plasma and other samples stored in medical institutions, blood stations, scientific research institutions and other departments under low temperature conditions.

Refrigeration System

Mainly composed of compressor, condenser, dryer filter, capillary tube, and evaporator.

Safety Precautions

WARNING:

Ignoring WARNING items may result in serious injury or death.

CAUTION:

Ignoring CAUTION items may result in minor injury or damage to the unit or surrounding property.

Prohibited Actions:

Acts or operations that must not be performed.

Required Actions:

Actions or operations that must be followed to ensure safe use.

CAUTION: Disposal Safety

- Dispose of the appliance in accordance with **federal and local regulations**.
- The appliance contains flammable refrigerant.

CAUTION: Handling Precautions

- Risk of fire or explosion if the refrigerant tubing is punctured.
- Follow handling instructions carefully.



- Do not store flammable, explosive, or volatile materials in the unit, and do not use flammable sprays near it. Doing so may result in fire or explosion.
- Do not store corrosive chemicals such as acids or alkalis inside the freezer. These substances can damage internal components and electrical parts.
- Keep plastic packaging bags out of the reach of children to prevent suffocation hazards.
- Do not climb on the unit or place heavy objects on top of it. The freezer may tip over and cause injury or property damage.
- Do not use this product outdoors. Exposure to rain can cause electrical shock or electrical leakage.
- Do not place the unit in areas with high humidity or where it may be splashed with water. Excess moisture can reduce insulation and lead to electrical shock.
- Do not pour water directly onto the freezer. This may cause electrical shock or a short circuit.
- Never attempt to disassemble, repair, or modify the unit on your own. Improper service can cause fire, electrical shock, or injury.
- Do not connect the grounding wire to gas pipes, water pipes, telephone lines, or lightning rods. Incorrect grounding may result in electrical shock or other hazards.
- Do not touch the power plug or operate switches with wet hands, as this can cause electrical shock.
- Do not place containers of liquid or heavy items on top of the unit. Spilled water can cause electrical leakage, and falling objects may cause injury.
- Never insert metal objects such as nails, wires, or tools into vents, gaps, or air outlets. This may result in injury or electric shock from contact with moving or live components.
- Do not drag, pull, twist, bind, or damage the power cord. A damaged cord or plug may cause fire or electric shock.
- Do not use the unit with a loose or damaged power plug, as this can cause fire or electrical shock.
- Do not store glass bottles or canned items in the freezer. They may freeze, crack, and cause injury.

 **CAUTION:**



- Keep the area around the unit clear to ensure proper airflow and ventilation.
- After a power outage or shutdown, verify that the temperature setpoint and settings are correct before restarting the freezer. Incorrect settings may damage stored materials.
- After the freezer is turned off or an outage, wait at least 5 minutes before turning the freezer back on to prevent compressor or system damage.
- Clean the air filter at least once per month. A dirty filter can cause temperature instability or system malfunction.
- If the power plug becomes dusty, clean it promptly. Dust buildup can cause poor connections, overheating, or even fire.
- Wear gloves during maintenance to avoid injury from sharp edges or corners.
- Do not touch stored items or interior surfaces with bare hands. Direct contact with frozen materials or inner walls may cause frostbite.
- Use the door handle when closing the door to prevent finger pinching.

- When moving or transporting the unit, do not tilt it more than 30° to avoid damaging internal components.



- During product handling, care should be taken not to trip over it to prevent damage to the product or personal injury.
- Do not use the door handle to lift or carry the product to avoid damage to it or personal injuries.
- Do not damage the refrigeration circuit.
- Do not use appliances inside the product except for those recommended by the manufacturer.

 **NOTICE! Risk of Damage:**

Vacuum insulation panels are used in the construction of these ULT freezers. Inspect the cabinet panels for punctures or other damage that compromises the integrity of the product

These panels are mounted in the cavity against the steel outer wall of the freezer. Any drilling or puncture to the outer wall could release the vacuum from the panel, resulting in impaired freezer performance.

Any unauthorized punctures or intentional damage to the cabinet walls will void the warranty.

WARNING: Dispose of the refrigerator in accordance with local regulations, as it contains flammable blowing agents and refrigerant.

Before Use

Usage Guidelines

- When the unit is running, the front area near the outer door may feel warm. This is normal and is caused by built-in anti-condensation components designed to prevent moisture buildup on the exterior surface.
- Before loading items, make sure the internal temperature has reached the setpoint. Add items in small batches, ensuring each load is no more than one-third of the compartment volume to avoid excessive temperature rise.
- The displayed temperature reflects the reading at the sensor location inside the cabinet. When the unit first starts, the displayed value may differ slightly from the internal center temperature. After the unit stabilizes, the displayed temperature will closely match the actual temperature.
- Some models include a test port for inserting temperature probes. After removing the probe or test lead, seal the test port with insulation material. Failure to do so may prevent the freezer from reaching the set temperature and can cause condensation around the port.
- Clean the unit using a diluted neutral cleaner. Do not use brushes, acids, gasoline, abrasive powders, polishing agents, or hot water, as these may damage painted, plastic, or rubber components. Never use volatile solvents (such as gasoline) on plastic or rubber parts.
- If the freezer will not be used for an extended period, disconnect the power and turn off the battery switch.
- Minimize the amount of time the door is open when loading or removing items to help maintain stable compartment temperature.
- After the door is opened, a brief temperature rise inside the compartment is normal. The temperature will return to the setpoint once the door is closed and the unit resumes normal operation.
- Over time, frost may form on the interior walls. If the frost layer reaches approximately 5 mm, defrost the unit using the provided plastic scraper. Excessive frost reduces cooling efficiency and increases energy consumption.
- Before defrosting, remove all stored items and place them in an environment that maintains their required storage temperature.
- Do not use sharp tools such as knives, chisels, or screwdrivers to remove frost. These can damage the refrigerant coils or inner liner, leading to product failure. Always avoid scratching the interior surfaces during defrosting.
- The enclosure can only be opened with tools, and repairs must be performed exclusively by qualified technicians or authorized after-sales service personnel. Unauthorized access or servicing may result in electric shock, fire, or serious injury.

Handling

1. Use proper equipment when moving the unit. Transport the product with a manual hydraulic pallet truck or similar appropriate lifting device to prevent damage.
2. Remove all packaging. Take off all packing materials, including the bottom cushion, before moving the unit into the building for placement.
3. Allow the unit to settle. After positioning the freezer in its final location, wait 24 hours before powering it on to ensure proper compressor oil return and stable operation.



Door Space Requirements

The unit's door must be able to open fully as shown.

$W \times D \geq 68.90 \text{ in} \times 76.77 \text{ in}$ (for KM-PHF-20CUL)

$W \times D \geq 65.75 \text{ in} \times 62.99 \text{ in}$ (for KM-PHF-25CUL)

$W \times D \geq 54.92 \text{ in} \times 59.06 \text{ in}$ (for KM-PHF-30CUL)

