

MOTAK



MRMC-1

Cold Wall Evaporator Milk Cooler Instruction Manual

This manual contains important information regarding your unit. Please read this manual thoroughly prior to equipment set-up, operation, and maintenance. Failure to comply with regular maintenance guidelines outlined in this manual may void the warranty.

IMPORTANT SAFEGUARDS

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



WARNING

DANGER:

- Risk of fire or explosion.
- Flammable refrigerant R290 used.
- Flammable insulation blowing gas C5H10 used.
- To be repaired only by trained service personnel.
- **DO NOT** use mechanical devices to defrost refrigerator.
- **DO NOT** puncture refrigerant tubing.
- **DO NOT** pierce or burn.
- **DO NOT** store in a room with continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).

ATTENTION

- 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.
- **DO NOT** use this unit for anything other than intended use.
- **DO NOT** overload outlet, to minimize shock and fire hazards.
- **DO NOT** spray the unit with water.
- **DO NOT** attempt to remove or repair any component.
- **DO NOT** attempt to alter or tamper with the electrical cord.
- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- **DO NOT** rest unit on or against the electrical cord or plug.
- **DO NOT** damage the refrigerant circuit.
- **DO NOT** store any flammable or explosive substances inside the unit.
- The appliance shall be stored so as to prevent mechanical damage from occurring.
- **DO NOT** install back of unit flush to wall.
 - * Leave enough space from the wall to the cabinet and the ceiling.
 - * There must be a minimum of four (4) inches (10 cm) of clearance between the sides and a wall.
- Keep obstruction away from all ventilation openings inside or outside the unit.
- Keep clear all packing material from the lower front area heat radiation area to avoid fire.
- **DO NOT** allow unit to collide or fiercely vibrate when in transportation.
- **DO NOT** incline the cabinet more than 45° (degrees).
- **DO NOT** hang on door or stand inside the unit. This will cause premature failure of the floor and door hinges.
- Servicing shall be done by the authorized service personnel, to minimize the risk of possible ignition due to incorrect parts or improper service.
- The unit must be turned OFF and disconnected from the power source whenever performing service, maintenance functions or cleaning the refrigerated area.

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ELECTRICAL WARNINGS:

- Observe all Warning Labels.
- This unit should be plugged into a grounded and properly sized electrical outlet with proper over-current protection.
 - * **DO NOT** alter the cord plug.
 - * Electrical requirements are on the name plate.
 - * Ensure that the required voltage matches the voltage on the data tag and is being supplied at all times.
 - * Check the proposed outlet to be used to ensure that the voltage, phase, and current-carrying capacity of the circuit from the electrical panel correspond to the requirements of the cabinet.
 - * A dedicated circuit with protection to a single-phase socket that is grounded must be used as per local codes.
- **NEVER** use an extension cord to power unit.
 - * This appliance should be connected to a dedicated grounded circuit.
 - * The use of an extension cord will cause damage to the compressor and void the warranty.
- All inter-wiring between the electrical panel and the unit must be done in accordance with the National Electric Code and all state and local codes. Refer to the Serial Tag for all pertinent electrical information.
- **DO NOT** pinch or roll the unit over the cord set, this will cause damage to the cord set. This type of damage is not covered by the manufacturing warranty.
- **DO NOT** plug or unplug the cord with wet hands, to minimize shock and fire hazards.
- **UNPLUG UNIT BEFORE** maintenance and cleaning. Disconnect the power supply to eliminate injury from electrical shock or moving parts when servicing equipment.

PROPER GROUNDING REQUIRED

- To minimize shock and fire hazards, make sure that the unit is properly grounded.
- **DO NOT** connect grounding wire to a water or gas pipe.

DISPOSAL

- Dispose of properly in accordance with Federal or local regulations.
- Refer to local regulations regarding disposal of the appliance for its flammable gas, C5H10.
- Before you scrap the appliance, take off the doors to prevent children from being trapped.

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.

- 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/driver.
- In the event that the exterior is not damaged, yet upon opening, there is concealed damage to the equipment, notify the carrier immediately.
 - * Notification should be made verbally, as well as, in written form.
- Freight carriers can supply the necessary damage forms upon request.
- Request an inspection by the shipping company of the damaged equipment. This should be done within 10 days from receipt of the equipment.
- Be certain to check the compressor compartment housing and visually inspect the refrigeration package. Be sure lines are secure and base is still intact.
- Retain all crating material until an inspection has been made or waived.

INSTALLATION WARNINGS:

- Remove the skid carefully to avoid damaging the cooler's finish.
- If this unit has recently been transported on its side, stand the unit upright for a minimum of 24 hours before plugging it in and turning on.

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- * Be sure to check the compressor to see if it pulled free of its mounting fasteners. Failure to do so will severely damage the compressor.
- The self-contained refrigeration system located at the bottom of the cabinet requires free air access for proper operation.
- The back of the cabinet may be positioned against a wall; however, there must be a minimum four (4) inches (10 cm) of clearance between the sides and a wall.
- The cooler must be properly leveled to provide adequate drainage and efficient functioning of the unit.
- There are no "customer serviceable" parts of the refrigeration system. Consult an authorized service technician for servicing/repair or maintenance.
- Make sure the unit has reached the desired temperature and allow before loading it with product.
 - * **If the unit fails to reach temperature with 1 hour, turn off the unit and call for service!**
- The appliance shall be installed in accordance with national wiring regulations
- The appliance is to be installed in accordance with the Safety Standard for Refrigeration Systems, ANSI/ASHRAE 15.

Notice:

- * Any person who is involved with working on a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorizes their competence to handle refrigerants safely in accordance with an industry recognized assessment specification.
- * Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
- * Component parts shall be replaced with like components so as to minimize the risk of possible ignition due to incorrect parts.

Accessories:

- Make sure all accessories are installed prior to turn the unit on. (Shelves, Clips, Swivel Casters, or Adjustable Legs)
- **DO NOT** tip the cabinet more than 45° (degrees) to install casters or legs.
- Ensure that the casters or legs are screwed all the way into the base.

Interior proper air flow:

- Failure to install the shelves properly is considered a user-error and is not covered by warranty.
- **DO NOT** place any boxes or bagged product directly on the floor or allow product to over-hang the shelving and come into contact with interior walls.
- This will severely impede air flow and cause product loss.
- ***DO NOT** store product within 6 inches of the evaporator cover.

Shelf Clips:

- Be sure the shelf clips are installed correct.
- **DO NOT** use pliers to install the clips, this will cause damage and the possibility of the shelving to collapse under a heavy load.
- Be sure the tab on clip is pointed up.
- Insert the top into the pilaster first, then the bottom.
- All product should be on the shelving to ensure proper air flow inside the box.
- When installed the shelf the "raised lip" needs to be installed facing up and to the rear of the unit.

Location

- Units represented in this manual are intended for indoor use only.
- Outdoor use will cause a decrease in efficiency and damage to the unit.
- Avoid direct sunlight.
- Avoid installation in a high humidity area.
- For optimum performance temperature a Maximum of an ambient temperature of 85°F.
- If this appliance is operated at or above 95°F ambient and humidity above 70% the unit will cease to function properly and would not be covered by the warranty.

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- Be sure the location chosen has a LEVEL floor strong enough to support the total weight of the cabinet and contents.
- A fully loaded unit can weigh as much as 1500 pounds.
- Reinforce the floor as necessary to provide for maximum loading.
- For the most efficient refrigeration, be sure to provide good air circulation inside and out.

Inside cabinet:

- **DO NOT** pack the units so full that air cannot circulate.
- The refrigerated air is discharged at the top rear of the unit.
- It is important to allow for proper air flow from the top rear to the bottom of the unit.
- Obstructions to this air flow can cause evaporator coil freeze ups and loss of temperature or overflow of water from the evaporator drain pan.
- The shelves have a rear turn up on them to prevent this.
- However, bags and other items can still be located to the far rear of the cabinet but should not overhand the shelving.
- Air is brought into the evaporator coil with fans mounted to the front of the coil.
- **DO NOT THROW** items into the storage area. Failure to heed these recommendations could result in damage to the interior of the cabinet.

Outside cabinet:

- Be sure that the unit has access to ample air.
- Avoid hot corners and locations near stoves and ovens.
- It is recommended that the unit be installed no closer than four (4) inches (10 cm) from any wall with at least 12" of clear space above the unit.

Leveling

- Ensure the floor where the unit is to be located is level.
 - * Failure to level unit will cause doors to hand open or not close properly. This will cause evaporator coil to freeze and prevent the flow of cold air.
 - * This is not considered a manufacturing defect and would not be covered by the warranty.
- A level cabinet looks better and will perform better because the doors will line up with the frames properly.
- Use a level to make sure the unit is level from front to back and side to side.
 - * The unit is supplied with legs that have adjustable bullet feet to make the necessary adjustments.
 - * The unit is supplied with casters but leveling adjustments cannot be made to casters.

Stabilizing

- All models are supplied with casters for your convenience. It is very important, however, that the cabinet be installed in a stable condition with the front wheels locked while in use.
- Should it become necessary to lay the unit on its side or back for any reason, allow at least 24 hours before start-up to allow compressor oil to flow back into place.
- Failure to meet this requirement can cause compressor failure and unit damage.

GENERAL OPERATION

- The milk coolers are cooled entirely by convection with copper coils completely encircling the perimeter of the storage compartment. During the refrigeration process, heat is removed through the evaporator tubing and expelled through the condensing unit.
- Air flow must not be restricted; do not block the side louvers to ensure the condensing unit operates properly.
- Under normal operating conditions, any frost that might accumulate on the walls during the "on" cycle of the condensing unit may melt during the "off" cycle. Drains are installed in all milk coolers to accommodate melting frost.
- The refrigeration system on this cabinet uses a temperature thermostat that senses the cut-in and cut-out temperatures of the cold wall evaporator coil.
- The temperature can be adjusted by turning the thermostat control knob, located behind the louvered side panel.

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TEMPERATURE CONTROLS

Setting the Temperature

- Your new freezer or refrigerator is already factory set to run at optimum temperature for food safety and adjustments should not be required.

How to see the Set Point:

1. Push and immediately release the SET key, the set point will be shown.
2. Push and immediately release the SET key or wait about 5 seconds to return to normal visualization.

How to change the Set Point:

1. Push the SET Key for more than 2 seconds to change the Set point value.
2. The value of the set point will be displayed and the "C" or "F" LED will start blinking.
3. To change the Set value, push the up ▲ or down ▼ arrows.
4. To memorize the new set point value, push the SET key again or wait 10 seconds.



Refrigeration Cycles

1. Refrigerators:

- * During the refrigeration cycle, the evaporator fans will run continuously even when one or more doors are open.
- * The door switch will activate the lights when opened.
- * Every 6 hours, the unit will turn off and to allow the evaporator coil to defrost. The controller will display the defrost symbol ❄️. When the coil temperature reaches 41°F or after 20 minutes of defrost, the unit will turn on again and go back into cooling or freeze mode.
- * The factory setting for the temperature range is 33° to 41° F.

2. Freezers:

- * During the refrigeration cycle, the controller supplies power to the condensing unit and evaporator fan motors. The evaporator fans will run at any time when the evaporator coil temperature is below 54° F. They will also keep running when door is open but cycle off during a defrost period.
- * The door switch will activate the lights when opened.
- * Every 6 hours, the unit will turn off and electric heater will turn on to defrost. The controller will display the defrost symbol ❄️. When the coil temperature reaches 45°F or after 20 minutes of defrost, the unit will turn on again and go back into the freeze mode.
- * Anti-condensation heaters on door frames work in conjunction with the compressor.
- * The factory setting for temperature range is -10 to 0°F

GENERAL MAINTENANCE

- The unit must be turned OFF and disconnected from the power source whenever performing service, maintenance functions or cleaning the refrigerated area.
- Lack of proper maintenance is not covered by the product warranty.

Refrigerators and Freezers - should be cleaned regularly.

- Beginning with the initial installation, the interior surfaces of the cabinet should be periodically wiped down with a solution of warm water and baking soda or with mild soap. This solution will remove any odors from spillage that has occurred.
- The exterior of the cabinet should also be cleaned frequently with a commercial grade glass cleaner or with mild soap and water. If this isn't sufficient, try ammonia and water or a nonabrasive liquid cleaner.
- When cleaning the exterior, always rub with the "grain" of the stainless steel to avoid marring the finish.
- NEVER** use an abrasive cleaner or acidic solution, as it can scratch the stainless steel and plastic, and it can damage the breaker strips and gaskets.

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Clean the Condenser Monthly

- **NEVER USE A HIGH-PRESSURE WATER WASH** as water can damage the electrical components located near the condenser coil.
- Failure to maintain a clean condenser coil can initially cause high temperatures and excessive run times. Continuous operation with dirty or clogged condenser coils can result in compressor failures.
- Regular cleaning of the condenser will aid the heat transfer characteristics of the refrigeration system and increase its efficiency.
- It is recommended every 30 to 90 days, depending on the amount of debris, dust and/or grease accumulating.
 - * If the build-up on the coil consists of only light dust and debris, the condenser coil can be cleaned with a brush.
 - * Heavier dust build-up may require a vacuum or even compressed air to blow through the condenser coil.
 - * If extremely dirty, a commercial-grade condenser cleaner may be required.
 - * If heavy grease is present, a service professional is recommended to clean the coils. Improper cleaning could damage the coil and possibly cause refrigerant leaks.
- Neglecting the condenser coil cleaning procedures will void any warranties associated with the compressor or cost to replace the compressor.

Stainless Steel Care and Cleaning

- To prevent discoloration of rust on stainless steel several important steps need to be taken. First, we need to understand the properties of stainless steel. Stainless steel contains 70-80% iron which will rust. It also contains 12-30% chromium which forms an invisible passive film over the steel's surface which acts as a shield against corrosion. As long as the protective layer is intact, the metal is still stainless. If the film is broken or contaminated, outside elements can begin to breakdown the steel and begin to form rust or discoloration. Proper cleaning of stainless steel requires soft cloths or plastic scouring pads.
- **NEVER USE STEEL PADS, WIRE BRUSHES OR SCRAPERS!**
- 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 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 steel's 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.
- **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.
- Use 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.

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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 inside the unit to remove condensation from the evaporator coil and evaporates it into an external condensate evaporator pan.
- The drain can become loose or disconnected from moving or bumping the drain. If excessive water accumulates inside of the unit, ensure the drain tube is connected from the evaporator housing to the condensate evaporator drain pan.
- If water starts to collect underneath the unit, check that the condensate evaporator drain tube is located inside the drain pan.
- 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.
- Ensure all drain lines are free of obstructions to avoid water backing up and overflowing the drain pans.

TROUBLE SHOOTING

- Before requesting any service on your unit, please check the following points. Please note that this guide serves only as a reference for solutions to common problems.

ISSUE	POSSIBLE CAUSE	SOLUTION
Compressor not running	Fuse blown or circuit breaker tripped.	Replace fuse or reset circuit breaker
	Power cord unplugged..	Connect the unit to the power outlet.
	Thermostat set too high	Set thermostat to lower temperature
	Cabinet in defrost cycle.	Wait for defrost cycle to finish.
Condensing unit runs for long time.	Excessive amount of warm product placed in cabinet.	Allow adequate time for product to cool down.
	Prolonged door opening or door ajar.	Ensure doors are closed when not in use. Avoid opening doors for long periods of time.
	Dirty condenser coil.	Ensure gaskets are snapped in completely. Remove gasket and wash with soap and water. Replace if necessary.
	Evaporator coil iced up and blocking air flow.	Unplug unit and allow coil to defrost. Make sure temperature setting is not too lower. Ensure that door gasket(s) are sealing properly.
Cabinet inside temperature is too high.	Temperature setting is too high.	Set parameter to lower temperature
	Air flow is blocked.	Re-arrange product to allow for proper air flow. Make sure there is at least six inches of clearance from evaporator.
	Excessive amount of warm product placed in cabinet.	Allow adequate time for product to cool down.
	Fuse blown or circuit breaker tripped.	Replace fuse or reset circuit breaker.
	Evaporator coil ice up.	Inspect the defrost heater if the fuse is burned out or blown. Inspect the temperature controller if the defrost parameter setting is wrong
Unit makes too much noise.	Parts are loose.	Tighten loose parts.
	Evaporator Fan Blade striking ice.	Unplug unit and allow coil to defrost