OWNER'S GUIDE

Hazardous Locations Refrigerator and Freezer with Mechanical Temp Control

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RECEIVING AND SHIPPING DAMAGE HANDLING

Each refrigerator or freezer is carefully inspected to meet our high standard quality assurance policy, before it ships to you. Unfortunately, shipping damage can happen during transportation to you. There are two general types of shipping damage. The first is **visible damage**. This type of damage includes visible loss, damage, shortage or any external evidence of loss or damage that is visible at time of delivery**. This type of damage must be noted in detail on your delivery receipt. Make sure the driver signs and dates the delivery receipt, acknowledging the damages. We also recommend taking many pictures to demonstrate and document the damaged area(s).** This must happen at the time of delivery or it won't happen at all. Keep a copy for your records and send another to the carrier's damage claims department along with a formal request for an inspection report. Follow up with a phone call. Their contact information can be found on the carrier's web site.

The second type of shipping damage is **concealed damage**. This type of damage will probably not be apparent at time of delivery and may not be discovered until unpacking and inspecting the unit. Remember, time is of the essence here. You should unpack and inspect the unit as soon as possible. Each day that passes reduces the likelihood that the carrier will pay the claim. **As soon as the concealed damage is discovered, stop unpacking and retain all packing materials. Take many pictures to demonstrate and document the concealed damage area(s). Contact the carrier by phone to report the claim.** Note the date and time and person you spoke with. Get a claim number. Follow up with a written letter referencing the claim number and including a formal request for an inspection. Again, consult the carrier's website for specific claim instructions and follow them precisely.

 **AS STATED ABOVE, THE CARRIER IS YOUR SOLE SOURCE FOR SATISFACTION OF A DAMAGE CLAIM. UNDER NO CIRCUMSTANCES SHOULD THE MERCHANDISE BE RETURNED TO THE MANUFACTURER. NO RETURNS WILL BE ACCEPTED WITHOUT PRIOR AUTHORIZATION.**

SAFETY

For your safety

- DO NOT store any unsealed chemical material in this refrigerator or freezer. Corrosive fumes from chemical material can linger inside of the chamber and cause serious damage to the refrigeration coils. Storing unsealed chemical material in this equipment will void the factory product warranty.
- Keep all flame sources or heat objects away from this refrigerator or freezer.
- Disconnect power before servicing this refrigerator or freezer.

This is a hazardous Locations storage refrigerator or freezer. All laboratory safety rules must be followed during the operation of this refrigerator or freezer.

RELEASE OF LIABILITY

Before you start to use this refrigerator, please take a moment to:

- Connect your remote alarm contacts system, or auto dialer, to the refrigerator's alarm system (if any).
- If your refrigerator model does not have an alarm system, you can install your 3rd party alarm into our refrigerator via the 3/8" access porthole. Please see "Field Monitor Probe Installation" Section.
- Develop an emergency backup plan and designate a different refrigerator or freezer to store the contents, if this refrigerator has an unforeseen issue.

IF YOU PLAN TO STORE IRREPLACEABLE AND/OR HIGH VALUE PRODUCTS IN THIS UNIT TAKE THE PROPER PRECAUTIONS NOW.

The manufacturer's sole obligation under this warranty is limited to either repair or replacement of parts, subject to the additional limitations below. This warranty neither assumes, nor authorizes any person to assume obligations other than those expressly covered by this warranty.

NO CONSEQUENTIAL DAMAGES. The manufacturer is not responsible for economic loss, profit loss, or special indirect or consequential damages, including without limitation, losses, or damages arising from contents spoilage claims whether because of refrigeration or mechanical failure.

California Residents Only:

WARNING: This product can expose you to chemicals including chromium which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to P65Warnings.CA.gov

ELECTRICAL INFORMATION

- The supply circuit to this cabinet must conform to NEC (National Electrical Code). Consult the cabinet Serial-Data plate for voltage, cycle, phase, and amp requirements before making connection.

- SUPPLY VOLTAGE SHOULD NOT VARY MORE THAN 5% FROM SERIALPLATE RATINGS.

- Per UL, NFPA, and OSHA guidelines, this refrigerator or freezer can only be powered by “hard-wire” only. There are 18 inches of factory-sealed harness for power source. Consult with your electrician before installation. Your harness should be located in a vapor-proof conduit, to prevent flammable gasto leak into the power connection.

INSTALLATION

Please take a moment to follow the steps below, before using this equipment.

1. Find a suitable location to install this refrigerator (or freezer)
2. Level this refrigerator (or freezer)
3. Set up the shelves inside (if applicable)
4. Install the optional monitor probe for field installation
5. Ready to use

1. SUITABLE LOCATION

Ambient Temperature – Unlike a household refrigerator, this equipment is designed for scientific / medical application. Many components are heavy duty and extra sized to meet the ultimate temperature performance. Therefore, the sounds generated from its operation may not be accepted by everyone in the room. Please take the operation sound factor into consideration and locate this refrigerator accordingly.

Please ensure the ambient temperature is climate-controlled, between 65°F to 85°F to achieve the ultimate temperature performance.

Clearance Space – We require 2 to 3 inches of clearance space around the unit. This makes it easier to maneuver it for annual maintenance or service.

2. LEVELING

Once this refrigerator or freezer is at its final location, please level your refrigerator, because it is critical to equipment operation. Here are a few benefits to a good leveled refrigerator (or freezer):

1. Moving mechanical parts, such as fan or compressor, would have less chances to fail, since it is in the designed upright position.
2. Reduce noise.
3. Door(s) would close properly.
4. Condensate water would flow out the refrigerator properly.

To level this equipment, set a leveler in each corner on the top. If the equipment is not level, adjust either the leveling legs or casters.

We recommend that the refrigerator (or freezer) is slightly tilted backward (5°.) This allows the non-self-closing door to shut properly and condensate water flow out more easily.

3. READY TO USE

Once you ensure the electrical service is adequate and Steps 1 and 2 are followed, you are ready to use this refrigerator (or freezer). Simply plug in the power cord into the wall outlet.

This refrigerator (or freezer) is factory set to run at its ultimate temperature performance. There should not be a need to adjust the temp settings. If you feel the temp settings must be adjusted, please refer to “TEMPERATURE ADJUSTMENT” section in this manual for more details.

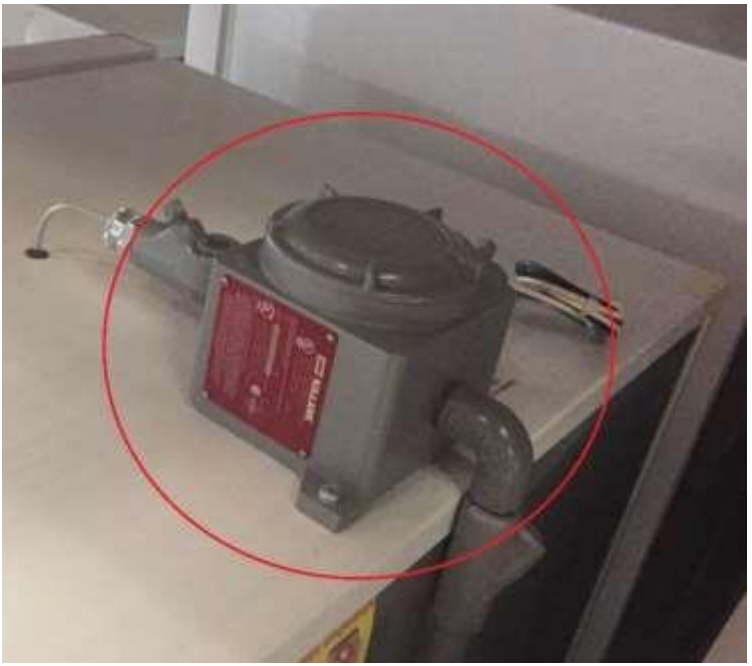
Temperature Controller System

Product Description

The mechanical temperature controller is designed to provide temperature control of refrigerators or freezers. It is located in the exterior rear top location of refrigerator or freezer, inside of the metal enclosure.

Setting 1 will operate the refrigerator or freezer at warmest setting and setting 7 (some models maximum setting is 9) will be the coldest setting.

After making an adjustment, please allow 8 hours' operation before making a new adjustment.



Mechanical Temperature Controller – located in the rear top location of refrigerator or freezer, inside of the metal enclosure.

Quick Troubleshooting Guide

Check these items before calling for service

PROBLEM:	POSSIBLE CAUSE / SOULTIONS:
Unit does not run	• Electrical circuit is not 110-120V 60Hz. • The power harness is not secured or connected correctly. • No power at the source. Check to make sure breaker is not tripped or fuse is not blown. Additionally, make sure unit is not plugged into a Ground Fault Circuit Interrupter (GFCI) type of outlet.
Unit does not maintain at the proper temperature	• Check the room temperature. We recommend the refrigerator or freezer should be placed in an air-conditioned room between 65°F to 85°F. If the room temp is too warm, the refrigerator or freezer may not be able to maintain the interior temp at proper range. • Door is not closed properly. • Amount of stored product is overloaded. • Product replacements are pushed against rear wall or interrupted the proper refrigerator air circulation. For the proper air circulation, place the products evenly on each shelf. Do not push against the refrigerator's rear or side walls. • Evaporator is blocked by frost or ice. Remove the products, unplug the refrigerator or freezer power, and allow the unit to defrost. If the problem still exists, call for service. • 3rd party thermometer is placed incorrectly. For proper temperature monitoring, the thermometer should be place in the middle of refrigerator. **PLEASE NOTE**! Prior to shipment, each refrigerator and freezer has been calibrated and tested at proper temperature range.

Appliance runs too long	• Prolong door openings. • Control set too cold. • Room temperature is high which will make the unit work harder to keep cool.
Temperature of external wall surface is warm	• The exterior walls can be as much as 30 degrees warmer than room temperature due to the embedded condenser coils. This is normal when the unit is operating.
Compressor noises	• Compressor may be overheated. Please check the room temp and ensure the range is within 65°F to 85°F. If the problem still exists, call for service.
Moisture collects inside	• Door gasket is not sealing properly. Check for debris, cracks, and items passing through door at the gasket. • The refrigerator or freezer is facing a doorway or is underneath of air conditioning vent. Relocate the unit or redirect air vent. • Too many door openings. Minimize time door is open. • Hot, humid weather increases condensation. • Make sure there is a water trap (U-shaped loop) in the drain tube near the compressor. This will “trap” a small amount of water in the loop and prevent air from entering the chamber through the tube.
Moisture collects on outside surface	• Hot, humid weather increases condensation. • As humidity decreases, moisture will disappear.
Odor inside the unit	• Interior needs to be cleaned. See section on maintenance and cleaning in this manual. • Make sure product containers are tightly sealed to prevent leakage
Door will not close	• The unit is not level. Refer to the Leveling section at the beginning of this manual • Check for dirt and debris or items passing through the door seal.

MOISTURE DURING THE SUMMER SEASON

The amount of moisture, condensation, or high humidity related issues increase during the summer and, in most cases, will self-resolve when the weather cools down. Please note a refrigeration system will NOT generate moisture or water but simply condenses the moisture that is already in the chamber. Keeping the unit in an

air conditioned, low humidity space will resolve many issues. Other things you should check

1. Location of the refrigerator (See Quick Troubleshooting Guide above)
2. Door sealing and frequency of door opening event (SeeQuick Troubleshooting Guide above)
3. Make sure there is a water trap (U-shaped loop) in the drain tube nearthe end. This will “trap” a small amount of water in the loop and prevent air from entering the chamber through the tube.

BEFORE CALLING THE MANUFACTURER’S TECHNICAL SUPPORT DEPARTMENT, please have the unit’s model and serial number ready as well as the problem description. The model and serial number is located on the serial tag which can be found on the interior left upper wall of the unit.

CLEANING

PART	CLEANING AGENTS	TIPS AND PRECAUTIONS
Interior and Door Liners	**Soap and water Baking soda and water**	**Use 2 tablespoons of baking soda in 1 quart of warm water Be sure to wring excess water out of sponge or cloth before cleaning around controls, light bulb or any electrical parts.**
Door Gaskets	**Soap and water**	**Wipe gaskets and their seating surfaces with a clean soft cloth**
Shelves	**Soap and water**	**Do not wash removable shelves in dishwasher**
Exterior and Handles	**Soap and water Non-Abrasive Glass Cleaner**	**Do not use commercial household cleaners, ammonia, or alcohol to clean handles Use a soft cloth to clean smooth handles Do not use a dry cloth to clean smooth handles**

Clean the glass with a mild detergent and water on a soft cloth or sponge. Rinse with water and wipe dry.

For Sliding door units, dust and debris can begin to build up in the door track. To clean the door, track the doors should be removed and the track cleaned with mild detergent and water on a soft cloth or sponge. Rinse with clean water and wipe dry. Contact technical support if you have difficulty removing the doors.

For Swinging door units, pay attention to the gasket and its seating surfaces. Any debris buildup on these can cause air leaks into the compartment resulting in condensation as well as reduced efficiency.

CONDENSER MAINTENANCE

IMPORTANT WARRANTY INFORMATION

Air is pulled through the condenser continuously during operation. Along with this air come impurities like dust, lint, grease, etc.
These impurities accumulate in the condenser. Dirty condensers result in inefficient operation, compressor failure and potential product loss ***which are not covered by warranty***.

If you keep the condenser clean, you will minimize your service expense and lower your electrical costs. **The condenser requires scheduled cleaning every 30 day** (or more frequently in dirty environments).

Proper cleaning involves removing dust from the condenser. This can be accomplished using a soft brush, by vacuuming, and by blowing through the condenser coils with pressurized air, CO2, or nitrogen.

- **REMEMBER, THE CLEANING OF THE CONDENSER IS NOT COVERED BY THE WARRANTY AND IS YOUR RESPONSIBILITY. ANY DAMAGE CAUSED BY FAILURE TO KEEP THE CONDENSER CLEAN IS ALSO NOT COVERED BY THE WARRANTY.**

CLEANING THE CONDENSER

1. Disconnect the electrical power to the unit
2. Removed the louvered grill at the base of the unit. Locate the condensing unit.
3. **CAUTION: Use eye protection while performing the steps 4-6 to avoid eye injury.**

4. Vacuum the dirt from the condenser coil fins. Use a soft brush to help dislodge the dirt from the coil fins and around the coil ends.
5. When properly cleaned, you should be able to see through the condenser unit (try shining a flashlight through to the other side).
6. If necessary, use compressed air, CO2 or Nitrogen to blow through the coils. Limit air pressure to approx. 30 psi.
7. When finished, be sure to replace the louvered grill as it provides protection for the condenser.
8. Reconnect the electrical power to the unit.