
LABORATORY FREEZER

Installation, Operation and Maintenance Instructions

INSPECTION

When the equipment is received, all items should be carefully checked against the bill of lading to insure all crates and cartons have been received. All units should be inspected for concealed damage by uncrating the units immediately. If any damage is found, it should be reported to the carrier at once, and a claim should be filed with the carrier. This equipment has been inspected and tested at the manufacturing facility and has been crated in accordance with transportation rules and guidelines. Manufacturer is not responsible for freight loss or damage.

Before connecting the refrigerator to the power supply, let it stand for approximately two hours to reduce the possibility of malfunctions in the cooling system due to transport handling.

INSTALLATION

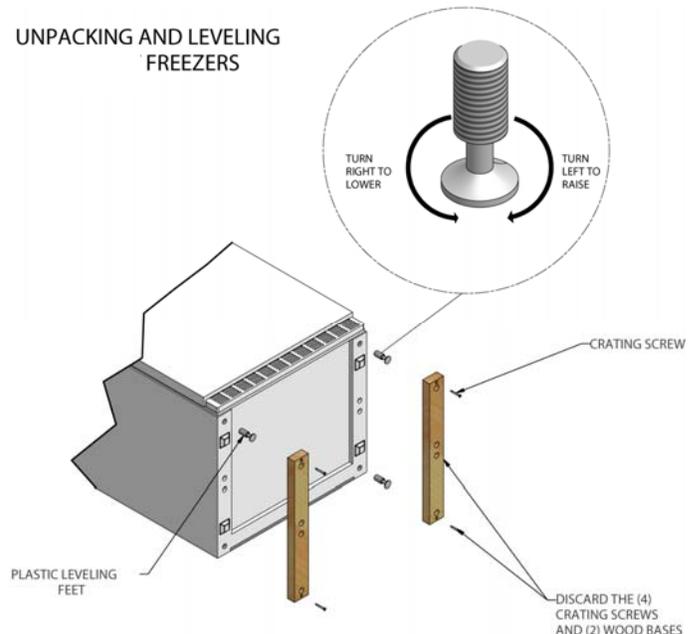
GENERAL

After the unit crate and crate base have been removed, ensure that the cabinet is level. All four corners of the unit must rest firmly on a solid floor. The cabinet is equipped with adjustable front feet to level the unit. Refer to the illustration below for adjustment of feet. Raise the front of the cabinet enough so that the doors will close freely when opened halfway. The cabinet should slope $\frac{1}{4}$ " to $\frac{1}{2}$ " from front to back. Then level the cabinet from side to side.

Note: It is extremely important that the freezer be level in order to function properly. If the freezer is not properly leveled during installation, the door may be misaligned and not close or seal properly causing cooling, frost or moisture problems.

Choose a location near a grounded electrical outlet. Do not install the freezer where the temperature will rise above 110°F (43°C). Temperatures below 32°F (0°C) will not affect freezer operation. *Allow adequate space around the unit for good air circulation.*

A minimum of 3 inch (75 mm) space on the sides and top and 3 inch (75 mm) space at the back of the freezer is required for adequate air circulation.



Note: The exterior walls of the freezer may become quite warm as the compressor works to transfer heat from the interior. Temperatures as much as 30°F (-1°C) warmer than room temperature can be expected. It is particularly important in hotter climates to allow adequate space for air circulation around the refrigerator.

ELECTRICAL

Check the proposed outlet to be used to insure that the voltage, phase, and current carrying capacity of the circuit from the electrical panel correspond to the requirements of the cabinet. **NEVER** use an extension cord or adapter plug to wire any unit. Refer to the serial tag for all pertinent electrical information.

The freezer must be plugged into its own 115 volt, 60 Hz, single phase outlet. The power cord of the freezer is equipped with a three-prong grounding plug for protection against shock hazards. It must be plugged into a properly grounded three-prong receptacle. The receptacles must be installed in accordance with local codes and ordinances.

If voltage varies by more than 10%, freezer performance may be affected. Operating the freezer with insufficient power can damage the compressor.

To prevent the freezer from being accidentally turned off, do not plug the unit into an outlet controlled by a wall switch or pull cord. Do not pinch, knot or bend the cord in any manner.

Observe all Warning Labels. Disconnect power supply to eliminate injury from electrical shock or moving parts when servicing equipment.

OPERATION

Cool Down Period

For safe storage of product, allow a minimum of 4 hours for the freezer to cool down completely. The freezer will run continuously for the first several hours.

Electronic Temperature Control

•Temperature setting

The electronic temperature control is located outside the freezer. Temperature is factory preset to provide satisfactory frozen storage temperatures. To adjust the temperature setting, move the UP (Λ) symbol for colder temperatures and DOWN (∇) symbol for warmer temperatures on the control panel. Allow several hours for the temperature to stabilize between adjustments. To turn off freezer, press DOWN (∇) symbol until display shows "1". Press three more times until display shows "0".

To activate freezer, press UP (Λ) three times until display shows "1" then press (Λ) to desired setting. To keep the temperature setting from being accidentally changed, the control may be locked. This is done by pressing "Alarm Reset" for 3 seconds. "L" will then appear on display. To unlock the control, press "Alarm Reset" for 3 seconds. For the first second, "U" will appear, and then the current temperature setting will appear.

To activate freezer, press UP (Λ) three times until display shows "1" then press (Λ) to desired setting. To keep the temperature setting from being accidentally changed, the control may be locked. This is done by pressing "Alarm Reset" for 3 seconds. "L" will then appear on display. To unlock the control, press "Alarm Reset" for 3 seconds. For the first second, "U" will appear, and then the current temperature setting will appear.

•Temp Alarm

This feature is designed to provide a warning if the inside temperature exceeds 23°F. "HI TEMP" feature operates on household electricity. It will not function if household electricity is interrupted.

• When the freezer is initially plugged in, the red "HI TEMP" indicator will be on and the buzzer will sound. The indicator light will stay on until the freezer temperature is below 23°F. To silence the buzzer, press the ALARM RESET button.



- If a malfunction causes the temperature inside the freezer to rise above 23°F, the “HI TEMP” light will turn on and the buzzer will sound. The buzzer will sound every five minutes until the freezer temperature is below 23°F. To silence the buzzer, press the ALARM RESET button.

•Door Ajar Alarm

This feature provides a warning if the door is open for more than five minutes. There will be a beep every five seconds and the “Door Ajar” indicator will light up. Press “Alarm Reset” to turn the alarm off. The “Door Ajar” indicator will remain lit until the door is closed. If the door remains open for 15 minutes or more, the interior lamp will turn off.

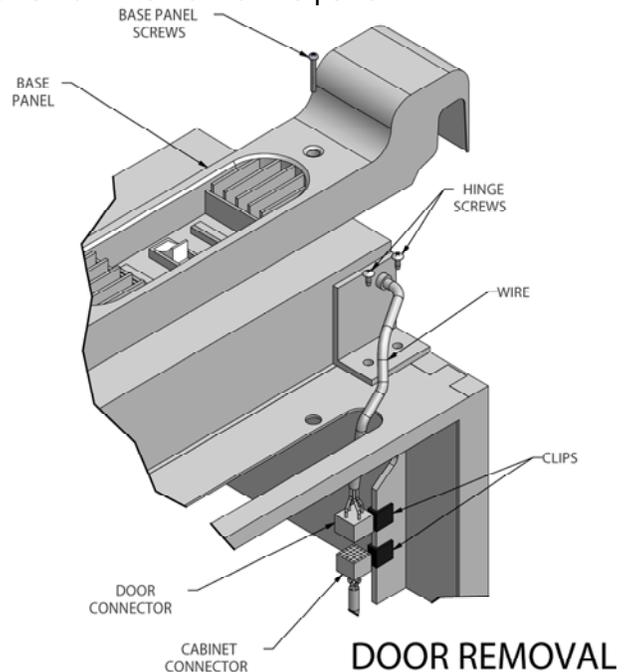
Should an “E” appear on display, contact your authorized service technician for repair. Until changes are made, freezer will continue to run.

DOOR REMOVAL

Door Removal

If the door must be removed to fit through a narrow passageway:

1. Lay the refrigerator on its back on a cover to protect its exterior surface.
2. Remove the base panel by unscrewing two screws from the front of the panel.
3. Unplug connector, if required, by holding the cabinet connector in place and pulling the door connector out (see illustration).
4. Remove the bottom hinge screws (see illustration).
5. remove the plastic top hinge cover.
6. Remove screws from the top hinge.
7. Remove the top hinge from the cabinet.
8. Remove the door and bottom hinge from the cabinet.
9. To replace the door, reverse the above order and securely tighten all screws to prevent hinge slippage.



MAINTENANCE

PERIODIC CLEANING

Disconnect the power supply before cleaning the freezer.

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 (two tablespoons in one quart of warm water). This solution will remove any odors from spillage that has occurred. The exterior of the cabinet should also be cleaned frequently with warm water and a mild liquid detergent.

**Caution: Do not use an abrasive or alkaline solution.
Do not wash any removable parts in a dishwasher.**

DEFROSTING

CAUTION: Freezer must be unplugged to avoid electrical hazard from power source when defrosting the unit.

On upright models with a defrost drain (Figure 1), remove the drain plug on the interior floor of the freezer by pulling straight out. To access the external drain tube on models with the base panel, remove the two screws from the base panel. Locate the drain tube near the left center under the freezer. Place a shallow pan under the drain tube. Defrost water will run out. Check the pan occasionally to ensure that the drain water does not overflow. A ½ inch garden hose adapter can be used to drain the freezer directly into a floor drain. If the model used is not equipped with an adapter, one can be purchased at most hardware stores. Replace the drain plug when defrosting and cleaning are complete. If the drain is left unplugged, warm air may enter the freezer.

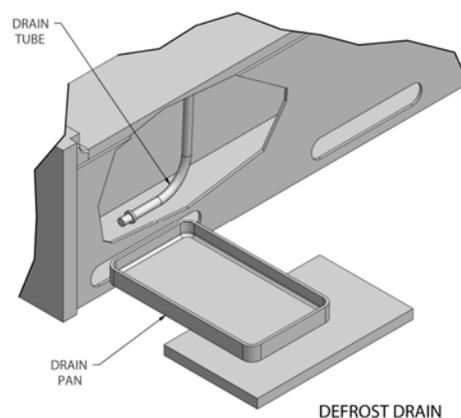


Figure 1

MAINTENANCE SERVICE AND ANALYSIS GUIDE

MALFUNCTION

POSSIBLE CAUSE

SOLUTION

Freezer does not run.

1. Freezer plugged into a ground fault interrupt circuit.
2. Temperature control is in the OFF position.
3. Fuse blown or tripped circuit breaker.

1. Use another circuit.
2. See **Temperature Control** Section.
3. Check/replace fuse with a 15A time delay fuse. Reset circuit breaker

Freezer runs too much or too long.

1. Freezer recently disconnected for a lengthy period.
2. Large amount of product recently stored.
3. Doors opened too frequently or too long.
4. Refrigerator door may be slightly open.
5. Temperature control set too cold.
6. Refrigerator gasket is dirty, worn, cracked or poorly fitted.

1. 4 hours required for refrigerator cool down.
2. Warm product will cause refrigerator to run more until desired temperature is reached.
3. Open doors less often.
4. Freezer may not be level.
5. Reset temperature control.
6. Clean or replace gasket.

Vibrating or rattling noise.

1. Freezer not level.
2. Freezer is touching the wall.

1. Re-level the freezer as specified in the **INSTALLATION** section.
2. Move the freezer away from the wall.

Moisture forms on refrigerator interior.

1. Weather is hot and humid.
2. Door not seating properly.
3. Door kept open too long or too frequently.

1. This is normal.
2. Re-level the freezer.
3. Open door less often.

Moisture forms on refrigerator exterior.

1. Door may not be sealing properly.

1. Re-level the freezer.

Door will not close.

1. Refrigerator is not level.

1. Re-level the freezer.

Light bulb will not turn on.

1. Light bulb burned out.
2. No electric current reaching the refrigerator.
3. Defective light bulb holder or light switch.

1. Replace light bulb with a new bulb of the Same wattage.
2. Ensure refrigerator is plugged into power receptacle.
3. Contact a service technician.