



## **Refrigerated Deli Cases**

### **Service, Installation and Care Manual**

**Please read this manual completely before attempting to install or operate this equipment.  
Notify carrier of damage! Inspect all components immediately.**



**\*Not suitable for installation in a non-commercial or residential application.**



**Important information read before use. Please save these instructions!**

## COMMERCIAL REFRIGERATOR 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. This is the Safety Alert Symbol. This symbol alerts you to potential hazards that can kill or injure you and others. All safety messages will follow the Safety Alert Symbol and either the words "DANGER", "WARNING" or "CAUTION".



Caution means that failure to heed this safety statement may result in minor or moderate personal injury, or property or equipment damage.



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



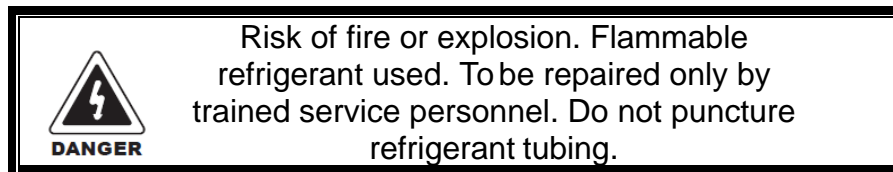
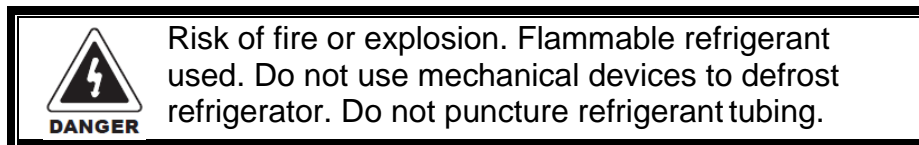
Warning means that failure to heed this safety statement may result in extensive product damage, serious personal injury, or death.

- ❖ 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.
- ❖ Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- ❖ The appliance use flammable insulation blowing gas C5H10, disposal of the appliance shall in accordance with the regulations of local authorities.



## CAUTION FOR SAFETY.

1. Leave enough space from the wall to the cabinet and the ceiling; DO NOT install back of unit flush to wall. It needs more than six inches (6"/20 cm) from the cabinet to wall.
2. Please keep away all packing material from the lower front area from heat radiation to avoid fire.
3. It's prohibited to store flammable, volatile chemical, or explosives.
4. A dedicated circuit with protection to a single-phase socket that is grounded must be used as per local codes.
5. Do not connect grounding wire to a water or gas pipe.
6. Do not collide or be fiercely vibrated when in transportation; DO NOT tilt more than 45° for the inclination of the cabinet.
7. Please refer to the Trouble Shooting references when the unit is facing some problems. Do not attempt to solve the problem on your own. Please refer to certified technician only.
8. Risk of fire or explosion. Flammable refrigerant used. Consult repair manual/owner's guide before attempting to service this product. All safety precautions must be followed.
9. Risk of fire or explosion. Dispose of properly in accordance with federal or local regulations. Flammable refrigerant used.
10. Risk of fire or explosion due to puncture of refrigerant tubing; follow handling instructions carefully. Flammable refrigerant used.
11. Keep clear of obstruction all ventilation openings in the appliance enclosure or in the structure for building-in.
12. Servicing shall be done by the authorized service personnel, so as to minimize the risk of possible ignition due to incorrect parts or improper service.



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For warranty service, call 833-474-0367

## 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.



The serial number is sixteen digits long. (It does not begin with PN).

Here is an example of the serial number tag.

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.

- 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.
- 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.
- Freight carriers can supply the necessary damage forms upon request.
- Retain all crating material until an inspection has been made or waived.

## INSTALLATION

- If this unit has recently been transported on its side, please let the unit stand upright for a minimum of 24 hour before plugging it in and turning on. 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.**
- Do not hang on door or stand inside the unit. This will cause premature failure of the floor and door hinges which is not covered under the warranty.
- **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.** There are a number of variables to installed the shelving in this unit. Be sure the shelf clips are installed correct. Do not use pliers to install the clip, 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.
- There are no "customer serviceable" parts of the refrigeration system. Consult an authorized service technician for servicing/repair or maintenance.
- Make sure all accessories are installed prior to turn the unit on. (Shelves, Clips, swivel casters, or legs.)
- 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!**

### 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. 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.

### 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 2" from any wall with at least 12" of clear space above the unit.



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## Leveling

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. Units supplied with legs will have adjustable bullet feet to make the necessary adjustments. If the unit is supplied with casters, no adjustments are available. 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. \*\***

## 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.



**NOTE: Unit repairs will not be subject to standard unit warranties if due to improper installation procedures.**



**The unit must be turned OFF and disconnected from the power source whenever performing service, maintenance functions or cleaning the refrigerated area.**

## Electrical Connections

- Ensure that the required voltage matched the voltage on the data tag and is being supplied at all times.
- This appliance should be connected to a dedicated grounded circuit. **\*\*DO NOT USE EXTENSION CORDS!** The use of an extension cord will cause damage to the compressor and void the warranty.
- This unit should be plugged into a grounded and properly sized electrical outlet with proper over-current protection. Electrical requirements are on the name plate. Do not alter the cord plug. Most plugs are a NEMA 5-15P or 5-20P.
- 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 throw items into the storage area. Failure to heed these recommendations could result in damage to the interior of the cabinet.**

## OPERATION

### 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. Example 33°F
2. Push and immediately release the SET key or wait about 5 seconds to return to normal visualization.

### How to change the setpoint:


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.

### Refrigerated cycle

**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.

1. Every 6 hours, the unit will turn off and to allow the evaporator coil to defrost. The controller now displays 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.
2. The factory setting for the temperature range is 33° to 41° F.

**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.

1. Every 6 hours, the unit will turn off and electric heater will turn on to defrost. The controller now displays 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.
2. Anti-condensation heaters on door frames work in conjunction with the compressor.
3. The factory setting for temperature range is -10 to 0°F

## MAINTENANCE

The unit must be turned OFF and disconnected from the power source whenever performing service, maintenance functions or cleaning the refrigerated area.

### Refrigerators and Freezers

The interior and exterior can be cleaned using soap and warm 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. Do not use an abrasive cleaner because it will scratch the stainless steel and plastic and can damage the breaker strips and gaskets.

### Cleaning the Condenser Coil

The condenser coil requires regular cleaning and it is recommended every 90 days. In some instances, you may find that there is a large amount of debris and dust or grease accumulated prior to the 90 day time frame. In these cases the condenser coil should be cleaned every 30 days.

If the build-up on the coil consists of only light dust and debris, the condenser coil can be cleaned with a simple brush. Heavier dust build-up may require a vacuum or even compressed air to blow through the condenser coil.

If heavy grease is present, there are de-greasing agents available for refrigeration use and specifically for the condenser coils. The condenser coil may require cleaning with the de-greasing agent and then blown through with compressed air. We recommend that this type of cleaning be done by a service professional. Improper cleaning could damage the coil and possibly cause refrigerant leaks.

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. Neglecting the condenser coil cleaning procedures will void any warranties associated with the compressor or cost to replace the compressor.



**Never use a high-pressure water wash for this cleaning procedure as water can damage to the electrical components located near or at the condenser coil.**

In order to maintain proper refrigeration performance, the condenser fins must be cleaned of dust, dirt and grease regularly. It is recommended that this be done at least every three months. If conditions are such that the condenser is totally blocked in three months, the frequency of cleaning should be increased. Clean the condenser with a vacuum cleaner or stiff brush. If extremely dirty, a commercial-grade condenser cleaner may be required.

### 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!**



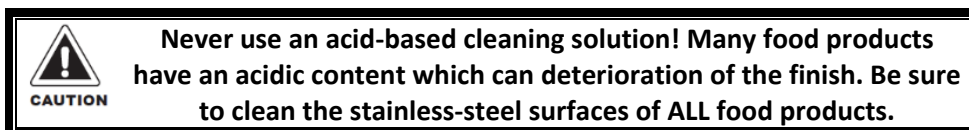
## MAINTENANCE

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.



### 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 grove 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. Lack of proper maintenance is not covered by the product warranty.

### 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 underneath the unit, you may want to check the condensate evaporator drain tube to be sure it is still 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. Be sure all drain lines are free of obstructions because this may cause water to back up and overflow the drain pans.

## TROUBLE SHOOTING

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

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Compressor not running	Fuse blown or circuit breaker tripped.	Replace fuse or reset circuit breaker
	Power cord unplugged.	Plug in power cord.
	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.
	Door gasket(s) not sealing properly.	Ensure gaskets are snapped in completely. Remove gasket and wash with soap and water. Replace if necessary.
	Dirty condenser coil.	Clean the condenser coil.
	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. Inspect the temperature controller if the defrost parameter setting is wrong
Cabinet Noisy	Parts are loose Evaporator Fan Blade striking ice.	Fastening loose parts Unplug unit and allow coil to defrost.



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