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# FLAMMABLE STORAGE REFRIGERATORS AND FREEZERS

## Installation, Operation and Maintenance Instructions

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### 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 immediately, and a claim should be filed with the carrier. This equipment has been inspected and tested in the Manufacturing Facility and has been crated in accordance with transportation rules and guidelines. Manufacturer is not responsible for freight loss or damage.

### WARNING

Observe all warning labels and be sure that during installation and servicing of the unit that the power is disconnected to avoid electrical shocks and injury. **Store all flammable materials in agency approved or listed storage containers. The contents of this cabinet are flammable, keep fire away.** These Flammable Storage Cabinets are intended for use in areas and laboratories classified by NFPA or other agencies, having jurisdiction, as Class C or D. **These cabinets are not to be used in NFPA Class I locations.**

### INSTALLATION

#### GENERAL

If for some reason the doors are not squared up on the cabinet, the doors can be adjusted. Opening the door(s) and loosening the screws that hold both the top and bottom hinges to the cabinet can accomplish this. After adjusting the door so that it is aligned correctly, tighten the screws to securely hold the hinges in place.

## LOCATION

The top of the cabinet requires free air access for proper operation. Allow a minimum of four-inch clearance on the top, rear, and sides of the cabinet. The cabinet should also be levelled when it is placed in its permanent location.

## CAUTION:

- Do not modify cabinet construction or associated equipment assembly
- Do not remove labelling or information supplied with the unit.
- Perform regular maintenance as specified.

## ELECTRICAL

Check the proposed electrical service 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 to wire any unit. Refer to the serial tag for all pertinent electrical information.

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

## GENERAL OPERATION

### COLD CONTROL ADJUSTMENT

The temperature control knob is located on top behind the facade of the upright model and behind the lower front panel on the undercounter model. To make a small increase or decrease in the internal cabinet temperature, rotate the control knob as needed.

### DEFROSTING FREEZER MODELS

Because of the cold wall design, it will be necessary to occasionally manually defrost the cabinet. To do this, shut off the switch and open the door. Wipe dry when the defrost is complete.

## GENERAL MAINTENANCE

### PERIODIC CLEANING

It is important that the interior of the cabinet be cleaned periodically, beginning with the initial installation. Spillage and poorly sealed containers may cause objectionable odors, corrosion, or discoloration of the liner. Clean with a solution of baking soda and warm water. Wipe dry after cleaning. **The interior, on refrigerator models, should also be periodically wiped dry because of potential condensation caused by the cold wall design.**

The easy to clean baked enamel exterior surfaces should be wiped off regularly with a damp cloth. Occasionally use a commercial grade of cleaner or polish which will remove any fingerprints and help restore the original luster of the finish. Never use an abrasive or alkaline solution for cleaning.

Monthly cleaning of the condenser will aid the heat transfer characteristics of the refrigeration system and increase its efficiency. To accomplish this, remove the cover panel from the cabinet and use a wire brush to loosen any dirt particles that are attached to the fins. Use a vacuum cleaner to remove the loosened particles.

All moving parts have been permanently lubricated and will generally require no maintenance.

**MAINTENANCE SERVICE AND ANALYSIS GUIDE**  
REFRIGERATION SYSTEMS - ALL MODELS

<b><u>MALFUNCTION</u></b>	<b><u>POSSIBLE CAUSE</u></b>	<b><u>SOLUTION</u></b>
Compressor will not start - no hum	<ol style="list-style-type: none"> <li>1. Service cord unplugged</li> <li>2. Fuse blown or removed</li> <li>3. Overload tripped</li> <li>4. Control stuck open</li> <li>5. Wiring incorrect</li> </ol>	<ol style="list-style-type: none"> <li>1. Plug in service cord</li> <li>2. Replace fuse</li> <li>3. Determine reasons and correct</li> <li>4. Repair or replace</li> <li>5. Check wiring against the diagram</li> </ol>
Compressor will not start - hums but trips on overload protector	<ol style="list-style-type: none"> <li>1. Improperly wired</li> <li>2. Low voltage to unit</li> <li>3. Starting capacitor defective</li> <li>4. Relay failing to close</li> </ol>	<ol style="list-style-type: none"> <li>1. Check wiring against the diagram</li> <li>2. Determine reason and correct</li> <li>3. Determine reason and replace</li> <li>4. Determine reason, correct or replace</li> </ol>
Compressor starts and runs, but short cycles on overload protector	<ol style="list-style-type: none"> <li>1. Low voltage to unit</li> <li>2. Overload defective</li> <li>3. Excessive head pressure</li> <li>4. Compressor hot-return gas hot</li> </ol>	<ol style="list-style-type: none"> <li>1. Determine reason and correct</li> <li>2. Check current, replace overload protector</li> <li>3. Check ventilation or restriction in refrigeration system</li> <li>4. Check refrigerant charge, fix leak if necessary</li> </ol>
Compressor operates long or continuously	<ol style="list-style-type: none"> <li>1. Short of refrigerant</li> <li>2. Control contact stuck</li> <li>3. Evaporator coil iced</li> <li>4. Restriction in refrig. system</li> <li>5. Dirty condenser</li> </ol>	<ol style="list-style-type: none"> <li>1. Fix leak, add charge</li> <li>2. Repair or replace</li> <li>3. Determine cause, defrost manually</li> <li>4. Determine location and remove restriction</li> <li>5. Clean condenser</li> </ol>
Compressor runs fine, but short cycles	<ol style="list-style-type: none"> <li>1. Overload protector</li> <li>2. Cold control</li> <li>3. Overcharge</li> <li>4. Air in system</li> <li>5. Undercharge</li> </ol>	<ol style="list-style-type: none"> <li>1. Check wiring diagram</li> <li>2. Differential too close - widen</li> <li>3. Reduce charge</li> <li>4. Purge and recharge</li> <li>5. Fix leak, add refrigerant</li> </ol>
Starting capacitor open, shorted or blown	<ol style="list-style-type: none"> <li>1. Relay contacts stuck</li> <li>2. Low voltage to unit</li> <li>3. Improper relay</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean contacts or replace relay</li> <li>2. Determine reason and correct</li> <li>3. Replace</li> </ol>
Relay defective or burned out	<ol style="list-style-type: none"> <li>1. Incorrect relay</li> <li>2. Voltage too high or too low</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and replace</li> <li>2. Determine reason and correct</li> </ol>
Refrigerated space too warm	<ol style="list-style-type: none"> <li>1. Control setting too high</li> <li>2. Refrigerant overcharge</li> <li>3. Dirty condenser</li> <li>4. Evaporator coil iced</li> <li>5. Not operating</li> </ol>	<ol style="list-style-type: none"> <li>1. Reset control</li> <li>2. Purge refrigerant</li> <li>3. Clean condenser</li> <li>4. Determine reason and defrost</li> <li>5. Determine reason, replace if necessary</li> </ol>
Standard temperature system freezes the product	<ol style="list-style-type: none"> <li>1. Control setting is too low</li> <li>2. Control points stuck</li> </ol>	<ol style="list-style-type: none"> <li>1. Reset the control</li> <li>2. Replace the control</li> </ol>
Objectionable noise	<ol style="list-style-type: none"> <li>1. Fan blade hitting fan shroud</li> <li>2. Tubing rattle</li> <li>3. Vibrating fan blade</li> <li>4. Condenser fan motor rattles</li> <li>5. General vibration</li> <li>6. Worn fan motor bearings</li> </ol>	<ol style="list-style-type: none"> <li>1. Reform or cut away small section of shroud</li> <li>2. Locate and reform</li> <li>3. Replace fan blade</li> <li>4. Check motor bracket mounting, tighten</li> <li>5. Compressor suspension bolts not loosened on applicable models - loosen them</li> <li>6. Replace fan motor</li> </ol>
Pan Area	<ol style="list-style-type: none"> <li>1. No cooling</li> <li>2. Too cold under pan area</li> <li>3. Too warm under pan area</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure switch is in the "on" position</li> <li>2. Adjust temperature control - see instructions</li> <li>3. Adjust temperature control - see instructions</li> </ol>