
NORLAKE®

MILK COOLER STORAGE Installation, Operation, and Maintenance Instructions



Model Number: GR422

Serial Number: _____

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

INSTALLATION

GENERAL

After the unit crate and base have been removed, locate the legs or casters found in the interior of the cabinet, if applicable. Legs or casters are optional for this cabinet. Attach the legs or casters to the unit base by screwing them into the same threaded fittings that were used to secure the crate base to the cabinet. Insure that the legs or casters are screwed all the way into the base.

LOCATION

The air cooled refrigeration system located on the top of the cabinet requires free air access for proper operation. Allow a minimum four inch (10.2cm) clearance between the back of the cabinet and a wall for condenser discharge.

Proper door gasket seal and door alignment are assured when the cabinet is installed on a firm, level supporting surface. After the cabinet is placed in its permanent location, a cabinet installed with legs can be leveled by turning the bottom portion of the adjustable legs. Shim material should be used to level a cabinet that will sit directly on the floor. **If casters or legs are not used**, it is required by NSF to seal the cabinet to the floor with an approved sealant such as Dow Corning #732 silicone.

Examine the door gasket seal by closing the door(s) on a piece of light paper at intervals of approximately six inches (15.2cm) around the perimeter of each door. When the seal is correct, a substantial drag should be felt when attempting to remove the paper with the door completely closed. Each hinge is provided with slotted mounting holes in the wing that is secured to the door. This feature applies or removes gasket pressure on the hinge side of the door.

If the doors are out of alignment on the cabinet, the doors can be adjusted. This can be accomplished by opening the door and loosening the screws that hold both the top and bottom hinges to the cabinet. After adjusting the door so that it is aligned correctly, tighten the screws to securely hold the hinges in place.

Physical Specifications

<u>Exterior Dimensions</u> <u>Width x Depth x Height*</u>	<u>Refrigerant</u> <u>Type/Amount</u>
63-3/8" x 35-1/2" x 64-7/8" (161cm x 90.2cm x 164.8cm)	See Serial Tag

* Note: Height dimension is without optional legs or casters.

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 to power this unit. 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 Electrical Data below and 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.

Electrical Data

<u>Type of Connection</u>	<u>Volt/Hz/Ph</u>
Cord	115/60/1

GENERAL OPERATION

The Milk Storage unit employs a unit cooler evaporator located inside the cabinet as the heat removing source. Through the refrigeration process, heat is captured in the evaporator, transferred to the condensing unit on top of the cabinet, and expelled to the surrounding outside air. It is extremely important to allow a four inch clearance between the back of the unit and a wall for the refrigeration process to function properly.

During the operation of this cabinet, frost will periodically form on the coil surface. Each time the compressor cycles "off", the evaporator fans will continue to run, which will keep the internal temperature uniform and at the same time remove any frost build up on the coil. The water produced will collect in the unit cooler drain pan and travel down the drain tube to a floor drain or the optional condensate vaporizer.

GENERAL MAINTENANCE

PERIODIC CLEANING

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. 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. Never, under any circumstances, use an abrasive cleaner or alkaline solution.

Monthly cleaning of the condenser will aid the heat transfer characteristics of the refrigeration system and increase its efficiency. Dust, dirt, and lint will tend to accumulate on the fins of the condensing unit. This obstruction will affect the flow of air through the condenser, thereby lowering the efficiency of the system. A wire brush or a brush with stiff bristles can be used to loosen these particles that are attached to the fins so that they may be removed with a vacuum cleaner. **Failure to keep the condenser coil clean and clear of obstructions could result in temperature loss and damage to the compressor.**

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

MAINTENANCE SERVICE AND ANALYSIS GUIDE
REFRIGERATION SYSTEMS - ALL MODELS

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