COLD WALL EVAPORATOR MILK COOLERS

Installation, Operation and Maintenance Instructions

TABLE OF CONTENTS

Inspection	2
Installation	2
General	2
Location	2
Electrical	2
General Operation	3
General Maintenance	3
Periodic Cleaning	3
Maintenance Service and Analysis Guide	4



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 in the Manufacturing Facility and has been crated in accordance with transportation rules and guidelines. Manufacturer is not responsible for freight loss or damage.

INSTALLATION

GENERAL

After crate base has been removed, locate the casters and mounting bolts found in the interior of the cabinet. Attach the casters to the caster supports with the (16) self-tapping bolts provided. A power driver must be used to accomplish this. The cabinet may be tipped to a 30 degree angle to allow adequate space for mounting the casters. Precaution must be taken to keep the cabinet from tipping over or moving during this procedure. The cabinet must be allowed to sit a minimum of one hour in its normal upright position before power can be applied.

LOCATION

The self contained refrigeration system located at the bottom of the cabinet requires free air access for proper operation. These guidelines must be followed for cabinets with casters or legs. The two door cabinets must have a clearance of four inches at each side and the rear and open at the top and front. The four door cabinets must have a clearance of four inches at each side and open at the top, front and rear.

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 any 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 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

The milk coolers are cooled entirely by convection as a result of copper coils completely encircling the perimeter of the storage compartment. During the refrigeration process, heat is removed through the evaporator tubing and expelled through the condensing unit. It is important that the flow of air through the side louvers is not restricted in order to ensure the condensing unit operates properly. Under normal operating conditions, any frost that might accumulate on the walls during the "on" cycle of the condensing unit may melt during the "off" cycle. Drains are installed in all milk coolers to accommodate melting frost.

The refrigeration system on this cabinet uses a temperature thermostat that senses the cutin and cut-out temperatures of the cold wall evaporator coil. The temperature can be adjusted by turning the thermostat control knob which is located behind the louvered side panel.

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. To accomplish this, remove the louvered panel from the cabinet and use a wire brush to loosen any dirt particles that are attached to the fins. After this is accomplished, 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

MALFUNCTION	POSSIBLE CAUSE	<u>sc</u>	<u>DLUTION</u>
Compressor will not start - no hum	 Service cord unplugged Fuse blown or removed 		Plug in service cord Replace fuse
no nam	Overload tripped		Determine reasons and correct
	Control stuck open	_	Repair or replace
	5. Wiring incorrect		Check wiring against the diagram
Compressor will not start -	Improperly wired		Check wiring against the diagram
hums but trips on overload protector	2. Low voltage to unit3. Starting capacitor defective		Determine reason and correct Determine reason and replace
protector	Relay failing to close		Determine reason, correct or replace
Compressor starts and runs,	1. Low voltage to unit		Determine reason and correct
but short cycles on overload	Overload defective		Check current, replace overload protector
protector	Excessive head pressure	3.	Check ventilation or restriction in refrigeration system
	Compressor hot-return gas hot	4.	Check refrigerant charge, fix leak if
			necessary
Compressor operates long or continuously	 Short of refrigerant Control contact stuck 		Fix leak, add charge Repair or replace
or commutation,	Evaporator coil iced	3.	Determine cause, defrost manually
		1 4.	Determine location and remove restriction
	5. Dirty condenser	5.	Clean condenser
Compressor runs fine, but	Overload protector	1.	Check wiring diagram
short cycles	Cold control	2.	Differential too close - widen
	3. Overcharge		Reduce charge
	4. Air in system		Purge and recharge
	5. Undercharge	5.	Fix leak, add refrigerant
Starting capacitor open,	Relay contacts stuck	1.	Clean contacts or replace relay
shorted or blown	Low voltage to unit		Determine reason and correct
	3. Improper relay	3.	Replace
Relay defective or burned out	 Incorrect relay 		Check and replace
	2. Voltage too high or too low	2.	Determine reason and correct
Refrigerated space too warm	1. Control setting too high	1.	Reset control
	Refrigerant overcharge	2.	Purge refrigerant
	Dirty condenser		Clean condenser
	Evaporator coil iced		Determine reason and defrost
	5. Not operating	5.	Determine reason, replace if necessary
Standard temperature system	Control setting is too low		Reset the control
freezes the product	Control points stuck	2.	Replace the control
Objectionable noise	 Fan blade hitting fan shroud 	1.	Reform or cut away small section of shroud
	Tubing rattle		Locate and reform
	Vibrating fan blade		Replace fan blade
	4. Condenser fan motor rattles		Check motor bracket mounting, tighten
	5. General vibration		Compressor suspension bolts not loosened on applicable models - loosen them
	6. Worn fan motor bearings	6.	Replace fan motor
Pan Area	1. No cooling	1.	Make sure switch is in the "on" position
	2. Too cold		Adjust temperature control - see instructions under pan area
	3. Too warm	3.	Adjust temperature control - see instructions under pan area

