MILK COOLER
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 by Master-Bilt and has been crated in accordance with transportation rules and guidelines. Manufacturer is not responsible for freight loss or damage.

INSTALLATION

LOCATION

The self-contained refrigeration system located at the end of the cabinet requires free air access for proper operation. There must be a minimum four inch clearance between the sides and a wall. These guidelines must be followed for cabinets with or without casters. A cabinet that will sit directly on the floor without casters should be levelled when it is placed in its permanent location. **If casters are not used**, it is required by NSF that the cabinet is sealed to the floor with an approved sealant such as Dow Corning #732 silicone.

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 refrigerators employ 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 the end of the cabinet, and expelled to the surrounding outside air. It is extremely important to allow a four (4) inch clearance on the top, rear, and sides of the unit for the refrigeration process to function properly.

The refrigeration system on this cabinet uses a temperature thermostat that senses the cut-in and cut-out temperatures of the evaporator coil. The temperature can be adjusted by turning the thermostat control which is located inside the cabinet.

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