



GLD52

**with R290 Refrigerant
with EVCO Control**

**SERVICE AND INSTALLATION
MANUAL**

Horizontal Display Case

GLOBAL REFRIGERATION, INC

51-5882-02



Important information is contained in this manual which should be retained in a convenient location for future reference. Information in the manual is subject to change without notice.

ADDITIONAL INFORMATION OR TECHNICAL ASSISTANCE

For customer service or technical assistance, please call our manufacturing facility toll free number:

1-888-650-9799

Our Customer Service Representatives and Engineers are willing to assist you in any way possible. Office hours are from 8am to 5pm, Monday-Friday (Eastern Standard Time)

*****Copies of Installation and Maintenance Manual and for helpful videos, please visit our web site at; www.globalref.com*****

If additional information is necessary, call the factory.

Our toll-free number is **1-888-650-9799**. Technical assistance engineers are willing to assist you in any way possible. Office hours are from 8:00 a.m. to 5:00 p.m. Monday through Friday, Eastern Standard Time.

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Thank you for purchasing this Global Refrigeration cabinet! This manual contains important instructions for installing, using, and servicing this equipment. Read all these documents carefully before installing or servicing your equipment. ***This document should be retained in a convenient location for future reference.***

GENERAL INFORMATION

An Important Message for Installers and Operators

These instructions include information which is intended to assure the operator of correct installation, operation and service. Before attempting installation, adjustment or maintenance, be certain of the following:

1. That you have read and fully understand the instructions.
2. That you have all tools required and are trained to use them.
3. That you have met all installation and usage restrictions and are familiar with the functions and operation of the unit.
4. That you follow all instructions exactly as given.

All fittings, measurements, procedures and recommendations are significant. Substitutions and approximations must be avoided. Improper handling, maintenance, installation and adjustment, or service attempted by anyone other than a qualified technician, may void the future warranty claims and cause damage to the unit and/or result in injury to the operator and/or bystanders.

Record for Service _____	Invoice Date _____
Model No. _____	Start-up Date _____
Serial No. _____	Telephone for Service _____

BE SURE TO INSPECT CABINET FOR SHIPPING DAMAGE BEFORE AND AFTER UNCRATING IT.

HANDLING & INSTALLATION

Inspecting for Damage

NOTE: The transportation company or other parties involved in the shipment are responsible for loss and/or damage. When direct delivery was made by the transportation company, follow the procedure as outlined in the following steps: Always inspect before and after uncrating. Inspect the uncrated unit(s) before locating (preferably at the point of unloading by the transportation company.) You may leave the skid on the unit for ease of locating it later.

- a) Damaged cartons or containers - If these are damaged in any way, open them and inspect the contents in the driver's presence.
- b) Have the driver note the nature and extent of the damage on the freight bill.
- c) Notify the transportation company's office to request an inspection. Carrier claim policies usually require inspections to be made within 15 days of delivery.
- d) Always use care when removing shipping tape, blocks, pads, hardware, or other materials. Retain all crate and packaging material until you are satisfied that the unit is completely operational.
- e) Contact factory if technical assistance is required.
- f) If damage is noticed (whether before or after uncrating the unit) the following claim procedure must be completed.

Inspecting for Shortages

NOTE: Refer to the "Inspecting for Damage" instructions and follow the procedure described.

- a) Check the number of cartons and/or containers delivered with the quantity shown on your receipt.
- b) If the quantities are not the same, have the driver note the shortage and file your claim accordingly.

Filing Claims

- a) File a claim for loss or damage at once with the transportation company for:
 1. A cash adjustment
 2. Repairs
 3. Replacement
- b) When filing your claim, retain all packaging materials and receipts.

Handling the Cabinet

The refrigeration system of the cabinet is designed to operate with the cabinet located on a flat surface. Avoid tilting the cabinet more than 30° to any side. If the cabinet must be tilted on an angle for handling or moving purposes, allow it to sit in an upright position 20 to 30 minutes prior to plugging it in and starting the cooling of the storage compartment. **DO NOT DRILL HOLES IN THE CABINET WALLS. THIS WILL VOID THE WARRANTY.**

Removing the Skid

Remove the front and rear covers. Remove the four (4) bolts securing the cabinet to the skid. Carefully slide the cabinet off the skid onto the floor.

Locating the Cabinet

This model is a display cabinet and should be positioned to expose the illuminated displays to customers in the store and provide a clear space behind for the person serving.

Select a location where you are sure that the cabinet won't be exposed to heat sources such as sun through a window, store heating or cooling ducts, exhausts from other cabinets, etc. Make sure there is adequate space on the serving side for loading cabinet and serving efficiently. The following must also be observed in order to properly locate the cabinet:

- a) The cabinet must be installed on a sturdy and solid, level floor.
- b) The cabinet should be installed in a protected, dry, and well-ventilated area, away from any heat source.
- c) The cabinet is designed to be installed in an environment where the temperature is at or below 75F and the relative humidity is 55% or less.
- d) The front, back and top of the cabinet must be open for compliance with safety and sanitation standards. The sides require no clearance. Blocking the airflow to the condensing unit will adversely affect the performance and will potentially void the warranty.

Leveling the Cabinet

Level the cabinet using a spirit level on top. Level front to back and side to side to assure quiet operation and satisfactory door and drain operation. Shim under the cabinet base as necessary to assure a level cabinet. To meet NSF requirements, these cabinets must be sealed to the floor with an NSF listed or FDA approved sealant.

Setting up the Cabinet

Cabinets are shipped with the pilasters in place. Shelving is also supplied with the cabinet.

Shipping material (cardboard, paper, plastic, ties, etc.) should be removed from shelving and the product area.

MODEL DESIGNATION INFORMATION

115V, 60HZ			
PART #	MODEL #	DATA PLATE	STYLE
52-2900-*	GLD52	GLD52	LOW TEMP, CURVED FRONT GLASS
EXPORT 220V, 50HZ			
PART #	MODEL #	DATA PLATE	STYLE
52-2900-*	EGLD52	EGLD52	LOW TEMP, CURVED FRONT GLASS
EXPORT 220V, 60HZ			
PART #	MODEL #	DATA PLATE	STYLE
52-2900-*	KGLD52	KGLD52	LOW TEMP, CURVED FRONT GLASS

Important information is contained in this manual which should be retained in a convenient location for future reference. **Information in this manual is subject to change without notice.**

Manual effective for models produced after November 2022.

⚠ DANGER RISK OF FIRE OR EXPLOSION.
FLAMMABLE REFRIGERANT USED.
-TO BE REPAIRED ONLY BY TRAINED SERVICE PERSONNEL. DO NOT PUNCTURE REFRIGERANT TUBING.
-DO NOT USE MECHANICAL DEVICES TO DEFROST REFRIGERATOR.
DO NOT PUNCTURE REFRIGERANT TUBING.

⚠ CAUTION RISK OF FIRE OR EXPLOSION.
FLAMMABLE REFRIGERANT USED.
-CONSULT REPAIR MANUAL/OWNER'S GUIDE BEFORE ATTEMPTING TO INSTALL OR SERVICE PRODUCT. ALL SAFETY PRECAUTIONS MUST BE FOLLOWED.

SPECIFICATIONS - DISPLAY CABINETS

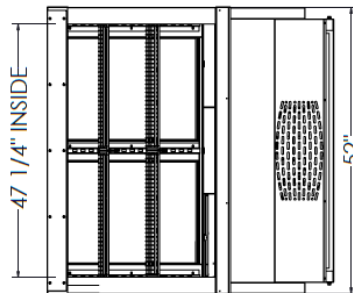
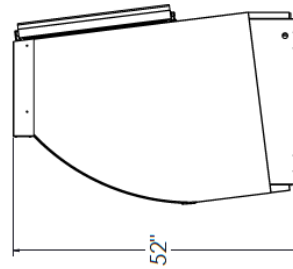
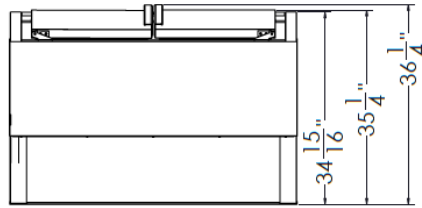
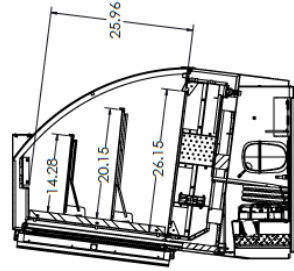
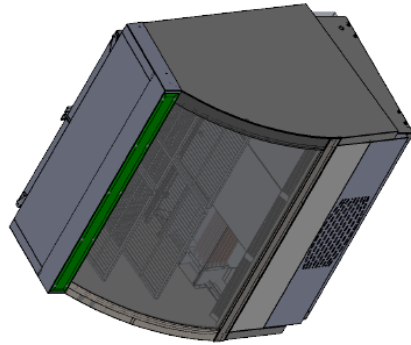
	MED TEMP	LOW TEMP
Temperature Range	Coming Soon	0°F to -15°F
Insulation	Coming Soon	2 5/16" Foam in Place
Compressor Size	Coming Soon	SCE21CNLX (16-0510-00)
Condenser Type	Coming Soon	Fin & Tube
Evaporator Type	Coming Soon	Fin & Tube
Refrigerant Type	Coming Soon	R290 (Flammable Refrigerant)
Defrost System	Coming Soon	Timed, Hot Gas
Electrical Specs.	Coming Soon	115/60/1
Sanitation	Coming Soon	UL EPH to NSF 7
Shelves	Coming Soon	Wire, Epoxy Coated; or Glass w/ ss frame
UL & CSA Listing	Coming Soon	Yes



Flammable refrigerant



DIMENSIONS



Grounding Instructions

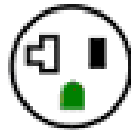
This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazards. This appliance should be plugged directly into a properly grounded three prong receptacle.

Where a two-prong wall receptacle is encountered, it must be replaced with a properly grounded three-prong receptacle in accordance with the National Electrical Code and local codes and ordinances. The work must be done by a licensed electrician (cabinet should be on a dedicated circuit unto itself. Refer to serial data for correct circuit ampacity).

(USA) 120 VOLTS

20 Amps

NEMA 5-20



Power Supply Switch

NOTE: When servicing or cleaning supply power must be turned off. The power supply switch is located at the rear of each cabinet behind the lower rear grill. The switch is incorporated into the electrical box assembly.

The light switch is located at the rear of each cabinet behind the lower rear grill. The switch is incorporated into the electrical box assembly.

These cabinets utilize a microprocessor control to manage both cavity temperature and defrost functions.

Cabinet Operation-Refrigeration Mode

Upon setting the cabinet in its final location, turn power supply on. The cabinet display should be indicating the cabinet temperature. There is a three minute time delay sequence built in each time the supply power is lost (compressor circuit). Evaporator fan starts and lights come on (medium temp models). Three minutes later the compressor starts. On low temp models the evaporator fan delays until the evaporator coil reaches 28°F.

The EVCO DIGITAL CONTROL located behind the lower front grill panel has several functions:

Display cabinet temperature

Change cavity set point temperature

NOTE: ON MED TEMP CABINETS DO NOT SET BELOW 33°F.



**EVCO # EV3294 THERMOSTAT SETTING
For UPRIGHTS**

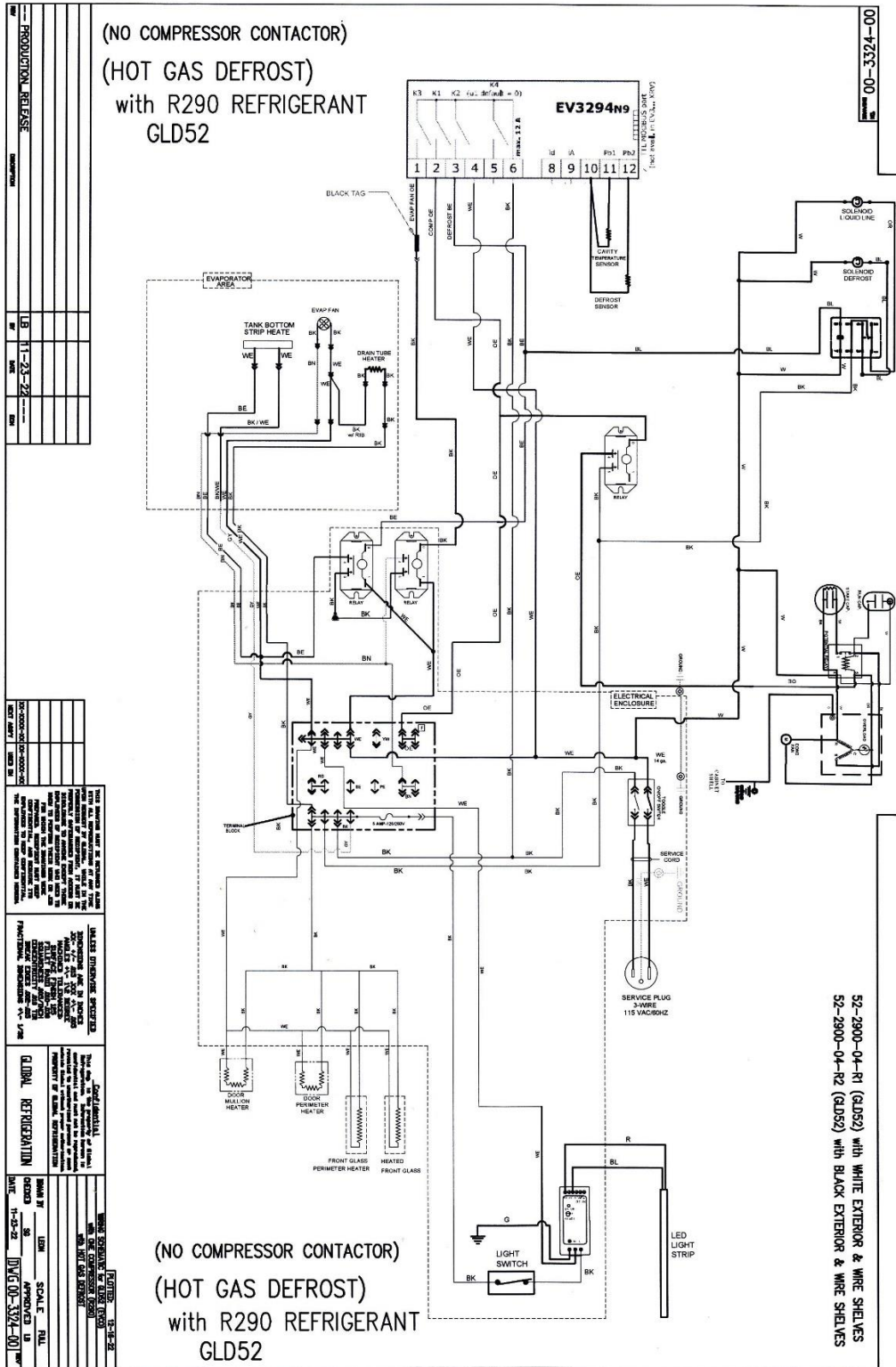
- | | |
|----------------------------------|---|
| To View current set point | Press and Hold "SET" button for 4 Seconds to Unlock the display |
| | Press and release SET button. Current "SP" is displayed |
| To Change the set point | Press the Upper Arrow button to make it warmer |
| | or |
| | Press the Lower Arrow button to make it colder |
| To Save new set point | Press and release the SET button |
| To EXIT | You do not have to press any button to EXIT. |
| | After staying idle for 60 seconds, the display will show current temperature inside the freezer. |

5/14/2021
REVISED: 12-8-22

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WIRING DIAGRAM – 115 VOLTS (USA ONLY)



IMPORTANT!!! – THIS WIRING DIAGRAM 00-3324-00 IS FOR EVCO CONTROL

WIRING DIAGRAM – 230 VOLTS (EXPORT ONLY)

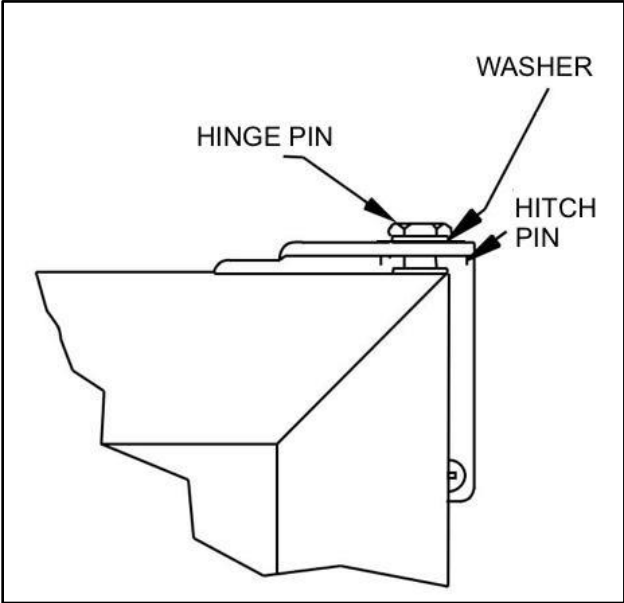
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DOOR REMOVAL(Rear)

Aligning Doors

Proper alignment of the cabinet doors will eliminate hinge binding and provide correct gasket seal.

1. Check cabinet level and door alignment by firmly closing each door. Observe the movement of the other doors. They should open slightly, then close and seal.
2. The hinge has slotted mounting holes for adjustment.
3. Additional adjustment can be made by adding shims between the hinge wing and either the door or the cabinet face.



Door Gasket Removal:

Allow door to warm up to room temperature. At one corner simply pull the gasket out of the plastic groove provided. Replace new gasket by firmly pressing the rear dart of gasket into the plastic groove all the way around the door.



GENERAL MAINTENANCE INFORMATION

Cleaning & Maintenance

WARNING:

To avoid the possibility of an electrical shock, turn OFF Master Supply Switch and unplug the electric cord of the cabinet before cleaning or touching electrical connections or parts.

Cleaning the Cabinet Exterior

Wipe the exterior with a cloth dampened in mild detergent water; rinse and wipe dry with a soft, dry cloth. Do not use abrasive or caustic cleaners or scouring pads.

Cleaning the Condenser

Periodic cleaning of the condenser can be easily accomplished by brushing the coils with a soft brush and/or using a vacuum cleaner with a brush attachment.

Be sure that dirt, dust and collection of other debris does not build up to a point air circulation through the condenser is restricted.

Cleaning the Storage Compartment

Remove the product and store it in another suitable cabinet, if possible. Be sure to prevent spoilage of the product which may occur if it is left a room temperature.

Turn OFF the Master Supply Switch and unplug the cabinet.

Remove the shelving.

Wash the inside surface of the doors and the entire interior storage area with warm water and baking soda solution per quart of water. Rinse thoroughly with clean water and wipe dry. This procedure can also be used for cleaning the door gaskets.

IMPORTANT:

Do not use any objects or cleaners which may leave residues, odors, or particles. Avoid the use of

strong chemicals or abrasive cleaners which may damage the interior surfaces and contaminate produce within the storage area.

Wash, rinse and dry the shelving while it is outside of the cabinet, using the same procedure as described for the storage area.

Be sure to correctly reinstall the shelving, plug in the cabinet, turn ON the Master Supply Switch, set the Temperature Display, and allow time for the cooling of the storage area before storing product.

NOTE: If a spill occurs within the storage cabinet and any time the storage compartment is cleaned, removal and cleaning of the cabinet storage compartment components is possible as follows:

1. Shelving lifts off the shelf brackets as well as storage compartment bottom. Price tag moldings will slip off ends of shelves.
2. Shelf brackets will lift out of shelf standard slots when needed.
3. The shelf standards are attached to left, right, and center pillars in rear of storage compartment.



Clean the cabinet exterior, interior, and shelving. Refer to “Cleaning the Cabinet Exterior” instructions in the Cleaning & Maintenance Section.

Plug the cabinet into the electrical outlet following the information in “Locating the Cabinet” instructions.

Electrical Supply– Cord Connected Cabinets

IMPORTANT

Wiring and connection in power supply system must meet all applicable (local and national) electrical codes. Consult these codes for entire lengths and sizes prior to cabinet installation.

The wiring diagram should be consulted before attempting any electrical service. Be sure to turn OFF power supply to cabinet by turning OFF the Master Power Supply Switch and/or disconnecting power cord before performing electrical service.

WARNING

Failure to perform the installation and service procedures of the electrical system as described in the following instructions may result in a hazard to equipment operators and bystanders. Covers, guards, and connections of electrical components are designed for use safety and must always be reinstalled or returned to original manufactured condition after installation or service.

IMPORTANT

If refrigeration system has trouble starting, maintaining correct temperature, or the cabinet lights dim, have the supply voltage checked by a licensed electrician: a.) with the cabinet disconnected; b.) under starting conditions, and c.) under load. Low line voltage is often the cause of a cabinet malfunction. Electrical supply requirements (see specifications label) should be consulted before installation and any time the cabinet is serviced.

Maximum Fuse Size & Over-Current Protection: Separately fused (or circuit breaker). Refer to serial data plate for correct circuit ampacity.

Cabinet Power Supply Cord & Receptacle: Grounded 3-Prong Plug, NEMA approved (National Electrical Manufacturers Association).

NOTE: Do not use an adapter or an extension cord with the power supply.



Voltage Check: Voltage at the compressor terminals must be within 10% (plus or minus) of rated voltage as compressor is starting up. If the voltage is not within this specified range, power supply (including wiring length and size) should be checked by a licensed electrician.



PROPANE IS FLAMMABLE. You MUST observe caution and proper safety practices when servicing equipment with R-290.





 CAUTION	HAZARDOUS ATMOSPHERE RISK OF FIRE OR EXPLOSION.
NO WELDING, CUTTING OR BRAZING ALLOWED.	
 CAUTION	
REFRIGERANT CHARGE ALWAYS < 150 GMS (CHECK COOLER LABEL FOR EXACT CHARGE AMOUNT) USE ONLY REFRIGERANT GRADE 99.9% PURE PROPANE FOR CHARGING	
<small>FN 47-0040-41B</small>	

- **Specialized Training for R-290 is Not Required, But Highly Recommended**
 - Refrigeration Service Engineers Society, RSES.org
- **Flammable Refrigerant Leak Detector Required**
 - Leave on while servicing
- **Place Safety Placard Advising No Smoking or Open Flames**
- **R-290 May Be Recovered, But Is Not Required. It Can Be Vented to the Atmosphere.**
- **Brazing Recommendations**
 - Work in well-ventilated, open spaces.
 - Eliminate all ignition sources.
 - Purge system with dry nitrogen to displace any trapped propane.
 - Continue purging during brazing process.
 - Tubes should be cut with tubing cutter vs. torch.
 - Evacuate to minimum 500 microns.
- **Charging Procedures Are Same for R-290 as HFC Refrigerants**

Replacement Parts

	GLD52	KGLD52	EGLD52
	115/1/60	230/1/60	230/1/50
Component	Part Number	Part Number	Part Number
Evaporator	18-2631-00		
Evaporator Fan	19-3308-00		
Evaporator Fan Guard	10-5662-00		
Pilaster	03-2284-00		
Door Gasket	10-0882-13		
HINGE, CARTRIDGE ASS`Y/BUSHING	25-0178-01		
Compressor (R290 REFRIGERANT)	16-0510-00		
Start Component "Tree"	16-0510-01		
Wire Shelf Kit, 2 Adj Top & 2 Adj Middle,	51-1046-15		
Filter Drier	18-2622-00		
Condenser	18-2630-00		
Condenser Fan	19-3278-00		
Liquid Line Solenoid	18-2626-00		
Defrost Solenoid	18-2626-00		
Solenoid Coil	19-3255-00		
Defrost Relay (HASCO)	19-3313-01		
Compressor Contactor	19-1005-00		
Digital Controller (EVCO)	19-3309-00		
Temperature Sensor	19-3263-00		
Defrost Sensor	19-3264-00		
GLASS SHELF KIT, 2 ADJ TOP, 2 ADJ MIDDLE	52-1911-00		
LED Light Strip	19-3268-00		
Power Cord	19-0967-00		
LED Power Supply	19-3267-00		

COMPRESSOR – TROUBLESHOOTING CHART

WON'T START.	Open line circuit.	Check wiring, fuses, receptacle.
	Protector open.	Wait for reset—check current.
	Control contacts open.	Check control, check pressures.
WON'T START. HUMS (cycling on protector)	Improperly wired.	Check wiring against diagram.
	Low line voltage.	Check main line voltage, determine location of voltage drop.
	Relay contacts not closing.	Check by operating manually. Replace relay if defective.
	Open circuit in start winding.	Check stator leads. If leads are all right, replace compressor.
	Stator winding grounded (normally will blow fuse.)	Check stator leads. If leads are all right replace compressor.
	High discharge pressure.	Eliminate cause of excessive pressure. Make sure discharge shut-off and receiver. valves are open if applicable.
	Weak starting capacitor or one weak capacitor of a set.	Replace.
COMPRESSOR STARTS - MOTOR WON'T GET OFF STARTING WINDING.	Low line voltage.	Bring up voltage.
	Improperly wired.	Check wiring against diagram.
	Defective relay.	Check operation—replace relay if defective.
	Running capacitor shorted.	Check resistances. Replace capacitor if defective.
	Starting and running windings shorted.	Check capacitance - replace if defective.
	Starting capacitor weak or one of a set open.	Check capacitance. Replace if defective.

	High discharge pressure.	Check discharge shutoff valves. Check pressure.
	Tight compressor.	Check oil level. Check binding. Replace compressor if necessary.
COMPRESSOR STARTS & RUNS BUT CYCLES ON PROTECTOR.	Low line voltage.	Bring up voltage.
	Additional current passing through protector.	Check for added fan motors and pumps connected to wrong side of protector.
	Suction pressure too high.	Check compressor for proper application.
	Discharge pressure too high.	Check ventilation, restrictions and over-charge.
	Protector weak.	Check current - replace protector if defective.
	Running capacitor defective.	Check capacitance. Replace if defective.
	Stator partially shorted or grounded	Check resistances; check for ground. Replace if defective.
	Inadequate motor cooling.	Correct cooling system.
	Compressor tight.	Check oil level. Check for binding condition.
	Unbalanced line (three-phase).	Check voltage of each phase. If not equal, correct condition of unbalance.
	Discharge valve leaking or broken.	Replace valve plate.
STARTING CAPACITORS BURNT OUT.	Short cycling.	Reduce number of starts to 20 or less per hour.
	Prolonged operation on starting winding.	Reduce starting load (install crankcase pressure limit valve), increase voltage if low—replace relay if defective.
	Improper relay or incorrect relay setting.	Replace relay.
	Improper capacitor.	Check parts list for proper capacitor rating: mfd. and voltage.
RUNNING CAPACITORS BURNT OUT.	Excessive line voltage.	Reduce line voltage to not over 10% above rating of motor.
	High line voltage and light load.	Reduce voltage if over 10% excessive.

RELAYS BURNT OUT.	Low line voltage.	Increase voltage to not less than 10% above motor rating.
	Excessive line voltage.	Reduce voltage to not more than 10% above motor rating.
	Incorrect running capacitor.	Replace with correct capacitor.
	Short cycling.	Reduce number of starts per hour.
	Relay vibrating.	Mount relay rigidly.
	Incorrect relay.	Use relay recommended for specific motor compressor.

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