

# **OPERATOR MANUAL**

IMPORTANT INFORMATION, KEEP FOR OPERATOR

888-994-7636, fax 888-864-7636 unifiedbrands.net

THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE. READ, UNDERSTAND AND FOLLOW THE INSTRUCTIONS AND WARNINGS CONTAINED IN THIS MANUAL.

FOR YOUR SAFETY Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

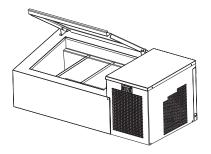
WARNING R290 flammable refrigerant in use. Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

NOTIFY CARRIER OF DAMAGE AT ONCE It is the responsibility of the consignee to inspect the container upon receipt of same and to determine the possibility of any damage, including concealed damage. Randell suggests that if you are suspicious of damage to make a notation on the delivery receipt. It will be the responsibility of the consignee to file a claim with the carrier. We recommend that you do so at once.

Manufacture Service/Questions 888-994-7636.

This manual provides information for:

# CR9000-290 COUNTERTOP RAILS



### RETAIN THIS MANUAL FOR FUTURE REFERENCE

NOTICE: Due to a continuous program of product improvement, Randell reserves the right to make changes in design and specifications without prior notice.

NOTICE: Please read the entire manual carefully before installation. If certain recommended procedures are not followed, warranty claims will be denied.

MODEL NOMBER
SERIAL NUMBER
INSTALLATION DATE

randell. SERIAL NUMBER XXXXXXXX MODEL NUMBER XXXXXXXXX DESCRIPTION

The serial number is located on the rear of thee countertop rail adjacent to the rear vented panel. An example is shown here.

# **EQUIPMENT DESCRIPTION**

MODEL	LENGTH	DEPTH	HEIGHT	PAN Capacity	HP	VOLT	AMPS	NEMA	SHIP WT (LBS)
CR9039-290	39"	18"	23.5"	(3) 1/3	1/5	115/60/1	1.8	5-15P	123
CR9046-290	46"	18"	23.5"	(4) 1/3	1/5	115/60/1	1.8	5-15P	162
CR9060-290	60"	18"	23.5"	(6) 1/3	1/5	115/60/1	1.8	5-15P	220
CR9067-290	67"	18"	23.5"	(7) 1/3	1/5	115/60/1	1.8	5-15P	249
CR9074-290	74"	18"	23.5"	(8) 1/3	1/5	115/60/1	1.8	5-15P	278



### **IMPORTANT - READ FIRST - IMPORTANT**

#### INTERIOR EVAPORATOR COVER



#### **EXTERIOR OF UNIT**



#### NEAR EXPOSED REFRIGERANT TUBING



#### **NEAR MACHINE COMPARTMENT AND NAMEPLATE**



#### INSTALLATION

THIS UNIT CONTAINS R290 FLAMMABLE REFRIGERANT. USE CAUTION WHEN HANDLING MOVING AND USE OF THE REFRIGERATOR OR FREEZER. AVOID DAMAGING THE REFRIGERANT TUBING OR INCREASE THE RISK OF A WARNING: FAILURE TO FOLLOW INSTALLATION GUIDELINES AND RECOMMENDATIONS MAY VOID THE WARRANTY ON YOUR UNIT. WARNING: IT IS IMPORTANT THAT YOUR UNIT HAS ITS OWN DEDICATED LINE. CONDENSING UNITS ARE DESIGNED TO OPERATE WITH A VOLTAGE FLUCTUATION OF PLUS OR MINUS 10% OF THE VOLTAGE INDICATED ON THE UNIT DATA TAG. BURN OUT OF A CONDENSING UNIT DUE TO EXCEEDING **VOLTAGE LIMITS WILL VOID THE WARRANTY.** THE DANFOSS CONTROLLER HAS LOW VOLTAGE PROTECTION AND WILL NOT OUTPUT VOLTAGE TO THE COMPRESSOR IF VOLTAGE IS LESS THAN WARNING: THIS UNIT IS INTENDED FOR USE IN LABORATORIES IN COMMERCIAL, INDUSTRIAL, OR INSTITUTIONAL OCCUPANCIES AS DEFINED IN THE SAFETY STANDARD FOR REFRIGERATION SYSTEMS, ASHRAE 15.

### **SELECTING A LOCATION FOR YOUR NEW UNIT**

The following conditions should be considered when selecting a location for your unit:

- Countertop Load: The area on which the unit will rest must be level, free of vibration, and suitably strong enough to support the combined weights of the unit plus the maximum product load weight. NOTE: If there is a question pertaining to weight load limits, consult the factory at 1-800-621-8560.
- Clearance: There must be a combine total of at least 4" clearance on the mechanical compartment side of the unit (right side standard).
- 3. Ventilation: The air cooled self contained unit requires a sufficient amount of cool clean air. Avoid surrounding your unit around other heat generating equipment and out of direct sunlight. Also, avoid locating in an unheated room or where the room temperature may drop below 70° F (21°C) or above 86°F (32°C). Do not place any object that can block the ventilation exhaust from the machine compartment register.
- Sealing the Unit to the Countertop: Final step. Using an NSF grade sealant, seal the unit to the countertop on all four sides.

### INSTALLATION CHECKLIST

After the final location has been determined, refer to the following checklist prior to start-up:

- Check all exposed refrigeration lines to ensure that they are not kinked, dented, or rubbing together or rubbing against any steel.
- 2. Check all visible components for any potential damage.
- Check that the condenser fan rotates freely without striking any stationary members.
- Unit must be property leveled. Adjusting bullet feet height or shimming casters may be necessary if the floor is not level. NOTE: Damage to equipment may result if not followed. Randell is not responsible for damage to equipment in improperly installed.
- Plug unit into power source. Unit will come on. If unit does not turn on, refer to controller operation section of this manual to manually turn on the unit.
- Allow unit time to cool down to holding temperature. If temperature adjustments are required, the control is located on the front panel. Confirm that the units is holding the desired temperature.
- Refer to the front of this manual for serial number location. Please record
  this information in your manual on page 3 now. It will be necessary when
  ordering replacement parts or requesting warranty service.
- Allow your unit to operate for approximately 45 minutes before putting in food in the rail. Allow 2 hours for base of the unit to cool down to storage temperature, prior to loading product. NOTE: All motors are oiled and sealed.

# **ELECTRICAL SUPPLY**

The wiring should be done by a qualified electrician in accordance with local electrical codes. A properly wired and grounded outlet will assure proper operation. Please consult the data tag attached to the compressor to ascertain the correct electrical requirements. Supply voltage and amperage requirements are located on the serial number tag located on the rear interior wall.

#### **OPERATION**

#### MECHANICAL COMPARTMENT

- Unit power is controlled by the controller located above the mechanical housing. The rail power switch is located underneath the hinged shelf on the left end of the prep rail. When rail power switch is on a red light will be illuminated indicating this. The rail power switch will shut down the rail for nightly shut down and cleaning.
- Your refrigerated prep table is equipped with a temperature adjustment control for the refrigerated rail. The controls are preset at the factory.

#### MORNING STARTUP OF PREP RAIL

- 1. Unit cleaning may be performed at this time.
- 2. Turn on the unit. Refer to item #1 in the mechanical compartment section.
- Allow a minimum 45 minutes for your unit to cool down before loading product.A uniform frost pattern will appear on side walls and bottom of prep rail area.
- Load the product and proceed with food preparation. NOTE: Product entering unit must be at 35°F +/- 2°F.

#### **EVENING SHUT DOWN OF PREP RAIL**

- 1. Remove product from unit at the end of the day's preparation.
- 2. Turn off unit. Refer to item #1 in the mechanical compartment section.
- Unit cleaning may be performed at this time if the frost has melted off the surface.

WARNING: IT IS RECOMMENDED TO ONLY MAKE CHANGES OF 2 DEGREE INCREMENTS
AT A TIME. ALLOW FOR THE UNIT TO OPERATE 24 HOURS BETWEEN
ADJUSTMENTS. IF THE 2 DEGREE ADJUSTMENT IS NOT ENOUGH ANOTHER
ADJUSTMENT CAN BE MADE. IF THE SETTINGS NEED TO GO ABOVE OR
BELOW THIS POINT THERE MAY BE OTHER CONTRIBUTING FACTORS AS
TO THE CAUSE OF THE TEMPERATURE VARIANCES, PLEASE CONTACT THE
FACTORY AT 1-800-621-8560.

Allow unit to operate for approximately 45 mins before putting product into the rail.

### **AMBIENT CONDITIONS**

Unit is designed for normal operating temperatures between 70° F (21°C) - 86°F (32°C). Operating outside of those temperatures may cause premature product wear or failure.

Randell has attempted to preset the temperature control to ensure that your unit runs at an optimum temperature, but due to varying ambient conditions, including elevation, food type and your type of operation, you may need to alter this temperature using control adjustment until desired temperature is reached.

# **DANFOSS CONTROLLER OPERATION**

LED	FUNCTION
*	Compressor energized & Evaporator fan de-energized
***	Defrost in progress
*	Fans delay after defrost completion
*	Evaporator fan energize
$\triangle$	An alarm is occurring
°C/°F	Temperature unit

# MANUAL DEFROST



CHANGE SET POINT

POWER ON / OFF: Press and hold the power button until LED display turns On / Off

MANUAL DEFROST: Press and hold "Defrost" Button

**CHANGE SET POINT:** To raise temperature

- Press and hold "Λ" to access set point.
- 2. When set point start flashing, Press "Λ" to adjust set point.
- After 30 seconds, the display automatically reverts to showing the current temperature.

## **CHANGE SET POINT:** To lower temperature

- 1. Press and hold "v" to access set point.
- 2. When set point start flashing, Press "v" to adjust set point.
- After 30 seconds, the display automatically reverts to showing the current temperature.

#### CHANGE FROM °F /°C:

- 1. Press the up/down buttons simultaneously for 5 seconds to access the menu.
- 2. Password is requested. Password is 000.
- 3. Press the bottom left button to OK the password.
- Using the up/down buttons, navigate to the "diS" level. Press the bottom left button to OK the selection.
- Using the up/down buttons, navigate to the "CFu" level. Press the bottom left button to OK the selection.
  - a. "-F" designates Fahrenheit.
  - b. "-C" designates Celsius.
- Press the top left button repeatedly to return to exit and return to the home screen.

### **MAINTENANCE**

WARNING: DO NOT USE SHARP UTENSILS AND/OR OBJECTS.

WARNING: DO NOT USE STEEL PADS, WIRE BRUSHES, SCRAPERS, OR CHLORIDE CLEANERS TO CLEAN YOUR STAINLESS STEEL.

CAUTION: DO NOT USE ABRASIVE CLEANING SOLVENTS, AND NEVER USE HYDROCHLORIC ACID (MURIATIC ACID) ON STAINLESS STEEL.

WARNING: DO NOT PRESSURE WASH EQUIPMENT AS DAMAGE TO ELECTRICAL COMPONENTS MAY RESULT.

Randell strongly suggests a preventive maintenance program which would include the following monthly, weekly, and daily procedures:

If a failure of the equipment is a direct result of any of the Preventative Maintenance guidelines being neglected, the repairs and parts replacements will not be covered under warranty.

It is recommended that the customer contact the local Authorized Service Agent to provide a quote to perform periodic Preventative Maintenance.

#### **MONTHLY PM PROCEDURES**

- Cleaning of all condenser coils on a monthly basis. Condenser coils are a
  critical component in the life of the compressor and must remain clean to
  assure proper air flow and heat transfer. Failure to maintain this heat transfer
  will affect unit performance and eventually destroy the compressor. Clean the
  condenser coils with coil cleaner and/or a vacuum, cleaner and brush. NOTE:
  Brush coil in direction of fins, normally vertically as to not damage or restrict
  air from passing through condenser.
- Inspect all silicone seams at interior of the rail and refrigerated base cabinet on a monthly basis. Re-apply food grade silicone sealant as needed to any seams where silicone has peeled away or cracked. Apply silicone to a clean dry surface. Allow sufficient drying time to assure best adhesion of sealant.

RECOMMENDED CLEANERS FOR YOUR STAINLESS STEEL INCLUDE THE FOLLOWING:

JOB	CLEANING AGENT	COMMENTS
Routine cleaning	Soap, ammonia, detergent Medallion	Apply with a sponge or cloth
Fingerprints and smears	Arcal 20, Lac-0-Nu, Ecoshine	Provides a barrier film
Stubborn stains and discoloration	Cameo, Talc, Zud, First Impression	Rub in the direction of the polish lines
Greasy and fatty acids, blood, burnt-on foods	Easy-Off, Degrease It, Oven Aid	Excellent removal on all finishes
Grease and Oil	Any good commercial detergent	Apply with a sponge or cloth
Restoration/Preservation	Benefit, Super Sheen	Good idea monthly

Reference: Nickel Development Institute, Diversey Lever, Savin, Ecolab, NAFEM

Proper maintenance of equipment is the ultimate necessity in preventing costly repairs. By evaluating each unit on a regular schedule, you can often catch and repair minor problems before they completely disable the unit and become burdensome on your entire operation.

For more information on preventive maintenance, consult your local service company or CFESA member. Most repair companies offer this service at very reasonable rates to allow you the time you need to run your business along with the peace of mind that all your equipment will last throughout its expected life. These services often offer guarantees as well as the flexibility in scheduling or maintenance for your convenience. For a complete listing of current Randell ASA please visit www.unifiedbrands.net.

Randell believes strongly in the products it manufactures and backs those products with one of the best warranties in the industry. We believe with the proper maintenance and use, you will realize a profitable return on your investment and years of satisfied service.

# REPLACEMENT PARTS

To order parts, contact your Authorized Service Agent. Supply the model designation, serial number, part description, part number, quantity, and when applicable, voltage and phase.

# **CONTACT US**

If you have questions pertaining to the content in this manual, contact Randell at 888-994-7636.

### **TROUBLESHOOTING**

This unit is designed to operate smoothly and efficiently if properly maintained. However, the following is a list of checks to make in the event of a problem. Wiring diagrams are found at the end of this manual. When in doubt, turn unit off and contact service at 888-994-7636.

SYMPTOM	POSSIBLE CAUSE	PROCEDURE		
	No power to unit	Plug in unit		
Unit does not run	Control in OFF position	Turn controller on		
	Faulty control	Call for service at 888-994-7636		
Unit too cold	Incorrect set point	Adjust control set point		
	Incorrect set point	Adjust control set point		
Unit too warm	Warm product introduced to cabinet	Pre-chill product 37°F		
	Ice on the coil	Initiate manual defrost		
Unit noisy	Ice on the coil	Initiate manual defrost		
Unit noisy	Condenser fan motor	Check condenser fan operation		
Unit does not defrost	Excessive ice on the coil	Initiate manual defrost		
Ice build up in rail	Rail not shut off nightly	Follow evening shutdown procedure		

#### DANFOSS CONTROLLER CODES

DISPLAYED ALARM CODE	ALARM	ACTION			
Hi	High Tomporature Alexa	Inspect door/drawer sealing			
П	High Temperature Alarm	Contact service			
Lo	Low Temperature Alarm	Contact service			
		Clean condenser coil			
CON	Condenser Temperature High Limit	Inspect coil for any objects obstruction hindering airflow			
		Contact service			
uHi	Line Voltage Too High	Verify voltage of power source, to be performed by qualified technician			
		Contact service			
uLi	Line Voltage Too Low	Verify voltage of power source, to be performed by qualified technician			
		Contact service			
		Inspect door/drawer sealing			
LEA	Continuous Compressor Runtime	Inspect condenser coil, clean if necessary			
		Contact service			
E01	S1 Sensor Failure	Contact service			
E02	S2 Sensor Failure	Contact service			
E03	S3 Sensor Failure	Contact service			
E04	S4 Sensor Failure	Contact service			

### **SERVICE**

CAUTION: COMPONENT PARTS SHALL BE REPLACED WITH FACTORY OEM PARTS. SERVICE WORK SHALL BE DONE BY FACTORY AUTHORIZED SERVICE PERSONNEL, SO AS TO MINIMIZE THE RISK OF POSSIBLE IGNITION DUE TO INCORRECT PARTS OR IMPROPER SERVICE.

CAUTION: BEFORE MAKING ANY REPAIRS, ENSURE THE UNIT IS DISCONNECTED

FROM ITS POWER SOURCE.

This piece of equipment uses a R290 Refrigeration system. This equipment has been clearly marked on the serial tag the type of refrigerant that is being used. There is also a warning labels stating that the unit contains R290 refrigerant. R290 is safe to use as long as you follow these warning labels.

No smoking or open flames when servicing this equipment. If needed, use a CO2 or dry-powder type fire extinguisher

Replacement parts used on any R290 Refrigeration system cabinet must have specific UL certification for non-sparking components.

Only authorized service technician, certified in R290 system should service this equipment.

#### **MANIFOLD SET**

A R134A manifold set can be used for servicing this equipment.

#### REFRIGERANT RECOVERY

Follow all national and local regulations for R-290 refrigerant recovery.

#### **LEAKING CHECKING AND REPAIR**

Leak check an R-290 system the same way you would an R-134a or R-404A system with the following exceptions.

- 1. Do not use a Halid leak detector on a R290 system.
- 2. Electronic leak detector must be designated specifically for combustible gas.

Use of a bubble solution or an ultrasonic leak detector are acceptable.

When repairing a leak, it is recommended using oxygen free dry nitrogen with a trace gas not exceeding 200PSI.

When accessing an R290 system, piercing valves are not to remain on the equipment in a permanent manner. After charge is recovered, Schrader valves are to be installed on the process stubs. Proper charge is to be weighed into the system and the system is to be leak checked afterwards.

The R290 equipment must have red process tubes and other devices through which the refrigerant is serviced, such as any service port. This color marking must remain on the equipment. If marking is removed, it must be replace and extend at least 2.5 centimeters (1") from the compressor.

#### CHARGING

Follow the charge amount specified on the data tag. It is recommended to use the shortest hoses possible to prevent undercharging.

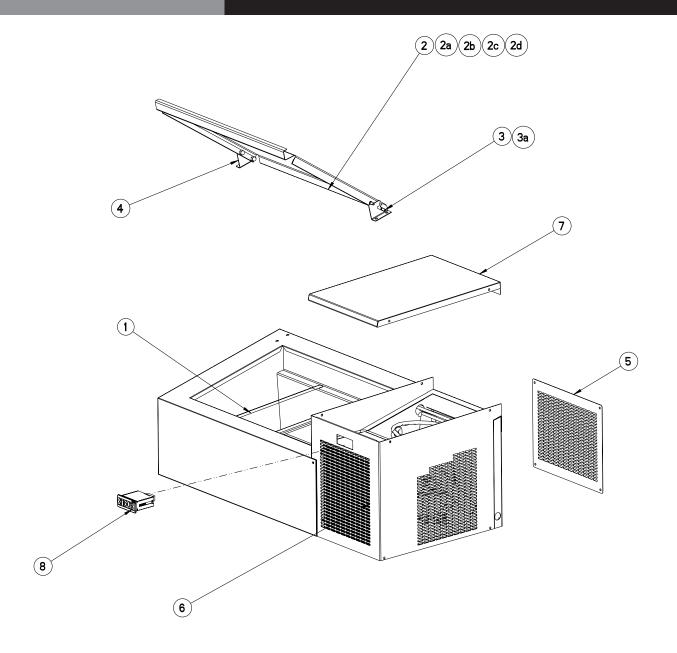
- · Ensure the system is sealed and leak checked
- Evacuate system to a minimum 500 micron
- Weigh in correct charge
- Leak check the system again
- · Bleed the refrigerant from the high side hose to the low side hose
- · Disconnect the hoses
- Remove line taps

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# **BASE UNIT**

# CALL FACTORY FOR REPLACEMENT PARTS: 888-994-7636

# **Parts List**

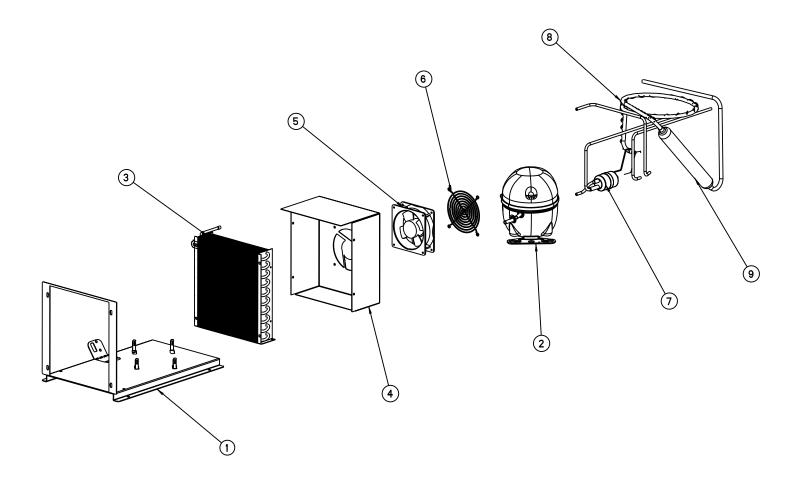


ITEM	DESCRIPTION	PART #	CR9039-290	CR9046-290	CR9060-290	CR9067-290	CR9074-290
1	ADAPTER BAR	RP BAR1325	Χ	X	X	X	X
2	HINGED COVER 23"	RP PCR0802	Χ	-	-	-	-
2A	HINGED COVER 30"	RP PCR0803	-	Χ	-	-	-
2B	HINGED COVER 44"	RP PCR0805	-	-	Χ	-	-
2C	HINGED COVER 51"	RP PCR0806	-	-	-	Χ	-
2D	HINGED COVER 28"	RP PCR0807	-	-	-	-	Χ
3	PIVOT PINT FOR PAN COVER	HD PIN0101	Χ	Χ	Χ	Χ	Χ
3A	ACORN NUT FOR PIVOT PIN	FA NUT0403SS	Χ	Χ	Χ	Χ	Χ
4	HINGE ASSY FOR PAN COVER	RP HNG006	Χ	Χ	Χ	Χ	Χ
5	BACK, AIR FLOW PANEL, CR9000	RP LVR0801	Χ	Χ	Χ	Χ	Χ
6	FRONT/SIDE AIR FLOW PANEL, CR9000-290	RP LVR1806	Χ	Χ	Χ	Χ	Χ
7	COND UNIT COVER, CR9000-290	RP CVR1802	Χ	Χ	Χ	Χ	Χ
8	DIGITAL CONTROL FOR RAIL, DANFOSS	RP CNT1802	Χ	Χ	Χ	Χ	Χ
NOT SHOWN	TEMPERATURE CONTROL PROBE, AIR SENSOR	RF CNT1603	Χ	Χ	Χ	Χ	Χ
NOT SHOWN	POWER CORD, 16/3, 90° PLUG	EL WIR1703	Χ	Χ	Χ	Χ	Χ
NOT SHOWN	SPACER, RAIL OPENING	RP SPC0801	-	-	-	-	Χ

# **REFRIGERATION**

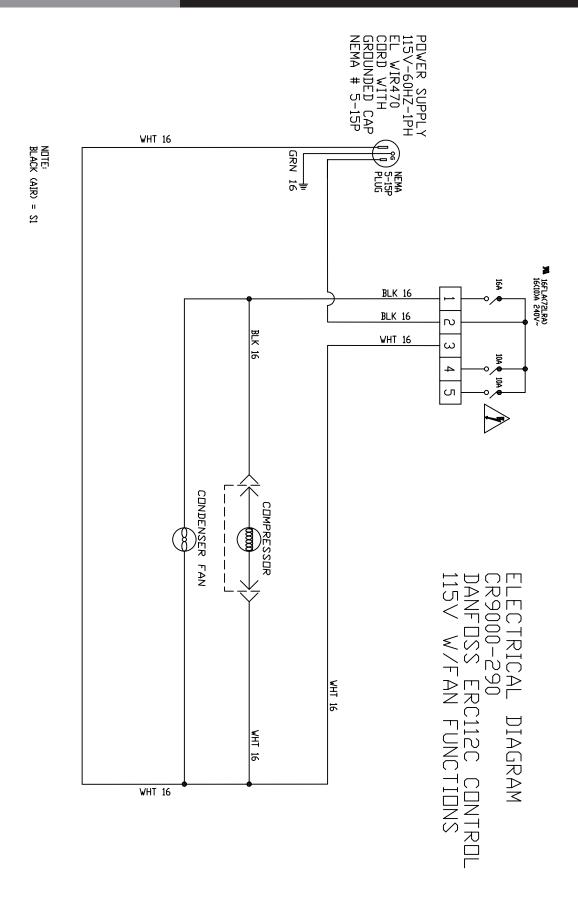
# CALL FACTORY FOR REPLACEMENT PARTS: 888-994-7636

# **Parts List**



ITEM	DESCRIPTION	PART #	CR9039-290	CR9046-290	CR9060-290	CR9067-290	CR9074-290
1	MOUNT. COMPRESSOR SKID (T07-1182)	RP MNT1801	Х	Х	Χ	Х	Х
2	COMPRESSOR, 1/5 HP, 115V-60HZ, R290, EMBRACO	RF CMP1801	Χ	Χ	Χ	Χ	Χ
2A	START COMPONENTS, COMPRESSOR	RF CMP1801SC	Χ	Χ	Χ	Χ	Χ
3	CONDENSER, COIL	RF COI1603	Χ	Χ	Χ	Χ	Χ
4	SHROUD, FAN, T07-1195 T07-1175	RP SHD1801	Χ	X	Χ	X	Χ
5	FAN, CONDENSER AXIAL	RF FAN1401	X	X	Χ	X	X
6	FAN GUARD	RF FAN0703	X	X	Χ	X	X
7	DRYER, ¼" FILTER	RF FLT9902	X	X	Χ	X	Χ
0	CAP TUBE WITH HEAT EXCHANGE, RAIL	RP WRP1801	v	v	V	v	v
0	(0.036X0.087, 8' W/4'HX)	NE WNE TOUT	^	^	^	^	^
9	ACCUMULATOR	RF ACM1701	X	X	Χ	X	X
NOT SHOWN	POWER CORD	ELWIR470	X	X	Χ	X	Χ

# **Wiring Diagram**



# **Service Log**

Model No:		Purchased From:			
Serial No:		Location:			
Date Purchased:		Date Installed:			
Purchase Order N	0:	For Service Call:			
Date	Maintenance Perform	od	Performed By		
Date	Maintenance renomi	<del></del>	r enormed by		