



# 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:

## DROP-IN FROST TOP RFT SERIES



### 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 NUMBER \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

INSTALLATION DATE \_\_\_\_\_

The serial number is located on the underside of the cold pan near the drain.



SERIAL NUMBER **XXXXXXXXXX**  
MODEL NUMBER **XXXXXXXXXX**  
DESCRIPTION

### EQUIPMENT DESCRIPTION

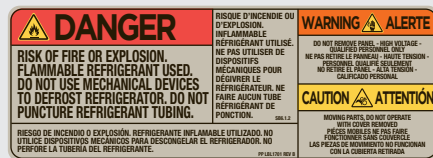
MODEL	LENGTH	WIDTH	CUTOUT DIM		HP	VOLTS	AMPS	NEMA	SHIP WT (LBS)
			L	W					
RFT-2	29.25"	21.6"	27.7"	20.3"	1/4	115/60/1	3.5	5-15P	140
RFT-3	42.25"	21.6"	40.7"	20.3"	1/4	115/60/1	3.5	5-15P	175
RFT-4	55.25"	21.6"	53.7"	20.3"	1/4	115/60/1	3.5	5-15P	210
RFT-5	68.25"	21.6"	66.7"	20.3"	1/4	115/60/1	3.5	5-15P	245
RFT-6	81.25"	21.6"	79.7"	20.3"	1/4	115/60/1	3.5	5-15P	280



Information contained in this document is known to be current and accurate at the time of printing/creation. Reference our product line website for the most updated product information and specifications. © 2023 Electrolux Professional, Inc. All Rights Reserved.

## IMPORTANT - READ FIRST - IMPORTANT

### INTERIOR EVAPORATOR COVER



LABEL DIMENSION: 9 in x 3.25 in

### EXTERIOR OF UNIT



LABEL DIMENSION: 6 in x 2.75 in

### NEAR EXPOSED REFRIGERANT TUBING



LABEL DIMENSION: 6.25 in x 2.8 in

### NEAR MACHINE COMPARTMENT AND NAMEPLATE



LABEL DIMENSION: 7.5 in x 5.36 in

## INSTALLATION

**CAUTION:** 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 LEAK.

**CAUTION:** UNIT MUST BE INSTALLED INTO IT'S OWN COMPARTMENT TO PROPERLY CONTAIN ANY REFRIGERANT LEAK. IT IS REQUIRED THAT NO ARCHING POTENTIAL COMPONENTS (GFCI) OR ELECTRICAL CONNECTIONS ARE BELOW 14.5" FROM THE BOTTOM OF THE CABINET.

**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 104V.

**WARNING:** IT IS IMPORTANT THAT A VOLTAGE READING BE MADE AT THE COMPRESSOR MOTOR ELECTRICAL CONNECTIONS, WHILE THE UNIT IS IN OPERATION TO VERIFY THE CORRECT VOLTAGE REQUIRED BY THE COMPRESSOR IS BEING SUPPLIED. LOW OR HIGH VOLTAGE CAN DETRIMENTALLY AFFECT OPERATION AND THEREBY VOID ITS WARRANTY.

**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.

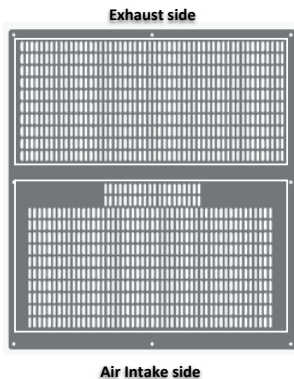


### SELECTING A LOCATION FOR YOUR NEW UNIT

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

1. Floor and 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.
2. Secure and Seal: Once the drop in unit is installed into the counter it can be secured to the countertop by using the brackets supplied from the factory.
  - a. Locate square openings on exterior body of drop unit. Insert securing bracket as shown. Tighten screw to anchor the unit tightly to cabinet top.
  - b. Secure unit to top and seal with "NSF" approved silicone.
  - c. Install inside duct with thumb screws and adjust outside duct to fit between condenser coil and counter's louvered cutout
  - d. Secure outside duct in place with screws through pre-punched holes.
3. Clearance: See installation diagrams for minimum compartment dimension. Do not place any object that can block the ventilation exhaust from the machine compartment register. 20 inch clearance at the louvered end of the unit. Area of equipment must be free of all combustible materials.
4. Ventilation: The air cooled self contained unit requires a sufficient amount of cool clean air. The mechanical housing on all models can be rotated so that the condenser intake air can be in direct line with the cabinet fresh air opening. Orientations to follow. Also see wing nut image above.
  - a. Loosen wing nuts located under cold pan body and rotate carriage to desired location.
  - b. Tighten wing nuts when rotation is complete.
  - c. Loosen nuts on each side of condenser shroud and extend to fresh air opening.
  - d. Tighten nuts on each side of condenser shroud

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). It is important that drop in be installed with the condenser coil facing a ventilated opening in the cabinet. If factory supplied louver is not used, adequate airflow must be provided. See Air Flow guide on next page.



### Exhaust

**Total Exhaust Area = 88.7 in<sup>2</sup>**

Exhaust Area slots : 10 x 54 = 540 slots

Perforation size : 0.75 in x .22 in (19 mm x 5.5mm )

### Air Intake

**Total Air Intake Area = 88.7 in<sup>2</sup>**

Air Intake Area : 10 x 50 & 2 x 20 = 540 slots

Perforation Size : 0.75 in x .22 in (19 mm x 5.6 mm)

If the louver is to be changed/swapped with a different one, the effective area on the exhaust and intake should be maintained at all times to ensure adequate ventilation.

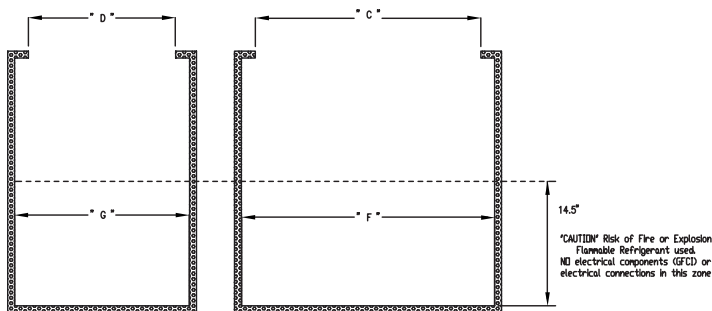
## INSTALLATION CHECKLIST

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

1. Units must be installed in a minimum compartment size as indicated in the installation drawing.
2. Provided louver and air funnel must be installed in accordance with the installation drawings to ensure proper ventilation for system operation or in the event of a refrigerant leak. Compressor housing can be rotated 90 degree to align with the vented opening in the counter. It is required that no arching potential components (GFCI) or electrical connections are below 14.5" from the bottom of the cabinet.
3. Check cord and plug of unit to assure no damage has occurred to these components.
4. Check all exposed refrigeration lines to ensure that they are not kinked, dented, or rubbing together after being installed into the counter.
5. Check that the condenser fans rotate freely without striking any stationary members.
6. Plug in unit and turn on main on/off power button on the controller.
7. Allow unit 50-60 min to cool down to temperature. If temperature adjustments are required, the control is located on the front panel. Confirm that the unit is holding the desired temperature.
8. Refer to the front of this manual for serial number location. Please record this information in your manual now. It will be necessary when ordering replacement parts or requesting warranty service.

## INSTALLATION INSTRUCTIONS

Minimum 20" clearance required for proper air flow.



CABINET INTERNAL DIMENSIONS

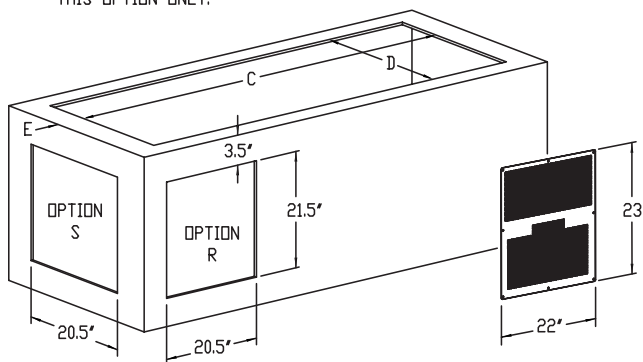
## CUT-OUT DIMENSION

MODELS	"A"	"B"	"C"	"D"	"E"	"F" (MIN)	"G" (MIN)
RFT-2	29.3"	21.6"	27.7"	20.3"	3"-6"	33.7"	26.3"
RFT-3	42.2"	21.6"	40.7"	20.3"	3"-6"	46.7"	26.3"
RFT-4	55.2"	21.6"	53.7"	20.3"	3"-6"	59.7"	26.3"
RFT-5	68.2"	21.6"	66.7"	20.3"	3"-6"	72.7"	26.3"
RFT-6	81.3"	21.6"	79.7"	20.3"	3"-6"	85.7"	26.3"

## CUT-OUT DIAGRAM: 2-6 PAN UNIT ONLY

### OPTION "S"

- 20.5" DIMENSION WILL BE CENTERED WITH THE "D" DIMENSION OF THE TOP CUTOUT.
- "E" DIMENSION AS SHOWN IS RELATIVE TO THIS OPTION ONLY.

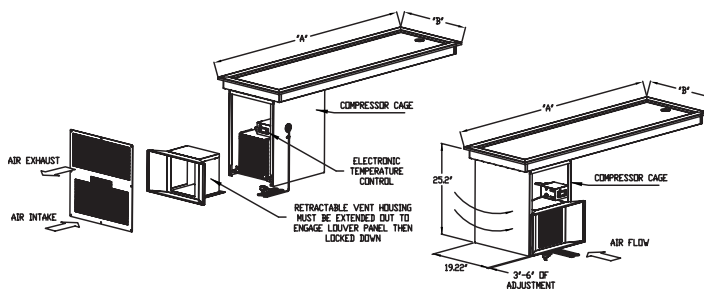


### OPTION "R"

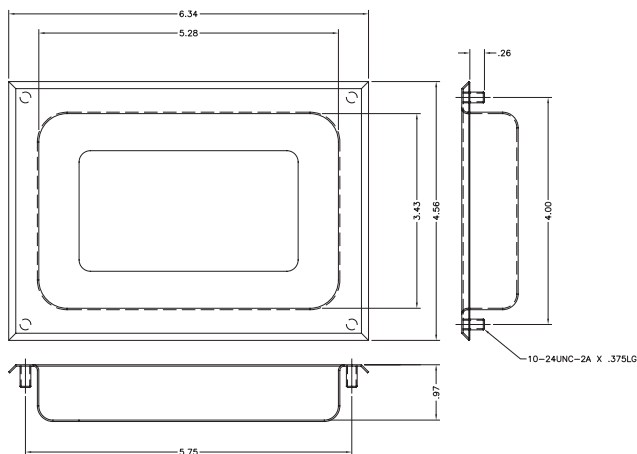
- "E" DIMENSION FOR THIS OPTION SWINGS 90 DEGREES TO LINE UP WITH "D" DIMENSION.
- LEFT EDGE OF THE 20.5" CUTOUT EXTENDS 5/8" BEYOND THE LEFT EDGE OF THE TOP CUTOUT.

## COMPRESSOR ROTATION & AIRFLOW: 2-6 PAN ONLY

### COMPRESSOR ROTATION & AIR FLOW: 2-6 PAN



## OPTIONAL REMOTE SWITCH DISWTRCK-290 CUT-OUT DIMENSIONS:



Dimensions shown in inches (mm) are for reference only and are subject to change.

## OPERATION

### AMBIENT CONDITIONS

Unit is designed for normal operating temperatures are between 70° F (21°C) and 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.

It is normal for the refrigerated cold well to develop an even layer of frost during operation. NOTE: Keeping the hinged cover closed as much as possible will prevent excessive frost buildup.






### MORNING STARTUP

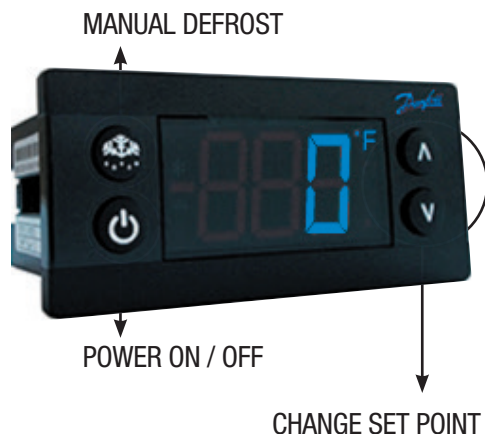
1. Cold pan cleaning may be performed at this time.
2. Turn on power to unit by either a switch or controller power button.

### EVENING SHUT DOWN

1. Remove product from the cold pan at the end of the day's preparation. The product may be discarded or stored in any commercial refrigerator.
2. Turn off power to unit by either a switch or controller power button. This will allow unit to thaw which allows for better operation when starting up unit for next day operation.
3. Unit cleaning may be performed at this time once the frost has melted off the surface. NOTE: Water may form small pools and have to be pushed to the drain for 100% draining.

### DANFOSS CONTROLLER OPERATION

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



**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

1. Press and hold "Λ" to access set point.
2. When set point start flashing, Press "Λ" to adjust set point.
3. 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.
3. 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.
4. Using the up/down buttons, navigate to the "diS" level. Press the bottom left button to OK the selection.
5. 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.
6. 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 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 PROCEDURES

1. Cleaning of all condenser coils. 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.
2. Clean fan blades on the condensing unit.
3. Clean and disinfect drain lines with a solution of warm water and mild detergent.
4. Check silicone seal around drop in flange for peeling and cracks. Reapply with food grade silicone as necessary.

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-O-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](http://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
Unit does not run	No power to unit	Plug in unit
	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
Unit too warm	Incorrect set point	Adjust control set point
Unit noisy	Vibration in the cabinet	Inspect for loose parts

## DANFOSS CONTROLLER CODES

DISPLAYED ALARM CODE	ALARM	ACTION
Hi	High Temperature Alarm	Inspect door/drawer sealing
		Contact service
Lo	Low Temperature Alarm	Contact service
CON	Condenser Temperature High Limit	Clean condenser coil
		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
LEA	Continuous Compressor Runtime	Inspect door/drawer sealing
		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 replaced and extend at least 2.5 centimeters (1") from the compressor.

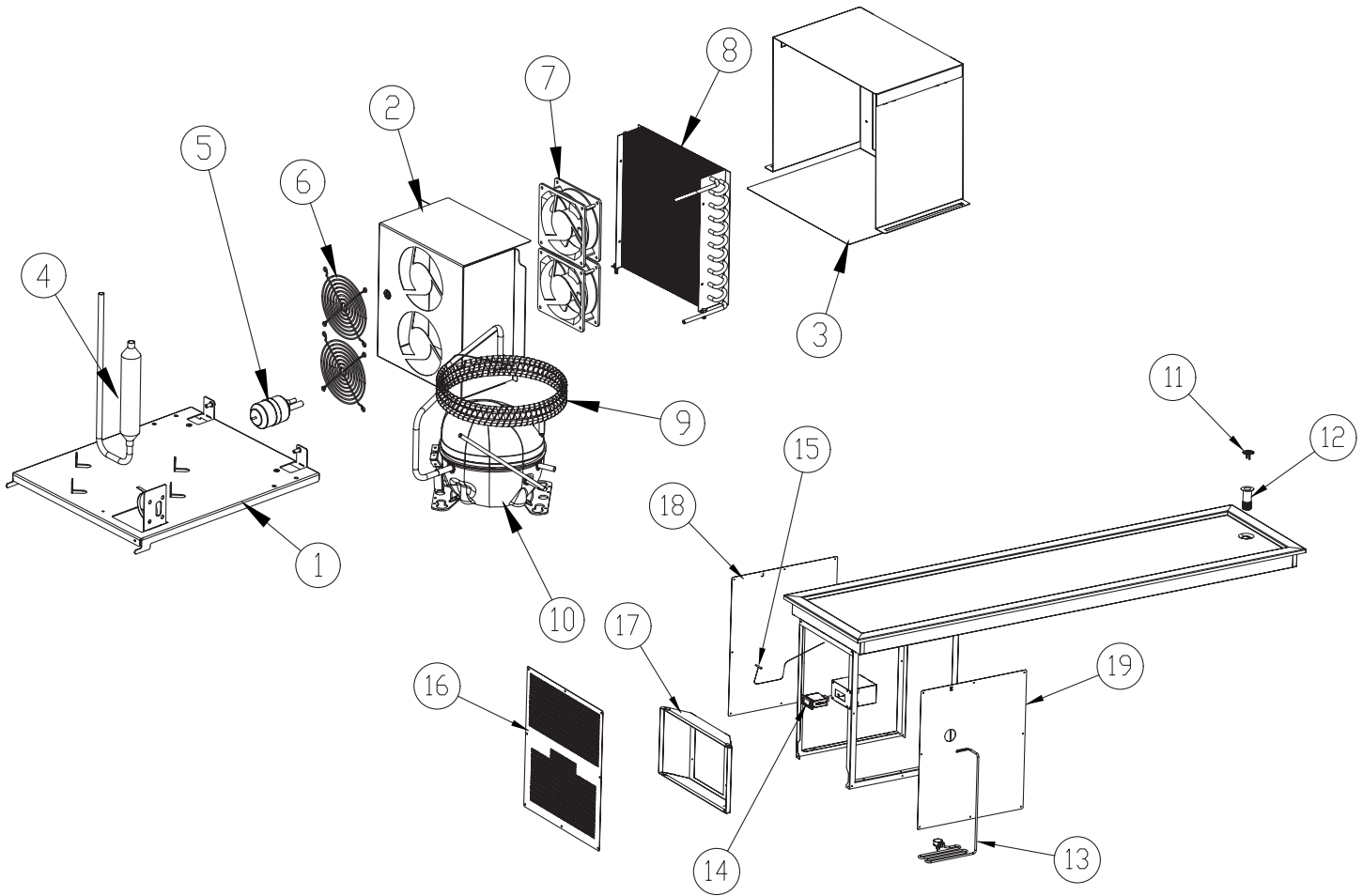
#### **CHARGING**

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

CALL FACTORY FOR REPLACEMENT PARTS:  
888-994-7636

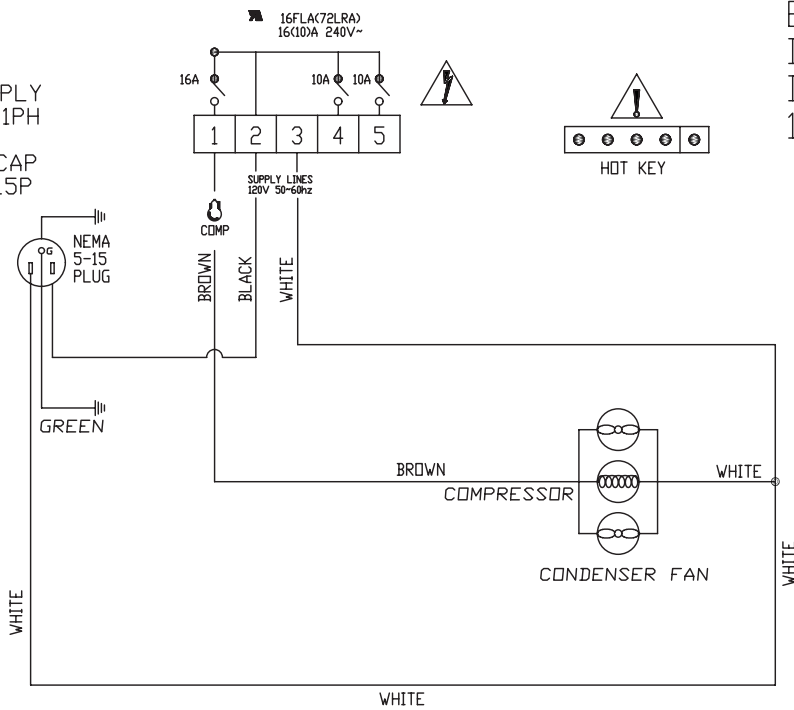
## Parts List



ITEM	SERVICE PART	DESCRIPTION	RFT-2	RFT-3	RFT-4	RFT-5	RFT-6
1	RP MNT1801	MOUNT, COMPRESSOR BASE SKID, (T28-0041)	X	X	X	X	X
2	RP HSG1803	FAN SHROUD, SINGLE FAN SHROUD BRACKET, 123 MM DIA (T28-0043E)	X	X	X	X	X
3	RP SHD1802	SHROUD, CONDENSER COIL, (T28-0042)	X	X	X	X	X
4	RF ACM1801	ACCUMULATOR	X	X	X	X	X
5	RF FLT9902	FILTER DRYER	X	X	X	X	X
6	RF FAN0703	FAN GUARD	X	X	X	X	X
7	RF FAN1407	FAN, AXIAL, CONDENSER	X	X	X	X	X
8	RF COI1603	CONDENSER COIL	X	X	X	X	X
9	RP WRP1802	CAP TUBE WRAP W/ HEAT EXCHANGE	X	X	X	X	X
10	RF CMP1604	COMPRESSOR, 1/4HP, R290, EMBRACO EM2X3125U	X	X	X	X	X
11	RP DSN001	DRAIN SCREEN	X	X	X	X	X
12	HD DRN1701	DRAIN, BRASS, NICKEL PLATED, 1" NPS X 3.25" LONG W/NUT & WASHER	X	X	X	X	X
13	EL WIR1703	POWER CORD, 9' 16/3 W/90°	X	X	X	X	X
14	RF CNT1601	CONTROL, DANFOSS ERC112C	X	X	X	X	X
15	RF CNT1603	THERMISTOR, QTI, AIR SENSOR, BLACK, 10'	X	X	X	X	X
16	RP LVR1802	LOUVER, FLAT (T28-00045)	X	X	X	X	X
17	RP FNL1801	FUNNEL, CONDENSING UNIT, (T28-0044)	X	X	X	X	X
18	RP PNL1806	SIDE, PANEL, LEFT (T28-0047A)	X	X	X	X	X
19	RP PNL1807	SIDE, PANEL, RIGHT (T28-0048A)	X	X	X	X	X

# Wiring Diagram

POWER SUPPLY  
115V-60HZ-1PH  
CORD WITH  
GROUNDED CAP  
NEMA # 5-15P



ELECTRICAL DIAGRAM  
DROP IN  
DANFOSS ERC112C CONTROL  
115V W/FAN FUNCTIONS

# Service Log

Model No:	Purchased From:
Serial No:	Location:
Date Purchased:	Date Installed:
Purchase Order No:	For Service Call:

Date	Maintenance Performed	Performed By