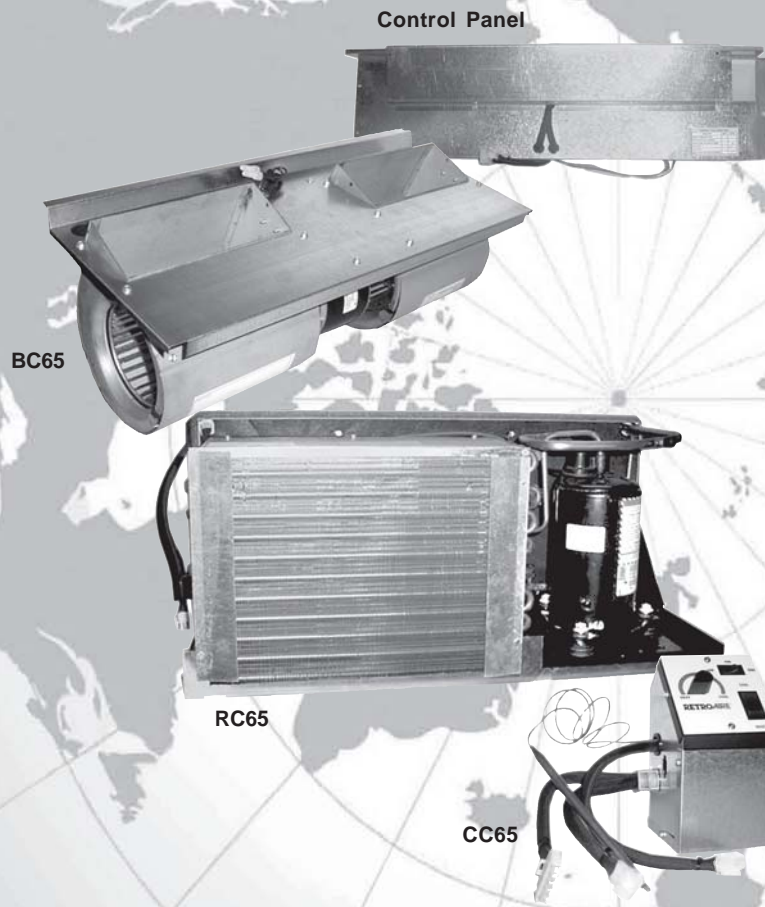


RC65 PACKAGED TERMINAL AIR CONDITIONER

Replacement Chassis for
Remington, Singer, McQuay J/EJ and Others

COOLING ONLY
Nominal Capacities:
9,000-12,000K Btuh

RETROAIRE
The Right Fit for Comfort



Enviromaster International LLC
5780 Success Dr.
Rome, NY 13440
Phone: 1-800-228-9364
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Email: info@retroaire.com

An **ECR International Brand**
An ISO 9001-2000 Certified Company



P/N# 240003038 Rev. 1.6 [02/05]

RC65 REPLACEMENT CHASSIS

INSTALLATION, OPERATION, AND MAINTENANCE GUIDE

P/N# 240003038 Rev. 1.6 [02/05]

Shipping Damage MUST be Reported to the Carrier IMMEDIATELY!!!
Examine the exterior. Remove cover and examine compressor and piping for signs of damage.

This manual is intended as an aid to qualified service personnel for proper installation, operation, and maintenance of the RetroAire RC65 Packaged Terminal Air Conditioner. Read these instructions thoroughly and carefully before attempting installation or operation. Failure to follow these instructions may result in improper installation, operation, service, or maintenance, possibly resulting in fire, electrical shock, property damage, personal injury, or death.

TO THE INSTALLER

- (1) Retain this manual and warranty for future reference.
- (2) Before leaving the premises, review this manual to be sure the unit has been installed correctly and run the unit for one complete cycle to make sure it functions properly.

To obtain technical service or warranty assistance during or after the installation of this unit, contact your local representative. Visit our website www.retroaire.com for a local representative listing. For further assistance call 1-800-228-9364.

When calling for assistance, please have the following information ready:

- Model Number _____
- Serial Number _____
- Date of installation _____



Recognize this symbol as an indication of important safety information



SAFETY INSTRUCTIONS

- ▲ Read all instructions before using the RetroAire RC65 PTAC. Install or locate this unit only in accordance with these instructions. Use this unit only for its intended use as described in this manual.
- ▲ Check the rating plate on the RetroAire RC65 PTAC before installation to make certain the voltage shown is the same as the electric supply to the unit.
- ▲ The RetroAire RC65 PTAC must be connected only to a properly grounded electrical supply. Do not fail to properly ground this unit.
- ▲ Turn off the electrical supply before servicing the RetroAire RC65 PTAC.
- ▲ Do not use the RetroAire RC65 PTAC if it has damaged wiring, is not working properly, or has been damaged or dropped.

[Save These Instructions]



DANGER



The RetroAire PTAC must:

- ▲ Be connected to a properly grounded electrical supply with the proper voltage as stated on the rating plate.
- ▲ Have proper over current protection (i.e. time-delay fuse/HACR-Breaker) as listed on the Rating Plate.

Failure to follow these instructions can result in a fire, explosion, or electrical shock causing property damage, personal injury, or death.

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INSTALLER RESPONSIBILITIES

This manual has been prepared to acquaint you with the installation, operation and maintenance of this RetroAire RC65 PTAC and to provide important safety information in these areas.

We urge you to read all of the instructions thoroughly before attempting the installation or operation of this unit. This manual should be kept for future reference.

The manufacturer of this unit will not be liable for any damages caused by failure to comply with the installation and operating instructions outlined in this manual.

A rating plate identifying this RetroAire RC65 PTAC can be found on the unit. When referring to your unit, always have the information listed on the rating plate readily available.

MODIFICATION AND TAMPERING

DANGER

Tampering with the RetroAire RC65 PTAC is dangerous and may result in serious injury or death. Tampering voids all warranties. Do not attempt to modify or change this unit in any way.

IMPORTANT SAFETY FEATURE

Power Cord With Integral Safety Protection

All PTACs rated 250V or less that are cord connected to the power supply are equipped with a power cord with integral safety protection as standard. Providing personal shock protection as well as arcing and fire prevention, the device is designed to sense any damage in the line cord and disconnect power before a fire can occur. Tested in accordance with Under Writer Laboratories, the cord set also offers a unique “passive” operation, meaning the unit does not require resetting if main power is interrupted.

WARNING - A DAMAGED POWER SUPPLY CORD MUST BE REPLACED WITH A NEW CORD FROM THE MANUFACTURER, AND NOT REPAIRED.

Each power cord should be checked before every use. Follow the instructions in the order listed on the device.

WARNING - DO NOT USE THE PRODUCT IF THE UNIT FAILS THE TEST.

WARNING

Completely read all instructions prior to assembling, installing, operating, or repairing this product. **Inspect all parts for damage prior to installation and start-up. The RetroAire RC65 PTAC must be installed ONLY by qualified installation personnel.**

PRODUCT DESCRIPTION

The RC65 replacement chassis is a high efficiency unit designed to replace Remington, Singer, McQuay J/EJ, and other manufacturer's units. The RC65 is available in 9,000 and 12,000 Btuh capacities as a straight cool unit only. The RC65 offers energy efficiency ratings as high as 9. The unit is available as a complete cooling chassis (RC65) for total unit replacement. RetroAire also offers hydronic heating coils and electric heaters as options. A separate outdoor fan saves energy because it does not run while the unit is in vent or heat mode.

Quiet, smooth operation improves room ambiance and the 20 gauge galvanized steel chassis ensures long service life.

All RetroAire products are backed by EMI and ECR International and are tested and rated in accordance with ARI Standards 310 & 380 and UL 484. A full service parts inventory is available, call (315) 336-3716 for more information.

Check the shipment against the bill of lading. Inspect each unit for damage. Make sure the carrier properly notes all damage on the delivery receipt as well completes a Carrier Inspection Report. Concealed damage must be reported to the carrier within 15 days of receiving the equipment.

NOTE: *The purchaser is responsible for filing any claims with the carrier. Notify the RetroAire traffic dept. in case of damage.*

STANDARD CONTROLS AND COMPONENTS

Factory/field installed controls and components include:

- Unit mounted operating controls
- Unit mounted thermostat
- Fan speed control
- Heat/Cool switch (where applicable)
- Baffle kit (field installed)
- Normally/open normally/closed motor valve-switch (hydronic heat only)

OPTIONAL ACCESSORIES

Factory Installed

- 3KW and 4KW electric heat
- Sea coast coated coils

Field Installed

- 2 way water valve
- 3 way water valve
- Custom wall sleeve/cabinet front
- Hydronic heat (double row coil)

IMPORTANT: *Make sure the motor valve is rated for the correct voltage. Most RetroAire units with unit mount controls will power a normally closed valve that is the same voltage as the unit (ex: a unit rated 208/230V will power a 208/230V normally closed valve). Be sure to check the wiring diagram (located on the unit) and voltage application for the specific unit. Other valve configurations and voltage options are available. Consult Technical Service if the unit voltage does not match your valve application.*

INSTALLATION PREPARATION

- Remove and dispose of old unit.
- Inspect wall sleeve for rust or damage and clean/repair as necessary.
- Remove and repair old weather seals and note locations for new seals.
- Make sure wall sleeve is pitched to the outside by ½" and drain holes are clear of debris for proper overflow drainage.

Note: *It is illegal to discharge refrigerant into the atmosphere. Use proper reclaiming methods when installing or servicing this unit.*

ELECTRICAL WIRING

- Inspect existing wiring for any deficiencies such as cut or frayed wires.
- All electrical wiring must be done according to NEC and local codes. Check the unit rating plate for circuit ampacity and breaker or fuse size. Use only HACR type breakers. Select the proper wire for the ampacity rating.

RC65 INSTALLATION KIT

- 1 Installation Manual
- 1 Condenser Baffle
- 4 #8-32x3/8 Screws
- 6 #8x3/8 Screws
- 2 Thermostat Bulb Clips
- 2 Thermostat Bulb Clips Grommets

HYDRONIC ONLY

- 1 109-4328 Hydronic Coil Bracket
- 1 109-4327 Hydronic Coil Bracket
- 4 #8-32x3/8 Screws

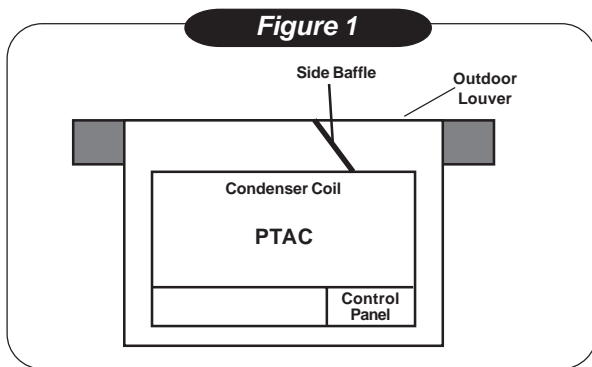
IMPORTANT: *The correct condenser air baffles must be installed or performances may be impaired and/or the warranty will be voided.*

INSTALLATION INSTRUCTIONS

RC 65 BAFFLE INSTALLATION

There is (1) condenser baffle supplied in the chassis kit bag. This is critical for unit operation as it prevents the risk of condenser air recirculation. This baffle should be installed before the chassis is put in the wall sleeve. To install this baffle:

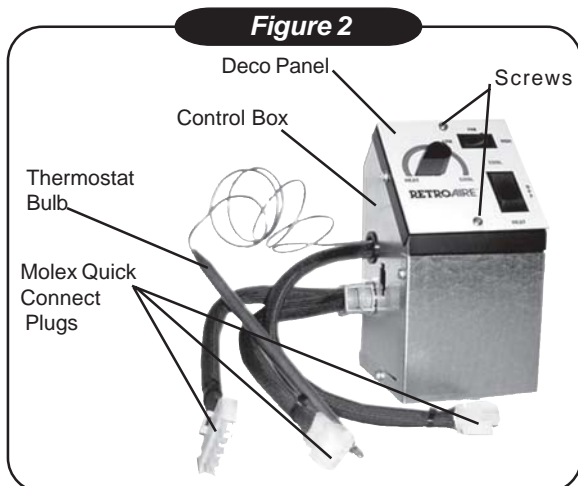
1. Locate condenser coil.
2. Remove (2) screws on the right side of the condenser coil end plate flanges.
3. Align holes in condenser baffle (with long flange facing inward) with holes in coil end plate flanges.
4. Attach baffle using (2) screws previously removed. (Figure 1)



Slid cooling chassis with baffle into wall sleeve and make sure baffle reaches condenser louver.

CONTROL BOX INSTALLATION

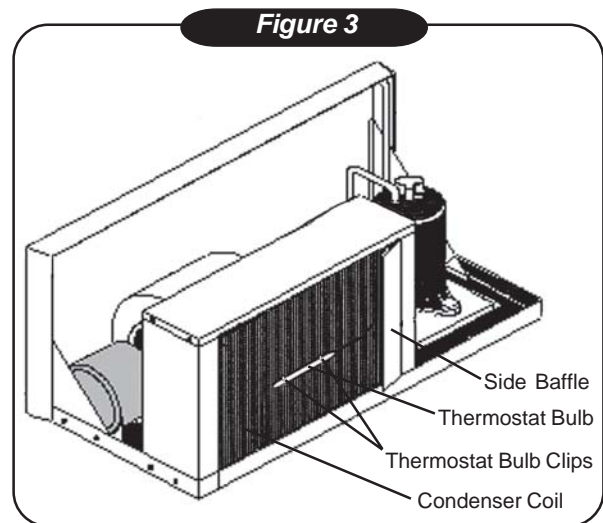
1. Slide blower section in place.
2. Remove control deco panel from control box (2 screws). (Figure 2)
3. Place control panel in provided cabinet space.
4. Attach control box. Place the deco over the control opening on cabinet and fasten the control box through the deco panel.



5. The Control box has three molex quick connect plugs that need connecting. One of the (3) position plugs and the (4) position plug connect to the control panel. The wire colors will match on each side of the plug when connected properly.
6. Connect the control box's 3 position molex to the 3 position molex connector on the cooling chassis.
7. Plug the 4 position wire connection into the cooling chassis. (Figure 2)

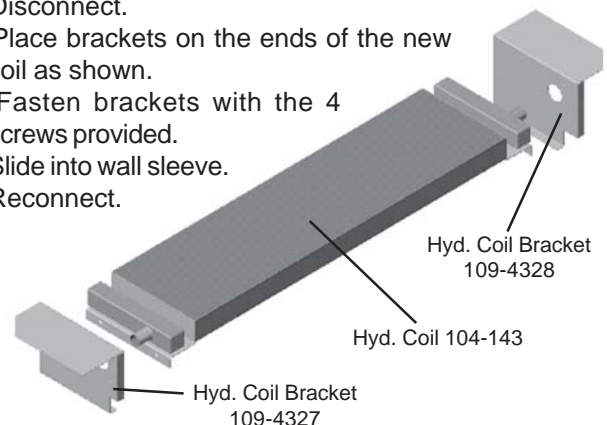
THERMOSTAT BULB INSTALLATION

1. Install the thermostat clip grommets by sliding grommets into the clips
2. To install the thermostat bulb clips (with grommets) push the round end of clips' through coil fins.
3. Gently snap thermostat bulb in the mounting clips. (Figure 3)



HYDRONIC COIL BRACKET INSTALLATION (Hydronic Only)

1. Remove existing coil and brackets from wall sleeve by sliding out.
2. Disconnect.
3. Place brackets on the ends of the new coil as shown.
4. Fasten brackets with the 4 screws provided.
5. Slide into wall sleeve.
6. Reconnect.



FINAL INSPECTION AND START-UP

- After the unit has been installed according to the instructions, the system is ready for final inspection and start up.
- Inspect the unit to make sure it is complete and installed properly.
- Check the electrical controls and connections.
- Remove all tools.
- Make sure the unit controls are in the **OFF** position before connecting power to the unit.

NOTE: Refer to rating plate for power supply voltage and amperage/fuse size specifications.

- Turn power on and check unit operation for all modes (heating, cooling & fan).

NOTE: The front of the cabinet must be in place before operating the unit.

COOLING

- Press the button marked “COOL.”
- Turn the thermostat knob to the right (blue) until the compressor and fans start. **Room temperature must be above 65° F for the unit to operate in cooling mode.** The unit should produce cold air. Allow the unit to run for a while. When the room gets cooler, turn the knob to the left until you hear the thermostat softly “click” and the compressor and fans shut down. Adjust the temperature knob until you reach an acceptable comfort level. Allow 3 minutes for unit to equalize pressure before restarting. Press the **OFF** button. All circuits should de-energize.

HEATING OPTIONS

Electric

- Press the button marked “HEAT.”
- Turn the thermostat knob to the left (red) until the electric heating coil produces heat and the room side fans are running (the condenser fan does not run in the heat mode). **Room temperature must be below 85° F for the unit to operate in heating mode.** The unit should produce warm air. Allow the unit to run for a while. When the room gets warm, turn the knob to the right until you hear the thermostat “click” and shut down. Adjust the temperature setting until you reach an acceptable comfort level.

Hydronic

- Press the button marked “HEAT.”
- Turn the thermostat knob to the left (red). A motorized valve (if equipped) should open and allow hot water to run through the coil. The room side fan will run when the valve is open (the condenser fan does not run in heat mode). If the unit is not equipped with a motorized valve, the fan will cycle with the thermostat. **Room temperature must be below 85° F for the unit to operate in heating mode.** The unit should produce warm air. Allow the unit to run for a while. Adjust the temperature until you reach an acceptable comfort level.

CONDENSATE REMOVAL

Make sure the unit is level or pitched to the outdoors. Perform a condensate flow test by pouring a small amount of water into the condensate drain pan. The water should flow towards the drain hose at the end of the pan.

This model has a drain connection at the end of the drain pan that allow condensate to drain through the bulkhead to the condensate fan. The condenser fan picks up the condensate and sprays it onto the hot condenser coil for evaporation.

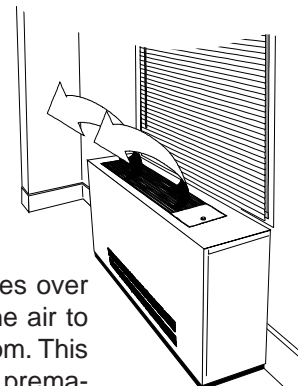
FINAL CHECK

- Make sure there is nothing obstructing either discharge or return air flow (curtains, thick pile carpeting, etc.). Damage to the unit resulting from obstructions of this nature is not covered by the warranty.
- Check all controls and devices for proper function and operation.
- Check the unit for smooth and quiet operation.
- Satisfactory air delivery.

AIR FLOW CONCERNS



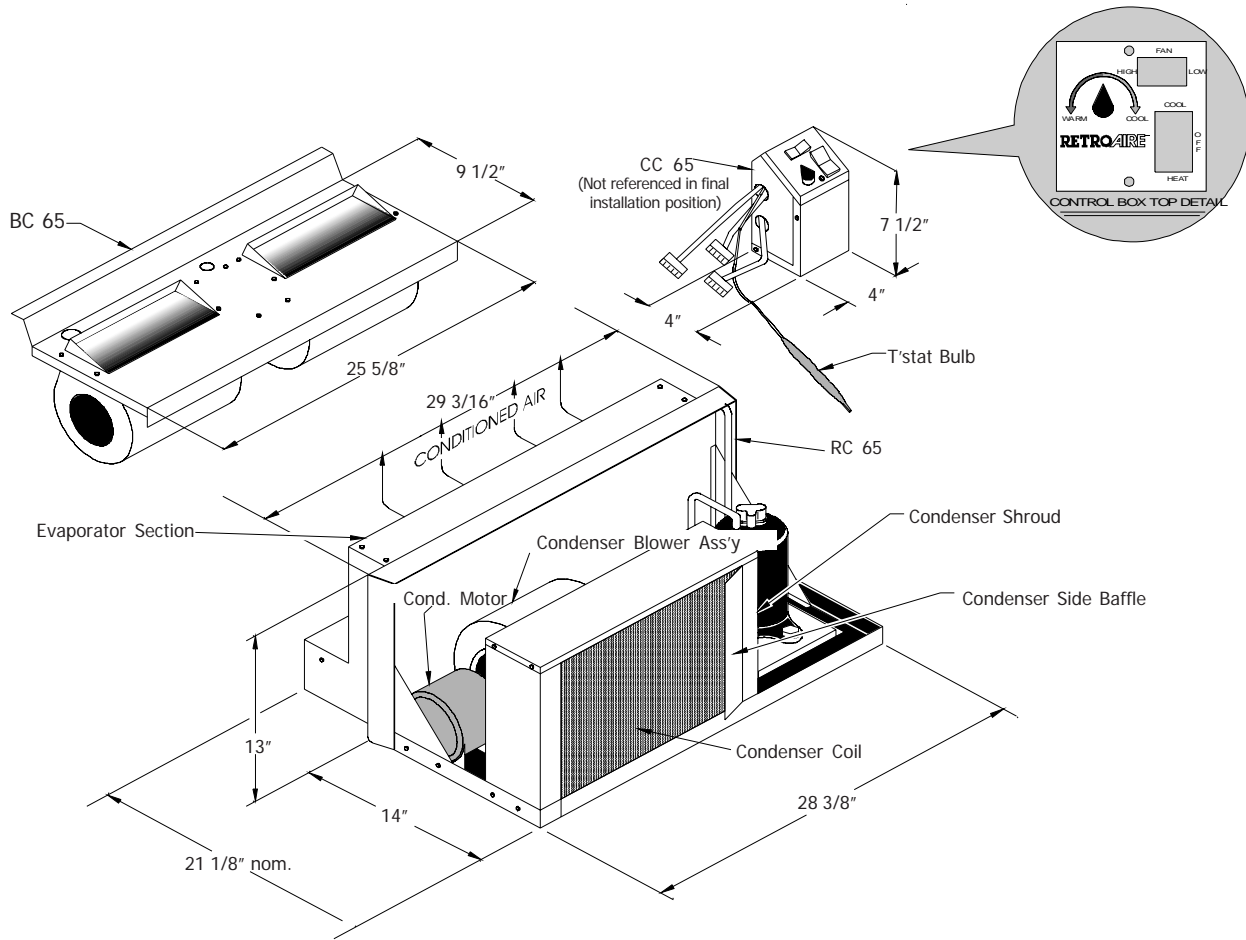
Avoid air flow restrictions. Allow cool air to circulate in the room. This ensures optimum performance and efficiency.



Do not position curtains or drapes over supply air grille. It may cause the air to recirculate before cooling the room. This could result in short cycling and premature compressor failure.

RC65 DIMENSIONS AND SPECIFICATIONS

NOTE: EMI products are subject to ongoing development. Products are subject to change without notice



RC65 Performance Data			
Unit Size	Cooling		Evaporator CFM Hi/Lo
	Btuh	EER's	
09	9,200	9.0	385/335
12	11,100	8.8	385/335

Rated in accordance with
ARI Standards: 310/380

RC65 Hydronic Heat Performance 104-143 (Double Row Coil)			
GPM	EWT (°F)	Capacities Btuh	P.D.
3.0	180°F Hi	15,800	1.0
	180°F Lo	14,900	1.0
	140°F Hi	9,800	1.0
	140°F Lo	9,300	1.0

RC65 ELECTRICAL SPECIFICATIONS											
MODEL#	VOLTS/HZ/PH	COND FAN AMPS	COMPRESSOR			EVAP FAN AMPS	HP	TOTAL AMPS	MIN VOLT	M.C.A.	HACR BRKR
			HP	RLA	LRA						
09	115/60/1	2.5	0.17	7.4	44	1.4	0.08	11.3	104	13.2	20
	208/230/60/1	1.1	0.15	3.8	20	0.6	0.08	5.5	197	6.4	15
12	115/60/1	2.5	0.17	9.7	54	1.4	0.08	13.6	104	16.0	25
	208/230/60/1	1.1	0.15	4.8	26.3	0.6	0.08	6.5	197	7.7	15

RC65 OPTIONAL ELECTRIC HEAT SPECIFICATIONS							
HEATER NO.	VOLTAGE	WATTS	Btuh	AMPS	TOTAL	MCA	FUSE
3	208	2454	8400	11.8	12.4	15.3	20.0
	230	3000	10300	13.04	13.6	16.9	20.0
4	208	3271	11200	15.7	16.3	20.3	25.0
	230	4000	13700	17.4	18.0	22.3	25.0

CLEANING AND MAINTENANCE

The RC 65 unit has been designed to provide long service life needing minimal maintenance. There are several simple maintenance procedures that will ensure long unit life and high efficiency.

- The removable air filter improves air quality and prolongs component life. It should be vacuumed and/or rinsed regularly. During peak usage, the filter should be checked (and cleaned if needed) monthly. The intake grill should also be vacuumed regularly.

- Check weepholes at base of rear flange and make sure they are free of debris.
- Clean evaporator and condenser coils regularly.
- Inspect wiring yearly.

NOTE: Any internal component serviced should be performed by a qualified service technician.

NOTE: Make sure you have the model number and serial number from your unit(s) when calling for service or technical information.

ALL PRODUCT LIMITED WARRANTY

Enviromaster International Corporation (EMI) warrants to the purchaser/owner, that the EMI products will be free from defects in material and workmanship under the normal use and maintenance for a period of twelve months for all components, and (60) months on unit compressors from date of the original installation or 15 months for all components and 63 months on unit compressors from the date of original sale whichever comes first.

WHAT WE WILL COVER

EMI will replace any defective part returned to EMI's approved service organization with a new or rebuilt part at no charge. The replacement part assumes that unused portion of this warranty.

WHAT WE DON'T COVER

THIS WARRANTY DOES NOT INCLUDE LABOR or other costs incurred for repairing, removing, installing, shipping, servicing, or handling of either defective or replacement parts.

EMI IS NOT RESPONSIBLE FOR

- Normal maintenance
- Damage or repairs required as a consequence of faulty installation or application by others.
- Failure to start due to voltage conditions, blown fuses, open circuit breakers, or other damages due to the inadequacy or interruption of electrical service.
- Damage or repairs needed as a consequence of any misapplication, abuse, improper servicing, unauthorized alteration, or improper operation.
- Damage as a result of floods, winds, fires, lightning, accidents, corrosive atmosphere, or other conditions beyond the control of EMI.
- Parts not supplied or designated by EMI.
- Products installed outside the United States or Canada.
- Any damages to person or property of whatever kind, direct or indirect, special or consequential, whether resulting from use or loss of use of the product.

LIMITATION OF WARRANTIES

This Warranty is exclusive and in lieu of any implied warranties of merchantability and fitness for a particular purpose and all other warranties express or implied. The remedies provided for in this warranty are exclusive and shall constitute the only liabilities on the part of EMI including any statements made by any individual which shall be of no effect.

FOR SERVICE OR REPAIR:

- 1) Contact the installer _____
- 2) Call the nearest distributor _____
- 3) Call or write _____

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