

RC75 SINGLE MOTOR PACKAGED TERMINAL AIR CONDITIONER

Replacement for Amana Curtain Unit

STRAIGHT COOL

Nominal Capacities:
9,000 & 12,000 Btuh

RETROAIRE

The Right Fit for Comfort



RC 75

Enviromaster International LLC
5780 Success Dr.
Rome, NY 13440
Phone: 1-800-228-9364
Fax: 1-800-232-9364
Email: info@retroaire.com

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



RC75 SINGLE MOTOR PACKAGED TERMINAL AIR CONDITIONERS

INSTALLATION, OPERATION & MAINTENANCE MANUAL

P/N# 240004620, Rev.1.2 [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.

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This manual is intended as an aid to qualified service personnel for proper installation, operation, and maintenance of the RetroAire RC75 Single Motor Packaged Terminal Air Conditioner (PTAC). 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.



Recognize this symbol as an indication of important safety information



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 _____

SAFETY INSTRUCTIONS

- Read all instructions before using the RetroAire RC75. 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 RC75 before installation to make certain the voltage shown is the same as the electric supply to the unit.
- The RetroAire RC75 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 RC75.
- Do not use the RetroAire RC75 if it has damaged wiring, is not working properly, or has been damaged or dropped.

[Save These Instructions]



WARNING



To avoid possible injury or death due to electrical shock, open the power supply disconnect switch and secure it in an open position during installation. On a plug and receptacle connection, keep the unit unplugged until installation is complete.

⚠ DANGER ⚠

Do not use the RetroAire RC75 with any electrical supply voltage other than the one listed on the rating plate.

Check the rating plate on the unit for the correct voltage rating. Failure to use the correct voltage may result in death, serious bodily injury or property damage. If you have any questions or doubts, consult the factory before installing this unit.

INSTALLER RESPONSIBILITIES

This manual has been prepared to acquaint you with the installation, operation and maintenance of the RetroAire RC75 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 product can be found on the unit. When referring to your unit, always have the information listed on the rating plate readily available.

⚠ DANGER ⚠

The RetroAire RC75 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.

⚠ 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 RC75 must be installed ONLY by qualified installation personnel.

MODIFICATION AND TAMPERING

⚠ DANGER ⚠

Tampering with the RetroAire RC75 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 Underwriters 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.

PRODUCT DESCRIPTION

The RetroAire RC75 is available as a cooling only model.

The RC75 uses a high-efficiency rotary compressor protected under a 5-year warranty and an enhanced high-efficiency heat exchanger to make the replacement of worn out and inefficient units a very attractive option.

Whisper quiet operation improves the room ambience and the 20 gauge galvanized steel construction of the chassis ensures long service life.

The RetroAire RC75 with override switch offers three fan speeds, and has an optional motorized fresh air feature with a positive pressure seal, and positive condensate re-evaporation to improve efficiency.

CONTROLS AND COMPONENTS

Controls and components installed at the factory or supplied for field installation include:

1. Unit mounted operating controls
 - Thermostat
 - Fan speed control
2. Motorized fresh air damper (optional)
3. Foam strip seal for supply air duct
4. Removable washable mesh filters

PREPARATION FOR INSTALLATION

1. Remove old unit from wall sleeve and dispose of properly.

IMPORTANT: *It is illegal to discharge refrigerant into the atmosphere. Use proper reclaiming methods and equipment when installing or servicing the RetroAire RC75.*

2. Inspect wall sleeve for rust or damage. Clean, replace or repair as necessary.
3. Make sure wall sleeve is pitched a minimum of 5° (at least ½") to the outside, this will insure proper drainage.
4. Inspect the existing exterior louver and remove any debris or obstructions. Verify that the unit is at least two inches away from the outside louver, to insure proper air circulation.
5. Inspect indoor supply and return air sections and remove any obstructions (draperies, bedspreads, etc.) that may cause an air restriction during operation.

IMPORTANT: *Do not place any objects on the supply air grille.*

ELECTRICAL WIRING

1. Inspect existing wiring for any deficiencies such as cut or frayed wires.
2. All electrical wiring must be run according to NEC and local codes. Check the unit rating plate for circuit ampacity and breaker or fuse size. **USE ONLY HACR TYPE BREAKERS OR TIME-DELAY FUSES.** Select the proper wire for the ampacity rating.
3. If plug and receptacle are used, be sure to check for proper fit.

INSTALLATION INSTRUCTIONS

RC75 INSTALLATION KIT

- 1 Installation Manual

1. Remove existing unit from wall-sleeve and unplug line-cord from existing receptacle.
2. Remove packaging and kit bag from the RC75 chassis.
3. Plug line-cord into existing receptacle.
4. Slide the RC75 chassis into wall sleeve.
5. Attach top panel and louver.
6. See Final Inspection and Start-Up (below).

FINAL INSPECTION AND START-UP

1. Make sure the chassis is level. Check by pouring water into the drain pan and making certain it flows through the drain hoses to the condenser side of the unit.
2. Plug or hard wire line voltage to unit.

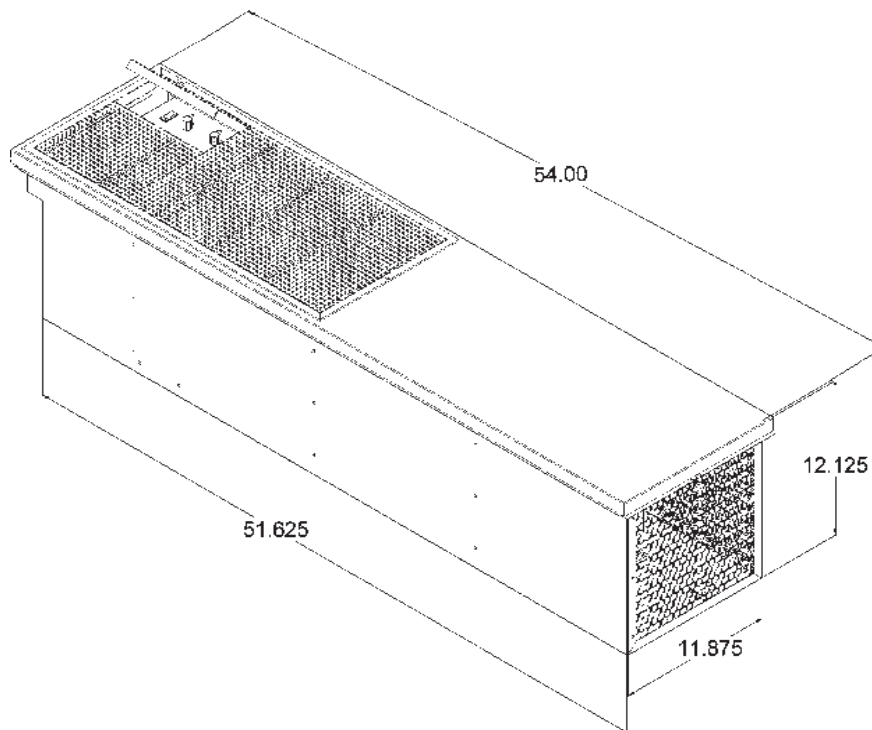
IMPORTANT: *Follow the information provided on the rating plate for voltage and amperage/fuse size for proper supply.*

3. Turn the power on.
4. Check for proper operation (cooling, fresh air, and heating (if supplied)).

When turning the selector knob on the RC75 for mode of operation, it is very important to make sure the knob position is "**SEATED**" directly on a mode of operation (**clicks into position**). **Do not mistakenly place between two positions.** This can result in a potential fan failure while the system is in a cooling or heating operation. A fan failure could result in the unit overheating (smoke) in an electric heating mode or freezing coil in a cooling mode.

RC75 SPECIFICATIONS AND PERFORMANCE

IMPORTANT: Due to ongoing product development, designs, specifications, and performance are subject to change without notice. Please consult factory for further information.



| PERFORMANCE DATA* | | | | |
|-------------------|--------------|-----|---------------------|---------------|
| MODEL | COOLING BTUH | EER | EVAP CFM HI/MED/LOW | FRESH AIR CFM |
| 09 | 9,300 | 8.2 | 350/300/275 | 40/35 |
| 12 | 11,400 | 7.8 | 350/300/275 | 40/35 |

*Due to RetroAire's on going development programs, specifications may change without notice. Please consult factory for the latest information and submittal data before making any job site updates.

RC/RH 75 Electrical Specifications

| Model Number | Voltage/hz/ph | Fan Motor | | Compressor | | Total amps | MCA | Max Fuse | Min Voltage | Line Cord |
|--------------|---------------|-----------|-------|------------|------|------------|------|----------|-------------|-----------|
| | | FLA | Hp | RLA | LRA | | | | | |
| 09 | 115/60/1 | 4.2 | 0.333 | 7.4 | 44.0 | 11.6 | 13.5 | 20 | 104 | 5-15P |
| | 208/230/60/1 | 2.2 | 0.333 | 3.8 | 20.0 | 6.0 | 7.0 | 15 | 197 | 6-15P |
| 12 | 115/60/1 | 4.2 | 0.333 | 9.7 | 54.0 | 13.9 | 16.3 | 25 | 104 | 5-20P |
| | 208/230/60/1 | 2.2 | 0.333 | 4.8 | 26.3 | 7.0 | 8.2 | 15 | 197 | 6-15P |

NEMA Specifications Non-Locking/Receptacles

| VOLTAGE | 125V | | 250V | | |
|------------|--------|--------|--------|--------|--------|
| | 15(A) | 20(A) | 15(A) | 20(A) | 30(A) |
| PLUG | 5-15 P | 5-20 P | 6-15 P | 6-20 P | 6-30 P |
| RECEPTACLE | 5-15 R | 5-20 R | 6-15 R | 6-20 R | 6-30 R |



SEQUENCE OF OPERATION

thermostat knob

UNIT MOUNTED THERMOSTAT CONTROLS

COOLING CYCLE

1. Rotate the system switch to the "COOLER" position.
2. Rotate thermostat knob (*Figure 6*) clockwise until the compressor fans start running and cold air begins to flow from the unit. For a colder room temperature, continue turning the thermostat knob clockwise and let the unit continue operating to cool the room and remove humidity. If a warmer room temperature is desired, rotate the thermostat knob counter-clockwise until the compressor cycles off.

IMPORTANT: The room temperature must be above 65° F for the compressor to operate.

3. Place system switch in the "OFF" position. All operation should stop.

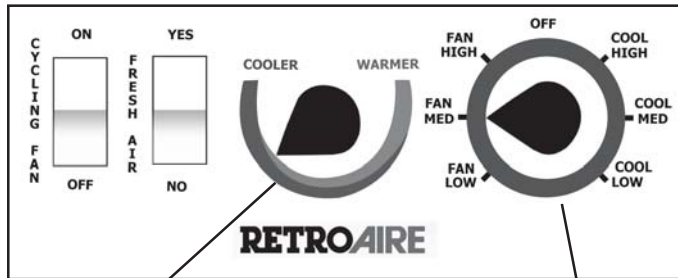


Figure 6

Thermostat Knob

Mode Selector Knob

Turning the unit mounted thermostat knob to the right (red) will produce warmer air temperature while turning it to the left (blue) will produce cooler. These settings can be adjusted for personal comfort. (*Figure 6*)

⚠ CAUTION ⚠

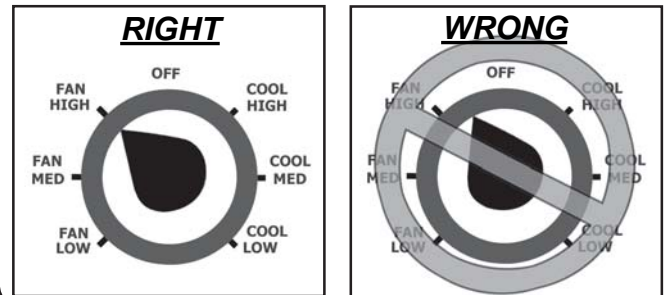
Avoid rotating the thermostat knob back and forth from heating to cooling. This causes the compressor to cycle on and off rapidly and **WILL** cause damage to the compressor. Allow the compressor to remain off for at least three minutes prior to restarting the unit.

⚠ CAUTION ⚠

When the unit is first powered up, high humidity conditions can cause condensation to form on the discharge grill. Keep doors and windows closed to reduce humidity and condensation will evaporate.

RC75 SAFETY NOTE

When turning the selector knob on the RC75 for mode of operation, it is very important to make sure the knob position is "**SEATED**" directly on a mode of operation (**clicks into position**). Do not mistakenly place between two positions. This can result in a potential fan failure while the system is in a cooling or heating operation. A fan failure could result in the unit overheating (smoke) in an electric heating mode or freezing coil in a cooling mode.



MOTORIZED FRESH AIR DAMPER (Optional)

The optional motorized damper allows fresh air to be brought into the room. By moving the "Fresh Air" switch to the **YES** position, outside air will be brought into the room when the indoor fan is circulating air. To circulate indoor air without fresh air, set the "Fresh Air" switch to the **NO** position.

FAN CYCLE SWITCH

This option allows the operator of the Single Motor PTAC to have the evaporator fan cycle or run continuously. With the switch in the (**OFF**) "**cycling**" position the evaporator fan will only run when the unit is calling for heat or cooling. When the switch is in the (**ON**) "**constant**" position, the evaporator fan will run continuously unless the unit is physically turned off.

CONDENSATE REMOVAL

The Single Motor PTAC has a drain connection at each end of the condensate drain pan. This allows the condensate to drain through the bulkhead to the area near the condenser fan. The condenser fan has a slinger ring that picks up the condensate and slings it on the hot condenser coil where it evaporates (*Figure 7*). On heat pump models condensate can form on the outdoor coil during the heat pump cycle. A temperature sensitive valve in the base pan will allow condensate to flow to an internal piping system or external drain kit (supplied by others).

CLEANING AND MAINTENANCE

⚠ WARNING ⚠

RetroAire RC75 units are designed and constructed for reliability and long life with minimal maintenance but service or repairs should only be performed by qualified service personnel.

⚠ DANGER ⚠

Before servicing the RC75 be sure to turn off electrical power to the unit. Failure to do so can result in a fire, explosion or electrical shock causing property damage, personal injury, or death.

⚠ WARNING ⚠

It is illegal to discharge refrigerant into the atmosphere. Use proper reclaiming methods and equipment when servicing a RetroAire RC75.

CLEANING THE INTERIOR OF THE UNIT

1. Disconnect power from unit.
2. Remove access panel and do a visual inspection of the unit, making sure to check for obvious problems such as broken wires, damaged coils, or evidence of extended wear on any moving part.
3. Check for unusual odors, oil leaks, or stains on or around the coil and refrigerant lines. The presence of oil here may indicate a potentially serious problem such as a refrigerant leak.
4. Inspect all electrical connections. Look for frayed wires and poor connections. Terminal ends that are loose will eventually fail, causing a loss of performance or worse.
5. Check fan motors and blower assemblies. Some units may require a drop of light oil to motors and/or bearing assemblies (look for oil cups). Check setscrews and motor mounting hardware, making sure they are tight.

IMPORTANT: *The RC75 is equipped with a permanently lubricated motor. Although oiling is not necessary, adding a few drops through the oiling ports twice yearly will extend the life of the motor. Do NOT over oil!!*

6. Brush and/or vacuum the blower wheels and blower cage assemblies. These parts must be clean to operate efficiently.
 7. Inspect and clean the indoor and outdoor coils, using a fin comb, if necessary, to straighten any damaged fins. These coils must be clean for proper operation.
- IMPORTANT:** *Do not use a solvent-based cleaner when cleaning the indoor or outdoor coils. Some solvents can produce a noxious odor when starting the fan or electric heat.*
8. Inspect and clean the drain pan. Use of an anti-fungicide tablet is recommended to keep the condensate system free from bacterial contaminants.
 9. Check the pitch of the unit and wall sleeve. Over time, the building and equipment may settle, causing a shift in the direction of the condensate flows. Ideally, the unit should pitch a minimum of 5° (at least ½") to the outside to allow for proper drainage.
 10. Replace panel and reconnect electrical power.
 11. Test unit operation.

CLEANING THE EXTERIOR OF THE UNIT

1. Clean the air filter at least once a month by removing it from the unit and washing or vacuuming any dust from its surface. Allowing dust to collect on the filter will cause the PTAC to lose efficiency and eventually malfunction.
2. When cleaning the filter, be sure to vacuum any dust from the return air grille surface as well.
3. Clean the exterior of the cabinet as desired with a mild soap or household cleaner.

TROUBLESHOOTING

NO COOLING: Check to see if the unit has power and if the thermostat is satisfied. If the thermostat is not satisfied, refer to the wiring diagram and check control components for continuity.

ALL PRODUCT LIMITED WARRANTY

Enviromaster International LLC (EMI) warrants to the purchaser/owner that 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 sixty months on unit compressors from the date of original installation, or fifteen months for all components and sixty-three months on unit compressors from the date of manufacture, 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, lightening, 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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