

Thru-the-Wall Room Air Conditioner with optional Electric Heat

Installation Instructions and Owner's Manual

This manual must be left with the owner
of the equipment.

Contents

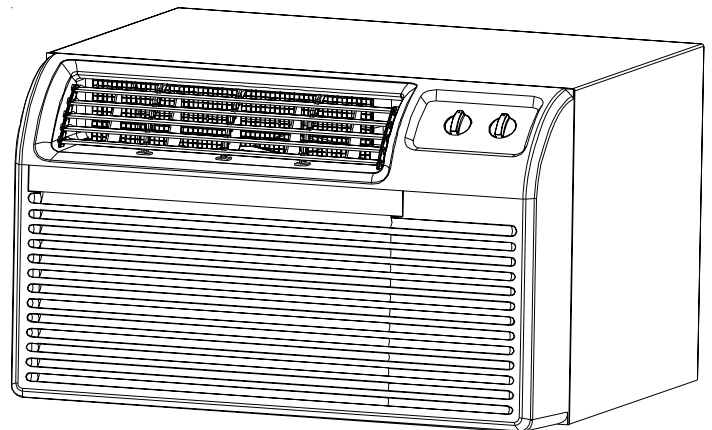
IMPORTANT NOTE TO THE OWNER	2
IMPORTANT NOTE TO THE SERVICER	2
Unit Features	2
Transportation Damage	2
Unpacking The Unit	2
Parts Supplied	2
Unit Accessories	3
Operating Instructions	3
Installation Instructions	3
Wiring	6
Unit Operation	6
Preventative Maintenance	8
Normal Operating Sounds and Conditions	9
Obtaining Service	9
Warranty	10



WARNING

HIGH VOLTAGE!

Disconnect ALL power before servicing
or installing. Multiple power sources may
be present. Failure to do so may cause
property damage, personal injury, or death.



RECOGNIZE THIS SYMBOL AS A SAFETY PRECAUTION.

ATTENTION INSTALLING PERSONNEL

As a professional installer you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this Instruction Manual. Pay special attention to all safety warnings. Often during installation or repair it is possible to place yourself in a position which is more hazardous than when the unit is in operation.

Remember, it is your responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting. Most dealers have a list of specific good safety practices...follow them.

The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

IMPORTANT NOTE TO THE OWNER

This equipment is to be serviced by professionally trained personnel only. If this equipment is improperly installed, adjusted or altered by an unqualified person, a safety hazard may result.

IMPORTANT NOTE TO THE SERVICER

Read this manual and familiarize yourself with the specific items which must be adhered to before attempting to service this unit. The precautions listed in this manual should not supersede existing practices but should be considered as supplemental information.

Transportation Damage

All units are securely packed in shipping containers approved by the National Safe Transit Association. The carton should be checked upon arrival for external damage. If damage is found, immediately make a written request for inspection by the carrier's agent.

In the event of damage:

1. Note on the delivery receipt any visible damage to shipment or container.
2. Notify carrier promptly and request an inspection.
3. File the claim with the following supporting documents within the six month statute of limitations.
 - a. Original Bill of Lading, certified copy, or indemnity bond.
 - b. Original paid freight bill or indemnity.
 - c. Original invoice or certified copy, showing trade and other discounts or reductions.
 - d. Copy of the inspection report issued by carrier's representative at the time damage is reported to the carrier.

The carrier is responsible for making prompt inspection of damage and for a thorough investigation of each claim. The distributor or manufacturer will not accept claims from dealers for transportation damage.

Unpacking The Unit

1. Cut the carton banding and open the carton.
2. Remove the literature, hardware pack, upper styrofoam shipping blocks, and styrofoam corner posts.
3. Remove the front assembly.
4. Lift the unit from the remaining carton.
5. Dispose of the cardboard and styrofoam at an approved Recycle Center. Check all contents for damaged or missing parts. In case of concealed damage, notify the carrier as soon as possible—preferably within 5 days. Refer to step 3 of the *Transportation Damage* section if damage or missing parts are noted.

Parts Supplied

Size	Description	Quantity
#8 x 3/8"	Blunt Point Sheet Metal Screw	1

(This screw is used for ground wire connection to the sleeve)

Unit Accessories

This unit is designed for through-the-wall installation in new or existing buildings. To complete the installation in an existing wall sleeve, a TWKGSLV rear louver panel kit, a TWEAK2 or TWFAK2 adapter kit is required.

If the sleeve is an Amana® brand wall sleeve, use the TWKGSLV rear louver panel kit. If the sleeve is an Emerson wall sleeve, use the TWEAK2 adapter kit. If the sleeve is a Fedders or Freidrich wall sleeve, use the TWFAK2 adapter kit.

Operating Instructions

Check the data specification plate and ensure the proper voltage and current rating for the type of power plug on the unit is available. **DO NOT REMOVE THE GROUNDING PRONG FROM THE POWER CORD.** See Figure 1 for the types of acceptable plugs. Do not use an extension cord for the installation of this product. Refer to the data specification plate for electrical requirements.

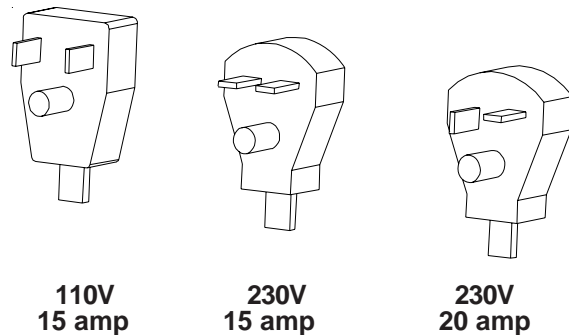
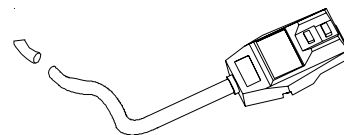


Figure 1

- **LCDI or AFCI Power Cords** - Underwrites Laboratories and the National Electric Code (NEC) now require power cords that sense current leakage and can open the electrical circuit to the unit on units rated at 250 volts or less. In the event that unit does not operate, check the reset button located on or near the head of the power cord as part of the normal troubleshooting procedure.



LCDI power Cord



WARNING

To prevent electrical shock, property damage, personal injury, or death, do not remove grounding prong from plug. Follow all operating instructions.

Installation Instructions

To ensure that the unit operates safely and efficiently, it must be installed, operated, and maintained according to these installation and operating instructions and all local codes and ordinances, or, in their absence, with the latest edition of the National Electrical Code. The proper installation of this unit is described in the following sections. Following the steps in the order presented should ensure proper installation.

SLEEVE INSTALLATION

In order for condensate water to drain properly inside the unit, the sleeve must be installed properly:

- Level from right to left.
- A slight downward pitch from the indoor side to the outdoor side as shown in Figure 3.

Refer to the Installation Instructions supplied with the wall sleeve for a complete description of the installation procedure.

NOTE: Wall sleeve (PBWS01A) is not shipped with chassis and must be purchased separately.

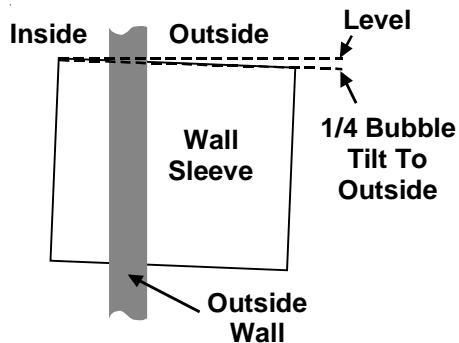


Figure 2

REAR LOUVER PANEL

A TWKGSLV rear louver panel kit is required for unit installation into an existing Amana® brand 26" wall sleeve. A TWEAK2 or TWFAK2 adapter kit is required for unit installation into an existing 27" wall sleeve. The rear louver panel directs air flow for proper unit operation and protects the outdoor coil. The panel must be installed before installing the chassis. These kits are not supplied with the unit. Refer to the Installation Instructions supplied with the rear louver panel kit for a complete description of the installation procedure.

CHASSIS INSTALLATION

1. Remove front grille. See Figure A.

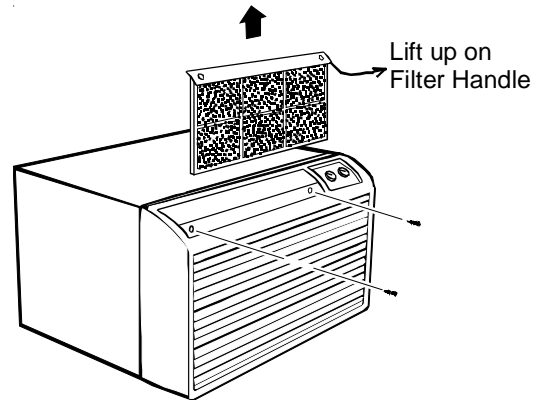
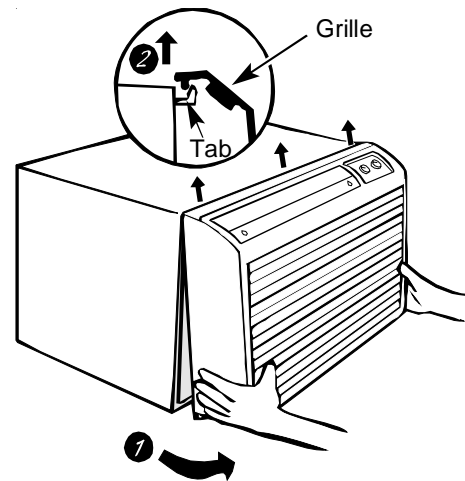


Figure A

The front grille can be removed for more thorough cleaning or to make the model and serial numbers accessible. To remove, pull the filter out and remove the two grille screws.



Pull the grille out from the bottom and lift up from the tabs on the top of the case.

2. Remove the grounding screw and wire next to the grounding symbol on right side of chassis control panel (Figure 3). Attach other end of ground wire to the hole in the bottom right side of the sleeve with #8 x 3/8" blunt point sheet metal screw. The hole on the sleeve is indicated by grounding symbol on the sleeve. Slide chassis part of the way into the sleeve and reattach the ground wire back to the hole on the right side on the control panel area next to the grounding symbol.

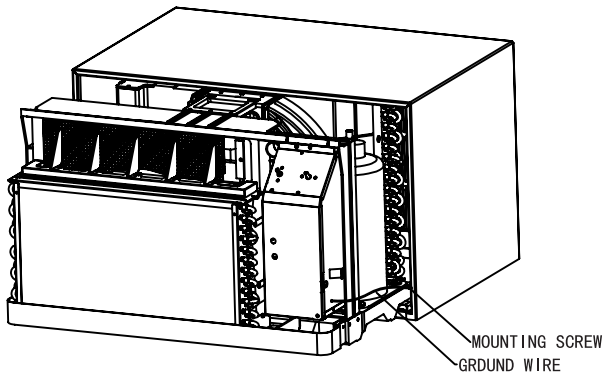


Figure 3

3. Remove shipping pads inside air conditioner next to compressor. (See Figure B.)

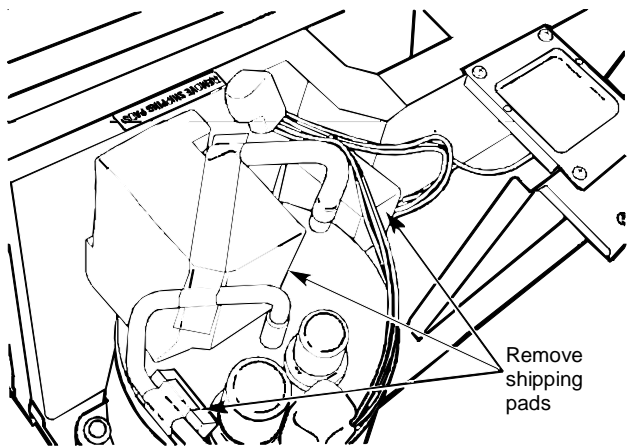


Figure B

4. Carefully slide the chassis into the sleeve. Ensure that the ground wire is not pinched or in the path of the condenser fan.
5. Loosen locking plate screw and rotate tab with tab behind wall case flange (See Figure C) then tighten locking plate screw.

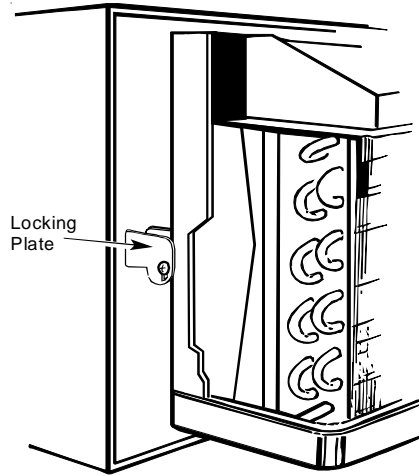


Figure C

6. If outlet is on the left side of the unit, route power cord as shown in Figure D.

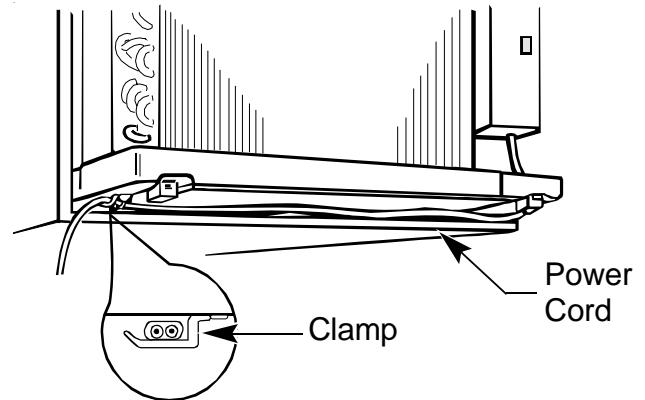


Figure D

To replace front grille:

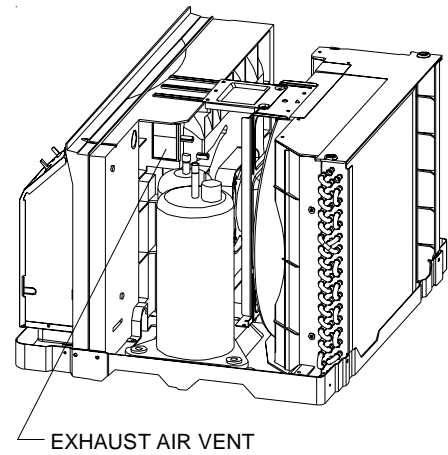
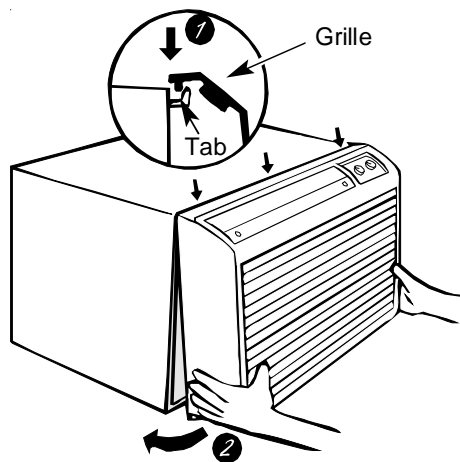


Figure 4

Hook the tabs on the front grille even with the tabs on the case and snap into place. Replace the screws and filter. Refer to Page 4, Figure A.

AIR DIRECTION:

Horizontal louvers on the front grille let you control the air direction up and down.

VENT CONTROL AND AIR DIRECTION (See Figure E)

The vent control is located behind the front grille on the right side of the air discharge area. When set at **CLOSE** only the air inside the room will be circulated and conditioned. When set at **OPEN**, some inside air is exhausted outside.

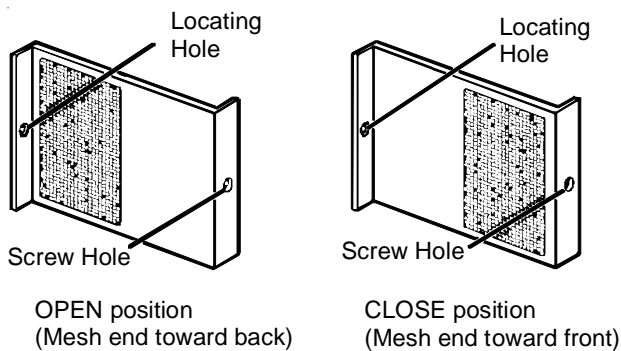
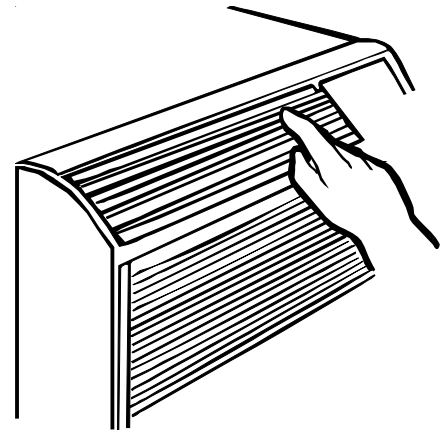


Figure E

To open or close the vent:

1. Remove the front grille.
2. Remove the vent card screw.
3. Remove the vent card, turn it over and replace it by locating rear hole in card over locating pin inside air discharge and reattaching screw at front.

Remove the front grille to adjust the vertical louvers side-to-side to direct the air left or right.

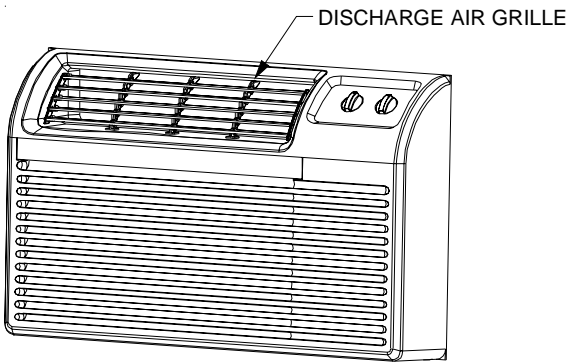
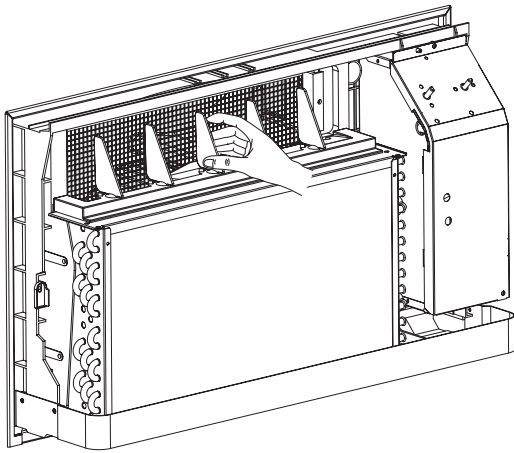


Figure 5

IMPORTANT NOTES:

1. The unit is equipped with a rubber-grommet-mounted compressor. These grommets are factory set and require no adjustment.
2. Obstruction to air flow must be checked and removed. Check the indoor and outdoor grilles for obstructions. The unit must be located where curtains, furniture, trees, or other objects do not block air flow to and from the unit. If air is obstructed and/or deflected back into the unit, the air conditioner's compressor may cycle on and off rapidly. This could cause damage to the compressor.

Wiring

Before wiring the unit, please review the following warnings and cautions.



WARNING

To avoid the risk of electrical shock, personal injury or death, do not service this unit without first opening all disconnects and/or removing the unit cord set plug from the wall outlet.



WARNING

To avoid the risk of electrical shock, personal injury, or property damage, do not use an extension cord with this unit.



WARNING

To avoid the risk of fire, property damage, or personal injury, use only copper conductors.



WARNING

To avoid the risk of personal injury, wiring to the unit must be properly polarized and grounded.



WARNING

This air conditioner is not meant to provide unattended cooling or life support for persons or animals who are unable to react to the failure of this product.

The failure of an unattended air conditioner may result in extreme heat in the conditioned space causing overheating or death of persons or animals. Take proper precautions to avoid unattended operation.

VOLTAGE MEASUREMENTS

Before connecting the unit, measure the supply voltage. Voltage must fall within the voltage utilization range given in Table 1.

Operating Voltage		
Unit Voltage Rating	Voltage Utilization Range	
	Minimum	Maximum
230/208	197	253
115	103	126

**Table 1
Operating Voltage**

Unit Operation

COOLING MODELS - PBC

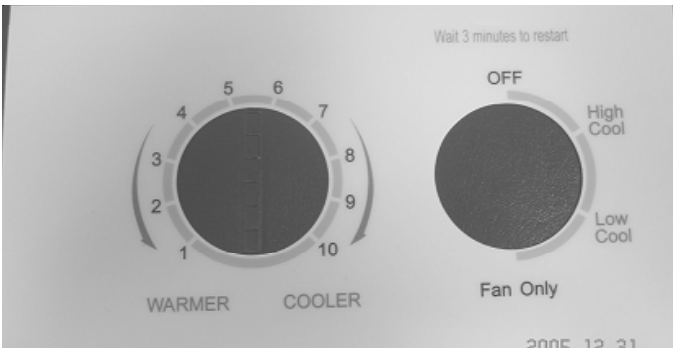
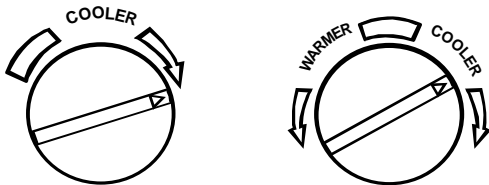


Figure 6

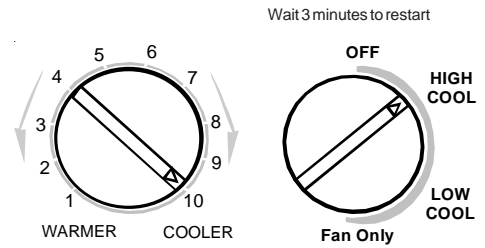
Two rotary knobs (Figure 6) control temperature and operational modes. They are located to the top left of the cabinet front.

THERMOSTAT SETTING



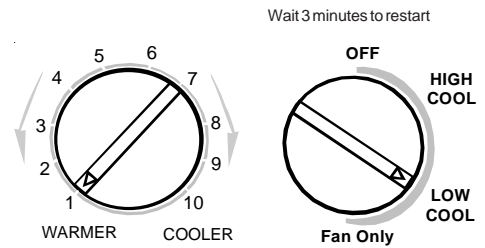
The thermostat controls the room temperature by turning either the compressor or electric heater on and off while the fan is running. Turn the thermostat control clockwise to provide a cooler room temperature; turn it counterclockwise to provide a warmer one.

NOTE: If the fan cycle switch (see Additional Control Inputs) is in the CYCLE mode, both the compressor and fan will cycle on and off during the cooling modes.



HIGH COOL

This setting provides the most cooling output at the highest efficiency possible. In this mode the fan runs on high and the compressor cycles on and off.



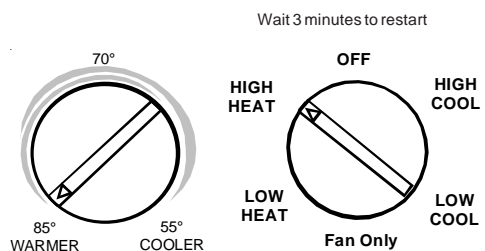
LOW COOL

This setting dehumidifies the air and provides the quietest fan operation. In this mode the fan runs at the lowest speed and the compressor cycles on and off.

HEAT PUMP MODELS - PBE & PBH

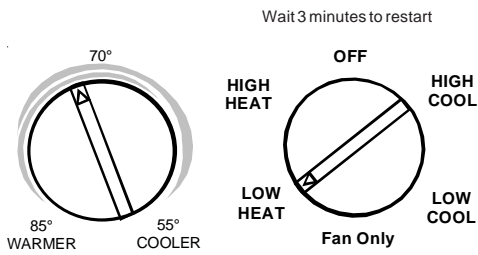


Figure 7



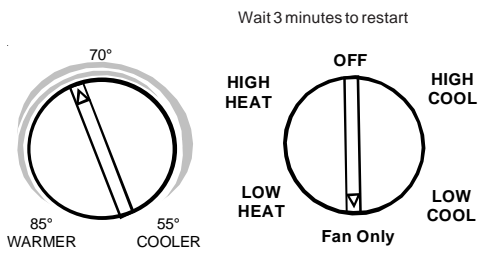
HIGH HEAT

On high heat, the fan runs at its highest speed. In this mode the electric heater cycles on and off by thermostat.



LOW HEAT

On low heat, the fan runs at its lowest speed and provides the quietest fan operation. In this mode the electric heater cycles on and off by thermostat.



FAN ONLY

This setting circulates air. If the exhaust air option is used, this setting will exhaust stale indoor air. In this mode, the fan runs continuously at high speed without compressor operation.

HEAT PUMP MODELS - PBE & PBH



Figure 8

When the outdoor temperature is lower than 25°F, heat is provided by the electric heater in the air conditioner instead of by the heat pump.

ADDITIONAL CONTROL INPUTS

NOTE: Not available on all models.

Fan Cycle Switch

The fan cycle switch is located behind the plastic front assembly underneath the control knob (Figure 9). The fan cycle switch sets the operational mode of the fan. In the NORMAL position, the fan will run continuously whenever the unit is in the heat or cool mode. In the CYCLE position, the fan will cycle on and off with the compressor when the unit is in the cool mode. This switch can only be set by a servicer.

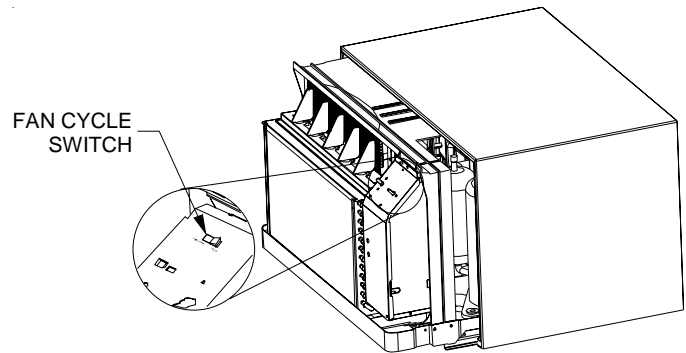


Figure 9

Preventative Maintenance



WARNING

To prevent death or personal injury due to electrical shock, unplug the unit at the wall outlet or turn off power at the fuse box or circuit breaker before servicing the unit.

INTAKE AIR FILTER

The intake air filter should be cleaned when it is dirty or at least once a month. The intake air filter is constructed of durable polypropylene.

The following procedure is used to remove the intake filter:

1. Remove the filter by lifting up on filter handle. See Figure A.
2. Remove intake air filter from front panel.
3. Clean filter with a vacuum or running water. If using water, please be sure that the filter is not excessively wet when replaced.
4. Reverse this procedure to reinstall the filter.

COMPRESSOR

The compressor is hermetically sealed, permanently lubricated and requires no additional oiling.

FRONT PANEL AND GRILLE

The front panel and grille can be cleaned with a mild soap or detergent. Do not use hydrocarbon-based cleaners (e.g. acetone, benzene, naphtha, gasoline, etc.) to clean the front panel or grille. Use care when cleaning the control area. Do not use an excessively wet cleaning cloth.

SCHEDULED MAINTENANCE

To achieve continuing top performance and high efficiency, a regular cleaning/inspection schedule must be established. Maintaining this schedule can be accomplished by either a local maintenance staff or an authorized servicer and must follow the instructions described in this manual.

- If the unit is operated in a dusty climate, dust may collect in the basepan and clog the condenser coil. It is advisable to remove the unit from the sleeve and thoroughly clean the basepan and condenser coil on a periodic basis.
- If the unit is installed ocean side or in a corrosive atmosphere, its life may be greatly reduced by the corrosive environment. Under these conditions, the unit should be removed from the sleeve and completely cleaned once a year. At that time any scratches or blisters on the painted surfaces should be sanded and repainted.

OUTDOOR COIL CLEANING

The coils on the outdoor side of the air conditioner should be checked regularly. For cleaning outside coil, remove the 6 screws that mount the condenser coil top cover to condenser shroud.



Normal Operating Sounds and Conditions

POPPING OR GURGLING SOUNDS

This sound is the refrigerant traveling through the lines. This is a normal sound which may be heard for a few seconds after the unit shuts off.

WATER TRICKLING SOUNDS

This sound is produced by the water as it is picked up and run over the coils. This procedure improves the efficiency of the unit and helps with water removal.

WATER DRIPPING

Water will collect in the basepan during high humidity days.

STARTING DELAY

You may notice a short delay in the startup if you try to restart the unit too soon after turning it off or if you adjust the thermostat right after the compressor has shut off. This delay protects the compressor.

Obtaining Service

In the unlikely event this unit requires repair or servicing beyond what is covered in this manual, contact an authorized service organization.

To obtain an authorized servicer, contact your sales representative or agency.

LIMITED WARRANTY

AE, AH, PBC, PBE, PBH

RAC Window Type H & C

This Amana® brand heating or air conditioning product is warranted by Goodman Company, L.P. ("Goodman") to be free from defects in materials and workmanship under normal use and maintenance as described below:

- The **SEALED SYSTEM COMPONENTS** (limited to the condenser and evaporator coils, compressor, reversing valves and connecting tubes), and refrigerant leaks, are warranted for a period of **FIVE YEARS**, and labor for **SEALED SYSTEM COMPONENT** replacements and refrigerant leak repairs is covered for a period of **FIVE YEARS**, except as provided below.
- All remaining parts are warranted for a period of **ONE YEAR**, and labor for all remaining part replacements is covered for a period of **ONE YEAR**, except as provided below.

The warranty period begins on the date of the original purchase. If that date cannot be verified, the warranty period begins three months from the month of manufacture (indicated by the first four digits of the serial number (yyymm)).

As its only responsibility, and your only remedy, Goodman will furnish a replacement part, without charge for the part, to replace any part that is found to be defective due to workmanship or materials under normal use and maintenance. Goodman will furnish labor for any defective part replacement, and to repair any refrigerant leak when the leak is caused by a defect in workmanship or materials under normal use and maintenance, only when service is performed by an authorized Amana® brand service. To locate an authorized Amana® brand service, contact Goodman Consumer Affairs at the number or address located at the bottom of this certificate.

For warranty credit the defective part must be returned to an Amana® heating and air conditioning products distributor by an authorized Amana® brand service. Any part replaced, or leak repaired, pursuant to this warranty is warranted only for the unexpired portion of the warranty term applying to the original part.

These warranties are in lieu of all other express warranties.

Model # & Serial # _____
Date of Purchase _____

ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

GOODMAN SHALL IN NO EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO EXTRA UTILITY EXPENSES OR DAMAGES TO PROPERTY. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

Goodman is not responsible for:

1. Damage or repairs required as a consequence of faulty installation or application.
2. Damage as a result of floods, fires, winds, lightning, accidents, corrosive atmosphere or other conditions beyond the control of Goodman.
3. Use of components or accessories not compatible with this unit.
4. Products installed outside the United States or Canada.
5. Normal maintenance as described in the installation and operating manual, such as cleaning of the coils, filter cleaning and/or replacement.
6. Parts not supplied or designated by Goodman.
7. Damage or repairs required as a result of any improper use, maintenance, operation or servicing.
8. Failure to start due to interruption and/or inadequate electrical service.
9. Changes in the appearance of the product that do not affect its performance.

This warranty gives you specific legal rights, and you may also have other rights that may vary from state to state.