

Owner's Information Manual

Heat Pump System



Turn to the Experts.™



Chas Roberts

AIR CONDITIONING & HEATING

(602) 943-3426

(520) 292-6858

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Important Facts You Should Know About Your Heat Pump

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- During the cooling season, the heat pump operates like a conventional system.
- Do Not turn the air conditioning system off. Part-time cooling is poor economy. If the system is left off during the morning, the home will soak up heat and be more difficult to cool in the afternoon. You can actually save money by letting the thermostat determine when cooling is needed.
- During the hot, dry seasons, we recommend keeping the air conditioner blower on continuously. The air conditioning unit cools more evenly when the blower switch is in the ON position. The blower provides refreshing air movement and even temperatures throughout the home. The blower also circulates air through the filter, which helps remove dust, lint and other pollutants more efficiently.
- Shades, drapes, shutters, or screens should be installed on windows that are exposed to direct sunlight. Also, plant a tree or put up a canopy to protect your windows from the direct sun.
- **During the heating season**, the heat pump will deliver warm air, but not hot air like other systems, and will operate for long periods of time. THIS IS NORMAL. *Remember*, air which is 80 degrees is warm air and will heat the house even though it may feel cool to a hand, which is 98 degrees.
- During the cold weather, frost will accumulate on the outdoor coil. This will cause the heat pump to go into a defrost cycle. During this cycle, the outdoor fan will stop running and you will hear the humming of the compressor and feel cool air coming from the registers. You may also notice steam or water runoff from the outdoor unit and hear a “whooshing” sound. *THIS IS A NORMAL FUNCTION DURING THE DEFROST CYCLE*. Do not turn off the unit, change the temperature, or adjust the thermostat during this cycle. The defrost cycle will last from 1-10 minutes depending on the amount of ice on the coil. Then the unit will return to the heating mode.
- Night setback during the heating season is NOT recommended. The heat pump is not designed to raise space temperatures quickly.
- **For cooling and heating** . . . Leave your thermostat alone. When you have found a temperature that you prefer, it is best to leave the thermostat at that setting.
- Clean or replace the filters frequently. Dirty filters will lower performance and efficiency of your cooling. The filters are usually located at the return grille or at the indoor section of your unit.

DELUXE THERMOSTATS

Carrier offers a number of deluxe thermostats, including programmable models, which can provide a number of benefits depending on the model:

- S Customized daily and/or weekly comfort schedules that you create to match your lifestyle
- S Enhanced energy efficiency and comfort
- S Enhanced comfort through humidity control
- S Enhanced maintenance reminders
- S Remote system operation

Ask your Carrier dealer for information on a deluxe thermostat option that matches your Heat Pump system.

OPERATION UNDER EXTREME CONDITIONS

Your Heat Pump will run as long as necessary to maintain the indoor temperature selected on your thermostat. On colder days, in the heat pump mode, the system will run for longer periods at a time than on moderate days. The same is true in the cooling mode. On extremely hot days, the system will run for longer periods at a time than on moderate days. Your system will also run for longer periods of time under the following cooling conditions:

- S Frequent opening of exterior doors
- S Operating laundry appliances
- S Taking hot showers
- S More than the usual number of people present in the home
- S More than the normal number of electric lights in use
- S Drapes or blinds are open on the sunny side of the home

INFINITY OPERATION

If you own an Infinity two-stage air conditioning system, you may notice your system runs for longer periods of time. Nearly 80% of the time it's running, it is operating in low-stage, and your indoor temperature will remain more consistent with fewer drafts, better humidity control, enhanced comfort and enhanced energy efficiency.

IMPORTANT FACTS ABOUT HEAT PUMP SYSTEMS

Heat pump systems have a few unique features and operations that you should be aware of:

- S During the heating cycle, air from your registers may seem cooler than you may expect. This is because your heat pump delivers a constant flow of air at around 90° to about 105° F, compared to sudden blasts of hot air provided by a typical furnace. This air may feel cool if it is slightly below your body temperature, however it is warm enough to keep your home comfortable.
- S Ice or frost may form on the outdoor coil during winter heating operation. Your heat pump will automatically melt the ice using its defrost cycle. During defrost, you may see steam or fog rising from the outdoor unit, which is normal.
- S Heat pumps installed in areas expecting snow are elevated with support feet.

GET THE MOST FROM YOUR HEAT PUMP SYSTEM

These simple suggestions can help you enjoy years of maximum comfort:

S Listen To Your System

Get to know the start-up and operational sounds your indoor and outdoor units make. Learn to recognize and identify unusual sounds that may signal the need for service.

S Keep Filter Clean

A clogged or improperly installed air filter on your indoor unit will increase operating costs and shorten the life of the unit. Plan to inspect the filter monthly and clean or replace it as needed.

S Do Not Block Floor, Wall or Ceiling Vents

When drapes, furniture, toys or other common household items block vents, the restricted airflow lessens the system's efficiency and life span.

S Do Not Cover or Block Outdoor Unit

The outdoor unit needs unrestricted airflow. Do not cover it or place items on or next to it. Do not allow grass clippings, leaves, or other debris to accumulate on the sides or top of the unit. And, maintain a 12" minimum clearance between the outdoor unit and tall grass, vines, shrubs, etc.

S Check Condensate Drain

Your Heat Pump removes humidity from your home during the cooling season. After a few minutes of operation, water should trickle from the condensate drain of the indoor coil. Check this occasionally to be sure the drain system is not clogged. Drainage will be limited if you live in a very dry environment.

S Do Not Operate Below 55° F On Cooling Mode

Your outdoor unit is not designed to operate when outdoor temperatures are lower than 55°F without modification. If operation below this temperature is required, consult your Carrier dealer.

A complete Infinity System with low ambient temperature cooling capability can operate down to 0°F outside temperature when properly set up.

S Do Not Operate Above 66° F on Heating Mode

Your outdoor unit is not designed to operate on heating mode when outdoor temperatures are higher than 66°. You can safely operate the system above 66° on emergency or auxiliary heat.

S Increase Heating Temperature 1–2 Degrees at a Time

During heating operation, increasing the thermostat setting more than 2 degrees at a time may cause the supplemental heat source to turn on. Needless use of supplemental heat can reduce potential energy savings.

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ROUTINE MAINTENANCE

Simple, routine maintenance as described below will enhance your Heat Pump system's ability to operate economically and dependably. Always remember the following safety precautions:



WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Disconnect all electrical power to the indoor air handler or furnace before removing access panels to perform any maintenance. Disconnect power to both the indoor and outdoor units (see Fig. 1.)

NOTE: There may be more than one electrical disconnect switch.



CAUTION

PERSONAL INJURY AND/OR PRODUCT AND PROPERTY DAMAGE HAZARD

Failure to follow this caution may result in personal injury or product and property damage.

Although special care has been taken to minimize sharp edges in the construction of your unit, be extremely careful when handling parts or reaching into the unit.

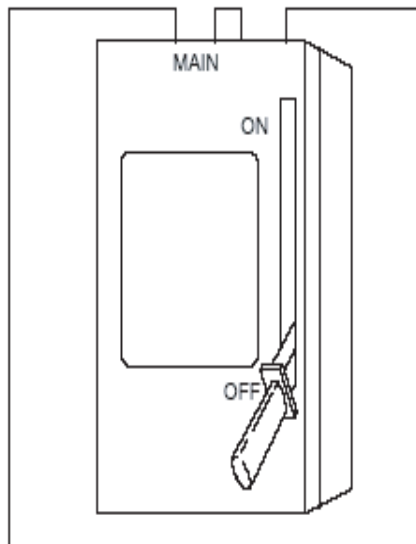


Fig. 4 - Main Electrical Disconnect

INDOOR UNIT (Furnace or Fan Coil)

S Check the Air Filter Monthly

There are no filters on your outdoor unit. However, a dirty air filter on the indoor unit can cause overheating, automatic system shutdown, and in extreme cases, component failure.

CHECK THE FILTER(S) MONTHLY AND CLEAN OR REPLACE AS NEEDED. For details on how to check, clean or replace your filter(s), refer to your furnace or fan coil owner's manual. OR, if you have an electronic air cleaner or a larger, "boxed" air filter, refer to the owners manual supplied with those products.

S Coil Cleaning

Your indoor coil is located in a sealed cabinet on your indoor unit and will require minimal cleaning with routine filter maintenance. Longer operating cycles and reduced energy efficiency may indicate the need for a coil cleaning by your Carrier dealer.

OUTDOOR UNIT

S Coil Cleaning

The most visible part of the outdoor unit is the large "coil" wrapped around the inner components of the Heat Pump. If grass clippings, leaves, shrubbery, and debris are kept away from the coil, minimal care is needed. If the coil becomes dirty, clean the coil surface with a vacuum cleaner using a soft brush attachment. Use an up and down motion being careful not to bend or damage the delicate, aluminum coil fins. If dirt is deep in the coil, contact your dealer for service.

S Base Pan Drainage

Periodically check for and remove debris that has settled around the base of your outdoor unit. This will ensure proper drainage of the base pan and eliminate standing water inside the outdoor unit.

S Level Installation

Your Carrier dealer will install the outdoor unit in a level position. If the support base settles or shifts and the unit is no longer level, be sure to re-level it promptly to assure proper drainage. If you notice water or ice collecting beneath the unit, arrange for it to be drained away from the unit.

SEA COAST COIL MAINTENANCE

Coastal locations often require additional maintenance of the outdoor unit due to highly corrosive airborne ocean salt. Although your new Carrier system is made of galvanized metal and is protected by top-grade paint, take the additional precaution of periodically washing all exposed surfaces and the outdoor coil approximately every 3 months. Consult your installing Carrier dealer for proper cleaning intervals and procedures for your geographic area or ask about a service contract for regularly scheduled professional cleaning and inspections.

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TROUBLESHOOTING

Before you request dealer service, check for these easily solved problems:

- S Check the indoor and outdoor disconnect switches (see Fig. 1.) Also check your main electrical panel circuit breakers or fuses.
- S Check for sufficient airflow. Air filter(s) should be reasonably clean and interior vents should be open and unobstructed.
- S Check thermostat settings. For cooling, your desired temperature setting should be LOWER than the displayed room temperature, and the System/Mode control should be on Cool or Auto. For heating, your temperature setting should be HIGHER than the displayed room temperature, and the System/Mode control is set to Heat or Auto.
- S Time delays – depending on the Carrier Heat Pump model you have, there may be delays in unit operation that are built-in to protect the equipment and your comfort. Don't be alarmed if you notice a time delay in operation. It may be a standard protection feature of your equipment. Check with your Carrier Dealer for more information on time delays.

If you need to contact your Carrier dealer for troubleshooting and/or repairs, be sure to have the model and serial numbers of your equipment available (there are spaces on the cover for you to write this information). With this information, your dealer may be able to offer helpful suggestions over the phone or save valuable time through knowledgeable preparation for the service call.

REGULAR DEALER MAINTENANCE

In addition to the routine maintenance that you perform, your home comfort system should be inspected regularly by a properly trained service technician. Many dealers offer this service at a reduced rate with a service contract. Some service contracts offer additional benefits such as parts discounts and no additional charge for "after hours" or emergency service.

Your annual system inspection should include:

- S Routine inspection of air filter(s) with replacement or cleaning as required
- S Inspection and cleaning of the blower wheel housing and motor
- S Inspection and, if required, cleaning of indoor and outdoor coils
- S Inspection of the indoor coil drain pan, as well as the primary and secondary drain lines. If the system has an auxiliary drain pan and line, they should be inspected at this time as well. Service should include cleaning if required.
- S Check all electrical wiring and connections
- S Check for secure physical connections of individual parts in each unit
- S Operational check of the Heat Pump system to determine actual working condition. Necessary repair and, or adjustment should be performed at this time.

TURN TO THE EXPERTS

When you turn to Carrier for your indoor comfort needs, you are turning to the experts. With more than a century of experience, Carrier has seen it all. Whether we're delivering superior comfort for homeowners nationwide, or solving cooling or refrigeration challenges around the world, Carrier has been coming through since 1902.

Your Carrier Heat Pump system, backed by the world's best name in comfort and supported with expert installation, maintenance and service by your local Carrier dealer should offer you and your family years of reliable, energy efficient cooling comfort.

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TO OBTAIN INFORMATION ON PARTS: Consult your installing dealer or classified section of your local telephone directory under the "Heating Equipment" or "Air Conditioning Contractors & Systems" heading for dealer listing by brand name. Have available the Model No., Series Letter, & Serial No. of your equipment to ensure correct replacement part.



AIR CONDITIONING & HEATING

The Most Comfortable Call You Can Make!

Chas Roberts Air Conditioning is proud to be a family owned and operated business, serving Arizona since 1942.

As your HVAC system Installer, we can provide you with services to meet all of your Heating and Air Conditioning needs after you have taken possession of your new home:

- Sales
- Service & Repair
- Extended Warranties
- Preventative Maintenance

We are available to speak with you Monday-Friday 7am to 8pm, Saturday 7am to 5pm, and Sunday 9am to 4pm with extended hours during the summer.

Please call, or visit our website, with all of your HVAC questions or concerns.

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CARRIER CORPORATION

Limited Warranty for Single Phase Base Series, Outdoor Cooling or Heating-Cooling Product of 60,000 BTUH or less Cooling Capacity

FOR WARRANTY SERVICE OR REPAIR FOLLOW THESE STEPS IN ORDER:

FIRST: Contact the installer or a Carrier dealer. You may find the installer's name on the equipment or in your Owner's Packet. You can also find a Carrier dealer online at www.carrier.com.

SECOND: For help finding a servicing dealer, contact: Carrier Corporation, Consumer Relations, P.O. Box 4808, Syracuse, New York 13221
Phone: 1-800-227-7437

PRODUCT REGISTRATION: You can register your product online at www.carrier.com or call 1-800-227-7437.

Model No. _____ Unit Serial No. _____

Date of Installation _____ Installed by _____

Name of Owner _____ Address of Installation _____

Carrier Corporation (hereinafter "Company") warrants this product against failure due to defect in material or workmanship under normal use and maintenance as follows. Except as otherwise stated, the warranty period is five (5) years from the date of installation. If a part fails due to defect within the warranty period, Company will provide only a new or remanufactured part, at Company's sole option, to replace the failed defective part without charge for the part. This limited warranty is subject to the provisions, conditions, limitations and exclusions listed below and on the reverse (if any) of this document.

LEGAL REMEDIES - The owner must notify the Company in writing, by certified or registered letter to Carrier Corporation, Warranty Claims, P.O. Box 4808, Syracuse, New York 13221, of any defect or complaint with the product, stating the defect or complaint and a specific request for repair, replacement, or other correction of the product under warranty, mailed at least thirty (30) days before pursuing any legal rights or remedies.

WARRANTY CONDITIONS:

1. Product must be installed properly and by a licensed or otherwise qualified HVAC technician.
2. The warranty applies only to products remaining in their original installation location.
3. Installation, use, care, and maintenance must be normal and in accordance with instructions contained in the Installation Instructions, Owner's Manual and Company's service information.
4. Defective parts must be returned to the distributor through a registered servicing dealer for credit.
5. Where a product is installed in a newly constructed home, the date of installation is the date the homeowner purchased the home from the builder.
6. If the date of original installation cannot be verified, then the warranty period begins ninety (90) days from the date of product manufacture (as indicated by the model and serial number).

LIMITATIONS OF WARRANTIES: ALL IMPLIED WARRANTIES AND/OR CONDITIONS (INCLUDING IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE) ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. SOME STATES OR PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS. SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESS WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

THIS WARRANTY DOES NOT COVER:

1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts, or replacement parts, or new units.
2. Any product purchased over the Internet.
3. Normal maintenance as outlined in the installation and servicing instructions or Owner's Manual, including filter cleaning and/or replacement and lubrication.
4. Failure, damage or repairs due to faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
5. Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
6. Failure or damage due to floods, winds, fires, lightning, accidents, corrosive environments or other conditions beyond the control of Company.
7. Parts not supplied or designated by Company, or damages resulting from their use.
8. Products installed outside the U.S.A. or its territories and Canada.
9. Electricity or fuel costs, or increases in electricity or fuel costs from any reason whatsoever, including additional or unusual use of supplemental electric heat.
10. Any cost to replace, refill or dispose of refrigerant, including the cost of refrigerant.
11. ANY SPECIAL, INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states or provinces do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.