

FOR THE RECORD

Please record the model and serial number(s) of your new equipment in the space provided below. This information, along with other ready-reference facts will be necessary should you ever require information, service or warranty.

	INDOOR	OUTDOOR
Carrier Model No:		
Serial No:		
Purchaser Name:		
Address:		
Installation Date:		
Installer Name:		
Installer Address:		
Contact Nos:		
Compliance Certificate No:		
Electrical Safety Certificate No:		

You will also need to provide Proof of Purchase to claim Service under Warranty. If your Carrier Home Comfort System was part of your New Home Package, a Certificate of Occupancy will suffice.



**Turn to the Experts
FOR CARRIER SERVICE OR WARRANTY**

TELEPHONE 1300 652 349

**A GUIDE TO OPERATING AND MAINTAINING YOUR
CARRIER DUCTED AIRCONDITIONING SYSTEM**

INTRODUCTION

Welcome to efficient, year-round comfort.

Congratulations on your excellent choice and sound investment in a Carrier Ducted Home Comfort System.

Your new Carrier Heat Pump Airconditioning System represents both the latest in engineering developments and the culmination of many years of experience as one of the most reputable manufacturers of home comfort systems.

Your new unit is among the most reliable home comfort products available today. To assure its dependability, spend just a few minutes with this booklet now. Learn about the operation of your heat pump and the small amount of maintenance it takes to keep it operating at its peak efficiency.

With minimal care, your heat pump will provide you and your family with satisfying home comfort - both now and for many years to come.

IMPORTANT FACTS

To better protect your investment and to eliminate unnecessary service calls, please familiarise yourself with the following facts:

WARNING

Improper installation, adjustment, alteration, service, maintenance, or use, can cause explosion, fire, electric shock, or other conditions, which may cause personal injury or property damage. Refer to this document or and or other accompanying manuals. For assistance or additional information consult a Carrier branch, qualified installer, service agency, distributor. The qualified installer or agency must use only factory authorised components or accessories if and when servicing this product.

Your Heat Pump System should never be operated without a clean filter properly installed. Plan to inspect the filter periodically. A clogged filter will increase the operating costs and shorten the life of the unit. Supply-air and return-air registers (grilles) should not be blocked or obstructed. Drapes, furniture and toys are some items commonly found obstructing grilles. Restricted airflow lessens the unit's efficiency and life span.

Outdoor (condenser / compressor) units must have unrestricted airflow. Do not cover the unit, lean any thing against it, or stand upon it. Do not allow grass clippings, leaves, or other debris to accumulate around or on top of the unit. Maintain a minimum of 300mm clearance between the outdoor unit and tall grass, shrubs, vines etc.

Your multi-purpose thermostat is the control centre for your Heat Pump System. You should refer to the manual that accompanies your thermostat to familiarise yourself with its specific operation, as the information following is of a general nature.

Attempting to control the system by other means - for instance, switching the electrical supply power ON and OFF - may cause damage to the unit.

Thermostat 'jiggling' causes rapid-cycling, which is potentially dangerous to the compressor and may blow the protective fuse or circuit breaker device at the mains power supply. Do not adjust the temperature on the thermostat for any reason for at least five (5) minutes after the compressor has shut off.

You may find that you can maintain greater personal comfort by running the FAN continuously. "Air Pockets" can form due to the structure of the building,

- Inspection, and if required, cleaning of indoor and outdoor coils
- Inspection of all electrical wiring and fittings
- Inspection for secure physical connections of individual components within units
- Checking refrigeration circuit
- Checking condensate drains and ensure they are unobstructed
- Operational check of the system to determine actual working condition. Necessary repair and/or adjustment should be performed at this time

NON-CARRIER FIELD SUPPLIED ACCESSORIES

Your home comfort system may include field-supplied accessories that do not form part of this regular maintenance cycle. These may include, ductwork, fittings, grilles, zone motors, auxiliary heaters, third party controls (including thermostats) and other non-Carrier supplied items.

These items may also require attention in accordance with the Original Equipment Manufacturer's (OEM) recommendations. Your installer can provide details in this regard, and should be consulted for any warranty or service matters for these items. Whilst they are an integral part of your home comfort system, these non-Carrier items are not covered by your Carrier Homeowners Equipment Warranty.

It is recommended that only Carrier Authorised Controls (Thermostats) be used on Carrier units. Third party controls and zoning systems may interfere with the correct operation of your Carrier Heat Pump system, and any consequential damages to Carrier equipment as a result of such incorrect operation, will not be covered by warranty.

WARRANTY

Please refer to your Carrier Warranty certificate for the full Terms and Conditions of Warranty for your Carrier Ducted Heat Pump unit.

Carrier Warranty does not cover:

- Non-Carrier field supplied equipment and accessories
- Maintenance as outlined in this document and more specifically in the Installation, Service and Start-Up Instructions for the specific unit
- Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorised repairs, improper operation or lack of proper maintenance
- Failure to start due to voltage conditions, blown fuses or circuit breakers or other faults due to inadequacy or interruption of power supplies
- Instructing customer on the operation of the system and or controls
- Fitness for purpose and overall system design, airflow or balancing
- Making the product accessible and or providing a safe working environment for access, service, maintenance or repairs

Purchaser's Responsibilities:

- Operate and maintain the unit in accordance with operating instructions
- Regularly clean filters and replace as necessary
- Replace batteries or other consumables as required
- Ensure condensate drains unobstructed
- Ensure Outdoor units have unrestricted airflow

placement of registers etc. These Air Pockets may be too cool or warm for your liking. Continuous FAN operation minimise any temperature differences. Also, systems equipped with electronic air cleaners or humidifiers offer the added benefit of having the air continuously cleaned year round, and humidified during the winter season.

* Your Heat Pump System will remove humidity from your home during the cooling season. This (primary) condensate is connected to your drainage system, but an overflow drain is also installed. If water is observed in the overflow drain, - it may be clogged, and your installer should be contacted for inspection.

OPERATING YOUR HEAT PUMP

For COOLING ONLY systems, please disregard all references to HEATING functions.

The operation of your Heat Pump Systems is controlled by the indoor Thermostat. You simply adjust the thermostat and it maintains the indoor temperature at the level you select, subject to it being within the design conditions of the system. Most Thermostats for Heat Pumps include the Temperature Selector, Fan Switch, and Mode or System Switch. Emergency or Auxiliary Heat is sometimes provided with the Mode or System Switch.

The temperature control selector may be a dial or button on the thermostat that allows you to set the temperature you wish to maintain for your personal comfort. Some thermostats provide two setting options, one for the heating cycle and one for the cooling cycle. Typical settings are 24°C and 20°C respectively.

The Fan switch offer two options for controlling the 'blower': 'AUTO' and 'ON'. When set to AUTO, the fan will run only when the heat pump is operating, i.e. actually heating or cooling. When the Fan switch is set to ON, the fan runs continuously.

Typically, the Mode or System switch offers the following selections: OFF, COOL, HEAT, and possibly AUTO. Some also have AUX (Auxiliary Heat) or EMERG (Emergency Heat) if fitted – refer to you Installer for details. The Heat Pump will not operate in the OFF position. When COOL is selected, the Heat Pump will operate in cooling mode when the indoor temperature rises above the level you wish to maintain. In HEAT mode, the Heat Pump will provide warmth whenever the indoor temperature is below the level you have selected.

The AUTO mode found on some thermostats provides for automatic changeover between heating and cooling cycles. In this mode, the cooling cycle is activated when the indoor temperature is above the cooling set point, or the heating cycle will be activated when the indoor temperature is below the heating set point. When the temperature is between the two set points, the Heat Pump will remain off.

COOLING CYCLE

When operating in the cooling cycle, your Heat Pump will run until the indoor temperature is lowered to the level you have selected (within design conditions). On extremely hot days, your heat pump will run for longer periods at a time and have shorter 'off' periods than on moderated days. The following typical conditions add extra heat and/or humidity to your home causing your Heat Pump to work longer to maintain comfortable conditions:

- Entrance (external) doors are frequently opened and closed
- Operating laundry appliances or running showers
- More than the usual lights or electrical appliances operating
- More than the usual number of people
- Window furnishings open on sunny side of home
- System operating at or outside the original system design conditions as specified by the Installer

HEATING CYCLE

In HEAT mode, the Heat Pump will provide warmth until the room temperature is raised to the level you have selected. Of course, the unit will operate for longer periods to maintain a comfortable environment on colder days and nights than on moderate ones.

Defrost Cycle: When Heat Pumps provide heating to your home and the outdoor temperature drops below 7.2°C, moisture may begin to freeze on the surface of the outdoor coil. If allowed to build up, this ice would impede the airflow across the coil and reduce the amount of heat absorbed from the outside air. So, to maintain energy efficient operation, your Carrier Heat Pump has an automatic defrost cycle.

Depending on which model you have, the on-board defrost controls will automatically start when there is sufficient ice to interfere with normal heating operation. During defrost, the indoor Fan may or may not be running (model and Installer setup dependent). After the ice is melted, or after a maximum of 10 minutes in defrost mode, the unit will automatically resume normal heating operation.

Do not be alarmed if steam or fog appears at the Outdoor unit during the defrost cycle. Water vapour from the melting ice may condense into a mist in the cold outdoor air.

Auxiliary or Emergency Heat: Where installed, this setting on the thermostat refers to any supplementary heating appliance they may be included in your home comfort system. Operation of this heat source may be required if heating demands exceed the capacity of the Heat Pump, or if the Heat Pump malfunctions.

ZONED SYSTEMS

Some home comfort systems are designed to operate on a zoned basis only – i.e. they are not designed to heat and or cool the entire home or space at one time. Generally, a zoned systems will be designed by your installer for your specific requirements. Your particular zoning configuration and the basis of design should be specified and detailed by your installer. With zoned systems, always observe the following:

- The Return Air grille(s) are generally in the 'common zone', and need to be part of the conditioned space at all times
- Close off all doors to areas that are not being conditioned – i.e. effectively isolate unconditioned spaces
- Set your zoning configuration with your zone controls before starting your Heat Pump system
- Do not attempt to shut down more zones than the minimum as specified by your installer, as this may lead to system shut down
- Do not attempt to heat or cool more zones than the maximum specified by your installer as this will prevent the system from being able to maintain design conditions

NOTE: The type of zoned Heat Pump system you have will have been specified by your installer.

It should include information on the total number of zones, the minimum and maximum number recommended to operate at one time to maintain design conditions, and the actual design conditions (Indoor Temperature Control settings at specified Outdoor Ambient conditions for both Heating and Cooling)

CARRIER COMFORT ZONE SYSTEM

Please refer to your Carrier Comfort Zone Owners Manual for details of your personalised home comfort system. For information on Carrier Comfort Zone, please consult your Authorised Comfort Zone Installer, or your local Carrier office.

PERFORMING ROUTINE MAINTENANCE

With proper maintenance and care, your Heat Pump will operate economically and dependably. Maintenance can be accomplished easily by referring to the following general directions, and any specific requirements for your particular model system. However, before performing maintenance, consider these important safety precautions:

- DISCONNECT ALL ELECTRICAL POWER TO HEAT PUMP BEFORE REMOVING ACCESS PANELS TO PERFORM SERVICE OR MAINTENANCE – NOTE: THERE MAY BE MORE THAN ONE ELECTRICAL ISOLATING SWITCH
- ALTHOUGH SPECIAL CARE HAS BEEN TAKEN TO MINIMISE SHARP EDGES IN THE CONSTRUCTION OF YOUR UNIT, BE EXTREMELY CAREFUL WHEN HANDLING PARTS OR REACHING INTO THE UNIT

CHECKING THE AIR FILTER

A dirty air filter will cause excessive strain on the compressor and fan blower motor. This can cause the compressor to overheat and automatically shut down. In the extreme, the components will fail and will need to be replaced. To avoid inefficient or failed operation of your unit, CHECK THE FILTER AT LEAST EVERY 3 TO 4 WEEKS. Replace filters(s) when necessary, or clean them if they are the reusable type. Disposable filters should be replaced by similar, new filters of the same grade and dimensions.

Reusable (permanent) type filters should be washed in a solution of cold to tepid water and very mild detergent, then rinsed and thoroughly dried. THE FILTER MUST BE COMPLETELY DRY BEFORE BEING REPLACED. To avoid prolonged shutdown of your system while a filter is being cleaned, you may wish to have an extra filter on hand. This would allow you to rotate between the two with minimal downtime for your comfort system. Extra filters are available from your Installer or a Carrier Spare Parts outlets.

Should you have any questions about the removal and/or cleaning of you filter(s), contact your Installer for assistance.

If grass clippings, leaves, shrubbery and debris are kept away from the outdoor unit, minimal care should be sufficient to keep the system functioning properly. However, if the outdoor coil becomes dirty, use a soft brush or vacuum and soft brush attachment to clean the exterior surface. If dirt is trapped deep within the coil, contact your Installer or Carrier for service.

UNIT SUPPORT

Split Ducted Systems: The indoor Fan Coil Unit (FCU) should be located in a position and in such a manner as specified in the unit's Installation, Start-Up and Service Instructions. The indoor unit should be maintained at a position that ensures condensate drainage from the unit. In an attic space, ideally the unit will be easily and safely accessible from the ceiling access panel, have a suitable catwalk and platform, and if necessary a service light.

The outdoor Condensing Unit (CDU) requires adequate support to ensure it is level. Heat Pump CDUs generate condensate water in the heating mode; depending on local codes this may need to be discharged in a prescribed manner.

REGULAR MAINTENANCE

In addition to the routine maintenance that you perform, your home comfort system should be inspected regularly by a properly trained service technician in accordance with industry and regulatory requirements as may be applicable. The inspection, preferably each year, should include:

- Inspection and cleaning of blower wheel, housing and motor – lubrication if necessary