


# VARIABLE SPEED - SPLIT SYSTEM - HEAT PUMP

## HOME OWNER'S INFORMATION

Our products are designed, tested and built in accordance with US Department of Energy standardized procedures and other standards; however, actual operating results and efficiencies may vary based on manufacturing and supplier tolerances, equipment configuration, operating conditions and installation practices.

### A Note about Safety

Anytime you see this symbol  in manuals, instructions, or on the unit, be aware of the potential for injury. There are three precaution levels:

**DANGER** identifies the most serious hazards which will result in severe personal injury or death.

**WARNING** signifies hazards that could cause personal injury or death.

**CAUTION** is used to identify unsafe practices which would result in minor personal injury or product and property damage.

**NOTE** is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

### **WARNING**

#### **PERSONAL INJURY, DEATH AND / OR PROPERTY DAMAGE HAZARD**

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

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or service agency must use factory-authorized kits or accessories when modifying this product.

Read and follow all instructions and warnings, including labels shipped with or attached to unit before operating your new heat pump.

### About your Air Conditioning System

Your new cooling system is called a "split system." It has an outdoor unit and an indoor unit connected to each other with copper refrigerant lines. Each unit has a rating plate with the model and serial numbers which you will need to know when calling an authorized dealer about your system. Take a few moments now to locate those numbers and record them on your warranty included in this booklet.

### Using your New System

Your new heat pump system is controlled by a wall-mounted Ion™ Control or thermostat installed inside your home. See the Ion™ Control or thermostat Homeowner Guide for more details on system operation.

### Variable Speed Operation

You may notice your system runs for longer periods of time. This system is designed to meet the cooling needs of the home at a wide range of conditions. Your indoor temperature will remain more consistent with fewer drafts, better humidity control, enhanced comfort and energy efficiency.

### Heating and Cooling your Home

For heating and cooling operation, make sure the System or Mode control is set to the appropriate mode. Adjust the Temperature control to your desired setting. Use the Fan control to select Automatic (turns ON or OFF as heating or cooling is needed) or ON (runs continuously). Your home comfort system may also include a supplementary heating source that will automatically turn on as needed. You may also select this heat source manually.

### Operation under Extreme Conditions

Your heat pump will run as long as necessary to maintain the indoor temperature selected on your Ion™ Control or thermostat. On extremely hot days, your heat pump will run for longer periods at a time. Your system will also run for longer periods under these conditions:

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

### Important Heat Pump Facts

- When heating, your heat pump delivers a constant flow of air around 95°F (35°C) to about 105°F (41°C), compared to sudden blasts of hot air provided by a typical furnace.
- Ice or frost may form on the outdoor coil during winter. Your unit will automatically melt the ice using a defrost cycle, during which you may see steam or fog rising from the unit. At the beginning and end of the defrost cycle, you may hear a "whoosh" sound.
- Heat pumps in areas expecting snow are elevated with support feet.

### Sound

Your new heat pump is different from most cooling systems. This is a variable speed system, designed to operate at different speeds depending on conditions. You may notice the sound coming from the outdoor unit changing from time to time. The higher speed produces a higher sound. This change of speed allows the system to operate more efficiently and maintain comfortable conditions inside the home. You may also hear a slight hissing sound. This is the sound of system pressure equalization which is required to enable soft and easy starting of the next cycle. These sounds are normal and do not represent a problem with your system.

### Routine Maintenance

Simple, routine maintenance as described below will enhance your heat pump system's ability to operate economically and dependably. Always follow safety precautions:

### **WARNING**

#### **ELECTRICAL SHOCK HAZARD**

Failure to follow this warning could result in personal injury or death. Before installing, modifying, or servicing the system, the main electrical disconnect switch must be in the OFF position. There may be more than one disconnect switch. Lock out and tag the switch(es) with a suitable warning label.

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

### **CAUTION**

#### **CUT HAZARD**

Failure to follow this caution may result in personal injury. Although special care has been taken to minimize sharp edges on your unit, be extremely careful and wear appropriate protective clothing and gloves when handling parts or reaching into the unit.

**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.

**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.

**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 clippings, leaves, or other debris to accumulate on the sides or top of the unit. Keep a 12” (305 mm) minimum clearance between the outdoor unit and tall grass, shrubs, etc.

**Check Condensate Drain** - Your heat pump removes humidity from your home when cooling. After a few minutes, 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.

**Do Not Operate Below Minimum Operating Temps in Cooling Mode**  
Your outdoor unit is not designed to operate below these minimum temperatures:

- —With Ion™ Control System: 40°F (4°C)
- —With Thermostat Control: 55°F (13°C)

**Do Not Operate Above 66°F (19°C) in Heating Mode** - Your outdoor unit is not designed to operate in heating mode when outdoor temperatures are above 66°F (19°C). You can safely operate the system above 66°F (19°C) on emergency or auxiliary heat.

**Minimum Heating Temperature** - The unit is not designed to operate at extreme cold outdoor temperatures. When the outdoor temperature is below 10°F (-12°C) the unit control may automatically shut the heat pump off and energize auxiliary heat.

**Base Pan Drainage** - Periodically check for and remove debris around the base of your outdoor unit to ensure proper drainage of the base pan.

**Level Installation** - Your dealer will install the outdoor unit in a level position. If the support base settles and the unit is no longer level, 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 require additional maintenance of the outdoor unit due to highly corrosive airborne ocean salt. Although your new system is made of galvanized metal and is protected by top-grade paint, we suggest washing all exposed surfaces and the outdoor coil about every 3 months. Consult your dealer for cleaning intervals and procedures or ask about a service contract for scheduled professional cleanings.

**Troubleshooting**

Before you request dealer service:

- Check the indoor and outdoor disconnect switches. Also check your main electrical panel circuit breakers or fuses.
- Turn circuit breaker off for at least 2 minutes, and turn back on.
- Check for sufficient airflow. Air filter(s) should be reasonably clean and interior vents should be open and unobstructed.
- Check Ion™ Control or thermostat settings. For cooling, your desired temperature setting should be LOWER than the displayed room temperature, and the System/Mode control on COOL or AUTO.
- Time delays - depending on the heat pump you have, there may be delays in unit operation that are built-in to protect the equipment and your comfort. Do not be alarmed if you notice a time delay in operation. It may be a standard protection feature of your equipment. Check with your dealer for more information on time delays.

If you need to contact your 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).

**Regular Dealer Maintenance**

In addition to the routine maintenance you perform, your 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 may offer additional discounts and free services.

**Table 1 – Maintenance Checklist**

Monthly maintenance items and outdoor unit rinsing may be performed by the consumer. All other maintenance items and all service work must be performed by a qualified service technician. Read all Warning labels.

Description of Maintenance	Recommended Interval	
	Monthly	Annual
<b>Outdoor unit specific:</b>		
Clear away debris and vegetation near unit.	X	
Inspect cabinet for damage. Replace components that are damaged or severely rusted.		X
Inspect electrical disconnect for proper function. Repair or replace as necessary.		X
Inspect electrical wiring and connections. Tighten loose connections. Inspect and perform functional test of equipment as needed to ensure proper function. Repair or replace damaged or overheated components and wiring.		X
Check refrigerant system subcooling and/or superheat (system dependent).		X
Inspect inside of unit. Clean if debris is present.		X
Inspect condenser coil. Clean if dust, dirt, or debris is present. Rinse unit with fresh water (see Note 2).		X
Inspect motor and fan for damage. Make sure fan spins freely.		X
<b>Indoor specific: (for fossil fuel furnaces and accessories, refer to unit specific literature)</b>		
Inspect, clean, or replace air filter if dirty.	X	
Inspect and clean blower assembly (includes blower housing, wheel, and motor).		X
Inspect internal and external of cabinet. Clean as needed.		X
Inspect electrical disconnect for proper function. Repair or replace as necessary.		X
Inspect electrical components, wiring, and connections. Tighten loose connections. Repair or replace damaged components and wiring.		X
Inspect evaporator coil. Clean if dust, dirt, or debris is present (see Note 2).		X
Clean condensate pan, trap, and drain lines (more frequent maintenance may be required in humid climates - consult your local HVAC dealer).		X
Inspect airflow system (ductwork). Check for leaks and repair as needed.		X

Notes: 1.) The above list may not include all maintenance items. Inspection intervals may vary depending on climate and operating hours. Consult your HVAC dealer about a service contract for seasonal inspections. 2.) Do not use harsh chemicals or high pressure water on coils. More frequent rinsing is required for units near a sea coast.