

# USER'S INFORMATION MANUAL

## SINGLE PACKAGE

### HEAT PUMP/ELECTRIC HEAT

#### MODELS: PHE\*



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### CONTACT INFORMATION

- Go to website at [www.york.com](http://www.york.com), then click on "Contact Us" and follow the instructions.
- Contact us by mail:

Johnson Controls Unitary Products  
 Consumer Relations  
 5005 York Drive  
 Norman, OK 73069

The manufacturer recommends that the user read this manual and keep the manual for future reference.

### SAFETY

#### **⚠ WARNING**

*This product must be installed and serviced by a qualified installer or service agency. Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.*

### HOW YOUR SYSTEM WORKS

#### COOLING CYCLE

If your hand is wet and you blow on it, it feels cool because some of the moisture is evaporating and becoming a vapor. This process requires heat. The heat is being taken from your hand, so your hand feels cool.

That's what happens with an air conditioner. During the cooling cycle, your system will remove heat and humidity from your home and will transfer this heat to the outdoor air.

#### HEATING CYCLE (HEAT PUMP)

During the heating cycle, your system will remove heat and humidity from the outdoor air and will transfer this heat to your home. This is possible because even 0°F outdoor air contains a great deal of heat. Remember that your heat pump doesn't generate much heat, it merely transfers it from one place to another.

#### HEATING CYCLE (ELECTRIC HEAT)

Your unit may be equipped with an optional electric heating element. This heating element will provide additional heat to your home during times when the outside temperature is very low and there is not enough heat in the outside air to allow the heat pump to keep your home at the desired temperature.

### System Operation

Your thermostat puts full control of the comfort level in your home at your fingertips. DO NOT switch your thermostat rapidly ON and OFF or between HEAT to COOL. This could damage your equipment. Always allow at least 5 minutes between changes.

### SETTING THE THERMOSTAT

#### **⚠ CAUTION**

*The main power to the system must be kept ON at all times to prevent damage to the outdoor unit compressor. If necessary, the thermostat control switch should be used to turn the system OFF. Should the main power be disconnected or interrupted for 8 hours or longer, DO NOT attempt to start the system for 8 hours after the power has been restored to the outdoor unit. If heat is needed during this 8 hour period, use emergency heat.*

### THERMOSTATS

#### YOUR KEY TO COMFORT

Although thermostats may vary widely in appearance, they are all designed to perform the same basic function: to control the operation of your air conditioning or heat pump system. Regardless of size or shape, each thermostat will feature a temperature indicator; a dial, arm, or push button for selection of the desired temperature; a fan switch to choose the indoor fan operation; and a comfort switch for you to select the system mode of operation.

Only approved thermostats have been tested and are fully compatible with this equipment. *Please be aware that many different thermostats operate on batteries or "power stealing" principles. These types of thermostats can not be supported as trouble free when used with this product.*

A complete operating instruction is provided by the manufacturer for each thermostat. Familiarize yourself with its proper operation to obtain the maximum comfort with minimum energy consumption.

## COOLING AND HEATING (HEAT PUMP)

You may have either a manual change-over type, or a programmable electronic type thermostat with 2-stages of cooling and 2-stages of heat.

### MANUAL CHANGE-OVER

Manual change-over simply means that the comfort switch must be manually positioned every time you wish to switch from the cooling to heating or heating to cooling modes of operation.

### PROGRAMMABLE ELECTRONIC THERMOSTATS

The computerized electronic thermostat is actually a sophisticated electronic version of a manual change-over type. This thermostat includes features which allow "set-back" temperature variations for periods of sleep, or while you are away during the day, and means energy savings for you. The thermostat also features a digital clock.

### FAN OPERATION SELECTION

A multi-position fan switch allows you to choose the type of fan operation of the indoor fan.

#### AUTO

With the thermostat fan switch set to "AUTO", the fan will run intermittently as required for either heating or cooling. This position will provide the lowest operating cost. If you purchased one of our thermostats, they may have an Intelligent fan mode which continually circulates the air during occupied modes or when you are at home, and can cycle the fan during unoccupied mode or during the night while you sleep to further conserve energy.

#### ON

**CONTINUOUS FAN OPERATION:** With the thermostat fan switch set to "ON", the indoor fan will not shut off. However, the cooling (AC) or heating (heat pump) systems will still operate as required by room temperatures. This provides continuous air filtering and more even temperature distribution to all conditioned spaces.

**FAN ONLY OPERATION:** On moderate days, usually during spring and fall, when neither heating nor cooling is required, you may want to run only the fan to ventilate, circulate and filter the air in your home or building. Set the comfort control switch to "OFF" and the fan switch to "ON". Be sure to return the switches to their original positions for normal operation.

## START-UP INSTRUCTIONS FOR AC OR HP

The maximum and minimum conditions for operation must be observed to assure a system that will give maximum performance with minimum service.

**TABLE 1:** Operating Limitations

Packaged Equipment Series	Air Temperature at Outdoor Coil, °F				Air Temperature at Indoor Coil, °F			
	Heating Mode		Cooling Mode		Heating Mode		Cooling Mode	
	Min. DB	Max. DB	Min. DB	Max. DB	Min. DB	Max. DB	Min. WB	Max. WB
14 SEER HP	-10 <sup>1</sup>	75	55	125	50	80	57	72
16 SEER HP	-10 <sup>1</sup>	75	55	125	50	80	57	72
14 SEER AC <sup>2</sup>	—	—	55	125	—	—	57	72
16 SEER AC <sup>2</sup>	—	—	55	125	—	—	57	72

1. Operation below this temperature is permissible for a short period of time.
2. Optional low ambient kit provides accessory hardware to convert unit to operate in cooling down to 0°F.

The comfort control switch is assumed to be in the "OFF" position. If the main power supply to the packaged equipment is off, turn the appropriate disconnects to the "ON" position. Place the system into operation as follows.

1. Set temperature adjustment to the desired temperature on the thermostat.

**COOLING** - The higher the setting, the lower the amount of energy consumed. Federal Guidelines recommend a setting of 78 °F.

**HEATING** - The lower the setting, the lower the amount of energy consumed. Federal guidelines recommend a setting of 65 °F or lower.

## NOTICE

*If your cooling and heating temperature adjustments are separate, be sure to set both.*

2. After considering the "Fan Operation Selection" above, select and set the fan operation mode desired.
3. Move the comfort control switch to the desired mode of operation (Cooling or Heating) found on the thermostat.

### POWER FAILURE

When accidents, wind storms, etc. disrupt electrical power supply to your house, switch thermostat to "OFF" position.

## SYSTEM OPERATION

### MANUAL CHANGE-OVER THERMOSTAT

**COOLING YOUR HOME:** With the comfort control switch in the "COOL" position, the system will operate as follows: When the indoor temperature rises above the level indicated by the temperature adjustment setting, the system will start. The outdoor unit will operate and the indoor fan will circulate the cooled, filtered air. When the room temperature is lowered to the setting selected, the system will shut off.

**HEATING YOUR HOME:** If the system heat pump and the comfort control switch both have a call for "HEAT," power is supplied to the compressor and the outdoor fan motor. When the indoor temperature drops below the level indicated by the temperature adjustment setting, the system starts up. The heating system operates and the indoor fan circulates the filtered air. When the room temperature is at the setting selected, the system shuts off. Whether heating or cooling, the fan continues to operate if the fan switch is set in the "ON" position. The "AUTO" setting on the fan switch allows the fan to shut off when the system shuts off. If the heat pump cannot meet the heating demand and the unit is equipped with supplementary electric heat, the thermostat sends a signal through the defrost control to energize the first stage of electric heat.

### ELECTRONIC THERMOSTAT

The computerized electronic thermostat, when programmed, will function automatically to operate the system as follows: When the indoor temperature rises above the higher (COOL) setting, the outdoor unit will operate and the indoor fan will circulate the cooled, filtered air. When the room temperature is lowered to the selected level, the system will shut off. The indoor fan will either shut off or run continuously, depending upon your choice of fan switch setting. When the indoor temperature drops below the lower (HEAT) setting, the heating system will operate, and the indoor fan will circulate the heated, filtered air. When the indoor temperature rises to the selected setting, the system will shut off. The indoor fan will either shut off or run continuously, depending upon your choice of fan switch setting.

## TO MAXIMIZE OPERATING EFFICIENCY

### HEATING CONSERVATION

For the most efficient operation, keep storm windows and doors closed all year long. They not only help insulate against heat and cold, but they also keep out dirt, pollen, and noise.

Closing drapes at night, keeping fireplace dampers closed when not in use, and running exhaust fans only when necessary will help you to retain the air you have already paid to heat.

Keep lamps, televisions, or other heat producing sources away from the thermostat. The thermostat will sense this extra heat and will not be able to maintain the inside temperature to the desired comfort level.

### COOLING CONSERVATION

To comfortably cool your home, your air conditioner must remove both heat and humidity. Don't turn your system off even though you will be away all day. On a hot day, your system may have to operate between 8 to 12 hours to reduce the temperature in your home to a normal comfort level.

Keep windows closed after sundown. While the outdoor temperature at night may be lower than indoors, the air is generally loaded with moisture which is soaked up by furniture, carpets, and fabrics. This moisture must be removed when you restart your system.

The hotter the outside temperature, the greater the load on your system. Therefore do not be alarmed when your system continues to run after the sun has set on a hot day. Heat is stored in your outside walls during the day and will continue to flow into your home for several hours after sunset.

Use your kitchen exhaust fan when cooking. One surface burner on "HIGH" requires one ton of cooling. Turn on your bathroom exhaust fan while showering to remove humidity. However, exhaust fans should not be run excessively. It would decrease efficiency by removing conditioned air.

You can also help your system in the summer by closing drapes or blinds and by lowering awnings on windows that get direct sunlight.

### CARE OF SYSTEM

It is strongly recommended that regular periodic preventative maintenance be performed on this equipment. The person most familiar with the equipment in your H.V.A.C. system is a dealer. The dealer can ensure your maintenance program meets the conditions of the Warranty, maximize the efficiency of the equipment, and service your unit within the federally mandated guidelines with regard to unlawful discharge of refrigerants into the atmosphere.

### COIL CARE

Keep the outdoor unit free of foliage, grass clippings, leaves, paper, and any other material which could restrict the proper air flow in and out of the unit. The coil may be vacuumed to remove any debris from between the fins. If the coil becomes excessively dirty, turn the main disconnect switch to "Off" and wash the coil with your garden hose. Avoid getting water into the fan motor and control box. Flush dirt from base pan after cleaning the coil.

## NOTICE

*DO NOT use a pressure washer as coil fin damage will occur.*

## SERVICE CALLS

There are a few instances where the user can avoid unnecessary service calls. If unit stops functioning properly check the following items before calling your servicing dealer:

1. Indoor section for dirty filter.
2. Outdoor section for leaf or debris blockage. Eliminate problem, turn off the thermostat for 10 seconds and attempt start. Wait 5 minutes. If system does not start, call your servicing dealer.

## ⚠ WARNING

*Your system contains environmentally friendly refrigerant R-410A, which operates at high pressures. You may be in danger if you try to make an attempt to repair your unit. Please contact your local dealer.*

## FILTER CARE

Inspect the air filter(s) at least once a month. If they are dirty, wash reusable filters with a mild detergent per manufacturer's recommendations. Replace disposable filters with new filters. Install the clean filters with "air flow" arrow in the same direction as the air flow in your duct. Filters should be clean to assure maximum efficiency and adequate air circulation.

## CLEARANCES

The minimum clearances shown below must be maintained should any patio or yard improvements be done around the outdoor unit.

- Top - 36"
- Front - 36"
- Right Side - 36"
- Left Side - 24"

Overhanging structures or shrubs must not obstruct condenser air discharge outlet.

## PARTS INFORMATION

Replacement parts are available from local contractor/dealer.

## SOME EFFICIENCY DO'S & DON'TS

**DON'T** be a "thermostat juggler". Moving your thermostat setting will not make your system heat or cool any faster. Adjust your thermostat to a comfortable setting and leave it there.

**DON'T** restrict air circulation. Placing furniture, rugs, etc. in such a way that they interfere with air vents will make your system work harder to achieve a comfortable temperature level. This requires more energy, which means greater cost to you.

**DON'T** locate lamps or other heat-producing appliances (radios, TV's, heaters, etc.) near your thermostat. The heat from these items will give your thermostat "false information" about the temperature in the room.

**DO** select a comfortable thermostat setting, but keep in mind that moderation in temperature selection will save energy.

**DO** turn on your kitchen exhaust fan when cooking and your bathroom exhaust fan when showering. Also, make sure your clothes dryer is properly vented. If these items are neglected, an excess heat and humidity condition may be created, causing your air conditioning system to run longer.

**DO** set your thermostat a few degrees lower than normal several hours before entertaining a large group of people in a relatively small area. People give off a considerable amount of heat and moisture in a closed area.

**DO** keep drapes and venetian blinds closed when practical. These items provide insulation against heat loss/gain.

**DO** contact a qualified service technician to make repairs or adjustments to your system. He has been trained to perform this service.

## NOTES

# Limited Warranty

## Residential Packaged Units

**WARRANTY TERMS:** Johnson Controls Unitary Products (“Company”) warrants this product to be free from defects in factory workmanship and material under normal use and service and will at its option, repair or replace defective parts without charge, subject to the exclusions below and according to the terms outlined in this warranty. Company reserves the right, at its sole discretion, to provide an equivalent complete replacement unit in place of repair parts. Alternatively, Company may at its option, offer a replacement price allowance to be applied toward the purchase of a new unit offered by Company. The exact allowance amount will be determined at the discretion of Company, based upon availability, age of existing equipment and current market conditions, but excluding items as ductwork, wiring, piping, and installation costs. The warranty period for obtaining repaired or replacement parts, or an allowance shall not extend beyond the original warranty period as stated below. In addition, if a replacement unit is provided by Company, the warranty period for the complete replacement unit is limited to the remainder of the original warranty period.

This warranty covers only equipment described by the Product Model Number and Unit Serial Number on the equipment or listed on the Warranty Registration Card, and applies only to products installed in the United States, Canada, or Puerto Rico. Company shall have no responsibility for installation, service, shipping, handling or other costs or charges, except as otherwise provided in this warranty. Tampering, altering, defacing, or removing the product serial number will serve to void this warranty. This warranty extends only to the original consumer purchaser and is nontransferable.

For this warranty to apply, the product must be installed according to Company recommendations and specifications, and in accordance with all local, state, and national codes; and the product or residence must not be removed from its place of original installation. This warranty does not apply to any unit sold over the Internet, by telephone or other electronic means unless the dealer that buys or sells a unit over the Internet, by telephone or other electronic means also installs the unit. In the absence of a recorded Warranty Registration Card, the warranty period will begin upon product shipment from Company.

If you are unaware of the effective warranty date, contact Company at (877) 874-7378 or [www.upgproductregistration.com](http://www.upgproductregistration.com).

**ADDITIONAL CONDITIONS FOR HEAT EXCHANGER WARRANTY:** This warranty covers heat exchangers (primary and/or secondary), only if:

1. The product has not been operated with an input rate in excess of the rating plate attached to the product.
2. The product has not been allowed to operate without the use of the proper automatic limit control for maximum warm air temperature and/or without adequate air circulation.
3. The product is installed so that combustion air is not contaminated by compounds of chlorine, fluorine, or other damaging chemical vapors.
4. The product is installed such that the heat exchangers are not exposed to return air temperatures below stated ratings.

**CONDITIONAL UNIT REPLACEMENT WARRANTY:** In addition to the Limited Parts Warranty, a Conditional Unit Replacement Option Warranty applies for certain models as noted below. If the Heat Exchanger (HX) assembly (primary and/or secondary) fails due a covered defect during the applicable Residential Unit Replacement Period shown below, the Company shall provide a replacement model, or if an exact replacement model is not available, an equivalent unit will be provided (the “Unit Replacement Option”). This Unit Replacement Option is available to the original purchaser in owner-occupied single family residential applications in the original location only, and is non-transferable. **Registration is required as noted below for this option.** The warranty for any replacement unit will be for the remaining period of the original equipment warranty. Company reserves the right to review and inspect any failed heat exchanger assemblies, and may require replaced parts to be returned for verification of claims.

**WARRANTY PERIOD:** The warranty period in years, depending on the part, is as shown in the chart below.

Product Tier	Product Model Family	Heat Exchanger		Parts**	Compressor **	Coil **
		HX Replacement in Residential Applications	HX Replacement in Non-Residential Applications			
Standard	PCG*	20 yrs or Lifetime*	10 years**	5 or 10 years*	5 or 10 years*	5 or 10 years*
Standard	PCE*	NA	NA	5 or 10 years*	5 or 10 years*	5 or 10 years*
Standard	PHG*	20 yrs or Lifetime*	10 years**	5 or 10 years*	5 or 10 years*	5 or 10 years*
Standard	PHE*	NA	NA	5 or 10 years*	5 or 10 years*	5 or 10 years*

**NOTE:** \* To qualify for Extended 10-year parts warranty, the Lifetime heat exchanger warranty, and/or the Unit Replacement Option, the unit must be registered online at [www.upgproductregistration.com](http://www.upgproductregistration.com) within 90 days of installation for replacement units or within 90 days of closing for new home construction. Non-residential applications are not eligible for unit replacements. In some states or provinces, registration is not required, but proof of installation is required. If not registered, standard warranty terms (5 years for parts, 20 years for heat exchangers) apply.

**NOTE:** \*\* All 3 Phase packaged units have 5 year compressor and 1 year parts warranty (Model numbers with 31/41 voltage codes).

**MAINTENANCE:** Company strongly recommends regular periodic preventive maintenance on this equipment. The person most familiar with the equipment in your HVAC system is a Participating Dealer. The Participating Dealer can ensure that your maintenance program meets the “Company Warranty” conditions, maximize the equipment efficiency, and service your unit within the mandated guidelines with regard to unlawful discharge of refrigerants into the atmosphere.

**FOR WARRANTY SERVICE OR REPAIR:** Notify the Installing Dealer or a Participating Dealer, preferably in writing, as soon as possible after you have discovered the problem. Be sure to include the Product Model Number, Unit Serial Number, Installation Date, and a description of the problem. You may find the Installing Dealer's name on this page or on the equipment, and you can locate Participating Dealers online. If a Dealer response is not received within a reasonable amount of time, notify Company at: Johnson Controls Unitary Products, Consumer Relations, 5005 York Drive, Norman, OK 73069 or by telephone at (877) 874-7378. All warranty service or repair will be performed during regular business hours, Monday through Friday 9:00 AM - 5:00 PM. Service requests sent to Company without prior Dealer contact will be referred back to a Participating Dealer. Because this process takes time, it is in the best interest of the Consumer to contact a Participating Dealer directly.

**FOR PRODUCT REGISTRATION:** For your benefit and protection, register your product with Company promptly after installation. This will initiate the warranty period and allow us to contact you, should it become necessary. You can register your product by returning the Warranty Registration Card on the back page of this Booklet or online at [www.upgproductregistration.com](http://www.upgproductregistration.com).

**Product Model Number:** \_\_\_\_\_ **Installation Date:** \_\_\_\_\_

**Unit Serial Number:** \_\_\_\_\_ **Installing Dealer:** \_\_\_\_\_

**MAINTENANCE:** Company strongly recommends regular periodic preventive maintenance on this equipment. The person most familiar with the equipment in your HVAC system is a Participating Dealer, who can ensure that your maintenance program meets the Company Warranty conditions, maximize the equipment efficiency, and service your unit within the mandated guidelines. For additional buyer protection, Residential Home Comfort Plans are available from a Participating Dealer. These plans provide you with additional years of warranty service protection including labor charges. Home Comfort Plans must be purchased within one (1) year from the date the equipment was installed.

**EXCLUSIONS:** This warranty does not cover any of the following:

1. Shipping, labor, or material charges or damages resulting from transportation, installation, or servicing.
2. Damage or repairs required as a consequence of mishandling, faulty installation, misapplication, abuse, improper servicing, improper operation, or unauthorized alteration.
3. Damages or failure to start resulting from improper voltage conditions, blown fuses, open circuit breakers, or other inadequacy or interruption of electrical service or fuel supply.
4. Fuses, either internal or external to the product.
5. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing, or handling of defective/replacement parts.
6. Products removed from their original location for reinstallation purposes.
7. Damages resulting from accident, abuse, fire, flood, alteration, or acts of God.
8. Damages resulting from use of the product in a corrosive atmosphere.
9. Normal maintenance costs are not covered.
10. Damages resulting from failure to perform normal maintenance as shown in installation and servicing instructions or owner's manual.
11. Cleaning or replacement of filters, nozzles, or orifices.
12. Damages resulting from operation with inadequate supply of air or from damages resulting from failure to properly and regularly clean air side of condenser and evaporator.
13. Damages resulting from freezing of condensate water or improper drainage of condensate from the furnace.
14. Damages caused by improper parts, components or accessories not suitable for use in or with the unit. For a list of parts that are known to be compatible, reference equipment repair parts list, contact a Participating Dealer for assistance, or call 1-877-874-7378.
15. Electricity or fuel costs or increases in fuel or electric costs, for any reason including additional or unusual use of supplemental heat.

This warranty is in lieu of all other express warranties. All implied warranties, including the implied warranty of merchantability and fitness for a particular purpose are limited in duration to the actual warranty period applicable to the part. Some states do not allow the disclaimer of implied warranties, so the above disclaimer may not apply to you. In addition, some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. In no event, whether as a result of breach of warranty or contract, tort (including negligence), strict liability, or otherwise, shall Company be liable for special, incidental, or consequential damages or expenses, including but not limited to loss of use of the equipment or associated equipment, lost revenues or profits, cost of substitute equipment, or cost of fuel or electricity.

The above limitations shall inure to the benefit of Company's suppliers and subcontractors. The above limitation on consequential damages shall not apply to injuries to persons in the case of consumer goods. Company does not assume, or authorize any other person to assume for Company, any other liability for the sale of this product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights. You may also have other rights which vary from state to state.