USER'S INFORMATION MANUAL

SINGLE PACKAGE AIR CONDITIONER/GAS HEAT

MODELS: PCG*







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CONTACT INFORMATION

- Go to website at 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

We recommend that the user read all sections of this manual and keep the manual for future reference.

⚠ WARNING

Cancer and Reproductive Harm – www.P65Warnings.ca.gov

A WARNING

FIRE OR EXPLOSION HAZARD - Failure to follow safety warnings exactly could result in serious injury, death, or property damage.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS:
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone (including cell phone) in your building.
- · Leave the building immediately.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
 —Installation and service must be performed by a qualified installer, service agency or the gas supplier.

SAFETY



This is a safety alert symbol. When you see this symbol on labels or in manuals, be alert to the potential for personal injury.

Understand and pay particular attention to the signal words **DANGER**, **WARNING**, or **CAUTION**.

DANGER indicates an **imminently** hazardous situation, which, if not avoided, **will result in death or serious injury**.

WARNING indicates a **potentially** hazardous situation, which, if not avoided, **could result in death or serious injury**.

CAUTION indicates a potentially hazardous situation, which, if not avoided <u>may result in minor or moderate injury.</u> It is also used to alert against unsafe practices and hazards involving only property damage.

- Make sure that the furnace area is clear and free of combustible materials, gasoline and other flammable vapors and liquids.
- For proper operation of this furnace, air for combustion and ventilation is required. Make sure that these openings are not obstructed.
- For lighting or shutting down this furnace, refer to the lighting instructions provided adjacent to the burners and also located in this manual.
- A roll-out switch is provided in the burner compartment. This switch is a manual reset. If the furnace fails to operate, contact a qualified service agency.
- Should the gas supply fail to shut off or if overheating occurs, shut off the gas valve to the furnace before shutting off the electrical supply. Then call a qualified service technician.
- 6. Do not use this furnace if any part has been under water. A flood-damaged furnace is extremely dangerous. Attempts to use the furnace can result in fire or explosion. A qualified service agency should be contacted to inspect the furnace and to replace all gas controls, control system parts, electrical parts that have been wet or the furnace if deemed necessary.

7. Prior to each heating season inspect the flue gas vent and the return and supply air duct and ensure that the equipment is well supported and there are no signs of deterioration. The manufacturer recommends that main burner, ignition device and controls are inspected by a qualified furnace technician before each heating season.

This heating/cooling unit is designed for outdoor use and can be installed anywhere from grade level to the roof. Electric air conditioning in the summer and gas heating in the winter - all from a single unit.

8. Do not allow snow to accumulate near the furnace where it could block the flue gas vent or the combustion air intake.

SYSTEM OPERATION

THERMOSTATS

Set your thermostat for either heating or cooling then set it for the desired temperature. DO NOT MOVE THE THERMOSTAT RAPIDLY ON AND OFF, OR BACK AND FORTH FROM HEAT TO COOL. THIS COULD DAMAGE YOUR EQUIPMENT.

Always allow at least 5 minutes between changes. Find the temperature that is most comfortable to you, and then LEAVE YOUR THERMOSTAT ALONE. (Exception is for night or vacation set back to conserve energy).

Manually moving the thermostat up or down will not speed up temperature changes in your rooms. This only causes the thermostat switch to function at your command rather than responding to room temperature.

Heat generated by devices other than the furnace may interfere with thermostat performance. Therefore, lamps, radios, television sets, etc. should not be placed near the thermostat.

SPARK IGNITION DEVICE

A CAUTION

Do not attempt to manually light the burners. Personal injury could result.

This unit is equipped with a spark ignition device. The control is designed to automatically light the burner each time the thermostat calls for heat.

HEATING

If your system comfort control switch is in the "HEAT" position, the system will operate as follows: When the indoor temperature drops below the level indicated by the temperature adjustment setting, the system will start. The heating system will operate and the indoor fan will circulate the filtered air. When the room temperature rises to the setting selected, the system will shut off. Whether heating or cooling, the fan will continue to operate if the fan switch was set in the "ON position. The "AUTO" setting on the fan switch will allow the fan to shut off when your system does.

Normal operation of the system resumes.

A WARNING

Should overheating occur, shut off the manual gas valve external to the appliance before shutting off the electrical supply.

A WARNING

Flue hood surface and immediate area is designed to operate at high temperatures during the heating cycle. Special attention must be given to keep all human contact and debris away from this area.

A WARNING

Incorrect installation of the flue vent hood could cause personal injury or property damage.

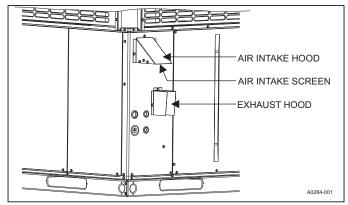


FIGURE 1: Exhaust and Air Intake Hoods

COOLING

When the thermostat calls for "COOL", the thermostat signals the compressor and outdoor fan to run.

The circulating fan is immediately energized at cooling speed.

When the thermostat is satisfied, the compressor and outdoor fan are de-energized.

After a cool fan off delay timing of 30 seconds the circulating fan is deenergized.

CIRCULATING FAN

When the thermostat calls for "FAN", the thermostat terminal signals the circulating fan to run at the selected fan speed.

If a call for "COOL" occurs, the circulating fan switches to the cool speed.

If a call for "HEAT" occurs, the circulating fan switches to heat speed after a 30 second delay.

When the thermostat ends the call for "FAN", the circulating fan is deenergized.

INPUT

The correct heat capacity of the furnace is regulated by the burner orifices and the gas pressure. The proper orifices are furnished but the gas pressure regulator must be adjusted by the installing service technician or gas company. This is a one-time adjustment.

FOR YOUR SAFETY, READ BEFORE OPERATING

A WARNING

If you do not follow these instructions exactly, a fire or explosion may result, causing property damage, personal injury or loss of life.

BEFORE OPERATING, smell all around the appliance area for gas. Be sure to smell around the base of the unit because some gas is heavier than air and will settle in the area.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- · Do not touch any electrical switch.
- Do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- Use only your hand to move the gas control switch. Never use tools. If the switch will not move by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- 10. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

START-UP INSTRUCTIONS - GAS HEATING SYSTEM

NOTICE

See General instructions for Start-up and Shutdown of your gas heating system.

- 1. STOP! Read the safety information.
- 2. Set the thermostat to the lowest setting.
- 3. Make sure all electrical power to the furnace is "OFF".
- 4. This appliance has a device which automatically lights the burners.
- Remove burner access panel by removing screws and lifting panel out
- 6. Move the manual gas switch to the "OFF" position.
- Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow procedures above titled WHAT TO DO IF YOU SMELL GAS. If you don't smell gas, go to next step.
- 8. Move the manual gas switch to the ON position.
- 9. Replace the control access panel.
- 10. Turn on all electrical power to the appliance.
- 11. Set the thermostat to the desired setting.
- 12. If the appliance will not operate, follow the instruction "To Turn OFF Gas To Appliance" and call your service technician or gas supplier.

SHUT-DOWN INSTRUCTION - TO TURN OFF GAS TO APPLIANCE

A CAUTION

Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the furnace before shutting off the electrical supply.

- 1. Set the thermostat to the lowest setting.
- Turn off all electrical power to the appliance if service is to be performed.
- Remove burner access panel by removing screws and lifting panel out.
- 4. Move the manual gas switch to the "OFF" position.

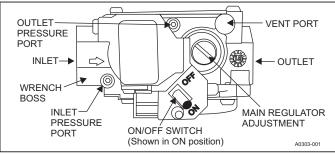


FIGURE 2: Single Stage Gas Valve

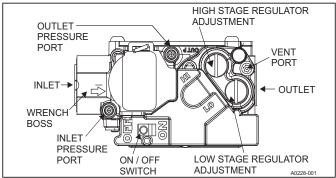


FIGURE 3: Two-Stage Gas Valve

5. Replace the control access panel.

A WARNING

ELECTRICAL SHOCK, FIRE OR EXPLOSION HAZARD -

Failure to follow safety warnings exactly could result in dangerous operation, serious injury, death or property damage.

Improper servicing could result in dangerous operation, serious injury, death or property damage.

- Before servicing, disconnect all electrical power to furnace.
- When servicing controls, label all wires prior to disconnecting. Reconnect wires correctly.
- · Verify proper operation after servicing.

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

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

- 1. Operation below this temperature is permissible for a short period of time.
- 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

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.

- After considering the "Fan Operation Selection" above, select and set the fan operation mode desired.
- 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.

MAINTENANCE

NORMAL MAINTENANCE

A WARNING

Prior to any of the following maintenance procedures, shut off all power to the unit, to avoid personal injury.

Periodic maintenance consists of changing or cleaning filters. Under some conditions, the main burners should be cleaned.

LUBRICATION

The indoor blower motor, outdoor fan motor and venter motor are permanently lubricated and require no maintenance.

GENERAL MAINTENANCE

The manufacturer recommends that the furnace system be inspected once a year by a qualified service technician.

For proper and safe operation, the gas heating section needs air for combustion and ventilation. Do not block or obstruct air openings on the unit, nor the spacing around the unit. Keep the gas heating system area clear and free of combustible materials, gasoline and other flammable vapors and liquids.

Snow or debris should not be allowed to accumulate in or around the unit. Do not permit overhanging structures or shrubs to obstruct condenser air discharge or vent outlet on your unit. These provide air for combustion and ventilation.

FILTER CARE

Some units are shipped without a filter and it is the responsibility of the installer to secure a filter in the return air ductwork or install a Filter/Frame Kit.

Filters should be inspected and, if necessary, cleaned or replaced once each month. If the location of the filter is not obvious, contact a qualified service agency.

Filters must always be used and must be kept clean. When filters become dirty, insufficient air will be delivered by the blower, decreasing your units efficiency and increasing operating costs and wear-and-tear on the unit and controls.

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.

OUTDOOR COIL

Dirt should not be allowed to accumulate on the outdoor coil surface or other parts in the air circuit. Cleaning should be done as often as necessary to keep the coil clean. Use a brush, vacuum cleaner attachment, or other suitable means. If water is used to clean the coil, be sure that the power to the unit is shut off prior to cleaning. Do not use a high pressure washer.

A CAUTION

Exercise care when cleaning the coil so that the coil fins are not damaged.

Do not permit the hot condenser air discharge to be obstructed by overhanging structures or shrubs.

BURNERS

At the beginning of each heating season, make a visual check of the main burner flame. The flame should be a light blue color. If yellow flame is present, or if black soot can be seen, the burners may need to be cleaned.

TO CLEAN BURNERS

Cleaning the burners should be performed only by a qualified service agency.

FLUE DISCHARGE

Visually inspect discharge outlet periodically to insure soot and dirt buildup is not excessive. If necessary, clean to maintain adequate combustion air discharge.

The manufacturer recommends that the furnace system be inspected once a year by a qualified service technician.

CLEANING FLUE PASSAGES AND HEATING ELE-MENTS

With proper combustion adjustment the heat exchanger of a gas fired furnace will seldom need cleaning. If the heat exchanger should become sooted, cleaning should be performed only by a qualified service agency.

REGISTERS

Supply air and return air registers must be open when the unit is in operation. Furniture must not block airflow in or out of the registers.

TROUBLESHOOTING

BEFORE CALLING A SERVICE TECHNICIAN:

- Check thermostat setting and insure thermostat is calling for heat or cooling.
- 2. Check thermostat for lint, dust, etc.
- Check fuses or circuit breakers.
- 4. Check filters for excessive dust accumulation and/or restriction.

REPLACEMENT PARTS LIST

All components, assemblies, accessories, and replacement parts for this furnace are available through qualified service agencies. It is not recommended that the user purchase, install, or replace any components of this furnace. Contact your local contractor, dealer, or service provider for additional information.

WIRING DIAGRAM

The unit wiring diagram may be found on the inside of one of the access panels on the furnace. It is intended for reference only. If service is required, contact your local contractor, dealer, or service provider.

SOME EFFICIENCY DO'S AND DON'TS

DON'T heat or cool unused areas. Reduce supply and return air flow to a minimum in areas which are not living spaces (storage rooms, garages, basements, etc.).

DON'T be a "thermostat jiggler". 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 heat or cool when you are away. If you are going to be away for a day or more, re-adjust your thermostat accordingly. Your furniture is far less demanding than you are when it comes to comfort levels. However, don't expect the system to restore comfort conditions immediately upon returning home. It will take a little time.

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. They have 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 required 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.

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.
- 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.

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

		Heat Exchanger				
Product Tier	Product Model Family	HX Replacement in Residential Applications	HX Replacement in Non-Residential Applications	Parts**	Compressor **	Coil **
Standard	PCG*	20 yrs or Lifetime*	10 years**	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, the unit must be registered online at www.upgproductregistration.com within 90 days of installation for replacement units or within 90 days of closing for new home construction. 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.

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.
- 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 re-installation 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.

1183747-UUM-L-0818

Supersedes: 1183747-UUM-K-0618