1190827-UUM-E-0324

About this manual

Read all sections of this manual and keep the manual for future reference.

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

About your air handling unit

This high efficiency air handling system has been precision engineered, manufactured of high quality materials, and passed many rigorous tests and inspections to ensure years of satisfactory service. That is why you can rely on efficient, trouble-free operation. Your system is fully automatic. Set the thermostat and forget it. It is automatically protected from damage by voltage fluctuations or excessive heating or cooling demands. Your air handler is actually two units: the indoor air blower and the indoor refrigeration coil, part of the outdoor air conditioning or heat pump system installed with this air handler. You may have an electric resistance heater kit installed in this air handler.

Certification

AHRI CERTIFIED™ www.ahridirectory.org

Assembled at a facility with an ISO 9001:2015-certified Quality Management System

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Contact information

To contact us online, go to www.york.com, click **Contact Us**, and follow the instructions.

To contact us by mail, use the following address:

Johnson Controls Ducted Systems

Consumer Relations

5005 York Drive

Norman, OK 73069

Safety

- **Important:** Read all information in this manual thoroughly and become familiar with the capabilities and use of the appliance before attempting to operate or maintain the unit.

Pay attention to all safety warnings and any other special notes highlighted in the manual.

Keep this manual where you have easy access to it in the future. If a problem occurs, check the instructions and follow the recommendations given. If these suggestions do not eliminate your problem, call your servicing contractor. Do not attempt to service the unit yourself.

Do not attempt to install or service your equipment under any circumstances.

Some local codes require licensed installation or service personnel for this type of equipment. Improper service, adjustment, or maintenance may cause explosion, fire, electrical shock, or other hazardous conditions, which may result in personal injury or property damage.

WARNING

Fire or electrical hazard

Failure to follow the safety warnings exactly could result in serious injury, death, or property damage. A fire or electrical hazard may result causing property damage, personal injury, or loss of life.

Understanding safety symbols and instructions

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**, **CAUTION**, as well as the **NOTICE**, **Important**, and **Note** alerts.

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 **may result in minor or moderate injury**. It is also used to alert against unsafe practices and hazards involving only property damage.

NOTICE indicates information considered important, but not hazard-related, such as messages relating to property damage.

Important indicates information that is essential to complete a task or may result in damage to the device if not followed.

Note indicates something of special interest or importance. Notes can contain any type of information except safety information.

Safety requirements

WARNING

Risk of fire

This unit uses a mildly flammable (A2L) refrigerant. The unit must only be repaired or serviced by trained service personnel. Before attempting to repair or service the unit, consult the *Installation Manual*. Follow all safety precautions.

How your system works

CAUTION

An air handler must never be operated without a suitable air filter. Dirty filters greatly restrict the flow of air and may cause damage to the moving parts. The filters must be checked every month. On new construction, the filters must be checked every week for the first four weeks and after that, every three weeks. When replacing the filters, you must use filters that are the same size as those recommended.

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 is what happens with an air conditioner or heat pump. During the cooling cycle, your system removes heat and humidity from your home and transfers this heat to the outdoor air.

Heating cycle (heat pumps only)

During the heating cycle, your system removes heat and humidity from the outdoor air and transfers this heat to your home. This is possible because even 0°F outdoor air contains a lot of heat. Your heat pump does not generate much heat, it just transfers it from one place to another.

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 min between changes.

Do not close or block off supply or return air grills. Damage to equipment and higher utility bills may result.

Setting the thermostat

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 features 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. Be aware that many different thermostats operate on batteries or power stealing principals. These types of thermostats cannot be supported as trouble free when used with this product.

The manufacturer provides complete operating instructions for each thermostat. Familiarize yourself with its correct operation to obtain the maximum comfort with minimum energy consumption.

If your system allows both cooling and heating operation, you may have either a manual change-over type or an automatic change-over type.

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.

The automatic change-over thermostat is actually a sophisticated electronic version of a manual change-over type. This thermostat includes features that 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 may feature a digital clock and outdoor temperature.

Manual change-over thermostat

Cooling your home: With the comfort control switch in the **COOL** position, the system operates as follows:

When the indoor temperature rises above the level indicated by the temperature adjustment setting, the system starts. The outdoor unit operates and the indoor fan circulates the cooled, filtered air. When the room temperature falls to the selected setting, the system shuts off.

Heating your home: If your system includes a heating unit and the comfort control switch is in the **HEAT** position, the system operates as follows:

When the indoor temperature drops below the level indicated by the temperature adjustment setting, the system starts. The heating system operates and the indoor fan circulates the filtered air. When the room temperature rises to the selected setting, the system shuts off. Whether heating or cooling, the fan continues to operate if the fan switch was set in the **ON** or **Intelligent** position. The **AUTO** setting on the fan switch allows the fan to shut off when your system does.

Electronic thermostat

The computerized electronic thermostat, when programmed, functions automatically to operate the system as follows:

When the indoor temperature rises above the higher (**COOL**) setting, the outdoor unit operates and the indoor fan circulates the cooled, filtered air. When the room temperature falls to the selected level, the system shuts off. The indoor fan either shuts off or runs continuously, depending on your choice of fan switch setting. When the indoor temperature drops below the lower (**HEAT**) setting, the heating system operates and the indoor fan circulates the heated, filtered air. When the indoor temperature rises to the selected setting, the system shuts off. The indoor fan either shuts off or runs continuously, depending on your choice of fan switch setting.

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 runs intermittently as required for either heating or cooling. This position provides the lowest operating cost. If you purchased one of our thermostats, they 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 does not shut off. However, the cooling (AC) or heating (heat pump) system still operates 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.

Cooling cycle operation

Switch your thermostat to cool. Select a comfortable thermostat temperature setting, typically between 75°F and 80°F. Comfort sensations vary with individuals. The lower the indoor temperature required, the greater the number of hours your unit must operate.

Set your thermostat 2°F or 3°F below normal several hours before entertaining large groups during hot weather. People emit considerable heat and moisture.

On an extremely hot day, the indoor temperature may rise 3°F to 6°F above the thermostat setting. Correctly selected equipment does not have the capacity to maintain a constant indoor temperature during the peak load. Over-sizing your system to handle this peak load is not practical because the oversized system would operate much less efficiently at all other conditions.

Heating cycle operation

With the thermostat in the heating position and the outdoor temperature in the range of 20°F to 30°F or below, the outdoor unit may run 100% of the time.

Some systems can be equipped with balance point control to provide even more efficient operation. This control prevents the electric heater from being energized when the outdoor air is above some predetermined temperature setting from 0°F to 45°F. At higher temperatures, a heat pump may provide all the heat the home needs. At lower temperatures, the auxiliary heat is energized to keep your home comfortable.

When the outdoor air is cool and moist, frost may form on the surface of your outdoor heat pump coil. When this frost builds to a certain point, your system switches to a defrost cycle. Although you may feel cooler air coming from your registers, **do not adjust your thermostat**. The frost melts quickly and your system returns to normal operation automatically.

Maximizing 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 helps 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 senses this extra heat and is not 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. Do not turn your system off even if you are away all day. On a hot day, your system may have to operate between 8 h to 12 h 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 continues to flow into your home for several hours after sunset.

Use your kitchen exhaust fan when cooking. One surface burner on high requires 1 ton of cooling. Turn on your bathroom exhaust fan while showering to remove humidity. However, do not run exhaust fan excessively as this decreases 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.

Caring for your system

Important: Do not attempt to disassemble the equipment or perform periodic maintenance unless you are experienced and qualified to do so.

It is essential to perform regular periodic preventative maintenance on this equipment. The person most familiar with the equipment in your HVAC 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.

It is recommended that your heating and air conditioning system is inspected on a yearly basis by a licensed and qualified service provider. The service technician must clean coils, inspect and tighten all electrical connections, clean drain lines, and check for correct system operation.

Motor lubrication

The motors in these air handlers are permanently lubricated and do not require periodic oiling.

Periodic inspection

WARNING

Fire, moving parts, and electrical hazards

Electric shock and moving parts hazards are present behind the blower and coil access panels. Risk of personal injury and/or fire or electric shock, potentially causing property damage, personal injury, and/or loss of life. The only owner serviceable part is the filter behind the filter access panel.

Every time the filters are changed, visually inspect the following items:

- Check the unit exterior to be sure it is in good condition and that there are no obvious signs of deterioration.
- Check the drain lines to make sure there are no cracks, leaks, or blockages.
- Check the area around the unit and all registers and grilles to maintain good airflow.

Periodic inspection by a qualified service technician is highly recommended. Only a qualified service professional must perform any cleaning and maintenance of the air handler interior and its components.

Call a certified dealer or servicing contractor for the following reasons:

- for more information
- if you have questions about the operation of your air handler
- if you suspect your unit is malfunctioning or in need of service or repair

Air filters

Dirty air filters greatly restrict the flow of air and may cause damage to the moving parts. Some pleated filters may be too restrictive and must not be used. If the filters become clogged, the electric heaters and blower motor could overheat, resulting in a potentially dangerous situation. Check the filters every month. On a new construction, check the filters every week for the first four weeks and every three weeks after that, especially if the indoor fan is running continuously. When replacing the filters, you must use filters that are the same size as those originally installed. Never operate your air handler without a suitable air filter.

Filter care

Inspect the air filters 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 the airflow arrow in the same direction as the airflow in your duct. Filters must be clean to assure maximum efficiency and adequate air circulation. Drapes, furniture, or other obstructions blocking your supply and return air grilles also decrease efficiency.

Externally mounted air filters

Locate this air filter in a rack attached to the casing of the air handler, in the return air duct, or in a wall-mounted filter grille. Replace disposable filters with the same size new filters. Disposable filters may be replaced with cleanable filters at this time. Clean cleanable filters as described in the manufacturer instructions.

Permanent, washable, high-velocity filters may be cleaned with a vacuum cleaner or taken away from the unit and washed with a garden hose. Be sure to shake off excess water and allow the filter to completely dry before re-installing the filter.

Condensate drain lines

Coils may be included in the air handler or separately mounted. During the cooling season, check the condensate drain lines to be sure that condensate is flowing from the primary drain but not from the secondary drain. If condensate ever flows from the secondary drain, shut the unit off immediately and get the condensate pan and drains cleaned by a qualified service technician to insure a free flowing primary drain.

Coil cleaning

If an inspection by a qualified service technician indicates the coil needs to be cleaned, it can be washed with water.

Blower care

Even with good filters correctly in place, blower wheels and motors become dust-laden after long months of operation. The entire blower assembly must be inspected annually. If the motor and wheel are heavily coated with dust, they can be brushed and cleaned with a vacuum cleaner. If the blower cannot be adequately cleaned without removing it from the air handler, then this service must be performed by a qualified service agency.

WARNING

Make sure you do not move the clip-on weight on the indoor fan wheel when cleaning the wheel. This weight is used to balance the wheel. Moving the weight causes the fan wheel to vibrate.

Troubleshooting

Table 1: Troubleshooting guide

Problem	Check	Action to take
No heating or cooling	1. Thermostat settings	Set thermostat to correct setting.
	2. Circuit breakers and fuses	Reset circuit breakers and replace any blown fuses.
	3. Outdoor unit for dirty coil (cooling)	Clean the coil.
	4. Outdoor unit for snow accumulation (heating)	Remove loose snow only.
	5. Indoor unit for dirty filter (heating or cooling)	Clean or replace the filter.
	6. Emergency heat light status on thermostat	
	• light on = malfunction	Check 1 to 5, then call qualified service person.
	• light flashing = malfunction	Check 1 to 5, then call qualified service person with fault code.
Wet on floor or in furnace	Condensate drain and P trap	Remove blockage.

Limited warranty

Residential Split Air Handlers

Warranty terms: Johnson Controls Ducted Systems (“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 non-transferable.

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 1-877-874-7378 or www.upgproductregistration.com.

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 online at www.upgproductregistration.com or by returning the Warranty Registration Card on the back page of this packet.

Product Model Number: _____ Installation Date: _____

Unit Serial Number: _____ Installing Dealer: _____

For warranty service or repair: Notify your Installing Dealer or a Participating Dealer, preferably in writing, as soon as possible after discovery of 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 at www.york.com.

If a Dealer response is not received within a reasonable amount of time, notify Company at: Johnson Controls Ducted Systems, Consumer Relations, 5005 York Drive, Norman, OK 73069 or by telephone at 1-877-874-7378. 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.

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

Description	Parts
Air handlers	5 years or 10 years‡

Note: †To qualify for the extended 10-year parts warranty, the unit must be registered online at http://www.upgproductregistration.com within 90 days of installation for replacement units or within 90 days of closing for new home construction. In some states, registration is not required, but proof of installation is required to qualify for the 10-year parts warranty.

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 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:

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, unauthorized alteration, or improper operation.

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 either defective parts or 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, or damages resulting from failure to perform normal maintenance, as outlined in the installation and servicing instructions or owner's manual.
10. Cleaning or replacement of filters, nozzles, or orifices.
11. Damages resulting from operation with inadequate supply of air or water; Damages resulting from failure to properly and regularly clean air and/or water side of condenser and evaporator.
12. Damages resulting from: (I) freezing of condenser water or condensate; (II) inadequate or interrupted water supply; (III) use of corrosive water; (IV) fouling or restriction of the water circuit by foreign material or like causes.
13. 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 please reference the equipment renewal parts list, contact a Participating Dealer for assistance, or call 1-877-874-7378.
14. Electricity or fuel costs, or increases in fuel or electric costs, for any reason including additional or unusual use of supplemental electric 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.

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