

Packaged Rooftop Air Conditioners Voyager™ 3 Gas/Electric For Servicers and Owners Use

Model Number: 27.5 to 50 Ton Packaged Gas/Electric

SAFETY WARNING
Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

September 2023

RT-SVU04K-EN

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1 Warnings, Cautions, and Notices

Read this manual thoroughly before operating or servicing this unit. Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

- 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, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
- NOTICE** Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

2

WARNING
Proper Field Wiring and Grounding Required!
Failure to follow code could result in death or serious injury. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.

WARNING
Personal Protective Equipment (PPE) Required!
Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.

3

WARNING
Follow EHS Policies!
Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

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Revision History

Removed V2 legacy models.

4 Inspection

- Unpack all components of the kit.
- Check carefully for any shipping damage. If any damage is found it must be reported immediately and a claim made against the transportation company.
- Visually inspect the components for shipping damage as soon as possible after delivery, before it is stored. Concealed damage must be reported within 15 days.
- If concealed damage is discovered, stop unpacking the shipment.
- Do not remove damaged material from the receiving location. Take photos of the damage, if possible. The owner must provide reasonable evidence that the damage did not occur after delivery.
- Notify the carriers terminal of damage immediately by phone and by mail. Request an immediate joint inspection of the damage by the carrier and the consignee.

Important: Do not attempt to repair any damaged parts until the parts are inspected by the carriers representative.

5 Important Safety Instructions

WARNING
Safety Instructions!
Failure to follow instructions in this section could result in death, serious injury, and property damage.

General Safety Instructions

- Do not store combustible materials, gasoline or other flammable vapors and liquids near the unit.
- 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.
- Do not use this furnace if any part has been under water. Immediately call a qualified service technician to inspect the furnace and to replace any part of
- Never perform any maintenance procedures until the electrical power and/or gas supply to the unit has been turned off.
- Never remove any panels from the unit while it is operating.
- Never remove panels or parts from this unit that are not discussed in this manual.
- Never cover the unit, since it is designed to operate year-round.
- The furnace area must be kept clear and free of combustible materials, gasoline and other flammable vapors and liquids.
- For proper and safe operation the furnace needs air for combustion and ventilation. Do not block or obstruct air openings on the furnace, air openings communicating with the areas in which the furnace is installed, and the spacing around the furnace.

At installation and the beginning of each heating season, a qualified service technician should examine the furnace to ensure:

- All flue products carrying areas external to the furnace, (i.e., chimney, vent connector, etc.), are clear and free of obstructions.
- The physical support of the furnace is sound and without sagging, cracks, gaps, etc., around the base so as to provide a seal between the support and the base.
- There are no obvious signs of deterioration of the furnace.

6 Safety Instructions Before Operating the Unit

- This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

What to do if you Smell Gas

- Do not try to light any appliance.
- Do not touch any electric 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.

7 Temperature Control Devices

Room thermostats and zone sensors are delicate temperature control devices.

Thermostats will energize and de-energize the heating or cooling circuit to maintain the temperature setting selected.

Zone sensors will sense the room temperature to allow the unit controls to activate the heating and cooling functions and maintain the temperature selected.

Many thermostats and zone sensors contain a room thermometer to indicate the approximate room temperature, and a temperature scale at the adjustment indicator to select the desired indoor air temperature. Most controls have a selector mode switch with Heat, Off, and Cool positions, and a fan switch with On and Auto positions.

When the selector switch is positioned at Off, the unit will not operate in either the heat or cool modes. If the selector switch is set at Heat, the unit will automatically cycle on and off to maintain the desired temperature setting. The unit will also operate automatically when the selector switch is positioned at Cool.

The fan selector switch can be used to operate the indoor fan continuously by positioning it at On. When set at Auto, the fan will only operate when required during the heating or cooling cycles.

To verify the thermostat or zone sensor operates properly, it must be level and positioned to avoid the influence of such external heat sources such as lamps, televisions, or other heat producing appliances.

Air Filters

Important: It is very important to keep the central duct system air filters clean.

Inspect them at least once each month when the system is in constant operation. In new homes, check the filters every week for the first 4 weeks. See [Table 1](#) for the required filter size(s).

If filters are disposable, replace them with new filters of the same type and size. Do not attempt to clean disposable filters.

Permanent type filters can be cleaned by washing them with a mild detergent and water. Confirm filters are thoroughly dry before reinstalling them in the unit (or duct system).

Note: It may be necessary to replace permanent filters annually if washing fails to clean the filter, or if the filter shows signs of deterioration. Use the same type and size as was originally installed.

Table 1. Recommended filter size

Model	Qty	Filter Size (L x W x D)
YC*330-420	16	16 x 20 x 2 ^(a)
YC*480-600	17	16 x 20 x 2 ^(a)

(a) 4-inch are optional. Replace with same size as originally supplied.

Heating System

Heating Cycle Operation

A normal heating cycle begins when the air temperature in the home drops below the selected setting. The control then energizes the heating electrical circuit that starts and controls the main burners. Shortly after the main burners ignite, the indoor fan starts and circulates warm air through your home, or building.

When the air temperature rises to the selected setting, the control de-energizes the heating electrical circuit which, in turn, extinguishes the main burners. The indoor fan continues to circulate warm air until most of the heat is removed from the unit's combustion chamber.

Safety Controls

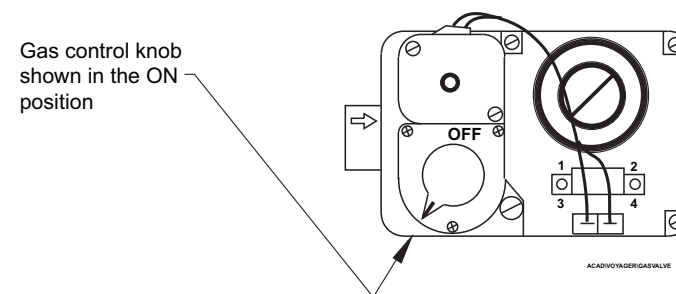
The unit is equipped with automatic reset safety limit controls to prevent overheating. When one of these controls open, it shuts down the heating electrical circuit until it cools down sufficiently. Inadequate airflow (dirty air filters or a defective fan motor) may cause the unit to cycle on and off as the limit controls trip and automatically reset. If you suspect the unit is cycling on its limit controls, immediately contact a technician for instructions.

Operating Instructions

1. Set the temperature control to lowest setting.
2. Turn off all electric power to the appliance.
3. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.

Note: Depending on heater size, the gas valve control will be a knob, as shown in [Figure 1](#), or a toggle switch.

Figure 1. Gas valve control knob (toggle switch used in some heater sizes)



4. Remove the access panel that has the following label:

REMOVE THIS PANEL
TO GAIN ACCESS
TO THE GAS VALVE

5. Turn the gas control knob clockwise or flip the toggle switch to the **OFF** position.

Note: Some valves require the knob to be pushed in slightly before turning. Do not force.

⚠ WARNING

Risk of Fire or Explosion!
Use only your hand to push in or turn the gas control knob. Never use tools. If the knob does not push in or turn by hand, don't try to repair it; call a qualified service technician. Failure to follow instructions could result in death or serious injury.

6. Wait 5 minutes to clear out any gas. If you then smell gas, STOP! Follow "[What to do if you Smell Gas](#)" in the safety information above in this manual. If you do not smell gas, go to the next step.
7. Turn gas control knob counter-clockwise or flip the toggle switch to **ON**.
8. Replace panel removed in [Step 4](#).
9. Turn on all electric power to the appliance.
10. Set the temperature control to desired setting.

Note: If the unit is equipped with modulating gas heat, the discharge air setpoint will also need to be set before the initial setup is complete.

11. If the appliance does not operate, follow instructions in "[To Turn Off Gas to the Appliance](#)" below and call your service technician or gas supplier.

To Turn Off Gas to the Appliance

1. Set the temperature control to lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Remove the access panel that has the following label:

REMOVE THIS PANEL
TO GAIN ACCESS
TO THE GAS VALVE

4. Turn the gas control knob clockwise or flip the toggle switch to the **OFF** position.

Note: Some valves require the knob to be pushed in slightly before turning. Do not force.

5. Replace panel removed in [Step 3](#).