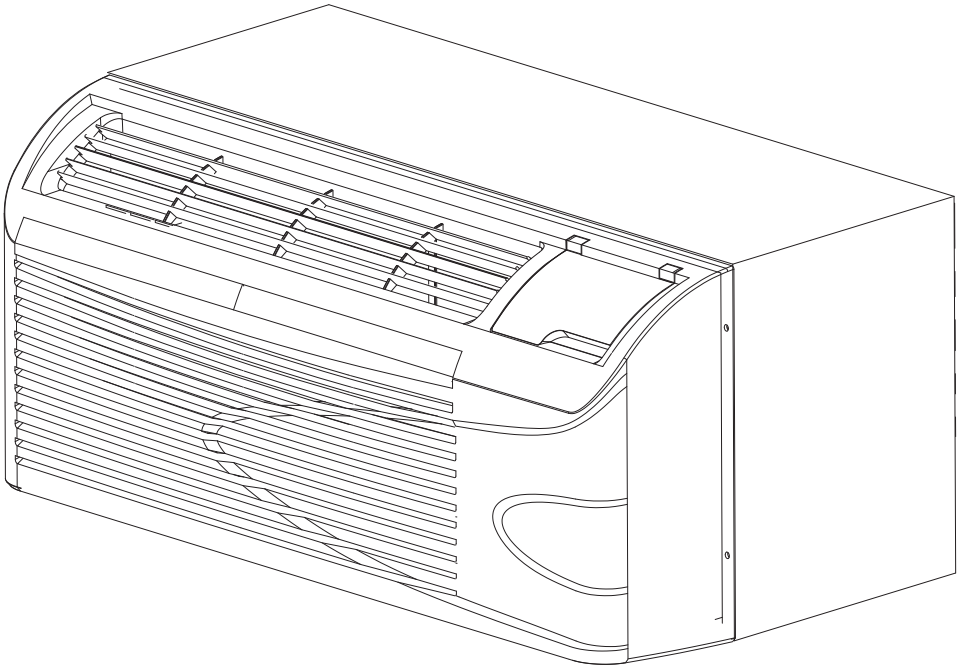
GA Series
Packaged Terminal Air Conditioner / Heat Pump
7,000 – 15,000 Btuh

Specification Guide



PACKAGED TERMINAL COOLING UNIT WITH HEAT PUMP OR ELECTRIC HEATING

HVAC Guide Specifications

Size Range:

Cooling: 7,600 to 15,000 Btuh (2051 to 4396 WH)

Electrical Heating:5,600 to 17,100 Btuh (1641 to 5015 WH)

Heat Pump: 6,100 to 13,800 Btuh (1876 to 3956 WH)

Model Numbers:

GAE Series, Cooling with Electric Heat

GAA Series, Heat Pump with Electric Heat

Part 1 — System Description

Packaged Terminal Air Conditioners shall be of the sizes and capacities as shown on the contract drawing schedule and in the specifications.

System shall be tested to insure no water infiltration into the room, when tested at eight inches of rain per hour with 40 mph (64.4 KPh) wind.

The complete system shall consist of the following:

A. **Packaged Terminal Heat Pump or Heat/Cool Chassis** : See section 2 - Chassis Description

B. **Power Cord or Hardwire Kit** shall provide the power connection to the unit.

C. **Insulated Polymer Wall Sleeve** shall provide excellent thermal insulation, be textured to hide scratches and prevent shine, will have superior outdoor noise absorption and shall be corrosion free for the life of the product. The Wall Sleeve must have dimensions of 42" (1067 mm) width x 16" (406 mm) height x 14-7/8" (377.8 mm) depth and be shipped with a rear weather barrier installed.

D. **Wall Sleeve Molding** shall trim the wall sleeve to the existing wall, to hide wall imperfections and irregularities due to the sleeve opening.

E. **Outdoor Polymer Louvered Grille** shall resist corrosion, breakage and match the color specified on drawing schedule and specifications.

F. **Subbase** will support the wall sleeve when it extends into the room more than 4" (101.6 mm). Subbase must come from the factory pre-assembled, with a built in receptacle (size as specified on drawing schedule and specifications).

Part 2 — Chassis Description

2.1 General:

The chassis shall be a factory-assembled, single-piece heating and/or cooling unit, that is simple to install and operate. Just slide the chassis into a wall sleeve, plug it into an outlet, and operate after installation. The chassis dimensions shall not exceed 42" (1067 mm) wide and 16" (406 mm) high with room cabinet in place. The chassis shall consist of the following functional sections and components:

A. **Certifications**:
System shall be approved and certified by UL & UL, Canada. Chassis shall meet ASHRAE Standard 90.1 for minimum energy efficiency.

B. **Operating Characteristics:**
Chassis shall be capable of starting and running at 115° F (46.1° C) ambient outdoor temperature per maximum load criteria of ARI Standard 310/380.

C. **Electrical**:
The accessory power cord or hardwire kit for the unit will be ordered separately. The power cord accessory will be 58" (1473 mm) for 208/230v models or 15" (381 mm) for 265v models. The Hardwire kit accessory will provide 36" (914 mm) of flexible conduit. The chassis current draw shall be specified on the chassis nameplate and match electrical requirements specified on the Contract drawing schedule and specifications.
The power cord plug configuration shall conform to NEMA standards and the rating shall support the current draw of the electric resistance heater.
For 265v installations, UL codes require the use of an electrical equipped subbase for power cord usage or hardwire conduit for non-corded installations.

D. **Safeties**:
Compressor shall have automatic reset, over temperature and over current protection. The fan motors shall have an inherent, automatic reset over temperature protection. The electric heater shall have two over temperature protectors.

E. **Air Flow System:**
For superior sound and comfort, the airflow system shall consist of two, direct-drive permanently lubricated fan motors. The outdoor fan motor will be single speed, with a dynamically balanced, corrosion resistant, aluminum multi-blade axial flow design, with integrated slinger ring. The indoor fan motor will be three speeds, with a dynamically balanced, aluminum, tangential blower wheel, to assure uniform air distribution and optimal sound. Both Fan Motors shall be of an enclosed design to reduce the effects of moisture and corrosion.

F. **Compressor & Refrigerant**:
The rotary-type Compressor shall be fully hermetic with internal and external vibration isolation. The refrigeration system will be sealed and contain a full refrigerant charge (R410A).

G. **Coils**:
Condenser and evaporator coils to be constructed of high-efficiency copper and aluminum, necessary to achieve EER and COP rating, as specified on the chassis name plate.

H. **Factory-Installed Electric Heater:**
The factory-installed, open coil type, electric heater is standard in heat/cool and heat pump chassis. The electric heater shall contain both an automatic reset and a one-shot over temperature protection device. The heating capacity of the electric heater shall be as identified on the Contract drawing schedule and in the specifications.

I. **Controls**:
All standard models shall be equipped with electronics, for added features and improved reliability of the unit.

The chassis shall have an easy to operate, user friendly, electronic display with simple to push, large digital buttons. All will be easily accessible and covered by a hinged door.

The mode selection control shall consist of OFF, FAN ONLY, HEAT or COOL operations. There will be 3 optional Fan Speed Options, LOW, MED or HIGH. The temperature selection will be controlled by color coded, simple to operate warmer and cooler buttons. The upper and lower setpoint temperature limits, can be easily configured.

All models shall have a configuration dipswitch, easily accessible for the maintenance person, optimal comfort settings, CONTINUOUS or CYCLE fan mode in HEATING, CONTINUOUS or CYCLE fan mode in COOLING, FREEZE GUARD enabled or disabled, WALL THERMOSTAT enabled or disabled, EMERGENCY HEAT (for heatpumps), and 4 optional SETPOINT LIMIT selections.

Fan cycle configuration switches, will allow continuous fan operation for maximum comfort or cycle operation for maximum energy savings. Settings can be different for both heating and cooling operations, for maximum comfort and efficiency.

All standard models shall have Temperature Limiting control, with four easy to configure settings. Temperature limiting allows a room temperature range to be set, to avoid extreme temperature settings, to maximize energy savings.

Emergency Heat Switch (Heat Pump Models Only) shall disable the compressor in heating mode and only allow the use of electric heat during heating cycles. The Emergency Heat switch is active at all outdoor ambient temperatures.

All units shall be capable of interfacing to a wall thermostat; have a blank out label to cover the control panel for wall thermostat applications; and have a removable wall thermostat terminal block, to simplify field wiring. No additional field-installed kits shall be required.

Wall thermostat interface shall provide two fan speed selections to maximize comfort.

Compatible with 2 wire central desk control systems.

Freeze Guard to automatically activate the electric heater and indoor fan to warm the room, to prevent damage from freezing temperatures. Freeze guard will be active as long as there is power supplied to the unit. Unit shall have the ability to disable Freeze guard, if needed.

Unit shall have the option to display temperature in °F or °C.

Unit will have memory; in case power is lost, unit will return to all previous settings.

Unit will have a random compressor restart after a power outage, to prevent power surges due to many units turning on at the same time.

Room temperature sensing shall use a Solid state thermostat control.

J. **Front Panel (supplied with chassis):** Front panel shall be constructed of a polymer material to resist breakage and corrosion. It shall have a front louvered surface with integrated control door and air filters. The air filters shall be easily accessible without removing the front panel from the chassis.

K. **Air Filters:** The chassis shall contain air filters, with a minimum of 40% arrestance per ASHRAE Standard 52.1. Two easily accessible front access supply air filters, shall be interchangeable, washable and permanent type. The vent filter shall be a one-piece, removable and washable type filter.

L. **Bi-Directional Discharge Grille:** Bi-directional polymer discharge grille shall resist corrosion and breakage. It shall be easily set to direct air at 40 degrees from horizontal or 80 degrees from horizontal. This non-metallic discharge grille shall be cool to the touch during the heating cycle.

M. **Ventilation:** The chassis shall have a manual adjustable fresh air vent with a concealed manual control. The vent control shall allow a maximum of up to 65 CFM of fresh air to be drawn into the room when the indoor fan is operating and the door is open.

N. **High Efficiency Condensate Removal System:** The chassis shall have a condensate removal system consisting of a condensate suction port, to draw and atomize condensate, and a slinger ring integrated in the outdoor fan, to disperse condensate onto the condenser coil to be evaporated.

O. **Accessories:**

1. **Power Cord** (PN: PWRCORD-xxxV-xxA) accessory, is required for all corded applications.
2. **Hardwire kit** (PN: HARDWIRE-KIT-xxA) shall be required if an accessory power cord is not used. The hardwire kit provides a permanent connection to the unit and shall have 36" (914 mm) of flexible steel conduit and a plug-in connector for easy connect/disconnect.
3. **Insulated Polymer Wall Sleeve** (PN: SLEEVE-INSUL-1PK) shall be made from a molded polymer, with factory installed insulation and a minimum flammability rating of UL94-5V. The sleeve surface shall be textured to prevent shine and hide scratches.
4. **Deep Wall Metal Wall Sleeve** (up to 28" / 711.2 mm.) (PN: SLEEVE-EXTxx-1PK) shall be a one- piece, extended wall sleeve, with factory installed insulation and deep wall baffles integrated.
5. **Sleeve Molding** (PN: SLEEVE-MOLDING) shall trim the wall sleeve to the existing wall to hide wall joints and irregularities due to the sleeve opening.
6. **Architectural Grille** (PN:GRILLE-PLA-xxxxx or GRILLE-ALU-xxxxx) shall be polymeric for long durable life or painted aluminum for a superior color match to the building.
7. **Subbase** (PN: SUBBASE-xxxV-xxA) shall be pre-assembled from the factory and UL listed. Subbase options include:
   - — ***Non-electrical subbase:*** The non-electrical subbase shall be pre-assembled and provides mechanical support and requires no wiring.
   - — ***Electrical subbase:*** The electrical subbase shall be pre-assembled with factory-installed electrical junction box containing a receptacle for corded units.
8. **Drain kit** (PN: DRAIN-KIT-4PK): This universal drain kit shall be used internally or externally to route excess condensate to a drainage system. It can be field-installed on any Carrier wall sleeve. The drain kit shall be attached to the exterior right or left side of the wall sleeve for external draining or may be mounted to the bottom of the wall sleeve for internal draining. The drain kit shall include both a straight tube and a 90˚ bend tube.
9. **Wall Thermostats** (PN: PN: TT-N-411 & PN: TT-N-421) The digital wall thermostat shall have a large LCD display with backlighting, operate with 24VAC, be non-programmable, easy to use and provide maximum guest comfort.

3.0 DELIVERY, STORAGE, AND HANDLING

The packaging of the chassis shall be sufficient to protect the chassis from damage during shipment via an enclosed truck. Chassis must also be able to withstand an impact force of 8 g's and a random continuous force of 1g, during shipping.

Chassis, wall sleeves, and grilles shall be shipped in separate cartons. Universal handling instructions shall be defined and visible on the carton, from front, back and sides.

Chassis shall be capable of withstanding temperatures from -40˚F to 155˚F (-40˚C to 68.3˚C), at 5 to 95 percent RH, non-condensing, during shipment and storage, without component failure.

Printed in U.S.A. Edition Date: 8/10 Catalog No. PTAC-GA-1GS