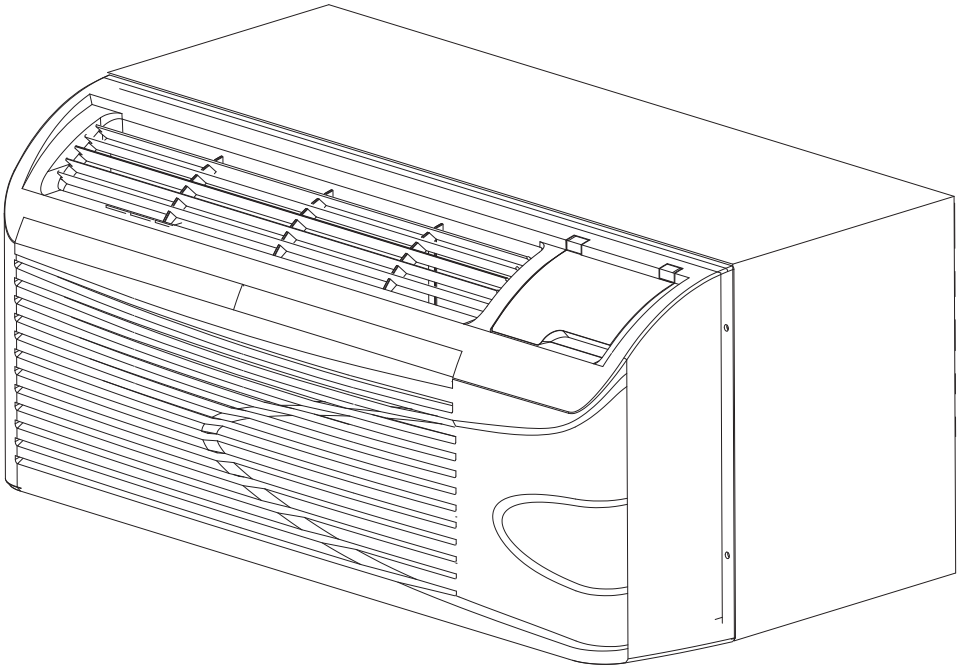
GA Series
Packaged Terminal Air Conditioner / Heat Pump
7,000 – 15,000 Btuh

Product Data



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GA

QUICK SPECIFICATIONS

COOLING & ELECTRIC HEAT

MODEL NUMBER	Voltage	Cooling Capacity BTUH	EER	Electrical Heating Capacity	Reverse Cycle Heat (BTUH)	COP	Voltage Range	Standard Indoor CFM (Dry / Wet)†			COOLING		Approx. Ship Weight lb
								Low	Med	High	AMPS	WATTS	
PTAC-GAE07AB-D	208/ 230V	7600/7700	12.2/12	15 or 20 Amp cord only*	–	–	187 – 253	260/240	280/260	300/280	3.0/2.8	620/640	121
PTAC-GAE09AB-D		8800/9000	11.4/11.3		–	–		260/240	280/260	300/280	3.9/3.7	770/800	128
PTAC-GAE12AB-D		11800/12000	10.5/10.7	15, 20 or 30 Amp cord only*	–	–		270/250	290/270	310/290	5.5/5.1	1120/1120	137
PTAC-GAE15AB-D		14600/15000	9.7/9.8		–	–		300/280	320/300	340/320	7.5/6.7	1510/1530	143
PTAC-GAE07AB-P	265V	7700	12	15 or 20 Amp cord only*	–	–	239–292	260/240	280/260	300/280	2.4	640	121
PTAC-GAE09AB-P		9000	11.3		–	–		260/240	280/260	300/280	3.7	800	128
PTAC-GAE12AB-P		12000	10.7	15, 20 or 30 Amp cord.*	–	–		270/250	290/270	310/290	4.8	1120	137
PTAC-GAE15AB-P		15000	9.8		–	–		300/280	320/300	340/320	5.9	1530	143

HEAT PUMPS

Model No.	Voltage	Cooling Capacity BTUH	EER	Electrical Heating Capacity	Reverse Cycle Heat BTUH	COP	Voltage Range	Standard Indoor CFM (Dry / Wet)†			COOLING		Approx. Ship Weight lb
								Low	Med	High	AMPS	WATTS	
PTAC-GAA07AB-D	208/ 230V	7600/7700	12.2/12	15 or 20 Amp cord only*	6100/6300	3.4/3.4	187–253	260/240	280/260	300/280	3.0/2.8	620/640	121
PTAC-GAA09AB-D		8800/9000	11.4/11.3		7900/8100	3.3/3.3	187–253	260/240	280/260	300/280	3.9/3.7	770/800	128
PTAC-GAA12AB-D		11800/12000	10.5/10.7	15, 20 or 30 Amp cord only*	10500/10700	3.1.3.1	187–253	270/250	290/270	310/290	5.3 / 5.1	1120/1120	137
PTAC-GAA15AB-D		15000	9.8	15, 20 or 30 Amp cord only*	13800	2.9	207–253	300/280	320/300	340/320	6.7	1530	143
PTAC-GAA07AB-P	265V	7700	12	15 or 20 Amp cord only*	6300	3.4	239–292	260/240	280/260	300/280	2.4	640	121
PTAC-GAA09AB-P		9000	11.3		8100	3.3	239–292	260/240	280/260	300/280	3.7	800	128
PTAC-GAA12AB-P		12000	10.7	15, 20 or 30 Amp cord.*	10700	3.1	239–292	270/250	290/270	310/290	4.8	1120	137
PTAC-GAA15AB-P		15000	9.8	15, 20 or 30 Amp cord.*	13800	2.9	239–292	300/280	320/300	340/320	5.9	1530	143

* See Power Cord Selection chart below for heating capacity rating. Using 30 Amp cords on U07 and U09 models could result in damage to unit.
† Dry = Heat Mode Indoor Standard CFM @ 230 or 265 volt / Wet = Cool Mode Indoor Standard CFM @ 230 or 265 volt

POWER CORD SELECTION:

Gree's GA aeries PTACs are not individually equipped with a power cord, so one must be ordered separately based on the voltage and amperage of your electrical circuit. If the unit is to be plugged into a receptacle, then a line cord connection kit needs to be selected. If it will be permanently connected, a hardwire connection must be used.

Model No.	Voltage	Receptacle Type		Heating (Btuh)	Heater (Kw)	Input Power (WH)	Current (Amps)	Branch Circuit Full Amps
PWRCORD–230V–15A	208/230V		15 AMP /250V	5500/6800	1.635/2.0	1643/2047	7.9/8.9	15
PWRCORD–230V–20A			20 AMP / 250V	8300/10200	2.453/3.0	2496/3036	12.2/13.2	20
PWRCORD–230V–30A			30 AMP / 250V	13900/17000	4.089/5.0	4118/5037	20.5/21.5	30
PWRCORD–265V–15A	265V		15 AMP / 277V	6800	2.0	2120	8.9	15
PWRCORD–265V–20A			20 AMP / 277V	10200	3.0	3127	13.2	20
PWRCORD–265V–20A			30 AMP / 277V	17000	5.0	5035	21.5	30

NOTE: In compliance with UL, and the National Electrical Code, 265V units installed with a power cord require the use use of a 265V electrical subbase.

GA

Always look for these symbols, the air conditioning industry seals of certified performance, efficiency and capacity.

APPLICATIONS

Whether you are designing a new structure or replacing packaged terminal air conditioning units in an existing building, Gree GA Series will meet your needs.

- Hotels and motels
- Nursing homes and assisted living care centers
- Offices
- Apartments
- Single-family dwellings
- Home conversions and residential add-ons

NEW CONSTRUCTION

The Gree GA series Packaged Terminal Air Conditioning (PTAC) unit is designed to meet the needs of the architect, engineer, and contractor. For unit installation, Gree's expert support network will assist in all applicable aspects of the construction project, from preparing a budget to start-up.

ADVANTAGES FOR NEW CONSTRUCTION

Design Flexibility for the Architect/Engineer

- Whisper-quiet performance, indoors and out
- No bulky duct system
- No separate equipment room
- No water towers or additional cooling equipment
- No complex match-up of different HVAC components
- Less sensitivity to building orientation (sun, wind, shade)
- Optional architectural grille to permit custom exterior appearance

Initial Cost Savings for the Building Owner

- No expensive component HVAC system purchase
- No equipment room or maintenance engineering staff
- Two-part delivery to minimize on-site damage
- Weather-protected wall sleeve that goes in place during construction; chassis that slides in place after construction
- No seasonal changeover required for cooling or heating - units are self-contained comfort systems

Lower Operating Costs and Reliable Comfort for The Occupant

- Heat pump models offer substantial savings over models with conventional electric resistance heaters
- Individual units allow tenants to choose the degree of comfort and operating economy.
- Rapid servicing reduces downtime: complete chassis can be replaced in minutes without disrupting other occupants.
- Each unit operates independently of other units in the building. No dependency by building on central HVAC system.

RETROFIT/REPLACEMENT

If you are replacing a unit in an existing wall sleeve, your options include:

- Replace the existing wall sleeve with the the polymer wall sleeve. See accessory sleeve section for selecting the correct sleeve for your application.
  NOTE: in most cases, when replacing the wall sleeve, the exterior grille must also be replaced.
- Use an existing sleeve and exterior grille. The Gree GA series PTAC will fit into:
  - The following major competitors' wall sleeves/grilles: Carrier, GE, Amana, Trane, Friedrich and Bryant, and NO accessory retrofit kit is required.
  - Friedrich T series and ZoneAire wall sleeves, with a required wall sleeve extension (see accessory Friedrich Retrofit Wall Sleeve Adapter).

APPLICATION CONSIDERATIONS

Installation instructions are shipped with all PTAC units. It is important that air conditioning systems be properly sized and installed for each application in order to achieve the desired temperature and humidity levels within the space to be conditioned. It is strongly recommended that a professional engineer match the PTAC units with the building structure and climate.

The following application considerations are all important in choosing the proper PTAC system for the building structure.

Undersizing

If a PTAC unit is undersized (cooling capacity is less than required load for an application), the unit will not be able to cool the space down to the desired temperature during very hot days. The result could be warm and humid or warm and dry conditioned space.

Oversizing

If a PTAC unit is oversized (cooling capacity is greater than required load for the specific application), the unit will cool the space down to the desired desired temperature too quickly.

The unit will cycle on and off, however, dehumidification only takes place when the unit is operating. The result of this type of application in a hot and/or humid climate would be a cool, yet excessively humid, space.

Air Infiltration

Excessive air infiltration can intensify problems associated with undersizing or oversizing a PTAC unit. This can be the cause of insufficient cooling, dehumidification, or heating. Sources of air infiltration include vents, gaps around windows and doors, and improperly sealed floors, ceilings or wall joints.

Condensate Removal

Gree's GA series has a new condensate (water) disposal system. The outdoor fan prop has a built in slinger ring which draws condensate water through a suction port built into the outdoor coil shroud. The water passes though the suction port and is sprayed on the warm outdoor coil for evaporation. Thus providing better disposal of excess condensate and improving unit operating efficiency.

It is normal and desirable to have some condensate water in the ebase pan to boost operating efficiency.

NOTE: This unit will not always evaporate 100% of the unit generated condensate and blown in rain water. If it is necessary to control 100% of the condensate, the Drain Kit (Part No.: DRAIN-KIT-4PK) and a building condensate drain system is recommended.

PRODUCT CATALOG NUMBER-NOMENCLATURE

PTAC-GA **E** **12** **AB** **D** **-CP**

Series Designation
PTAC (Packaged Terminal Air Conditioner)

Performance Series
E – Cooling with Electric Heat
A– Heat Pump

Cooling Capacity (nominal)
07 – 7,000 Btuh
09 – 9,000 Btuh
12 – 12,000 Btuh
15 – 15,000 Btuh

AB - Major & Minor Revsions

Electrical Data
D– 208–v, 60HZ
D– 230–v, 60Hz
P– 265–v, 60 Hz

None – Standard Protection
CP – Corrosion Protection

A08385

ACCESSORY POWER CORD (REQUIRED) CATALOG NUMBER

PWRCORD – **230v** – **20A**

Kit Description
PWRCORD = Power Cord

Voltage
230v = 208/230-v, 60 Hz
265v = 265-v, 60 Hz

Amperage
15A = 15 Amps
20A = 20 Amps
30A = 30 Amps

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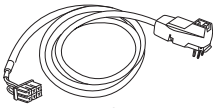
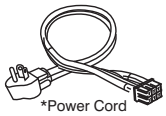


*Power Cord
for 208/230v*

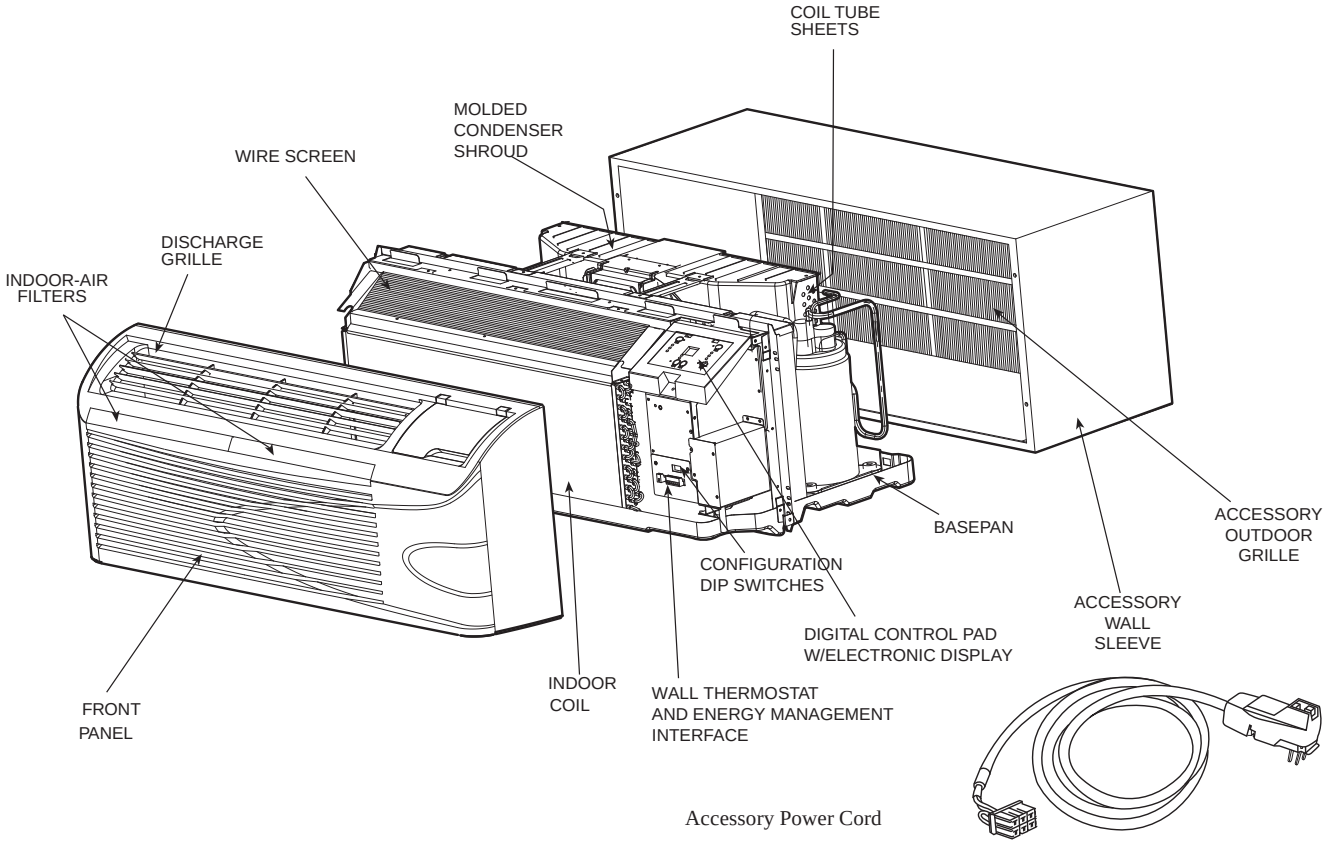


*Power Cord
for 265v

A07637

PRODUCT OVERVIEW (GA Series)

This section summarizes product features covered in detail in later sections of this manual.



GA

- **Accessory Power Cord or Hardwire Kit (required) –** Select correct power cord or hardwire kit to match voltage and amperage of electrical circuit.
- **Polymer, Metal or Extended Wall Sleeve –** Designed for rugged duty, acoustic absorption, and attractive appearance for years to come.
- **Rotary Compressors –** Provide quiet, reliable operation.
- **Copper Tube Aluminum Fin Coils –** Enhanced coils provide durability, high performance, and ease of operation.
- **Fresh Air Control Arm –** Allows outdoor air into room through vent filter for improved air quality.
- **Control Door –** Provides protection for controls and enhances appearance.
- **Condensate Removal –** Minimizes condensate water on outside of building.
- **Two-Piece Filter Design –** Provides improved air filtration and can be removed easily for cleaning.
- **Louvered Front Panel –** Made of high impact polystyrene. Provides improved performance and quiet operation.
- **Digital Control Pad with Electronic Display –** Easy to select: mode, fan speed and set point with an easy to read electronic display. In ˚F or ˚C.
- **Configuration Dip Switches –** Setup the system perfect for the exact application.
- **Wall Thermostat Interface –** A terminal block for wiring up a wall thermostat that is easy to wire to and is easy to remove.
- **EM (Energy Management) Interface –** A plug for connecting to an Energy Management system or Front Desk Control. Easy to wire to and easy to remove.

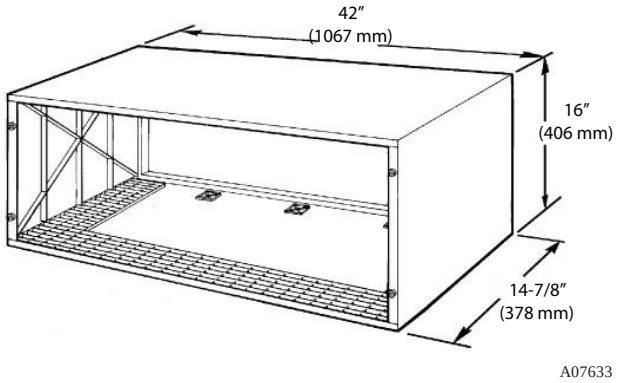
PRODUCT FEATURES AND BENEFITS (GA Series)

NO-RUST WALL SLEEVE AND FRONT PANEL

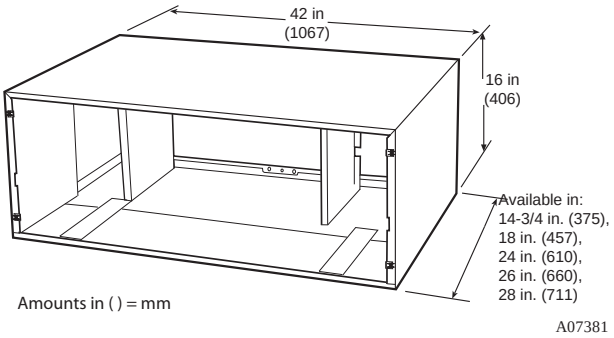
The indoor front panel and polymer wall sleeve use nonmetallic compounds that never rust or corrode, do not support combustion, and do not give off toxic fumes. The weather-resistant feature exceeds requirements of Underwriters Laboratories and resists damage caused by impact and scratching.

Insulated polymer wall sleeves combine all of the above features with factory-installed insulation. The insulation helps to reduce heat loss, save energy, provide better sound absorption, and reduce the risk of sleeve sweating.

Grees's metal wall sleeves are available in a variety of sizes for most standard and deep wall applications. All metal wall sleeves come with factory-installed insulation, designed to minimize heat loss and reduce outdoor noise transmissions into the room.



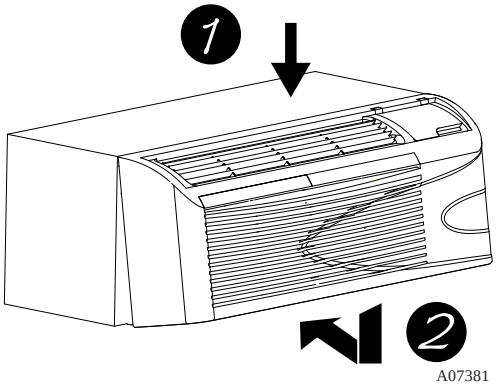
Standard Wall Sleeve (Polymer)



Standard and Deep Wall Sleeve (Metal)

REMOVABLE FRONT PANEL

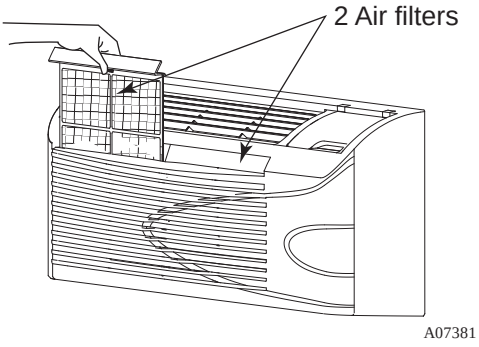
The louvered front panel fits firmly onto the chassis and features easy removal for service. It provides front air intake to enhance performance and quiet operation.



Front Panel

TWO-PIECE LIFETIME INDOOR FILTER

Two-piece removable filters easily slide in and out from the front of the PTAC unit and are interchangeable. The front panel does not need to be removed to access or change the filters. The filters are washable and permanent.

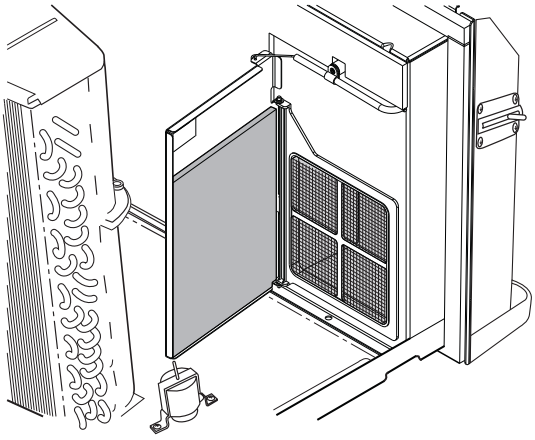


Two–Piece Indoor Filter

OUTDOOR AIR VENTILATION

The unique vent system is activated by a two-position control. Fresh outside air is redirected by the vent door to the indoor room. A molded plastic filter prevents dirt and debris from entering the room side of the unit. The vent mechanism is made from non corrosive material ensuring reliable operation. Amagnet on the door and high-pressure airflow create a tight, draft free seal when the vent door is closed.

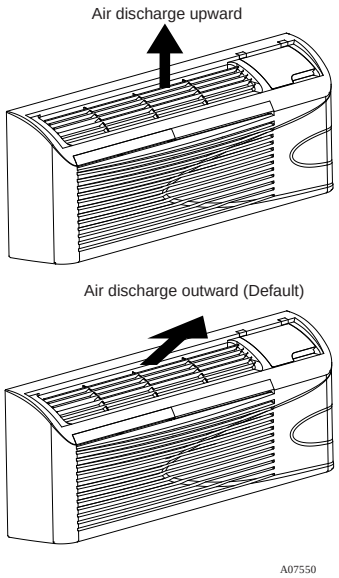
The vent will provide up to 65 cfm of fresh air.



Outdoor Air Ventilation

BI-DIRECTIONAL DISCHARGE GRILLE

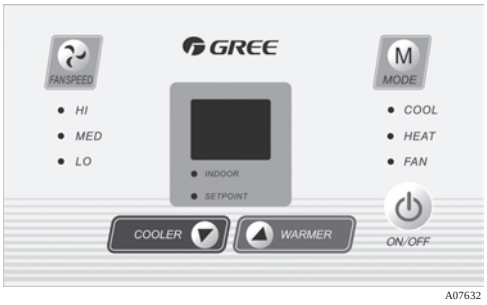
The discharge grille is constructed of durable polycarbonate and is reversible. Air flows upward at a 40 degree angle to the floor but can easily be adjusted to an 80 degree angle to the floor.



Reversible Polycarbonate Discharge Grille

DIGITAL KEYPAD AND ELECTRONIC DISPLAY

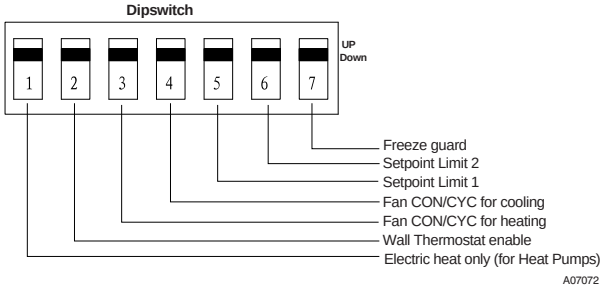
The digital keypad provides a simple to operate control. The large, easy to press, "On/Off", "Fan Speed", "Mode", "Setpoint Up" and "Setpoint Down" buttons make the control easy to operate. LEDs are used to show the operating conditions selected. Large numbers are used to display the Setpoint, and if configured, room air temperature.



Electronic Display

SYSTEM CONFIGURATION

There are many different configuration possibilities, through both dip switches and the digital keypad, that allow you to configure the unit for your exact application. See Owner's Manual for more detailed information.



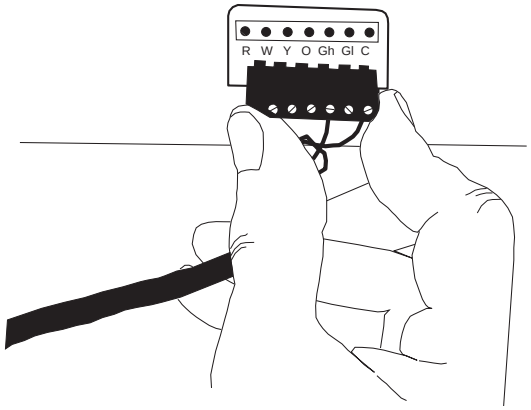
Dip Switches

WALL THERMOSTAT INTERFACE

The standard wall thermostat interface provides a simple to install thermostat connection. The unit has a removable terminal connector to make field wiring easy. See more info on wall thermostat connections in the Dimensional Drawings and Installation Data Section.

Notes:

- — Thermostat wire is field supplied and recommended wire size is 18 to 20 gage solid thermostat wire.
- — Wire should never be routed through the wall sleeve.
- — It is recommended to include extra wires in case a wire breaks or is cut during installation.
- — The thermostat is ordered separately and a Gree PTAC approved thermostat is recommended, see the accessory chart in the back.

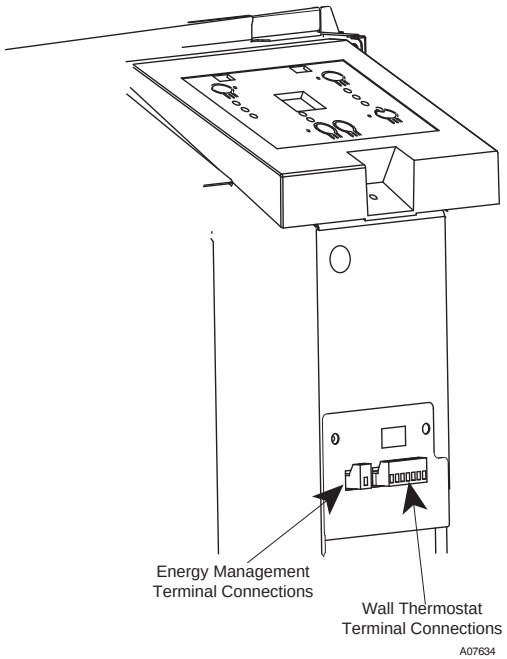


Terminal Connector Removal and Replacement

EM (ENERGY MANAGEMENT) INTERFACE

The EM interface is standard and provides a simple to install, Energy Management connection. The unit has a removable terminal connector to make field wiring easy. When 24VAC is supplied to the input (the EM connection), the unit will turn off. Once the 24VAC is removed (becomes 0 volts), the unit will turn back on.

Note: For more info, see the section in the back, Typical Wiring Schematic For Energy Management Interface.

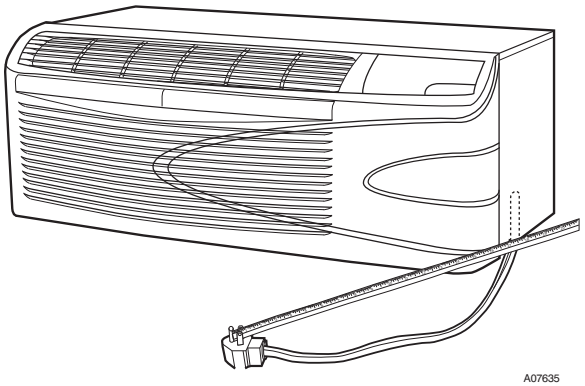


Wall Thermostat and Energy Management Interface

POWER CORD FOR 265V UNITS

The 265v power cord extends 15–in. (381 mm) from bottom of front panel and, per UL and National Electric Codes (NEC), must plug into an electrical subbase.

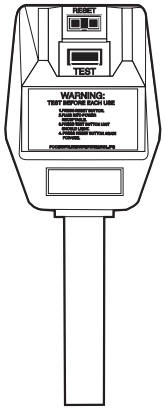
Note: Accessory power cord and electrical subbase sold separately. (See *Accessory* section in back of this document.)



265V Power Cord

POWER CORD PROTECTION FOR 230/208V UNITS

The power cord for the 208/230-v unit provides power cord protection by automatically disconnecting power during an unsafe condition. Power can be restored by pressing the RESET button.



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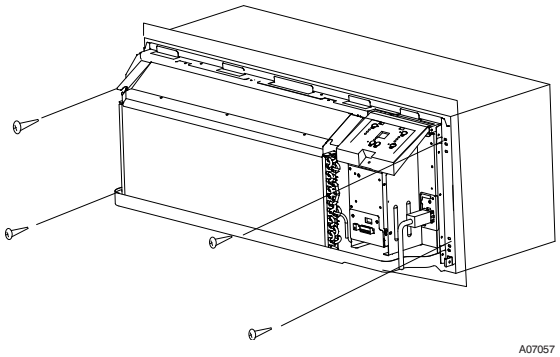
Power cord Plug Head

BI-MOLDED

GA

EASY ACCESS TO CHASSIS

Access to the chassis simply requires removing front panel, then four easy to access screws and then sliding the chassis out of the sleeve for service or maintenance.



A07057

Easy to Access Chassis

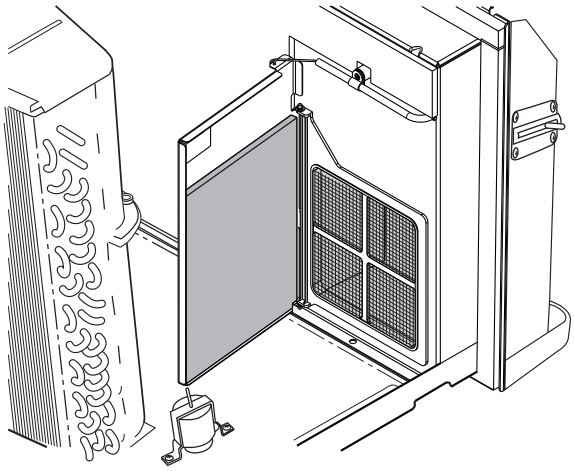
CONDENSATE DRAIN VALVE

The temperature-activated drain valve opens when the outdoor temperature drops below 55˚ F (12.8˚ C) to prevent water from freezing in the basepan.

SEAMLESS BASEPAN

Seamless drawn basepan walls add protection against water accumulation resulting from storm-driven rain with heavy wind.

Gree's deep basepan holds up to 1-3/4 gallons (6.6 liters) of water without spilling. Closed cell foam insulators are located between the basepan and coils, keeping coils from direct contact with the basepan and providing additional protection against corrosion.



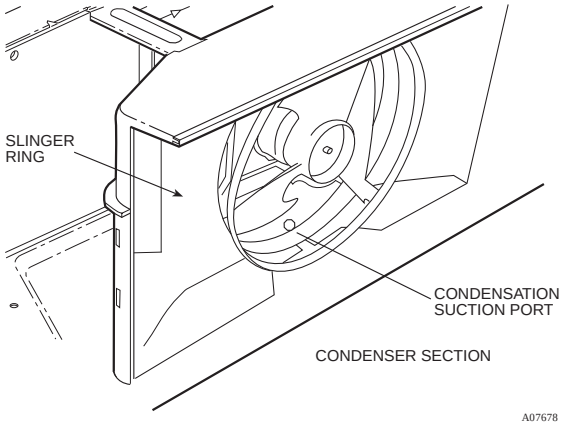
A07550

Condensate Drain Valve Prevents Water from Freezing in Basepan

CONDENSATE REMOVAL

Gree's GA series has a new condensate (water) disposal system. The suction port, along with the slinger ring, draws in water which is sprayed up onto the outdoor coil. The water then evaporates, thus providing better disposal of excess condensate and improving unit efficiency.

NOTE: If it is necessary to control 100% of the condensate, the Drain Kit (Part No.: DRAIN-KIT-4PK) is recommended.



A07678

Condensate Removal System

CORROSION PROTECTION

To protect against the corrosive effects of a seacoast environment, this option includes:

- A standard chassis with front panel
- Special outdoor section protections consisting of:
  - — All exposed steel components are painted.
  - — Coated outdoor coil fins and tubing.
  - — Stainless steel tube sheets (outdoor coil)
  - — Totally enclosed fan motor with moisture resistant windings.

All installations within one mile of the sea coast or other corrosive environment must use Corrosion Protection (CP).

NOTE: Refer to the product warranty for reduced warranty coverage on standard non-corrosion protected units installed within one mile of the of the sea coast or within a corrosive environment.

A09078

Corrosion Protection

GA

Corrosion Protected Models are not currently available.

Contact your customer service representative for more information.

HEAT PUMPS PAY THEIR OWN WAY

Heat pump models are available at a nominal additional cost. In many locales, the payback is realized in just a few months. Cost and payback details are provided on the next page.

SPECIAL FEATURES

Two-Stage Thermostat:

The indoor thermostat senses the indoor temperature and automatically turns on the electric heat to warm the room quickly. After the desired temperature conditions have been satisfied, the thermostat automatically switches to heat pump mode. If compressor failure occurs, the thermostat will provide backup electric heat automatically.

Outdoor Thermostat:

During the heating cycle, the outdoor thermostat senses outdoor coil temperature. It switches the unit to electric heat mode when the outdoor coil temperature is 28˚ F (-2.2˚ C) or below for one minute. The thermostat switches the unit back to heat pump mode when the outdoor coil temperature rises above 40˚ F (4.4˚ C) for ten minutes, which is enough to provide heat to meet demand. The entire operation is completely automatic.

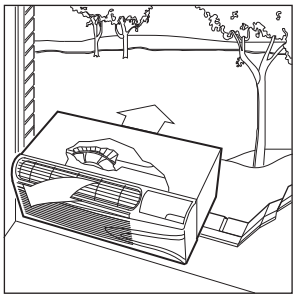
Reversing Valve:

The reversing valve provides quiet refrigerant flow when energized in heating mode. The valve controls the direction of refrigerant flow for both heating and cooling functions and remains energized as long as the controls are in the heat position. When the cooling controls are activated, the valve automatically reverses to the cooling position.

Manual Compressor Override Configuration:

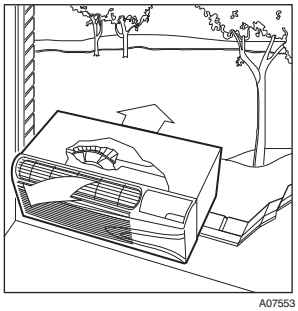
This configuration dip switch completely locks out the compressor. See Owners Manual for more details.Note that the compressor and heater do not operate at the same time, thus conserving energy.

HOW THE HEAT PUMP WORKS



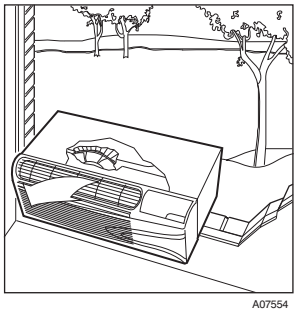
In Hot Weather:

Gree's PTAC units provide indoor comfort in the same manner as conventional air conditioners, removing heat and humidity fromindoor air. The heat and humidity is released to the outdoors. Gree's high efficiency design saves energy and reduces cooling costs.



In Cool Weather:

When the outdoor coil temperature is above 28˚ F (-2.2˚ C), the heat pump draws heat from outdoor air and uses it to heat indoor air. Since heat is transferred and not produced, Gree's heat pump uses less electricity and reduces energy costs significantly.



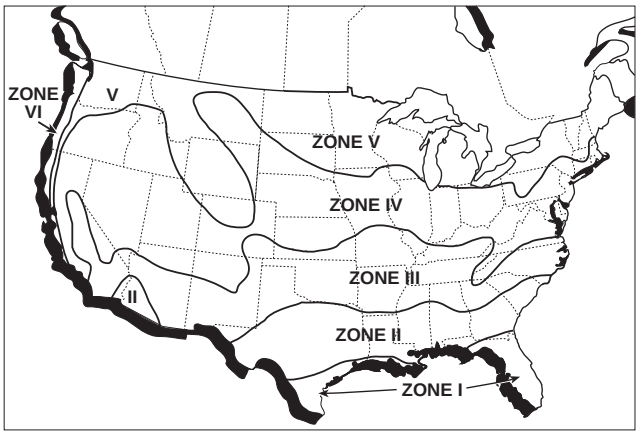
In Sub-Freezing Weather:

When the outdoor coil temperature falls below 28˚ F (-2.2˚ C) for one minute, the unit automatically switches on a built-in electric heater. The compressor stops and the indoor fan circulates warm air produced by the heater. When the outdoor coil temperature rises above 40˚ F (4.4˚ C) for ten minutes, heat pump operation resumes automatically.

HEAT PUMP ENERGY SAVINGS

Heat pumps save more on operating costs during the heating cycle than heat/cool models. The table below shows that the higher initial cost of purchasing a heat pump is quickly made up in lower operating costs.

Use the map to identify the climate zone's designated number. Reading down the left-hand column of the table, select the cost/kWh rate in this zone that most closely approximates your local rate. The approximated savings and payback period is found at the intersection of your zone/rate line and the desired Btuh Cooling Capacity column. Exact savings are determined by lifestyle, local electrical rates, and climatic conditions.



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GA

GREE HEAT PUMP INITIAL COST VERSUS SAVINGS OVER HEAT/COOL MODELS

ZONE	ELECTRIC COST/kWH	7,000 BTUH (2,051 WH)1 COOLING CAPACITY	$60 PREMIUM	9,000 BTUH (2,638 WH)2 COOLING CAPACITY	$75 PREMIUM	12,000 BTUH (3,517 WH)2 COOLING CAPACITY	$90 PREMIUM	15,000 BTUH (4,396 WH)3 COOLING CAPACITY	$110 PREMIUM
		Annual Savings*	Payback in Months	Annual Savings*	Payback in Months	Annual Savings*	Payback in Months	Annual Savings*	Payback in Months
I	$.06	$ 34.26	21	$ 43.08	21	$ 58.20	19	$ 68.34	19
	$.08	$ 45.68	16	$ 57.44	16	$ 77.60	14	$ 91.12	14
	$.10	$ 57.10	13	$ 71.80	13	$ 97.00	11	$113.90	12
II	$.06	$ 57.12	13	$ 71.76	13	$ 96.96	11	$113.64	12
	$.08	$ 76.16	9	$ 95.68	9	$129.28	8	$151.52	9
	$.10	$ 95.20	8	$119.60	8	$161.60	7	$189.40	7
III	$.06	$ 58.02	12	$ 72.84	12	$ 98.40	11	$115.38	11
	$.08	$ 77.36	9	$ 97.12	9	$131.20	8	$153.84	9
	$.10	$ 96.70	7	$121.40	7	$164.00	7	$192.30	7
IV	$.06	$ 82.02	9	$103.02	9	$139.14	8	$163.14	8
	$.08	$109.36	7	$137.36	7	$185.52	6	$217.52	6
	$.10	$136.70	5	$171.70	5	$231.90	5	$271.90	5
	$.12	$164.04	4	$206.04	4	$278.28	4	$326.28	4
	$.14	$191.38	4	$240.38	4	$324.66	3	$380.66	3
	$.16	$218.72	3	$274.72	3	$371.04	3	$435.04	3
V	$.06	$ 57.36	13	$ 71.94	13	$ 97.26	11	$113.94	12
	$.08	$ 76.48	9	$ 95.92	9	$129.68	8	$151.92	9
	$.10	$ 95.60	8	$119.90	8	$162.10	7	$189.90	7
	$.12	$114.72	6	$143.88	6	$194.52	6	$227.88	6
	$.14	$133.84	5	$167.86	5	$272.33	4	$265.86	5
VI	$.06	$ 93.72	8	$117.66	8	$159.00	7	$186.48	7
	$.08	$124.96	6	$156.88	6	$212.00	5	$248.64	5
	$.10	$156.20	5	$196.10	5	$265.00	4	$310.80	4
	$.12	$187.44	4	$235.32	4	$318.00	3	$372.96	4

LEGEND

kWH – Kilowatt Hour

* Computer projections based on full cooling load at 95° F (35° C). Savings projected for 230 v ratings.

1 Heating load is 5,000 Btuh (1465 WH) at winter design point temperature.

2 Heating load is 10,000 Btuh (2931 WH) at winter design point temperature.

3 Heating load is 15,000 Btuh (4396 WH) at winter design point temperature.

FIELD-INSTALLED ACCESSORIES

WALL SLEEVES

For the best performance and longest life, Gree recommends genuine polymer wall sleeves for all installations.

All Gree wall sleeves are built with a pitch of 1/4 in. per foot (20.3 mm/m); for self-pitching of the unit. Overflow slots on the outside of the sleeve are in place to divert excess water during severe weather.

Important Sleeve Installation Considerations:

- All Gree sleeves are self pitching and must be mounted level in all directions.
- The sleeve should be caulked on all sides, including both inside and outside the building.
- If more than 4 in. (101.6 mm) of wall sleeve projects into the room, an accessory subbase must be used for support.
- For all applications with an accessory subbase, wall sleeve must extend 3-1/4 in. (82.6 mm) minimum into room and must be 3-1/4 in. (82.6 mm) minimum to 5-1/2 in. (139.7 mm) maximum above floor (including carpeting) to allow for proper fit of subbase.
- For applications where the wall sleeve is mounted flush to the exterior of the building (or recessed in), Gree recommends a field-supplied drip edge be installed to prevent water infiltration into the building.
- Insulated wall sleeves should be considered for superior sound absorption, to reduce heat loss and to prevent sleeve sweating, a condition that can occur when the outside temperature is cold and the indoor conditions are warm and humid.

Polymer Wall Sleeves

Choose a polymer wall sleeve for maximum protection and appearance.

All polymer wall sleeves are made from a molded polymer that is designed for strength and durability. This material has excellent corrosion resistance and a flammability rating of UL94-5V.

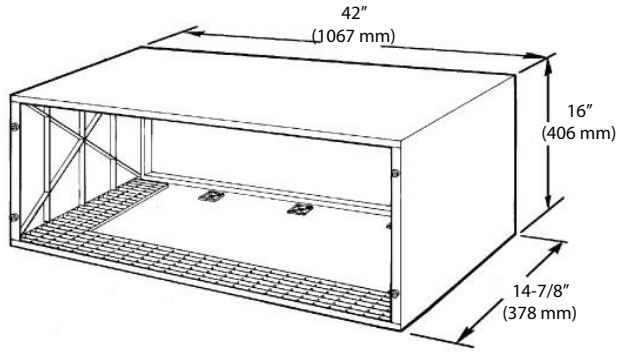
The sleeve surface is textured to prevent shine and hide scratches. The rib configuration on the sleeve bottom allows easy chassis removal and aids in drainage. The locating holes in the side and top panels allow for easy fastening of the sleeve to wall openings. Refer to dimension drawings for typical wall installation and dimensions. The sleeve's alpine mist color (a shade of beige) closely matches the front panel and blends in well with any inside or outside decor. The polymer wall sleeve comes in both insulated (factory installed) or non-insulated, to meet the requirements of every application.

Insulated Polymer Wall Sleeve

Part No.: SLEEVE-INSUL-1PK

Gree's accessory insulated polymer wall sleeve, with factory-installed insulation, provides superior sound absorption, reduces heat loss and prevents sleeve sweating, a condition that can occur when the outside temperature is cold and the indoor conditions are warm and humid.

IMPORTANT: Insulated Polymer Wall Sleeve provides superior sound absorption, reduces heat loss and prevents sleeve sweating.



Corrosion-Protected Polymer Sleeve

Non-Insulated Polymer Wall Sleeve

Part No.: WALL-SLEEVE-1PK

Gree's accessory non-insulated polymer wall sleeve provides a superior appearance and protection for many applications.

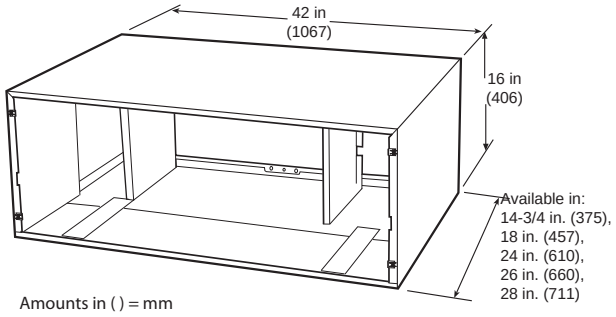
For applications where weather conditions could influence sleeve sweating, a condition that can occur when the outside temperature is cold and the indoor conditions are warm and humid, the Insulated Polymer Wall Sleeve should be considered.

FIELD-INSTALLED ACCESSORIES (CONT.)

Insulated Metal Wall Sleeves

Part No.: SLEEVE-STEEL-1PK
Part No.: SLEEVE-EXT18-1PK
Part No.: SLEEVE-EXT24-1PK
Part No.: SLEEVE-EXT26-1PK
Part No.: SLEEVE-EXT28-1PK

Gree's metal wall sleeves are available in a variety of sizes for most applications and difficult installations. Choose from 14-3/4 in., 18 in., 24 in., 26 in., or 28 in. (375 mm, 457mm, 610 mm, 660 mm, and 711 mm) standard depth sizes . All metal wall sleeves come with factory-installed insulation, designed to minimize heat loss, reduce outdoor noise transmissions into the room and prevent sleeve sweating. In addition, the metal wall sleeve provides a flammability rating higher than UL94-5V.



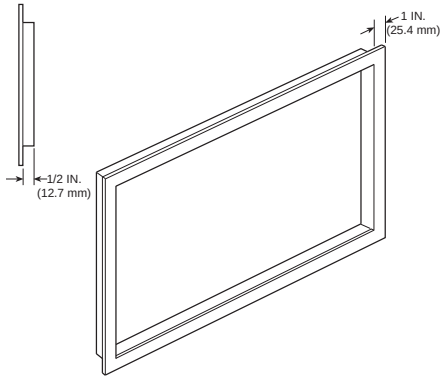
Standard and Extended Metal Wall Sleeve

GA

Wall Sleeve Molding Kit

Part No.: SLEEVE–MOLDING

For a superior look and to hide any construction imperfections, use Gree's wall sleeve molding kit to trim the wall sleeve to the wall. The molding kit is a perfect solution and can be used with any Gree wall sleeve (matches wall sleeve color).

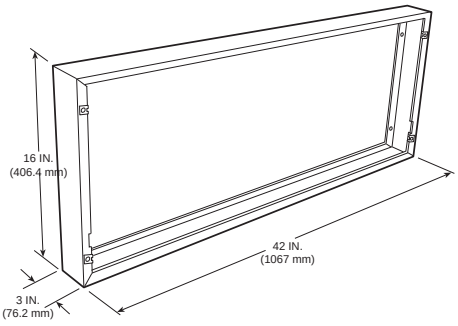


Wall Sleeve Molding Kit

Friedrich (and ZoneAire) Retrofit Wall Sleeve Adapter

Part No.: FR-SLEEVE-EXT

The Friedrich (and ZoneAire) wall sleeve adapter is constructed of metal and is designed to increase the depth of an existing Friedrich T-series or ZoneAire wall sleeve to accommodate all industry standard PTAC units.



Friedrich Wall Sleeve Adapter Kit

FIELD-INSTALLED ACCESSORIES (CONT.)

OUTDOOR GRILLES

Gree recommends only the use of Gree-supplied grilles for use with the GA series units. However, the architectural designs of a building may dictate the use of special or oversized grilles and/or louvers. Special louvers or any special architectural treatment of the building facade that may restrict free circulation of condenser airflow should be referred to Gree Corporation for evaluation and approval.

Aluminum Architectural Outdoor Grilles (Louvered)

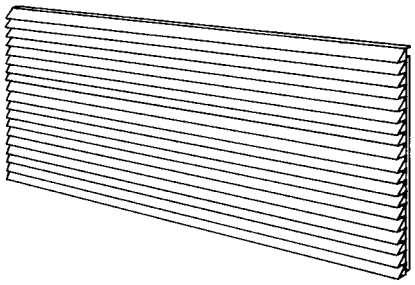
Part No.: GRILLE-ALU-CLEAR (anodized aluminum)
Part No.: GRILLE-ALU-WHITE
Part No.: GRILLE-ALU-BEIGE
Part No.: GRILLE-ALU-ALPIN (color matches wall sleeve)
Part No.: GRILLE-ALU-BRONZ
Part No.: GRILLE-ALU-MBRNZ
Part No.: GRILLE-ALU-BROWN

This premium line of decorative outdoor grilles will enhance the appearance of any building. The grilles are made of strong, durable, extruded, anodized aluminum and are designed to be mounted easily from inside the room. These elegant grilles, available in many standard colors, have baked enamel finishes containing 50% Kynar® resin, for a superior finish that will withstand the most extreme conditions.

Polymeric Architectural Outdoor Grilles (Louvered)

Part No.: GRILLE-PLA-BEIGE
Part No.: GRILLE-PLA-ALPIN
(color matches Gree's polymer wall sleeve)

This value line of polymeric architectural outdoor grilles will blend attractively with most building exteriors. Mounted easily from inside the room, the one-piece, molded grille is designed for protection, enhanced appearance, and superior weather-resistance. The grille is made of durable polymer and has a colorfast, lightly textured finish that blends well with most exterior finishes.

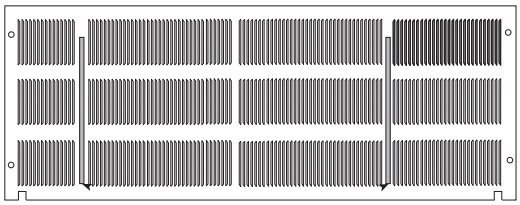


Architectural Grille in Aluminum or Polymeric

Standard Outdoor Aluminum Grille

Part No.: GRILLE-ALU-STAMP

This cost-effective, one-piece standard grille is made from durable anodized aluminum. The grille is lightweight, has a clear finish, and is easy to install from inside the room.



Standard Grille

FIELD–INSTALLED ACCESSORIES (CONT.)

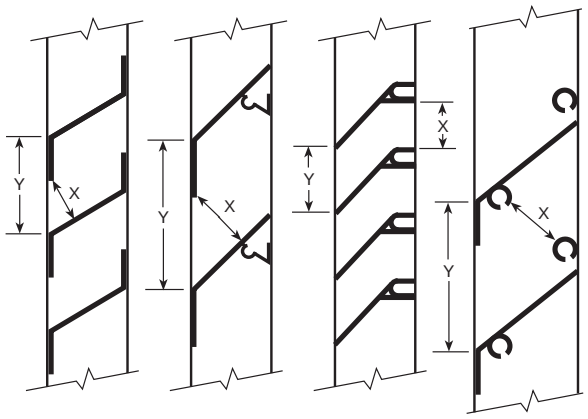
OUTDOOR GRILLE SELECTION

IMPORTANT: If you wish to use a grille not made for the Gree GA series contact Gree Application Engineering.

The following guidelines must be followed in the initial selection of any alternate exterior grille or louver:

1. The louver must have a minimum of 65% free area. Free area is the minimum area of the opening in an air inlet or outlet in which air can pass. Free Area (%) = X/Y.
2. The louver should be attached to the wall sleeve in a manner that will prevent recirculation of condenser discharge air into the inlet. In most applications, baffles, splitters, and/or gasket will be required between the chassis tube end sheets and the louver to prevent air recirculation.

The above criteria must be followed, since a louver that is restrictive or allows re–circulation will result in a reduction of the unit's capacity and efficiency and will ultimately shorten the compressor life.



Louver Dimensional Reference

Sample Calculations

$$\text{Free Area (\%)} = \frac{x}{y} \times 100$$

$x = 1$

$y = 1.5$

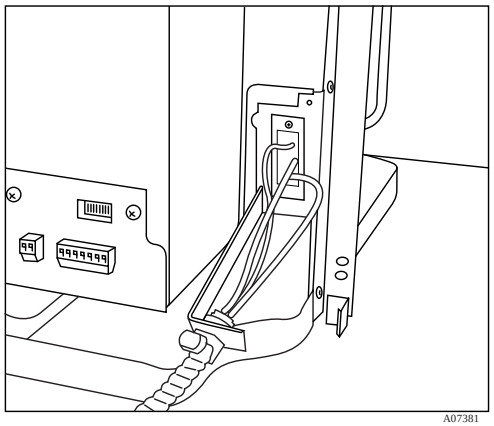
$$\text{F.A. (\%)} = \frac{1}{1.5} \times 100 = 66.7\%$$

GA

Hardwire Kit

Part No.: HARDWIRE-KIT-15A
HARDWIRE-KIT-20A
HARDWIRE-KIT-30A

This accessory hardwire kit provides a permanent connection to the unit. Electrical hard wiring is required when NEC (National Electrical Code) or local codes restrict the use of power cord and plug connections. The hardwire kit easily mounts on the front right side of the unit and comes with 36 inches (914.4 mm) of flexible steel conduit.

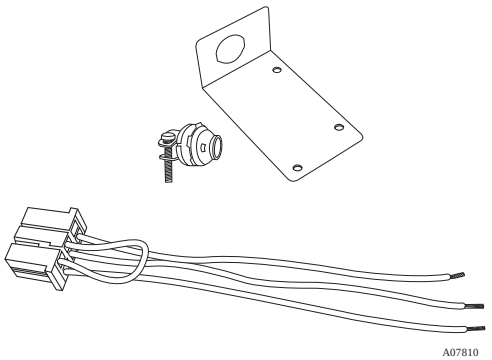


Hardwire Kit

Conduit Interface Kit

Part No.: CONDUIT-KIT-15A
CONDUIT-KIT-20A
CONDUIT-KIT-30A

The conduit interface accessory kit provides an easy wire connection to the unit to interface to existing field–supplied conduit.



Conduit Interface Kit

FIELD-INSTALLED ACCESSORIES (CONT.)

SUBBASE

Part No.: SUBBASE-230V-15A
Part No.: SUBBASE-230V-20A
Part No.: SUBBASE-230V-30A
Part No.: SUBBASE-265V-15A
Part No.: SUBBASE-265V-20A
Part No.: SUBBASE-265V-30A
Part No.: SUBBASE-NON-ELEC
Part No.: LEVELING-LEGS

This decorative subbase supports the unit and is available in three basic models: non-electrical, electrical, and hardwired.

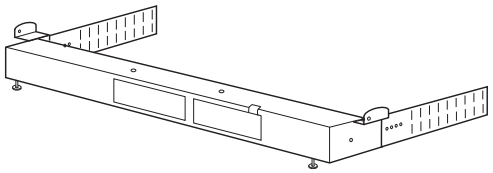
A subbase (or leveling legs) is required for installations where the wall sleeve extends 4 or more inches into the room or the wall is less than 2 in. (50.8 mm) thick. The minimum clearance between the bottom of the sleeve and the floor is 3-1/4 in. (82.6 mm), and the maximum clearance is 5-1/2 (139.7 mm) inches.

All subbase models are pre-assembled, mount to the wall sleeve, and come with adjustable legs and side skirting to provide a finished appearance.

IMPORTANT: All standard cord-connected 265-v PTAC units will require a field-installed electrical subbase accessory per UL and NEC electrical codes.

Non-Electrical Subbase

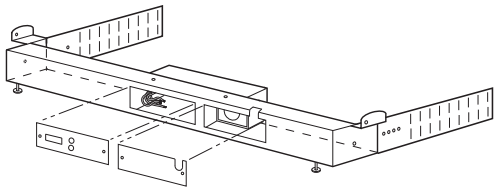
The easy to install, non-electrical subbase provides mechanical support and requires no wiring.



Non-Electrical Subbase Assembly

Electrical Subbase

The electrical subbase has a factory-installed electrical junction box containing a receptacle for corded packaged terminal air conditioner (PTAC) units. The electrical subbase series offers models from 230-v, 15 amp up to 265-v, 30 amp. Knockouts are provided for power source connections.



Electrical Subbase Assembly

FIELD-INSTALLED ACCESSORIES (CONT.)

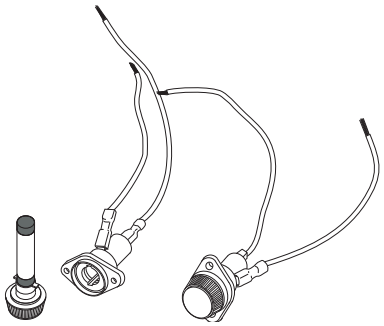
Subbase Fuse Kit

Part No.: SUBBASE-FUSE-15A

Part No.: SUBBASE-FUSE-20A

Part No.: SUBBASE-FUSE-30A

The fuse kit provides in-line over-current protection at the unit when required by NEC (National Electric Code) or local codes.



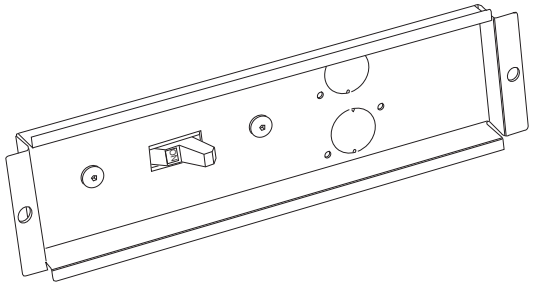
Subbase Fuse Kit

Subbase Power Disconnect Switch

Part No.: SUBBASE-SWITCH

The subbase power disconnect 2-pole switch provides a recessed power disconnect for the PTAC unit when required by NEC or local codes.

IMPORTANT: The fuse Kits & disconnect switch accessories can only be used with the electrical or hardwired subbase

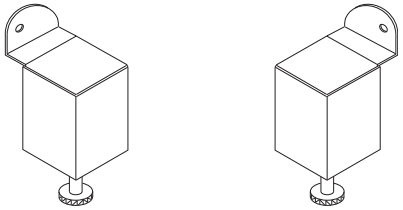


Power Disconnect Switch Assembly

Leveling Legs

Part No.: LEVELING-LEGS

Leveling legs attach easily to the wall sleeve and offer accurate leveling and support for units without a subbase. Leveling legs are adjustable from 3-1/4 to 5-1/2 inches (82.6 to 139.7 mm).



Leveling Legs

GA

FIELD-INSTALLED ACCESSORIES (CONT.)

THERMOSTATS

Gree's full line of wall thermostats are designed to enhance every PTAC application. The TopTech Comfort Series of thermostats consists of programmable and non-programmable air conditioner and heat pump controls. These units feature non-mercury, non-lead based electronic controls built into a subtle, 1.2 inch (30.5 mm) slim plastic enclosure. Wall thermostats are simple and easy to use. Wall thermostats provide better temperature and humidity control as they can be placed in an optimal position in the room. All Top Tech 400 series thermostats features Temperature Range Limiting to help prevent wasted energy and optimize energy savings opportunities. See page 30 for thermostat wiring instructions.

In addition, multiple GA series PTACs can be controlled by a single wall thermostat. See page 40 for wiring multiple PTAC units to one thermostat.

Non-Programmable Thermostat

Part No.: TT-N-411 (Heat / Cool Models)
Part No.: TT-N-421 (Heat Pump Models)

This low-voltage, easy-to-use non-programmable thermostat provides maximum guest comfort.

- Dual Powered – Hardwired or Battery
- Large Display with Bright Blue Backlight
- Adjustable Temperature Set Point Limits
- Non-Volatile Memory Retains User Settings
- Easy Access Front Battery Door
- Compressor Short Cycle Protection
- Separate Heating and Cooling Set Points
- ESD Guard™ Electronic Circuitry
- Display Degree F or C Switch
- Mount to Horizontal Box
- Adjustable Temperature Differential

Non-Programmable Thermostat

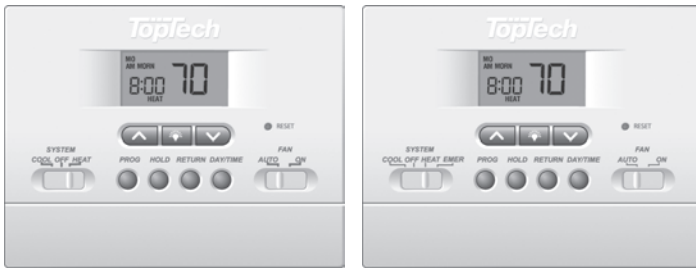
Digital Programmable Thermostat

Part No.: TT-P-411 (Heat / Cool Models)
Part No.: TT-P-421 (Heat Pump Models)

This micro computer controlled, 7-day programmable wall thermostat has enhanced features for both heat pumps and heating/cooling units.

The programmable model includes the non-programmable features plus the following:

- 5-2 Day Separate Weekday / Weekend Programming
- Adaptive Recovery Mode (ARM™)
- Separate Heating and Cooling Set Point Program Times
- Temporary Program Override
- Programmable Extended Hold Mode
- Meets California Title 24 Guidelines



Programmable Thermostat

FIELD-INSTALLED ACCESSORIES (CONT.)

Condensate Drain Kit

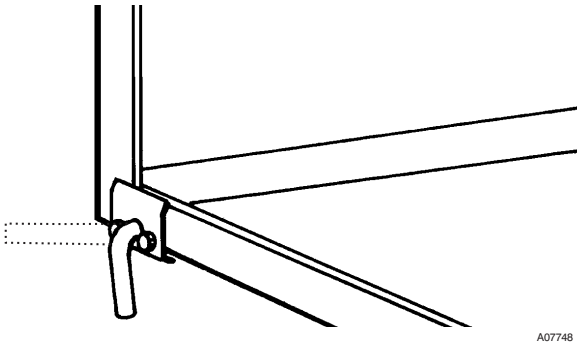
Part No.: DRAIN-KIT-4PK

This universal drain kit may be used internally or externally to route condensate to a drainage system. It can be field-installed on any Gree wall sleeve. Although Gree units are designed to dissipate all the condensate generated during normal cooling, there may be times when abnormal conditions cause more condensate than the unit can dissipate. If condensate that drips from the wall sleeve is objectionable, this internal/external drain kit should be installed.

The drain kit may be attached to the exterior right or left side of the wall sleeve for external draining or mounted to the room side of the wall sleeve for internal draining.

A 6 in. (152.4 mm) straight tube and 90˚ curved tube are supplied to simplify any application (1/2 in. / 12.7 mm OD copper).

IMPORTANT: For internal drains installed in the plastic wall sleeve, the drain must be installed on the flat area of the sleeve. It cannot be installed in the wafer area.



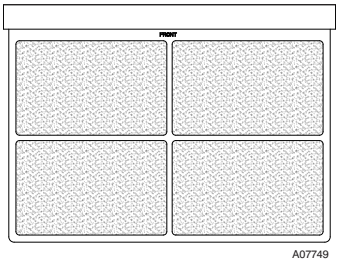
Drain Kit

GA

Replacement Filters

Part No.: GA-FILTER-10PK

The Gree GA model replacement air filters come in packages of 10. The filters save energy by preventing the evaporator coils from being plugged with dirt and lint. These economical and sturdy filters are interchangeable and may be washed, vacuumed, and reused.



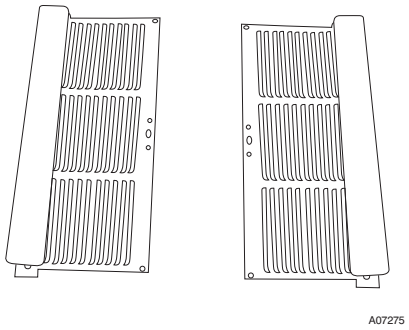
Replacement FIlters

Baffle Kit

Part No.: BAFFLE-KIT-1PK

The accessory baffle kit ensures a good seal between the unit and the exterior grille to prevent air recirculation, which can cause system failure.

The accessory baffle kit is required for applications where a Gree wall sleeve is used without a Gree authorized exterior grille.



Baffle Kit

DIMENSIONAL DRAWINGS AND INSTALLATION DATA – NEW CONSTRUCTION

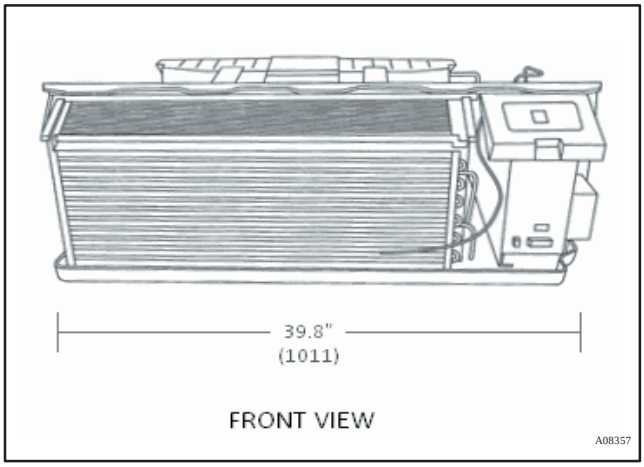
Proper building practices must be used when constructing a wall opening to support a PTAC wall sleeve and chassis.

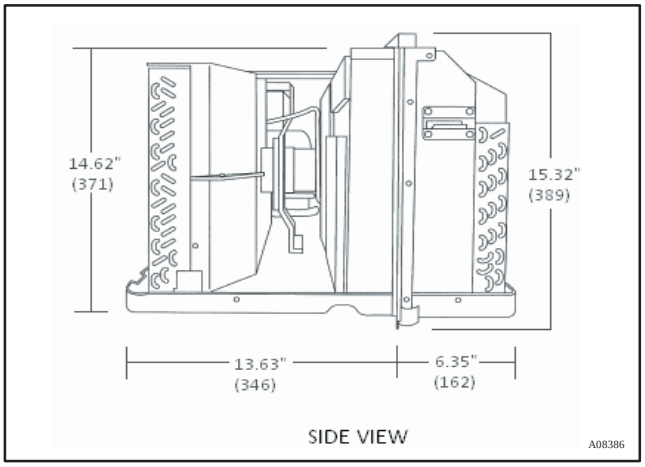
If practices are unknown, consult your local architect or building contractor. Installed wall sleeve must be level from side to side and front to back.

COOLING & ELECTRIC HEAT				
Model No.	**Power Cord Options**	**Voltage Range**	**Approx. Ship Weight lb (kg)**	**Approx. Operating Weight lb (kg)**
GAE07AB-D	15 or 20 Amp cord only*	187 – 253	125 (56.7)	105 (47.6)
GAE09AB-D			125 (56.7)	105 (47.6)
GAE12AB-D	15, 20 or 30 Amp cord only*		140 (63.5)	120 (54.4)
GAE15AB-D			150 (68.0)	130 (59.0)
GAE07AB-P	15 or 20 Amp cord only*	239–292	125 (56.7)	105 (47.6)
GAE09AB-P			125 (56.7)	105 (47.6)
GAE12AB-P	15, 20 or 30 Amp cord.*		140 (63.5)	120 (54.4)
GAE15AB-P			150 (68.0)	130 (59.0)

HEAT PUMPS				
Model No.	**Power Cord Options**	**Voltage Range**	**Approx. Ship Weight lb (kg)**	**Approx. Operating Weight lb (kg)**
GAA07AB-D	15 or 20 Amp cord only*	187–253	125 (56.7)	105 (47.6)
GAA09AB-D			125 (56.7)	105 (47.6)
GAA12AB-D	15, 20 or 30 Amp cord only*		140 (63.5)	120 (54.4)
GAA15AB-D	15, 20 or 30 Amp cord only*	207–253	150 (68.0)	130 (59.0)
GAA07AB-P	15 or 20 Amp cord only*	239–292	125 (56.7)	105 (47.6)
GAA09AB-P			125 (56.7)	105 (47.6)
GAA12AB-P	15, 20 or 30 Amp cord.*		140 (63.5)	120 (54.4)
GAA15AB-P	15, 20 or 30 Amp cord.*	239–292	150 (68.0)	130 (59.0)

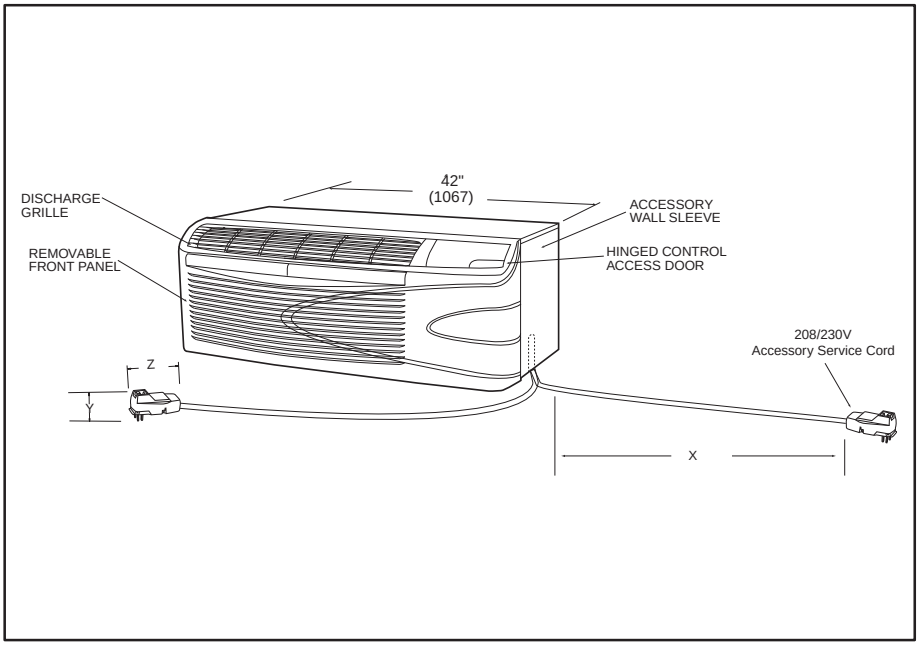
* See Power Cord Selection chart for heating capacity rating. **Using 30 AMP cords on U07 and U09 models could result in damage to unit.**





DIMENSIONAL DRAWINGS AND INSTALLATION DATA CONTINUED

VOLTAGE	CURRENT	DIMENSIONS – Inches (mm)					PLUG TYPE	
VOLTS	AMPS	X	Y		Z		NEMA PLUG	NEMA RECEPTACLE
			SUPPLIER 1	SUPPLIER 2	SUPPLIER 1	SUPPLIER 2		
208/230	15	58 (1473)	2.36 (60)	2.44 (62)	3.35 (85)	4 (101)	6–15P	6–15R
208/230	20	58 (1473)	2.36 (60)	2.44 (62)	3.35 (85)	4 (101)	6–20P	6–20R
208/230	30	58 (1473)	2.55 (65)	4 (101)	2.63 (67)	3.8 (96)	6–30P	6–30R
265	15	15 (381)	1.5 (38.2)		1.46 (37.3)		7–15P	7–15R
265	20	15 (381)	2 (50)		2.48 (63.2)		7–20P	7–20R
265	30	15 (381)	2.41 (61.3)				7–30P	7–30R



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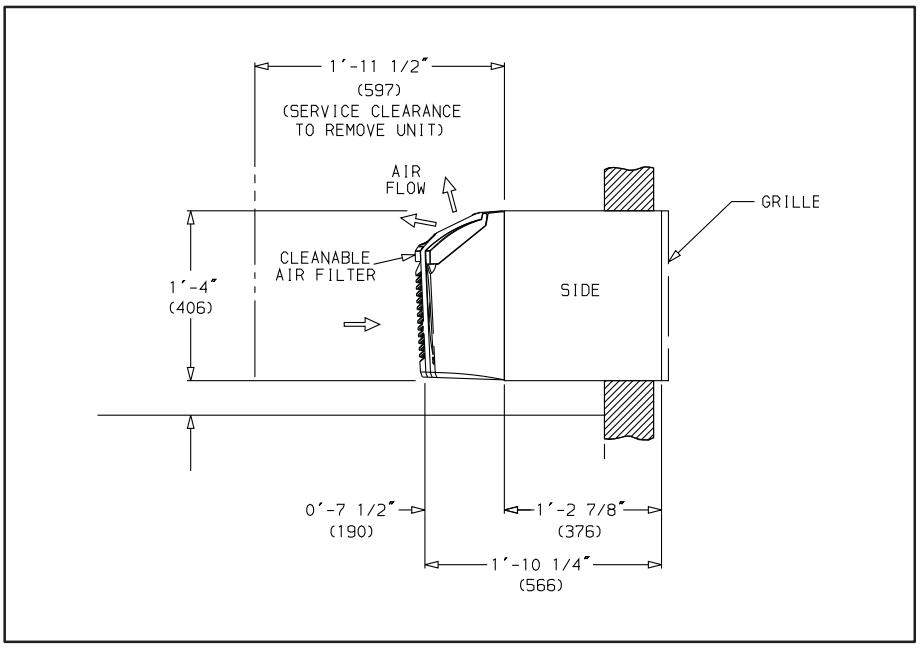
Front View



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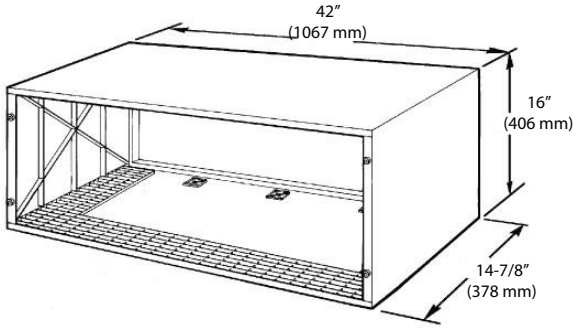
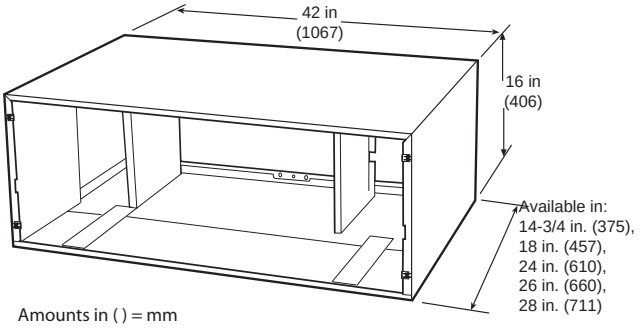
Side View

DIMENSIONAL DRAWINGS AND INSTALLATION DATA – NEW CONSTRUCTION (CONT.)

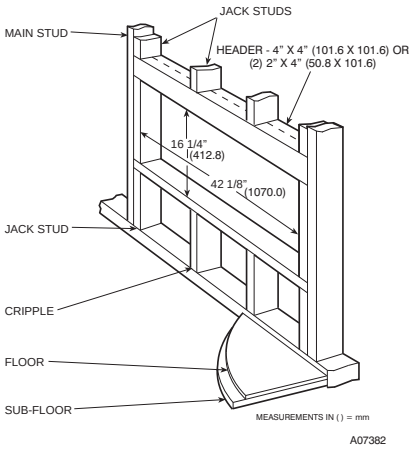
WALL SLEEVE MOUNTING DIMENSIONS FOR STANDARD AND ACCESSORY GRILLES



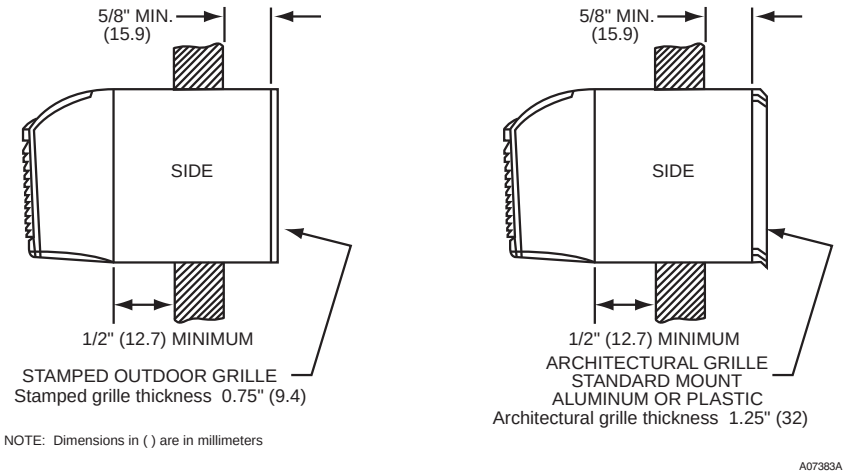
Standard Polymer Non–Insulated Wall Sleeve
Standard Polymer Insulated Wall Sleeve



Standard and Extended Metal Insulated Wall Sleeve

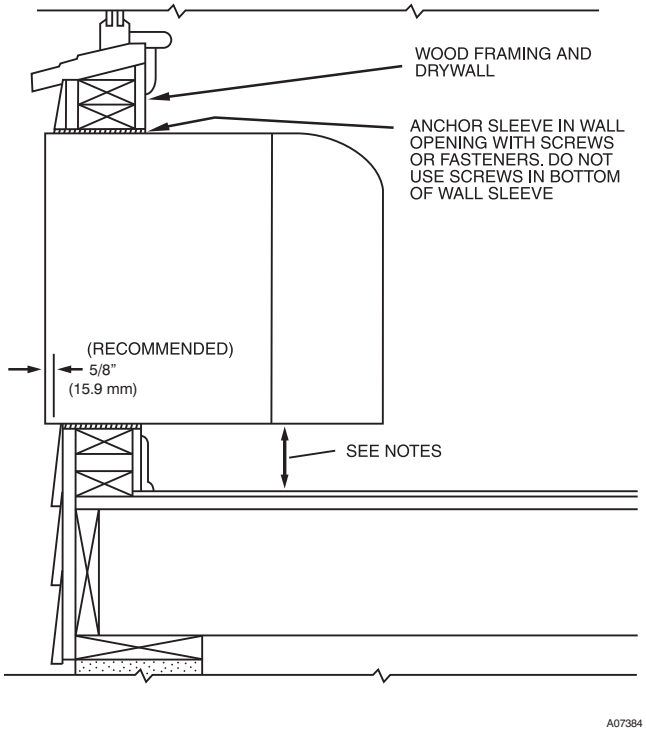


Framing and Minimum Wall Sleeve Opening



Wall Sleeve Mounting (All Models)

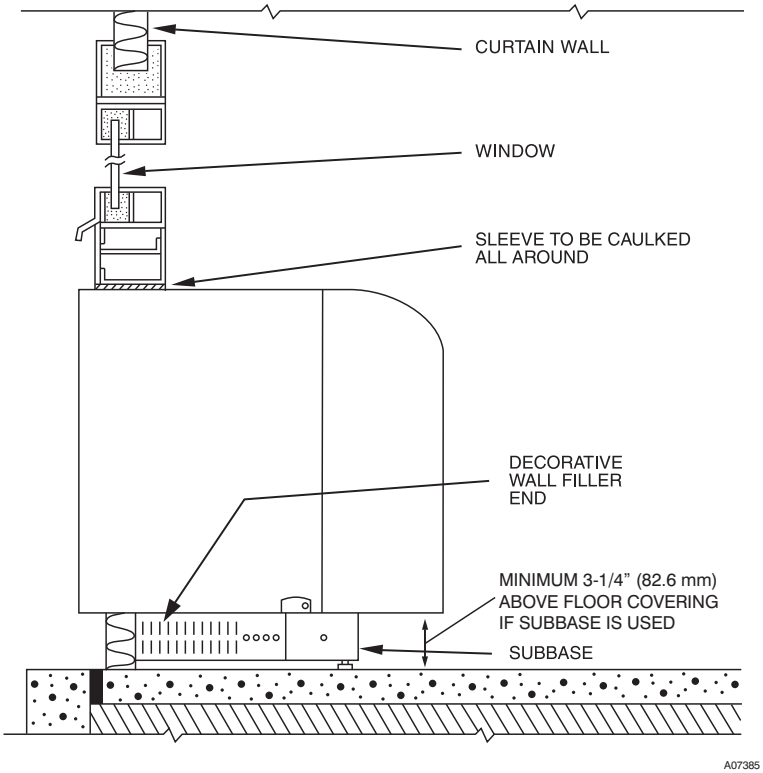
TYPICAL WALL INSTALLATION



Typical Wall Sleeve Installation

NOTES:

1. Sleeve may be flush mounted to floor, but front panel may have to be notched to accommodate service cord.
2. If more than 4 in. (101.6 mm) of sleeve projects into room, an accessory subbase must be used for support.
3. For walls 2 in. (50.8 mm) thick or less, an accessory subbase must be used for support.
4. Caulk around sleeve on both indoor and outdoor sides.



Typical Curtain Wall Installation (All Models)

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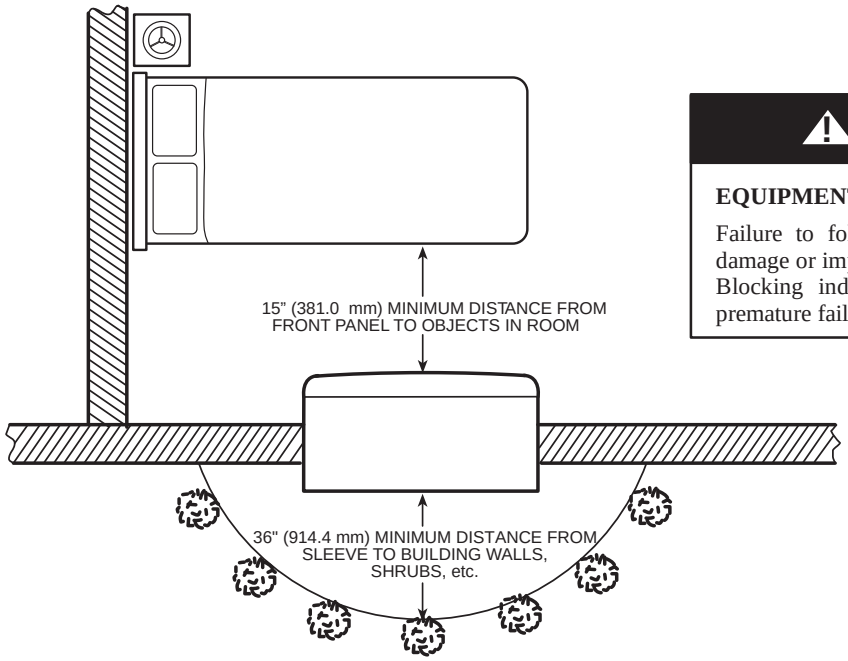
DIMENSIONAL DRAWINGS AND INSTALLATION – NEW CONSTRUCTION (CONT.)

MINIMUM CLEARANCE FOR INDOOR AND OUTDOOR DISCHARGE AIR



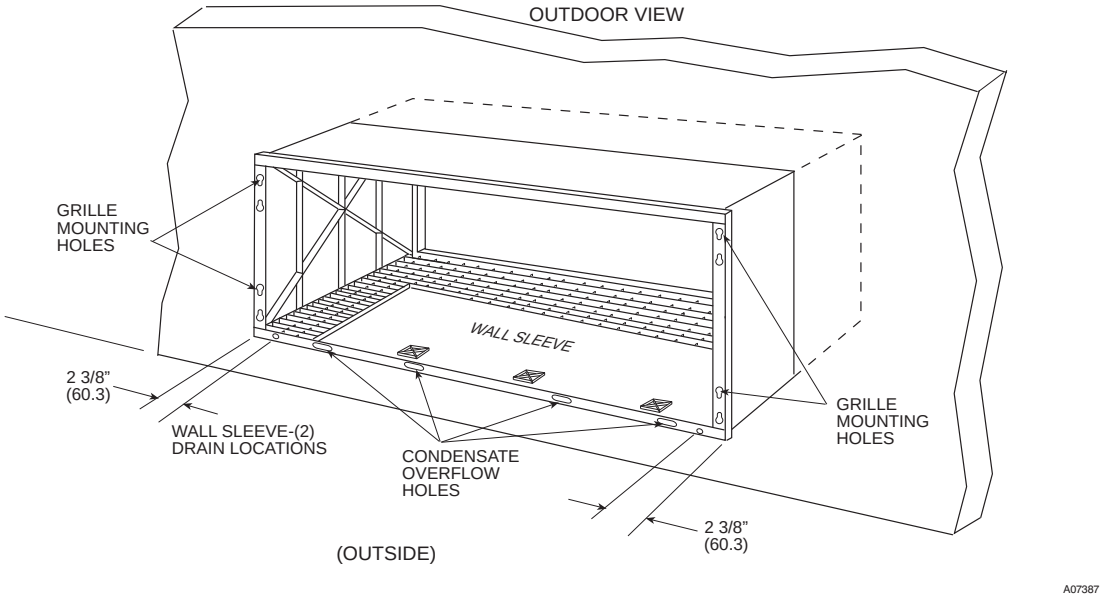
52M Indoor and Outdoor Discharge Air Circulation

⚠ CAUTION

EQUIPMENT OPERATION HAZARD

Failure to follow this caution may result in equipment damage or improper operation.

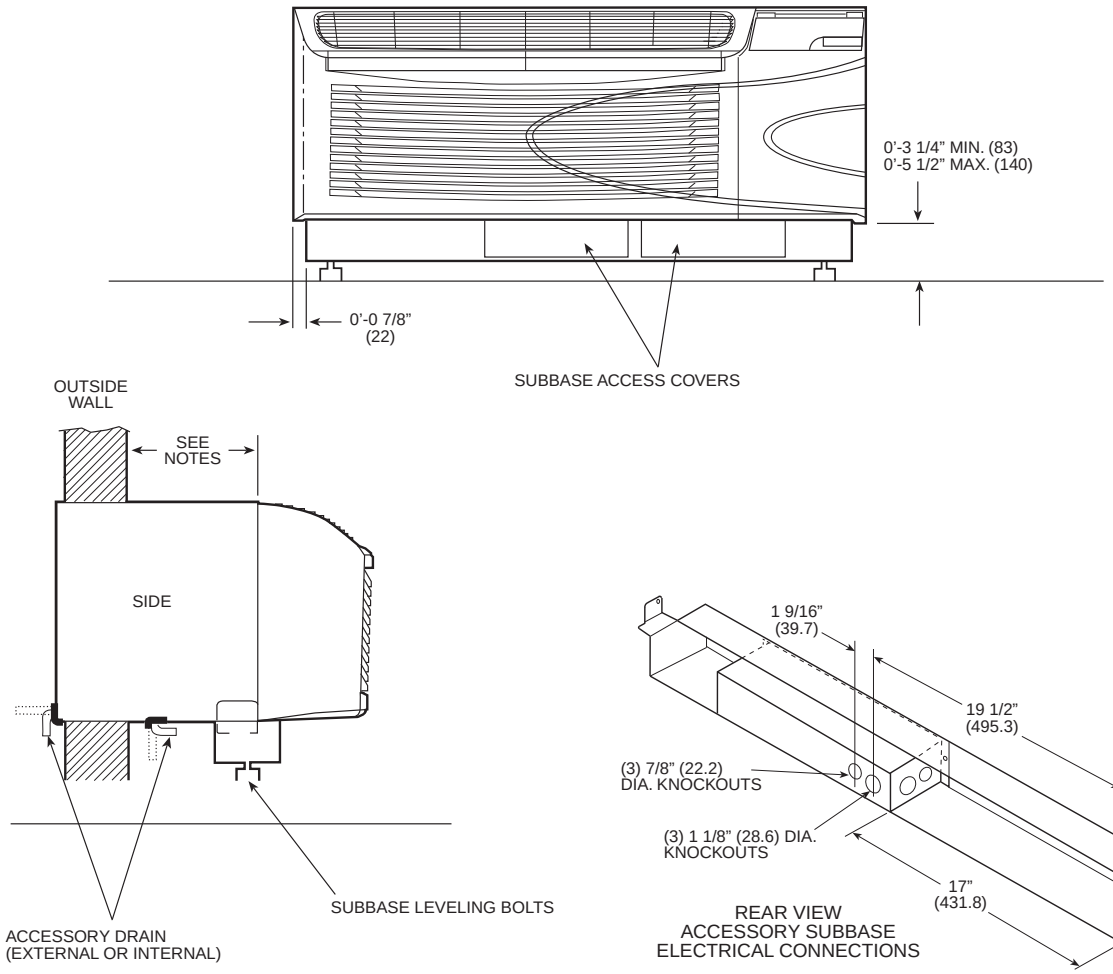
Blocking indoor or outdoor discharge air could cause premature failure of unit.



Back of Polymer Wall Sleeve

DIMENSIONAL DRAWINGS AND INSTALLATION DATA – NEW CONSTRUCTION (CONT.)

TYPICAL SUBBASE INSTALLATION



NOTES:
1. Accessory subbase is required for applications where:
   - Wall sleeve extends 4 inches (101.6 mm) or more into the room.
   - Wall thickness is less than 2 inches (50.8 mm).
   - All 265-v cord-connected applications.
2. For all applications with an accessory subbase:
   - Wall sleeve must extend 4 in. (101.6 mm) into the room and 3-1/4 in. (82.6 mm)minimum above the floor
   - Subbase height is adjustable from 3-1/4 in. (82.6 mm) to 5-1/2 in. (139.7 mm) maximum above floor (including carpeting).
   Refer to wall sleeve installation instructions.

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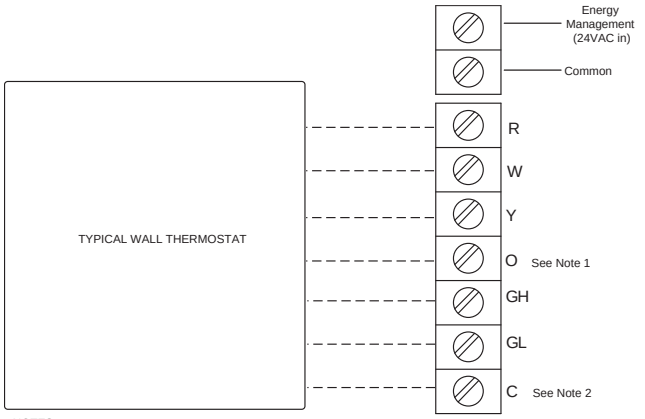
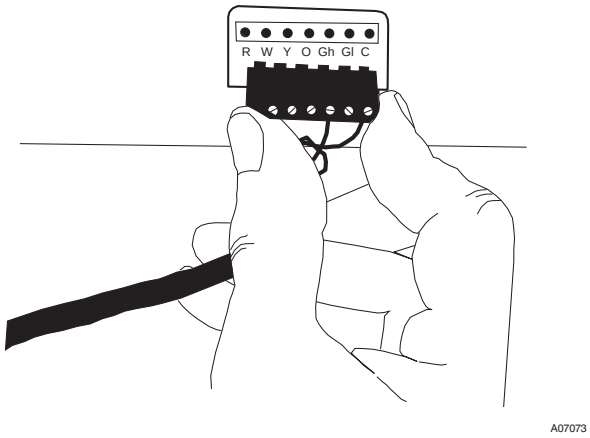
WALL THERMOSTAT CONNECTIONS



NOTES:
1. Use terminal "O" for heat pump connection only.
2. Terminal "C" (common) is typically only required for digital thermostats.

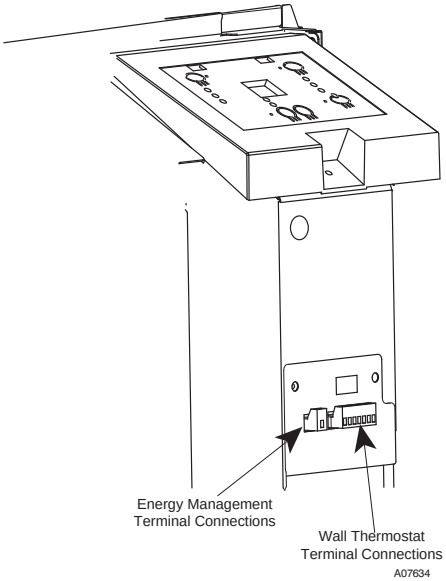
A07059

Control Box Wire Terminal for Wall Thermostat Models



A07073

Terminal Connector Removal and Replacement



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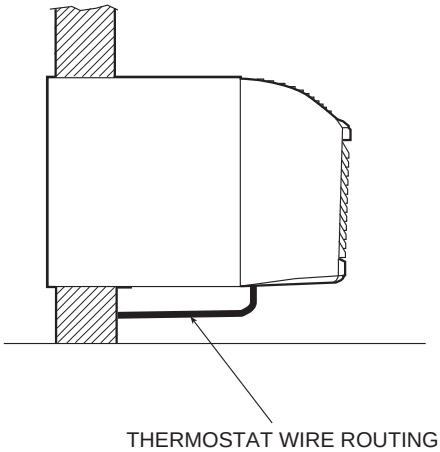
Terminal Connections



A07074

Terminal Wire Routing

NOTE: Thermostat wire is field supplied. Recommended wire gage is 18 to 20 gage solid thermostat wire. Thermostat wire should always be routed around or under, NEVER through, the wall sleeve. The wire should then be routed behind the front panel to the easily accessible terminal connector.

PERFORMANCE AND ELECTRICAL DATA

HEAT/COOL MODELS **MODEL PTAC-GAE (208/230-1-60)**

MODEL NUMBER	CAPACITY*			EER	COP‡	VOLTAGE RANGE	COOLING	
	Cooling Btuh	Heating					AMPS	WATTS
		Rev.Cyc. BtuH	Electric†					
PTAC-GAE07AB-D	7600/7700	N/A	15 or 20 Amp cord only	12.2/12	N/A	187 - 253	3.0/2.8	620/640
PTAC-GAE09AB-D	8800/9000	N/A		11.4/11.3	N/A		3.9/3.7	770/800
PTAC-GAE12AB-D	11800/12000	N/A	15, 20 or 30 Amp cord	10.5/10.7	N/A		5.3/5.1	1120/1120
PTAC-GAE15AB-D	14600/15000	N/A		9.7/9.8	N/A		7.5/6.7	1510/1530

MODEL NUMBER	POWER FACTOR (%)	FAN MOTOR				R-410a CHARGE oz	MAX DEHUM. Pint/Hr	SENSIBLE HEAT FACTOR	APPROX. CHASSIS SHIP WT. lb
		Indoor Motor HP‡	Indoor Motor Full Load Amps	Outdoor Motor HP	Outdoor Motor Full Load Amps				
PTAC-GAE07AB-D	98%	0.024	0.1	0.05	0.35	23.6	1.7	84%	121
PTAC-GAE09AB-D	97%	0.029	0.2	0.05	0.35	33.5	2.2	81%	128
PTAC-GAE12AB-D	99%	0.031	0.2	0.09	0.6	35.3	2.7	67%	137
PTAC-GAE15AB-D	99%	0.031	0.2	0.09	0.6	38.1	3.2	65%	143

LEGEND

EER — Energy Efficiency Ratio

* Rated in accordance with ARI Standard 380-93.

† See power cord selection guide below for electric heating capacity rating. Using 30 Amp cords on U07 and U09 models could result in damage to unit.

‡ Coefficient of Performance (COP) at 47°F (8.3°C) outdoor ambient temperature.

POWER CORD SELECTION GUIDE

GA PTACs are not individually equipped with a power cord, so one must be ordered separately based on the voltage and amperage of your electrical circuit. If the unit is to be plugged into a receptacle, then a line cord connection kit needs to be selected. If it will be permanently connected, a hardwire connection must be used.

Model No.	Voltage	Receptacle Type	Heating (BTUH)	Heater (Kw)	Input Power (WH)	Current (Amps)	Branch Circuit Full Amps
PWRCORD–230V–15A	208/230V	15 amp /250	5500/6800	1.6/2.0	1643/2047	7.9/8.9	15
PWRCORD–230V–20A		20 amp /250	8300/10200	2.5/3.0	2496/3036	12.2/13.2	20
PWRCORD–230V–30A		30 amp /250	13900/17000	4.1/5.0	4118/5037	20.5/21.5	30

RECEPTACLE AND FUSE TYPES

UNIT NAMEPLATE VOLTAGE	230/208		
OUTLET RATED VOLTS/AMPS	250/15	250/20	250/30
OUTLET BLADE CONFIGURATION			
RECEPTACLE TYPE	A	B	C
NEMA CONFIGURATION	6–15R	6–20R	6–30R
TIME DELAY FUSE OR CIRCUIT BREAKER (AMPS)	15	20*	30
NOMINAL HEATER SIZE	1.6/2.0 KW	2.5/3.0 KW	4.1/5.0 KW

LEGEND

NEMA – National Electrical Manufacturers Association

* May be used for 15–amp applications if fused for 15 amps.

PERFORMANCE AND ELECTRICAL DATA (CONT.)

HEAT/COOL MODELS **MODEL PTAC- GAE (265-1-60)**

MODEL NUMBER	CAPACITY*			EER	COP‡	VOLTAGE RANGE	COOLING	
	Cooling Btuh	Heating					AMPS	WATTS
		Rev.Cyc. BtuH	Electric†					
PTAC-GAE07AB-P	7700	N/A	15 or 20 Amp cord only	12	N/A	239 - 292	2.4	640
PTAC-GAE09AB-P	9000	N/A		11.3	N/A		3.7	800
PTAC-GAE12AB-P	12000	N/A	15, 20 or 30 Amp cord	10.7	N/A		4.8	1120
PTAC-GAE15AB-P	15000	N/A		9.8	N/A	239 - 292	5.9	1530

MODEL NUMBER	POWER FACTOR (%)	FAN MOTOR				R-410a CHARGE oz	MAX DEHUM. Pint/Hr	SENSIBLE HEAT FACTOR	APPROX. CHASSIS SHIP WT. lb
		Indoor Motor HP‡	Indoor Motor Full Load Amps	Outdoor Motor HP	Outdoor Motor Full Load Amps				
PTAC-GAE07AB-P	99%	0.024	0.16	0.054	0.3	24.69	1.7	84%	121
PTAC-GAE09AB-P	99%	0.029	0.2	0.054	0.3	33.5	2.2	81%	128
PTAC-GAE12AB-P	99%	0.031	0.2	0.061	0.35	35.98	2.7	67%	137
PTAC-GAE15AB-P	99%	0.031	0.2	0.061	0.35	40.21	3.2	65%	143

LEGEND
EER — Energy Efficiency Ratio
* Rated in accordance with ARI Standard 380-93.
† See power cord selection guide below for electric heating capacity rating. Using 30 Amp cords on U07 and U09 models could result in damage to unit.
‡ Coefficient of Performance (COP) at 47°F (8.3°C) outdoor ambient temperature.

POWER CORD SELECTION GUIDE

GA PTACs are not individually equipped with a power cord, so one must be ordered separately based on the voltage and amperage of your electrical circuit. If the unit is to be plugged into a receptacle, then a line cord connection kit needs to be selected. If it will be permanently connected, a hardwire connection must be used.

Model No.	Voltage	Receptacle Type	Heating (BTUH)	Heater (Kw)	Input Power (WH)	Current (Amps)	Branch Circuit Full Amps
PWRCORD–265V–15A	265V	15 amp / 277	6800	2.0	2120	8.9	15
PWRCORD–265V–20A		20 amp / 277	10200	3.0	3127	13.2	20
PWRCORD–265V–30A		30 amp / 277	17000	5.0	5035	21.5	30

NOTE: In compliance with UL, and the National Electrical Code, 265V units installed with a power cord require the use use of a 265V electrical subbase.

RECEPTACLE AND FUSE TYPES

UNIT NAMEPLATE VOLTAGE	265		
OUTLET RATED VOLTS/AMPS	277/15	277/20	277/30
OUTLET BLADE CONFIGURATION			
RECEPTACLE TYPE	A	B	C
NEMA CONFIGURATION	7–15R	7–20R	7–30R
TIME DELAY FUSE OR CIRCUIT BREAKER (AMPS)	15	20	30
NOMINAL HEATER SIZE	2.0 KW	3.0 KW	5.0 KW

LEGEND
NEMA – National Electrical Manufacturers Association

PERFORMANCE AND ELECTRICAL DATA (CONT.)

HEAT PUMP MODELS **MODEL PTAC-GAA (208/230-1-60)**

MODEL NUMBER	CAPACITY*			EER	COP‡	VOLTAGE RANGE	COOLING	
	Cooling Btuh	Heating					AMPS	WATTS
		Rev.Cyc. BtuH	Electric†					
PTAC-GAA07AB-D	7600/7700	6100/6300	15 or 20 Amp cord only	12.2/12	3.4/3.4	187 - 253	3.0/2.8	620/640
PTAC-GAA09AB-D	8800/9000	7900/8100		11.4/11.3	3.3/3.3		3.9/3.7	770/800
PTAC-GAA12AB-D	11800/12000	10500/10700	15, 20 or 30 Amp cord	10.5/10.7	3.1/3.1		5.3/5.1	1120/1120
PTAC-GAA15AB-D	15000	13800		9.8	2.9	207-253	6.7	1530

MODEL NUMBER	POWER FACTOR (%)	FAN MOTOR				R-410a CHARGE oz	MAX DEHUM. Pint/Hr	SENSIBLE HEAT FACTOR	APPROX. CHASSIS SHIP WT. lb
		Indoor Motor HP‡	Indoor Motor Full Load Amps	Outdoor Motor HP	Outdoor Motor Full Load Amps				
PTAC-GAA07AB-D	97%	0.024	0.1	0.054	0.35	23.6	1.7	84%	121
PTAC-GAA09AB-D	99%	0.029	0.2	0.054	0.35	33.5	2.2	81%	128
PTAC-GAA12AB-D	99%	0.031	0.2	0.088	0.6	35.3	2.7	67%	137
PTAC-GAA15AB-D	98%	0.031	0.2	0.088	0.6	38.1	3.2	65%	143

LEGEND
EER — Energy Efficiency Ratio
* Rated in accordance with ARI Standard 380-93.
† See power cord selection guide below for electric heating capacity rating. Using 30 Amp cords on U07 and U09 models could result in damage to unit.
‡ Fan motor indoor CFM (LO/HI) shown for 230-1-60 units.

POWER CORD SELECTION GUIDE

GA PTACs are not individually equipped with a power cord, so one must be ordered separately based on the voltage and amperage of your electrical circuit. If the unit is to be plugged into a receptacle, then a line cord connection kit needs to be selected. If it will be permanently connected, a hardwire connection must be used.

Model No.	Voltage	Receptacle Type	Heating (BTUH)	Heater (Kw)	Input Power (WH)	Current (Amps)	Branch Circuit Full Amps
PWRCORD–230V–15A	208/230V	15 amp /250	5500/6800	1.6/2.0	1643/2047	7.9/8.9	15
PWRCORD–230V–20A		20 amp /250	8300/10200	2.5/3.0	2496/3036	12.2/13.2	20
PWRCORD–230V–30A		30 amp /250	13900/17000	4.1/5.0	4118/5037	20.5/21.5	30

RECEPTACLE AND FUSE TYPES

UNIT NAMEPLATE VOLTAGE	208/230		
OUTLET RATED VOLTS/AMPS	250/15	250/20	250/30
OUTLET BLADE CONFIGURATION			
RECEPTACLE TYPE	A	B	C
NEMA CONFIGURATION	6–15R	6–20R	6–30R
TIME DELAY FUSE OR CIRCUIT BREAKER (AMPS)	15	20*	30
NOMINAL HEATER SIZE	1.6/2.0 KW	2.5/3.0 KW	4.1/5.0 KW

LEGEND
NEMA – National Electrical Manufacturers Association
* May be used for 15–amp applications if fused for 15 amps.

PERFORMANCE AND ELECTRICAL DATA (CONT.)

HEAT PUMP MODELS **MODEL PTAC-GAA (265-1-60)**

MODEL NUMBER	CAPACITY*			EER	COP‡	VOLTAGE RANGE	COOLING	
	Cooling Btuh	Heating					AMPS	WATTS
		Rev.Cyc. BtuH	Electric†					
PTAC-GAA07AB-P	7700	6300	15 or 20 Amp cord only	12	3.4	239 - 292	2.4	640
PTAC-GAA09AB-P	9000	8100		11.3	3.3		3.7	800
PTAC-GAA12AB-P	12000	10700	15, 20 or 30 Amp cord	10.7	3.1		4.8	1120
PTAC-GAA15AB-P	15000	13800		9.8	2.9		5.9	1530

MODEL NUMBER	POWER FACTOR (%)	FAN MOTOR				R-410a CHARGE oz	MAX DEHUM. Pint/Hr	SENSIBLE HEAT FACTOR	APPROX. CHASSIS SHIP WT. lb
		Indoor Motor HP‡	Indoor Motor Full Load Amps	Outdoor Motor HP	Outdoor Motor Full Load Amps				
PTAC-GAA07AB-P	99%	0.024	0.16	0.054	0.3	24.7	1.7	84%	121
PTAC-GAA09AB-P	99%	0.029	0.2	0.054	0.3	35.3	2.2	81%	128
PTAC-GAA12AB-P	99%	0.031	0.2	0.061	0.35	36.0	2.7	67%	137
PTAC-GAA15AB-P	98%	0.031	0.2	0.061	0.35	40.2	3.2	65%	143

LEGEND
EER — Energy Efficiency Ratio
***** Rated in accordance with ARI Standard 380-93.
† See power cord selection guide below for electric heating capacity rating. Using 30 Amp cords on U07 and U09 models could result in damage to unit.
‡ Fan motor indoor CFM (LO/HI) shown for 230-1-60 units.

POWER CORD SELECTION GUIDE

GA PTACs are not individually equipped with a power cord, so one must be ordered separately based on the voltage and amperage of your electrical circuit. If the unit is to be plugged into a receptacle, then a line cord connection kit needs to be selected. If it will be permanently connected, a hardwire connection must be used.

Model No.	Voltage	Receptacle Type	Heating (BTUH)	Heater (Kw)	Input Power (WH)	Current (Amps)	Branch Circuit Full Amps
PWRCORD–265V–15A	265V	15 amp / 277	6,800	2.0	2,120	8.9	15
PWRCORD–265V–20A		20 amp / 277	10,200	3.0	3,127	13.2	20
PWRCORD–265V–30A		30 amp / 277	17,000	5.0	5,035	21.5	30

NOTE: In compliance with UL, and the National Electrical Code, 265V units installed with a power cord require the use use of a 265V electrical subbase.

RECEPTACLE AND FUSE TYPES

UNIT NAMEPLATE VOLTAGE	265		
OUTLET RATED VOLTS/AMPS	277/15	277/20	277/30
OUTLET BLADE CONFIGURATION			
RECEPTACLE TYPE	A	B	C
NEMA CONFIGURATION	7–15R	7–20R	7–30R
TIME DELAY FUSE OR CIRCUIT BREAKER (AMPS)	15	20	30
NOMINAL HEATER SIZE	2.0 KW	3.0 KW	5.0 KW

LEGEND
NEMA – National Electrical Manufacturers Association

INDOOR FAN PERFORMANCE DATA

Model	Voltage	Dry CFM*			Wet CFM*		
		Low	Medium	High	Low	Medium	High
GAE07AB-D Heat / Cool GAA07AB-D Heat Pump	208	235	250	270	220	235	250
	230	260	280	300	240	260	280
GAE07AB-P Heat / Cool GAA07AB-P Heat Pump	265	260	280	300	240	260	280
GAE09AB-D Heat / Cool GAA09AB-D Heat Pump	208	235	250	270	220	235	250
	230	260	280	300	240	260	280
GAE09AB-P Heat / Cool GAA09AB-P Heat Pump	265	260	280	300	240	260	280
GAE12AB-D Heat / Cool GAA12AB-D Heat Pump	208	245	260	280	225	240	260
	230	270	290	310	250	270	290
GAE12AB-P Heat / Cool GAA12AB-P Heat Pump	265	270	290	310	250	270	290
GAE15AB-D Heat / Cool	208	270	290	305	250	270	290
	230	300	320	340	280	300	320
GAA15AB-D Heat Pump	230	300	320	340	280	300	320
GAE15AB-P Heat / Cool GAA15AB-P Heat Pump	265	300	320	340	280	300	320

* Dry = Heat Mode or Fan Only Mode – Indoor Standard CFM
Wet = Cool Mode – Indoor Standard CFM

INDOOR SOUND POWER DATA

Indoor Sound Estimating Table (dBA and BELS)

Operating Mode	Volts	NOMINAL SIZES (dBA)								NOMINAL SIZES (BELS)							
		GAA				GAE				GAA				GAE			
		7000	9000	12000	15000	7000	9000	12000	15000	7000	9000	12000	15000	7000	9000	12000	15000
Low Cool	208	55.2	NA	NA	NA	55.6	NA	NA	61.0	5.5	NA	NA	NA	5.6	NA	NA	6.1
	230	56.5	60.2	60.7	60.5	57.1	60.9	61.8	62.0	5.7	6.0	6.1	6.1	5.7	6.1	6.2	6.2
	265	60.7	57.9	59.9	60.0	57.6	61.6	61.7	61.2	6.1	5.8	6.0	6.0	5.8	6.2	6.2	6.1
Medium Cool	208	55.4	NA	NA	NA	55.9	NA	NA	61.8	5.5	NA	NA	NA	5.6	NA	NA	6.2
	230	56.8	60.6	60.8	61.0	57.3	60.7	61.8	62.3	5.7	6.1	6.1	6.1	5.7	6.1	6.2	6.2
	265	60.9	58.7	60.3	60.0	57.9	62.0	62.4	61.9	6.1	5.9	6.0	6.0	5.8	6.2	6.2	6.2
High Cool	208	55.9	NA	NA	NA	55.9	NA	NA	62.3	5.6	NA	NA	NA	5.6	NA	NA	6.2
	230	57.6	61.1	61.2	61.4	57.8	61.2	61.9	62.7	5.8	6.1	6.1	6.1	5.8	6.1	6.2	6.3
	265	61.1	59.5	61.2	62.0	58.3	62.3	62.8	62.9	6.1	5.9	6.1	6.2	5.8	6.2	6.3	6.3
Low Fan	208	46.9	NA	NA	NA	47.4	NA	NA	54.7	4.7	NA	NA	NA	4.7	NA	NA	5.5
	230	49.9	53.3	55.4	57.1	49.0	53.4	54.5	57.7	5.0	5.3	5.5	5.7	4.9	5.3	5.5	5.8
	265	51.1	51.4	53.6	56.0	51.9	51.9	53.5	56.6	5.1	5.1	5.4	5.6	5.2	5.2	5.4	5.7
Medium Fan	208	49.3	NA	NA	NA	50.2	NA	NA	57.4	4.9	NA	NA	NA	5.0	NA	NA	5.7
	230	52.1	54.3	56.0	58.1	51.2	54.6	55.8	59.1	5.2	5.4	5.6	5.8	5.1	5.5	5.6	5.9
	265	52.7	53.9	55.6	57.0	53.5	55.1	55.6	58.0	5.3	5.4	5.6	5.7	5.4	5.5	5.6	5.8
High Fan	208	51.3	NA	NA	NA	51.9	NA	NA	59.4	5.1	NA	NA	NA	5.2	NA	NA	5.9
	230	53.6	55.7	57.3	59.2	53.2	55.9	56.7	60.4	5.4	5.6	5.7	5.9	5.3	5.6	5.7	6.0
	265	54.1	55.6	57.1	59.0	54.4	56.3	57.4	60.2	5.4	5.6	5.7	5.9	5.4	5.6	5.7	6.0
Low Heat	208	55.3	NA	NA	NA	51.9	NA	NA	56.2	5.5	NA	NA	NA	5.2	NA	NA	5.6
	230	56.6	61.4	61.1	62.1	55.5	54.6	56.0	58.8	5.7	6.1	6.1	6.2	5.6	5.5	5.6	5.9
	265	59.0	62.2	60.7	61.0	52.6	53.2	53.5	57.0	5.9	6.2	6.1	6.1	5.3	5.3	5.4	5.7
Medium Heat	208	55.2	NA	NA	NA	54.2	NA	NA	57.9	5.5	NA	NA	NA	5.4	NA	NA	5.8
	230	56.7	61.2	61.1	62.0	55.6	55.9	57.1	59.7	5.7	6.1	6.1	6.2	5.6	5.6	5.7	6.0
	265	59.8	62.5	60.9	60.0	53.6	55.8	55.6	58.4	6.0	6.3	6.1	6.0	5.4	5.6	5.6	5.8
High Heat	208	55.8	NA	NA	NA	54.6	NA	NA	59.7	5.6	NA	NA	NA	5.5	NA	NA	6.0
	230	57.5	61.8	61.5	62.3	55.8	56.6	57.4	60.8	5.8	6.2	6.2	6.2	5.6	5.7	5.7	6.1
	265	60.2	62.7	61.5	62.0	55.0	57.2	57.9	60.4	6.0	6.3	6.2	6.2	5.5	5.7	5.8	6.0

See notes on page 38

OUTDOOR SOUND POWER DATA

Outdoor Sound Estimating Table (dBA and BELS)

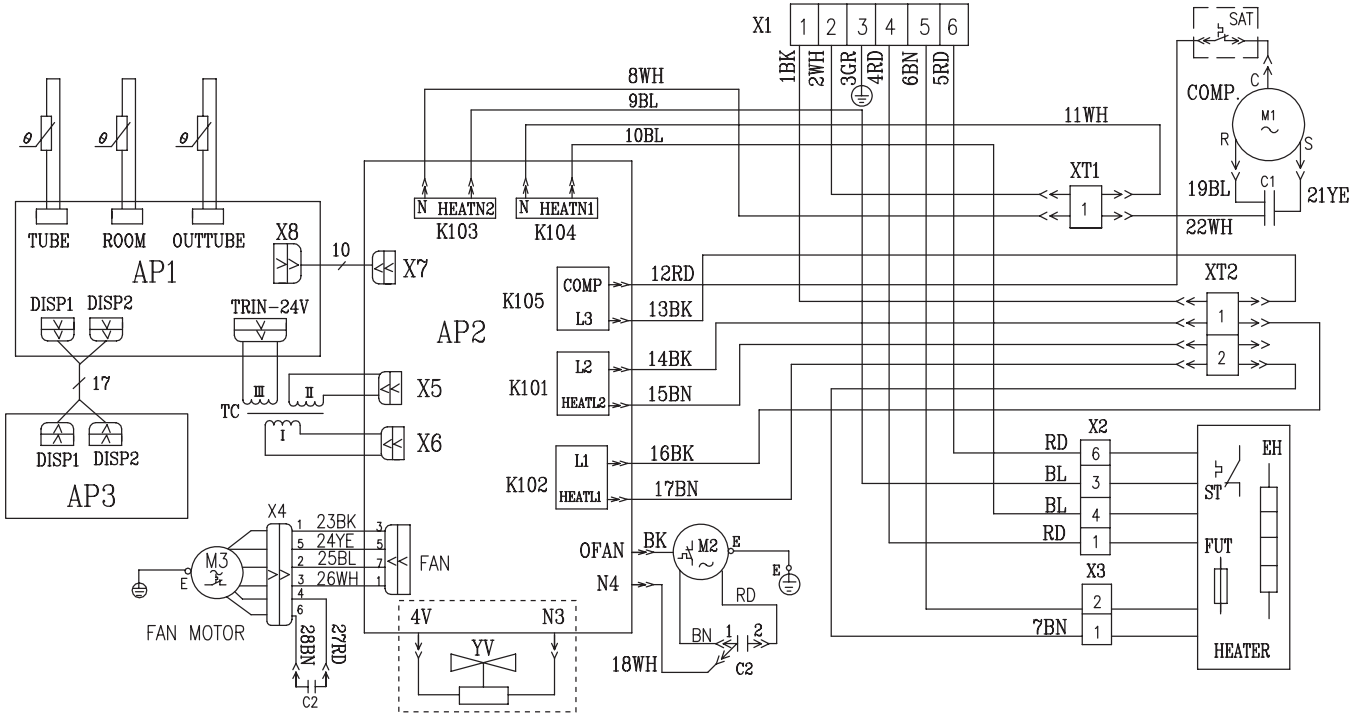
Operating Mode	Volts	NOMINAL SIZES (dBA)								NOMINAL SIZES (BELS)							
		GAA				GAE				GAA				GAE			
		7000	9000	12000	15000	7000	9000	12000	15000	7000	9000	12000	15000	7000	9000	12000	15000
Low Cool	208	67.4	NA	NA	NA	68.0	NA	NA	72.0	6.7	NA	NA	NA	6.8	NA	NA	7.2
	230	69.3	71.3	72.0	73.0	69.6	71.3	72.4	73.1	6.9	7.1	7.2	7.3	7.0	7.1	7.2	7.3
	265	69.9	70.7	72.9	73.0	69.4	72.2	72.5	73.3	7.0	7.1	7.3	7.3	6.9	7.2	7.3	7.3
Medium Cool	208	67.4	NA	NA	NA	68.0	NA	NA	72.0	6.7	NA	NA	NA	6.8	NA	NA	7.2
	230	69.3	71.3	72.0	73.0	69.6	71.3	72.4	73.1	6.9	7.1	7.2	7.3	7.0	7.1	7.2	7.3
	265	69.9	70.7	72.9	73.0	69.4	72.2	72.5	73.3	7.0	7.1	7.3	7.3	6.9	7.2	7.3	7.3
High Cool	208	67.4	NA	NA	NA	68.0	NA	NA	72.0	6.7	NA	NA	NA	6.8	NA	NA	7.2
	230	69.3	71.3	72.0	73.0	69.6	71.3	72.4	73.1	6.9	7.1	7.2	7.3	7.0	7.1	7.2	7.3
	265	69.9	70.7	72.9	73.0	69.4	72.2	72.5	73.3	7.0	7.1	7.3	7.3	6.9	7.2	7.3	7.3
Low Heat	208	67.8	NA	NA	NA	----	----	----	----	6.8	NA	NA	NA	----	----	----	----
	230	70.2	72.4	72.7	73.8	----	----	----	----	7.0	7.2	7.3	7.4	----	----	----	----
	265	70.6	71.7	73.2	74.0	----	----	----	----	7.1	7.2	7.3	7.4	----	----	----	----
Medium Heat	208	67.8	NA	NA	NA	----	----	----	----	6.8	NA	NA	NA	----	----	----	----
	230	70.2	72.4	72.7	73.8	----	----	----	----	7.0	7.2	7.3	7.4	----	----	----	----
	265	70.6	71.7	73.2	74.0	----	----	----	----	7.1	7.2	7.3	7.4	----	----	----	----
High Heat	208	67.8	NA	NA	NA	----	----	----	----	6.8	NA	NA	NA	----	----	----	----
	230	70.2	72.4	72.7	73.8	----	----	----	----	7.0	7.2	7.3	7.4	----	----	----	----
	265	70.6	71.7	73.2	74.0	----	----	----	----	7.1	7.2	7.3	7.4	----	----	----	----

Sound Transmission Coefficient (STC) = 23

NOTES:
1. The tables above indicate the approximate indoor and outdoor sound levels of a 52M unit.
   Tests were conducted in the Carrier Sound Testing Laboratory according to AHRI (Air Conditioning, Heating and Refrigeration Institute) Noise Rating Standard 300 for non–ducted indoor air conditioning equipment.
2. NA = Not Available

WIRING SCHEMATIC

LEGEND	
AP1	Main Circuit Board
AP2	Relay Circuit Board
AP3	Displaly Circuit Board
C1	Compressor Capacitor
C2	Fan Motor Capacitor
L1, L2	Electric Heater Relay
L3	Compressor Relay
M1	Compressor Motor
M2	Outdoor Fan Motor
M3	Indoor Fan Motor
OUTTUBE	Outdoor Coil Sensor
ROOM	Room Air Temp. Sensor
SAT	Compressor Overload
TC	Transformer
TRIN-24V	Transformer 24 Volt Connector
TUBE	Indoor Coil Sensor
X1	Main Power Connector
X2	Heater Connector
X3	Heater Limit Connector
X4	Indoor Fan Motor Connector
X5,X6	Transformer Connector
X7,X8	Board Jumper Connector
XT1	Terminal Block (White)
XT2	Terminal Block (Black)
YV	Reversing Valve (Heat Pump Units)



*NOTE: Dashed area above shows REVERSING VALVE.
It is found only in HEAT PUMP (MQ) models.

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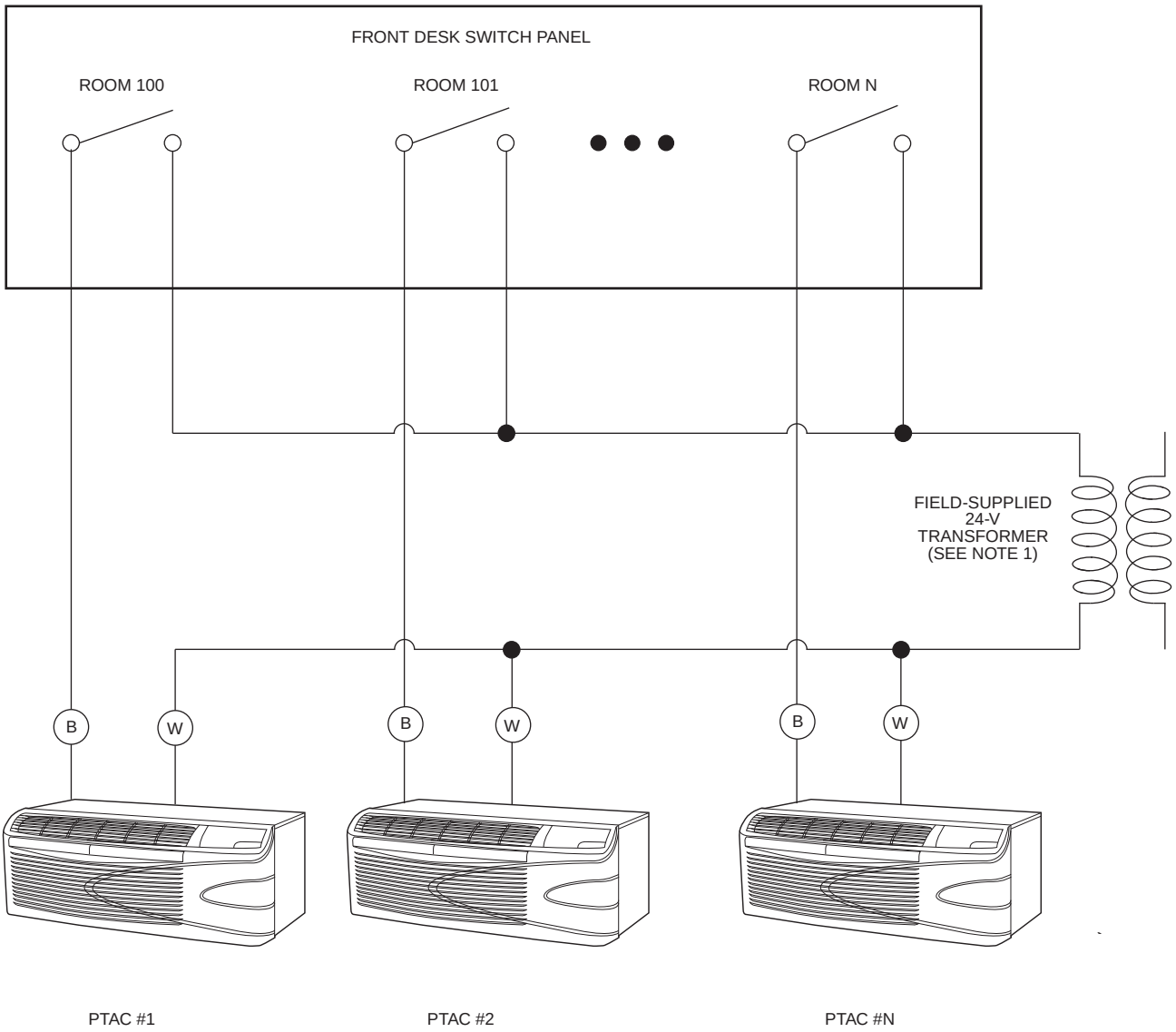
TYPICAL WIRING SCHEMATIC FOR ENERGY MANAGEMENT INTERFACE



LEGEND

AWG **---** American Wire Gage
B **---** Black
PTAC **---** Packaged Terminal Air Conditioner
W **---** White

NOTES:

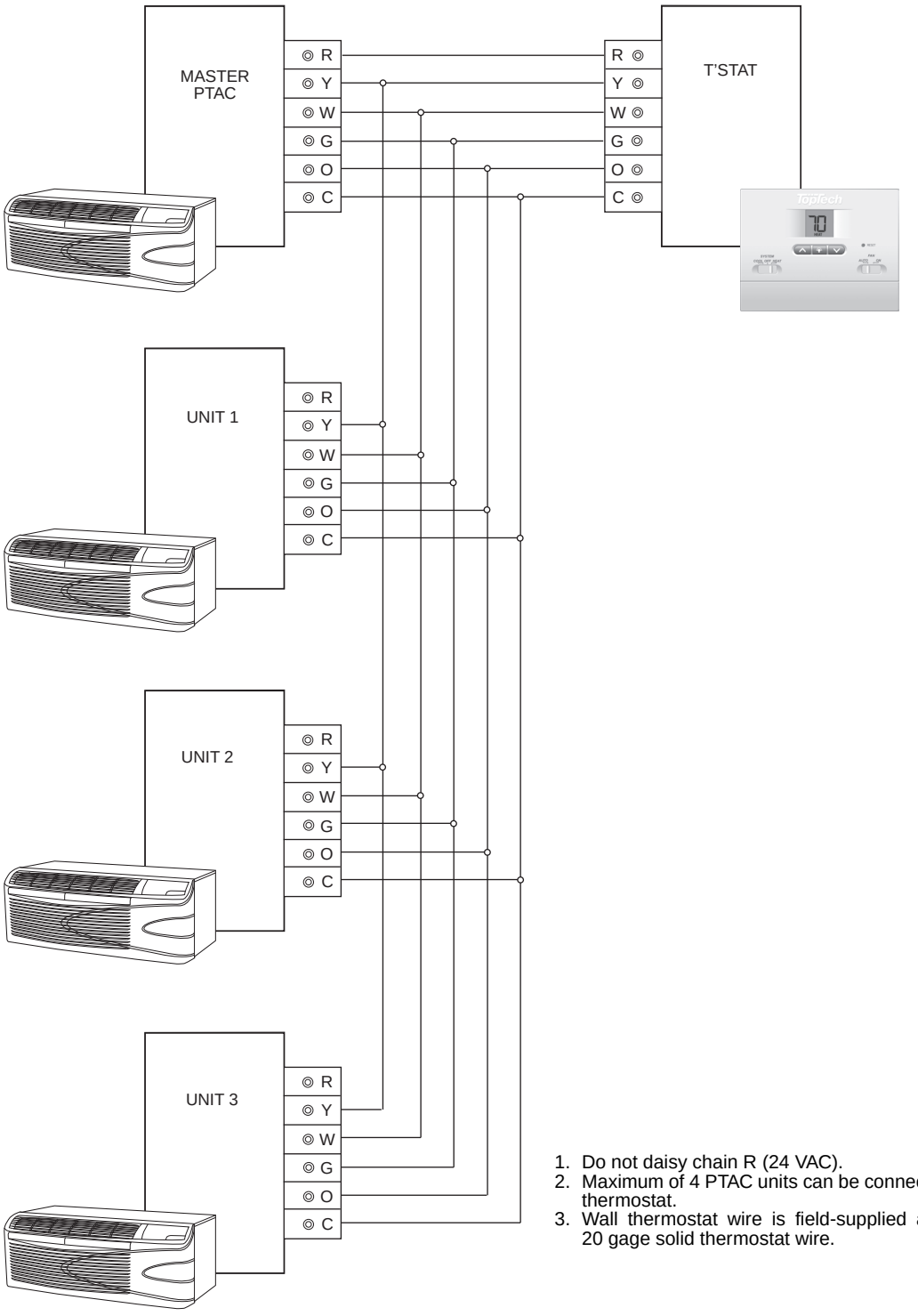
1. To size transformer, use the following equation:
   Quantity of PTAC units x 12 va = Transformer Size (va)
   Example: 110 PTAC Units x 12 va = 1320 va Transformer
2. Following are recommended wire sizes:

AWG WIRE SIZE NO.	MAXIMUM LENGTH ft (m)
24	400 (121.9)
22	600 (182.9)
20	900 (274.3)
18	1500 (457.2)
16	2000 (609.6)

A07390

GA

TYPICAL WIRING SCHEMATIC FOR MULTIPLE PTAC UNITS CONNECTED TO A SINGLE WALL THERMOSTAT



1. Do not daisy chain R (24 VAC).
2. Maximum of 4 PTAC units can be connected to one single wall thermostat.
3. Wall thermostat wire is field-supplied and should be 18 to 20 gage solid thermostat wire.

GA

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.

NOTES:

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