



TECHNICAL GUIDE

**Single Package
Heat Pump/Electric Heat
16 SEER - R-410A - 460 V - Three-Phase
3 ton to 5 Nominal ton
Models: PHE6*36 to 60**



Due to continuous product improvement, specifications are subject to change without notice.

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WARRANTY SUMMARY*

Standard 1-Year limited parts warranty.

Standard 5-Years limited compressor warranty.

*See limited warranty certificate in User's Information Manual for details.

Description

These packaged cooling/heating heat pumps are designed for outdoor installation. Only utility and duct connections are required at the point of installation.

Features

- **Operating efficiency** - The PHE6 heat pump models are rated at 15.0+ SEER, 11.5+ EER, and 8.0 HSPF per DOE procedures and are AHRI certified. All PHE6 models use multi-stage compressors for maximum comfort and efficiency.
- **On-site flexibility** - All model sizes use a compact design cabinet in one footprint. Field convertible duct connections from side shot to down shot allow the installer to have greater flexibility with less inventory.
- **Lower installation cost** - Installation time and costs are reduced by easy power and control wiring connections. All units are completely wired, charged with R-410A refrigerant, and tested before shipment. Test stations using a state-of-the-art computerized process system are used to ensure product quality. Refrigerant charge and component part numbers are verified using computers during assembly. Vital run test statistics such as system pressure, motor currents, air velocity and temperature, unit vibration, and gas system safeties are monitored and recorded by the system to ensure unit performance. Equal size side supply and return duct connections allow easy connection of ducts to match low crawl spaces without transition pieces.
- **Utility connections made easy** - Electric utility access is provided through the bottom or side of the unit. Utility connections can be made quickly and with a minimum amount of field labor. A field supplied and field installed electrical disconnect switch must be installed.
- **Convertible airflow design** - The bottom duct openings are covered when they leave the factory, ready to be used for a side supply/side return application. If a bottom supply/bottom return application is required, remove the two panels from the bottom of the unit and place them in the side supply/side return duct openings. No panel cutting is required and no accessory panel is necessary. Convertible airflow design allows maximum field flexibility and minimum inventory.
- **Condensate pan** - A corrosion-resistant, long-lasting, water-tight pan is positioned below the indoor coil to collect and drain all condensate, preventing build-up of stagnant condensate. The condensate pan conforms to ASHRAE 62-19 standards (Ventilation for Acceptable Indoor Air Quality).
- **Condensate drain** - The 3/4 in. NPT female connection is rigidly mounted to ensure proper fit and leak tight seal.
- **Durable finish** - The cabinet is made of G90 galvanized steel with a powder paint coating for appearance and protection. The pre-treated galvanized steel provides a better paint-to-steel bond, which resists corrosion and rust creep. The powder paint finish ensures less fading when exposed to sunlight, and provides superior corrosion resistance (1000 hour salt spray tested).

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- **Full perimeter base rails** - The easily removable base rails provide a solid foundation for the entire unit and protect the unit during shipment. The rails provide forklift access from all sides, and rigging holes are also provided so an overhead crane can be used to place the units on a roof. On applications where the unit is placed on a pad, the base keeps the unit off the pad to deter corrosion. On applications where height is limited, the base rails can be removed by removing two screws in each corner.
 - **Attractive appearance** - A single-piece top cover containing a top-discharge outdoor fan arrangement requires less square footage on installation and provides a wider variety of installations. The one-piece design adds greater water integrity. Rounded corners with water drip edges add to the attractive appearance and provide cut protection to the installer.
 - **Top discharge** - The top-discharge outdoor fan does not disrupt neighboring areas or dry out vegetation surrounding the unit. The warm air from the top mounted fan is blown up and away from the structure and any landscaping.
 - **Outdoor coil grille** - All models use a stamped slotted design that provides superior impact protection against small objects during transit and after installation.
 - **Low operating sound level** - The upward airflow carries the normal operating noise up and away from the living area. The rigid top panel effectively isolates noise. Isolator mounted compressor and the rippled fins of the outdoor coil muffle the normal fan motor and compressor operating sounds. The unique formed base pan also aids in sound attenuation with its structural design.
 - **Low maintenance** - Long life, permanently lubricated outdoor and indoor fan motor bearings need no annual maintenance, adding greater reliability to the unit. Slide-out blower assembly can be easily removed for cleaning or service.
 - **Fan system** - All models operate over a wide range of design conditions with an enhanced ECM indoor fan motor. These units easily match all types of applications and provide greater on-site flexibility to match comfort requirements. The cooling speed and heating speeds are factory set at test design conditions but can be field adjusted. This allows maximum comfort capabilities.
 - **Dehumidification/humidity switch input** - This model unit features a built-in dehumidification feature for advanced dehumidification during cooling operation. The unit indoor blower control is designed to work with a humidity control that closes when the humidity is below the setpoint. The control is open when the humidity is above the setpoint. This humidity control can be referred to as a humidistat or dehumidistat.
- Note:** To use this feature, the control HUM STAT jumper must be set to YES and a humidistat must be connected from the low voltage R and HUM color coded leads. During cooling operation, if the humidity level is above the humidistat setpoint, the indoor blower speed is reduced by approximately 15%.
- **Simple control circuit** - An indoor enhanced ECM blower control board and a defrost control board each contain a status/diagnostic indicator light. Field thermostat wiring connects to color coded leads using twist on wire connections.

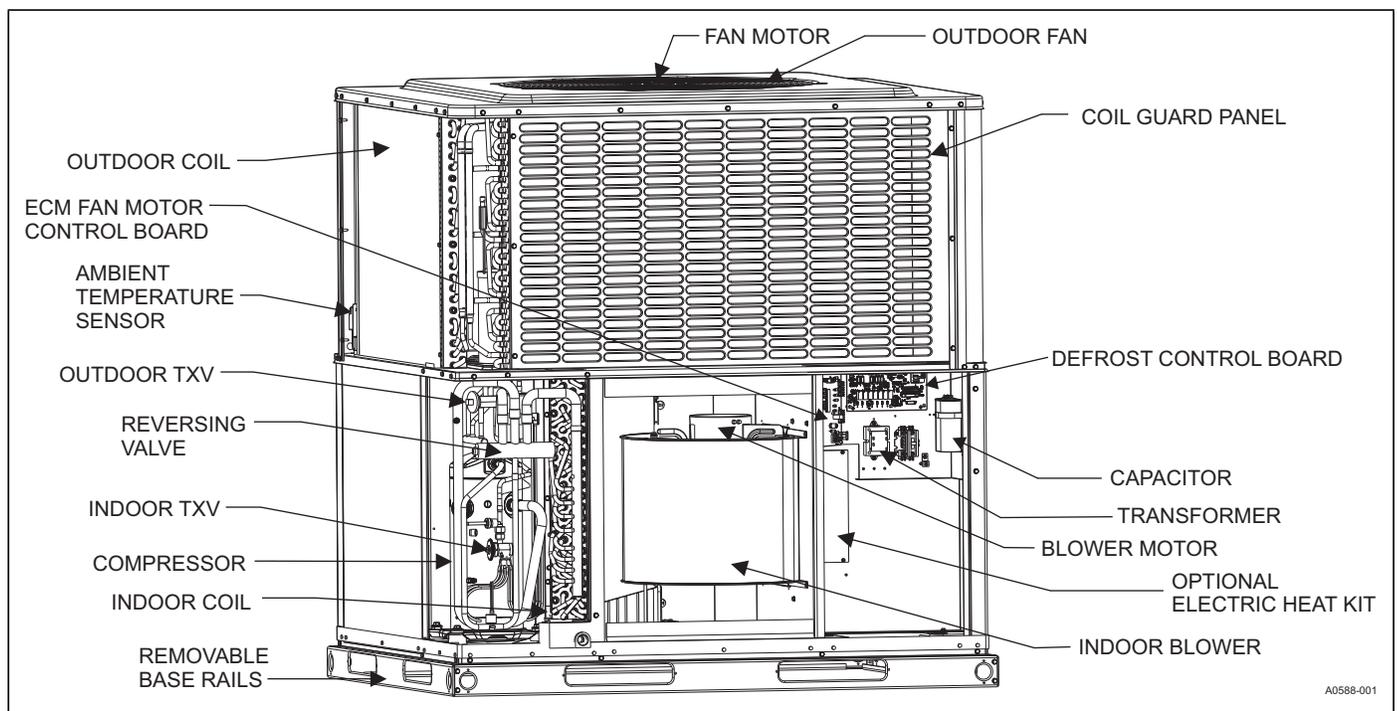
Cooling controls use a contactor and a second stage 24 VAC to 24 VDC rectifier for simple application and troubleshooting. MATE-N-LOK plug connectors are used. The electrical control box is not located in the compressor compartment. The controls are mounted to allow the separate access panel to be removed for troubleshooting and maintenance without affecting the normal system operating pressures. All wiring internal to the unit is color/number coded.

- **Protected compressor** - The compressor is internally protected against high pressure and temperature. This is accomplished by the simultaneous operation of scroll bypass and a temperature thermal overload sensor, which protects the compressor if undesirable operating conditions occur. The crankcase heater ensures lubrication of the compressor at start up by mitigating the impact of refrigerant migration and condensation when the system is off, keeping the refrigerant at a temperature higher than the coldest part of the system.
- **Pressure switch** - A high pressure switch is standard in all units. When abnormal conditions are sensed through the pressure switch, the unit locks out, preventing any further operation until the unit is reset.
- **Loss of charge switch** - All models include a loss of charge switch to provide safe shutdown of compressor.
- **Exclusive coil design** - Grooved copper tubes and enhanced aluminum fin construction improve heat transfer for maximum efficiency and durability. Indoor coils use tin-coated copper tubing with aluminum fins for effective heat transfer.
- **Electric heat (optional)** - All PHE models use 6HK electric heat kits, which are available in 460-3-60 from 10 kW to 25 kW. Single-point field wiring kits are available for all applications.
- **Easy service access** - Individual access panels provide access to all major components, for example, compressors, indoor coils, blowers, controls/electric heat kits, and filters, making servicing easy. Removing these panels allows easy removal of components such as the blower assembly for maintenance and troubleshooting.
- **Replacement parts** - The installer requires no special training to replace any of the components of these units. The number of new components has been reduced to minimize the inventory of unique parts.
- **Controls** - Demand defrost curves pre-loaded into defrost control for optimized performance based on unit capacities.
- **Filter frame kit** - All three-phase units include a filter frame kit that is shipped inside the unit from production. Field installation is required.
- **Filters** - All three-phase units include an applicable number of 1 in. washable filters, which are shipped inside the unit from production. Field installation is required. Two filters are required for A base units. Three filters are required for B base units.

Nomenclature

PHE	4	A	24		2		1	A		
1	2	3	4	5	6	7	8	9		
1. Model Family PHE - packaged heat pump with electric heat PCG - packaged A/C with gas heat PHG - packaged heat pump with gas heat PCE - packaged A/C with electric heat				5. Gas Heating Input Btu/h x 1000 050 = 50,000 Btu/h input, blank = electric heat					6. Voltage-Phase-Frequency 2 = 208/230-1-60, 3 = 208/230-3-60, 4 = 460-3-60	
2. Nominal Cooling Efficiency 4 = 14 SEER, 6 = 16 SEER				7. NOx Approval X = low-NOx, blank = not low-NOx					8. Generation Level 1 = first generation	
3. Cabinet Size A = small 35 x 51, B = large 45 x 51				9. Revision Level A = original release, B = second release						
4. Nominal Air Conditioning Cooling Capacity Btux1000 24 = 24,000 Btu, etc.										
Example: PHE6B4221A is a packaged heat pump, 16 SEER, large cabinet, 3 1/2 ton, 208/230 V, single-phase model, first generation, first release.										

Component location



Unit limitations

Model	Unit voltage	Unit limitations		
		Applied voltage		Outdoor DB temperature
		Minimum	Maximum	Maximum (°F)
PHE6B3644	460-3-60	432	504	125
PHE6B4844	460-3-60	432	504	125
PHE6B6044	460-3-60	432	504	125

Applications and accessories

Packaged equipment series	Application limitations							
	Air temperature at outdoor coil (°F)				Air temperature at indoor coil (°F)			
	Minimum		Maximum		Minimum		Maximum	
	DB cool	DB heat	DB cool	DB heat	WB cool	DB heat	WB cool	DB heat
PHE6/PHG6*	55	-10	125	75	57	50	72	80

* The PHE6/PHG6A24 model is restricted to operation of 0°F DB Outdoor Air Temperature.

- **Anchor Bracket Kit (S1-1HK0601)** - This kit firmly anchors PCG, PCE, PHE, and PHG packaged units to a pad or support structure. When correctly installed, the kit is approved for ground-mounted or roof-mounted applications, wind load certified, and listed with the State of Florida. See <https://floridabuilding.org> for this listing.
- **Economizer for Downflow Applications (S1-2EE04710024, S1-2EE04710124)** - Modulating integrated economizer provides simultaneous operation between mechanical cooling and economizer operation. Independent blade design ensures proper control and less than 1% leak rate. Includes hood and mesh bird screen filter integrated into the hood, dry bulb sensor, and barometric relief damper. Separate field accessories of single/dual enthalpy kits are also available.
- **Economizer for Horizontal Applications (S1-2EE04710224, S1-2EE04710324)** - Modulating integrated economizer provides simultaneous operation between the mechanical cooling and economizer operation. Independent blade design ensures proper control and less than 1% leak rate. Includes hood and mesh bird screen filter integrated into hood and dry bulb sensor. Separate field accessories of single enthalpy and dual enthalpy are available.
- **Barometric Relief Hood (S1-1RD0501)** - Used in conjunction with a horizontal economizer, the Barometric Relief Hood helps to equalize the building pressure caused by the fresh air that is introduced through the economizer fresh air hood.
- **Single/Dual Enthalpy Sensor (S1-HE-69630NS-2D)** - Sensor replaces supply air temperature dry bulb sensor standard in economizer kit. Provides improved economizer operation by sensing the dry bulb temperature of indoor supply air plus the enthalpy content of the indoor air.
- **Duct/Unit Mount CO₂ Kit (S1-2AQ04700924)** - Sensor kit detects CO₂ levels automatically and overrides the economizer when CO₂ levels rise above the preset limits.
- **Wall Mount CO₂ Kit (S1-2AQ04701024)** - Sensor kit detects CO₂ levels automatically and overrides the economizer when CO₂ levels rise above the preset limits.
- **Supply Air Temperature Sensor Kit (S1-TE-63616E-2D)** - Outdoor supply air temperature sensor kit used with economizers.
- **Filter/Frame Kit (Kit provided) (S1-1FF0602, S1-1FF0601)** - Kit contains the necessary hardware to field install return air filters into the base unit. The filter rack is suitable for either 1 in. filters or 2 in. filters.
- **Filter (S1-02647812000)** - Washable 1 in. filter. Two filters are required for A base units. Three filters are required for B base units.
- **Motorized Fresh Air Damper (S1-2MD04705224, S1-2MD04705124)** - Designed for duct mounted side supply/return and unit mounted down supply/return applications. Damper capable of providing 0% through

50% of outdoor air (field supplied). Closes on power loss and includes hood and screen assembly.

- **Rectangle to Round (Horizontal) Adapter (S1-1AK0110, S1-1AK0111)** - Kit includes one supply and one return air rectangle to round duct adapter. Adapters are preformed and designed to fit over current horizontal duct openings on the base unit. Transition is from rectangle to 12 in. round for the 1AK0110 kit and from rectangle to 14 in. round for the 1AK0111 kit.
- **Rectangle to Round (Downflow) Adapter (S1-1AK0108, S1-1AK0109)** - Kit includes one supply and one return air rectangle to round duct adapter. Adapters are preformed and designed to fit into current downflow duct openings on the roof curb. Transition is from rectangle to 16 in. round for the 1AK0108 kit and from rectangle to 18 in. round for the 1AK0109 kit.
- **Roof Curbs (S1-1RC0503, S1-1RC0501)** - NRCA approved curbs provide proper fit to base unit for rooftop installations. Curbs are designed to be assembled through hinge pins in each corner. Kit also provides seal strip to ensure an airtight seal. These are 8 in. high roof curbs.
- **Roof Curbs (S1-1RC0504, S1-1RC0502)** - NRCA approved curbs provide proper fit to base unit for rooftop installations. Curbs are designed for assembly through hinge pins in each corner. Kit also provides seal strip to ensure an airtight seal. These are 14 in. high roof curbs.
- **Manual Outdoor Damper (S1-1FA0502, S1-1FA0501)** - Provides 0% through 50% outdoor air capability (field adjustable). Designed for duct mounted side supply/return applications and unit mounted down supply/return applications. Includes hood and screen assembly.
- **Low Ambient Kit (S1-2LA04701024)** - Kit provides necessary hardware to convert unit to operate in cooling cycle down to 0°F. Standard unit operation is 55°F.
- **Base Rail Hole Cover Kit (S1-1HC0101)** - Kit provides necessary hardware to close off openings in base rails to block off openings and prevent animal entrance.
- **Single Point Wiring Kits for 6HK Electric Heat Applications (S1-SPWK*)** - Kit provides field option for connecting electrical power supplies to the field installed 6HK heat kits and the package unit power supply to a single source of power.
- **Transition Curb Kits (S1-1TC01*)** - Adapter kits to allow field use of existing installed roof curbs to match PHE6 footprint to Affinity roof curbs, Carrier, Trane, or Goodman curb footprints. Curb adapters are optional for current generation Carrier replacements, but are recommended for previous generation applications. Refer to the PHE6 price pages for more details.
- **Thermostat** - Compatible thermostat controls are available through accessory sourcing. For optimum performance, these outdoor units are fully compatible with our residential Hx™ Touch Screen Thermostat available through Source 1. For more information, refer to the thermostat section of the Product Equipment Catalog.
- **Wall Thermostat** - The units are designed to operate with standard, 24 V electronic non power stealing and electromechanical thermostats. All units require the use of a 3 heat/2 cool (3H/2C) heat pump thermostat - with or without the economizer.

* For additional kit numbers refer to the price pages.

Guide specifications

General

Units shall be manufactured by Ducted Systems in an ISO 9001 certified facility. These packaged cooling/heating air conditioners are designed for outdoor installation. Only utility and duct connections are required at the point of installation. Heat pumps provide electric cooling and electric heating, with field installed electric heat kits from 10 kW to 25 kW for backup supplemental heating operation.

Description

Units shall be factory-assembled, single packaged, heat pumps with electric cooling/electric heating units designed for outdoor installation. They shall have built-in, equal size, field convertible duct connections for downflow supply/return or horizontal supply/return. The units shall be factory wired, piped, charged with R-410A refrigerant, and factory tested before shipment. All models shall be rated in accordance with DOE and AHRI test procedures for both heating and cooling operation. Units shall be CSA listed to the UL 1995/CAN/CSA No. 236-M90 standards.

- **Operating efficiency** - All heat pump models shall be rated at a minimum of 15.0 SEER, 11.5 EER, and 8.0 HSPF for cooling and heating operation.
- **Low operating sound level** - The upward airflow carries the normal operating noise up and away from the living area. The rigid top panel effectively isolates noise. Isolator mounted compressor and the rippled fins of the outdoor coil muffle the normal fan motor and compressor operating sounds. The unique formed base pan also aids in sound attenuation with its structural design. Sound ratings as tested under AHRI test procedures shall be less than 77 dB(A) for all models.

Unit cabinet

Unit cabinet shall be a single piece design, with drip edges and no-seam corners to provide optimum water integrity. Unit shall have a rigidly mounted outdoor coil guard to provide protection from objects and personnel after installation. Indoor blower section shall be insulated with foil-faced or foam insulation, fastened to prevent insulation from entering the air stream. Cabinet panels shall be separate and easily removable for servicing and maintenance. Unit shall be built on a formed, design base pan, with embossments at critical points to add strength and rigidity and to aid in minimizing sound. Full perimeter base rails shall be provided to ensure reliable transit of equipment and facilitate overhead rigging, allowing fork truck access and proper sealing on roof curb applications. Base rails shall be easily removable, when required to lower unit height. Filters shall be field installed, furnished, and accessible through a removable access door, sealed airtight. The unit's vertical discharge and return duct configuration shall be designed to fit between standard 24 in. O.C. beams without modification to building structure, duct work, and base unit.

- **On-site flexibility** - All model sizes shall use a compact design cabinet in one of two footprints. This provides installer flexibility for placing the proper capacity unit on curbs or pads with the smallest footprint after the internal load has been determined. Field convertible duct connections from side shot to down shot allow the installer to have greater flexibility with less inventory.

- **Durable finish** - The cabinet shall be made of G90 galvanized steel with a powder paint coating for appearance and protection. The pre-treated galvanized steel shall provide a better paint-to-steel bond, which resists corrosion and rust creep. The powder paint finish ensures less fading when exposed to sunlight, and provides superior corrosion resistance (1,000 hour salt spray tested).
- **Attractive appearance** - A single-piece top cover containing a top-discharge outdoor fan arrangement shall be used. This requires less square footage on installation and provides a wider variety of installations. The one-piece design adds greater water integrity. Rounded corners with water drip edges add to the attractive appearance and prevent water penetration.
- **Convertible airflow design** - The bottom duct openings are covered when they leave the factory, ready to be used for a side supply/side return application. If a bottom supply/bottom return application is required, remove the two panels from the bottom of the unit and place them in the side supply/side return duct openings. No panel cutting is required and no accessory panel is necessary. Convertible airflow design allows maximum field flexibility and minimum inventory.
- **Utility connections made easy** - Electric utility access shall be provided through the bottom or side of the unit. Utility connections should be made quickly and with a minimum amount of field labor. A field supplied and field installed electrical disconnect switch must be installed.
- **Easy service access** - Individual access panels provide access to all major components, for example, compressors, indoor coils, blowers, controls/electric heat kits, and filters, making servicing easy. Removing these panels allows easy removal of components such as the blower assembly for maintenance and troubleshooting.
- **Top discharge** - The top-discharge outdoor fan does not disrupt neighboring areas or dry out vegetation surrounding the unit. The warm air from the top mounted fan is blown up and away from the structure and any landscaping.
- **Outdoor coil grille** - All models use a stamped slotted design that provides superior impact protection against small objects during transit and after installation.

Indoor blower assembly - Blower shall be direct drive design. Blower wheel shall be double-inlet type with forward-curved blades, dynamically balanced to operate smoothly throughout the entire range of operation. Design shall use constant torque motors. Bearings shall be sealed and permanently lubricated for longer life and no maintenance. Fan assembly shall be a slide-out design for easy removal and cleaning. Indoor blower motors shall be equipped with a standard high efficiency brushless DC motor (constant torque), also known as an enhanced ECM motor.

Outdoor fan assembly - The outdoor fan shall be of the direct-driven propeller type, discharge air vertically, have aluminum blades riveted to corrosion resistant steel spider bracket, and be statically balanced for smooth operation. The outdoor fan motor shall be totally enclosed with permanently lubricated ball bearings and internally protected against overload conditions.

Refrigerant components

- **Protected compressor** - The compressor shall be a fully hermetic type, direct drive compressor, that is internally protected against high pressure and temperature. This is accomplished by the simultaneous operation of scroll bypass and a temperature thermal overload sensor, which protects the compressor if undesirable operating conditions occur. The hermetic motor shall be suction gas cooled and have a voltage range of +/- 10% of the unit nameplate voltage. Compressors shall have internal isolation and sound muffling to minimize vibration and noise, and be externally isolated on a dedicated, independent mounting.
- **Indoor coils** - Indoor coils shall be of the direct expansion, draw through design and have aluminum plate fins mechanically bonded to seamless internally enhanced tin-coated copper tubes with all joints brazed.
- **Condensate pan** - A corrosion-resistant, long-lasting, water-tight pan is positioned below the indoor coil to collect and drain all condensate, preventing build-up of stagnant condensate. The condensate pan conforms to ASHRAE 62-19 standards (Ventilation for Acceptable Indoor Air Quality).
- **Condensate drain** - The 3/4 in. NPT female connection is rigidly mounted to ensure proper fit and leak tight seal.
- **Outdoor Coils** - Outdoor coils shall have aluminum plate fins mechanically bonded to seamless internally enhanced copper tubes with all joints brazed, and be a draw through design.
- **Refrigerant circuit and refrigerant safety components shall include the following:** thermal expansion devices (TXVs) that are factory mounted and provided, filter/strainer to eliminate any foreign matter, and reversing valves to control refrigerant flow.

Controls

- **Simple control circuit** - An indoor enhanced ECM blower control board and a defrost control board each contain a status/diagnostic indicator light. Field thermostat wiring connects to color coded leads using twist on wire connections. Cooling controls use a contactor and a second stage 24 VAC to 24 VDC rectifier for simple application and troubleshooting. MATE-N-LOK plug connectors are used. The electrical control box is not located in the compressor compartment. The controls are mounted to allow the separate access panel to be removed for troubleshooting and maintenance without affecting the normal system operating pressures. All wiring internal to the unit is color/number coded.
- **Controls** - Demand defrost curves pre-loaded into defrost control for optimized performance based on unit capacities.
- **Pressure switch** - A high pressure switch is standard in all units. When abnormal conditions are sensed through the pressure switch, the unit locks out, preventing any further operation until the unit is reset.
- **Loss of charge switch** - A loss of charge switch is standard in all units. When excessive compressor discharge temperatures are sensed, the unit locks out, preventing any further operation until the unit is reset.
- **Factory testing** - Installation time and costs are reduced by easy power and control wiring connections. All units are completely wired, charged with R-410A refrigerant, and tested before shipment. Test stations using a state-of-the-art computerized process system shall be used to ensure product quality. Refrigerant charge and component part numbers are verified using computer bar code scans during assembly. Vital run test statistics such as system pressure, motor currents, air velocity and temperature, unit vibration, and gas system safeties are monitored and recorded by the system to ensure unit performance. This data could be provided by serial number tracking if necessary.
- **Electric heat (optional)** - All PHE models use 6HK electric heat kits, which are available in 460-3-60 from 10 kW to 25 kW. Single-point field wiring kits are available for all applications. Electric heat kits must be certified to UL 1995 standard requirements.

Physical data

Model	PHE6B36	PHE6B48	PHE6B60
Nominal tonnage	3.0	4.0	5.0
AHRI cooling performance			
Gross capacity at AHRI A point (MBH)	37.2	46.6	59.1
AHRI net capacity (MBH)	36.0	45.5	56.5
EER	12.5	11.5	11.5
SEER	15.5	15.0	15.0
Nominal CFM	1170.0	1520.0	1820.0
System power (kW)	2.8	3.7	4.7
Refrigerant type	R410A	R410A	R410A
Refrigerant charge (lb-oz)	9-7	13-0	11-12
AHRI heating performance			
47°F capacity rating (MBH)	33.4	45.0	56.0
System power (kW/COP)	3.6	3.6	3.6
17°F capacity rating (MBH)	18.4	26.5	33.0
HSPF (Btu/Watts-hr)	8.0	8.0	8.0
Dimensions (in.)			
Length	51 1/4	51 1/4	51 1/4
Width	45 3/4	45 3/4	45 3/4
Height	49	53	55
Operating weight (lb)	407	476	495
Compressors			
Type	Scroll	Scroll	Scroll
Stages	2	2	2
Outdoor coil data			
Face area (sq ft)	17.6	24.2	26.4
Rows	2	2	2
Fins per inch	22	22	22
Tube diameter	3/8	3/8	3/8
Circuitry type	Interlaced	Interlaced	Interlaced
Refrigerant control	TXV	TXV	TXV
Indoor coil data			
Face area (sq ft)	6.3	6.3	6.3
Rows	4	4	4
Fins per inch	16	16	16
Tube diameter	3/8	3/8	3/8
Circuitry type	Interlaced	Interlaced	Interlaced
Refrigerant control	TXV	TXV	TXV
Outdoor fan data			
Fan diameter (in.)	26	26	26
Type	Prop	Prop	Prop
Drive type	Direct	Direct	Direct
Number of speeds	1	1	1
Motor HP each	1/3	1/3	1/3
RPM	850	850	850
Nominal total CFM	3000	3900	3900
Direct drive indoor blower data			
Fan size (in.)	11 x 10	11 x 10	11 x 10
Type	Centrifugal	Centrifugal	Centrifugal
Motor HP each	1/2	1	1
Maximum RPM	1400	1400	1400
Frame size	48	48	48
Filters			
Filter size	B	B	B
Quantity - size	Field-supplied external filters must be sized so as not to exceed 300 fpm air velocity through disposable filters. All three-phase models include an internal filter rack kit and washable filters. Consult the instructions supplied with the kit for replacement filter sizes. Filter sizes: A= 20 x 20, B = 20 x 30.		

Cooling performance data - 3 ton (low speed)																
Packaged unit model no. PHE6B3644																
Condenser entering air temperature	ID CFM	700					900					1100				
	IDDB	75	80	80	80	80	75	80	80	80	80	75	80	80	80	80
	IDWB	62	57	62	67	72	62	57	62	67	72	62	57	62	67	72
55 / 45	T.C.	29.6	27.2	29.6	33.0	36.8	31.6	30.0	31.9	35.4	39.1	32.7	31.7	32.8	36.8	40.9
	S.C.	21.6	27.2	25.3	22.0	18.6	24.9	30.0	29.8	25.3	21.0	27.5	31.7	32.8	27.4	23.1
	K.W.	1.29	1.30	1.29	1.27	1.24	1.29	1.30	1.29	1.27	1.24	1.37	1.37	1.37	1.35	1.32
65 / 55	T.C.	28.3	26.7	28.3	31.2	34.2	29.8	29.3	29.8	32.8	35.9	30.5	31.0	31.0	33.6	36.8
	S.C.	20.9	26.7	24.6	20.9	17.2	23.9	29.3	28.6	23.9	19.1	26.4	31.0	31.0	26.4	20.5
	K.W.	1.40	1.42	1.40	1.38	1.35	1.40	1.41	1.40	1.38	1.35	1.48	1.48	1.48	1.45	1.42
75 / 63	T.C.	25.9	25.1	25.9	28.8	31.5	27.3	27.2	27.3	30.1	33.1	27.9	28.7	28.8	30.8	33.7
	S.C.	19.4	25.1	23.1	19.3	15.5	22.3	27.2	27.2	22.3	17.3	25.1	28.7	28.8	24.9	18.8
	K.W.	1.56	1.57	1.56	1.53	1.51	1.56	1.56	1.56	1.53	1.51	1.63	1.63	1.63	1.61	1.58
85 / 69	T.C.	23.7	22.9	23.7	26.3	29.0	24.9	25.1	25.1	27.6	30.3	25.5	26.6	26.6	28.1	30.9
	S.C.	17.9	22.9	21.7	17.7	13.8	20.9	25.1	25.1	20.8	15.7	23.4	26.6	26.6	23.3	17.1
	K.W.	1.74	1.75	1.74	1.72	1.70	1.74	1.74	1.74	1.72	1.70	1.82	1.81	1.81	1.80	1.78
95 / 75	T.C.	21.7	21.2	21.6	24.1	26.7	22.8	23.3	23.3	25.3	28.0	23.2	24.7	24.8	25.8	28.4
	S.C.	16.8	21.2	20.7	16.6	12.6	19.8	23.3	23.3	19.4	14.4	22.4	24.7	24.8	22.2	15.9
	K.W.	1.94	1.95	1.94	1.92	1.91	1.94	1.94	1.94	1.92	1.90	2.02	2.01	2.01	2.00	1.99
105 / 83	T.C.	19.8	19.6	19.6	21.7	24.4	20.7	21.5	21.5	23.0	25.5	21.2	22.7	22.8	23.8	26.0
	S.C.	15.8	19.6	19.5	15.9	11.4	18.7	21.5	21.5	18.5	13.3	21.2	22.7	22.8	21.5	14.8
	K.W.	2.16	2.16	2.16	2.14	2.13	2.16	2.15	2.15	2.14	2.13	2.24	2.23	2.23	2.22	2.21
115 / 89	T.C.	17.8	17.9	17.9	19.5	21.6	18.5	19.8	19.8	20.8	23.2	19.4	20.7	20.7	20.8	23.5
	S.C.	14.5	17.9	17.9	15.0	10.8	17.7	19.8	19.8	17.4	12.2	19.4	20.7	20.7	20.3	13.8
	K.W.	2.40	2.40	2.40	2.39	2.37	2.41	2.40	2.40	2.39	2.38	2.49	2.47	2.47	2.47	2.46
125 / 95	T.C.	14.7	14.7	15.1	16.9	19.1	15.5	15.7	16.7	18.4	21.4	16.5	16.3	17.8	19.3	23.3
	S.C.	12.5	14.7	15.1	12.4	8.0	15.5	15.7	16.7	16.1	12.0	16.5	16.3	17.8	19.3	15.5
	K.W.	2.67	2.67	2.67	2.65	2.63	2.67	2.67	2.66	2.65	2.64	2.75	2.74	2.74	2.73	2.72

Cooling performance data - 3 ton (high speed)																
Packaged unit model no. PHE6B3644																
Condenser entering air temperature	ID CFM	1000					1200					1400				
	IDDB	75	80	80	80	80	75	80	80	80	80	75	80	80	80	80
	IDWB	62	57	62	67	72	62	57	62	67	72	62	57	62	67	72
55 / 45	T.C.	41.1	38.4	41.3	45.2	49.3	42.9	40.8	42.9	47.4	51.9	44.0	42.6	44.1	49.0	53.2
	S.C.	29.7	38.4	35.1	29.8	24.6	32.7	40.8	39.0	33.0	27.2	35.4	42.6	42.6	35.5	28.6
	K.W.	1.99	1.98	1.98	2.01	2.04	2.02	2.03	2.02	2.06	2.08	2.05	2.08	2.06	2.09	2.10
65 / 55	T.C.	39.6	37.4	39.6	43.3	47.2	40.9	39.7	40.9	44.7	48.6	41.8	41.7	41.8	45.7	49.6
	S.C.	28.9	37.4	34.3	28.7	23.3	31.5	39.7	37.9	31.4	25.0	34.2	41.7	41.4	34.0	26.5
	K.W.	2.11	2.09	2.11	2.16	2.21	2.16	2.14	2.16	2.20	2.25	2.19	2.19	2.19	2.24	2.29
75 / 63	T.C.	37.1	35.4	37.2	40.7	44.5	38.5	37.7	38.4	42.0	45.7	39.3	39.5	39.6	42.9	46.6
	S.C.	27.4	35.4	32.8	27.2	21.5	30.1	37.7	36.5	29.8	23.1	32.7	39.5	39.6	32.4	24.7
	K.W.	2.30	2.28	2.30	2.33	2.37	2.34	2.33	2.34	2.37	2.41	2.37	2.37	2.37	2.41	2.44
85 / 69	T.C.	34.5	33.2	34.6	37.8	41.4	35.6	35.3	35.6	39.1	42.7	36.6	37.0	37.0	39.9	43.4
	S.C.	25.9	33.2	31.3	25.6	19.7	28.5	35.3	34.7	28.0	21.3	31.3	37.0	37.0	30.6	22.8
	K.W.	2.50	2.49	2.50	2.53	2.56	2.54	2.53	2.54	2.56	2.59	2.57	2.57	2.57	2.59	2.62
95 / 75	T.C.	31.7	30.9	31.8	34.9	38.1	32.7	32.8	32.8	35.9	39.1	33.5	34.3	34.4	36.7	39.8
	S.C.	24.1	30.9	29.5	23.7	17.8	26.8	32.8	32.8	26.2	19.2	29.3	34.3	34.4	28.8	20.8
	K.W.	2.72	2.72	2.72	2.74	2.76	2.75	2.75	2.75	2.77	2.79	2.78	2.79	2.79	2.80	2.82
105 / 83	T.C.	29.6	29.1	29.5	32.5	35.6	30.5	31.0	31.0	33.5	36.6	31.1	32.4	32.5	34.0	37.2
	S.C.	23.2	29.1	28.6	22.8	17.0	26.1	31.0	31.0	25.6	18.7	29.0	32.4	32.5	28.6	20.3
	K.W.	2.97	2.97	2.96	2.98	3.00	3.00	3.00	3.00	3.01	3.03	3.03	3.03	3.03	3.04	3.06
115 / 89	T.C.	27.2	27.1	27.1	29.5	32.6	27.9	28.7	28.8	30.6	33.5	28.4	30.0	30.1	31.1	34.1
	S.C.	22.0	27.1	27.1	22.1	15.7	24.9	28.7	28.8	24.6	17.5	27.9	30.0	30.1	27.5	19.3
	K.W.	3.25	3.25	3.25	3.26	3.28	3.28	3.29	3.29	3.29	3.31	3.31	3.32	3.32	3.32	3.34
125 / 95	T.C.	23.2	23.0	23.7	26.6	30.7	23.6	24.3	25.0	27.5	31.7	24.5	25.3	26.1	28.2	32.3
	S.C.	19.7	23.0	23.7	20.2	16.1	22.7	24.3	25.0	23.2	17.6	24.5	25.3	26.1	26.5	19.3
	K.W.	3.58	3.57	3.58	3.58	3.59	3.61	3.60	3.62	3.62	3.62	3.64	3.62	3.65	3.65	3.65

Cooling performance data - 4 ton (low speed)																
Packaged unit model no. PHE6B4844																
Condenser entering air temperature	ID CFM	1050					1250					1450				
	IDDB	75	80	80	80	80	75	80	80	80	80	75	80	80	80	80
	IDWB	62	57	62	67	72	62	57	62	67	72	62	57	62	67	72
55 / 45	T.C.	40.7	37.7	40.8	45.2	50.0	44.7	42.3	44.8	49.4	54.5	46.0	44.4	46.0	50.7	55.6
	S.C.	30.0	37.7	34.8	30.3	25.9	33.4	42.3	39.0	33.6	28.4	35.7	44.4	42.3	35.6	29.4
	K.W.	1.62	1.63	1.62	1.60	1.58	1.89	1.88	1.89	1.88	1.88	2.00	1.95	1.99	2.01	2.00
65 / 55	T.C.	40.3	37.4	40.3	44.3	48.8	41.3	39.3	41.4	45.6	50.2	42.1	40.8	42.1	46.5	51.1
	S.C.	29.0	37.4	33.9	29.1	24.3	30.9	39.3	36.6	31.1	25.5	32.7	40.8	39.0	32.8	26.6
	K.W.	2.05	2.07	2.05	2.02	1.99	2.13	2.14	2.13	2.10	2.07	2.21	2.22	2.21	2.18	2.15
75 / 63	T.C.	36.2	34.3	36.2	40.0	44.1	37.1	36.0	37.1	41.0	45.2	37.7	37.3	37.5	41.7	45.9
	S.C.	26.7	34.3	31.7	26.7	21.7	28.6	36.0	34.4	28.7	22.9	30.4	37.3	36.9	30.4	23.9
	K.W.	2.17	2.18	2.17	2.14	2.12	2.25	2.26	2.25	2.23	2.20	2.34	2.34	2.34	2.31	2.29
85 / 69	T.C.	32.0	31.0	32.0	35.4	39.1	32.7	32.4	32.6	36.1	39.9	33.0	33.6	33.6	36.6	40.5
	S.C.	24.3	31.0	29.4	24.3	19.0	26.3	32.4	32.2	26.2	20.1	28.0	33.6	33.6	27.9	21.2
	K.W.	2.28	2.28	2.28	2.25	2.23	2.36	2.36	2.36	2.34	2.32	2.45	2.44	2.44	2.43	2.41
95 / 75	T.C.	29.3	28.7	29.2	32.5	35.9	29.8	30.0	30.0	33.1	36.6	30.1	31.0	31.1	33.4	37.1
	S.C.	22.6	28.7	27.8	22.4	17.0	24.6	30.0	30.0	24.4	18.1	26.4	31.0	31.1	26.2	19.2
	K.W.	2.55	2.55	2.55	2.53	2.51	2.63	2.63	2.63	2.61	2.60	2.72	2.71	2.71	2.70	2.69
105 / 83	T.C.	27.7	27.4	27.6	30.7	34.1	28.2	28.8	28.8	31.4	34.8	28.5	29.9	29.9	31.8	35.2
	S.C.	21.6	27.4	27.2	21.2	15.4	23.8	28.8	28.8	23.4	16.6	26.0	29.9	29.9	25.5	17.8
	K.W.	3.05	3.05	3.05	3.04	3.03	3.14	3.13	3.13	3.12	3.12	3.23	3.22	3.22	3.21	3.20
115 / 89	T.C.	24.5	24.8	24.8	27.4	30.4	25.0	26.0	26.1	27.9	31.0	25.3	27.0	27.0	28.1	31.3
	S.C.	20.0	24.8	24.8	19.3	13.2	22.4	26.0	26.1	21.7	14.4	24.5	27.0	27.0	23.9	15.7
	K.W.	3.46	3.46	3.46	3.45	3.45	3.55	3.55	3.55	3.54	3.54	3.64	3.64	3.63	3.63	3.63
125 / 95	T.C.	17.9	19.2	19.3	20.2	22.7	20.9	22.3	22.5	23.5	26.4	21.2	22.8	22.9	23.3	26.1
	S.C.	17.9	19.2	19.3	17.3	11.2	20.4	22.3	22.5	19.9	12.5	21.2	22.8	22.9	21.8	13.4
	K.W.	3.54	3.51	3.53	3.54	3.55	3.85	3.80	3.84	3.87	3.90	3.84	3.83	3.83	3.83	3.83

Cooling performance data - 4 ton (high speed)																
Packaged unit model no. PHE6B4844																
Condenser entering air temperature	ID CFM	1350					1550					1750				
	IDDB	75	80	80	80	80	75	80	80	80	80	75	80	80	80	80
	IDWB	62	57	62	67	72	62	57	62	67	72	62	57	62	67	72
55 / 45	T.C.	52.4	47.7	52.5	55.9	60.9	53.4	49.4	53.5	57.0	61.9	54.0	50.7	54.0	61.9	62.5
	S.C.	38.5	47.7	44.8	37.4	31.5	40.4	49.4	47.5	39.4	32.4	42.0	50.7	49.7	43.3	33.2
	K.W.	2.34	2.10	2.34	2.10	2.18	2.44	2.20	2.44	2.33	2.27	2.58	2.35	2.58	2.83	2.41
65 / 55	T.C.	48.7	46.0	48.8	53.4	58.0	49.6	47.6	49.6	54.2	58.9	50.1	48.9	50.0	54.7	59.3
	S.C.	35.9	46.0	42.3	36.0	29.7	37.8	47.6	44.8	37.8	30.7	39.3	48.9	47.0	39.3	31.5
	K.W.	2.45	2.44	2.45	2.47	2.49	2.55	2.54	2.55	2.57	2.59	2.69	2.69	2.69	2.71	2.73
75 / 63	T.C.	47.1	44.8	47.2	51.5	56.0	48.0	46.4	47.9	52.3	56.8	48.4	47.5	48.2	52.8	57.2
	S.C.	34.8	44.8	41.3	34.7	28.0	36.7	46.4	43.9	36.6	29.1	38.3	47.5	46.2	38.1	29.9
	K.W.	2.85	2.84	2.85	2.87	2.89	2.95	2.94	2.95	2.97	2.98	3.09	3.08	3.09	3.11	3.12
85 / 69	T.C.	44.7	42.8	44.8	48.9	53.0	45.5	44.3	45.4	49.6	53.7	45.8	45.4	45.7	49.9	54.1
	S.C.	33.1	42.8	39.6	32.9	26.0	35.1	44.3	42.3	34.8	27.1	36.7	45.4	44.7	36.4	27.9
	K.W.	3.28	3.27	3.28	3.30	3.32	3.38	3.37	3.38	3.40	3.42	3.52	3.51	3.52	3.54	3.56
95 / 75	T.C.	41.1	39.7	41.1	44.9	48.8	41.7	41.0	41.6	45.5	49.4	42.0	42.0	42.0	45.7	49.6
	S.C.	30.8	39.7	37.3	30.4	23.5	32.7	41.0	39.9	32.2	24.5	34.3	42.0	42.0	33.8	25.3
	K.W.	3.59	3.58	3.59	3.61	3.63	3.68	3.68	3.68	3.71	3.73	3.82	3.82	3.82	3.85	3.87
105 / 83	T.C.	34.7	34.6	34.7	37.9	41.1	35.0	35.7	35.8	38.3	41.5	35.2	36.5	36.5	38.4	41.6
	S.C.	27.5	34.6	34.5	26.9	19.3	29.7	35.7	35.8	29.1	20.5	31.7	36.5	36.5	31.1	21.5
	K.W.	3.82	3.81	3.82	3.84	3.86	3.91	3.92	3.92	3.94	3.96	4.05	4.06	4.06	4.08	4.10
115 / 89	T.C.	29.8	30.3	30.3	32.6	35.4	30.0	31.2	31.2	32.8	35.7	30.1	31.9	31.9	32.9	35.7
	S.C.	24.8	30.3	30.3	23.8	15.7	27.1	31.2	31.2	26.0	16.9	29.1	31.9	31.9	28.1	18.1
	K.W.	4.32	4.33	4.33	4.35	4.38	4.42	4.43	4.43	4.45	4.48	4.56	4.58	4.58	4.59	4.62
125 / 95	T.C.	25.1	25.7	25.9	27.6	30.1	25.3	26.4	26.7	27.7	30.2	27.0	28.3	28.6	29.5	32.0
	S.C.	21.7	25.7	25.9	21.0	12.7	24.0	26.4	26.7	23.3	13.8	26.4	28.3	28.6	25.9	15.1
	K.W.	5.15	5.15	5.17	5.21	5.27	5.04	5.05	5.06	5.08	5.12	4.99	5.01	5.02	5.04	5.08

Cooling performance data - 5 ton (low speed)																
Packaged unit model no. PHE6B6044																
Condenser entering air temperature	ID CFM	1150					1400					1650				
	IDDB	75	80	80	80	80	75	80	80	80	80	75	80	80	80	80
	IDWB	62	57	62	67	72	62	57	62	67	72	62	57	62	67	72
55 / 45	T.C.	54.3	47.4	54.3	60.4	65.3	56.3	50.3	56.3	62.7	67.5	57.5	52.6	57.6	64.1	68.9
	S.C.	39.7	47.4	45.3	40.4	35.4	42.7	50.3	49.2	43.1	37.0	45.1	52.6	52.5	45.3	38.3
	K.W.	2.24	2.01	2.24	2.32	2.33	2.31	2.08	2.31	2.40	2.41	2.41	2.16	2.41	2.49	2.50
65 / 55	T.C.	52.4	47.8	52.5	57.7	63.3	54.4	50.8	54.4	59.8	65.4	55.7	53.1	55.6	61.1	66.8
	S.C.	37.9	47.8	43.4	38.5	33.5	40.7	50.8	47.1	41.2	35.3	43.0	53.1	50.3	43.5	36.7
	K.W.	2.59	2.62	2.59	2.56	2.52	2.67	2.69	2.67	2.64	2.60	2.76	2.78	2.76	2.73	2.69
75 / 63	T.C.	47.2	43.9	47.2	52.0	57.1	48.8	46.7	48.6	53.6	58.7	49.8	48.6	49.5	54.6	59.7
	S.C.	34.8	43.9	40.4	35.2	29.9	37.5	46.7	44.0	37.8	31.6	39.9	48.6	47.4	40.1	32.9
	K.W.	2.66	2.68	2.66	2.64	2.60	2.74	2.76	2.75	2.71	2.68	2.84	2.85	2.84	2.81	2.78
85 / 69	T.C.	42.3	40.0	42.1	46.6	51.1	43.4	42.5	43.2	47.9	52.4	44.2	44.2	44.3	48.6	53.2
	S.C.	32.0	40.0	37.6	32.2	26.6	34.6	42.5	41.4	34.8	28.2	37.1	44.2	44.3	37.2	29.6
	K.W.	2.80	2.82	2.80	2.78	2.75	2.89	2.89	2.89	2.86	2.83	2.98	2.98	2.98	2.95	2.92
95 / 75	T.C.	38.6	37.2	38.3	42.6	46.9	39.6	39.4	39.4	43.7	48.0	40.1	40.9	40.9	44.3	48.7
	S.C.	29.8	37.2	35.5	29.9	24.3	32.6	39.4	39.3	32.5	25.9	35.0	40.9	40.9	34.9	27.2
	K.W.	3.14	3.15	3.14	3.11	3.09	3.22	3.22	3.22	3.20	3.17	3.32	3.32	3.32	3.29	3.27
105 / 83	T.C.	33.4	33.2	33.3	36.9	40.7	34.1	35.1	35.1	37.6	41.6	34.5	36.5	36.5	38.2	42.2
	S.C.	27.1	33.2	33.1	27.0	20.8	30.1	35.1	35.1	29.9	22.4	32.9	36.5	36.5	32.6	23.8
	K.W.	3.51	3.51	3.51	3.49	3.47	3.60	3.59	3.59	3.57	3.55	3.70	3.68	3.68	3.67	3.65
115 / 89	T.C.	28.1	28.7	28.8	31.1	34.5	28.7	30.4	30.4	31.8	35.1	29.3	31.5	31.5	32.1	35.5
	S.C.	24.2	28.7	28.8	23.9	17.4	27.2	30.4	30.4	26.8	19.1	29.3	31.5	31.5	29.8	20.7
	K.W.	3.92	3.92	3.92	3.90	3.88	4.01	4.00	3.99	3.98	3.96	4.10	4.09	4.09	4.08	4.06
125 / 95	T.C.	23.9	25.9	25.1	26.1	28.1	24.5	27.1	26.4	26.3	28.5	25.3	28.0	27.3	26.7	28.7
	S.C.	22.0	25.9	25.1	21.0	13.2	24.5	27.1	26.4	24.1	14.7	25.3	28.0	27.3	26.7	16.5
	K.W.	4.36	4.34	4.35	4.34	4.32	4.44	4.42	4.43	4.42	4.40	4.54	4.52	4.52	4.52	4.50

Cooling performance data - 5 ton (high speed)																
Packaged unit model no. PHE6B6044																
Condenser entering air temperature	ID CFM	1550					1800					2050				
	IDDB	75	80	80	80	80	75	80	80	80	80	75	80	80	80	80
	IDWB	62	57	62	67	72	62	57	62	67	72	62	57	62	67	72
55 / 45	T.C.	68.2	63.5	68.0	73.1	76.0	69.2	66.1	69.4	73.7	77.0	70.2	68.3	70.5	74.7	76.9
	S.C.	50.2	63.5	57.3	49.6	42.2	52.3	66.1	60.6	51.1	43.0	54.4	68.3	63.7	52.8	43.3
	K.W.	3.13	3.10	3.13	3.16	3.18	3.31	3.29	3.31	3.34	3.35	3.48	3.48	3.48	3.51	3.52
65 / 55	T.C.	63.5	59.1	63.8	69.7	75.8	64.8	61.3	65.0	71.0	77.1	65.7	63.2	65.9	71.9	78.1
	S.C.	46.8	59.1	53.9	47.3	40.6	48.9	61.3	56.9	49.5	41.9	50.8	63.2	59.7	51.3	42.9
	K.W.	3.39	3.34	3.39	3.45	3.51	3.56	3.53	3.56	3.63	3.69	3.73	3.70	3.73	3.79	3.85
75 / 63	T.C.	60.4	56.7	60.5	66.2	72.2	61.6	58.8	61.6	67.5	73.6	62.3	60.6	62.3	68.2	74.4
	S.C.	44.7	56.7	52.0	45.0	37.8	46.9	58.8	55.2	47.2	39.1	49.0	60.6	58.2	49.3	40.3
	K.W.	3.69	3.65	3.69	3.74	3.80	3.86	3.84	3.86	3.92	3.98	4.02	4.01	4.02	4.08	4.14
85 / 69	T.C.	56.8	54.0	56.7	62.3	68.0	57.8	56.1	57.7	63.3	69.1	58.4	57.8	58.3	63.9	69.7
	S.C.	42.5	54.0	50.2	42.6	34.8	45.0	56.1	53.7	45.0	36.2	47.3	57.8	56.9	47.3	37.5
	K.W.	4.02	3.99	4.02	4.07	4.13	4.20	4.18	4.19	4.25	4.31	4.35	4.35	4.35	4.41	4.47
95 / 75	T.C.	52.3	50.7	52.2	57.3	62.6	53.1	52.7	53.1	58.1	63.6	53.6	54.3	54.3	58.7	64.0
	S.C.	39.9	50.7	47.9	39.7	31.4	42.6	52.7	51.8	42.4	32.9	45.4	54.3	54.3	45.0	34.3
	K.W.	4.40	4.38	4.40	4.45	4.51	4.57	4.57	4.57	4.62	4.68	4.73	4.74	4.74	4.79	4.84
105 / 83	T.C.	47.1	46.3	47.1	51.5	56.3	47.7	48.0	48.0	52.3	56.4	48.0	49.4	49.4	52.5	57.4
	S.C.	36.5	46.3	44.7	36.1	27.4	39.4	48.0	48.0	38.8	28.8	42.1	49.4	49.4	41.5	30.5
	K.W.	4.83	4.82	4.83	4.88	4.94	5.00	5.01	5.01	5.06	5.11	5.16	5.18	5.18	5.22	5.27
115 / 89	T.C.	41.9	41.8	41.9	45.8	49.9	42.3	43.3	43.3	46.2	50.4	42.5	44.4	44.5	46.5	50.6
	S.C.	33.2	41.8	41.5	32.6	23.8	36.2	43.3	43.3	35.5	25.3	39.0	44.4	44.5	38.3	26.8
	K.W.	5.32	5.32	5.32	5.37	5.43	5.49	5.50	5.50	5.54	5.60	5.64	5.67	5.67	5.70	5.76
125 / 95	T.C.	37.6	38.6	38.0	40.0	42.5	37.8	39.8	39.2	40.2	42.7	37.9	40.7	40.2	40.5	42.8
	S.C.	31.3	38.6	38.0	29.5	19.1	34.1	39.8	39.2	32.2	20.7	36.7	40.7	40.2	35.2	22.3
	K.W.	5.85	5.85	5.86	5.91	5.98	6.02	6.03	6.04	6.08	6.15	6.18	6.20	6.21	6.24	6.30

Heating performance data - 3.0 ton (low speed)										
Packaged unit model no. PHE6B3644										
Air temperature entering outdoor unit	Air temperature entering indoor coil	ID CFM								
		700			900			1100		
		MBH	COP	KW	MBH	COP	KW	MBH	COP	KW
60	60	25.9	4.17	1.82	28.1	4.87	1.69	30.4	5.21	1.71
	70	26.2	3.80	2.02	27.2	4.21	1.89	29.3	4.57	1.88
	80	24.2	3.15	2.25	26.2	3.67	2.09	28.3	3.98	2.08
47	60	23.4	3.77	1.82	24.0	4.13	1.70	24.7	4.21	1.72
	70	22.8	3.30	2.02	23.2	3.59	1.89	23.8	3.69	1.89
	80	22.2	2.86	2.27	22.4	3.12	2.11	22.9	3.17	2.12
40	60	22.2	3.55	1.83	22.2	3.76	1.73	21.9	3.71	1.73
	70	21.5	3.09	2.04	21.3	3.24	1.93	21.0	3.24	1.90
	80	21.0	2.70	2.28	20.8	2.82	2.16	20.1	2.75	2.14

Heating performance data - 3.0 ton (high speed)										
Packaged unit model no. PHE6B3644										
Air temperature entering outdoor unit	Air temperature entering indoor coil	ID CFM								
		1000			1200			1400		
		MBH	COP	KW	MBH	COP	KW	MBH	COP	KW
60	60	38.4	4.46	2.52	40.3	4.86	2.43	42.2	5.20	2.38
	70	37.3	3.99	2.74	39.2	4.37	2.63	41.1	4.68	2.57
	80	36.1	3.54	2.99	38.0	3.88	2.87	40.2	4.20	2.80
47	60	33.6	4.14	2.38	34.5	4.37	2.31	35.4	4.57	2.27
	70	32.6	3.68	2.60	33.6	3.91	2.52	34.5	4.08	2.48
	80	31.8	3.28	2.84	32.9	3.48	2.77	33.7	3.64	2.71
40	60	30.5	3.87	2.31	31.2	4.06	2.25	31.7	4.20	2.21
	70	29.8	3.46	2.53	30.5	3.62	2.47	31.0	3.75	2.42
	80	29.1	3.07	2.78	29.9	3.23	2.71	30.4	3.36	2.65
30	60	27.1	3.56	2.23	27.3	3.67	2.18	27.5	3.74	2.15
	70	26.7	3.18	2.46	26.9	3.28	2.40	27.1	3.36	2.37
	80	26.3	2.85	2.70	26.5	2.94	2.64	26.7	3.01	2.60
17	60	22.1	2.92	2.21	20.1	2.85	2.07	20.8	2.95	2.07
	70	19.3	2.46	2.29	20.0	2.54	2.30	20.5	2.61	2.30
	80	19.0	2.20	2.53	19.8	2.30	2.52	20.4	2.37	2.52
10	60	15.7	2.24	2.05	16.6	2.39	2.03	17.5	2.55	2.01
	70	15.5	2.02	2.26	16.4	2.14	2.25	17.4	2.29	2.23
	80	15.5	1.83	2.47	16.3	1.94	2.47	17.3	2.06	2.46

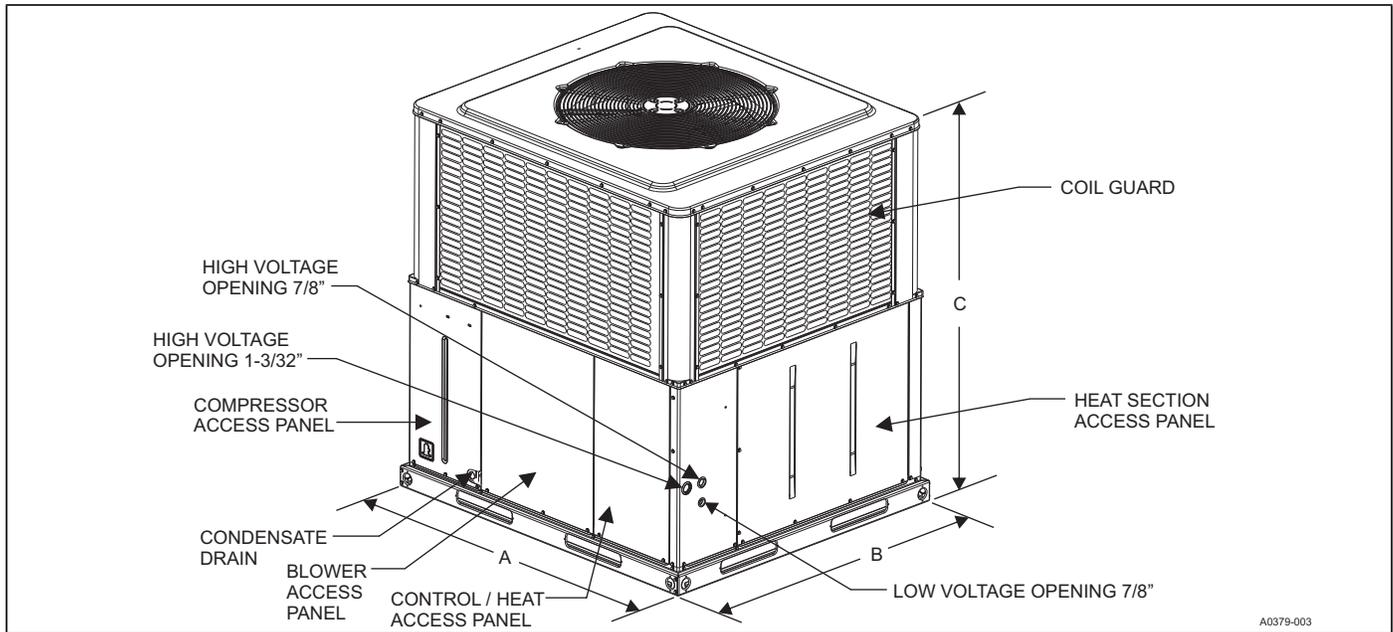
Heating performance data - 4.0 ton (low speed)										
Packaged unit model no. PHE6B4844										
Air temperature entering outdoor unit	Air temperature entering indoor coil	ID CFM								
		1000			1200			1400		
		MBH	COP	KW	MBH	COP	KW	MBH	COP	KW
60	60	37.8	4.52	2.45	39.4	4.87	2.37	40.6	5.09	2.34
	70	36.8	3.86	2.79	38.3	4.22	2.66	39.5	4.42	2.62
	80	35.3	3.35	3.09	37.0	3.61	3.00	38.3	3.82	2.94
47	60	31.9	3.86	2.42	33.1	4.10	2.36	34.2	4.26	2.35
	70	31.0	3.33	2.73	32.2	3.56	2.65	33.4	3.72	2.63
	80	30.0	2.85	3.09	31.3	3.07	2.99	32.5	3.22	2.95
40	60	29.0	3.52	2.42	30.2	3.73	2.37	31.1	3.86	2.36
	70	28.2	3.02	2.74	29.5	3.24	2.66	30.4	3.36	2.65
	80	27.4	2.59	3.10	28.6	2.74	3.05	29.6	2.93	2.96

Heating performance data - 4.0 ton (high speed)										
Packaged unit model no. PHE6B4844										
Air temperature entering outdoor unit	Air temperature entering indoor coil	ID CFM								
		1400			1600			1800		
		MBH	COP	KW	MBH	COP	KW	MBH	COP	KW
60	60	56.6	5.01	3.31	59.1	5.36	3.23	58.4	5.22	3.28
	70	55.0	4.45	3.62	57.4	4.75	3.54	56.7	4.66	3.57
	80	53.5	3.93	3.99	55.8	4.18	3.91	55.1	4.13	3.91
47	60	47.3	4.43	3.13	48.0	4.49	3.13	48.0	4.45	3.16
	70	46.1	3.94	3.43	46.7	4.00	3.42	46.8	3.98	3.44
	80	44.8	3.48	3.77	45.4	3.54	3.76	45.5	3.55	3.76
40	60	42.2	4.08	3.03	43.1	4.11	3.07	42.6	4.04	3.09
	70	41.1	3.61	3.33	42.0	3.67	3.35	41.5	3.61	3.37
	80	39.9	3.20	3.66	40.8	3.25	3.68	40.4	3.22	3.68
30	60	36.7	3.65	2.95	36.2	3.58	2.96	36.1	3.52	3.00
	70	35.8	3.25	3.23	37.1	3.33	3.27	35.3	3.14	3.29
	80	34.8	2.87	3.56	36.0	2.94	3.59	34.3	2.80	3.59
17	60	27.8	2.85	2.85	27.9	2.82	2.90	27.9	2.76	2.96
	70	26.2	2.38	3.23	27.5	2.53	3.19	27.6	2.49	3.25
	80	26.7	2.25	3.48	27.0	2.25	3.51	27.0	2.22	3.57
10	60	24.4	2.52	2.84	24.4	2.49	2.88	24.2	2.40	2.96
	70	24.3	2.24	3.17	24.2	2.23	3.18	24.0	2.16	3.26
	80	23.9	2.00	3.50	23.8	2.00	3.50	23.6	1.92	3.60

Heating performance data - 5.0 ton (low speed)										
Packaged unit model no. PHE6B6044										
Air temperature entering outdoor unit	Air temperature entering indoor coil	ID CFM								
		1150			1400			1650		
		MBH	COP	KW	MBH	COP	KW	MBH	COP	KW
60	60	51.6	4.68	3.23	53.8	5.07	3.11	55.3	5.40	3.00
	70	49.4	4.10	3.53	52.0	4.37	3.49	53.5	4.70	3.34
	80	47.8	3.56	3.94	50.0	3.80	3.85	51.6	4.05	3.74
47	60	42.0	3.98	3.09	42.8	4.18	3.00	42.6	4.16	3.00
	70	40.6	3.45	3.45	41.5	3.61	3.37	41.1	3.60	3.35
	80	39.0	2.97	3.85	39.9	3.05	3.83	39.8	3.16	3.69
40	60	36.0	3.40	3.10	36.8	3.55	3.04	36.4	3.51	3.04
	70	34.7	2.95	3.45	35.6	3.09	3.37	35.1	3.04	3.38
	80	33.3	2.54	3.84	34.3	2.68	3.75	33.8	2.63	3.77

Heating performance data - 5.0 ton (high speed)										
Packaged unit model no. PHE6B6044										
Air temperature entering outdoor unit	Air temperature entering indoor coil	ID CFM								
		1550			1800			2050		
		MBH	COP	KW	MBH	COP	KW	MBH	COP	KW
60	60	71.9	4.78	4.41	72.6	4.96	4.29	72.9	4.99	4.28
	70	70.7	4.25	4.88	71.1	4.42	4.72	71.7	4.49	4.68
	80	69.2	3.76	5.39	69.6	3.96	5.15	69.9	4.00	5.12
47	60	59.0	4.09	4.23	59.2	4.18	4.15	59.2	4.25	4.08
	70	58.2	3.66	4.66	58.3	3.74	4.56	58.5	3.83	4.47
	80	57.2	3.23	5.19	57.3	3.33	5.05	57.2	3.40	4.93
40	60	52.3	3.75	4.09	52.6	3.83	4.02	52.9	3.88	4.00
	70	51.5	3.36	4.49	51.8	3.45	4.41	52.1	3.49	4.38
	80	50.6	2.99	4.97	50.9	3.08	4.85	51.3	3.13	4.80
30	60	44.5	3.27	3.99	45.0	3.33	3.96	45.5	3.36	3.97
	70	44.0	2.94	4.39	44.4	3.01	4.33	44.9	3.04	4.33
	80	43.4	2.62	4.85	43.8	2.69	4.77	44.3	2.73	4.76
17	60	34.2	2.61	3.84	34.4	2.64	3.81	34.7	2.61	3.90
	70	33.6	2.32	4.24	34.0	2.37	4.20	34.2	2.34	4.28
	80	33.4	2.09	4.68	33.7	2.13	4.63	37.1	2.36	4.61
10	60	28.8	2.30	3.68	32.1	2.58	3.64	29.8	2.30	3.80
	70	29.1	2.11	4.05	29.3	2.11	4.07	29.8	2.10	4.17
	80	28.8	1.88	4.49	28.9	1.88	4.50	29.0	1.83	4.65

Unit dimensions and access locations



Unit dimensions

Model	Dimensions (in.)		
	A	B	C
PHE6B3644	51 1/4	45 3/4	47
PHE6B4844	51 1/4	45 3/4	53
PHE6B6044	51 1/4	45 3/4	55

Unit clearances

Direction	Distance (in.)	Direction	Distance (in.)
Top ¹	36	Incoming power (right side)	36
Side opposite ducts	36	Left side	24
Duct panel	0	Bottom ^{2 3}	1

1. There must be a minimum clearance of 1 in. on all sides of the supply air duct for the first 3 ft of the duct for 20 kW and 25 kW heaters (0 in. thereafter). For all other heaters, there must be a 0 in. clearance on all sides for the entire length of the supply air duct.
 2. Units must be installed outdoors. Overhanging structures or shrubs must not obstruct the outdoor air discharge outlet.
 3. Units can be installed on combustible materials made from wood or class A, B, or C roof covering materials if factory base rails are left in place as shipped.
- Note:** For units with a roof curb, the minimum clearance between combustible roof curb material and the supply air duct can be reduced from 1 in. to 1/2 in.

Indoor blower specifications

Model	Motor				
	HP	RPM	EFF.	SF	Frame
PHE6B3644	1/2	Variable	0.8	1.0	48
PHE6B4844	1	Variable	0.8	1.0	48
PHE6B6044	1	Variable	0.8	1.0	48

Cooling sound performance

Model	Sound rating ¹ dB(A)	Octave band centerline frequency (Hz)						
		125	250	500	1000	2000	4000	8000
PHE6B3644	73.2	61.8	63.2	60.5	64.4	58.9	53.4	45.9
PHE6B4844	74.0	62.0	62.0	60.9	64.7	60.1	56.6	49.2
PHE6B6044	74.1	65.9	61.8	60.8	63.5	58.7	55.5	48.3

1. Rated in accordance with AHRI Standard 270.

Heating sound performance

Model	Sound rating ¹ dB(A)	Octave band centerline frequency (Hz)						
		125	250	500	1000	2000	4000	8000
PHE6B3644	72.8	60.1	62.5	60.4	64.5	58.8	53.0	46.0
PHE6B4844	74.6	66.0	63.3	61.1	64.6	60.2	56.4	48.9
PHE6B6044	73.7	61.6	59.4	60.5	63.6	58.7	55.1	51.4

1. Rated in accordance with AHRI Standard 270.

Minimum blower speed for electric heat

Model	Heater kW			
	10	15	20	25
PHE6B3644	D (LO)	B (MH)	--	--
PHE6B4844	D (LO)	C (ML)	B (MH)	--
PHE6B6044	D (LO)	D (LO)	C (ML)	A (HI)

Electrical data for 460-3-60 single source power

Model	Compressor			OD fan motor	Blower motor	Electric heat option				MCA ¹ (total unit)	Max fuse ² or breaker ³ size (total unit)	MCA ¹ (unit less heater)	Max fuse ² or breaker ³ size (unit less heater)	MCA ¹ u nit (heater only)	Max fuse ² or breaker ³ size (heater only)
						Heater kit ⁴	Heater kW	Stages	Heater amps						
	RLA	LRA	MCC	FLA	FLA	460	460	460	460	460	460	460	460	460	
PHE6B36	4.0	31.0	6.0	0.9	1.9	none	--	--	--	7.8	15	7.8	15	-	-
						6HK06501046	8.8	1	11.0	21.6	25	7.8	15	13.8	15
						6HK06501546	13.2	1	16.6	28.5	30	7.8	15	20.8	25
PHE6B48	5.7	60.0	9.3	0.9	3.3	none	--	--	--	11.3	15	11.3	15	-	-
						6HK06501046	8.8	1	11.0	25.1	30	11.3	15	13.8	15
						6HK06501546	13.2	1	16.6	32.0	35	11.3	15	20.8	25
						6HK06502046	17.6	1	22.1	40.0	40	11.3	15	27.6	30
PHE6B60	6.5	60.0	9.9	0.9	3.3	none	--	--	--	12.3	15	12.3	15	-	-
						6HK06501046	8.8	1	11.0	26.1	30	12.3	15	13.8	15
						6HK06501546	13.2	1	16.6	33.0	35	12.3	15	20.8	25
						6HK06502046	17.6	1	22.1	40.0	40	12.3	15	27.6	30
						6HK06502546	22.0	1	27.7	46.9	50	12.3	15	34.5	35

1. MCA = Minimum Circuit Ampacity.

2. Maximum Overcurrent Protection per standard UL 1995.

3. Fuse or HACR circuit breaker to be field installed.

4. Single Point Conversion Kit required.

Note: Single-source power MCA and MOP requirements are given here for reference if the unit is installed with a field-installed single-point power modification**Electrical data for 460-3-60 multi source power**

Model	Compressor			OD fan motor	Blower motor	Electric heat option				MCA ¹ amps	Max fuse ² or breaker ³ size	MCA ¹ amps	Max fuse ² or breaker ³ size
						Heater kit	Heater kW	Stages	Heater amps				
	RLA	LRA	MCC	FLA	FLA	Heater kit	Heater kW	Stages	Heater amps	Circuit 1 unit minus heaters		Circuit 2 heaters	
PHE6B36	4.0	31.0	6.2	0.9	1.9	none	--	--	--	7.8	15	--	--
						6HK06501046	8.8	1	11.0	7.8	15	13.8	15.0
						6HK06501546	13.2	1	16.6	7.8	15	20.8	25.0
PHE6B48	5.7	60.0	8.9	0.9	3.3	none	--	--	--	11.3	15	--	--
						6HK06501046	8.8	1	11.0	11.3	15	13.8	15.0
						6HK06501546	13.2	1	16.6	11.3	15	20.8	25.0
						6HK06502046	17.6	1	22.1	11.3	15	27.6	30.0
PHE6B60	6.5	52.0	11.9	0.9	3.3	none	--	--	--	12.3	15	--	--
						6HK06501046	8.8	1	11.0	12.3	15	13.8	15.0
						6HK06501546	13.2	1	16.6	12.3	15	20.8	25.0
						6HK06502046	17.6	1	22.1	12.3	15	27.6	30.0
						6HK06502546	22.0	1	27.6	12.3	15	34.5	35.0

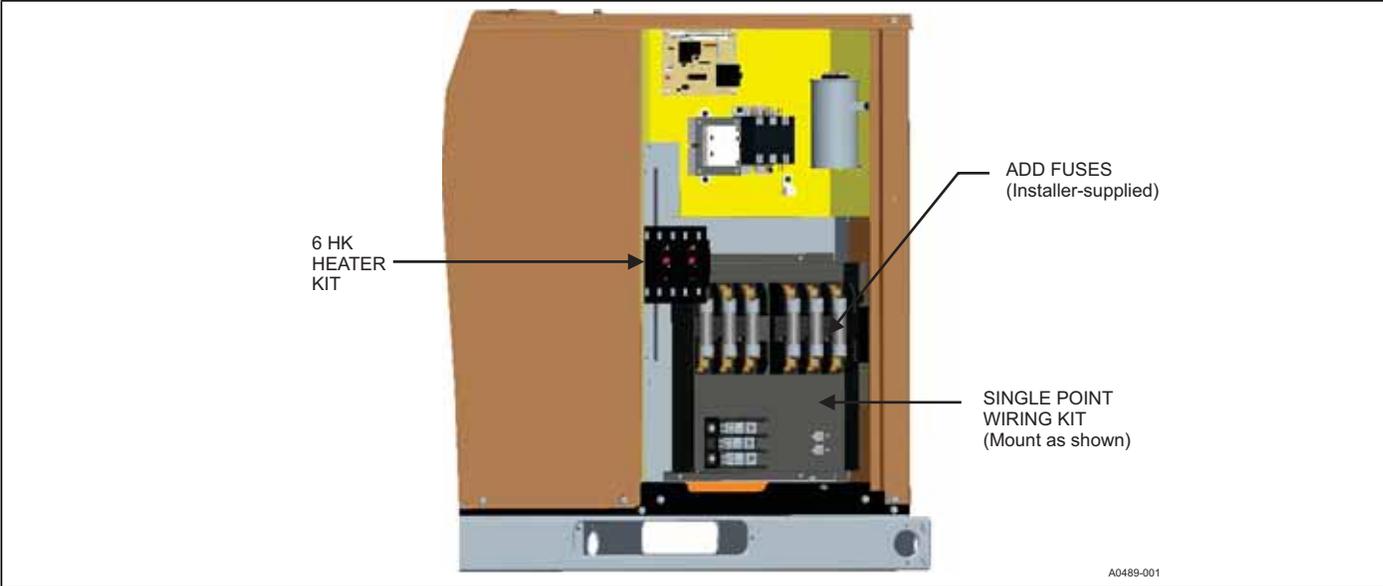
1. MCA = Minimum Circuit Ampacity.

2. Maximum Overcurrent Protection per standard UL 1995.

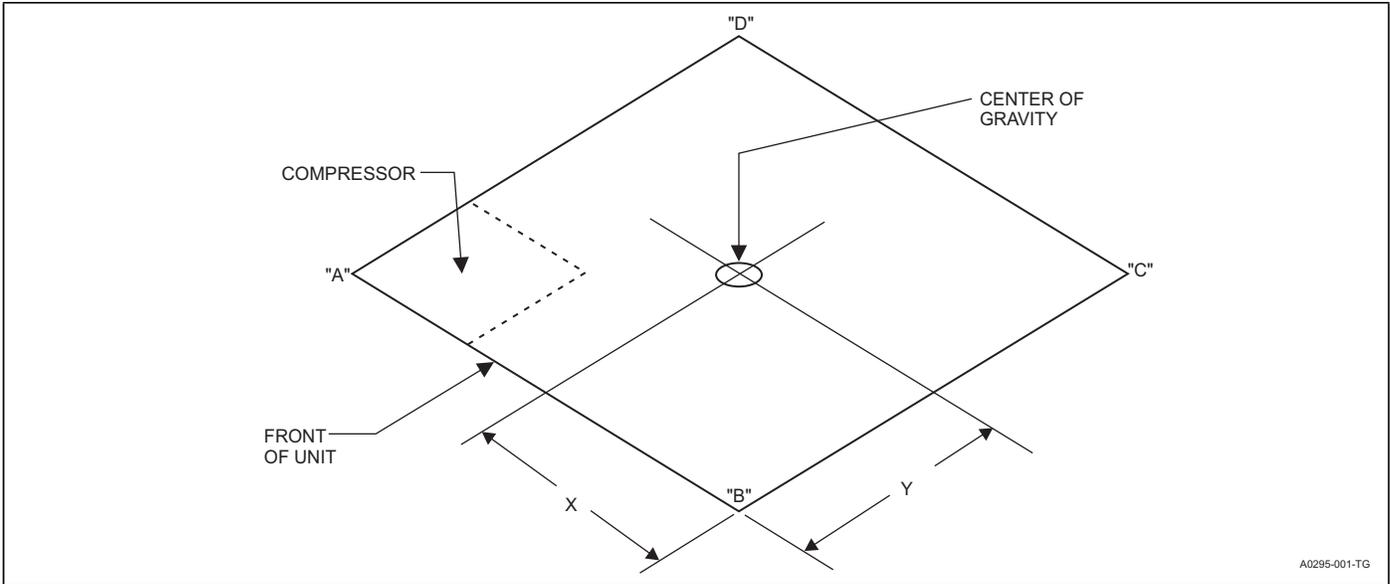
3. Fuse or HACR circuit breaker to be field installed.

Single point wiring kit part numbers

Unit model number	Voltage	Heater kit	Single point wiring kit	Unit fuse size (A)	Heater fuse size (A)
PHE6B36	460-3-60	6HK06501046	S1-2SPWK036	15	15
		6HK06501546	S1-2SPWK036	15	25
PHE6B48	460-3-60	6HK06501046	S1-2SPWK036	15	15
		6HK06501546	S1-2SPWK036	15	25
		6HK06502046	S1-2SPWK036	15	30
PHE6B60	460-3-60	6HK06501046	S1-2SPWK036	15	15
		6HK06501546	S1-2SPWK036	15	25
		6HK06502046	S1-2SPWK036	15	30
		6HK06502546	S1-2SPWK037	15	35



Weights and dimensions



Weights and dimensions

Model	Weight (lb)		Center of gravity		Four-point load location (lb)			
	Shipping	Operating	X	Y	A	B	C	D
PHE6B3644	413	408	28	22	162	90	87	69
PHE6B4844	481	476	29	19	171	105	102	98
PHE6B6044	500	495	29	19	178	110	106	101

Airflow performance - side duct application

Model	Jumper position		External static pressure (in. W.C.)									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
			SCFM	SCFM	SCFM	SCFM	SCFM	SCFM	SCFM	SCFM	SCFM	SCFM
PHE6B36	High COOL (AC cooling, HP heating)	A	1520	1480	1440	1410	1360	1320	1270	1230	1180	1110
		B	1340	1300	1260	1220	1170	1130	1080	1020	950	880
		C	1150	1110	1060	1010	970	900	830	750	690	640
		D	1050	1000	950	900	840	760	690	630	580	530
	Low COOL (AC cooling, HP heating)	A	1010	960	910	850	780	700	640	590	530	490
		B	870	810	750	670	600	530	480	420	360	160
		C	730	660	600	520	450	380	320	250	170	100
		D	710	640	570	490	420	360	300	220	150	100
	HEAT (Electric heat)	A	1610	1570	1530	1500	1460	1420	1370	1330	1290	1240
		B	1540	1500	1460	1430	1390	1340	1300	1260	1210	1140
		C	1460	1430	1390	1350	1310	1260	1220	1170	1120	1040
		D	1380	1350	1300	1260	1220	1180	1130	1080	1010	930
PHE6B48	High COOL (AC cooling, HP heating)	A	1840	1810	1770	1730	1700	1660	1620	1590	1550	1510
		B	1680	1650	1610	1570	1530	1500	1460	1420	1390	1350
		C	1580	1540	1500	1460	1420	1380	1340	1300	1260	1210
		D	1430	1380	1340	1290	1240	1210	1160	1110	1050	1000
	Low COOL (AC cooling, HP heating)	A	1370	1310	1270	1220	1180	1140	1090	1030	970	910
		B	1230	1170	1120	1070	1010	960	900	840	780	730
		C	1160	1100	1040	990	920	860	800	740	680	640
		D	1060	1000	930	870	800	720	660	600	540	500
	HEAT (Electric heat)	A	1880	1850	1810	1770	1740	1700	1660	1630	1590	1550
		B	1760	1720	1690	1650	1610	1570	1530	1500	1460	1430
		C	1610	1570	1540	1500	1450	1420	1380	1340	1300	1260
		D	1450	1400	1360	1310	1270	1230	1180	1130	1080	1030
PHE6B60	High COOL (AC cooling, HP heating)	A	2240	2200	2170	2140	2090	2060	2030	2000	1960	1930
		B	1920	1890	1850	1810	1780	1740	1700	1660	1630	1590
		C	1810	1780	1750	1700	1670	1630	1590	1560	1520	1480
		D	1650	1610	1570	1530	1490	1460	1420	1380	1340	1300
	Low COOL (AC cooling, HP heating)	A	1540	1500	1460	1420	1380	1340	1300	1260	1220	1170
		B	1470	1420	1380	1340	1290	1260	1210	1160	1110	1060
		C	1410	1360	1320	1270	1220	1190	1130	1080	1030	970
		D	1280	1220	1180	1130	1070	1030	970	910	850	790
	HEAT (Electric heat)	A	1960	1930	1890	1850	1820	1790	1740	1700	1660	1630
		B	1850	1820	1790	1750	1710	1670	1630	1600	1560	1520
		C	1740	1710	1670	1630	1600	1560	1520	1490	1450	1410
		D	1610	1570	1540	1500	1450	1420	1380	1340	1300	1260

Notes:

Airflow tested with dry coil conditions, without air filters, at 460 V.

Applications above 0.8 in. W.C. external static pressure are not recommended.

Brushless DC high efficiency standard ECM blower motor used for all indoor blower assemblies.

Minimal variations in airflow performance data result from using downflow duct applications. Data above can be used in those cases.

Heating applications tested at 0.5 in. W.C. external static pressure. Cooling applications tested per AHRI Standard 210/240.

The COOL jumper sets the indoor blower speed for both high-stage and low-stage AC cooling and HP heating.

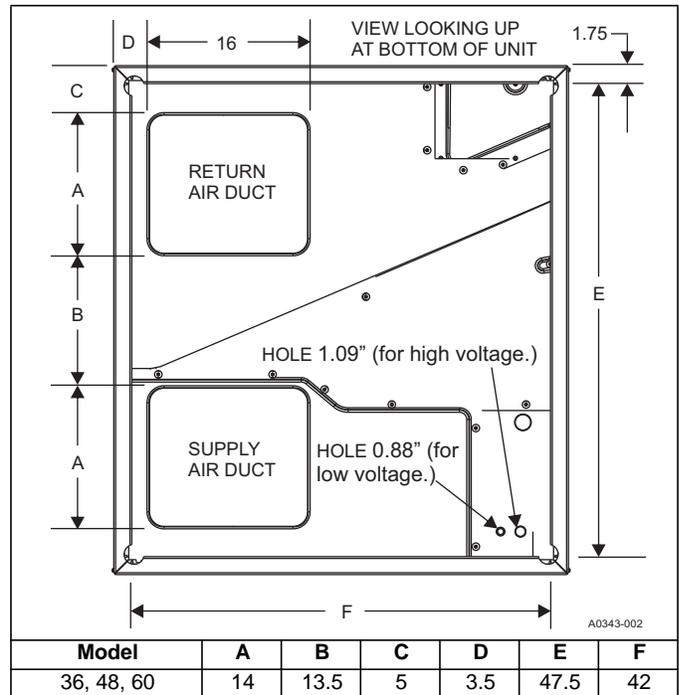
Additional static resistance

Size (ton)	CFM	Wet indoor coil	Economizer ¹	Filter/frame kit
36 (3.0)	700	0.01	0.00	0.04
	800	0.02	0.01	0.06
	900	0.03	0.01	0.08
	1000	0.04	0.01	0.10
	1100	0.05	0.01	0.13
	1200	0.06	0.02	0.16
	1300	0.07	0.03	0.17
	1400	0.08	0.04	0.18
48 (4.0)	1100	0.02	0.02	0.04
	1200	0.03	0.02	0.04
	1300	0.04	0.02	0.05
	1400	0.05	0.03	0.05
	1500	0.06	0.04	0.06
	1600	0.07	0.04	0.07
	1700	0.07	0.04	0.08
	1800	0.08	0.04	0.09
60 (5.0)	1900	0.09	0.05	0.10
	2000	0.09	0.05	0.11
	1100	0.02	0.02	0.04
	1200	0.03	0.02	0.04
	1300	0.04	0.02	0.05
	1400	0.05	0.03	0.05
	1500	0.06	0.04	0.06
	1600	0.07	0.04	0.07
	1700	0.07	0.04	0.08
	1800	0.08	0.04	0.09
1900	0.09	0.05	0.10	
2000	0.09	0.05	0.11	

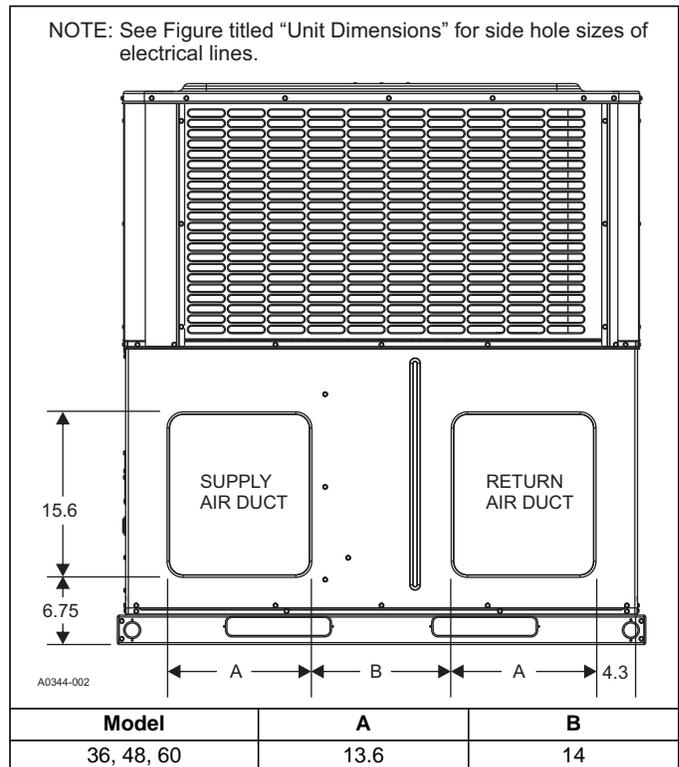
1. The pressure drop through the economizer is greater for 100% outdoor air than for 100% return air. If the resistance of the return air duct is less than 0.25 IWG, the unit delivers less CFM during full economizer operation.

Note: Filter pressure drop based on standard filter media tested at velocities not to exceed 300 ft/min.

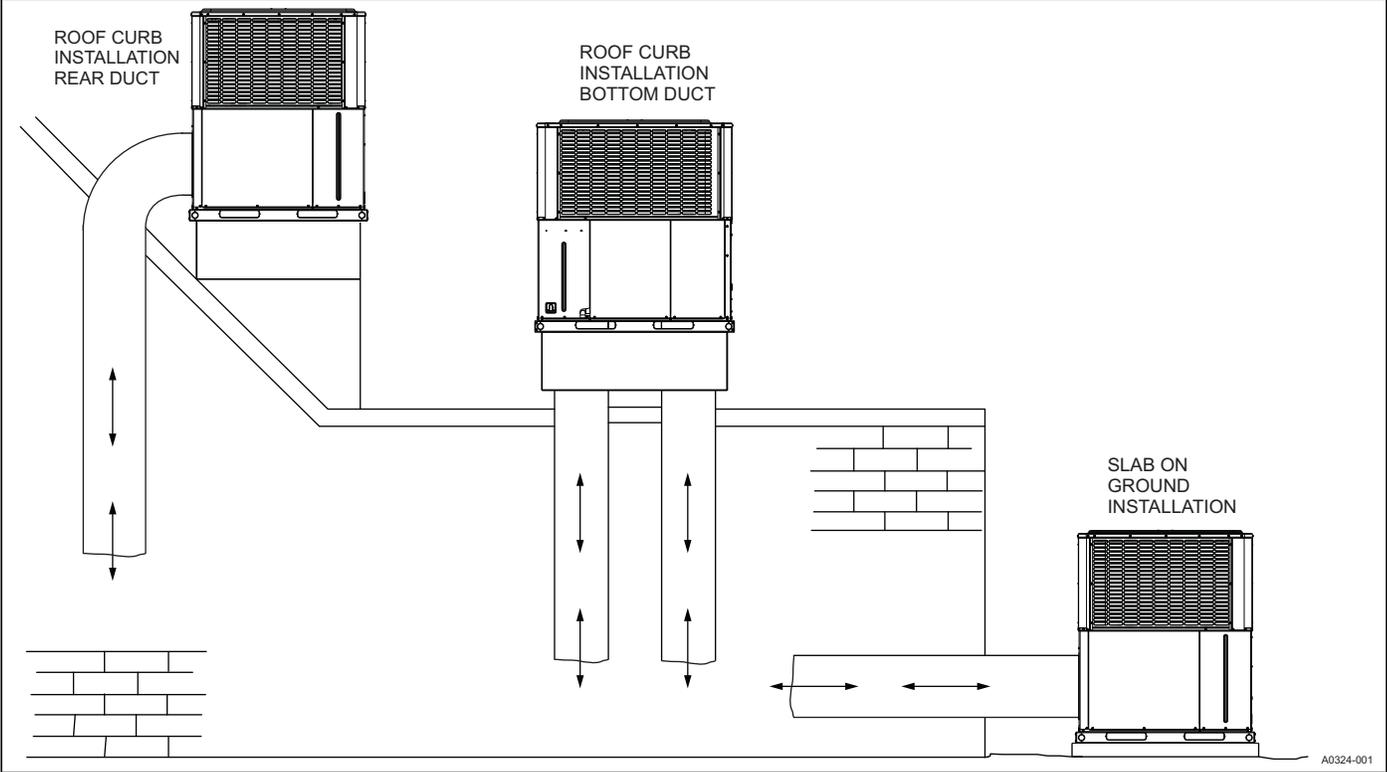
Bottom duct dimensions (in.)



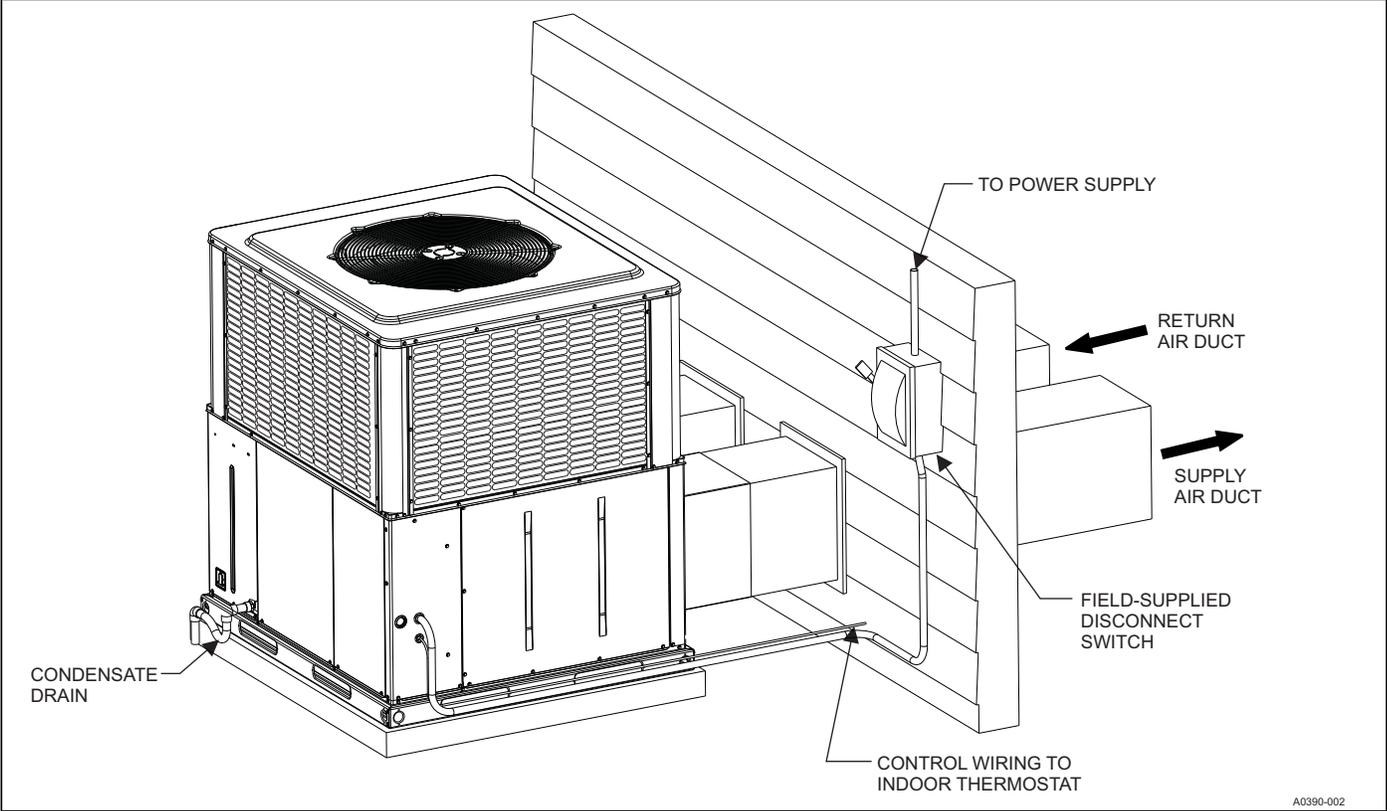
Rear duct dimensions (in.)



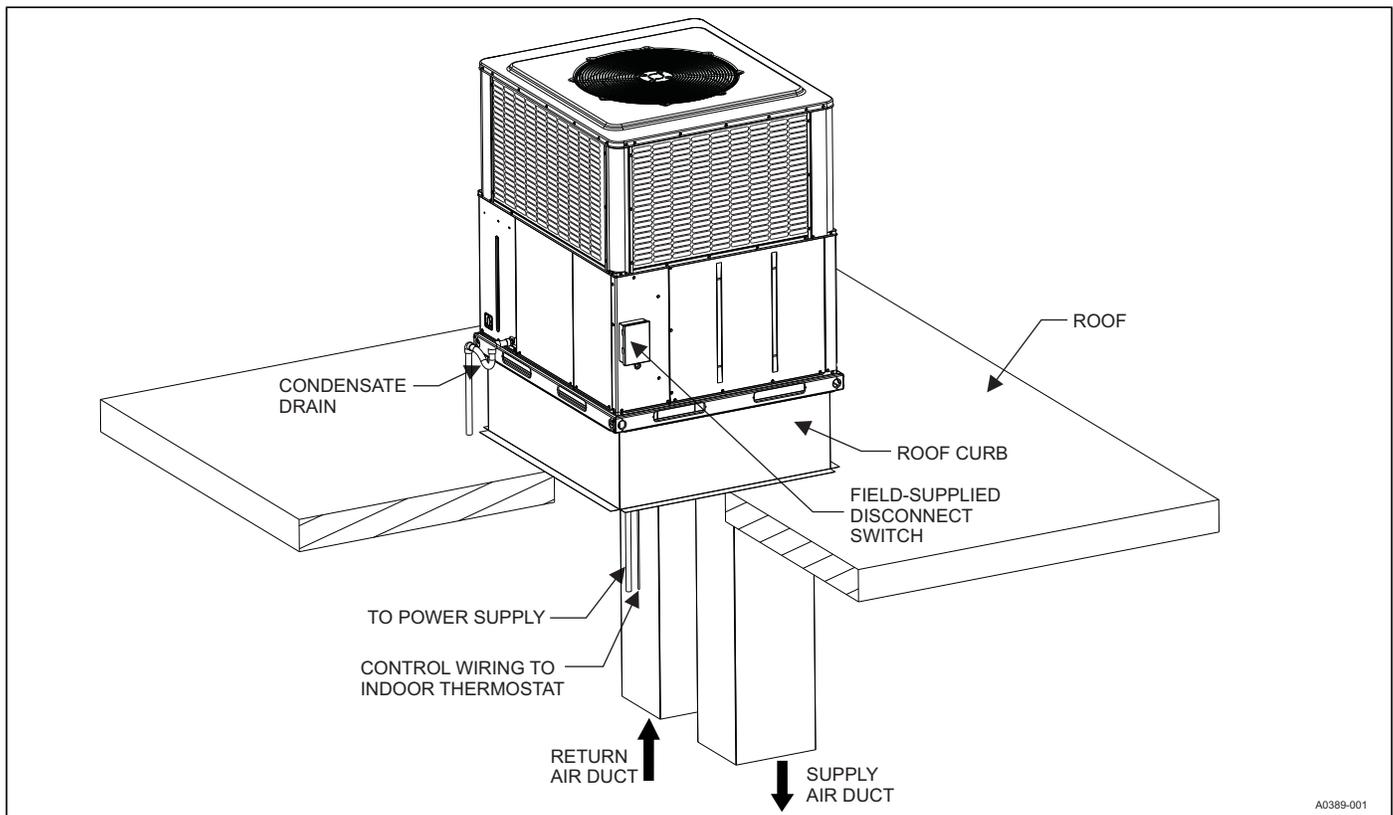
Unit typical duct applications



Unit typical slab on ground installation



Unit typical roof curb installation



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