Eubank®
ISO 9001:2015 REGISTERED COMPANY AIRXCEL™, Inc.

PRODUCT DATA SHEET

11+ EER 2-5 Ton Vertical Packaged Wall Mount Heat Pumps

EHA24-30-36-42-49-60
(High Efficiency Single Stage Cooling)

EHSA24-30-36-42-49-60
(High Efficiency 2-Stage Cooling)

EHA36HP3A

General Description

Eubank wall mounted heat pumps are the ideal HVAC system for a wide variety of applications. The exterior mounting means that no valuable interior space is required. Eubank heat pumps are packaged units – the refrigerant piping and internal wiring are factory assembled and thoroughly tested. All components are readily accessible for easy service and maintenance. The energy efficient operation keeps operating costs to a minimum and makes Eubank heat pumps ideal problem solvers for a wide variety of applications, including offices, classrooms and telecommunication shelters.

✪ **Eubank Heat Pumps Are Available To Meet Any Budget Or Efficiency Requirement:**

- **EHA High Efficiency Models**
  Eubank's most efficient wall mount heat pumps with highly efficient scroll compressors result in Energy Efficiency Ratios (EER's) of up to 11.50. Available in cooling capacities of 2, 2½, 3, 3½, 4 and 5 tons (24,000 to 60,000 BTUH). No other wall mount heat pump is more efficient
- **EHSA 2-Stage Compressor Models**
  EHSA models feature a 2-stage compressor which can reduce energy costs by more precisely matching the cooling capacity to the heat load with first stage cooling approximately 65% of the total cooling capacity. This results in Energy Efficiency Ratios (EER's) of up to 11.00 and an Integrated Part Load Value (IPLV) of up to 15.00. EHSA models are available in cooling capacities of 2, 2½, 3, 3½, 4 and 5 tons (24,000 to 60,000 BTUH).

✪ **Outside Air for Ventilation or Free Cooling**

A full range of accessories and options allows Eubank heat pumps to be optimized for each application. For classrooms, a complete range of ventilation options are available to meet the fresh air requirements of the ASHRAE 62 standard, "Ventilation for Acceptable Indoor Air Quality", including the exclusive Eubank GreenWheel® Energy Recovery Ventilator. Where cooling is required during cool or cold weather, e.g., telecommunications shelters, a factory installed economizer should be used. To insure proper operation and optimum performance, all outside air ventilation packages are non-removable, factory installed and factory calibrated.

AHRI CERTIFIED® www.ahridirectory.org | CE | ETL US Intertek | NSF Registered to ISO 9001 | Designed, Engineered & Assembled In the USA

Features and Benefits

GreenWheel® and GreenCube® Energy Recovery Ventilators

- *Total Energy (Sensible and Latent) Recovery Ventilators*
- *Independent Ventilation Blower Motors*

R-410A Refrigerant

- *Efficient Heat Release*
- *Non-Ozone Depleting Refrigerant*
- *Synthetic Lubricant*
- *Reduced Compressor Wear*

High Efficiency and Reliability

- *EER up to 11.50 - No Wall Mount Heat Pump is More Efficient*
- *Optional Economizer Reduces Energy Usage*
- *High Efficiency Compressor and Lanced Coil Fins*
- *High/Low Pressure Switches with Lockout & Short Cycle Protection*

Ease of Installation and Service

- *Single Point Power Entry*
- *Built-In Mounting Flanges and Internal Disconnect*
- *Standard Access Valves and Filters, Status LEDs*

2-Stage Compressor

All EHSA models feature a two stage compressor with a first stage capacity of 65% of the total capacity. The two stage compressor offers better comfort by maintaining more precise temperature and relative humidity levels with improved overall energy efficiency. During mild days, the first stage can satisfy the load, minimizing temperature fluctuations providing steady, even comfort. With Integrated Part Load Performance Values (IPLV) of up to 15.00, the Eubank heat pump with the two stage, high efficiency compressor can provide significant energy savings compared to older, less efficient systems. The cooling mode has two stage operation; heating is single stage.

Quiet in the Classroom

In addition to high efficiency, the EHA and EHSA models minimize sound levels in the classroom. A high efficiency axial fan moves air silently through the outdoor coils. A low vibration, scroll compressor ensures quiet operation as well as energy efficiency. The indoor air mover utilizes a revolutionary electronically commutated motor (ECM). This motor consumes a minimum of power with whisper quiet operation. The ECM automatically adjusts its speed to maintain the proper air flow at various external static pressures.

Safety Listed and Energy Certified

All Eubank heat pumps are built to UL standard 1995, 4th edition and CAN/CSA C22.2, No. 236-11. For energy efficiency and performance, the units are tested and rated in accordance to the ANSI/AHRI (Air-Conditioning Heating and Refrigeration Institute) Standard 390 (Single Package Vertical Units). All units meet or exceed the efficiency requirements of ANSI/ASHRAE/IESNA 90.1.2007. Eubank exterior wall mount heat pumps are commercial units and are not intended for use in residential applications.

Dehumidification

The introduction of outside air can cause humidity levels to rise to unacceptable levels. To reduce humidity, the Eubank heat pumps can be ordered with a Hot Gas Reheat (HGR) coil. The HGR coil allows the heat pump to dehumidify without adversely lowering the temperature in the classroom and uses less energy than electric reheat. When used in conjunction with the GreenWheel® ERV, humidity levels can be controlled at a minimum of expense. See page 4 for a detailed description of the operation of the Hot Gas Reheat Coil.

Eubank Wall Mount Heat Pump Features

High Efficiency

- Scroll compressors are standard on all units.
- Lanced fins and rifled tubing on the indoor & outdoor coils maximize heat transfer.
- Electronically commutated indoor blower motor on EHA & EHSA models.

Engineered Reliability

- PC board simplifies wiring, consolidates several of the electrical functions in one device.
- High refrigerant pressure switch with lockout relay protects the compressor in the event of insufficient condenser air flow.
- Loss of charge pressure switch with lockout relay protects the compressor in the event of a loss of refrigerant or inadequate evaporator air flow.
- Time delay for short cycle protection.

Ease of Installation

- Sloped top with flashing eliminates need of rain hood.
- Built-in mounting flanges facilitate installation and minimize chance of water leaks.
- Factory installed phase monitor is standard on all 3Ø units and will turn the air conditioner off if power supply is not phased properly.
- Factory installed disconnect on all units, including 460v. models.
- Outside air hood included with each unit.
- Single Point Power Entry complies with latest edition of U.L. Standard 1995.

Rugged Construction

- Baked on beige finish over galvaneel steel on exterior sheet metal.
- Copper tube, aluminum fin evaporator and condenser coils.
- Corrosion resistant Dacromet® external fasteners.

Ease of Service

- LED's on the control board indicate operational status and fault conditions.
- Refrigerant access valves are standard
- All major components are readily accessible
- Front control panel allows easy access and complies with NEC clearance codes on side by side units.
- Major components accessible from either side.

Options for Outside Air for Ventilation

ASHRAE standard 62 requires 30 cfm of outside air per occupant of a classroom. To meet this requirement, Eubank offers seven ventilation packages for every budget and requirement.

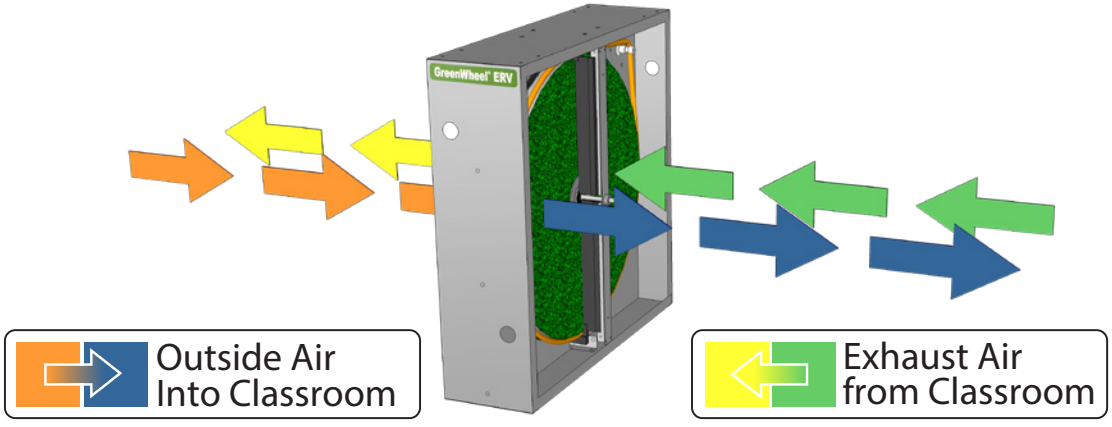
- **Configuration "N": Manual Fresh Air Damper *(Standard)***
  Manual damper capable of up to 15% of rated airflow of outside air; field adjustable, no pressure relief.
- **Configuration "Y": Field Adjustable Manual Damper *(Optional)***
  Manually field adjustable to allow up to 450 cfm, or 40% of the heat pump's total rated airflow of outside air.
- **Configuration "Z": Field Adjustable Manual Damper with Pressure Relief *(Optional)***
  Manually adjustable to allow up to 450 cfm, or 40% of the heat pump's total rated airflow of outside air and includes pressure relief.
- **Configuration "B": Motorized Fresh Air Damper with Pressure Relief Ventilation *(Optional)***
  Manual, two position damper (open and closed) capable of 0 to 450 cfm of outside air; includes pressure relief. A 24-volt actuated motor controls the damper from an external input such as a time clock, CO_2 sensor, energy management system or a manual switch.
- **Configuration "C": Economizer *(Optional)***
  The economizer reduces the cost of air conditioning by using outside air when acceptable to cool the room. The factory installed Eubank® economizer has integral pressure relief. On a signal from a thermostat that cooling is required, either mechanical cooling with the compressor or free cooling with the economizer is provided. The Eubank economizer is capable of bringing in outside air equal to 100% of the rated cooling capacity of the unit and has built in pressure relief.

  An internal enthalpy controller determines whether the outside air is sufficiently cool and dry to be used with cooling. If suitable, the compressor is locked out and the economizer damper opens to bring in outside air. The temperature at which the economizer opens is adjustable from approximately 55°F (13°C) to 73°F (23°C) at 50% RH. If the outside air becomes too hot or humid, the economizer damper closes completely or to a minimum position and mechanical cooling is activated. When used with minimum position potentiometer (optional), the Eubank® economizer can meet requirements of ASHRAE Std. 62.
- **Configuration "H": GreenWheel® ERV Energy Recovery Ventilator *(Optional)***
  Allows independent control of the exhaust and intake blowers. When used, the standard speed controller operates the intake blower and the optional second controller, the exhaust blower. Individual blower control allows positive pressurization of the classroom. Field or factory installed.

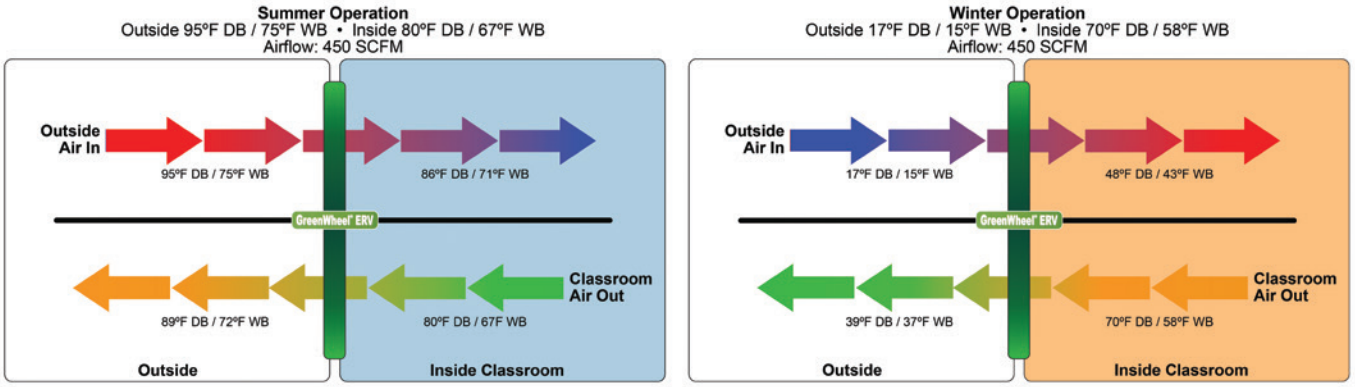
  The Eubank GreenWheel® ERV is a total energy (both sensible and latent) wheel that reduces both construction and operating cost while ventilating the classroom to ASHRAE 62-1999 requirements. The use of the GreenWheel ERV reduces the energy load of the outside air. Exhausting stale, inside air keeps indoor pollutants and harmful gases to a minimum. The Eubank GreenWheel ERV has been tested and certified according to ARI Standard 1060.

  How It Works - During the summer, cool dry air from the classroom is exhausted through the GreenWheel ERV to the outside. As the air passes through the rotating wheel, the desiccant becomes cooler and drier. Simultaneously, hot humid air is being pulled across the rotating wheel. The cool, dry desiccant absorbs moisture and heat from the incoming air. The cooler, drier air is mixed with the return air from the classroom and distributed throughout the room.

  In the winter, warm moist air is exhausted through the GreenWheel ERV to the outside. As the air passes through the rotating wheel, the desiccant becomes warmer and absorbs moisture. Simultaneously, cold dry air is being pulled across the rotating wheel. The cold, dry air absorbs heat and moisture from the desiccant. The warmed air is mixed with the return air from the classroom and distributed throughout the room.



Quality Components - The GreenWheel ERV Ventilation package consists of the GreenWheel cassette, an incoming air blower, an exhaust air blower, an air filter for the incoming air and one fan speed controller that controls the speed of both blower motors simultaneously. As an option, a second fan speed controller can be factory installed for independent control of the exhaust air motor and positive pressurization of the classroom. Also, an optional filter on the exhaust air is available on selected models. Please consult your Eubank representative for details. The two blowers simultaneously pull fresh air from outside and exhaust air from the classroom through the rotating wheel. The air streams are separated by an insulated partition so that the incoming fresh air is not mixed with the exhaust air. Two variable speed blowers ensure that up to 450 CFM of outside air can be brought into the room and the indoor air is properly exhausted. Variable speed blowers permit that the desired quantity of outside air is delivered into the room. Optional independent exhaust air blower control allows positive pressurization of the classroom, i.e., more outside air can be introduced through the GreenWheel ERV than is exhausted.



GreenWheel® Energy Recovery Ventilator Performance

SCFM* of Outside Air	Energy Conserved, BTUH					
	95° DB/73° WB Outside • 80° DB/67° WB Inside			95° DB/80° WB Outside • 80° DB/67° WB Inside		
	Sensible	Latent	Total	Sensible	Latent	Total
225	2,900	1,100	4,000	2,900	6,400	9,300
250	3,100	1,200	4,300	3,100	6,900	10,000
325	3,700	1,400	5,100	3,700	8,100	11,800
400	4,200	1,500	5,700	4,200	9,100	13,300
450	4,500	1,600	6,100	4,500	9,700	14,200

SCFM* of Outside Air	Energy Conserved, BTUH								
	90° DB/74° WB Outside • 75° DB/64° WB Inside			80° DB/70° WB Outside • 75° DB/64° WB Inside			60° DB/54° WB Outside • 70° DB/58° WB Inside		
	Sensible	Latent	Total	Sensible	Latent	Total	Sensible	Latent	Total
225	2800	3600	6400	900	2800	2700	1900	200	2100
250	3000	3800	6800	1000	3000	4000	2000	200	2200
325	3600	4500	8100	1200	3500	4700	2400	200	2600
400	4100	4900	9000	1400	3800	5200	2700	300	3000
450	4300	5200	9500	1400	4000	5400	2900	300	3200

SCFM* of Outside Air	Energy Conserved, BTUH								
	40° DB/36° WB Outside • 70° DB/58° WB Inside			20° DB/18° WB Outside • 70° DB/58° WB Inside			0° DB/7° WB Outside • 70° DB/58° WB Inside		
	Sensible	Latent	Total	Sensible	Latent	Total	Sensible	Latent	Total
225	5600	3300	8900	9300	4900	14200	13000	5700	18700
250	6000	3600	9600	10000	5300	15300	14000	6100	14100
325	7200	4200	11400	12000	6200	18200	16700	7100	23800
400	8100	4600	12700	13500	6800	20300	18900	7900	26800
450	8600	4800	13400	14400	7100	21500	20100	8200	28300

*SCFM = Standard Cubic Feet per Minute

For performance of the GreenWheel® ERV at conditions other than those shown, please contact your Eubank® representative or the factory.

For performance of the GreenWheel ERV at conditions other than those shown, please contact your Eubank® representative or the factory.

Outside Air Ventilation Schedule

Ventilation Package Designator*	Description	Outside Air Capability	Pressure Relief
N	Manual, fixed position damper	0-15% of rated air flow	No
Y	Manual damper, field adjustable	Up to 450 cfm, but not to exceed 40% of the rated air flow of the heat pump.	No
Z	Manual damper, field adjustable	Up to 450 cfm, but not to exceed 40% of the rated air flow of the heat pump.	Yes
B	Motorized, two position damper (open and closed) includes pressure relief. A 24-volt actuated motor controls the damper from an external input such as a time clock, CO2 sensor, energy management system or a manual switch.	Up to 450 cfm, but not to exceed 40% of the rated air flow of the heat pump.	Yes
C	Economizer	100% of rated air flow of outside air	Yes
H	GreenWheel® ERV. Includes a ventilation intake air blower, a ventilation intake air filter, a ventilation exhaust blower and a single fan speed controller for both motors. Optional second fan speed controller for the exhaust air. This second controller allows independent control of the exhaust air motor and positive pressurization of the classroom.	0-450 CFM	Yes

Hot Gas Reheat Operation

Eubank® heat pumps equipped with Hot Gas Reheat (HGR) allow the indoor humidity of the controlled environment to be maintained at or below a certain humidity set point. These units do not have the ability to add humidity to the classroom. Dehumidification is achieved by operating mechanical cooling in conjunction with a hot gas reheat coil.

Operation - If the humidity rises above the set point on the humidity controller and the temperature in the classroom is satisfied, both mechanical cooling and the HGR coil operate to temper the air and lower the humidity. If the temperature in the classroom rises above (or falls below) the set point of the thermostat and the unit is operating in the dehumidification mode, the call for cooling (or heating) will override the call for dehumidification and the coil is disengaged until the thermostat is satisfied. This assures the environment temperature is maintained as first priority and humidity control is second.

Heat Pump PC Board

Each Eubank heat pump has a PC board that controls the operation of the indoor blower, the compressor and the reversing valve while providing high refrigerant pressure and loss of refrigerant protection with an integral defrost function. In addition, the board has user selectable pins and potentiometers for multi-function control.

- **High & Loss of Refrigerant Protection**
  If either of these fault conditions occur twice within an one hour, the control board will enter into and indicate the lockout mode. In the lockout mode, the compressor will not operate, the alarm output is energized and the red LED will blink to indicate which fault has occurred. The user can select either Normally Open or Normally Closed contacts.
- **Compressor Anti-Short Cycle Protection**
  An integral three minute delay prevents compressor from destructive short cycling.
- **Loss of Refrigerant By-pass Timer**
  To prevent nuisance fault alarms, the board ignores a loss of charge fault for three minutes on start-up of the compressor.
- **Defrost Control**
  The defrost cycle removes ice build-up on the outdoor coil during the heating cycle. If the defrost sensor senses a coil temperature of 32°F while in the heat mode, a 30, 60 or 90 minute (user selectable) delay period will begin. After the delay period if the sensor is still calling for a defrost cycle, the outdoor fan will be stopped and the reversing valve energized. The defrost cycle will stop if the defrost sensor registers a temperature of 50°F or after 10 minutes. By moving the EHDD pin, the user can have electric heat operate during the defrost cycle or not operate.
- **Electric Heat During Defrost (EHDD)**
  The control board has an EHDD jumper pin marked YES or NO. When the YES pins are jumped, electric heat WILL operate during a defrost cycle. When the NO pins are jumped, electric heat will NOT operate during a defrost cycle.
  Note: When EHDD is set to YES, the S-circuit jumpers must be set to NO.

S-Circuit

The control board has an S-CIRCUIT jumper pin marked YES or NO. When the YES pins are jumped, electric heat will NOT operate with the compressor. When the NO pins are jumped, electric heat WILL operate with the compressor. ***Note:*** When S-Circuit is set to YES, the EHDD jumpers must be set to NO.

Indoor Blower Speed Control

A speed control potentiometer mounted on the board allows the user to vary the blower speed on the AVPA heat pumps from 40% to 100% of rated air flow. (Not applicable to the EHA and EHSA units with the electronically commutated indoor blower motor).

Ventilation Damper Relay

The board has a dedicated relay to control a two position – Open & Closed - motorized fresh air damper (Ventilation Configuration "B").

Protection of the Refrigerant Components

High Refrigerant Pressure Switch

The high pressure switch is located on the liquid line. It is electrically connected to the PC board and will turn the compressor off if the pressure rises above the set point twice within one hour. This protects the compressor if airflow is significantly reduced or lost through the coil performing the condenser function.

Loss of Charge Switch

The loss of charge switch is located on the liquid line. It is electrically connected to the PC board and will turn the compressor off if the pressure drops below the set point twice within one hour. This protects the compressor if airflow is significantly reduced or lost through the coil performing the evaporator function or there is a loss of refrigerant.

Eubank Wall Mount Heat Pump Options

Eubank® options can be used to provide optimum performance over a full range of operating conditions.

Adjustable Outdoor Thermostat

Will not allow electric resistance heat to be energized unless the outdoor temperature is below the desired set point. Field or factory installed. Available on all Eubank units.

Energy Management System (EMS) Relay Kit

Relay to control the unit. Available in 24, 120 or 240 VAC. Field or factory installed.

Electric Reheat

Control provides simultaneous operation of compressor when in cooling mode and the electric elements to provide dehumidification without over cooling the room. The electric element (kW) must be properly sized for each model for proper operation. Factory installed. Consult factory for details.

Compressor Sound Jackets

Reduces sound of compressor.

Special Application Packages and Coil Coatings

Protective Coating Packages

Two corrosion protection packages are offered - one for the condenser section (Coastal Environmental Package) and the other for the entire unit (Coat-All Package).

The Coastal Environmental Package includes:

- Corrosion resistant fasteners
- Sealed or partially sealed condenser fan motor
- Protective coating applied to all exposed internal copper and metal in the condenser section
- Protective coating on the condenser coil (Luvata Insitu®) contains ES2 (embedded stainless steel pigment) technology

The Coat all Package includes all of the above, plus:

- Protective coating on the evaporator coil (Luvata Insitu®) contains ES2 (embedded stainless steel pigment) technology
- Protective coating on exterior and interior components and sheet metal. (***Note:*** the internal sheet metal which is insulated and the internal control box are not coated)

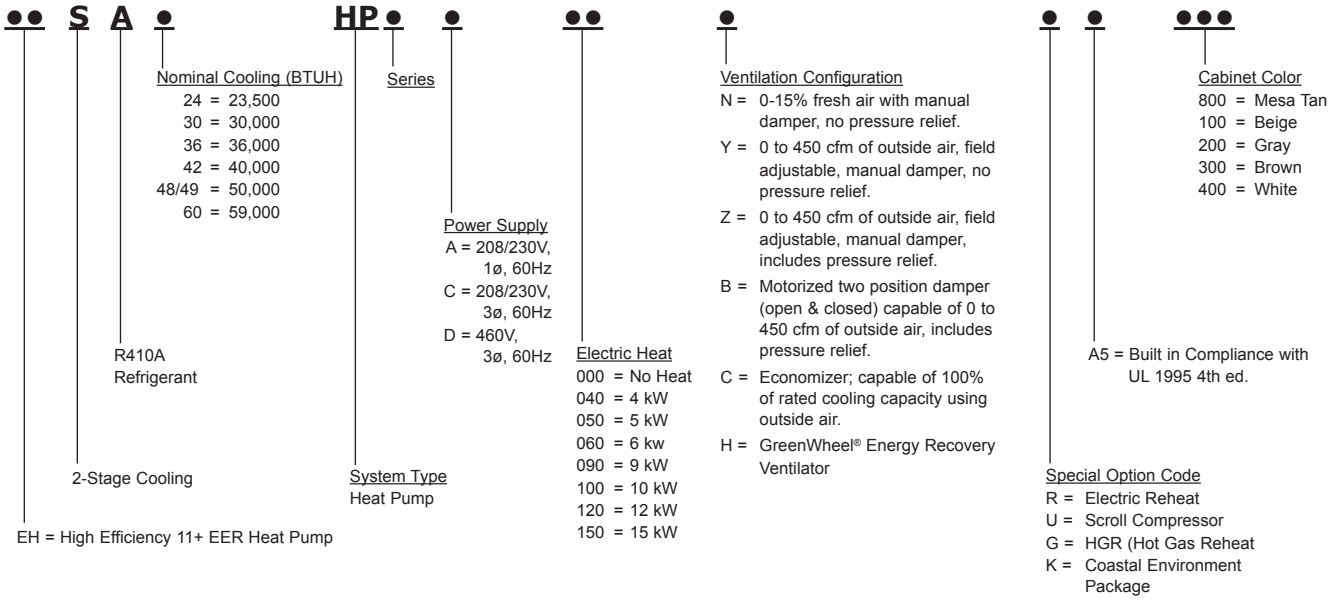
Protective Coil Coatings

The Condenser Coil or the Evaporator Coil or Both can be coated. Coating the Evaporator Coil in not common. For

harsh conditions, e.g., power plants, paper mills or sites where the unit will be exposed to salt water, the coils should be protected by a protective coating.

Note: Cooling capacity may be reduced by up to 5% on units with coated coils.

Eubank Heat Pump Model Identification



Accessories

Thermostats for Single Stage Heat Pumps (no electric heat)

Digital, Non-Programmable Thermostat ..... *P/N 50121*
1 stage heat, 1 stage cool. Fan switch: Auto & On. Manual changeover system switch: Cool-Off-Heat. Low temperature protection. °F or °C selectable. Thirty minute power loss memory retention.

Digital, Seven Day Programmable Thermostat ..... *P/N 50123*
1 stage heat, 1 stage cool. Fan switch: Auto & On. Auto-changeover. Keypad lockout. Non-volatile program memory. Title 24 compliant.

Digital, Non-Programmable Thermostat ..... *P/N 50186*
One stage cool/One stage heat. Manual or auto changeover. Fan mode: Auto or On. Permanent retention of settings upon power loss. Field adjustable temperature calibration. Max heat and minimum cool set points. Adjustable temperature differential. Remote sensor capable. Keypad lock out. Status LED. °F or °C selectable.

Thermostats for Heat Pumps with 2-Stage Heat

Digital, 7 Day, 5-2 and 5-1-1 Day Programmable Thermostat ..... *P/N 50107*
Two stage heat/Two stage cool. Manual or auto changeover. Fan: Auto & On. Permanent retention of setting on power loss. Field adjustable temperature calibration. Adjustable max. setpoint for heating and min. adjustable setpoints for cooling. Adjustable temperature differential. Keypad lockout. Status LED. °F or °C selectable. Title 24 compliant.

Digital, 7 Day, 2 Occupied & 2 Unoccupied Periods for Each Day of the Week Programmable Thermostat ..... *P/N 50248*
Three stage heat/Three stage cool. Manual or auto changeover. Fan: Auto & On. Ten year retention of programming settings and 48 hour clock and day settings on power loss. Adjustable max. setpoint for heating and min. adjustable setpoints for cooling. Adjustable temperature differential. Keypad lockout. Status LED. °F or °C selectable. Optional remote sensors for outdoor air, supply air and humidity. Title 24 compliant.

Digital, Non-Programmable Thermostat ..... *P/N 50252*
Two stage heat/Two stage cool. Manual or auto changeover. Fan: Auto & On. Permanent retention of setting on power loss. Field adjustable temperature calibration. Adjustable max. setpoint for heating and min. adjustable setpoints for cooling. Adjustable temperature differential. Keypad lockout. Status LED. °F or °C selectable.

MAR7000 Thermostat/Controller

The MAR7000 thermostat/controller is a stand alone, self-programming HVAC controller designed to optimize performance of Eubank's heat pumps and air conditioners. It can function as an independent controller or used in conjunction with a BACnet network.

With built-in temperature and humidity sensors, motion sensing and an optional CO2 detection sensor, the MAR7000 can control:

- Single or 2-stage air conditioners or heat pumps with supplemental hot water or electric heat,
- Hot gas dehumidification operation,
- An economizer cycle, and
- Eubank's various ventilation options including the Eubank GreenWheel® Energy Recovery Ventilator.

The intelligent occupancy anticipation feature of the MAR7000 automatically programs occupied and unoccupied settings for temperature, humidity, and ventilation requirements. The ventilation control can be based on occupancy, demand, time, or a combination of these features. When vacant, the thermostat automatically reduces the run time of the unit and adjusts ventilation to save energy. The intelligent occupancy feature can be turned off, and the MAR7000 can be connected to a BACnet control system for remote control and operation of Eubank heat pumps or air conditioners. The MAR7000 thermostat includes a precise, real time clock with capacitor back up to maintain the program and set points for extended power outages.

Features include:

- User-friendly English-language menus (no obscure numeric codes) on a 64 x 128 pixel, dot-matrix LCD display with 5 buttons for data selection and entry,
- Built-in, factory-tested libraries of configurable application control sequences,
- Schedules that can easily be set uniquely by weekdays (Mon.–Fri.), weekend (Sat.–Sun.), entire week (Mon.–Sun.), individual days, and/or holidays,
- Six On/Off and independent heating and cooling set point periods are available per day, and
- Three levels of password-protected access (user/operator/administrator) prevent disruption of operation and configuration

Thermostat Guards

Clear Thermostat Guard with Keylock & Clear Plastic Cover & Base.....*P/N 50092*
For use with 50121, 50123, 50186, 50107 and 50252 thermostats.

Clear Thermostat Guard with Keylock & Clear Plastic Cover & Base.....*P/N 50119*
For use with 50248 thermostat.

Humidity Controller

Digital Humidity Controller.....*P/N 50254*
To be used with units with Hot Gas or electric reheat. Programmable dehumidistat, ventilation control. Permanent memory retention of set points. Humidity sensor can be field calibrated. High & low dehumidification set points. Outdoor temperature and humidity sensor included. ºF or ºC selectable.

Grilles

EHA24*		
Double Deflection, Aluminum Supply Grille	28" x 8" (711mm x 203mm)	80675
Aluminum Return Grille	28" x 14" (711mm x 356mm)	80678
Return Filter Grille*	28" x 14" (711mm x 356mm	80672
EHA30, 36, 42, 49 & 60 and EHSA 36, 42, 49 & 60		
Double Deflection, Aluminum Supply Grille	30" x 10" (762mm x 254mm)	80676
Aluminum Return Grille	30" x 16" (762mm x 406mm)	80679
Return Filter Grille	30" x 16" (762mm x 406mm)	80673

Note: Return filter grilles should be used when the 2" (51mm) filter in the Eubank unit is not accessible from the exterior of the building. Filter used in the return filter grille is a 1" (25mm) thick filter. The return filter grille is not recommended for use with the heat pumps with economizers.

EER Comparison by Model

Nominal Cooling Capacity (BTUH)	Basic Model	EER
24,000	EHA24	11.0
	EHSA24	11.0
30,000	EHA30	11.5
	EHSA30	11.0
36,000	EHA36	11.0
	EHSA36	11.0
42,000	EHA42	11.0
	EHSA42	11.0
48,000/49,000	EHA49	11.5
	EHSA49	11.0
60,000	EHA60	11.0
	EHSA60	11.0
Note: EHSA models have 2-stage compressors.		

EHA High Efficiency Heat Pumps

Certified Efficiency and Capacity Ratings at ANSI/ARI Standard 390 - for EHA Heat Pumps with Single Stage Compressor

Model Number	EHA24HP3			EHA30HP3			EHA36HP3			EHA42HP3			EHA49HP3			EHA60HP3		
	A	C	D	A	C	D	A	C	D	A	C	D	A	C	D	A	C	D
Cooling BTUH[1]	22,000			26,800			34,000			40,500			46,200			57,000		
EER[2]	11.0			11.5			11.0			11.0			11.0			11.0		
High Temperature Heating[3]	21,000			26,000			33,000			33,000			42,000			51,000		
High Temperature COP[3,4]	3.3			3.3			3.3			3.3			3.3			3.3		
Rated Air Flow (CFM[5])	800			1,000			1,200			1,300			1,750			1,750		

[1]Cooling is rated at 95°F (35°C) outdoor and 80°F DB/67°F WB (26.5°C DB/19.5°C WB) return air.
[2]EER = Energy Efficiency Ratio
[3]High Temperature Heating & COP is rated at 47°F DB/43°WB (8.3°C DB/6.1°C WB) outdoor and 70°F (21.1°C) return air.
[4]COP = Coefficient of Performance
[5]CFM = Cubic Feet per Minute
Ratings are with no outside air. Performance will be affected by altitude. Ratings are at 230 volts for 208/230 volt units ("A" & "C" models) and 460 volts for "D" models. Operation of units at a different voltage from that of the rating point will affect performance and air flow.

Sensible Total Heat Ratio @ 95°F (35°C) Outside Air DB - EHA Heat Pumps with Single Stage Compressor

Model Number	EHA24HP3			EHA30HP3			EHA36HP3			EHA42HP3			EHA49HP3			EHA60HP3		
	A	C	D	A	C	D	A	C	D	A	C	D	A	C	D	A	C	D
Total Capacity	22,000			26,800			34,000			40,500			46,200			57,000		
Sensible Heat Ratio	0.75			0.75			0.78			0.74			0.79			0.73		
Sensible Capacity	16,400			20,000			25,500			30,000			36,800			41,700		
Rated Air Flow (CFM[1])	800			1,000			1,200			1,300			1,750			1,750		

[1]CFM = Cubic Feet per Minute
Sensible Heat Ratios based upon ANSI/AHRI std. 390 outdoor conditions of 95°F (35°C) outdoor and 80°F DB/67°F WB (26.5°C DB/19.5°C WB) return air.

Cooling Performance (BTUH) at Various Outdoor Temperatures - EHA Heat Pumps with Single Stage Compressor

Model Number	Outdoor Temperature								
	75°F/24°C	80°F/26.5°C	85°F/29°C	90°F/32°C	95°F/35°C	100°F/38°C	105°F/40.5°C	110°F/43.3°C	115°F/46°C
EHA24HP3	25,520	24,640	23,760	22,880	22,000	21,120	20,240	19,360	18,920
EHA30HP3	31,088	30,016	28,944	27,872	26,800	25,728	26,656	23,584	23,048
EHA36HP3	39,440	38,080	36,720	35,360	34,000	32,640	31,280	29,920	29,240
EHA42HP3	46,980	45,360	43,740	42,120	40,500	38,880	37,260	35,640	34,830
EHA49HP3	53,592	51,744	49,896	48,048	46,200	44,352	42,504	40,656	39,732
EHA60HP3	66,120	63,840	61,560	59,280	57,000	54,720	52,440	50,160	49,020

Based upon ANSI/AHRI std. 390 return air conditions of 80°F DB/67°F WB (26.5°C DB/19.5°C WB). Return air at rated air flow.

Heating Performance (BTUH) at Various Outdoor Temperatures - EHA Heat Pumps with Single Stage Compressor

Model Number	Outdoor Temperature								
	10°F / -12.2°C	17°F / -8.3°C	20°F / -6.7°C	30°F / -1.1°C	40°F / 4.4°C	47°F / 8.3°C	50°F / 10°C	60°F / 15.6°C	70°F / 21.1°C
EHA24HP3	9,775	11,500	12,450	15,775	18,625	21,000	21,630	22,575	23,625
EHA30HP3	12,410	14,600	15,740	19,730	23,150	26,000	26,780	27,950	29,250
EHA36HP3	14,110	16,600	18,240	23,980	28,900	33,000	33,990	35,475	37,125
EHA42HP3	16,150	19,000	20,400	25,300	29,500	33,000	33,990	35,475	37,125
EHA49HP3	20,060	23,600	25,440	31,880	37,400	42,000	43,260	45,150	47,250
EHA60HP3	23,800	28,000	30,300	38,350	45,250	51,000	52,530	54,825	57,375

Based upon ANSI/AHRI std. 390 return air conditions of 70°F DB (21.1°C DB). Return air at rated air flow.

Electrical Characteristics - Compressor, Fan, Ventilation & Blower Motors - EHA Heat Pumps with Single Stage Compressor

Model Number	COMPRESSOR			OTHER MOTORS	OUTDOOR FAN MOTOR			INDOOR BLOWER MOTOR (ECM)			VENTILATION GREENWHEEL® ERV AMPS		
	VOLTS-HZ-PH	RLA[1]	LRA[2]	VOLTS-HZ-PH	RPM[3]	FLA[4]	HP[5]	RPM[3]	FLA[4]	HP[5]	OAM[6]	EXM[7]	WD[8]
EHA24HP3A	208/230-60-1	12.8	58.3	208/230-60-1	1200	3.5	1/3	1050	2.8	1/3			
EHA30HP3A	208/230-60-1	12.8	77.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHA36HP3A	208/230-60-1	16.6	112.0	208/230-60-1	1200	2.5	1/3	1500	4.3	1/2	1.0	1.0	0.2
EHA42HP3A	208/230-60-1	19.8	109.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHA49HP3A	208/230-60-1	21.8	117.0	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2
EHA60HP3A	208/230-60-1	26.2	134.0	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2
EHA24HP3C	208/230-60-3	7.7	55.1	208/230-60-1	1200	3.5	1/3	1050	2.8	1/3			
EHA30HP3C	208/230-60-3	8.3	71.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHA36HP3C	208/230-60-3	10.4	88.0	208/230-60-1	1200	2.5	1/3	1500	4.3	1/2	1.0	1.0	0.2
EHA42HP3C	208/230-60-3	13.6	83.1	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHA49HP3C	208/230-60-3	13.7	83.1	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2
EHA60HP3C	208/230-60-3	15.6	111.0	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2
EHA24HP3D	460-60-3	3.6	28.0	208/230-60-1	1200	3.5	1/3	1050	2.8	1/3			
EHA30HP3D	460-60-3	5.1	38.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHA36HP3D	460-60-3	5.8	44.0	208/230-60-1	1200	2.5	1/3	1500	4.3	1/2	1.0	1.0	0.2
EHA42HP3D	460-60-3	6.1	41.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHA49HP3D	460-60-3	6.2	41.0	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2
EHA60HP3D	460-60-3	7.7	52.0	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2

[1]RLA = Rated Load Amps [2]LRA = Locked Rotor Amps [3]RPM = Revolutions per Minute [4]FLA = Full Load Amps
[5]HP = Horsepower [6]OAM = Outside Air Mover [7]EXM = Exhaust Air Mover [8]WD = Wheel Drive Motor
The 460 volt units have a step down transformer for the 230 volt motors.

Summary Electrical Ratings (Wire and HACR Circuit Breaker Sizing) - EHA Heat Pumps w/Single Stage Compressor & Ventilation Configuration: Manual Damper, up to 15% outside air ("N") Manual Damper, up to 450 cfm of outside air ("Y") Manual Damper, up to 450 cfm of outside air with pressure relief ("Z") Motorized, 2-Position Damper, up to 450 CFM of Outside Air w/Pressure Relief ("B") Economizer, Outside Air ("C")

ELECTRIC HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw		150 = 15 kw	
BASIC MODEL	VOLTS-HZ-PH	SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]	
		MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
EHA24HP3A	208/230-1-60	22.3	35	43.1	45	48.3	50	53.6	60	64.7	70			74.4	80				
EHA30HP3A	208/230-1-60	25.6	35			51.6	60	56.9	60	67.3	70			77.7	80	88.1	90	103.7	110
EHA36HP3A	208/230-1-60	27.6	40			53.6	60	58.8	60	69.2	70			79.6	80	90.1	100	105.7	110
EHA42HP3A	208/230-1-60	34.4	50			60.4	70							86.4	90	96.9	100	112.5	120
EHA49HP3A	208/230-1-60	39.4	60			65.4	70							91.4	100	101.9	110	117.5	120
EHA60HP3A	208/230-1-60	44.9	70			70.9	80							96.9	100	107.4	110	123.0	130
EHA24HP3C	208/230-3-60	15.9	20					34.0	40			43.0	45						
EHA30HP3C	208/230-3-60	20.0	25					38.0	40			47.0	50			56.1	60	65.1	70
EHA36HP3C	208/230-3-60	19.8	30					37.8	40			46.9	50			55.9	60	64.9	70
EHA42HP3C	208/230-3-60	26.6	40					44.6	50			53.7	60			62.7	70	71.7	80
EHA49HP3C	208/230-3-60	29.2	40					47.3	50			56.3	60			65.3	70	74.3	80
EHA60HP3C	208/230-3-60	31.6	45					49.6	60			58.7	60			67.7	70	76.7	80
EHA24HP3D	460-3-60	7.7	15					16.7	20			21.2	25			25.7	30	30.2	30
EHA30HP3D	460-3-60	11.2	15					20.2	20			24.7	25			29.2	30	33.7	35
EHA36HP3D	460-3-60	10.7	15					19.7	20			24.2	25			28.7	30	33.2	35
EHA42HP3D	460-3-60	12.4	15					21.4	25			26.0	30			30.5	35	35.0	40
EHA49HP3D	460-3-60	13.8	20					22.8	25			27.3	30			31.8	35	36.4	40
EHA60HP3D	460-3-60	15.7	20					24.7	25			29.2	30			33.7	35	38.2	40

[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse or HACR Breaker Size [3]SPPE = Single Point Power Entry
MCA & MFS are calculated at 230 volts on the 208-230v. (HPA & HPC) models. The 460 volt HPD models are calculated at 460 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

Summary Electrical Ratings (Wire and HACR Circuit Breaker Sizing) - EHA Heat Pumps with Single Stage Compressor and with the "S" Circuit Jumper Set to "Yes" and Ventilation Configuration: Manual Damper, up to 15% outside air ("N") Manual Damper, up to 450 cfm of outside air ("Y") Manual Damper, up to 450 cfm of outside air with pressure relief ("Z") Motorized, 2-Position Damper, up to 450 CFM of Outside Air w/Pressure Relief ("B") Economizer, Outside Air ("C")

ELECTRIC HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw		150 = 15 kw	
		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]	
BASIC MODEL	VOLTS-HZ-PH	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
EHA24HP3A	208/230-1-60	22.3	35	23.6	20	28.8	30	34.1	35					54.9	60				
EHA30HP3A	208/230-1-60	25.6	35			30.3	35	35.6	40					56.4	60	66.8	70	82.4	90
EHA36HP3A	208/230-1-60	27.6	40			30.3	40	35.6	40					56.4	60	66.8	70	82.4	90
EHA42HP3A	208/230-1-60	34.4	45			30.3	45							56.4	60	66.8	70	82.4	90
EHA49HP3A	208/230-1-60	39.4	60			32.8	60							58.9	60	69.3	70	84.9	90
EHA60HP3A	208/230-1-60	44.9	70			32.8	70							59.9	60	69.3	70	84.9	90
EHA24HP3C	208/230-3-60	15.9	20					20.8	35			29.9	35			38.9	40	47.9	50
EHA30HP3C	208/230-3-60	20.0	25					22.3	25			31.4	35			40.4	45	49.4	50
EHA36HP3C	208/230-3-60	19.8	35					22.3	30			31.4	35			40.4	45	49.4	50
EHA42HP3C	208/230-3-60	26.6	40					24.8	40			31.4	40			40.4	45	49.4	50
EHA49HP3C	208/230-3-60	29.2	40					29.6	40			33.9	40			42.9	45	51.9	60
EHA60HP3C	208/230-3-60	31.6	45					31.6	45			33.9	45			42.9	45	51.9	60
EHA24HP3D	460-3-60	7.7	15					10.4	15			14.9	20			19.4	20	24.0	25
EHA30HP3D	460-3-60	11.2	15					11.2	15			15.7	20			20.2	25	24.7	25
EHA36HP3D	460-3-60	10.7	15					11.2	15			15.7	20			20.2	25	24.7	25
EHA42HP3D	460-3-60	12.4	15					12.4	15			15.7	20			20.2	25	24.7	25
EHA49HP3D	460-3-60	13.8	20					13.8	15			16.9	20			21.4	25	26.0	30
EHA60HP3D	460-3-60	15.7	20					15.7	20			16.9	20			21.4	25	26.0	30

S-Circuit - The user can move a pin on the board to control whether the electric heat will operate simultaneously with the compressor (S Circuit – NO) or will not run simultaneously with the compressor (S Circuit – Yes).
[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse or HACR Breaker Size [3]SPPE = Single Point Power Entry MCA & MFS are calculated at 230 volts on the 208-230v. (HPA & HPC) models. The 460 volt HPD models are calculated at 460 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

Summary Electrical Ratings (Wire and HACR Circuit Breaker Sizing) - EHA Heat Pumps with Single Stage Compressor and GreenWheel® ERV - Ventilation Configuration ("H")

ELECTRIC HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw		150 = 15 kw	
		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]	
BASIC MODEL	VOLTS-HZ-PH	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
EHA30HP3A	208/230-1-60	27.8	35			53.8	60	59.1	60	69.5	70			79.9	90	90.3	90	105.9	110
EHA36HP3A	208/230-1-60	29.8	40			55.8	60	61.0	70	71.4	80			81.8	90	92.3	100	107.9	110
EHA42HP3A	208/230-1-60	36.6	45			62.6	70							88.6	90	99.1	100	114.7	120
EHA49HP3A	208/230-1-60	41.6	50			67.6	70							93.6	100	104.1	105	119.7	120
EHA60HP3A	208/230-1-60	47.1	60			73.1	80							99.1	105	109.6	110	125.2	130
EHA30HP3C	208/230-3-60	22.2	25					40.2	45			49.2	50			58.3	60	67.3	70
EHA36HP3C	208/230-3-60	22.0	30					40.0	45			49.1	50			58.1	60	67.1	70
EHA42HP3C	208/230-3-60	28.8	35					46.8	50			55.9	60			64.9	70	73.9	80
EHA49HP3C	208/230-3-60	31.4	40					49.5	50			58.5	60			67.5	70	76.5	80
EHA60HP3C	208/230-3-60	33.8	45					51.8	60			60.9	70			69.9	80	78.9	80
EHA30HP3D	460-3-60	12.3	15					21.3	25			25.8	25			30.3	30	34.8	35
EHA36HP3D	460-3-60	11.8	15					22.8	25			25.3	30			29.8	30	34.3	35
EHA42HP3D	460-3-60	13.5	15					22.5	25			27.1	30			31.6	30	36.1	40
EHA49HP3D	460-3-60	14.9	15					23.9	25			28.4	30			32.9	35	37.5	40
EHA60HP3D	460-3-60	16.8	20					25.8	30			30.3	30			34.8	35	39.3	40

[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse or HACR Breaker Size [3]SPPE = Single Point Power Entry
MCA & MFS are calculated at 230 volts on the 208-230v. (HPA & HPC) models. The 460 volt HPD models are calculated at 460 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

Summary Electrical Ratings (Wire and HACR Circuit Breaker Sizing) - EHA Heat Pumps w/Single Stage Compressor & "S" Circuit Set to "Yes" and GreenWheel® ERV - Ventilation Configuration ("H")

ELECTRIC HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw		150 = 15 kw	
		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]	
BASIC MODEL	VOLTS-HZ-PH	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
EHA30HP3A	208/230-1-60	27.8	35			32.5	35	37.8	40					58.6	60	69.0	70	84.6	90
EHA36HP3A	208/230-1-60	29.8	40			32.6	40	37.8	40					58.6	60	69.0	70	84.6	90
EHA42HP3A	208/230-1-60	36.6	45			36.6	45							58.6	60	69.0	70	84.6	90
EHA49HP3A	208/230-1-60	41.6	50			41.6	50							61.1	70	71.5	80	87.1	90
EHA60HP3A	208/230-1-60	47.1	60			47.1	60							62.1	70	71.5	80	87.1	90
EHA30HP3C	208/230-3-60	22.2	25					24.5	25			33.6	35			42.6	45	51.6	60
EHA36HP3C	208/230-3-60	22.0	30					24.8	30			33.6	35			42.6	45	51.6	60
EHA42HP3C	208/230-3-60	28.8	35					28.8	35			33.6	35			42.6	45	51.6	60
EHA49HP3C	208/230-3-60	31.4	40					31.8	40			36.1	40			45.1	50	54.1	60
EHA60HP3C	208/230-3-60	33.8	45					33.8	45			36.1	45			45.1	50	54.1	60
EHA30HP3D	460-3-60	12.3	15					12.3	15			16.8	20			21.3	25	25.8	30
EHA36HP3D	460-3-60	11.8	15					13.5	15			16.8	20			21.3	25	25.8	30
EHA42HP3D	460-3-60	13.5	15					13.5	15			16.8	20			21.3	25	25.8	30
EHA49HP3D	460-3-60	14.9	15					14.9	15			18.0	20			22.5	25	27.0	30
EHA60HP3D	460-3-60	16.8	20					16.8	20			18.0	20			22.5	25	27.0	30

S-Circuit - The user can move a pin on the board to control whether the electric heat will operate simultaneously with the compressor (S Circuit – NO) or will not run simultaneously with the compressor (S Circuit – Yes).
[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse or HACR Breaker Size [3]SPPE = Single Point Power Entry
MCA & MFS are calculated at 230 volts on the 208-230v. (HPA & HPC) models. The 460 volt HPD models are calculated at 460 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

Unit Load Amps (Heating) - EHA Heat Pumps w/Single Stage Compressor & Ventilation Configuration: Manual Damper, up to 15% outside air ("N") Manual Damper, up to 450 cfm of outside air ("Y") Manual Damper, up to 450 cfm of outside air with pressure relief ("Z") Motorized 2-Position Damper, up to 450 cfm of outside air w/Pressure Relief ("B") Economizer, Outside Air ("C")

MODEL NUMBER	VOLTAGE PHASE HERTZ	CURRENT (AMPS)		LOAD OF RESISTIVE HEATING - ELEMENTS ONLY (AMPS *(1) ALL HEATING ELEMENTS ARE ON A SEPARATE CIRCUIT (2) SHADED VALUES (12 & 15 kW) UTILIZE TWO CIRCUITS*								TOTAL MAXIMUM HEATING AMPS *INCLUDES AMPS FROM MOTOR(S) THAT ARE LOCATED ON AN ELECTRICAL CIRCUIT THAT DOES NOT HAVE HEATERS*							
		HP[1]	IBM[2]	04 kW	05 kW	06 kW	08 kW	09 kW	10 kW	12 kW	15 kW	04 Kw	05 Kw	06 Kw	08 Kw	09 Kw	10 Kw	12 Kw	15 Kw
EHA24HP3A	208-230/1/60	19.1	2.8	16.7	20.8	25.00	33.3		41.7			35.8	39.9	44.1	52.4		60.8		
EHA30HP3A	208-230/1/60	22.4	4.3	16.7	20.8	25.00	33.3		41.7	**50.0**	**62.5**	39.1	43.2	47.4	55.7		64.1	**72.4**	**84.9**
EHA36HP3A	208-230/1/60	23.4	4.3	16.7	20.8	25.00	33.3		41.7	**50.0**	**62.5**	40.1	44.2	48.4	56.7		65.1	**76.2**	**88.7**
EHA42HP3A	208-230/1/60	29.4	4.3		20.8				41.7	**50.0**	**62.5**		50.2				71.1	**79.4**	**91.9**
EHA49HP3A	208-230/1/60	33.9	6.8		20.8				41.7	**50.0**	**62.5**		54.7				75.6	**83.9**	**96.4**
EHA60HP3A	208-230/1/60	38.3	6.8		20.8				41.7	**50.0**	**62.5**		59.1				80.0	**88.3**	**100.8**
EHA24HP3C	208-230/3/60	14.0	2.8			14.4		22		28.9	36.1			28.4		35.7		42.9	50.1
EHA30HP3C	208-230/3/60	17.9	4.3			14.4		22		28.9	36.1			32.3		39.6		46.8	54.0
EHA36HP3C	208-230/3/60	17.2	4.3			14.4		22		28.9	36.1			34.4		41.7		48.9	56.1
EHA42HP3C	208-230/3/60	23.2	4.3			14.4		22		28.9	36.1			37.6		44.9		52.1	59.3
EHA49HP3C	208-230/3/60	25.8	6.8			14.4		22		28.9	36.1			40.2		47.5		54.7	61.9
EHA60HP3C	208-230/3/60	27.7	6.8			14.4		22		28.9	36.1			42.1		49.4		56.6	63.8
EHA24HP3D	460/3/60	6.8	1.4			9.0		10.8		14.4	18.0			15.8		17.6		21.2	24.8
EHA30HP3D	460/3/60	9.9	2.2			9.0		10.8		14.4	18.0			18.9		20.7		24.3	27.9
EHA36HP3D	460/3/60	9.2	2.2			9.0		10.8		14.4	18.0			18.2		20.0		23.6	27.2
EHA42HP3D	460/3/60	10.9	2.2			9.0		10.8		14.4	18.0			19.9		21.7		25.3	28.9
EHA49HP3D	460/3/60	12.3	3.4			9.0		10.8		14.4	18.0			21.3		23.1		26.7	30.3
EHA60HP3D	460/3/60	13.8	3.4			9.0		10.8		14.4	18.0			22.8		24.6		28.2	31.8

[1]HP = Heat Pump Unit Amps (includes Indoor Motor amps) [2]IBM = Indoor Blower Motor
Heating kW is rated at 240 volts on the 208-230v. (HPA & HPC) models. Derate heater output by 25% for operation at 208 volts. Heating kW is rated at 480 volts on the HPD models.
Total heating amps for single phase units with two circuits (#1 and #2) includes both circuits. Total heating and cooling amps includes all motors. Three phase models contain single phase motor loads. Values shown are maximum phase loads. Loads are not equally balanced on each phase.

Unit Load Amps (Heating) - EHA Heat Pumps with Single Stage Compressor and GreenWheel® ERV - Ventilation Configuration ("H")

MODEL NUMBER	VOLTAGE PHASE HERTZ	CURRENT (AMPS)			LOAD OF RESISTIVE HEATING - ELEMENTS ONLY (AMPS *(1) ALL HEATING ELEMENTS ARE ON A SEPARATE CIRCUIT (2) SHADED VALUES (12 & 15 kW) UTILIZE TWO CIRCUITS*								TOTAL MAXIMUM HEATING AMPS *INCLUDES AMPS FROM MOTOR(S) THAT ARE LOCATED ON AN ELECTRICAL CIRCUIT THAT DOES NOT HAVE HEATERS*							
		HP[1]	IBM[2]	H[3]	04 kW	05 kW	06 kW	08 kW	09 kW	10 kW	12 kW	15 kW	04 Kw	05 Kw	06 Kw	08 Kw	09 Kw	10 Kw	12 Kw	15 Kw
EHA30HP3A	208-230/1/60	24.6	2.8	2.2	16.7	20.8	25.0	33.3		41.7	**50.0**	**62.5**	41.3	45.4	49.6	57.9		66.3	**74.6**	**87.1**
EHA36HP3A	208-230/1/60	25.6	2.8	2.2	16.7	20.8	25.0	33.3		41.7	**50.0**	**62.5**	41.3	49.2	53.4	61.7		70.1	**78.4**	**90.9**
EHA42HP3A	208-230/1/60	31.6	2.8	2.2		20.8				41.7	**50.0**	**62.5**		52.4				73.3	**81.6**	**94.1**
EHA49HP3A	208-230/1/60	36.1	4.3	2.2		20.8				41.7	**50.0**	**62.5**		56.9				77.8	**86.1**	**98.6**
EHA60HP3A	208-230/1/60	40.5	4.3	2.2		20.8				41.7	**50.0**	**62.5**		61.3				82.2	**90.5**	**103.0**
EHA30HP3C	208-230/3/60	20.1	2.8	2.2			14.4		21.7		28.9	36.1			34.5		41.8		49.0	56.2
EHA36HP3C	208-230/3/60	19.4	2.8	2.2			14.4		21.7		28.9	36.1			36.6		43.9		51.1	58.3
EHA42HP3C	208-230/3/60	25.4	2.8	2.2			14.4		21.7		28.9	36.1			39.8		47.1		54.3	61.5
EHA49HP3C	208-230/3/60	28.0	4.3	2.2			14.4		21.7		28.9	36.1			42.4		49.7		56.9	64.1
EHA60HP3C	208-230/3/60	29.9	4.3	2.2			14.4		21.7		28.9	36.1			44.3		51.6		58.8	66.0
EHA30HP3D	460/3/60	11.0	1.4	1.1			7.2		10.8		14.4	18.0			18.2		21.8		25.4	29.0
EHA36HP3D	460/3/60	10.3	1.4	1.1			7.2		10.8		14.4	18.0			18.9		22.5		26.1	29.7
EHA42HP3D	460/3/60	12.0	1.4	1.1			7.2		10.8		14.4	18.0			19.2		22.8		26.4	30.0
EHA49HP3D	460/3/60	13.4	2.2	1.1			7.2		10.8		14.4	18.0			20.6		24.2		27.8	31.4
EHA60HP3D	460/3/60	14.9	2.2	1.1			7.2		10.8		14.4	18.0			22.1		25.7		29.3	32.9

[1]HP = Heat Pump Unit Amps (includes Indoor Motor amps) [2]IBM = Indoor Blower Mower [3]H = GreenWheel ERV

Heating kW is rated at 240 volts on the 208-230v. (HPA & HPC) models. Derate heater output by 25% for operation at 208 volts. Heating kW is rated at 480 volts on the HPD models.

Total heating amps for single phase units with two circuits (#1 and #2) includes both circuits. Total heating and cooling amps includes all motors. Three phase models contain single phase motor loads. Values shown are maximum phase loads. Loads are not equally balanced on each phase.

EHSA Heat Pumps with 2-Stage Compressor

Certified Efficiency and Capacity Ratings at ANSI/ARI Standard 390 - for EHSA Heat Pumps with 2-Stage Compressor

Model Number	EHSA24HP3			EHSA30HP3			EHSA36HP3			EHSA42HP3			EHSA49HP3			EHSA60HP3		
	A	C	D	A	C	D	A	C	D	A	C	D	A	C	D	A	C	D
Cooling BTUH[1] - 2nd Stage	TBA			28,800			33,000			39,000			47,000			56,000		
EER[2] - 2nd Stage	TBA			11.0			11.0			11.0			11.0			11.0		
Integrated Part Load Value[3]	TBA			14.0			14.0			13.6			15.0			14.8		
High Temperature Heating[4]	TBA			26,000			31,400			37,600			39,000			50,500		
High Temperature COP[5]	TBA			3.3			3.3			3.3			3.3			3.3		
Rated Air Flow (CFM[6])	TBA			1,000			1,200			1,300			1,750			1,750		

[1]Cooling is rated at 95°F (35°C) outdoor and 80°F DB/67°F WB (26.5°C DB/19.5°C WB) return air.
[2]EER = Energy Efficiency Ratio
[3]Integrated Part Load Value is an integrated efficiency measure from 1st and 2nd stage capacity modulation.
[4]High Temperature Heating & COP is rated at 47°F DB/43°WB (8.3°C DB/6.1°C WB) outdoor and 70°F (21.1°C) return air.
[5]COP = Coefficient of Performance
[6]CFM = Cubic Feet per Minute
Ratings are with no outside air. Performance will be affected by altitude. Ratings are at 230 volts for 208/230 volt units ("A" & "C" models) and 460 volts for "D" models.
Operation of units at a different voltage from that of the rating point will affect performance and air flow.

Sensible Total Heat Ratio @ 95ºF (35ºC) Outside Air DB - EHSA Heat Pumps - Stage 2

Model Number	EHSA24HP3			EHSA30HP3			EHSA36HP3			EHSA42HP3			EHSA49HP3			EHSA60HP3		
	A	C	D	A	C	D	A	C	D	A	C	D	A	C	D	A	C	D
Total Capacity	TBA			28,800			33,000			39,000			47,000			56,000		
Sensible Heat Ratio	TBA			0.80			0.78			0.74			0.77			0.70		
Sensible Capacity	TBA			23,000			26,000			29,000			36,000			39,000		
Rated Air Flow (CFM)	TBA			1,000			1,200			1,300			1,750			1,750		

[1]CFM=Cubic Feet per Minute
Sensible Heat Ratios based upon ANSI/AHRI std. 390 outdoor conditions of 95°F (35°C) outdoor and 80°F DB/67°F WB (26.5°C DB/19.5°C WB) return air.

Cooling Performance (BTUH) at Various Outdoor Temperatures - EHSA Heat Pumps - Stage 2

Model Number	Outdoor Temperature								
	75ºF/24ºC	80ºF/26.5ºC	85ºF/29ºC	90ºF/32ºC	95ºF/35ºC	100ºF/38ºC	105ºF/40.5ºC	110ºF/43.3ºC	115ºF/46ºC
EHSA24HP3	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA
EHSA30HP3	33,408	32,256	31,104	29,952	28,800	27,648	26,496	25,344	24,768
EHSA36HP3	38,280	36,960	35,640	34,320	33,000	31,680	30,360	29,040	28,380
EHSA42HP3	45,240	43,680	42,120	40,560	39,000	37,440	35,880	34,320	33,540
EHSA49HP3	54,520	52,640	50,760	48,880	47,000	45,120	43,240	41,360	40,420
EHSA60HP3	64,960	62,720	60,480	59,280	56,000	53,760	51,520	49,280	48,160

Based upon ANSI/AHRI std. 390 return air conditions of 80°F DB/67°F WB (26.5°C DB/19.5°C WB). Return air at rated air flow.

Heating Performance (BTUH) at Various Outdoor Temperatures - EHSA Heat Pumps with 2-Stage Compressor

Model Number	Outdoor Temperature								
	10ºF/-12.2ºC	17ºF/-8.3ºC	20ºF/-6.7ºC	30ºF/-1.1ºC	40ºF/4.4ºC	47ºF/8.3ºC	50ºF/10ºC	60ºF/15.6ºC	70ºF/21.1ºC
EHSA24HP3	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA
EHSA30HP3	12,155	14,300	15,470	19,565	23,075	26,000	26,780	27,950	29,250
EHSA36HP3	14,620	17,200	18,620	23,590	27,850	31,400	32,342	33,755	35,325
EHSA42HP3	17,680	20,800	22,420	28,090	32,950	37,000	38,110	39,775	41,625
EHSA49HP3	18,700	22,000	23,700	29,650	34,750	39,000	40,170	41,925	43,875
EHSA60HP3	25,500	30,000	32,050	39,225	45,375	50,500	52,015	54,288	56,813

Based upon ANSI/AHRI std. 390 return air conditions of 70°F DB (21.1°C DB). Return air at rated air flow.

Electrical Characteristics - EHSA Heat Pumps - 2-Stage Compressor
Manual Damper, up to 15% outside air ("N")
Manual Damper, up to 450 cfm of outside air ("Y")
Manual Damper, up to 450 cfm of outside air with pressure relief ("Z")
Motorized 2-Position Damper, up to 450 cfm of outside air w/Pressure Relief ("B")
Economizer, Outside air with Pressure Relief ("C")
GreenWheel® Energy Recovery Ventilator ("H")
Compressor, Fan, Ventilation & Blower Motors -

Model Number	COMPRESSOR			OTHER MOTORS	OUTDOOR FAN MOTOR			INDOOR BLOWER MOTOR (ECM)			VENTILATION GREENWHEEL® ERV AMPS		
	VOLTS-HZ-PH	RLA[1]	LRA[2]	VOLTS-HZ-PH	RPM[3]	FLA[4]	HP[5]	RPM[3]	FLA[4]	HP[5]	OAM[6]	EXM[7]	WD[8]
EHSA30HP3A	208/230-60-1	13.1	73.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHSA36HP3A	208/230-60-1	15.2	83.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHSA42HP3A	208/230-60-1	17.9	96.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHSA49HP3A	208/230-60-1	21.1	104.0	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2
EHSA60HP3A	208/230-60-1	27.1	152.9	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2
EHSA30HP3C	208/230-60-3	8.6	58.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHSA36HP3C	208/230-60-3	11.6	73.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHSA42HP3C	208/230-60-3	14.1	88.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHSA49HP3C	208/230-60-3	14.0	83.1	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2
EHSA60HP3C	208/230-60-3	16.5	110.0	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2
EHSA30HP3D	460-60-3	4.3	28.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHSA36HP3D	460-60-3	5.7	38.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHSA42HP3D	460-60-3	6.2	44.0	208/230-60-1	1200	5.3	1/2	1500	4.3	1/2	1.0	1.0	0.2
EHSA49HP3D	460-60-3	6.4	41.0	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2
EHSA60HP3D	460-60-3	7.2	52.0	208/230-60-1	1200	5.3	1/2	1500	6.8	3/4	1.0	1.0	0.2

[1]RLA = Rated Load Amps [2]LRA = Locked Rotor Amps [3]RPM = Revolutions per Minute [4]FLA = Full Load Amps
[5]HP = Horsepower [6]OAM = Outside Air Mover [7]EXM = Exhaust Air Mover [8]WD = Wheel Drive Motor
The 460 volt units have a step down transformer for the 230 volt motors.

Summary Electrical Ratings (Wire and HACR Circuit Breaker Sizing) -
EHSA Heat Pumps w/2-Stage Compressor and Ventilation Configurations:
Manual Damper, up to 15% outside air ("N")
Manual Damper, up to 450 cfm of outside air ("Y")
Manual Damper, up to 450 cfm of outside air with pressure relief ("Z")
Motorized, 2-Position Damper, up to 450 CFM of Outside Air w/Pressure Relief ("B")
Economizer, Outside Air ("C")

ELECTRIC HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw		150 = 15 kw	
BASIC MODEL	VOLTS-HZ-PH	SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]	
		MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
EHSA24HP3A	208/230-1-60	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA			TBA	TBA				
EHSA30HP3A	208/230-1-60	26.0	35			52.0	60	57.2	60	67.6	70			78.1	80	88.5	90	104.1	110
EHSA36HP3A	208/230-1-60	28.6	40			54.6	60	59.9	60	70.3	80			80.7	90	91.1	100	106.7	110
EHSA42HP3A	208/230-1-60	32.0	45			58.0	60							84.1	90	94.5	100	110.1	120
EHSA49HP3A	208/230-1-60	38.5	60			64.5	70							90.6	100	101.0	110	116.6	120
EHSA60HP3A	208/230-1-60	46.0	70			72.0	80							98.1	100	108.5	110	124.1	130
EHSA24HP3C	208/230-3-60	TBA	TBA					TBA	TBA			TBA	TBA						
EHSA30HP3C	208/230-3-60	20.4	25					38.4	40			47.4	50			56.4	60	65.5	70
EHSA36HP3C	208/230-3-60	24.1	35					42.1	45			51.2	60			60.2	70	69.2	70
EHSA42HP3C	208/230-3-60	27.2	40					45.3	50			54.3	60			63.3	70	72.3	80
EHSA49HP3C	208/230-3-60	29.6	40					47.6	50			56.7	60			65.7	70	74.7	80
EHSA60HP3C	208/230-3-60	32.7	45					50.8	60			59.8	60			68.8	70	77.8	80
EHSA24HP3D	460-3-60	TBA	TBA					TBA	TBA			TBA	TBA			TBA	TBA	TBA	TBA
EHSA30HP3D	460-3-60	10.2	15					19.2	20			23.7	25			28.2	30	32.7	35
EHSA36HP3D	460-3-60	11.9	15					20.9	25			25.5	30			30.0	35	34.5	35
EHSA42HP3D	460-3-60	12.6	15					21.6	25			26.1	30			30.6	35	35.1	40
EHSA49HP3D	460-3-60	14.1	20					23.1	25			27.6	30			32.1	35	36.6	40
EHSA60HP3D	460-3-60	15.1	20					24.1	25			28.6	30			33.1	35	37.6	40

[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse or HACR Breaker Size [3]SPPE = Single Point Power Entry
MCA & MFS are calculated at 230 volts on the 208-230v. (HPA & HPC) models. The 460 volt HPD models are calculated at 460 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

Summary Electrical Ratings (Wire and HACR Circuit Breaker Sizing) - EHSA Heat Pumps with 2-Stage Compressor and "S" Circuit Set to "Yes"and Ventilation Configurations:
Manual Damper, up to 15% outside air ("N")
Manual Damper, up to 450 cfm of outside air ("Y")
Manual Damper, up to 450 cfm of outside air with pressure relief ("Z")
Motorized, 2-Position Damper, up to 450 CFM of Outside Air w/Pressure Relief ("B")
Economizer, Outside Air ("C")

ELECTRIC HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw		150 = 15 kw	
		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]	
BASIC MODEL	VOLTS-HZ-PH	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
EHSA24HP3A	208/230-1-60	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA					TBA	TBA				
EHSA30HP3A	208/230-1-60	26.0	35			30.3	35	35.6	40					56.4	60	66.8	70	82.4	90
EHSA36HP3A	208/230-1-60	28.6	40			30.3	40	35.6	40					56.4	60	66.8	70	82.4	90
EHSA42HP3A	208/230-1-60	32.0	45			32	45							56.4	60	66.8	70	82.4	90
EHSA49HP3A	208/230-1-60	38.5	60			41	60							58.9	60	69.3	70	84.9	90
EHSA60HP3A	208/230-1-60	46.0	70			41	70							58.9	60	69.3	70	84.9	90
EHSA24HP3C	208/230-3-60	TBA	TBA					TBA	TBA			TBA	TBA			TBA	TBA	TBA	TBA
EHSA30HP3C	208/230-3-60	20.4	25					22.3	25			31.4	35			40.4	45	49.4	50
EHSA36HP3C	208/230-3-60	24.1	35					24.1	35			31.4	35			40.4	45	49.4	50
EHSA42HP3C	208/230-3-60	27.2	40					27.2	40			31.4	40			40.4	45	49.4	50
EHSA49HP3C	208/230-3-60	29.6	40					29.6	40			33.9	40			42.9	45	51.9	60
EHSA60HP3C	208/230-3-60	32.7	45					32.7	45			33.9	45			42.9	45	51.9	60
EHSA24HP3D	460-3-60	TBA	TBA					TBA	TBA			TBA	TBA			TBA	TBA	TBA	TBA
EHSA30HP3D	460-3-60	10.2	15					11.2	15			15.7	20			20.2	25	24.7	25
EHSA36HP3D	460-3-60	11.9	15					11.9	15			15.7	20			20.2	25	24.7	25
EHSA42HP3D	460-3-60	12.6	15					12.6	15			15.7	20			20.2	25	24.7	25
EHSA49HP3D	460-3-60	14.1	20					14.1	15			16.9	20			21.4	25	25.9	30
EHSA60HP3D	460-3-60	15.1	20					15.1	20			16.9	20			21.4	25	25.9	30

S-Circuit - The user can move a pin on the board to control whether the electric heat will operate simultaneously with the compressor (S Circuit – NO) or will not run simultaneously with the compressor (S Circuit – Yes).
[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse or HACR Breaker Size [3]SPPE = Single Point Power Entry
MCA & MFS are calculated at 230 volts on the 208-230v. (HPA & HPC) models. The 460 volt HPD models are calculated at 460 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

Summary Electrical Ratings (Wire and HACR Circuit Breaker Sizing) - EHSA Heat Pumps with 2-Stage Compressor and GreenWheel® Energy Recovery Ventilator - Ventilation Configuration ("H")

ELECTRIC HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw		150 = 15 kw	
		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]	
BASIC MODEL	VOLTS-HZ-PH	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
EHSA30HP3A	208/230-1-60	28.2	35			54.2	60	59.4	60	69.8	70			80.3	90	90.7	90	106.3	110
EHSA36HP3A	208/230-1-60	30.8	40			56.8	60	62.1	70	72.5	80			82.9	90	93.3	100	108.9	110
EHSA42HP3A	208/230-1-60	34.2	45			60.2	70							86.3	90	96.7	100	112.3	120
EHSA49HP3A	208/230-1-60	40.7	50			66.7	70							92.8	100	103.2	105	118.8	120
EHSA60HP3A	208/230-1-60	48.2	60			74.2	80							100.3	105	110.7	110	126.3	130
EHSA30HP3C	208/230-3-60	18.6	25					40.6	45			49.6	50			58.6	60	67.7	70
EHSA36HP3C	208/230-3-60	22.3	30					44.3	45			53.4	60			62.4	70	71.4	80
EHSA42HP3C	208/230-3-60	25.4	35					47.5	50			56.5	60			65.5	70	74.5	80
EHSA49HP3C	208/230-3-60	26.8	40					49.8	50			58.9	60			67.9	70	76.9	80
EHSA60HP3C	208/230-3-60	29.9	45					53.0	60			62.0	70			71.0	80	80.0	80
EHSA30HP3D	460-3-60	9.3	15					20.3	25			24.8	25			29.3	30	33.8	35
EHSA36HP3D	460-3-60	11.0	15					22.0	25			26.6	30			31.1	30	35.6	40
EHSA42HP3D	460-3-60	11.7	15					22.7	25			27.2	30			31.7	30	36.2	40
EHSA49HP3D	460-3-60	12.7	15					24.2	25			28.7	30			33.2	35	37.7	40
EHSA60HP3D	460-3-60	13.7	20					25.2	30			29.7	30			34.2	35	38.7	40

[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse or HACR Breaker Size [3]SPPE = Single Point Power Entry
MCA & MFS are calculated at 230 volts on the 208-230v. (HPA & HPC) models. The 460 volt HPD models are calculated at 460 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

Summary Electrical Ratings (Wire and HACR Circuit Breaker Sizing) - EHSA Heat Pumps with 2-Stage Compressor and "S" Circuit set to "Yes" GreenWheel® Energy Recovery Ventilator - Ventilation Configuration ("H")

ELECTRIC HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw		150 = 15 kw	
		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]	
BASIC MODEL	VOLTS-HZ-PH	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
EHSA30HP3A	208/230-1-60	28.2	35			32.5	35	37.8	40					58.6	60	69.0	70	84.6	90
EHSA36HP3A	208/230-1-60	30.8	40			32.5	40	37.8	40					58.6	60	69.0	70	84.6	90
EHSA42HP3A	208/230-1-60	34.2	45			34.2	45							58.6	60	69.0	70	84.6	90
EHSA49HP3A	208/230-1-60	40.7	50			43.2	50							61.1	70	71.5	80	87.1	90
EHSA60HP3A	208/230-1-60	48.2	60			43.2	60							61.1	70	71.5	80	87.1	90
EHSA30HP3C	208/230-3-60	18.6	25					24.5	25			33.6	35			42.6	45	51.6	60
EHSA36HP3C	208/230-3-60	22.3	30					26.3	30			33.6	35			42.6	45	51.6	60
EHSA42HP3C	208/230-3-60	25.4	35					29.4	35			33.6	35			42.6	45	51.6	60
EHSA49HP3C	208/230-3-60	26.8	40					31.8	40			36.1	40			45.1	50	54.1	60
EHSA60HP3C	208/230-3-60	29.9	45					34.9	45			36.1	45			45.1	50	54.1	60
EHSA30HP3D	460-3-60	9.3	15					12.3	15			16.8	20			21.3	25	25.8	30
EHSA36HP3D	460-3-60	11.0	15					13.0	15			16.8	20			21.3	25	25.8	30
EHSA42HP3D	460-3-60	11.7	15					13.7	15			16.8	20			21.3	25	25.8	30
EHSA49HP3D	460-3-60	12.7	15					15.2	15			18.0	20			22.5	25	27.0	30
EHSA60HP3D	460-3-60	13.7	20					16.2	20			18.0	20			22.5	25	27.0	30

S-Circuit - The user can move a pin on the board to control whether the electric heat will operate simultaneously with the compressor (S Circuit – NO) or will not run simultaneously with the compressor (S Circuit – Yes).
[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse or HACR Breaker Size [3]SPPE = Single Point Power Entry
MCA & MFS are calculated at 230 volts on the 208-230v. (HPA & HPC) models. The 460 volt HPD models are calculated at 460 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

Summary Electrical Ratings (Wire and HACR Circuit Breaker Sizing) - EHSA Heat Pumps with 2-Stage Compressor and "S" Circuit set to "Yes" and Ventilation Configurations: GreenCube® ERV - Ventilation Configuration ("Q")

ELECTRIC HEAT		000 = None		040 = 4 kw		050 = 5 kw		060 = 6 kw		080 = 8 kw		090 = 9 kw		100 = 10 kw		120 = 12 kw		150 = 15 kw	
		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]		SPPE[3]	
BASIC MODEL	VOLTS-HZ-PH	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]	MCA[1]	MFS[2]
EHSA24HP3A	208/230-1-60	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA			TBA	TBA				
EHSA30HP3A	208/230-1-60	27.1	35			31.4	35	36.7	40	47.1	50			57.5	60	67.9	70	83.5	90
EHSA36HP3A	208/230-1-60	29.7	40			31.4	40	36.7	40	47.1	50			57.5	60	67.9	70	83.5	90
EHSA42HP3A	208/230-1-60	33.1	45			33.1	45							57.5	60	67.9	70	83.5	90
EHSA49HP3A	208/230-1-60	39.6	60			39.6	60							60.0	70	70.4	75	86.0	90
EHSA60HP3A	208/230-1-60	47.1	70			47.1	70							60.0	70	70.4	75	86.0	90
EHSA24HP3C	208/230-3-60	TBA	TBA					TBA	TBA			TBA	TBA						
EHSA30HP3C	208/230-3-60	21.5	25					23.4	25			32.5	35			41.5	45	50.5	55
EHSA36HP3C	208/230-3-60	25.2	35					25.2	35			32.5	35			41.5	45	50.5	55
EHSA42HP3C	208/230-3-60	28.3	40					28.3	40			32.5	40			41.5	45	50.5	55
EHSA49HP3C	208/230-3-60	30.7	40					30.7	40			35.0	40			44.0	45	53.0	55
EHSA60HP3C	208/230-3-60	33.8	45					33.8	45			35.0	45			44.0	45	53.0	55
EHSA24HP3D	460-3-60	TBA	TBA					TBA	TBA			TBA	TBA			TBA	TBA	TBA	TBA
EHSA30HP3D	460-3-60	10.7	15					11.7	15			16.2	20			20.7	25	25.3	30
EHSA36HP3D	460-3-60	12.5	15					12.5	15			16.2	20			20.7	25	25.3	30
EHSA42HP3D	460-3-60	13.1	15					13.1	15			16.2	20			20.7	25	25.3	30
EHSA49HP3D	460-3-60	14.6	20					14.6	20			17.5	20			22.0	25	26.5	30
EHSA60HP3D	460-3-60	15.6	20					15.6	20			17.5	20			22.0	25	26.5	30

S-Circuit - The user can move a pin on the board to control whether the electric heat will operate simultaneously with the compressor (S Circuit – NO) or will not run simultaneously with the compressor (S Circuit – Yes).
[1]MCA = Minimum Circuit Ampacity (Wiring Size Amps) [2]MFS = Maximum Fuse or HACR Breaker Size [3]SPPE = Single Point Power Entry
MCA & MFS are calculated at 230 volts on the 208-230v. (HPA & HPC) models. The 460 volt HPD models are calculated at 460 volts. This chart should only be used as a guideline for estimating conductor size and overcurrent protection. For the requirements of specific units, always refer to the data label on the unit.

Unit Load Amps (Heating) - EHSA Heat Pumps w/2-Stage Compressor & Ventilation Configuration: Manual Damper, up to 15% outside air ("N") Manual Damper, up to 450 cfm of outside air ("Y") Manual Damper, up to 450 cfm of outside air with pressure relief ("Z") Motorized 2-Position Damper, up to 450 cfm of outside air w/Pressure Relief ("B") Economizer, Outside Air ("C")

MODEL NUMBER	VOLTAGE PHASE HERTZ	CURRENT (AMPS)		LOAD OF RESISTIVE HEATING - ELEMENTS ONLY (AMPS (1) ALL HEATING ELEMENTS ARE ON A SEPARATE CIRCUIT (2) SHADED VALUES (12 & 15 kW) UTILIZE TWO CIRCUITS								TOTAL MAXIMUM HEATING AMPS INCLUDES AMPS FROM MOTOR(S) THAT ARE LOCATED ON AN ELECTRICAL CIRCUIT THAT DOES NOT HAVE HEATERS							
		HP[1]	IBM[2]	04 kW	05 kW	06 kW	08 kW	09 kW	10 kW	12 kW	15 kW	04 Kw	05 Kw	06 Kw	08 Kw	09 Kw	10 Kw	12 Kw	15 Kw
EHSA24HP3A	208-230/1/60	TBA	TBA	TBA	TBA	TBA	TBA		TBA			TBA	TBA	TBA	TBA		TBA		
EHSA30HP3A	208-230/1/60	22.7	4.3	16.7	20.8	25.00	33.3		41.7	**50.0**	**62.5**	39.4	43.5	47.7	56.0		64.4	**72.7**	**85.2**
EHSA36HP3A	208-230/1/60	24.8	4.3	16.7	20.8	25.00	33.3		41.7	**50.0**	**62.5**	41.5	45.6	49.8	58.1		66.5	**74.8**	**87.3**
EHSA42HP3A	208-230/1/60	27.5	4.3		20.8				41.7	**50.0**	**62.5**		48.3				69.2	**77.5**	**90.0**
EHSA49HP3A	208-230/1/60	33.2	6.8		20.8				41.7	**50.0**	**62.5**		54.0				74.9	**83.2**	**95.7**
EHSA60HP3A	208-230/1/60	39.2	6.8		20.8				41.7	**50.0**	**62.5**		60.0				80.9	**89.2**	**101.7**
EHSA24HP3C	208-230/3/60	TBA	TBA			TBA		TBA		TBA	TBA			TBA		TBA		TBA	TBA
EHSA30HP3C	208-230/3/60	18.2	4.3			14.4		22		28.9	36.1			32.6		39.9		47.1	54.3
EHSA36HP3C	208-230/3/60	21.2	4.3			14.4		22		28.9	36.1			35.6		42.9		50.1	57.3
EHSA42HP3C	208-230/3/60	23.7	4.3			14.4		22		28.9	36.1			38.1		45.4		52.6	59.8
EHSA49HP3C	208-230/3/60	26.1	6.8			14.4		22		28.9	36.1			40.5		47.8		55.0	62.2
EHSA60HP3C	208-230/3/60	28.6	6.8			14.4		22		28.9	36.1			43.0		50.3		57.5	64.7
EHSA24HP3D	460/3/60	TBA	TBA			TBA		TBA		TBA	TBA			TBA		TBA		TBA	TBA
EHSA30HP3D	460/3/60	9.1	2.2			9.0		10.8		14.4	18.0			18.1		19.9		23.5	27.1
EHSA36HP3D	460/3/60	10.5	2.2			9.0		10.8		14.4	18.0			19.5		21.3		24.9	28.5
EHSA42HP3D	460/3/60	11.0	2.2			9.0		10.8		14.4	18.0			20.0		21.8		25.4	29.0
EHSA49HP3D	460/3/60	12.5	3.4			9.0		10.8		14.4	18.0			21.5		23.3		26.9	30.5
EHSA60HP3D	460/3/60	13.3	3.4			9.0		10.8		14.4	18.0			22.3		24.1		27.7	31.3

[1]HP = Heat Pump Unit Amps (includes Indoor Motor amps) [2]IBM = Indoor Blower Motor
Heating kW is rated at 240 volts on the 208-230v. (HPA & HPC) models. Derate heater output by 25% for operation at 208 volts. Heating kW is rated at 480 volts on the HPD models.
Total heating amps for single phase units with two circuits (#1 and #2) includes both circuits. Total heating and cooling amps includes all motors. Three phase models contain single phase motor loads. Values shown are maximum phase loads. Loads are not equally balanced on each phase.

Unit Load Amps (Heating) - EHSA Heat Pumps with 2-Stage Compressor and GreenWheel® Energy Recovery Ventilator - Ventilation Configuration ("H")

MODEL NUMBER	VOLTAGE PHASE HERTZ	CURRENT (AMPS)			LOAD OF RESISTIVE HEATING - ELEMENTS ONLY (AMPS (1) ALL HEATING ELEMENTS ARE ON A SEPARATE CIRCUIT (2) SHADED VALUES (12 & 15 kW) UTILIZE TWO CIRCUITS								TOTAL MAXIMUM HEATING AMPS INCLUDES AMPS FROM MOTOR(S) THAT ARE LOCATED ON AN ELECTRICAL CIRCUIT THAT DOES NOT HAVE HEATERS							
		HP[1]	IBM[2]	H[3]	04 kW	05 kW	06 kW	08 kW	09 kW	10 kW	12 kW	15 kW	04 Kw	05 Kw	06 Kw	08 Kw	09 Kw	10 Kw	12 Kw	15 Kw
EHSA30HP3A	208-230/1/60	24.9	4.3	2.2	16.7	20.8	25.0	33.3		41.7	**50.0**	**62.5**	41.6	45.7	49.9	58.2		66.6	**74.9**	**87.4**
EHSA36HP3A	208-230/1/60	27.0	4.3	2.2	16.7	20.8	25.0	33.3		41.7	**50.0**	**62.5**	43.7	47.8	52.0	60.3		68.7	**77.0**	**89.5**
EHSA42HP3A	208-230/1/60	29.7	4.3	2.2		20.8				41.7	**50.0**	**62.5**		50.5				71.4	**79.7**	**92.2**
EHSA49HP3A	208-230/1/60	35.4	6.8	2.2		20.8				41.7	**50.0**	**62.5**		56.2				77.1	**85.4**	**97.9**
EHSA60HP3A	208-230/1/60	41.4	6.8	2.2		20.8				41.7	**50.0**	**62.5**		62.2				83.1	**91.4**	**103.9**
EHSA30HP3C	208-230/3/60	20.4	4.3	2.2			14.4		21.7		28.9	36.1			34.8		42.1		49.3	56.5
EHSA36HP3C	208-230/3/60	23.4	4.3	2.2			14.4		21.7		28.9	36.1			37.8		45.1		52.3	59.5
EHSA42HP3C	208-230/3/60	25.9	4.3	2.2			14.4		21.7		28.9	36.1			40.3		47.6		54.8	62.0
EHSA49HP3C	208-230/3/60	28.3	6.8	2.2			14.4		21.7		28.9	36.1			42.7		50.0		57.2	64.4
EHSA60HP3C	208-230/3/60	30.8	6.8	2.2			14.4		21.7		28.9	36.1			45.2		52.5		59.7	66.9
EHSA30HP3D	460/3/60	10.2	2.2	1.1			7.2		10.8		14.4	18.0			17.4		21.0		24.6	28.2
EHSA36HP3D	460/3/60	11.6	2.2	1.1			7.2		10.8		14.4	18.0			18.8		22.4		26.0	29.6
EHSA42HP3D	460/3/60	12.1	2.2	1.1			7.2		10.8		14.4	18.0			19.3		22.9		26.5	30.1
EHSA49HP3D	460/3/60	13.6	3.4	1.1			7.2		10.8		14.4	18.0			20.8		24.4		28.0	31.6
EHSA60HP3D	460/3/60	14.4	3.4	1.1			7.2		10.8		14.4	18.0			21.6		25.2		28.8	32.4

[1]HP = Heat Pump Unit Amps (includes Indoor Motor amps) [2]IBM = Indoor Blower Motor [3]H = GreenWheel ERV
Heating kW is rated at 240 volts on the 208-230v. (HPA & HPC) models. Derate heater output by 25% for operation at 208 volts. Heating kW is rated at 480 volts on the HPD models.
Total heating amps for single phase units with two circuits (#1 and #2) includes both circuits. Total heating and cooling amps includes all motors. Three phase models contain single phase motor loads. Values shown are maximum phase loads. Loads are not equally balanced on each phase.

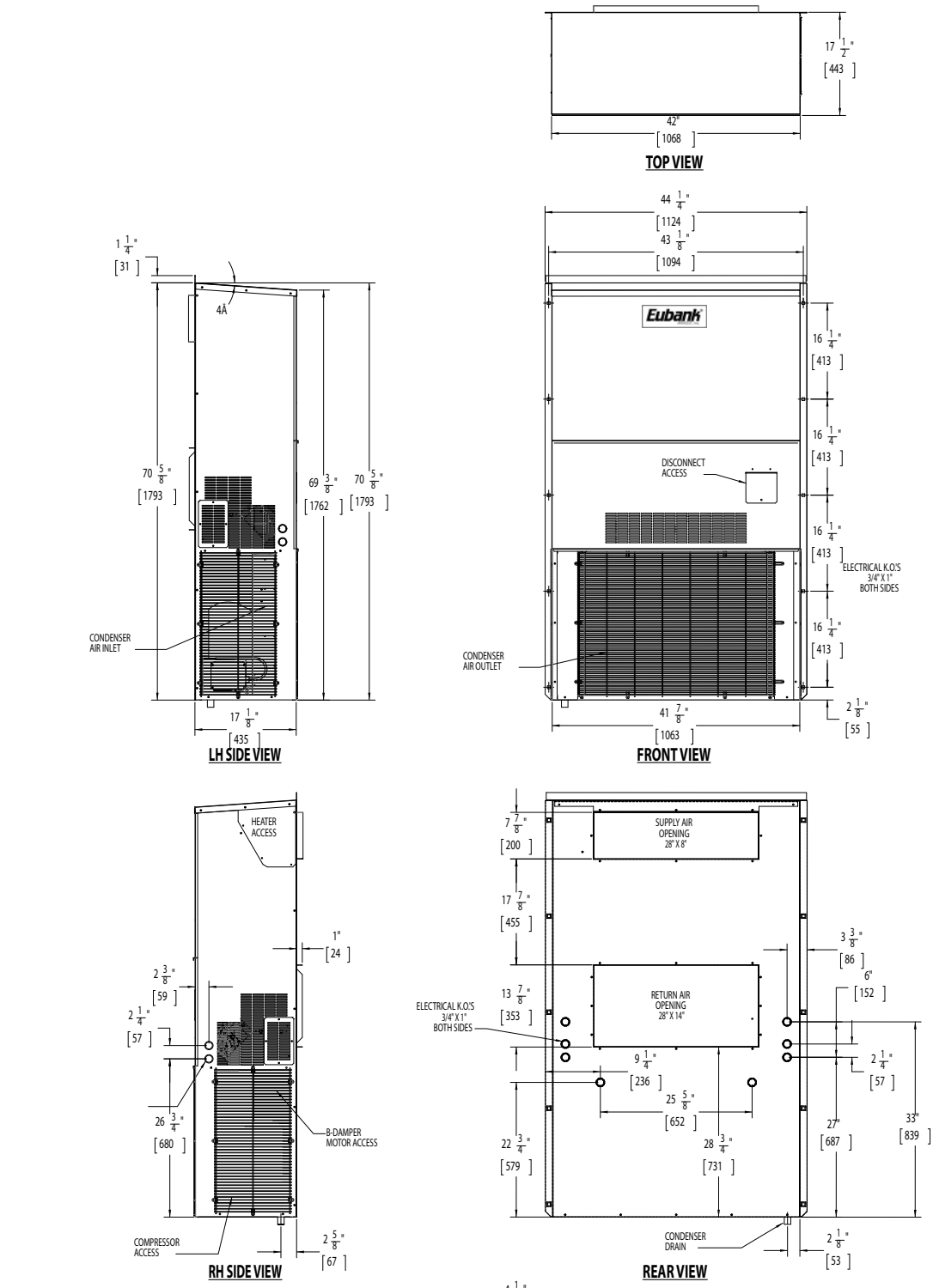
EHA & EHSA Air Flow (CFM) at Various Static Pressures

MODEL	0.10	0.20	0.25	0.30	0.40	0.50
24	800	770	725	680	600	500
30	1200	1100	1050	1000	900	800
36	1290	1170	1115	1060	1000	920
42	1500	1360	1295	1230	1160	1070
49	1900	1800	1700	1600	1500	1350
60	2200	2100	2000	1900	1800	1650

Eubank Heat Pump Model & Cabinet Designation

MODEL	CABINET DESIGNATION			
	A	B	C	D
EHA24	✓			
EHSA24	✓			
EHA30/36/42		✓		
EHSA30/36/42		✓		
EHA49/60			✓	
EHSA49/60			✓	
EHA49/60 w/GreenWheel ERV			✓	
EHSA49/60 w/GreenWheel ERV			✓	
EHA30/36/42 w/GreenWheel ERV				✓
EHSA30/36/42 w/GreenWheel ERV				✓

Dimensional Data for Cabinet A (inches and mm)



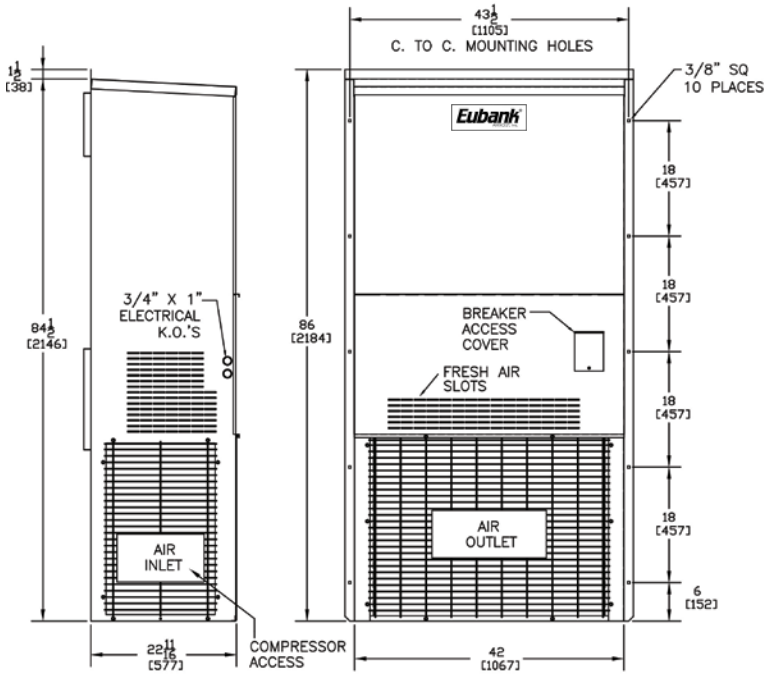
Shipping Weight (pounds/kilograms)

Cabinet A	LBS/KGS
WITH VENTILATION CONFIGURATION "N"	420/191
WITH VENTILATION CONFIGURATION "C", "B", "Y", & "Z"	445/202.5

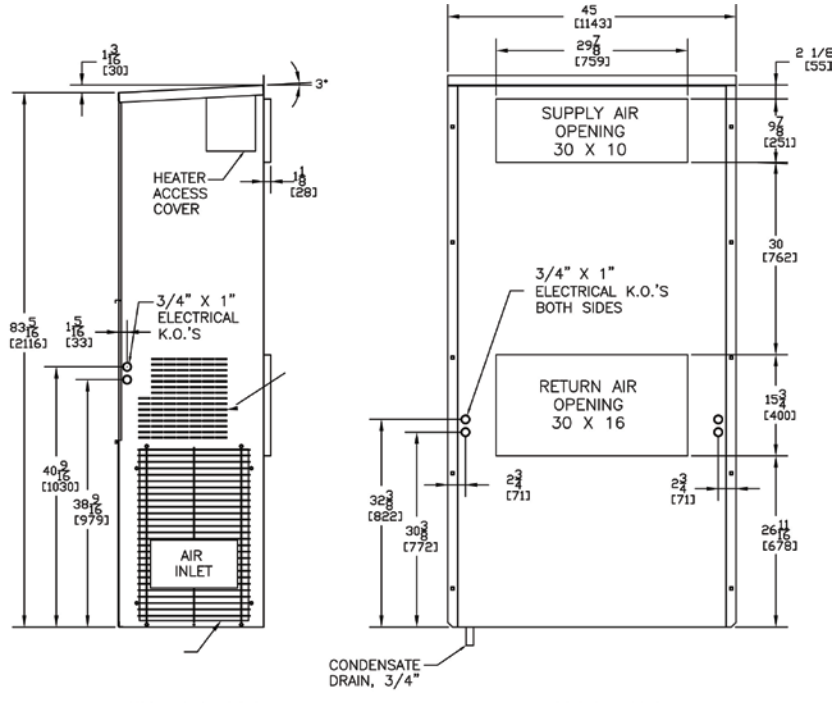
Filter Size

Cabinet A	INCHES	MILLIMETERS	PART NUMBER	FILTERS PER UNIT	MERV RATING
RETURN AIR FILTER	30 x 16 x 1	762 x 406 x 25	80136	1	7

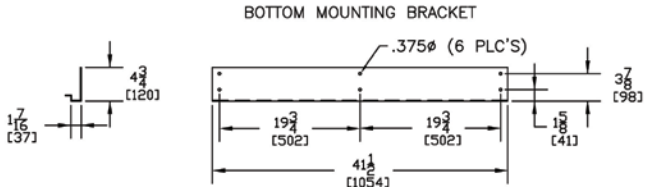
Dimensional Data for Cabinet B (inches and mm)



LH SIDE VIEW FRONT VIEW



RH SIDE VIEW BACK VIEW



The GreenCube® ERV is only available on EHSA units (2-stage compressor).

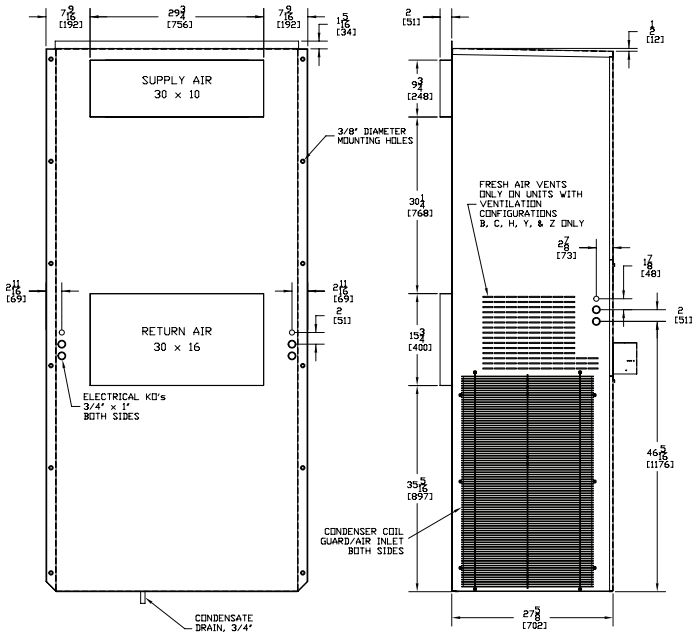
Shipping Weight (pounds/kilograms)

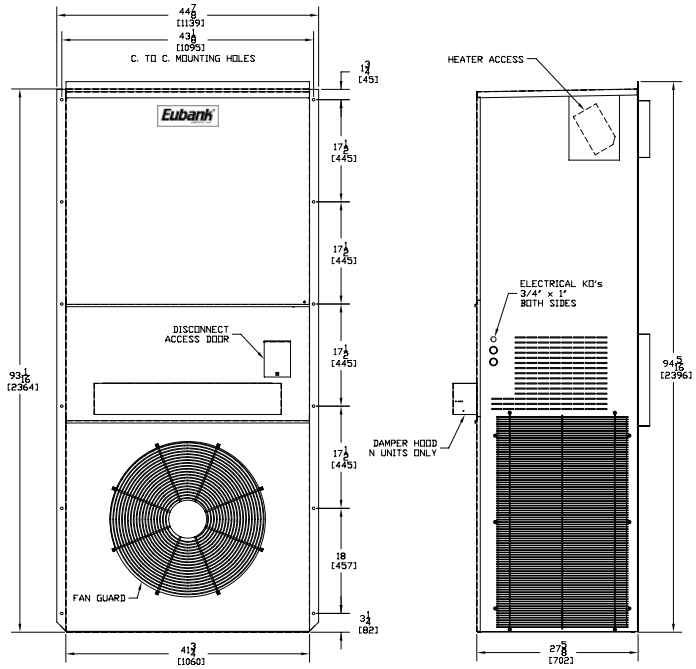
Cabinet B	LBS/KGS
WITH VENTILATION CONFIGURATION "N"	540/246
WITH VENTILATION CONFIGURATION "C", "B", "Y", & "Z"	495/224.5

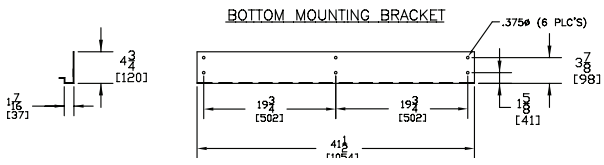
Filter Size

Cabinet B	INCHES	MILLIMETERS	PART NUMBER	FILTERS PER UNIT	MERV RATING
RETURN AIR FILTER	36½ x 22 x 1	927 x 559 x 25	80139	1	7

Dimensional Data for Cabinet C (inches and mm)







Shipping Weight (pounds/kilograms)

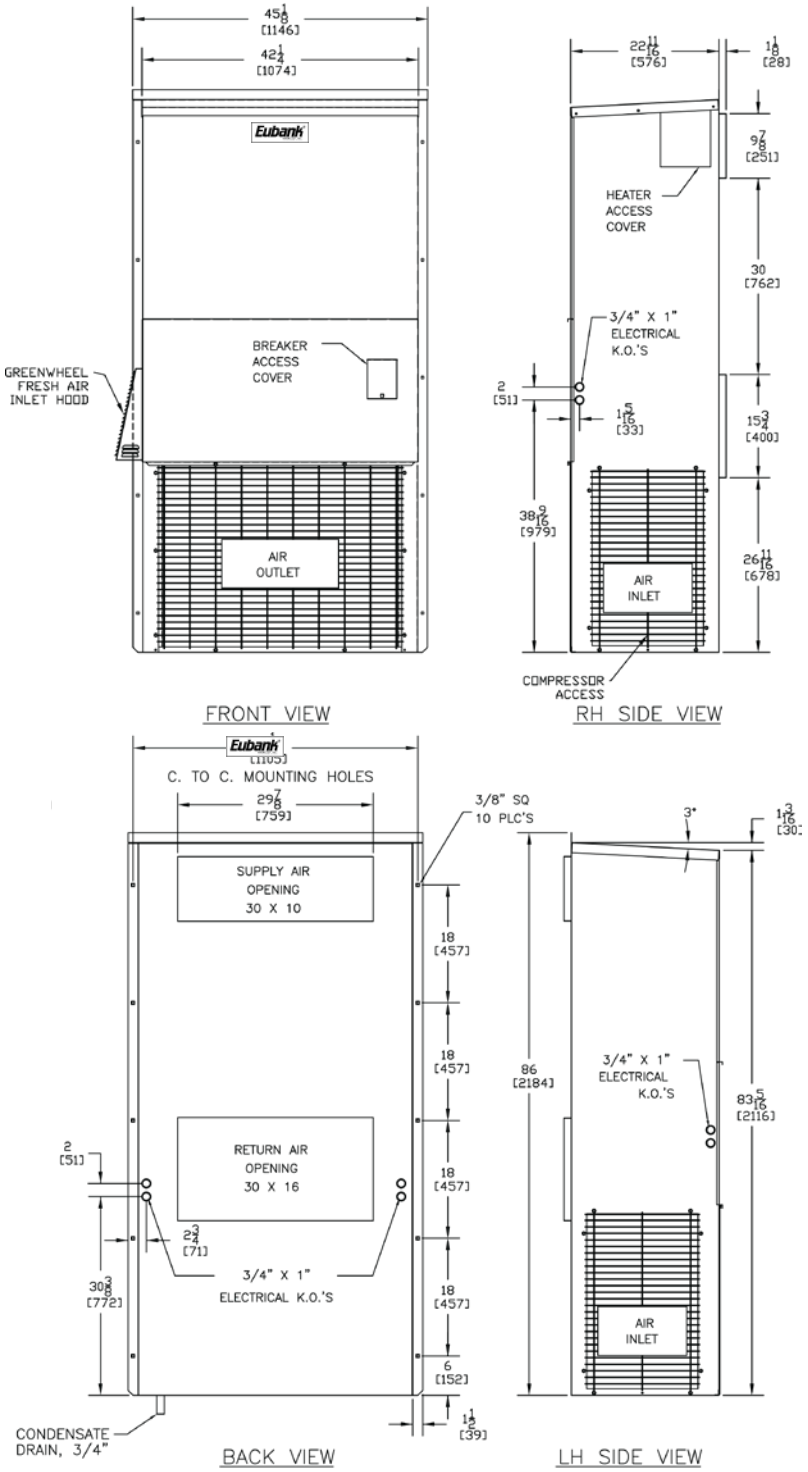
Cabinet C	LBS/KGS
WITH VENTILATION CONFIGURATION "N"	680/309
WITH VENTILATION CONFIGURATION "C", "B", "Y", & "Z"	659/298.9
WITH GREENWHEEL ERV	810/369

Filter Size

Cabinet C	INCHES	MILLIMETERS	PART NUMBER	FILTERS PER UNIT	MERV RATING
RETURN AIR FILTER	18 x 24 x1	457 x 610 x 25	81199	2	7
INTAKE AIR FILTER*	14 x 14 x 1	356 x 356 x 25	80192	1	N/A
RETURN AIR FILTER (STD)**	16 x 24 x 1	406 x 635 x 25	92367	2	7
RETURN AIR FILTER (OPT)**	16 x 24 x 2	406 x 635 x 51	91968	2	8
INTAKE AIR FILTER**	9¾ x 22¾ x ¾	248 x 222 x 19	92113	1	N/A
EXHAUST AIR FILTER**	9¾ x 22¾ x ¾	248 x 222 x 19	92113	1	N/A

*Units with the GreenWheel ERV

Dimensional Data for Cabinet D (inches and mm)



Shipping Weight (pounds/kilograms)

Cabinet D	LBS/KGS
With GreenWheel ERV	590/268

Filter Size

Cabinet D	INCHES	MILLIMETERS	PART NUMBER	FILTERS PER UNIT	MERV RATING
RETURN AIR FILTER	36 x 22 x 1	927 x 559 x 25	80139	1	7
INTAKE AIR FILTER*	14 x 14 x 1	356 x 356 x 25	80192	1	N/A

*Units with the GreenWheel ERV

Notes

Please consult the Eubank® website at www.EubankWallmount.com for the latest product literature. Detailed dimensional data is available upon request. A complete warranty statement can be found in each product's Installation/Operation Manual, on our website or by contacting Eubank at 229-273-3636. As part of the Eubank continuous improvement program, specifications are subject to change without notice.

Eubank® ISO 9001:2015 REGISTERED COMPANY AIRXCEL™, Inc.
P.O. Box 400 • Cordele, GA 31010
156 Seedling Drive • Cordele, GA 31015
Ph: 229-273-3636 • Fax: 229-273-5154
Email: EubankOrders@airxcel.com • Internet: www.EubankWallmount.com
Designed, Engineered & Assembled In the USA