



HP

Space Constrained Heat Pump with Electric Heating and fully integrated ERV (EPE)

1.0 - 2.5 tons

3 to 10 kW Electric Heat

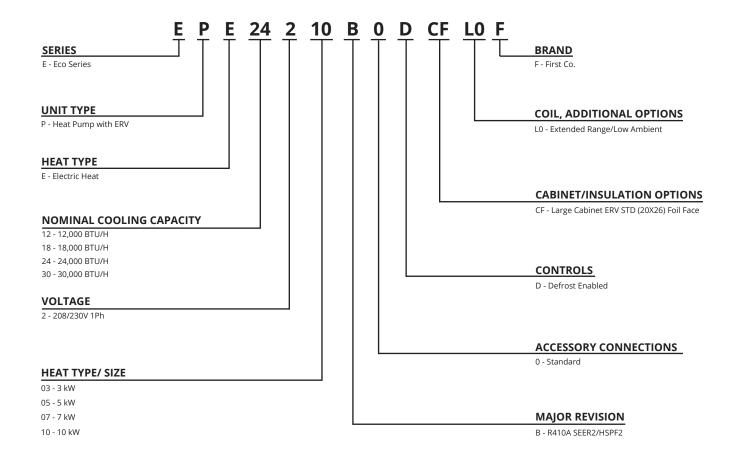
11.9 SEER2 & 6.3 HSPF2







# **Nomenclature**



#### PRODUCT DESCRIPTION

- Space constrained low ambient heat pump with with integrated energy recovery ventilator (ERV)
- Pre-wired and pre-charged with R410a refrigerant, capable of delivering conditioned air to multiple rooms
- Easily installs into a closet or mechanical room on an exterior wall, utilizing a minimal amount of floor space
- · Controlled by a standard low voltage heat pump thermostat with ventilation capabilities

#### **APPLICATIONS**

Hospitality, Apartments/Condominiums, Assisted Living/Memory Care, Student Housing, Senior Living and Modular/Prefabricated Buildings

#### STANDARD FEATURES

- Shipped ready for top supply and front return (with optional ducted return)
- Insulated compartment to improve cooling performance, reduce noise, and prevent sweating
- ECM indoor blower & outdoor fan motor to provide precise airflow selection and improve system efficiency
- High-efficiency single stage scroll and rotary compressors with double isolated compressor mount to lower compressor noise and vibration
- · Larger evaporator coil with low face velocity for improved cooling performance
- Drain pan with corrosion resistant coating to drain condensate in cooling and heating operations
- Thermal expansion valve (TXV) for both cooling and heating to optimize performance
- Operates down to as low as 5°F ambient temperature with time-temperature defrost board with selectable defrost interval times
- High and low pressure switch protection
- Electric heat with automatic reset limit switch and non-resettable fuse link
- Filter brackets and disposable filter shipped with unit for field installation; no tool needed to replace filter
- Multi-function microprocessor control board
- Factory installed condensate float switch for overflow protection

#### SERVICEABILITY FEATURES

- Easy access for in-place service of most components
- All electrical components and control boards are serviceable from front of the unit

#### WARRANTY

Five (5) year limited warranty on compressor and parts

#### **REQUIRED ACCESSORIES**

- Single piece weight bearing wall sleeves with integrated ventilation air intake and exhaust ports for various wall thicknesses from 5" to 20"
- Flush type aluminum louver with finish and paint options
- Standard low voltage heat pump thermostat with ventilation capabilities
- WLAN service stick to program ERV control board

#### **OPTIONAL ACCESSORIES**

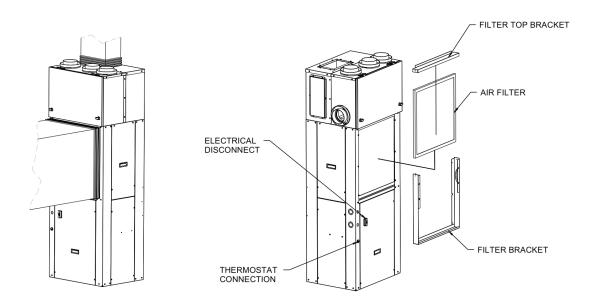
- Interior Access Panels Louvered or Solid \*\*Bone White only\*\*\* no custom color
- ERV Sensors Humidity or Carbon Dioxide (field provided)
- ERV Exhaust Controls Analog Egg Timer or Digital Timer Switch (field provided)

#### STANDARD UNIT FEATURES

**Ductwork Connections -** Shipped ready for top supply duct connection and front non-ducted return with optional ducted return. If require by code, return air can be ducted to the unit.

**NOTE:** If ducted return is utilized, the filter will need to be relocated to a suitable location outside the cabinet for ease of service.

**Filter Rack** - Filter Brackets and a disposable filter ship with each unit to be field installed over the evaporator coil. **NOTE:** Do not use filters which will cause the total external static pressure, including ducts, grilles, registers, and filters to exceed 0.5 in. w.c.



#### MULTI-FUNCTION MICROPROCESSOR CONTROL BOARD

**Evaporator coil low temperature protection** – During the cooling mode, should the evaporator coil experience either a low temperature condition that could result in ice buildup on the coil or a reduced air flow situation, a temperature sensor attached to the coil will de-energize the unit. The sensor will re-energize the unit when the coil warms back up.

**Random restart** – When power is turned on after a power outage, a built-in random restart of 3-4 minutes prevents all compressors from restarting simultaneously.

**Compressor restart delay** – This delay ensures that system pressures are allowed to equalize before a compressor restart, which extends compressor life.

*Fan delay* – A fan delay allows the evaporator blower to continue running for up to 45 seconds after the thermostat is satisfied, which maximizes cooling performance.

**Defrost Controls** - During the heating mode, if conditions for frost build up are detected in the outdoor section, the unit will enter a temporary defrost mode to thaw the condenser coil and allow the unit to continue operation down to 5°F.

#### SERVICE PULL OUT SWITCH

Provides a visible disconnecting means when performing maintenance; models with 7 and 10 kW electric heat also have terminal block.

WARNING: This service switch does not de-energize the incoming power supply to the unit. ALWAYS turn off all power to the unit before servicing equipment. There may be more than one disconnect switch. All lockout/tag out procedures should be followed.

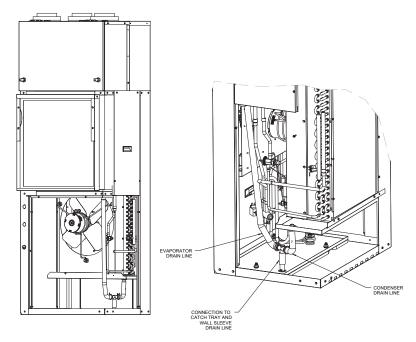
#### **CONDENSATE SYSTEM**

#### **Primary Condensate**

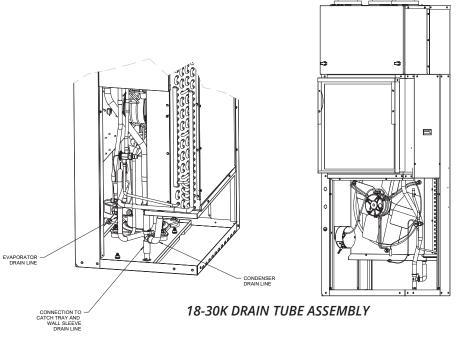
Factory installed drain line connects the evaporator drain pan to a vertical pipe connection in the unit base pan. Evaporator condensate is delivered from the unit to a catch tray in the wall sleeve and exits the sleeve through the 3/4" male NPT fitting. This design allows the plumber to completely pipe the drain to a condensate riser during the rough-in stage, thus eliminating condensate connection problems usually encountered when trying to connect the HVAC drain to the riser after the HVAC unit is installed in the closet. This features also allows the unit to be removed for service without disconnecting the condensate piping. This configuration does not require any additional closet space to make the drain connection, as do some competitive products.

#### **Secondary Condensate**

If for any reason, the primary condensate riser becomes clogged, water will fill the catch tray and then be diverted through the wall sleeve to the exterior of the building, rather than be allowed to overflow into the closet or living area. Rain water entering the wall sleeve is automatically diverted to the condensate drain.



12K DRAIN TUBE ASSEMBLY



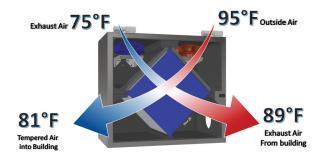
# What is ERV?

**ENERGY RECOVERY VENTILATOR (ERV)** is a device that uses waste/stale air to precondition incoming outside/ fresh air for ventilation.

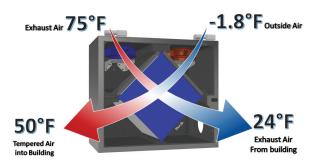
**ERV** uses a polymer core to transfer temperature (sensible energy) and moisture (latent energy) from waste air to incoming ventilation air. It will cool the air in the warmer months and warm the air in the colder months.

Tighter construction requirements create less natural ventilation, the **ERV** offers the solution with balanced ventilation.

#### How it works during summer months



#### How it works during winter months

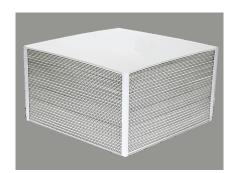


#### **Integrated Energy Recovery Ventilator (ERV)**

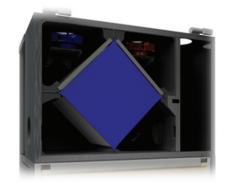
- **Core Enclosure:** Insulated one piece molded enclosure, made from mold/mildew resistant material. Completely sealed providing noise and air leakage reduction
- Core: Full enthalpy core made from polymer material that is removable for servicing & cleaning
- Core Filters: Filtration of Ventilation Air & Return Air with MERV 5 washable and disposable filters







**ERV CORE** 



**DEFROST** – The ERV will sense when the exhaust drops below the set temperature and will activate the built-in multistage defrost mode. The first stage will reduce the fan speed to help warm up the core and prevent freezing. The second stage will, if optioned, activate a 3rd party field installed electric preheater. The ERV will cycle between defrost and normal operation until the temperature rises to the set point. It can be field configured so that the supply fan can be switched off while the exhaust runs to warm up the core.

# **REQUIRED ACCESSORIES**

#### Wall sleeve, louver and thermostat are required for each installation

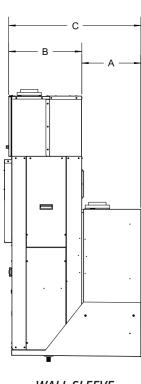
#### **WALL SLEEVES**

- •Fresh air intake and exhaust ports are built in to wall sleeve
- •Provided for installation during rough-in and when ready the unit is simply slid into the wall sleeve and connect the ductwork and electrical
- •Weight bearing wall sleeve that supports the entire weight of the unit and provides a weather tight seal against wind and water infiltration
- •Four wall sleeve depths are available to accommodate wall thickness from 5" to 20".
- •Includes a weather guard to cover the sleeve opening and a debris guard to cover wall sleeve base and drain during construction

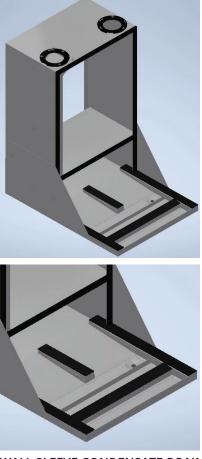
| ACCESSORY               | DESCRIPTION               | DIMENSIONS<br>(H x W x D) | PART #    | Α       | В         | С         |
|-------------------------|---------------------------|---------------------------|-----------|---------|-----------|-----------|
|                         | For 5" - 8" thick walls   | 43-1/4 x 26-1/2 x 37-1/4  | 999-21B-E | 16-3/4" | 20-15/16" | 37-11/16" |
| FRESH-PAK               | For 8" - 12" thick walls  | 43-1/4 x 26-1/2 x 41-1/4  | 999-22B-E | 20-3/4" | 20-15/16" | 41-11/16" |
| INTEGRATED<br>TOP PORTS | For 12" - 15" thick walls | 43-1/4 x 26-1/2 x 44-1/4  | 999-23B-E | 23-3/4" | 20-15/16" | 44-11/16" |
|                         | For 15" - 20" thick walls | 43-1/4 x 26-1/2 x 50-1/4  | 999-24B-E | 29-3/4" | 20-15/16" | 50-11/16" |

All wall sleeves are shipped two (2) per carton, fully assembled.

Wall sleeve, louver and thermostat are required for each installation.

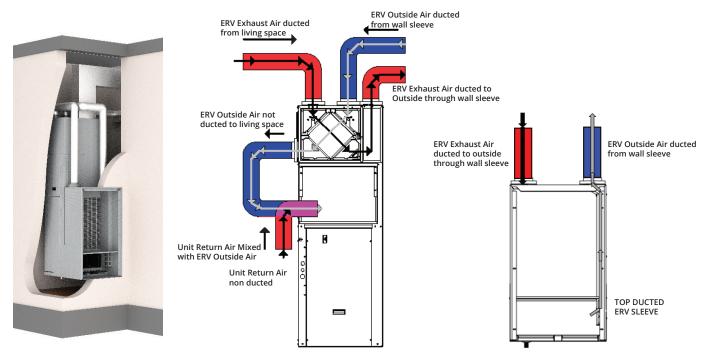


WALL SLEEVE WITH TOP PORTS



WALL SLEEVE CONDENSATE DRAIN

## **WALL SLEEVE ERV DUCTING**



TOP DUCTED INSTALLATION

#### **LOUVERS**

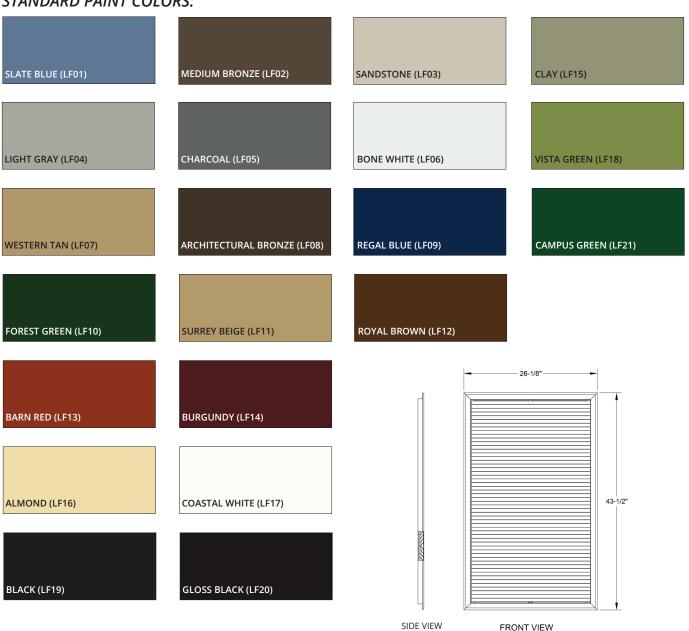
Extruded aluminum louver that attaches to the outside face of the wall sleeve. The blades of this unique louver recess into the wall sleeve for a neat, flush appearance.

Louver attachment screws are tightened from inside of the wall sleeve. Do not install the unit into the wall sleeve before installing the louver and tightening attachment screws.

| DESCRIPTION         | DIMENSIONS<br>(H x W x D) | PART #   |
|---------------------|---------------------------|----------|
| Field Painted       | 43-1/2 x 26-1/8           | G8502PPA |
| Anodized Clear Coat | 43-1/2 x 26-1/8           | G8501A   |
| Custom Painted      | 43-1/2 x 26-1/8           | G8503S*  |

S\* indicates custom color, to be provided by customer. Minimum order quantity is 15 per color, if less than 15 set up fees will be applied

#### STANDARD PAINT COLORS:



## **CONTROLS**

#### **Thermostats**

Units are controlled by a standard low voltage heat pump thermostat with ventilation capabilities.

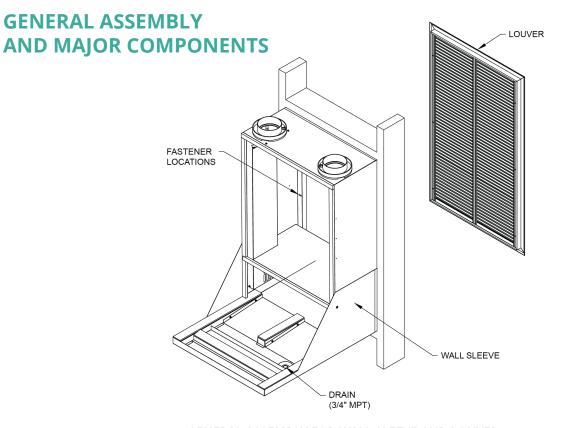
| BRAND     | DESCRIPTION                                                                                                                                 | PART<br>NUMBER | IMAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Honeywell | Programmable<br>7-day/5-2/5-1-1<br>3H/2C HP 2H/2C Conv.<br>24v Hardwired, C-wire only,<br>Wi-Fi, w/ventilation control                      | TH6320WF2003   | Name of the state |  |  |
| Honeywell | Programmable<br>7-day/5-2/5-1-1<br>3H/2C HP 2H/2C Conv.<br>24v Hardwired, C-wire only,<br>Wi-Fi, aux heat lockout w/<br>ventilation control | THX321WFS2001W | 630<br>72<br>088                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |

#### **WLAN Service Stick**

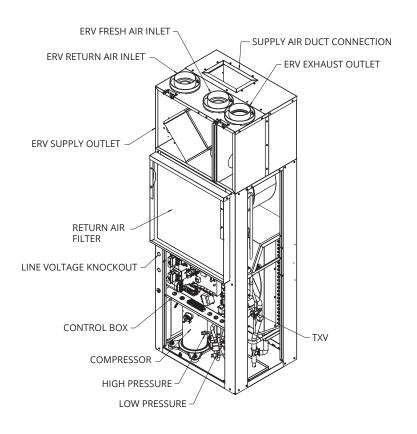
ERV Programming via WLAN\* service stick - Must purchase one stick per project. Required to program ERV board through the ABT GO app.

| PART<br>NUMBER | IMAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| USB-300        | SIEMENS POLICE AND THE CONTROL OF TH |

<sup>\*</sup>WLAN = wireless local area network



GENERAL ASSEMBLY FOR WALL SLEEVE AND LOUVER



**MAJOR COMPONENTS** 

# **OPTIONAL ACCESSORIES**

#### **ACCESS PANELS**

| COMPONENT        | DESCRIPTION | FRAME<br>(A x C) | OPENING<br>(B x D) | PART<br>NUMBER | SHIPPING<br>WEIGHT<br>LBS. |
|------------------|-------------|------------------|--------------------|----------------|----------------------------|
| RETURN AIR PANEL | LOUVERED    | 87 X 37          | 84 X 34            | 931-20         | 55                         |
| ACCESS PANEL     | SOLID       | 87 X 37          | 84 X 34            | 931-16         | 55                         |

No filter provided, requires unit mounted filter.

Both panels are insulated for sound reduction and have tamperproof screws. Panels are shipped ten per carton.

A solid door or panel with a side wall return air grille will result in lower sound levels.





# ERV SENSORS (Field provided)

- Humidity: Measures temperature and air humidity, signals ERV board to bring on ventilation
- $\bullet$  Carbon Dioxide (CO<sub>2</sub>): Used for determining ventilation necessity and to manage the amount of ventilation air supplied to maintain acceptable levels of CO<sub>2</sub> in the space

| BRAND     | DESCRIPTION                                                                  | PART<br>NUMBER | IMAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Honeywell | Carbon Dioxide (CO2) Sensor<br>Duct mounted no display                       | C7232          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Honeywell | Carbon Dioxide (CO2) Sensor<br>wall mounted sensor with<br>LED light display | C7233          | 1 140                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Honeywell | Carbon Dioxide (CO2) Sensor<br>wall mounted sensor with<br>digital display   | C7263          | J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| PCE       | Humidity Sensor<br>wall mounted<br>4 - 20 mA output                          | PCE-P18        | CG Sala                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Honeywell | Humidistat wall mounted<br>HumidiPRO Digital Humidity<br>Control             | H6062          | Hamouel Service of the Control of th |

## ERV EXHAUST CONTROLS (Field provided)

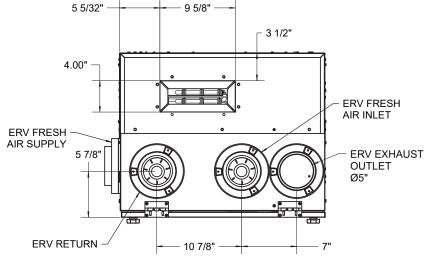
- Analog Egg Timer
- Digital Timer Switch

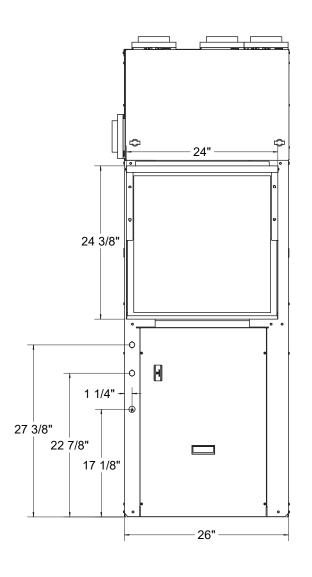
## **PHYSICAL DATA**

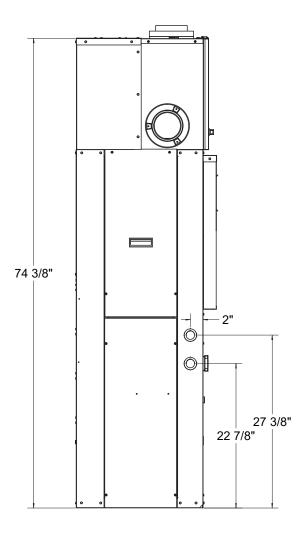
| MODEL NUMBER              | EPE122**B       | EPE182**B       | EPE242**B       | EPE302**B       |
|---------------------------|-----------------|-----------------|-----------------|-----------------|
| Compressor (Quantity)     | Rotary (1)      |                 | Scroll (1)      | •               |
| Factory Charge            | 3.8             | 5.4             | 5.2             | 5.9             |
| (R410Å) lb. [kg]          | [1.7]           | [2.5]           | [2.36]          | [2.67]          |
| INDOOR FAN MOTOR          |                 |                 |                 |                 |
| Motor (Quantity)          | 1               | 1               | 1               | 1               |
| Fan Motor Type            | ECM             | ECM             | ECM             | ECM             |
| Motor HP                  | 1/4             | 1/3             | 1/3             | 1/2             |
| OUTDOOR FAN MOTOR         |                 |                 |                 |                 |
| Motor (Quantity)          | 1               | 1               | 1               | 1               |
| Fan Motor Type            | ECM             | ECM             | ECM             | ECM             |
| Motor HP                  | 1/4             | 1/3             | 1/3             | 1/3             |
| INDOOR BLOWER SIZE        |                 |                 |                 |                 |
| Blowers (Quantity)        | 1               | 1               | 1               | 1               |
| Blower Wheel              | 6 x 4           | 10 x 4          | 10 x 4          | 10 x 4          |
| Size (D x W) in. [cm]     | [15.3 x 10.16]  | [25.4 x 10.16]  | [25.4 x 10.16]  | [25.4 x 10.16]  |
| EVAPORATOR COIL           |                 | -               |                 | ^               |
| Dimensions                | 24x16.25        | 24x22           | 24x22           | 24x22           |
| (H x W) in. [cm]          | [61 x 41.275]   | [61 x 55.88]    | [61 x 55.88]    | [61 x 55.88]    |
| Face Area ft² [m²]        | 2.71 [0.25]     | 3.53 [0.33]     | 3.53 [0.33]     | 3.53 [0.33]     |
| Rows                      | 3               | 3               | 4               | 4               |
| OUTDOOR COIL              |                 |                 | •               | ^               |
| Dimensions                | 26 x 16.625     | 26 x 22.5       | 26 x 22.5       | 26 x 22.5       |
| (H x W) in. [cm]          | [66 x 42]       | [66 x 57]       | [66 x 57]       | [66 x 57]       |
| Face Area ft² [m²]        | 3.0 [0.2787]    | 4.1 [0.3762]    | 4.1 [0.3762]    | 4.1 [0.3762]    |
| MISCELLANEOUS             |                 |                 |                 | ^               |
| Filter Size               | 24 x 24         | 24 x 24         | 24 x 24         | 24 x 24         |
| (HxW) in. [cm]            | [60.96 x 60.96] | [60.96 x 60.96] | [60.96 x 60.96] | [60.96 x 60.96] |
| Throwaway Filter Quantity | 1               | 1               | 1               | 1               |
| Operating Weight lb. [oz] | 280 [4,480]     | 290 [4,640]     | 305 [5,040]     | 315 [5,040]     |
| Packaged Weight lb. [oz]  | [300 [4800]     | [310 [4960]     | 325 [5,200]     | 335 [5,360]     |

## **PHYSICAL DATA**

Unit Dimensions 12K



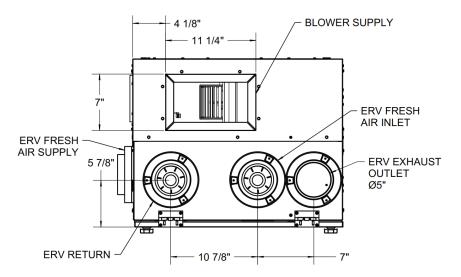


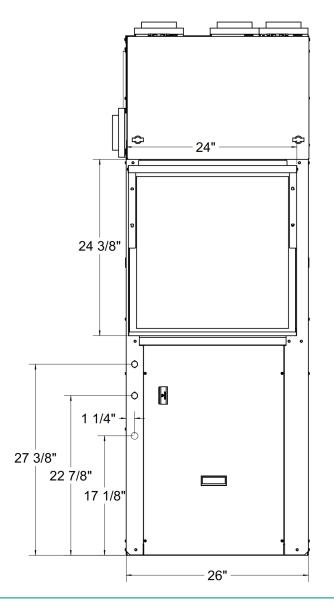


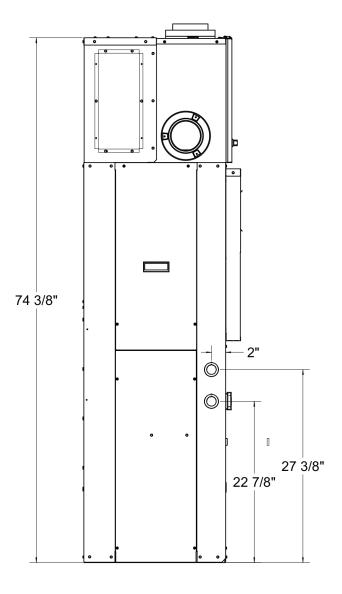
## **PHYSICAL DATA**

**Unit Dimensions** 

18-30K







#### **ELECTRICAL DATA**

| MODEL<br>NUMBER |                  | COMPRESSOR |     | OUTD<br>MOT |     |     | OOR<br>TOR | MIN. CIRCUIT<br>AMPACITY (MCA) |      |               | MAX. OVERCURRENT PROTECTION (MOP) |                       |      |                       |      |
|-----------------|------------------|------------|-----|-------------|-----|-----|------------|--------------------------------|------|---------------|-----------------------------------|-----------------------|------|-----------------------|------|
|                 | VOLTAGE<br>PH-HZ | RLA        | LRA | FLA         | НР  | FLA | НР         | CIRCUIT 1*<br>(L1-L2)          |      | CIRCU<br>(L3- | JIT 2*<br>·L4)                    | CIRCUIT 1*<br>(L1-L2) |      | CIRCUIT 2*<br>(L3-L4) |      |
|                 |                  |            |     |             |     |     |            | 240V                           | 208V | 240V          | 208V                              | 240V                  | 208V | 240V                  | 208V |
| EPE12203B       | 208/230-1-60     | 4.7        | 26  | 2.3         | 1/4 | 2.3 | 1/4        | 26                             | 24   | -             | -                                 | 30                    | 25   | -                     | -    |
| EPE12205B       | 208/230-1-60     | 4.7        | 26  | 2.3         | 1/4 | 2.3 | 1/4        | 37                             | 33   | -             | -                                 | 40                    | 35   | -                     | -    |
| EPE18205B       | 208/230-1-60     | 9          | 56  | 2.8         | 1/3 | 2.8 | 1/3        | 17                             | 17   | 26            | 23                                | 25                    | 25   | 30                    | 25   |
| EPE18207B       | 208/230-1-60     | 9          | 56  | 2.8         | 1/3 | 2.8 | 1/3        | 17                             | 17   | 36            | 32                                | 25                    | 25   | 40                    | 35   |
| EPE18210B       | 208/230-1-60     | 9          | 56  | 2.8         | 1/3 | 4.1 | 1/2        | 18                             | 18   | 52            | 45                                | 25                    | 25   | 60                    | 50   |
| EPE24205B       | 208/230-1-60     | 10.7       | 55  | 2.8         | 1/3 | 2.8 | 1/3        | 19                             | 19   | 26            | 23                                | 25                    | 25   | 30                    | 25   |
| EPE24207B       | 208/230-1-60     | 10.7       | 55  | 2.8         | 1/3 | 2.8 | 1/3        | 19                             | 19   | 36            | 32                                | 25                    | 25   | 40                    | 35   |
| EPE24210B       | 208/230-1-60     | 10.7       | 55  | 2.8         | 1/3 | 4.1 | 1/2        | 20                             | 20   | 52            | 45                                | 30                    | 30   | 60                    | 50   |
| EPE30205B       | 208/230-1-60     | 12.8       | 65  | 2.8         | 1/3 | 2.8 | 1/3        | 22                             | 22   | 26            | 23                                | 30                    | 30   | 30                    | 25   |
| EPE30207B       | 208/230-1-60     | 12.8       | 65  | 2.8         | 1/3 | 2.8 | 1/3        | 22                             | 22   | 36            | 32                                | 30                    | 30   | 40                    | 35   |
| EPE30210B       | 208/230-1-60     | 12.8       | 65  | 2.8         | 1/3 | 4.1 | 1/2        | 23                             | 23   | 52            | 45                                | 35                    | 35   | 60                    | 50   |

Size 12 models require 1 electrical circuit Size 18, 24 & 30 models require 2 electrical circuits

Size 12 models circuit 1 powers all components
Size 18, 24 & 30 models, circuit 1 powers compressor, condenser fan and evaporator motor. Circuit 2 powers both stages
of electric heat

Refer to wiring diagrams In the EPE IOM for additional details Wire size should be determined in accordance with National Electric Codes Unit are rated for 208/230V, but MOP, MCA values are calculated at 208/240V

RLA – Rated Load Amps LRA – Locked Rotor Amps FLA – Full Load Amps HP – Horsepower

<sup>\*</sup> Circuits 1 and 2 require separate sets of power wires connected to the unit, each backed by an independent circuit breaker

#### **RATED COOLING & HEATING PERFORMANCE**

|    | MODEL<br>NUMBER | Rated Airflow<br>SCFM/CFM | Cooling Capacity<br>95°F, BTU/H | EER2<br>95°F | SEER2 | Heating Capacity<br>47°F, BTU/H | Heating Capacity<br>17°F, BTU/H | HSPF2 |
|----|-----------------|---------------------------|---------------------------------|--------------|-------|---------------------------------|---------------------------------|-------|
| EF | PE12***B        | 400                       | 11,500                          | 10.0         | 11.9  | 10,500                          | 5,500                           | 6.3   |
| EF | PE18***B        | 600                       | 17,500                          | 10.0         | 11.9  | 16,500                          | 9,000                           | 6.3   |
| EF | PE24***B        | 800                       | 23,500                          | 10.0         | 11.9  | 22,500                          | 14,000                          | 6.3   |
| EF | PE30***B        | 950                       | 26,200                          | 10.0         | 11.9  | 25,500                          | 15,800                          | 6.3   |

<sup>(1)</sup> Tested at 95°F DB/75°F WB outdoor and 80°F DB/67°F WB indoor

# **EXTENDED HEATING PERFORMANCE** *Heat Pump Only*

#### OUTDOOR TEMPERATURE - DB/WB (°F)

|                 |         | 47/43           |                |                       |                 | 35/33          |                       |                 | 17/15          |                       |                 | 5/3            |                       |  |
|-----------------|---------|-----------------|----------------|-----------------------|-----------------|----------------|-----------------------|-----------------|----------------|-----------------------|-----------------|----------------|-----------------------|--|
| MODEL<br>NUMBER | Airflow | Net<br>Capacity | Power<br>Input | Outlet<br>Dry<br>Bulb |  |
|                 | SCFM    | BTU/H           | kW             | °F                    |  |
| EPE122**B       | 390     | 10,500          | .93            | 93                    | 9,500           | .95            | 90                    | 5,500           | .86            | 83                    | 4,500           | .80            | 79                    |  |
| EPE182**B       | 600     | 16,690          | 1.5            | 95                    | 12,590          | 1.5            | 90                    | 9,000           | 1.5            | 84                    | 6,450           | 1.4            | 80                    |  |
| EPE242**B       | 800     | 21,950          | 1.92           | 95                    | 16,600          | 1.9            | 90                    | 11,930          | 1.8            | 84                    | 8,570           | 1.8            | 80                    |  |
| EPE302**B       | 900     | 24,100          | 2.01           | 93                    | 20,230          | 2.0            | 90                    | 13,960          | 1.9            | 84                    | 10,000          | 1.9            | 80                    |  |

Performance data is based on nominal CFM and 70°F indoor dry bulb

<sup>(2)</sup> Tested at 47°F DB outdoor

All units tested in accordance with AHRI 210/240 2023 (SEER2)

<sup>\*</sup>May experience some loss in capacity.

<sup>\*</sup>This data is to be used as reference values only and does not constitute a rating or a guarantee that the installed system will perform as indicated

# COMBINED EXTENDED HEATING PERFORMANCE Heat Pump & Electric Heat

#### OUTDOOR TEMPERATURE - DB/WB (°F)

|                 | Heater        | 47/4            | 3              | 35/3            | 3              | 17/             | 15             | 5/3             | 3              |
|-----------------|---------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|
| MODEL<br>NUMBER | Size,<br>240V | Net<br>Capacity | Power<br>Input | Net<br>Capacity | Power<br>Input | Net<br>Capacity | Power<br>Input | Net<br>Capacity | Power<br>Input |
|                 | kW            | BTU/H           | kW             | BTU/H           | kW             | BTU/H           | kW             | BTU/H           | kW             |
| EPE12203B       | 3             | 20,730          | 3.93           | 19,730          | 3.95           | 15,730          | 3.86           | 14,730          | 3.79           |
| EPE12205B       | 5             | 27,560          | 5.93           | 26,560          | 5.95           | 22,560          | 5.86           | 21,560          | 5.79           |
| EPE18205B       | 5             | 33,750          | 6.5            | 29,650          | 6.5            | 26,060          | 6.5            | 23,510          | 6.4            |
| EPE18207B       | 7             | 40,574          | 8.5            | 36,474          | 8.5            | 32,884          | 8.5            | 30,334          | 8.4            |
| EPE18210B       | 10            | 50,810          | 11.5           | 46,710          | 11.5           | 43,120          | 11.5           | 40,570          | 11.4           |
| EPE24205B       | 5             | 39,010          | 6.92           | 33,660          | 6.9            | 28,990          | 6.8            | 25,630          | 6.8            |
| EPE24207B       | 7             | 45,834          | 8.92           | 40,484          | 8.9            | 35,814          | 8.8            | 32,454          | 8.8            |
| EPE24210B       | 10            | 56,070          | 11.92          | 50,720          | 11.9           | 46,050          | 11.8           | 42,690          | 11.8           |
| EPE30205B       | 5             | 41,160          | 7.01           | 37,290          | 7.0            | 31,020          | 6.9            | 27,060          | 6.9            |
| EPE30207B       | 7             | 47,984          | 9.01           | 44,114          | 9.0            | 37,844          | 8.9            | 33,884          | 8.9            |
| EPE30210B       | 10            | 58,220          | 12.01          | 54,350          | 12.0           | 48,080          | 11.9           | 44,120          | 11.9           |

Note - Values based on nominal airflow at .3" in H<sub>2</sub>0, 70°F Inlet Air

<sup>\*</sup>May experience some loss in capacity.

<sup>\*</sup>This data is to be used as reference values only and does not constitute a rating or a guarantee that the installed system will perform as indicated

## **EXTENDED COOLING PERFORMANCE**

|                 | Indoor |        |       |     | Outdoor 1 | Гетрега | ture °F |        |       |     |
|-----------------|--------|--------|-------|-----|-----------|---------|---------|--------|-------|-----|
| MODEL<br>NUMBER | Temp   |        | 65.0  |     |           | 75.0    |         |        | 85.0  |     |
| NO MIDEN        | DB/WB  | BTU/H  | S/T   | kW* | BTU/H     | S/T     | kW*     | BTU/H  | S/T   | kW* |
|                 | 75/57  | 12,200 | 12200 | 0.8 | 11,500    | 11500   | 0.9     | 10,900 | 10900 | 1.0 |
| EPE12           | 75/63  | 13,100 | 9600  | 0.8 | 12,400    | 9400    | 0.9     | 11,700 | 9100  | 1.0 |
| EPEIZ           | 80/67  | 14,000 | 10000 | 0.8 | 13,400    | 9600    | 0.9     | 12,500 | 9400  | 1.0 |
|                 | 85/72  | 15,500 | 9400  | 0.8 | 14,600    | 9000    | 0.9     | 12,000 | 8800  | 1.0 |
|                 | 75/57  | 18,100 | 18100 | 1.3 | 17,400    | 17400   | 1.4     | 16,600 | 16600 | 1.5 |
| EPE18           | 75/63  | 19,650 | 15100 | 1.3 | 18,650    | 14600   | 1.4     | 17,700 | 14250 | 1.5 |
| EPEIO           | 80/67  | 20,950 | 15450 | 1.3 | 19,950    | 15100   | 1.4     | 18,900 | 14750 | 1.5 |
|                 | 85/72  | 22,700 | 15300 | 1.3 | 21,600    | 14900   | 1.4     | 20,500 | 14500 | 1.5 |
|                 | 75/57  | 23,800 | 23800 | 1.7 | 22,850    | 22850   | 1.8     | 21,850 | 21850 | 2.0 |
| EPE24           | 75/63  | 25,900 | 19750 | 1.7 | 24,550    | 19100   | 1.8     | 23,200 | 18500 | 2.0 |
| EPE24           | 80/67  | 27,600 | 20250 | 1.7 | 26,200    | 19700   | 1.8     | 24,850 | 19200 | 2.0 |
|                 | 85/72  | 29,900 | 20000 | 1.7 | 28,400    | 19450   | 1.9     | 26,850 | 18850 | 2.0 |
|                 | 75/57  | 27,450 | 27450 | 1.9 | 26,250    | 26250   | 2.1     | 25,050 | 25050 | 2.3 |
| EPE30           | 75/63  | 29,300 | 22850 | 1.9 | 27,900    | 22250   | 2.1     | 26,450 | 21750 | 2.3 |
| EFESU           | 80/67  | 31,200 | 23600 | 2.0 | 29,800    | 23150   | 2.1     | 28,100 | 22300 | 2.3 |
|                 | 85/72  | 33,750 | 23200 | 2.0 | 32,050    | 22700   | 2.1     | 30,450 | 22100 | 2.3 |

|                 | Indoor | Outdoor Temperature °F |       |     |        |       |     |        |       |     |  |
|-----------------|--------|------------------------|-------|-----|--------|-------|-----|--------|-------|-----|--|
| MODEL<br>NUMBER | Temp   | 95.0                   |       |     | 105.0  |       |     |        | 115.0 |     |  |
| . TO III DEIX   | DB/WB  | BTU/H                  | S/T   | kW* | BTU/H  | S/T   | kW* | BTU/H  | S/T   | kW* |  |
|                 | 75/57  | 10,300                 | 10300 | 1.1 | 9,700  | 9700  | 1.2 | 9,000  | 9100  | 1.3 |  |
| EPE12           | 75/63  | 11,000                 | 8900  | 1.1 | 10,200 | 8500  | 1.2 | 9,400  | 8250  | 1.3 |  |
| EPEIZ           | 80/67  | 11,700                 | 9100  | 1.1 | 10,900 | 8800  | 1.2 | 10,100 | 8500  | 1.3 |  |
|                 | 85/72  | 13,000                 | 8500  | 1.1 | 12,100 | 8300  | 1.2 | 11,200 | 7950  | 1.3 |  |
|                 | 75/57  | 15,800                 | 15800 | 1.7 | 15,000 | 15000 | 1.9 | 14,050 | 14050 | 2.1 |  |
| EPE18           | 75/63  | 16,700                 | 13800 | 1.7 | 15,650 | 13350 | 1.9 | 14,650 | 12950 | 2.1 |  |
|                 | 80/67  | 17,700                 | 14200 | 1.7 | 16,750 | 13850 | 1.9 | 15,750 | 13550 | 2.1 |  |
|                 | 85/72  | 19,350                 | 14050 | 1.7 | 18,250 | 13750 | 1.9 | 17,050 | 13250 | 2.1 |  |
|                 | 75/57  | 20,750                 | 20750 | 2.2 | 19,650 | 19650 | 2.5 | 18,400 | 18400 | 2.7 |  |
| EPE24           | 75/63  | 21,900                 | 18050 | 2.2 | 20,600 | 17550 | 2.5 | 19,200 | 16900 | 2.7 |  |
| EPE24           | 80/67  | 23,250                 | 18550 | 2.2 | 22,000 | 18050 | 2.5 | 20,600 | 17650 | 2.8 |  |
|                 | 85/72  | 25,350                 | 18300 | 2.3 | 23,900 | 17900 | 2.5 | 22,200 | 17200 | 2.8 |  |
|                 | 75/57  | 23,850                 | 23850 | 2.5 | 22,550 | 22550 | 2.8 | 21,100 | 21100 | 3.1 |  |
| EPE30           | 75/63  | 24,900                 | 21100 | 2.5 | 23,400 | 20500 | 2.8 | 21,750 | 19650 | 3.1 |  |
| EFESU           | 80/67  | 26,350                 | 21700 | 2.6 | 25,000 | 21350 | 2.8 | 23,300 | 20550 | 3.1 |  |
|                 | 85/72  | 28,700                 | 21450 | 2.6 | 26,950 | 20900 | 2.8 | 25,250 | 20350 | 3.1 |  |

\* Total power input of the unit Performance data is simulated based on the rated value of each model and is calculated based on nominal CFM and .3 external static pressure This data is to be used as reference values only and does not constitute a rating or a guarantee that the installed system will perform as indicated

### **BLOWER PERFORMANCE**

|                 | MOTOR           | IWC STATIC PRESSURE |       |      |       |      |       |      |       |      |       |
|-----------------|-----------------|---------------------|-------|------|-------|------|-------|------|-------|------|-------|
| MODEL<br>NUMBER | SPEED           | 0.10                |       | 0.20 |       | 0.30 |       | 0.40 |       | 0.50 |       |
| TA              | TAP             | SCFM                | WATTS | SCFM | WATTS | SCFM | WATTS | SCFM | WATTS | SCFM | WATTS |
| EPE12203        | T1              | 284                 | 22    | 271  | 30    | 255  | 36    | 237  | 41    | 219  | 45    |
|                 | T2 <sup>c</sup> | 446                 | 73    | 433  | 81    | 417  | 87    | 399  | 41    | 381  | 95    |
| EPETZZUS        | T3              | 446                 | 73    | 433  | 81    | 417  | 87    | 399  | 41    | 381  | 95    |
|                 | T4 <sup>H</sup> | 505                 | 98    | 492  | 106   | 476  | 112   | 458  | 41    | 440  | 121   |
|                 | T1              | 284                 | 22    | 271  | 30    | 255  | 36    | 237  | 41    | 219  | 45    |
| EPE12205        | T2 <sup>c</sup> | 446                 | 73    | 433  | 81    | 417  | 87    | 399  | 41    | 381  | 95    |
| EPE 12205       | T3              | 446                 | 73    | 433  | 81    | 417  | 87    | 399  | 41    | 381  | 95    |
|                 | T4 <sup>H</sup> | 575                 | 136   | 562  | 143   | 546  | 149   | 528  | 41    | 510  | 158   |
|                 | T1              | 385                 | 34    | 343  | 40    | 311  | 46    | 282  | 53    | 254  | 60    |
|                 | T2 <sup>c</sup> | 448                 | 44    | 406  | 49    | 374  | 55    | 345  | 62    | 316  | 69    |
| EPE182205       | T3              | 617                 | 77    | 575  | 82    | 542  | 88    | 513  | 95    | 485  | 102   |
|                 | T4 <sup>H</sup> | 617                 | 77    | 575  | 82    | 542  | 88    | 513  | 95    | 485  | 102   |
|                 | T5              | 837                 | 144   | 795  | 149   | 762  | 156   | 733  | 163   | 705  | 170   |
|                 | T1              | 385                 | 34    | 343  | 40    | 311  | 46    | 282  | 53    | 254  | 60    |
|                 | T2 <sup>c</sup> | 706                 | 100   | 664  | 105   | 631  | 112   | 602  | 119   | 574  | 126   |
| EPE182207       | T3              | 788                 | 126   | 746  | 132   | 714  | 138   | 685  | 145   | 657  | 152   |
|                 | T4 <sup>H</sup> | 837                 | 144   | 795  | 149   | 762  | 156   | 733  | 163   | 705  | 170   |
|                 | T5              | 926                 | 182   | 884  | 187   | 851  | 194   | 822  | 200   | 794  | 208   |
|                 | T1              | 507                 | 54    | 478  | 62    | 447  | 70    | 416  | 77    | 387  | 83    |
|                 | T2 <sup>c</sup> | 698                 | 101   | 669  | 110   | 638  | 117   | 608  | 124   | 579  | 131   |
| EPE182210       | T3              | 787                 | 129   | 758  | 138   | 727  | 145   | 696  | 152   | 667  | 159   |
|                 | T4 <sup>н</sup> | 1315                | 444   | 1286 | 452   | 1255 | 460   | 1224 | 466   | 1195 | 473   |
|                 | T5              | 1397                | 529   | 1367 | 538   | 1336 | 545   | 1306 | 552   | 1277 | 559   |

<sup>&</sup>lt;sup>C</sup> Factory-set default tap cooling and heat pump <sup>H</sup> Factory-set default tap electric heat

Tap T1 is fan only operation (all models)
Tap T2 & T3 are cooling and heat pump operation
Tap T4 & T5 are electric heat operation

Blower performance data based on a dry coil at 70°F DB EAT with a standard 1" clean air filter

SCFM - standard cubic feet per minute

### **BLOWER PERFORMANCE**

#### **Continued**

|                 | MOTOR           |      |       |      | IW    | C STATIC | PRESSURI |      |       |      |       |
|-----------------|-----------------|------|-------|------|-------|----------|----------|------|-------|------|-------|
| MODEL<br>NUMBER | SPEED           | 0.10 |       | 0.   | 20    | 0        | .30      | 0.40 |       | 0.50 |       |
| INOINIBER       | TAP             | SCFM | WATTS | SCFM | WATTS | SCFM     | WATTS    | SCFM | WATTS | SCFM | WATTS |
| EPE24205        | T1              | 385  | 34    | 343  | 40    | 311      | 46       | 282  | 53    | 254  | 60    |
|                 | T2 <sup>c</sup> | 926  | 182   | 884  | 187   | 851      | 194      | 822  | 200   | 794  | 208   |
|                 | T3              | 982  | 210   | 940  | 215   | 907      | 222      | 879  | 229   | 850  | 236   |
|                 | T4 <sup>H</sup> | 882  | 162   | 840  | 168   | 808      | 174      | 779  | 181   | 751  | 188   |
|                 | T5              | 1005 | 223   | 963  | 228   | 930      | 234      | 902  | 241   | 873  | 248   |
|                 | T1              | 385  | 34    | 343  | 40    | 311      | 46       | 282  | 53    | 254  | 60    |
|                 | T2 <sup>c</sup> | 882  | 162   | 840  | 168   | 808      | 174      | 779  | 181   | 751  | 188   |
| EPE24207        | T3              | 982  | 210   | 940  | 215   | 907      | 222      | 879  | 229   | 850  | 236   |
|                 | T4 <sup>H</sup> | 882  | 162   | 840  | 168   | 808      | 174      | 779  | 181   | 751  | 188   |
|                 | T5              | 1005 | 223   | 963  | 228   | 930      | 234      | 902  | 241   | 873  | 248   |
|                 | T1              | 507  | 54    | 478  | 62    | 447      | 70       | 416  | 77    | 387  | 83    |
|                 | T2 <sup>c</sup> | 868  | 160   | 838  | 169   | 807      | 176      | 777  | 183   | 748  | 190   |
| EPE24210        | T3              | 955  | 201   | 926  | 209   | 895      | 216      | 864  | 223   | 835  | 230   |
|                 | T4 <sup>H</sup> | 1315 | 444   | 1286 | 452   | 1255     | 460      | 1224 | 466   | 1195 | 473   |
|                 | T5              | 1397 | 529   | 1367 | 538   | 1336     | 545      | 1306 | 552   | 1277 | 559   |
|                 | T1              | 510  | 54    | 468  | 60    | 435      | 66       | 407  | 73    | 378  | 80    |
|                 | T2 <sup>c</sup> | 1041 | 244   | 999  | 249   | 967      | 256      | 938  | 263   | 910  | 270   |
| EPE30205        | T3              | 1143 | 311   | 1100 | 316   | 1068     | 323      | 1039 | 330   | 1011 | 337   |
|                 | Т4 <sup>н</sup> | 1041 | 244   | 999  | 249   | 967      | 256      | 938  | 263   | 910  | 270   |
|                 | T5              | 1143 | 311   | 1100 | 316   | 1068     | 323      | 1039 | 330   | 1011 | 337   |
|                 | T1              | 510  | 54    | 468  | 60    | 435      | 66       | 407  | 73    | 378  | 80    |
|                 | T2 <sup>c</sup> | 1041 | 244   | 999  | 249   | 967      | 256      | 938  | 263   | 910  | 270   |
| EPE30207        | T3              | 1143 | 311   | 1100 | 316   | 1068     | 323      | 1039 | 330   | 1011 | 337   |
|                 | Т4 <sup>н</sup> | 1041 | 244   | 999  | 249   | 967      | 256      | 938  | 263   | 910  | 270   |
|                 | T5              | 1143 | 311   | 1100 | 316   | 1068     | 323      | 1039 | 330   | 1011 | 337   |
|                 | T1              | 507  | 54    | 478  | 62    | 447      | 70       | 416  | 77    | 387  | 83    |
|                 | T2 <sup>c</sup> | 979  | 213   | 950  | 221   | 919      | 229      | 888  | 235   | 859  | 242   |
| EPE30210        | T3              | 1104 | 286   | 1075 | 294   | 1044     | 302      | 1013 | 308   | 984  | 315   |
|                 | Т4 <sup>н</sup> | 1315 | 444   | 1286 | 452   | 1255     | 460      | 1224 | 466   | 1195 | 473   |
|                 | T5              | 1397 | 529   | 1367 | 538   | 1336     | 545      | 1306 | 552   | 1277 | 559   |

 $<sup>^{\</sup>rm C}$  Factory-set default tap cooling and heat pump  $^{\rm H}$  Factory-set default tap electric heat

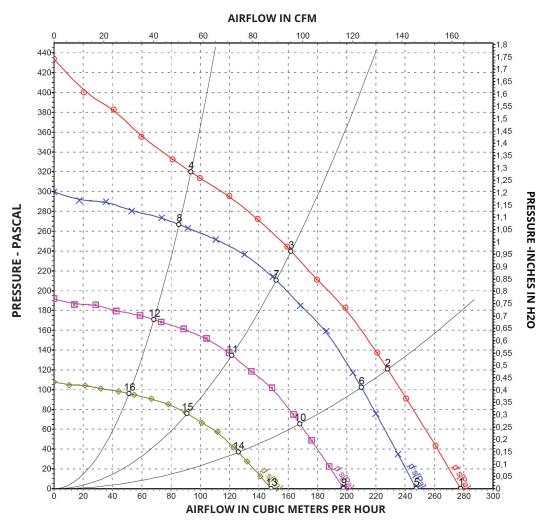
Tap T1 is fan only operation (all models)
Tap T2 & T3 are cooling and heat pump operation
Tap T4 & T5 are electric heat operation

Blower performance data based on a dry coil at 70°F DB EAT with a standard 1" clean air filter

SCFM - standard cubic feet per minute

# **ERV FAN PERFORMANCE**

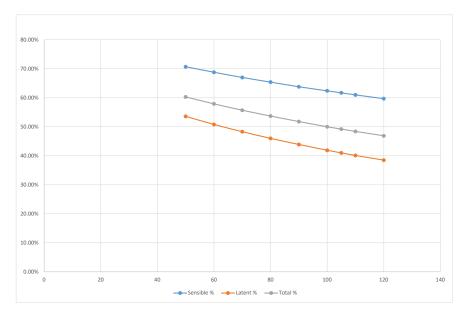
## ERV FAN CURVE AIR FLOW AT 60HZ



|    | Voltage | Frequency<br>Hz | Speed<br>(Rev/min) | Power<br>(Watts) | Current<br>(Amps) | Airflow<br>(m^3/h) | Pressure<br>(Pa) | Airflow<br>(CFM) | Pressure<br>(IN H20) |
|----|---------|-----------------|--------------------|------------------|-------------------|--------------------|------------------|------------------|----------------------|
| 1  | 230     | 60              | 3930               | 24               | 0.23              | 280                | 0                | 165              | 0.00                 |
| 2  | 230     | 60              | 3800               | 26               | 0.26              | 230                | 120              | 136              | 0.48                 |
| 3  | 230     | 60              | 3770               | 27               | 0.27              | 160                | 240              | 95               | 0.96                 |
| 4  | 230     | 60              | 3835               | 26               | 0.25              | 95                 | 320              | 56               | 1.28                 |
| 5  | 230     | 60              | 3500               | 17               | 0.16              | 250                | 0                | 148              | 0.00                 |
| 6  | 230     | 60              | 3500               | 20               | 0.2               | 210                | 102              | 124              | 0.41                 |
| 7  | 230     | 60              | 3500               | 22               | 0.22              | 150                | 211              | 89               | 0.85                 |
| 8  | 230     | 60              | 3500               | 19               | 0.19              | 85                 | 267              | 51               | 1.07                 |
| 9  | 230     | 60              | 2800               | 8.5              | 0.08              | 200                | 0                | 118              | 0.00                 |
| 10 | 230     | 60              | 2800               | 10               | 0.1               | 170                | 66               | 101              | 0.26                 |
| 11 | 230     | 60              | 2800               | 11               | 0.11              | 120                | 135              | 71               | 0.54                 |
| 12 | 230     | 60              | 2800               | 9.9              | 0.1               | 70                 | 171              | 42               | 0.69                 |
| 13 | 230     | 60              | 2100               | 3.6              | 0.04              | 150                | 0                | 89               | 0.00                 |
| 14 | 230     | 60              | 2100               | 4.4              | 0.04              | 125                | 37               | 74               | 0.15                 |
| 15 | 230     | 60              | 2100               | 4.8              | 0.05              | 90                 | 76               | 53               | 0.31                 |
| 16 | 230     | 60              | 2100               | 4.2              | 0.04              | 50                 | 96               | 30               | 0.39                 |

# **ERV PERFORMANCE**

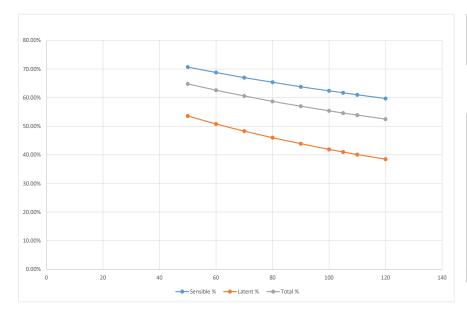
#### **SUMMER**



| Outo | door  | Return |        |  |
|------|-------|--------|--------|--|
| db   | db rh |        | rh     |  |
| 95   | 46.5% | 75     | 51.17% |  |

| CFM | Sensible % | Latent % | Total % |
|-----|------------|----------|---------|
| 50  | 70.70%     | 53.60%   | 60.30%  |
| 60  | 68.80%     | 50.80%   | 57.90%  |
| 70  | 67.00%     | 48.30%   | 55.70%  |
| 80  | 65.40%     | 46.00%   | 53.70%  |
| 90  | 63.80%     | 43.90%   | 51.80%  |
| 100 | 62.40%     | 41.90%   | 50.00%  |
| 105 | 61.70%     | 41.00%   | 49.20%  |
| 110 | 61.00%     | 40.10%   | 48.40%  |
| 120 | 59.70%     | 38.50%   | 46.90%  |

#### **WINTER**



| Out | door      | Return |        |  |
|-----|-----------|--------|--------|--|
| db  | rh        | db     | rh     |  |
| 35  | 35 81.69% |        | 47.88% |  |

| CFM | Sensible % | Latent % | Total % |
|-----|------------|----------|---------|
| 50  | 70.70%     | 53.60%   | 64.80%  |
| 60  | 68.80%     | 50.80%   | 62.60%  |
| 70  | 67.00%     | 48.30%   | 60.60%  |
| 80  | 65.40%     | 46.00%   | 58.70%  |
| 90  | 63.80%     | 43.90%   | 57.00%  |
| 100 | 62.40%     | 41.90%   | 55.40%  |
| 105 | 61.70%     | 41.00%   | 54.60%  |
| 110 | 61.00%     | 40.10%   | 53.90%  |
| 120 | 59.70%     | 38.50%   | 52.50%  |



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