



AIR HANDLERS

CBX25UH

MERIT® Series

R-410A - Upflow / Horizontal

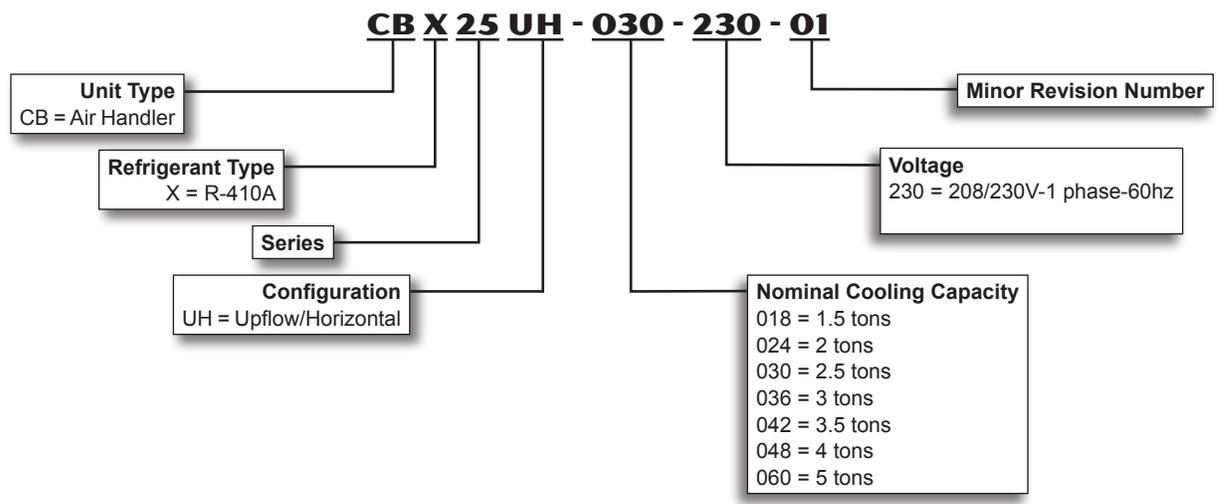
PRODUCT SPECIFICATIONS

Bulletin No. 210610
April 2014
Supersedes January 2014



Nominal Capacity - 1.5 to 5 Tons
Optional Electric Heat - 2.5 to 20 kW

MODEL NUMBER IDENTIFICATION



FEATURES

CONTENTS

| | |
|---|----|
| Accessory Dimensions | 14 |
| Blower Data | 6 |
| Dimensions | 13 |
| Electric Heat Data | 8 |
| Features..... | 2 |
| Installation Clearances With Electric Heat..... | 4 |
| Model Number Identification | 1 |
| Optional Accessories | 5 |
| Specifications..... | 5 |

WARRANTY

All covered components - Limited five years in residential applications, one year in non-residential applications.

Refer to Lennox Limited Warranty Certificate included with each unit for additional details.

APPLICATIONS

1.5 to 5 ton nominal sizes.

Upflow or horizontal applications. Downflow applications with optional conversion kit.

CBX25UH models are applicable to R-410A expansion valve systems in cooling applications and check and expansion valve systems in heat pump applications.

See bulletins in section Air Conditioners for cooling capacities.

See bulletins in section Heat Pump Outdoor Units for cooling and heating capacities.

Optional field installed electric heaters available in several sizes for additive heating capacity.

APPROVALS

Tested with matching air conditioners and heat pump units in the Lennox Research Laboratory environmental test room in accordance with AHRI Standard 210/240.

Optional electric heaters are rated in accordance with US Department of Energy (DOE) test procedures and Federal Trade Commission (FTC) labeling regulations.

Air handlers and components within are bonded for grounding to meet safety standards for servicing required by ETL, NEC and CEC.

Units are ETL certified for the U.S. and Canada.

ISO 9001 Registered Manufacturing Quality System.

REFRIGERANT SYSTEM

1 Refrigerant Line Connections

Suction (vapor) and liquid lines have sweat connections that extended outside of the cabinet for ease of connection.

See dimension drawing for locations.



Check and Expansion Valve Furnished

CBX25UH models have non-chlorine, ozone friendly, R-410A valve.

Wide range valve.

Chatleff style fitting.

Factory installed on all models internal to cabinet.



2 Copper Tube/Enhanced Fin Evaporator Coil

Assembled in "A" configuration.

Provides extra large surface and contact area, excellent heat transfer and low air resistance for maximum efficiency.

Precise circuiting for uniform refrigerant distribution.

Precisely spaced ripple-edged aluminum fins fitted to durable seamless copper tubes.

Fins are strengthened to resist bending and are equipped with collars that grip tubing for maximum contact area.

Lanced fins provide maximum exposure of fin surface to air stream.

Long life copper tubing is easy to service.

Rifled tubing provides superior heat transfer.

Flared shoulder tubing joints and silver soldering provide tight, leakproof joints.

Coil thoroughly factory tested under high pressure to ensure leakproof construction.

FEATURES

FILTER

- Disposable 1 inch filter is furnished.
- Filter rack furnished in cabinet for easy filter installation.
- See Specifications tables for filter sizes.

3 BLOWER

- Multi-speed PSC motor.
- Choice of blower speeds. See blower performance tables.
- Speed changes easily accomplished by a simple wiring change.
- Blower is easily removed from unit for servicing.

Time Delay Blower Relay

Relay allows 30 second blower “on” delay before continuous fan or cooling operation and 45 second blower “off” delay after continuous fan or cooling operation.

CONTROLS

4 Transformer and Blower Cooling Relay

- 24 volt transformer and blower cooling relay furnished as standard.
- Factory installed in the unit control box.

Optional Accessories

Thermostat

See Thermostat bulletins in Controls section and Lennox Price Book for a complete list of thermostats.

5 CABINET

- Constructed of heavy gauge galvanized steel.
- Pre-painted cabinet finish.
- Completely insulated with foil faced fiberglass insulation.
- Removable panels provide complete service access.
- Filter access door for easy filter replacement.
- Thumbscrews hold filter door in place.
- Electrical inlets provided in sides and top of cabinet.
- See dimension drawing for locations.
- Knock-outs in cabinet for drain connections for upflow (left and right) and horizontal applications. See dimension drawing.

Low Leakage Cabinet

All models have less than 2% air leakage and meet ANSI/ASHRAE Standard 193-2010 “*Method of Test for Determining the Air Tightness of HVAC Equipment.*”

Upflow/Horizontal Capability (Optional Downflow)

- Shipped for upflow and horizontal left-hand discharge.
- May be field converted to horizontal right-hand air discharge by repositioning horizontal drain pan.
- Optional Downflow Conversion Kit available for field conversion.

6 Anti-Microbial Dual Position Drain Pans

Anti-Microbial additive resists growth of mold and mildew on drain pan which improves indoor air quality and reduces drain line blockage.



Factory installed drain pans designed for upflow or horizontal applications.

Deep, corrosion resistant high temperature engineered polymer drain pans have dual pipe drains.

See dimension drawing.

Optional Accessories

Downflow Conversion Kit

Required for field conversion to downflow position. Kit consists of insulated downflow drain pan, insulated drain pan drip shields, coil drip shields, seal plates and support brackets for repositioning coil and drain pan. See Specifications table.

Horizontal Support Frame Kit

Provides support of unit in horizontal applications. Consists of (2) 1 x 1-1/2 x 32-5/8 in. and (2) 1 x 3 x 53-7/8 in. painted heavy gauge cold rolled steel support channels with assembly and suspending holes. Bolts and nuts furnished for field assembly. Suspending rods must be field provided.

Side Return Unit Stand (Upflow Only)

Raises unit 16 in. above floor for side return air duct connection.

Eliminates need for wooden platform construction.

All aluminum construction.

Two adjustable frames fit all sizes.

See Dimension Drawing.

Wall Hanging Bracket Kit (Upflow Only)

Allows unit to be hung on wall at any height.

Consists of heavy gauge steel support brackets (one for air handler unit, one for wall mount).

Screws furnished for fastening one bracket to unit.

Bolts for fastening one bracket to wall are field provided.

FEATURES

ELECTRICAL

Optional Accessories

7 Electric Heat

Field install internal to unit cabinet.

Available in several kW sizes.

See Electric Heat tables.

Helix wound nichrome heating elements exposed directly in air stream resulting in instant heat transfer, low element temperatures and long service life.

Each element equipped with accurately located limit control with fixed temperature off setting and automatic reset.

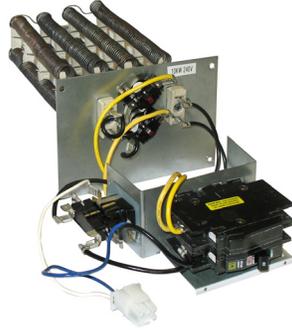
Thermal sequencer relay brings elements on and off line, in sequence and equal increments, with time delay between each.

Initiates and terminates blower operation.

Heating control relay(s) furnished as standard.

Factory assembled with controls installed and wired.

Electric heat control wiring plugs into mating connector on air handler unit.



Circuit Breaker Models

ECB25-5CB, ECB25-7.5CB, ECB25-10CB, ECB25-12.5, ECB25-15CB, ECB25-20CB heaters are equipped with circuit breakers for overload and short circuit protection.

Factory wired and mounted on electric heat unit.

Current sensitive and temperature actuated.

Manual reset.

Flexible plastic circuit breaker cover protects circuit breaker in areas with high humidity or unconditioned areas to prevent nuisance tripping.

Circuit breakers qualify as disconnect means at unit in many areas, eliminate the need for field provided disconnect.

Consult local electrical code in your area.

Circuit Breaker Cover Kit

Flexible plastic cover protects circuit breaker.

Recommended in areas with high humidity or unconditioned areas to prevent nuisance tripping.

Single-Point Power Source Control Box

Control Box may be used with optional electric heat when single power supply is connected to multi-circuit electric heat.

Field installs external to the unit cabinet on either side or top.

Constructed of heavy gauge steel, baked enamel finish, prepunched mounting holes, electrical inlet knockouts, and terminal strip.

Removeable cover provides easy access.

Dimensions (H x W x D) - 7 x 7 x 4 in.

INSTALLATION CLEARANCES WITH ELECTRIC HEAT

| | |
|---------------------------------------|---------------------------|
| Cabinet | 0 inch (0 mm) |
| To Plenum | 0 inch (0 mm) |
| To Outlet Duct within 3 feet (914 mm) | 0 inch (0 mm) |
| Floor | 0 inch (0 mm) See Note #1 |
| Service / Maintenance | See Note #2 |

¹ Units installed on combustible floors in the downflow position with electric heat do not require a downflow combustible flooring base.

² Front service access - 24 inches (610 mm) minimum.

NOTE - If cabinet depth is more than 24 inches (610 mm), allow a minimum of the cabinet depth plus 2 inches (51 mm).

REPLACEMENT CIRCUIT BREAKERS

| Voltage | Description | Catalog No. |
|--------------------|----------------|--------------|
| 208/240V - 1 Phase | 25 amp, 2 pole | 41K13 |
| | 30 amp, 2 pole | 17K70 |
| | 35 amp, 2 pole | 72K07 |
| | 40 amp, 2 pole | 49K14 |
| | 45 amp, 2 pole | 17K71 |
| | 50 amp, 2 pole | 41K12 |
| | 60 amp, 2 pole | 17K72 |

SPECIFICATIONS

| General Data | | Model Number | CBX25UH-018 | CBX25UH-024 | CBX25UH-030 | CBX25UH-036 |
|---------------------------------|---------------------------------------|-----------------|-------------|-------------|-------------|-------------|
| | | Nominal tonnage | 1.5 | 2 | 2.5 | 3 |
| Connections | Suction/Vapor line (o.d.) - in. sweat | | 3/4 | 3/4 | 3/4 | 7/8 |
| | Liquid line (o.d.) - in. sweat | | 3/8 | 3/8 | 3/8 | 3/8 |
| | Condensate - in. fpt | | (2) 3/4 | (2) 3/4 | (2) 3/4 | (2) 3/4 |
| Indoor Coil | Net face area - ft. ² | | 3.11 | 3.56 | 4.00 | 4.89 |
| | Tube outside diameter - in. | | 3/8 | 3/8 | 3/8 | 3/8 |
| | Number of rows | | 3 | 3 | 3 | 3 |
| | Fins per inch | | 14 | 14 | 14 | 14 |
| Blower | Wheel nominal diameter x width - in. | | 9 x 6 | 9 x 6 | 10 x 8 | 9 x 10 |
| | Blower motor output - hp | | 1/5 | 1/3 | 1/3 | 1/2 |
| ¹ Filters | Size of filter - in. | | 12 x 20 x 1 | 15 x 20 x 1 | 15 x 20 x 1 | 18 x 20 x 1 |
| Shipping Data -1 package - lbs. | | | 105 | 123 | 126 | 161 |

ELECTRICAL DATA

| | | | | | |
|---|--|----------|----------|----------|----------|
| Voltage - 1 phase (60 hz) | | 208/240V | 208/240V | 208/240V | 208/240V |
| ² Maximum overcurrent protection (unit only) | | 15 | 15 | 15 | 15 |
| ³ Minimum circuit ampacity (unit only) | | 1.4 | 2.0 | 2.4 | 2.9 |
| Blower Motor Full Load Amps | | 1.1 | 1.6 | 1.9 | 2.3 |

SPECIFICATIONS

| General Data | | Model Number | CBX25UH-042 | CBX25UH-048 | CBX25UH-060 |
|---------------------------------|---------------------------------------|-----------------|-------------|-------------|-------------|
| | | Nominal tonnage | 3.5 | 4 | 5 |
| Connections | Suction/Vapor line (o.d.) - in. sweat | | 7/8 | 7/8 | 7/8 |
| | Liquid line (o.d.) - in. sweat | | 3/8 | 3/8 | 3/8 |
| | Condensate - in. fpt | | (2) 3/4 | (2) 3/4 | (2) 3/4 |
| Indoor Coil | Net face area - ft. ² | | 5.83 | 7.00 | 7.00 |
| | Tube outside diameter - in. | | 3/8 | 3/8 | 3/8 |
| | Number of rows | | 3 | 3 | 3 |
| | Fins per inch | | 14 | 14 | 14 |
| Blower | Wheel nominal diameter x width - in. | | 12 x 8 | 11 x 9 | 12 x 9 |
| | Blower motor output - hp | | 1/3 | 1/2 | 1/2 |
| ¹ Filters | Size of filter - in. | | 18 x 24 x 1 | 18 x 24 x 1 | 18 x 24 x 1 |
| Shipping Data -1 package - lbs. | | | 163 | 186 | 186 |

ELECTRICAL DATA

| | | | | |
|---|--|----------|----------|----------|
| Voltage - 1 phase (60 hz) | | 208/240V | 208/240V | 208/240V |
| ² Maximum overcurrent protection (unit only) | | 15 | 15 | 15 |
| ³ Minimum circuit ampacity (unit only) | | 2.4 | 4.9 | 4.9 |
| Blower Motor Full Load Amps | | 1.9 | 3.9 | 3.9 |

¹ Disposable filter.

² HACR type circuit breaker or fuse.

³ Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

OPTIONAL ACCESSORIES - ORDER SEPARATELY

| Model | -018 | -024 -030 | -036 | -042 -048 -060 |
|---|-------|--------------|-------|----------------------|
| Downflow Conversion Kit | 96W37 | 96W38 | 97W95 | 97W96 |
| Horizontal Support Frame Kit | 56J18 | 56J18 | 56J18 | 56J18 |
| Side Return Unit Stand (Upflow Only) | 45K31 | 45K32 | 45K32 | 45K32 |
| Single-Point Power Source Control Box (for Electric Heat) | 21H39 | 21H39 | 21H39 | 21H39 |
| Wall Hanging Bracket Kit (Upflow Only) | 45K30 | 45K30 | 45K30 | 45K30 |

BLOWER DATA - UPFLOW AND HORIZONTAL

CBX25UH-018 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|---|--------|-----|
| | High | Medium | Low |
| 0.10 | 905 | 670 | 510 |
| 0.20 | 865 | 650 | 495 |
| 0.30 | 820 | 630 | 475 |
| 0.40 | 770 | 595 | 415 |
| 0.50 | 700 | 500 | 325 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-042 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|---|--------|------|
| | High | Medium | Low |
| 0.10 | 1820 | 1490 | 1325 |
| 0.20 | 1770 | 1465 | 1315 |
| 0.30 | 1690 | 1440 | 1300 |
| 0.40 | 1600 | 1395 | 1275 |
| 0.50 | 1500 | 1315 | 1225 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-024 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|---|--------|-----|
| | High | Medium | Low |
| 0.10 | 1130 | 885 | 630 |
| 0.20 | 1100 | 875 | 625 |
| 0.30 | 1070 | 850 | 615 |
| 0.40 | 1010 | 820 | 610 |
| 0.50 | 950 | 780 | 580 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-048 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|---|--------|------|
| | High | Medium | Low |
| 0.10 | 2070 | 1995 | 1775 |
| 0.20 | 1970 | 1895 | 1710 |
| 0.30 | 1850 | 1800 | 1645 |
| 0.40 | 1720 | 1685 | 1565 |
| 0.50 | 1595 | 1560 | 1470 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-030 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|---|--------|-----|
| | High | Medium | Low |
| 0.10 | 1240 | 1075 | 900 |
| 0.20 | 1210 | 1060 | 865 |
| 0.30 | 1170 | 1030 | 830 |
| 0.40 | 1135 | 985 | 785 |
| 0.50 | 1085 | 940 | 740 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-060 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|---|--------|------|
| | High | Medium | Low |
| 0.10 | 2140 | 1965 | 1675 |
| 0.20 | 2085 | 1925 | 1630 |
| 0.30 | 2000 | 1875 | 1580 |
| 0.40 | 1895 | 1800 | 1520 |
| 0.50 | 1795 | 1695 | 1450 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-036 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|---|--------|------|
| | High | Medium | Low |
| 0.10 | 1660 | 1500 | 1160 |
| 0.20 | 1575 | 1445 | 1140 |
| 0.30 | 1495 | 1385 | 1115 |
| 0.40 | 1405 | 1300 | 1085 |
| 0.50 | 1390 | 1200 | 990 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

BLOWER DATA - DOWNFLOW

CBX25UH-018 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|--|--------|-----|
| | High | Medium | Low |
| 0.10 | 670 | 600 | 495 |
| 0.20 | 630 | 565 | 460 |
| 0.30 | 590 | 500 | 420 |
| 0.40 | 515 | 465 | 380 |
| 0.50 | 470 | 410 | 330 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-024 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|--|--------|-----|
| | High | Medium | Low |
| 0.10 | 945 | 840 | 630 |
| 0.20 | 890 | 800 | 615 |
| 0.30 | 850 | 760 | 595 |
| 0.40 | 795 | 705 | 560 |
| 0.50 | 730 | 605 | 465 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-030 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|--|--------|-----|
| | High | Medium | Low |
| 0.10 | 1105 | 950 | 820 |
| 0.20 | 1065 | 915 | 780 |
| 0.30 | 1010 | 870 | 745 |
| 0.40 | 960 | 825 | 695 |
| 0.50 | 900 | 660 | 615 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-036 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|--|--------|------|
| | High | Medium | Low |
| 0.10 | 1195 | 1160 | 1065 |
| 0.20 | 1090 | 1065 | 985 |
| 0.30 | 1020 | 990 | 935 |
| 0.40 | 960 | 925 | 865 |
| 0.50 | 885 | 850 | 805 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-042 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|--|--------|------|
| | High | Medium | Low |
| 0.10 | 1460 | 1375 | 1310 |
| 0.20 | 1375 | 1295 | 1245 |
| 0.30 | 1315 | 1235 | 1180 |
| 0.40 | 1225 | 1150 | 1120 |
| 0.50 | 1145 | 1055 | 1025 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-048 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|--|--------|------|
| | High | Medium | Low |
| 0.10 | 1725 | 1665 | 1605 |
| 0.20 | 1640 | 1585 | 1520 |
| 0.30 | 1550 | 1495 | 1435 |
| 0.40 | 1455 | 1400 | 1350 |
| 0.50 | 1350 | 1280 | 1105 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

CBX25UH-060 BLOWER PERFORMANCE

| External Static Pressure in. w.g. | Air Volume at Specific Blower Taps (cfm) | | |
|--------------------------------------|--|--------|------|
| | High | Medium | Low |
| 0.10 | 1785 | 1730 | 1630 |
| 0.20 | 1700 | 1650 | 1555 |
| 0.30 | 1605 | 1570 | 1490 |
| 0.40 | 1505 | 1455 | 1390 |
| 0.50 | 1390 | 1370 | 1280 |

NOTE - All air data measured external to unit with dry coil and 1 inch non-pleated air filter in place.
Electric heaters have no appreciable air resistance.

ELECTRIC HEAT DATA

| SINGLE PHASE | | CBX25UH-018 | | | | | |
|---|-------|-------------|-------------------|-----------------------------|---------------------------------------|---|--|
| Description | Input | | | Blower Motor Full Load Amps | ² Minimum Circuit Ampacity | ³ Maximum Overcurrent Protection | |
| | Volt | kW | ¹ Btuh | | | | |
| 2.5 kW ECB25-2.5 (89W42) Wire Leads | 208 | 1.9 | 6,400 | 1.1 | 13 | 15 | |
| | 220 | 2.1 | 7,200 | 1.1 | 13 | 15 | |
| | 230 | 2.3 | 7,800 | 1.1 | 14 | 15 | |
| | 240 | 2.5 | 8,500 | 1.1 | 14 | 15 | |
| 5 kW ECB25-5 (89W43) Terminal Block ECB25-5CB (89W44) 30A Circuit Breaker | 208 | 3.8 | 12,800 | 1.1 | 24 | ⁴ 25 | |
| | 220 | 4.2 | 14,300 | 1.1 | 25 | ⁴ 25 | |
| | 230 | 4.6 | 15,700 | 1.1 | 26 | 30 | |
| | 240 | 5.0 | 17,100 | 1.1 | 27 | 30 | |
| 7.5 kW ECB25-7.5 (89W45) Terminal Block ECB25-7.5CB (89W46) 45A Circuit Breaker | 208 | 5.6 | 19,200 | 1.1 | 35 | ⁴ 40 | |
| | 220 | 6.3 | 21,500 | 1.1 | 37 | ⁴ 40 | |
| | 230 | 6.9 | 23,500 | 1.1 | 39 | ⁴ 40 | |
| | 240 | 7.5 | 25,600 | 1.1 | 40 | 45 | |
| 10 kW ECB25-10 (10Z43) Terminal Block ECB25-10CB (10T37) 60A Circuit Breaker | 208 | 6.8 | 23,000 | 1.1 | 42 | ⁴ 45 | |
| | 220 | 7.6 | 25,800 | 1.1 | 44 | ⁴ 45 | |
| | 230 | 8.3 | 28,200 | 1.1 | 46 | ⁴ 50 | |
| | 240 | 9.0 | 30,700 | 1.1 | 48 | ⁴ 50 | |
| SINGLE PHASE | | CBX25UH-024 | | | | | |
| Description | Input | | | Blower Motor Full Load Amps | ² Minimum Circuit Ampacity | ³ Maximum Overcurrent Protection | |
| | Volt | kW | ¹ Btuh | | | | |
| 2.5 kW ECB25-2.5 (89W42) Wire Leads | 208 | 1.9 | 6,400 | 1.6 | 13 | 15 | |
| | 220 | 2.1 | 7,200 | 1.6 | 14 | 15 | |
| | 230 | 2.3 | 7,800 | 1.6 | 15 | 15 | |
| | 240 | 2.5 | 8,500 | 1.6 | 15 | 15 | |
| 5 kW ECB25-5 (89W43) Terminal Block ECB25-5CB (89W44) 30A Circuit Breaker | 208 | 3.8 | 12,800 | 1.6 | 25 | ⁴ 25 | |
| | 220 | 4.2 | 14,300 | 1.6 | 26 | 30 | |
| | 230 | 4.6 | 15,700 | 1.6 | 27 | 30 | |
| | 240 | 5.0 | 17,100 | 1.6 | 28 | 30 | |
| 7.5 kW ECB25-7.5 (89W45) Terminal Block ECB25-7.5CB (89W46) 45A Circuit Breaker | 208 | 5.6 | 19,200 | 1.6 | 36 | ⁴ 40 | |
| | 220 | 6.3 | 21,500 | 1.6 | 38 | ⁴ 40 | |
| | 230 | 6.9 | 23,500 | 1.6 | 40 | ⁴ 40 | |
| | 240 | 7.5 | 25,600 | 1.6 | 41 | 45 | |
| 10 kW ECB25-10 (10Z43) Terminal Block ECB25-10CB (10T37) 60A Circuit Breaker | 208 | 6.8 | 23,000 | 1.6 | 43 | ⁴ 45 | |
| | 220 | 7.6 | 25,800 | 1.6 | 45 | ⁴ 45 | |
| | 230 | 8.3 | 28,200 | 1.6 | 47 | ⁴ 50 | |
| | 240 | 9.0 | 30,700 | 1.6 | 49 | ⁴ 50 | |

NOTE - Circuit 1 Minimum Circuit Ampacity includes the Blower Motor Full Load Amps.

¹ Electric heater capacity only - does not include additional blower motor heat capacity.

² Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

³ HACR type breaker or fuse.

⁴ **Bold indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size shown. See table on page 4.**

ELECTRIC HEAT DATA

| SINGLE PHASE | | CBX25UH-030 | | | | | | | | | |
|---|-------|-------------|-------------------|-----------------------------|---------------------------------------|-------|---|-----------------|---------------------------------------|---|--|
| Description | Input | | | Blower Motor Full Load Amps | ² Minimum Circuit Ampacity | | ³ Maximum Overcurrent Protection | | Single Point Power Source | | |
| | Volt | kW | ¹ Btuh | | Ckt 1 | Ckt 2 | Ckt 1 | Ckt 2 | ² Minimum Circuit Ampacity | ³ Maximum Overcurrent Protection | |
| 2.5 kW ECB25-2.5 (89W42) Wire Leads | 208 | 1.9 | 6,400 | 1.9 | 14 | --- | 15 | --- | --- | --- | |
| | 220 | 2.1 | 7,200 | 1.9 | 14 | --- | 15 | --- | --- | --- | |
| | 230 | 2.3 | 7,800 | 1.9 | 15 | --- | 15 | --- | --- | --- | |
| | 240 | 2.5 | 8,500 | 1.9 | 15 | --- | 15 | --- | --- | --- | |
| 5 kW ECB25-5 (89W43) Terminal Block ECB25-5CB (89W44) 30A Circuit Breaker | 208 | 3.8 | 12,800 | 1.9 | 25 | --- | ⁴ 25 | --- | --- | --- | |
| | 220 | 4.2 | 14,300 | 1.9 | 26 | --- | 30 | --- | --- | --- | |
| | 230 | 4.6 | 15,700 | 1.9 | 27 | --- | 30 | --- | --- | --- | |
| | 240 | 5.0 | 17,100 | 1.9 | 28 | --- | 30 | --- | --- | --- | |
| 7.5 kW ECB25-7.5 (89W45) Terminal Block ECB25-7.5CB (89W46) 45A Circuit Breaker | 208 | 5.6 | 19,200 | 1.9 | 36 | --- | ⁴ 40 | --- | --- | --- | |
| | 220 | 6.3 | 21,500 | 1.9 | 38 | --- | ⁴ 40 | --- | --- | --- | |
| | 230 | 6.9 | 23,500 | 1.9 | 40 | --- | ⁴ 40 | --- | --- | --- | |
| | 240 | 7.5 | 25,600 | 1.9 | 41 | --- | 45 | --- | --- | --- | |
| 10 kW ECB25-10 (10Z43) Terminal Block ECB25-10CB (10T37) 60A Circuit Breaker | 208 | 6.8 | 23,000 | 1.9 | 43 | --- | ⁴ 45 | --- | --- | --- | |
| | 220 | 7.6 | 25,800 | 1.9 | 45 | --- | ⁴ 45 | --- | --- | --- | |
| | 230 | 8.3 | 28,200 | 1.9 | 47 | --- | ⁴ 50 | --- | --- | --- | |
| | 240 | 9.0 | 30,700 | 1.9 | 49 | --- | ⁴ 50 | --- | --- | --- | |
| 12.5 kW ECB25-12.5CB (89W49) (1) 50A and (1) 25A Circuit Breaker | 208 | 9.4 | 32,000 | 1.9 | 40 | 19 | ⁴ 40 | ⁴ 20 | 58 | 60 | |
| | 220 | 10.5 | 35,800 | 1.9 | 42 | 20 | ⁴ 45 | ⁴ 20 | 61 | 70 | |
| | 230 | 11.5 | 39,200 | 1.9 | 44 | 21 | ⁴ 45 | 25 | 64 | 70 | |
| | 240 | 12.5 | 42,600 | 1.9 | 46 | 22 | 50 | 25 | 66 | 70 | |
| 15 kW ECB25-15CB (10T14) (1) 60A and (1) 30A Circuit Breaker | 208 | 11.3 | 38,400 | 1.9 | 25 | 45 | ⁴ 25 | ⁴ 50 | 69 | 70 | |
| | 220 | 12.6 | 43,000 | 1.9 | 26 | 48 | 30 | ⁴ 50 | 73 | 80 | |
| | 230 | 13.5 | 47,000 | 1.9 | 27 | 50 | 30 | ⁴ 50 | 76 | 80 | |
| | 240 | 15.0 | 51,200 | 1.9 | 28 | 52 | 30 | 60 | 80 | 80 | |

NOTE - Circuit 1 Minimum Circuit Ampacity includes the Blower Motor Full Load Amps.

¹ Electric heater capacity only - does not include additional blower motor heat capacity.

² Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

³ HACR type breaker or fuse.

⁴ Bold indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size shown. See table on page 4.

ELECTRIC HEAT DATA

| SINGLE PHASE | | CBX25UH-036 | | | | | | | | | |
|----------------|---|-------------|-------------------|-----------------------------|---------------------------------------|-------|---|-----------------------|---------------------------------------|---|-----|
| Description | Input | | | Blower Motor Full Load Amps | ² Minimum Circuit Ampacity | | ³ Maximum Overcurrent Protection | | Single Point Power Source | | |
| | Volt | kW | ¹ Btuh | | Ckt 1 | Ckt 2 | Ckt 1 | Ckt 2 | ² Minimum Circuit Ampacity | ³ Maximum Overcurrent Protection | |
| 2.5 kW | ECB25-2.5 (89W42) Wire Leads | 208 | 1.9 | 6,400 | 2.3 | 14 | --- | 15 | --- | --- | --- |
| | | 220 | 2.1 | 7,200 | 2.3 | 15 | --- | 15 | --- | --- | --- |
| | | 230 | 2.3 | 7,800 | 2.3 | 15 | --- | 15 | --- | --- | --- |
| | | 240 | 2.5 | 8,500 | 2.3 | 16 | --- | 20 | --- | --- | --- |
| 5 kW | ECB25-5 (89W43) Terminal Block ECB25-5CB (89W44) 30A Circuit Breaker | 208 | 3.8 | 12,800 | 2.3 | 25 | --- | ⁴25 | --- | --- | --- |
| | | 220 | 4.2 | 14,300 | 2.3 | 27 | --- | 30 | --- | --- | --- |
| | | 230 | 4.6 | 15,700 | 2.3 | 28 | --- | 30 | --- | --- | --- |
| | | 240 | 5.0 | 17,100 | 2.3 | 29 | --- | 30 | --- | --- | --- |
| 7.5 kW | ECB25-7.5 (89W45) Terminal Block ECB25-7.5CB (89W46) 45A Circuit Breaker | 208 | 5.6 | 19,200 | 2.3 | 37 | --- | ⁴40 | --- | --- | --- |
| | | 220 | 6.3 | 21,500 | 2.3 | 39 | --- | ⁴40 | --- | --- | --- |
| | | 230 | 6.9 | 23,500 | 2.3 | 40 | --- | ⁴40 | --- | --- | --- |
| | | 240 | 7.5 | 25,600 | 2.3 | 42 | --- | 45 | --- | --- | --- |
| 10 kW | ECB25-10 (10Z43) Terminal Block ECB25-10CB (10T37) 60A Circuit Breaker | 208 | 6.8 | 23,000 | 2.3 | 43 | --- | ⁴45 | --- | --- | --- |
| | | 220 | 7.6 | 25,800 | 2.3 | 46 | --- | ⁴50 | --- | --- | --- |
| | | 230 | 8.3 | 28,200 | 2.3 | 48 | --- | ⁴50 | --- | --- | --- |
| | | 240 | 9.0 | 30,700 | 2.3 | 50 | --- | ⁴50 | --- | --- | --- |
| 12.5 kW | ECB25-12.5CB (89W49) (1) 50A and (1) 25A Circuit Breaker | 208 | 9.4 | 32,000 | 2.3 | 40 | 19 | ⁴40 | ⁴20 | 59 | 60 |
| | | 220 | 10.5 | 35,800 | 2.3 | 43 | 20 | ⁴45 | ⁴20 | 62 | 70 |
| | | 230 | 11.5 | 39,200 | 2.3 | 44 | 21 | ⁴45 | 25 | 65 | 70 |
| | | 240 | 12.5 | 42,600 | 2.3 | 46 | 22 | 50 | 25 | 68 | 70 |
| 15 kW | ECB25-15CB (10T14) (1) 60A and (1) 30A Circuit Breaker | 208 | 11.3 | 38,400 | 2.3 | 25 | 45 | ⁴25 | ⁴50 | 70 | 70 |
| | | 220 | 12.6 | 43,000 | 2.3 | 27 | 48 | 30 | ⁴50 | 74 | 80 |
| | | 230 | 13.5 | 47,000 | 2.3 | 28 | 50 | 30 | ⁴50 | 78 | 80 |
| | | 240 | 15.0 | 51,200 | 2.3 | 29 | 52 | 30 | 60 | 81 | 90 |

NOTE - Circuit 1 Minimum Circuit Ampacity includes the Blower Motor Full Load Amps.

¹ Electric heater capacity only - does not include additional blower motor heat capacity.

² Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

³ HACR type breaker or fuse.

⁴ Bold indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size shown. See table on page 4.

ELECTRIC HEAT DATA

| SINGLE PHASE | | CBX25UH-042 | | | | | | | | | |
|----------------|---|-------------|-------------------|-----------------------------|---------------------------------------|-------|---|-----------------------|---------------------------------------|---|-----|
| Description | Input | | | Blower Motor Full Load Amps | ² Minimum Circuit Ampacity | | ³ Maximum Overcurrent Protection | | Single Point Power Source | | |
| | Volt | kW | ¹ Btuh | | Ckt 1 | Ckt 2 | Ckt 1 | Ckt 2 | ² Minimum Circuit Ampacity | ³ Maximum Overcurrent Protection | |
| 2.5 kW | ECB25-2.5 (89W42) Wire Leads | 208 | 1.9 | 6,400 | 1.9 | 14 | --- | 15 | --- | --- | --- |
| | | 220 | 2.1 | 7,200 | 1.9 | 14 | --- | 15 | --- | --- | --- |
| | | 230 | 2.3 | 7,800 | 1.9 | 15 | --- | 15 | --- | --- | --- |
| | | 240 | 2.5 | 8,500 | 1.9 | 15 | --- | 15 | --- | --- | --- |
| 5 kW | ECB25-5 (89W43) Terminal Block ECB25-5CB (89W44) 30A Circuit Breaker | 208 | 3.8 | 12,800 | 1.9 | 25 | --- | ⁴25 | --- | --- | --- |
| | | 220 | 4.2 | 14,300 | 1.9 | 26 | --- | 30 | --- | --- | --- |
| | | 230 | 4.6 | 15,700 | 1.9 | 27 | --- | 30 | --- | --- | --- |
| | | 240 | 5.0 | 17,100 | 1.9 | 28 | --- | 30 | --- | --- | --- |
| 7.5 kW | ECB25-7.5 (89W45) Terminal Block ECB25-7.5CB (89W46) 45A Circuit Breaker | 208 | 5.6 | 19,200 | 1.9 | 36 | --- | ⁴40 | --- | --- | --- |
| | | 220 | 6.3 | 21,500 | 1.9 | 38 | --- | ⁴40 | --- | --- | --- |
| | | 230 | 6.9 | 23,500 | 1.9 | 40 | --- | ⁴40 | --- | --- | --- |
| | | 240 | 7.5 | 25,600 | 1.9 | 41 | --- | 45 | --- | --- | --- |
| 10 kW | ECB25-10 (10Z43) Terminal Block ECB25-10CB (10T37) 60A Circuit Breaker | 208 | 6.8 | 23,000 | 1.9 | 43 | --- | ⁴45 | --- | --- | --- |
| | | 220 | 7.6 | 25,800 | 1.9 | 45 | --- | ⁴45 | --- | --- | --- |
| | | 230 | 8.3 | 28,200 | 1.9 | 47 | --- | ⁴50 | --- | --- | --- |
| | | 240 | 9.0 | 30,700 | 1.9 | 49 | --- | ⁴50 | --- | --- | --- |
| 12.5 kW | ECB25-12.5CB (89W49) (1) 50A and (1) 25A Circuit Breaker | 208 | 9.4 | 32,000 | 1.9 | 40 | 19 | ⁴40 | ⁴20 | 54 | 60 |
| | | 220 | 10.5 | 35,800 | 1.9 | 42 | 20 | ⁴45 | ⁴20 | 62 | 70 |
| | | 230 | 11.5 | 39,200 | 1.9 | 44 | 21 | ⁴45 | 25 | 65 | 70 |
| | | 240 | 12.5 | 42,600 | 1.9 | 46 | 22 | 50 | 25 | 67 | 70 |
| 15 kW | ECB25-15CB (10T14) (1) 60A and (1) 30A Circuit Breaker | 208 | 11.3 | 38,400 | 1.9 | 25 | 45 | ⁴25 | ⁴50 | 70 | 70 |
| | | 220 | 12.6 | 43,000 | 1.9 | 26 | 48 | 30 | ⁴50 | 74 | 80 |
| | | 230 | 13.5 | 47,000 | 1.9 | 27 | 50 | 30 | ⁴50 | 77 | 80 |
| | | 240 | 15.0 | 51,200 | 1.9 | 28 | 52 | 30 | 60 | 81 | 90 |

NOTE - Circuit 1 Minimum Circuit Ampacity includes the Blower Motor Full Load Amps.

¹ Electric heater capacity only - does not include additional blower motor heat capacity.

² Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

³ HACR type breaker or fuse.

⁴ Bold indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size shown. See table on page 4.

ELECTRIC HEAT DATA

| SINGLE PHASE | | CBX25UH-048, CBX25UH-060 | | | | | | | | | |
|----------------|---|--------------------------|-------------------|-----------------------------|---------------------------------------|-------|---|-----------|---------------------------------------|---|-----|
| Description | Input | | | Blower Motor Full Load Amps | ² Minimum Circuit Ampacity | | ³ Maximum Overcurrent Protection | | Single Point Power Source | | |
| | Volt | kW | ¹ Btuh | | Ckt 1 | Ckt 2 | Ckt 1 | Ckt 2 | ² Minimum Circuit Ampacity | ³ Maximum Overcurrent Protection | |
| 5 kW | ECB25-5 (89W43) Terminal Block ECB25-5CB (89W44) 30A Circuit Breaker | 208 | 3.8 | 12,800 | 3.9 | 27 | --- | 30 | --- | --- | --- |
| | | 220 | 4.2 | 14,300 | 3.9 | 29 | --- | 30 | --- | --- | --- |
| | | 230 | 4.6 | 15,700 | 3.9 | 30 | --- | 30 | --- | --- | --- |
| | | 240 | 5.0 | 17,100 | 3.9 | 31 | --- | 35 | --- | --- | --- |
| 7.5 kW | ECB25-7.5 (89W45) Terminal Block ECB25-7.5CB (89W46) 45A Circuit Breaker | 208 | 5.6 | 19,200 | 3.9 | 39 | --- | 40 | --- | --- | --- |
| | | 220 | 6.3 | 21,500 | 3.9 | 41 | --- | 45 | --- | --- | --- |
| | | 230 | 6.9 | 23,500 | 3.9 | 42 | --- | 45 | --- | --- | --- |
| | | 240 | 7.5 | 25,600 | 3.9 | 44 | --- | 45 | --- | --- | --- |
| 10 kW | ECB25-10 (10Z43) Terminal Block ECB25-10CB (10T37) 60A Circuit Breaker | 208 | 6.8 | 23,000 | 3.9 | 45 | --- | 45 | --- | --- | --- |
| | | 220 | 7.6 | 25,800 | 3.9 | 48 | --- | 50 | --- | --- | --- |
| | | 230 | 8.3 | 28,200 | 3.9 | 50 | --- | 50 | --- | --- | --- |
| | | 240 | 9.0 | 30,700 | 3.9 | 52 | --- | 60 | --- | --- | --- |
| 12.5 kW | ECB25-12.5CB (89W49) (1) 50A and (1) 25A Circuit Breaker | 208 | 9.4 | 32,000 | 3.9 | 42 | 19 | 45 | 20 | 61 | 70 |
| | | 220 | 10.5 | 35,800 | 3.9 | 45 | 20 | 45 | 20 | 64 | 70 |
| | | 230 | 11.5 | 39,200 | 3.9 | 46 | 21 | 50 | 25 | 67 | 70 |
| | | 240 | 12.5 | 42,600 | 3.9 | 48 | 22 | 50 | 25 | 70 | 70 |
| 15 kW | ECB25-15CB (10T14) (1) 60A and (1) 30A Circuit Breaker | 208 | 11.3 | 38,400 | 3.9 | 27 | 45 | 30 | 50 | 72 | 80 |
| | | 220 | 12.6 | 43,000 | 3.9 | 29 | 48 | 30 | 50 | 76 | 80 |
| | | 230 | 13.5 | 47,000 | 3.9 | 30 | 50 | 30 | 50 | 80 | 80 |
| | | 240 | 15.0 | 51,200 | 3.9 | 31 | 52 | 35 | 60 | 83 | 90 |
| 20 kW | ECB25-20CB (10T35) (1) 60A and (1) 60A Circuit Breaker | 208 | 15.0 | 51,200 | 3.9 | 45 | 50 | 45 | 50 | 95 | 100 |
| | | 220 | 16.8 | 57,300 | 3.9 | 48 | 53 | 50 | 60 | 100 | 100 |
| | | 230 | 18.4 | 62,700 | 3.9 | 50 | 55 | 50 | 60 | 105 | 110 |
| | | 240 | 20.0 | 68,200 | 3.9 | 52 | 57 | 60 | 60 | 109 | 110 |

NOTE - Circuit 1 Minimum Circuit Ampacity includes the Blower Motor Full Load Amps.

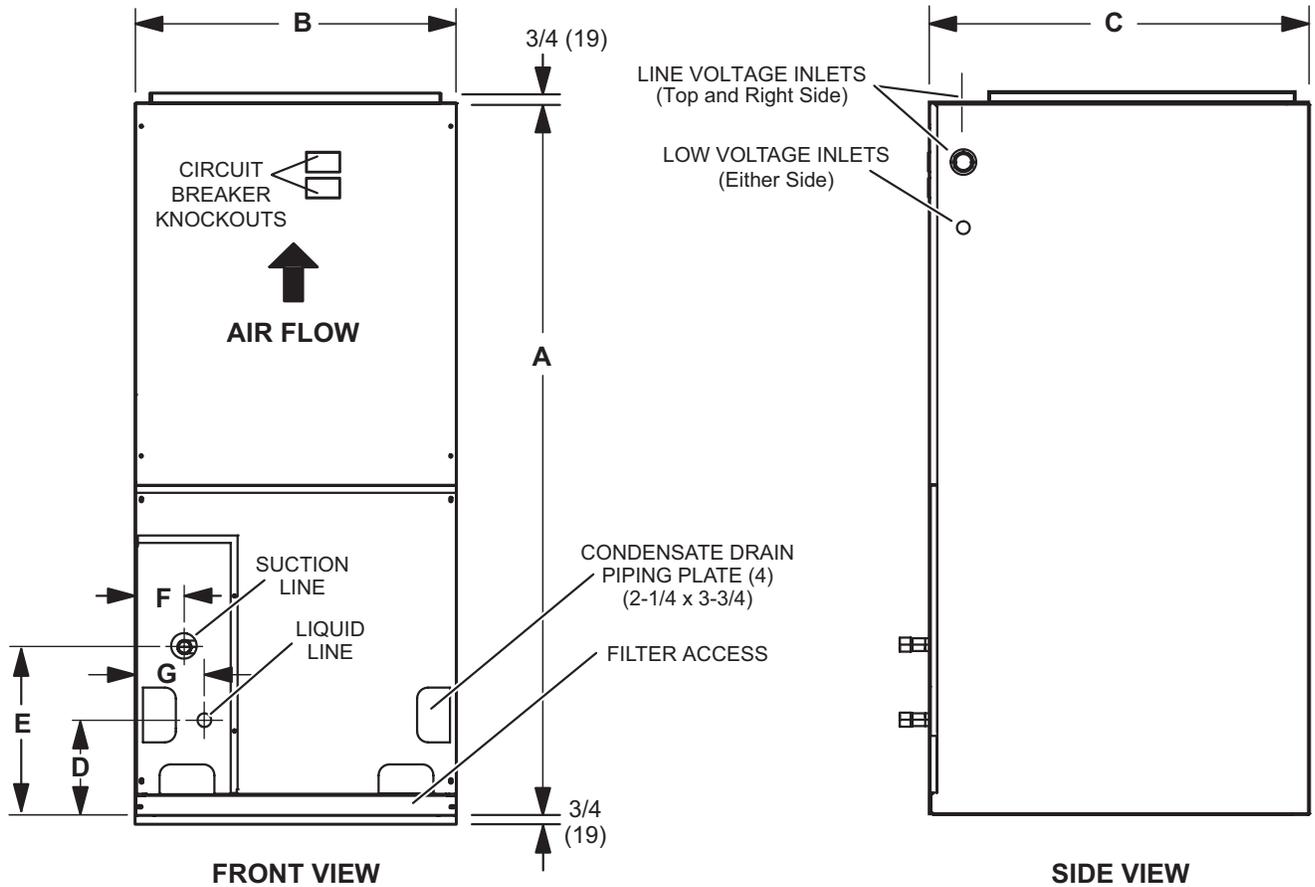
¹ Electric heater capacity only - does not include additional blower motor heat capacity.

² Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

³ HACR type breaker or fuse.

⁴ **Bold indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size shown. See table on page 4.**

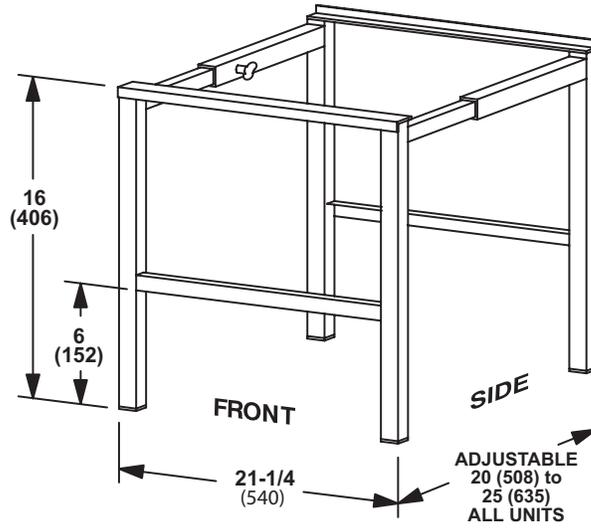
DIMENSIONS - INCHES (MM) - UPFLOW POSITION SHOWN



| Dimension | 018 | | 024 | | 030 | | 036 | | 042 | | 048-060 | | |
|---------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|-----|
| | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | |
| A | 38 | 965 | 40-1/2 | 1029 | 43 | 1092 | 48 | 1219 | 48 | 1219 | 52-1/2 | 1334 | |
| B | 15 | 381 | 18-1/2 | 470 | 18-1/2 | 470 | 21-7/8 | 556 | 21-7/8 | 556 | 21-7/8 | 556 | |
| C | 22 | 559 | 22 | 559 | 22 | 559 | 22 | 559 | 26 | 660 | 26 | 660 | |
| D | 6 | 152 | 6 | 152 | 6 | 152 | 12-1/4 | 311 | 6-1/4 | 159 | 6-3/8 | 162 | |
| E | 11 | 279 | 14 | 357 | 16 | 406 | 18-7/8 | 479 | 17-7/8 | 454 | 15-1/4 | 387 | |
| F | 3-5/8 | 92 | 5-1/2 | 140 | 5-1/2 | 140 | 5-3/4 | 146 | 3-1/4 | 83 | 3-1/4 | 83 | |
| G | 3-5/8 | 92 | 5-1/2 | 140 | 5-1/2 | 140 | 5-3/4 | 146 | 4-5/8 | 117 | 6-3/8 | 162 | |
| Supply Air Opening | Depth | 17 | 432 | 17 | 432 | 17 | 432 | 17 | 432 | 21 | 533 | 21 | 533 |
| | Width | 13 | 330 | 16-1/2 | 419 | 16-1/2 | 419 | 19-7/8 | 505 | 19-7/8 | 505 | 19-7/8 | 505 |
| Return Air Opening | Depth | 20-3/4 | 527 | 20-3/4 | 527 | 20-3/4 | 527 | 20-3/4 | 527 | 24-3/4 | 629 | 24-3/4 | 629 |
| | Width | 12-1/2 | 318 | 16 | 406 | 16 | 406 | 19-3/8 | 492 | 19-3/8 | 492 | 19-3/8 | 492 |

ACCESSORY DIMENSIONS - INCHES (MM)

**SIDE RETURN UNIT STAND
(Upflow Only)**



REVISIONS

| Sections | Description of Change |
|-------------------------|---|
| Installation Clearances | Revised clearances for downflow applications and clearance to plenum and outlet duct. |



Visit us at www.lennox.com

For the latest technical information, www.lennoxravenet.com

Contact us at 1-800-4-LENNOX

NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

©2014 Lennox Industries, Inc.