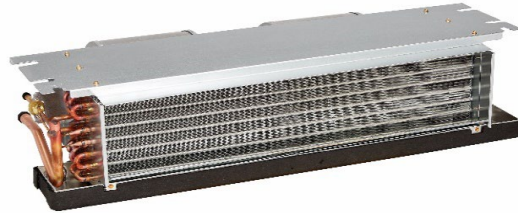


Soffit Mount Multi-Family Air Handlers for Lennox



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Lennox Soffit Mount Air Handler A1 Refrigerants

| | | | | | | | | | | | | | | | | | | | | |
|---|----------|--|----------|--|----------|-----------|--|----------|--|------------|--|----------|-----------|--|----------|--|----------|--|----------|--|
| | L | | S | | C | 24 | | 9 | | C03 | | P | 05 | | 1 | | U | | A | |
| Series L = Lennox | | | | | | | | | | | Revision | | | | | | | | | |
| Blower Motor Type S = Constant speed (PSC) E = 5-speed ECM | | | | | | | | | | | Case C = Cased U = Uncased | | | | | | | | | |
| Airflow Configuration C = Ceiling Mounted Horizontal | | | | | | | | | | | Voltage 1 = 208/240 V, 60 Hz, 1 ph. | | | | | | | | | |
| Unit Size (Nominal MBTUH) 18, 19, 23, 24, 25, 29, 30 | | | | | | | | | | | Electric Heat 00 = No Heat 03 = 3 kW (18-24) 05 = 5 kW (all sizes) 06 = 6 kW (all sizes) 08 = 8 kW (all sizes) 10 = 10 kW (24-30) | | | | | | | | | |
| Refrigerant Type & Metering Device 1 = Piston (R-410A) 9 = R-410A Non-bleed HP-A/C TXV | | | | | | | | | | | Line Voltage Connection S = Stripped Wire (No Heat only) P = Pull Disconnect | | | | | | | | | |
| Slab Number C = Copper, A = Aluminum | | | | | | | | | | | | | | | | | | | | |

Lennox Soffit Mount Air Handler A2L Refrigerants

| | | | | | | | | | | | | | | | | | | | | |
|--|----------|--|----------|--|----------|-----------|--|----------|--|------------|--|----------|-----------|--|----------|--|----------|--|----------|--|
| | L | | S | | C | 24 | | A | | C03 | | P | 05 | | 1 | | U | | R | |
| Series L = Lennox | | | | | | | | | | | Refrigerant Detection System R = Included (Factory Installed) | | | | | | | | | |
| Blower Motor Type S = Constant speed (PSC) E = 5-speed ECM | | | | | | | | | | | Case C = Cased U = Uncased | | | | | | | | | |
| Airflow Configuration C = Ceiling Mounted Horizontal | | | | | | | | | | | Voltage 1 = 208/240 V, 60 Hz, 1 ph. | | | | | | | | | |
| Unit Size (Nominal MBTUH) 18, 19, 23, 24, 25, 29, 30 | | | | | | | | | | | Electric Heat 00 = No Heat 03 = 3 kW (18-24) 05 = 5 kW (all sizes) 06 = 6 kW (all sizes) 08 = 8 kW (all sizes) 10 = 10 kW (24-30) | | | | | | | | | |
| Refrigerant Type & Metering Device (Field Configurable) 1 = Piston (R-454B & R-32) A = R-454B Non-bleed HP-A/C TXV B = R-32 Non-bleed HP-A/C TXV | | | | | | | | | | | Line Voltage Connection S = Stripped Wire (No Heat only) P = Pull Disconnect | | | | | | | | | |
| Slab Number C = Copper, A = Aluminum | | | | | | | | | | | | | | | | | | | | |

Product Features

General Features

- Available in uncased or factory-installed cased configurations.
- Designed for drop ceiling or Fur-Down application.
- Constructed of heavy-gauge, corrosion-resistant galvanized steel.
- Left hand refrigerant connections.
- Condensate drain connections on left and right side of air handler.
- Decorative panel available as accessory.
- Air pressure leak tested.
- Suitable for free air-return installation (non-ducted return).

Coil Features

- Available in copper or aluminum construction.
- A1 models suitable for use with R-22 and R-410A.
- A2L models suitable for use with R-32 and R-454B.
- A2L models include factory installed Refrigerant Detections System (RDS).
- Field or factory installed threaded expansion valve.
- Drain pans are constructed of aluminum to resist corrosion.
- Lanced fin design.
- Rifled copper tubing.

Electrical Features

- ECM Constant Torque motor or PSC motor available.
- Easy to service electric heat section.
- Pull disconnect line voltage connection standard on all factory-installed heat models.
- Includes thermostat connections, time delay, & motor speed settings (PSC motor uses control board; functions are built into the ECM Constant Torque motor).

Physical Data

| | Unit Size | | | | | | | | | | | | | | |
|---------------------------------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | LSC18 | LEC18 | LSC19 | LEC19 | LSC23 | LEC23 | LSC24 | LEC24 | LS25 | LEC25 | LSC29 | LEC29 | LSC30 | LEC30 | |
| Available Voltages | 208/240 V, 60 Hz, 1 Phase | | | | | | | | | | | | | | |
| Maximum Elec. Heat available (kW) | 8 | 8 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| Transformer Size and Type | 40VA, Class 2 | | | | | | | | | | | | | | |
| Blower Data: | Motor H.P. | 1/8 | -- | 1/8 | -- | 1/3 | -- | 1/3 | -- | 1/3 | -- | 1/3 | -- | 1/3 | -- |
| 2-Speed PSC Motor | F.L.A. @ 240 V | 1.25 | -- | 1.25 | -- | 1.9 | -- | 1.9 | -- | 1.9 | -- | 1.9 | -- | 1.9 | -- |
| Blower Data: | Motor H.P. | -- | 1/4 | -- | 1/4 | -- | 1/4 | -- | 1/4 | -- | 1/4 | -- | 1/4 | -- | 1/4 |
| ECM Constant Torque | F.L.A. @ 240 V | -- | 2 | -- | 2 | -- | 2 | -- | 2 | -- | 2 | -- | 2 | -- | 2 |
| Nominal CFM | | 600 | 600 | 600 | 600 | 800 | 800 | 800 | 800 | 800 | 800 | 1000 | 1000 | 1000 | 1000 |
| Refrigerant Conn. (IDS) Suction | | 3/4" | | | | | | | | | | | | | |
| Refrigerant Conn. (IDS) Liquid | | 3/8" | | | | | | | | | | | | | |
| R-410A Piston Size (in) | | 0.049 | 0.049 | 0.049 | 0.049 | 0.053 | 0.053 | 0.053 | 0.053 | 0.053 | 0.053 | 0.059 | 0.059 | 0.059 | 0.059 |
| Pallet Quantity (min order per model) | | 8 | | | | | | | | | | | | | |
| Max Unit Weight (uncased) | | 60 | 63 | 65 | 68 | 63 | 63 | 65 | 68 | 70 | 73 | 68 | 70 | 70 | 73 |
| Max Shipping Weight (uncased) | | 63 | 66 | 68 | 71 | 66 | 66 | 68 | 71 | 73 | 76 | 71 | 73 | 73 | 76 |
| Max Unit Weight (cased) | | 89 | 92 | 97 | 100 | 92 | 92 | 97 | 100 | 105 | 108 | 103 | 105 | 105 | 108 |
| Max Shipping Weight (cased) | | 92 | 95 | 100 | 103 | 95 | 95 | 100 | 103 | 108 | 111 | 106 | 108 | 108 | 111 |

Blower Performance

2-Speed PSC Motor

| Unit Size | Blower Speed Setting | Airflow (CFM) vs. External Static Pressure (inches W.C.) *** | | | | |
|------------|----------------------|--|-----|-----|-----|-----|
| | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 |
| LSC 18, 19 | Low - Red | 610 | 536 | 468 | 392 | 316 |
| | * ^ High -Black | 680 | 607 | 532 | 456 | 368 |
| LSC 23 | Low - Red | 846 | 777 | 702 | 627 | 546 |
| | * ^ High -Black | 902 | 830 | 755 | 667 | 589 |
| LSC 24, 29 | Low - Red | 833 | 781 | 725 | 658 | 580 |
| | * ^ High -Black | 1039 | 976 | 903 | 825 | 728 |
| LSC 25, 30 | Low - Red | 839 | 771 | 706 | 644 | 553 |
| | * ^ High -Black | 1050 | 975 | 901 | 820 | 744 |

* Factory setting for cooling.

^ Factory setting for heating.

*** All airflow data is with a dry coil & electric heat.

- Heating speeds should not be reduced below factory setting.
- Different speeds can be set for cooling mode; see installation instructions.
- When matched with heat pump, and the room thermostat calls for second stage heat (electric heat strips), the first stage (heat pump) operation must be locked out. See parts sheet for Heat Pump Relay Kit - Part #76701444.

ECM Constant Torque Motor

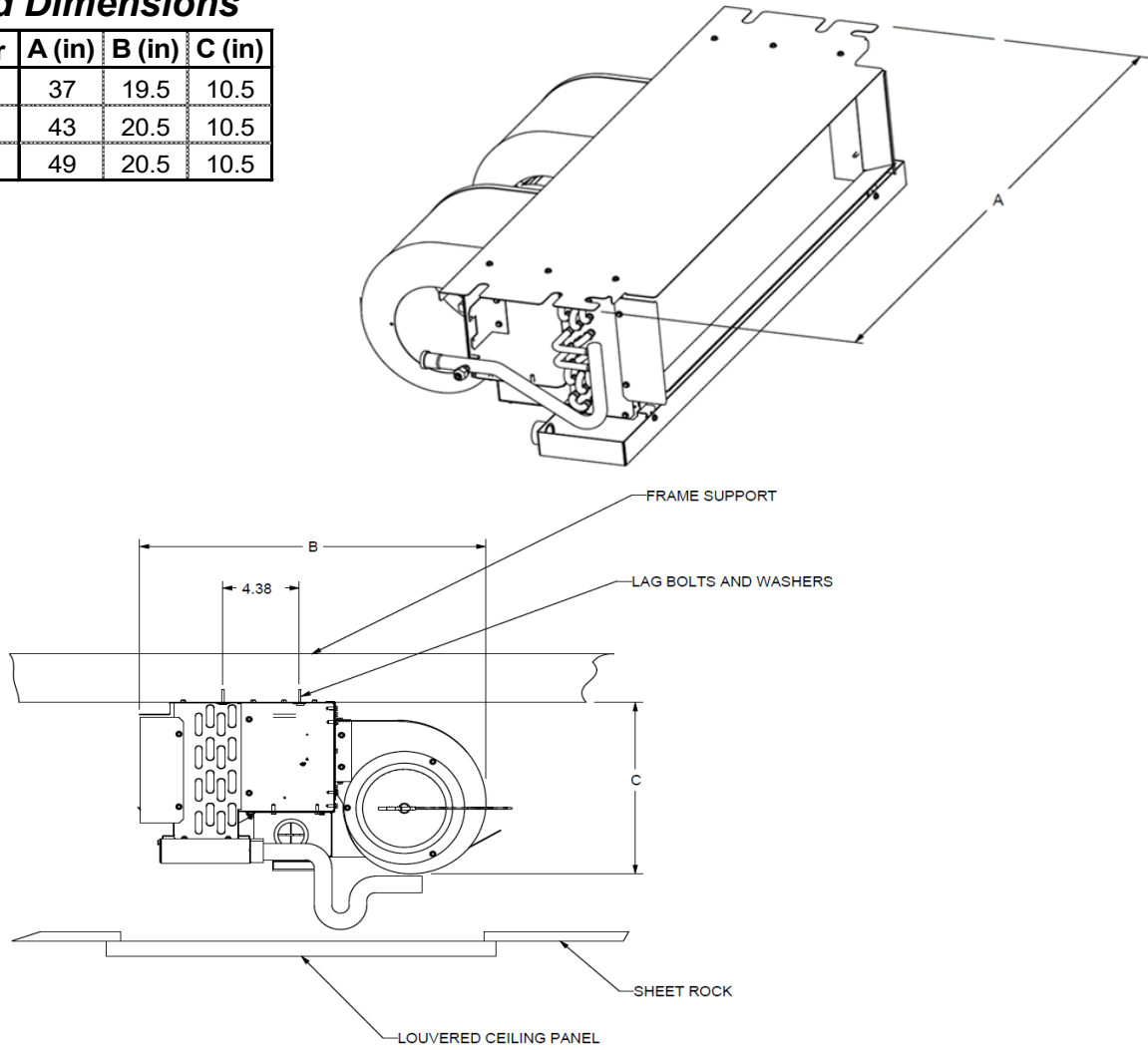
| Unit Size | Blower Speed Setting | Airflow (CFM) vs. External Static Pressure (inches W.C.) *** | | | | |
|----------------|----------------------|--|-----|-----|-----|-----|
| | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 |
| LEC 18, 19 | Tap 1 (G) | 604 | 514 | 453 | 437 | 301 |
| | Tap 2 (DS) | 604 | 514 | 453 | 437 | 301 |
| | Tap 3 (Y1) | 735 | 651 | 577 | 506 | 444 |
| | Tap 4 (Y2) | 890 | 826 | 764 | 700 | 605 |
| | ^ Tap 5 (W1) | 890 | 826 | 764 | 700 | 605 |
| LEC 23, 24, 29 | Tap 1 (G) | 618 | 547 | 464 | 344 | 270 |
| | Tap 2 (DS) | 617 | 547 | 469 | 351 | 273 |
| | Tap 3 (Y1) | 779 | 720 | 633 | 549 | 441 |
| | Tap 4 (Y2) | 940 | 876 | 812 | 750 | 675 |
| | ^ Tap 5 (W1) | 937 | 875 | 812 | 750 | 674 |
| LEC 25, 30 | Tap 1 (G) | 630 | 557 | 485 | 380 | 277 |
| | Tap 2 (DS) | 630 | 556 | 483 | 378 | 277 |
| | Tap 3 (Y1) | 803 | 719 | 640 | 576 | 521 |
| | Tap 4 (Y2) | 981 | 909 | 833 | 766 | 705 |
| | ^ Tap 5 (W1) | 984 | 909 | 837 | 769 | 709 |

^ Factory setting for heating.

*** All airflow data is with a dry coil & electric heat.

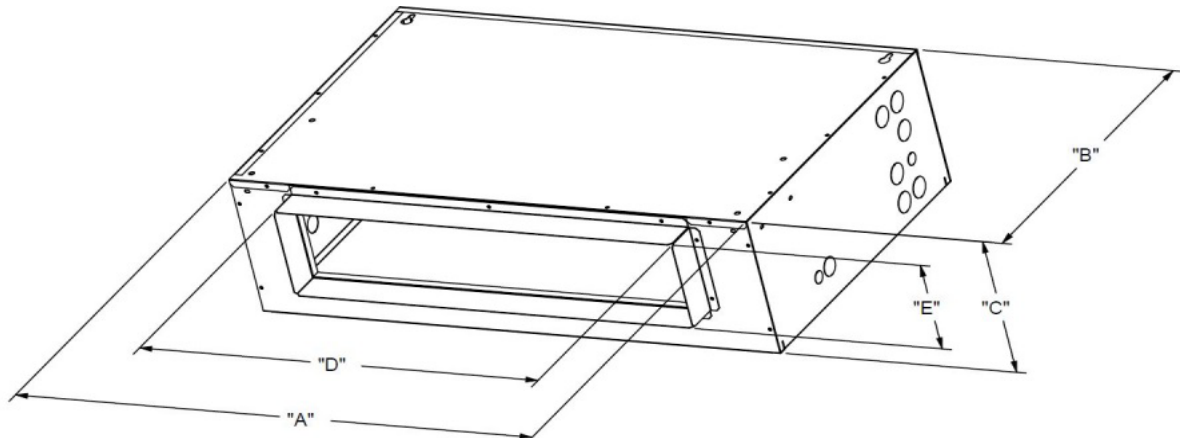
Uncased Dimensions

| Air Handler | A (in) | B (in) | C (in) |
|-------------|--------|--------|--------|
| 18, 23 | 37 | 19.5 | 10.5 |
| 19, 24, 29 | 43 | 20.5 | 10.5 |
| 25, 30 | 49 | 20.5 | 10.5 |



Cased Dimensions

| Air Handler Size | A (in) | B (in) | C (in) | D (in) | E (in) |
|------------------|--------|--------|--------|--------|--------|
| 18, 23 | 39.7 | 24 | 11 | 30.5 | 7 |
| 19, 24, 29 | 45.7 | 24 | 11 | 36.5 | 7 |
| 25, 30 | 51.7 | 24 | 11 | 42.5 | 7 |



Electrical Data

| Unit Size (All have electric heat) | Electric Heating Capacity | | Blower Current (A) | | Total Current (A) | | Minimum Circuit Ampacity (A) | | Maximum Circuit Breaker Size Per Stage (A) | |
|---------------------------------------|---------------------------|----------------------|--------------------|-------|-------------------|-------|------------------------------|-------|--|-------|
| | kW | BTUH | 208 V | 240 V | 208 V | 240 V | 208 V | 240 V | 208 V | 240 V |
| | 240 V ^[1] | 240 V ^[1] | | | | | | | | |
| 18, 19 | 0.0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 15.00 | 15.00 |
| | 3.0 | 10,236 | 1 | 1 | 12 | 14 | 15 | 17 | 20.00 | 20.00 |
| | 5.0 | 17,061 | 1 | 1 | 19 | 22 | 24 | 28 | 25.00 | 30.00 |
| | 6.0 | 20,473 | 1 | 1 | 23 | 26 | 29 | 33 | 30.00 | 35.00 |
| | 8.0 | 27,297 | 1 | 1 | 30 | 35 | 38 | 43 | 40.00 | 45.00 |
| 23, 24, 25, 29, 30 | 0.0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 15.00 | 15.00 |
| | 3 ^[2] | 10,236 | 2 | 2 | 13 | 14 | 16 | 18 | 20.00 | 20.00 |
| | 5.0 | 17,061 | 2 | 2 | 20 | 23 | 25 | 28 | 25.00 | 30.00 |
| | 6.0 | 20,473 | 2 | 2 | 24 | 27 | 29 | 34 | 30.00 | 35.00 |
| | 8.0 | 27,297 | 2 | 2 | 31 | 35 | 38 | 44 | 40.00 | 45.00 |
| | 10 ^[3] | 34,121 | 2 | 2 | 38 | 44 | 48 | 54 | 50.00 | 60.00 |

[1] For 208 Volts use .751 correction factor for kW & MBTUH.

[2] 10kW not available in -23 model

[3] 10 kW is not available in 23 model

| Unit Size (All have electric heat) | Electric Heating Capacity | | Blower Current (A) | | Total Current (A) | | Minimum Circuit Ampacity (A) | | Maximum Circuit Breaker Size Per Stage (A) | |
|---------------------------------------|---------------------------|----------------------|--------------------|-------|-------------------|-------|------------------------------|-------|--|-------|
| | kW | BTUH | 208 V | 240 V | 208 V | 240 V | 208 V | 240 V | 208 V | 240 V |
| | 240 V ^[1] | 240 V ^[1] | | | | | | | | |
| 18, 19, 23, 24, 25, 29, 30 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.5 | 2.5 | 15.0 | 15 |
| | 3 ^[2] | 10236.4 | 2.0 | 2.0 | 12.8 | 14.5 | 16.0 | 18.1 | 20.0 | 20 |
| | 5.0 | 17060.7 | 2.0 | 2.0 | 20.1 | 22.8 | 25.1 | 28.5 | 30.0 | 30 |
| | 6.0 | 20472.9 | 2.0 | 2.0 | 23.7 | 27.0 | 29.6 | 33.8 | 30.0 | 35 |
| | 8.0 | 27297.1 | 2.0 | 2.0 | 30.9 | 35.3 | 38.6 | 44.2 | 40.0 | 45 |
| | 10 ^[3] | 34121.4 | 2.0 | 2.0 | 38.1 | 43.7 | 47.6 | 54.6 | 50.0 | 60 |

[1] For 208 Volts use .751 correction factor for kW & MBTUH.

[2] 3 kW is not available in 25, 30 model

[3] 10 kW is not available in 18, 23 model

Electrical Connections

- Determine the number of circuits needed to supply the heater with electrical power (1 or 2 circuits). See the air handler Accessory Kit label for number of circuits and ratings.
- Disconnect all power supplies.
- Remove the control panel.
- Using the pre-punched wiring holes, install UL listed wires and fittings.
- Connect appropriate size wire to the pull disconnect terminals.
- Connect green ground wire(s) (1 or 2) to the ground terminal(s) (1 or 2) marked "GND".
- Install conduit-opening plugs in any unused openings.
- Reinstall the air handler control panel.
- Reconnect power.
- Dispose of all remaining parts.



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