

Specification Guide

Soffit Mount Multi-Family Air Handlers
for Lennox



Contents	Page
Nomenclature.....	2
Product Features	3
Physical Data	3
Blower Performance.....	3
Dimensions	4
Electrical Data.....	5

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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	--
	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
	F.L.A. @ 240 V	--	2	--	2	--	2	--	2	--	2	--	2	--	2
ECM Constant Torque		--	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

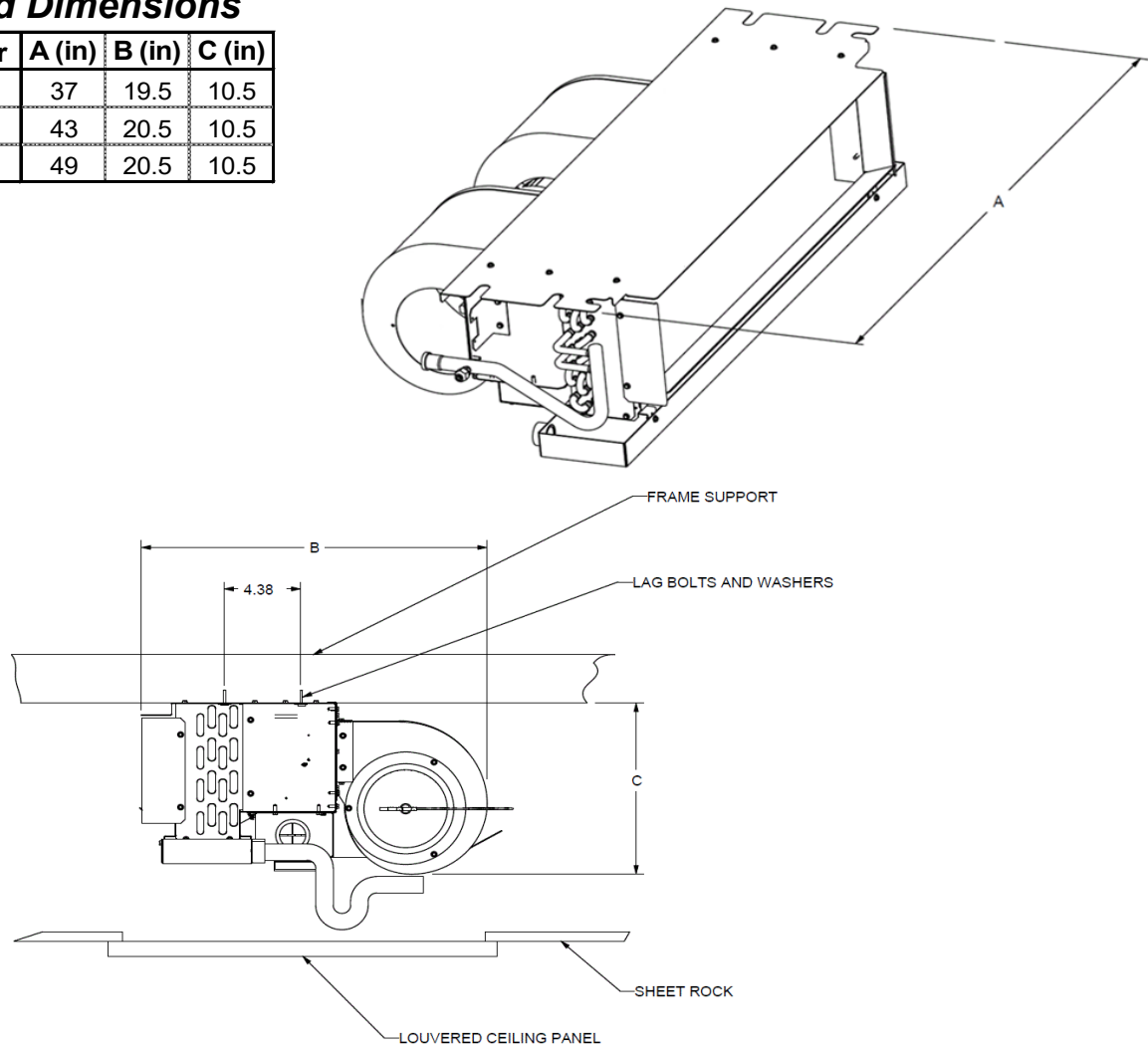
Unit Size	Blower Speed Setting	Airflow (CFM) vs. External Static Pressure (inches W.C.) ***				
		0.1	0.2	0.3	0.4	0.5
LEC 18, 19	Tap 1 (G)	604	514	453	437	301
	Tap 2 (DS)	604	514	453	437	301
	Tap 3 (Y1)	735	651	577	506	444
	Tap 4 (Y2)	890	826	764	700	605
	^ Tap 5 (W1)	890	826	764	700	605
LEC 23, 24, 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.

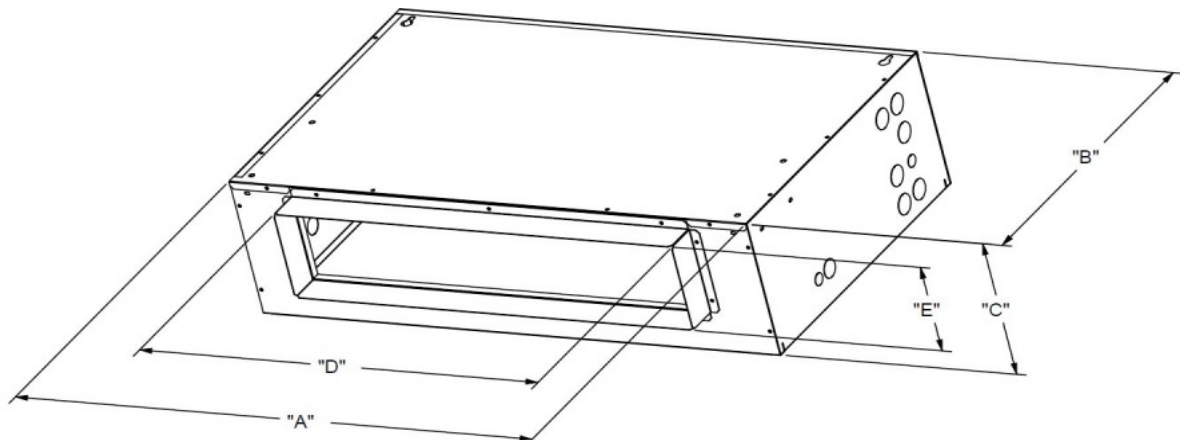
Uncased Dimensions

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								
	240 V ^[1]	240 V ^[1]	208 V	240 V	208 V	240 V	208 V	240 V	208 V	240 V
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								
	240 V ^[1]	240 V ^[1]	208 V	240 V	208 V	240 V	208 V	240 V	208 V	240 V
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

1. 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.
2. Disconnect all power supplies.
3. Remove the control panel.
4. Using the pre-punched wiring holes, install UL listed wires and fittings.
5. Connect appropriate size wire to the pull disconnect terminals.
6. Connect green ground wire(s) (1 or 2) to the ground terminal(s) (1 or 2) marked "GND".
7. Install conduit-opening plugs in any unused openings.
8. Reinstall the air handler control panel.
9. Reconnect power.
10. Dispose of all remaining parts.



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