



AIR HANDLERS

CBX25UH-T

MERIT® Series

R-410A - Upflow / Horizontal - 50HZ

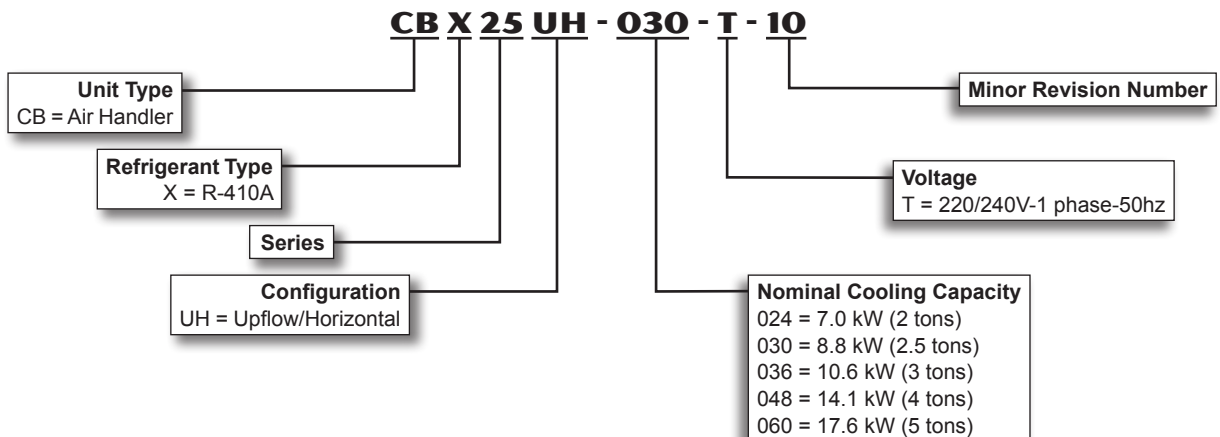
Bulletin No. 490178
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PRODUCT SPECIFICATIONS



Nominal Capacity - 7.0 kW to 17.6 kW (1.5 to 5 Tons)

MODEL NUMBER IDENTIFICATION



FEATURES

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APPLICATIONS

7.0 to 17.6 kW nominal sizes.

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

CBX25UH-T 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.

APPROVALS

Tested and rated with matching air conditioners and heat pump units in the Lennox Research Laboratory environmental test room in accordance with AHRI Standard 210/240 test conditions when operating at rated voltage and air volumes.

Air handlers and components within bonded for grounding to meet safety standards for servicing required by Intertek (ETL) and the International Electrotechnical Commission (IEC).

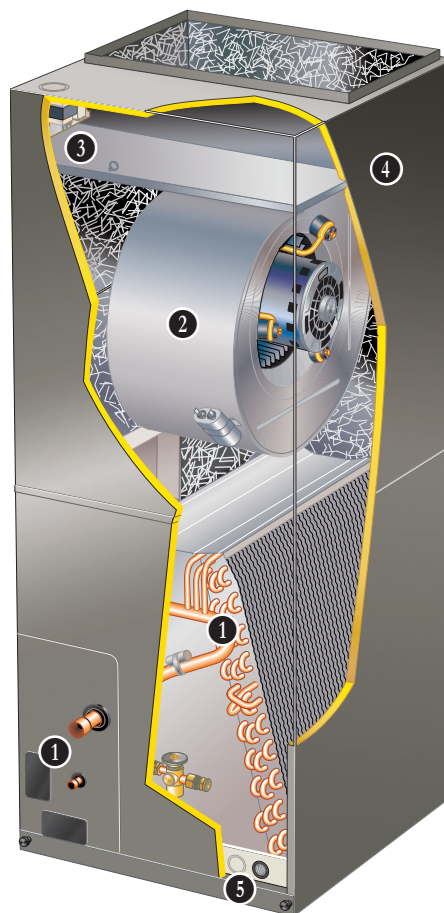
International Organization for Standardization (ISO) 9001 Registered Manufacturing Quality System.

REFRIGERANT SYSTEM

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

Wide range valve.

Chatleff style fitting.

Factory installed on all models internal to cabinet.



❶ 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 25 mm filter is furnished.
Filter rack furnished in cabinet for easy filter installation.
See Specifications tables for filter sizes.

2 BLOWER

Multi-speed permanent split capacitor (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 one second blower “on” delay before continuous fan or cooling operation and 45 second blower “off” delay after continuous fan or cooling operation.

CONTROLS

3 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.

4 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.
Plugs 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.

5 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 Optional Accessories table.

Horizontal Support Frame Kit

Provides support of unit in horizontal applications.
Consists of (2) 25 x 38 x 829 mm and (2) 25 x 76 x 1368 mm 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 406 mm 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.

SPECIFICATIONS

General Data		Model Number	CBX25UH-024-T	CBX25UH-030-T	CBX25UH-036-T
		Nominal kW (tons)	7.0 (2)	8.8 (2.5)	10.6 (3)
Connections	Suction/Vapor line (o.d.) - in. sweat		3/4	3/4	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 - m ² (ft. ²)		0.33 (3.56)	0.37 (4.00)	0.45 (4.89)
	Tube outside diameter - mm (in.)		9.5 (3/8)	9.5 (3/8)	9.5 (3/8)
	Number of rows		3	3	3
	Fins per m (inch)		551 (14)	551 (14)	551 (14)
Blower	Wheel nominal diameter x width - mm (in.)		229 x 152 (9 x 6)	254 x 203 (10 x 8)	254 x 203 (10 x 8)
	Blower motor output - W (hp)		224 (1/3)	224 (1/3)	224 (1/3)
¹ Filters	Size of filter - mm (in.)		381 x 508 x 25 (15 x 20 x 1)	381 x 508 x 25 (15 x 20 x 1)	457 x 508 x 25 (18 x 20 x 1)
Shipping Data -1 package - kg (lbs.)			58 (127)	60 (133)	74 (163)

ELECTRICAL DATA

Voltage - 1 phase (50 hz)		220/240	220/240	220/240
² Maximum overcurrent protection (unit only)		15	15	15
³ Minimum circuit ampacity (unit only)		5	5	5
Blower Motor Full Load Amps		1.6	1.9	2.0

SPECIFICATIONS

General Data		Model Number	CBX25UH-048-T	CBX25UH-060-T
		Nominal kW (tons)	14.1 (4)	17.6 (5)
Connections	Suction/Vapor line (o.d.) - in. sweat		7/8	7/8
	Liquid line (o.d.) - in. sweat		3/8	3/8
	Condensate - in. fpt		(2) 3/4	(2) 3/4
Indoor Coil	Net face area - m ² (ft. ²)		0.65 (7.00)	0.65 (7.00)
	Tube outside diameter - mm (in.)		9.5 (3/8)	9.5 (3/8)
	Number of rows		3	3
	Fins per m (inch)		551 (14)	551 (14)
Blower	Wheel nominal diameter x width - mm (in.)		278 x 229 (11 x 9)	305 x 229 (12 x 9)
	Blower motor output - W (hp)		373 (1/2)	373 (1/2)
¹ Filters	Size of filter - mm (in.)		457 x 610 x 25 (18 x 24 x 1)	457 x 610 x 25 (18 x 24 x 1)
Shipping Data -1 package - kg (lbs.)			84 (186)	84 (186)

ELECTRICAL DATA

Voltage - 1 phase (50 hz)		220/240	220/240
² Maximum overcurrent protection (unit only)		15	15
³ Minimum circuit ampacity (unit only)		5	10
Blower Motor Full Load Amps		3.9	7.4

¹ Disposable filter.

² Heating Air Conditioning and Refrigeration type circuit breaker or fuse.

³ Refer to local electrical codes to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75°C (167°F).

OPTIONAL ACCESSORIES - ORDER SEPARATELY

Model	-024 -030	-036	-048 -060
Downflow Conversion Kit	96W38	97W95	97W96
Horizontal Support Frame Kit	56J18	56J18	56J18
Side Return Unit Stand (Upflow Only)	45K32	45K32	45K32
Wall Hanging Bracket Kit (Upflow Only)	45K30	45K30	45K30

BLOWER DATA

CBX25UH-024-T BLOWER PERFORMANCE

External Static Pressure		Air Volume at Various Blower Speeds					
		High		Medium		Low	
Pa	in. w.g.	L/s	cfm	L/s	cfm	L/s	cfm
25	0.10	415	880	389	825	347	735
50	0.20	382	810	354	750	321	680
75	0.30	342	725	314	665	285	605
100	0.40	290	615	264	560	219	465
125	0.50	198	420	184	390	158	335

NOTE - All air data measured external to unit with dry coil and 25 mm (1 inch) non-pleated air filter in place.

CBX25UH-036-T BLOWER PERFORMANCE

External Static Pressure		Air Volume at Various Blower Speeds					
		High		Medium		Low	
Pa	in. w.g.	L/s	cfm	L/s	cfm	L/s	cfm
25	0.10	675	1430	597	1265	517	1095
50	0.20	632	1340	562	1190	486	1030
75	0.30	585	1240	521	1105	451	955
100	0.40	533	1130	472	1000	394	835
125	0.50	448	950	399	845	342	725

NOTE - All air data measured external to unit with dry coil and 25 mm (1 inch) non-pleated air filter in place.

CBX25UH-030-T BLOWER PERFORMANCE

External Static Pressure		Air Volume at Various Blower Speeds					
		High		Medium		Low	
Pa	in. w.g.	L/s	cfm	L/s	cfm	L/s	cfm
25	0.10	524	1110	479	1015	406	860
50	0.20	484	1025	444	940	378	800
75	0.30	434	920	389	825	335	710
100	0.40	373	790	330	700	285	605
125	0.50	297	630	276	585	236	500

NOTE - All air data measured external to unit with dry coil and 25 mm (1 inch) non-pleated air filter in place.

CBX25UH-048-T BLOWER PERFORMANCE

External Static Pressure		Air Volume at Various Blower Speeds					
		High		Medium		Low	
Pa	in. w.g.	L/s	cfm	L/s	cfm	L/s	cfm
25	0.10	915	1940	845	1790	739	1565
50	0.20	882	1870	816	1730	727	1540
75	0.30	845	1790	788	1670	708	1500
100	0.40	805	1705	755	1600	684	1450
125	0.50	755	1600	713	1510	649	1375

NOTE - All air data measured external to unit with dry coil and 25 mm (1 inch) non-pleated air filter in place.

CBX25UH-060-T BLOWER PERFORMANCE

External Static Pressure		Air Volume at Various Blower Speeds					
		High		Medium		Low	
Pa	in. w.g.	L/s	cfm	L/s	cfm	L/s	cfm
25	0.10	958	2030	856	1815	755	1600
50	0.20	932	1975	831	1760	727	1540
75	0.30	904	1915	805	1705	703	1490
100	0.40	878	1860	779	1650	680	1440
125	0.50	854	1810	755	1600	658	1395

NOTE - All air data measured external to unit with dry coil and 25 mm (1 inch) non-pleated air filter in place.

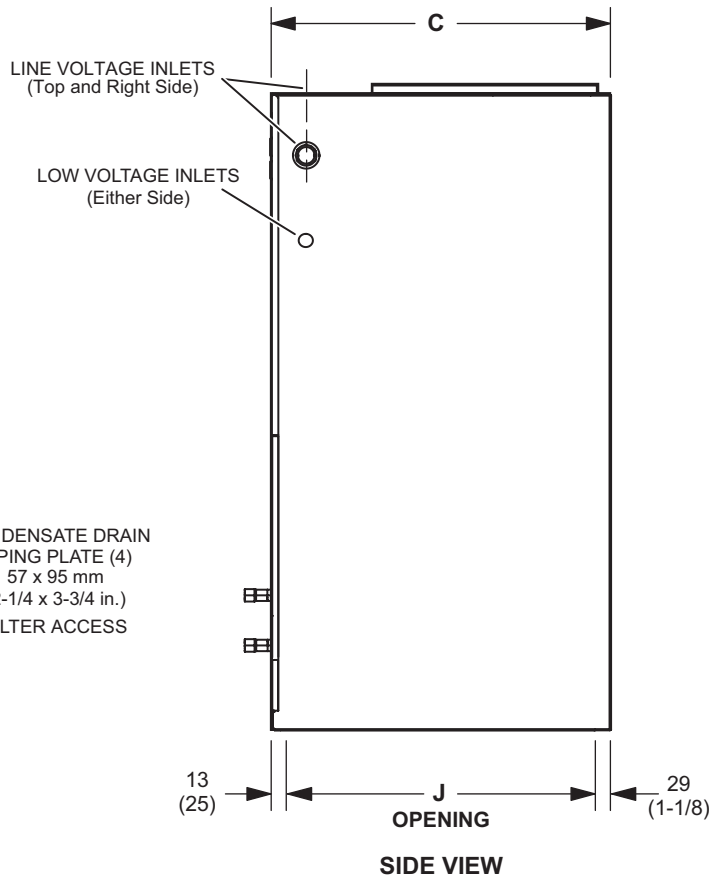
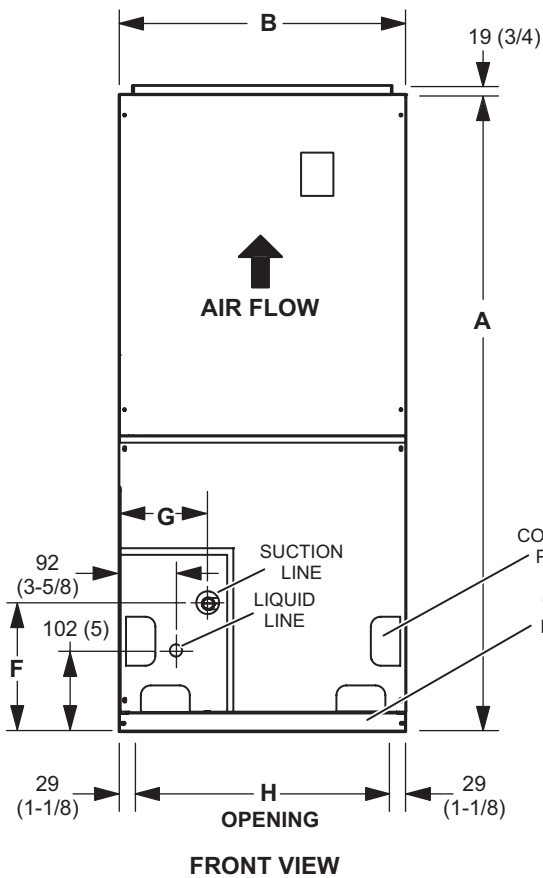
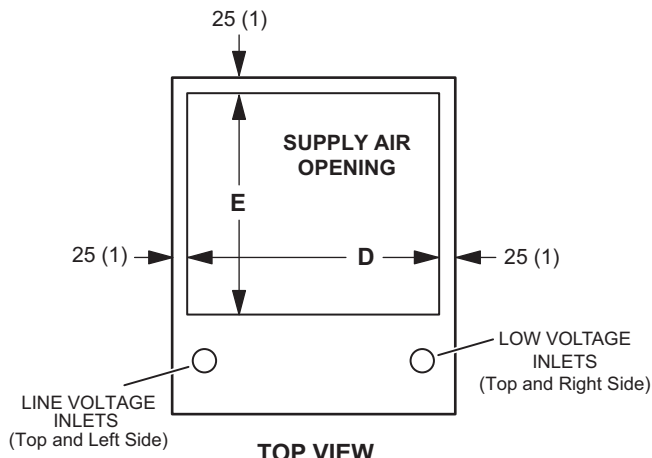
INSTALLATION CLEARANCES

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)
Service / Maintenance	See Note #1

¹ Front service access - 24 inches (610 mm) minimum.

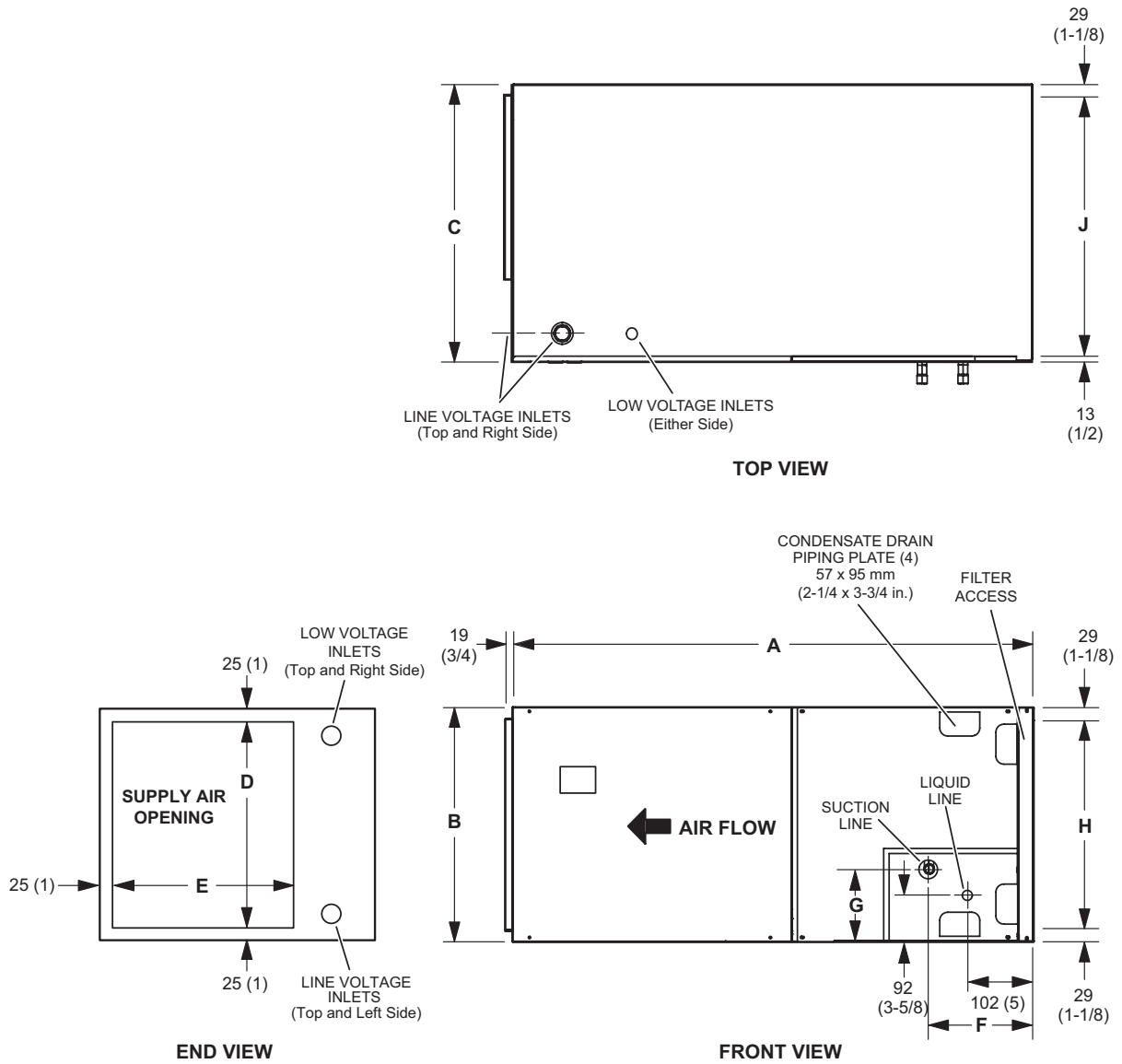
NOTE - If cabinet depth is more than 24 inches (610 mm), allow a minimum of the cabinet depth plus 2 inches (51 mm).

DIMENSIONS - UNIT - UPFLOW - MM (INCHES)



Dimension	024		030		036		048-060	
	mm	in.	mm	in.	mm	in.	mm	in.
A	1029	40-1/2	1092	43	1334	52-1/2	1334	52-1/2
B	470	18-1/2	470	18-1/2	556	21-7/8	556	21-7/8
C	559	22	559	22	559	22	667	26-1/4
D	419	16-1/2	419	16-1/2	505	19-7/8	505	19-7/8
E	368	14-1/2	368	14-1/2	368	14-1/2	476	18-3/4
F	203	8	203	8	203	8	235	9-1/4
G	143	5-5/8	143	5-5/8	143	5-5/8	114	4-1/2
H	413	16-1/4	413	16-1/4	498	19-5/8	498	19-5/8
J	518	20-3/8	518	20-3/8	518	20-3/8	625	24-5/8

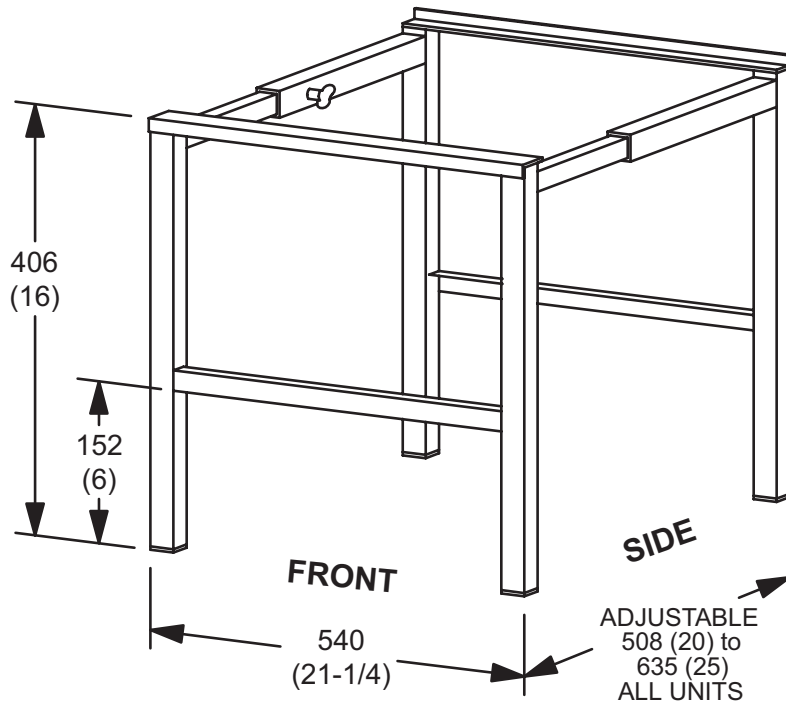
DIMENSIONS - UNIT - HORIZONTAL - MM (INCHES)



NOTE - Shipped for horizontal left-hand discharge.
 May be field converted to horizontal right-hand air discharge by repositioning horizontal drain pan.

Dimension	024		030		036		048-060	
	mm	in.	mm	in.	mm	in.	mm	in.
A	1029	40-1/2	1092	43	1334	52-1/2	1334	52-1/2
B	470	18-1/2	470	18-1/2	556	21-7/8	556	21-7/8
C	559	22	559	22	559	22	667	26-1/4
D	419	16-1/2	419	16-1/2	505	19-7/8	505	19-7/8
E	368	14-1/2	368	14-1/2	368	14-1/2	476	18-3/4
F	203	8	203	8	203	8	235	9-1/4
G	143	5-5/8	143	5-5/8	143	5-5/8	114	4-1/2
H	413	16-1/4	413	16-1/4	498	19-5/8	498	19-5/8
J	518	20-3/8	518	20-3/8	518	20-3/8	625	24-5/8

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





Visit us at www.lennox.com

For the latest technical information, www.lennoxcommercial.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.

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