

AIR HANDLERS

CBA27UHE

ELITE® Series

R-410A - Upflow / Horizontal - High Efficiency Blower Motor

PRODUCT SPECIFICATIONS

Bulletin No. 210675 January 2019 Supersedes October 2017







Nominal Capacity - 1.5 to 5 Tons Optional Electric Heat - 2.5 to 25 kW

MODEL NUMBER IDENTIFICATION CB A 27 UH E - 036 - 230 - 6 - 01 **Unit Type Minor Revision Number** CB = Air Handler **Refrigerant Metering Device** Refrigerant Type A = Aluminum Coil/R-410A 2 = Fixed Orifice 3 = TXV - Bleedport (indoor unit) Series 4 = TXV - Non-bleedport (indoor unit) 5 = TXV - Non-bleedport (outdoor unit) Configuration 6 = TXV - R-410A Non-bleedport (indoor unit) UH = Upflow/Horizontal **Blower** Voltage E = High Efficiency Constant Torque Blower Motor 230 = 208/230V-1 phase-60hz 1 460 = 460V-1 phase-60hz ¹ Blower motor is 460V - 1 phase. **Nominal Cooling Capacity - Tons** Optional electric heat is 460V - 3 phase. 018 = 1.5 tonsCan be used with 575V (step-down transformer required) 024 = 2 tons030 = 2.5 tons036 = 3 tons042 = 3.5 tons048 = 4 tons060 = 5 tons

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WARRANTY

All covered components - five years in residential applications, one year in non-residential applications Refer to Lennox Limited Warranty Certificate included with each unit for additional details.

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.

Blower performance data according to unit tests conducted in Lennox air test chamber.

Air handlers are UL Listed to US and Canadian safety standards and components within are bonded for grounding to meet safety standards for servicing required by CEC and NEC.

Air handler units are approved for installation in manufactured housing and mobile homes.

ISO 9001 Registered Manufacturing Quality System.

APPLICATIONS

1.5 to 5 ton nominal sizes.

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

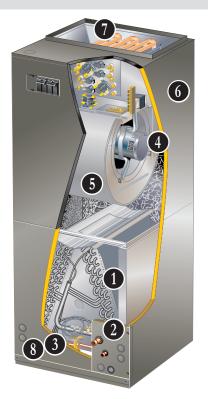
Applicable to expansion valve systems in cooling applications and check and expansion valve systems in heat pump applications.

Wide-range check and expansion valve is factory installed.

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.



REFRIGERANT SYSTEM



Lennox designed and fabricated coils.

Enhanced aluminum alloy tube/enhanced fin coil for superior corrosion resistance.

Aluminum tubing, hairpins, distributor and header tubes.

Ripple-edged aluminum fins.

Twin coil construction assembled in a "A" configuration for large surface area.

Provides excellent heat transfer and low air resistance for maximum efficiency.

Precise circuiting for uniform refrigerant distribution.

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

Rifled tubing provides superior heat transfer.

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

2 Refrigerant Line Connections

Copper refrigerant sweat connections on both liquid and suction lines for easy brazing.

Lines extend outside of the cabinet for ease of connection.

See dimension drawings for locations.

3 Check and Expansion Valve Furnished

For use with R-410A systems.

Wide range valve with Chatleff style fitting.



Factory installed on all models, internal to cabinet.

BLOWER

Power Saver™ Constant Torque Blower Motor

Programmable high efficiency multi-speed blower motor. By maintaining constant torque output, blower motor

can deliver more uniform (but not constant) airflow over the static pressure range.

Programmable multi-speed operation is achieved by the use of an ECM (Electronically Commutated Motor) motor.



Leadless blower motor features simple plug-in connections.

Choice of blower speeds is available. See Blower Data tables.

5 Blower speed change is easily accomplished by a simple wiring change.

Blower Assembly

Lennox designed and built, direct drive blower.

Each blower is statically and dynamically balanced as an assembly before installation in the unit.

Blower motor is resiliently mounted to blower assembly. Blower slides out of cabinet for servicing.

6CABINET

Constructed of heavy-gauge galvanized steel.

Completely insulated with thick fiberglass insulation.

Pre-painted steel cabinets have mildly textured enamel finish with primer coat on unpainted side of all panels.

Units are shipped in one piece but may be disassembled into two separate sections for ease of installation in tight applications. See dimension drawings.

Thick rubber gasket between sections of the two piece cabinets provides an air tight seal.

No external screw heads on sides of cabinet for tight installations without damage to walls or woodwork.

Removable panels provide complete service access.

Electrical inlets provided in sides and top of cabinet. See dimension drawings for locations.

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 kit available for field conversion.

Dual Position Drain Pans

Drain pans designed for upflow, downflow or horizontal applications.

Deep, corrosion resistant plastic drain pans have dual pipe drains.

See dimension drawings.

Optional Accessories

Downflow Combustible Flooring Floor Base

Base is required for models with electric heat installed in downflow position on combustible floors.

Downflow Conversion Kit

Required for field conversion to downflow position. Kit consists of drip shields and 2 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 -018/024 thru -060 models.

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, one for wall mount).

Screws furnished for fastening one bracket to unit.

Bolts for fastening one bracket to wall are field provided.

High Performance Economizer (Commercial Applications Only)

Designed for applications requiring outdoor air to be utilized in a commercial HVAC system. Allows the entry of fresh outdoor air for free cooling, reducing the requirement for mechanical cooling.

Heavy gauge galvanized steel cabinet lined with thick fiberglass insulation.

Mixed air sensor, outdoor air sensor and 24VAC transformer furnished.

Approved for California Title 24 building standards.

ASHRAE 90.1-2010 compliant.

See separate Product Specifications bulletin for additional information and available control and sensor options.

CONTROLS

Transformer and Blower Cooling Relay

24 volt transformer with in-line fuse and blower cooling relay furnished as standard.

Factory installed in the unit control box.

Terminal strip furnished.

Optional Accessories

iComfort® E30 Smart Wi-Fi Thermostat

Wi-Fi enabled, electronic 7-day, universal, multi-stage, programmable, touchscreen thermostat.

3 Heat/2 Cool.

Auto-changeover.

Controls dehumidification during cooling mode and humidification during heating mode.

Offers enhanced capabilities including

humidification / dehumidification / dewpoint measurement and control, *Humiditrol*® control, and equipment maintenance reminders.

Easy to read 7 in. color touchscreen (measured diagonally).

LCD display with backlight shows the current and set temperature, time, inside relative humidity, system status (operating mode and schedules) and outside temperature (optional outdoor sensor required).

Smooth Setback Recovery starts system early to achieve setpoint at start of program period.

Compressor short-cycle protection (5 minutes).

Up to four separate schedules are available plus Schedule IQ^{TM} .

One-Touch Away Mode - A quick and easy way to set the cooling and heating setpoints while away.

Smart Away[™] - Uses geo-fencing technology to determine when the homeowner is within a predetermined distance from the home to operate the system when leaving, away and arriving.

Apple HomeKit™ enabled, making it easy to control the E30 thermostat from an iPhone, iPad or iPod device. Use Siri® voice commands to control the E30 thermostat.

Amazon[®] Alexa-enabled, smart-home compatible. It works with Amazon Echo, Echo Dot and Tap devices.

Wi-Fi remote monitoring and adjustment through a home wireless network for desktop PCs, laptops and apps for smartphones or tablets.

High Definition Color Display, Mag-Mount, Smart Hub Controller, wallplate (for retrofit installations) furnished for easy installation.

Additional indoor air quality comfort products (PureAir™ Air Purification System, *Healthy Climate®* Humidifiers, *Humiditrol®* Enhanced Dehumidification Accessory, *Healthy Climate®* Energy/Heat Recovery Ventilators, *Healthy Climate®* Germicidal Lights) can be added to the system for a complete total-comfort system.

See the iComfort® E30 Smart Wi-Fi Thermostat Product Specifications bulletin in the Controls section for more information.

Remote Outdoor Temperature Sensor

Used with the iComfort® E30 Smart Thermostat.

When installed outdoors, sensor allows thermostat to display outdoor temperature. Sensor is auto-detected when connected to thermostat.

NOTE - Sensor is required for Humiditrol® applications.



Thermostat

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Thermostat (programmable/non-programmable) is not furnished with unit.

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

OPTIONAL ELECTRIC HEAT

Field install internal to unit cabinet.

Available in several voltages and 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.

Supplemental thermal cutoff limit control, provides positive protection in case of excessive temperatures.

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.

Control box and access cover constructed of heavy gauge galvanized steel.

Factory assembled with controls installed and wired. Electric heat low voltage controls plug-in to air handler.

Circuit Breaker Models

ECB29-4CB, -5CB, -6CB, -8CB, -9CB, -10CB, -12.5CB, -15CB, -20CB, -25CB and -30CB (208/240V-1ph) and ECB29-15CB, -20CB and -25CB (208/240V-3ph) 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.

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.

NOTE - 460V-3 phase air handlers can be used in 575V applications.

575V electric heaters are shipped with a 575V to 460V step-down transformer.

Optional Accessories

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.

Removable cover provides easy access.

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

INDOOR AIR QUALITY

8 Air Filter

Tool-less access to filter area for quick and easy servicing.

Disposable frame type filter furnished and factory installed in rails in cabinet.

See Specifications tables for sizes.

Optional Accessories

Healthy Climate® Germicidal UVC Light



Germicidal lamp emits C-Band ultra-violet (UVC) energy at 253.7 nanometers, which is proven to be effective in reducing microbes such as viruses, bacteria, yeasts, and molds.

This process either destroys the organism or controls its ability to reproduce. UVC germicidal light greatly reduces the growth and proliferation of mold and other bioaerosols (bacteria and viruses) on illuminated surfaces (particularly coil and drain pan).

Surfaces must be cleaned prior to UVC light being installed.

Available in 24 volt and 110.230V-1ph models.

Air handlers have a factory provided knockout in the coil delta plate for mounting light within coil area.

Shielding baffle is required when installing light above a non-UVC resistant component, such as a filter.

Baffle must be ordered separately.

SPECIFICATI	10149		ı	ı	ı
General	Model Number	CBA27UHE-018	CBA27UHE-024	CBA27UHE-030	CBA27UHE-036
Data	Nominal tonnage	1.5	2	2.5	3
Connections	Suction (vapor) line (o.d.) - in. sweat	3/4	3/4	3/4	3/4
	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	Net face area - ft.2	4.44	4.44	5.0	5.0
Coil	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.	10 x 8	10 x 8	11 x 8	11 x 8
	Blower motor output - hp	1/2	1/2	1/2	1/2
¹ Filters	Size of filter - in.	20 x 20 x 1			
Shipping Data -1 p	ackage - Ibs.	137	137	150	150
ELECTRICAL	DATA		'		•
	Voltage - 1 phase - 60hz	208/230V-1ph	208/230V-1ph	208/230V-1ph	208/230V-1ph
	Voltage - 3 phase - 60hz				³ 460V-1ph
² Maximum over	current protection (unit only) - All voltages	15	15	15	15
Minimu	um circuit ampacity (unit only) - 208/230V	5	5	5	5
ſ	Blower Motor Full Load Amps - 208/230V	4.1	4.1	4.1	4.1
Mi	inimum circuit ampacity (unit only) - 460V				2.6
	Blower Motor Full Load Amps - 460V				2.1
OPTIONAL A	CCESSORIES - ORDER SEP	ARATELY			
iComfort® E30 Sma	art Wi-Fi Thermostat	15S63	15S63	15S63	15S63
Outdoor Temperate	ure Sensor	X2658	X2658	X2658	X2658
	stible Flooring Base	44K15	44K15	44K15	44K15
Downflow Convers	sion Kit	83M57	83M57	83M57	83M57
Electric Heat - See	Electric Heat Data tables		2.5 to	20 kW	I.
Electric Heat Circu	iit Breaker Cover Kit	82W01	82W01	82W01	82W01
Healthy Climate	UVC-24V (24V)	X9423	X9423	X9423	X9423
Germicidal Light	Shielding Baffle (required)	Y2120	Y2120	Y2120	Y2120
	UVC-41W-S (110/230v-1 ph)	X9424	X9424	X9424	X9424
	Shielding Baffle (required)	X9900	X9900	X9900	X9900
Horizontal Support		56J18	56J18	56J18	56J18
	tand (Upflow Only)	45K32	45K32	45K32	45K32
	r Source Control Box	21H39	21H39	21H39	21H39
	ket Kit (Upflow Only)	45K30	45K30	45K30	45K30
5 5	• • • • • • • • • • • • • • • • • • • •		_	-	

¹ Disposable frame type filter.

 $^{^{\}rm 2}$ HACR type circuit breaker or fuse.

 $^{^{\}rm 3}$ Blower motor is 460V - 1 phase. Optional electric heat is 460V - 3 phase.

SPECIFICAT	TIONS			
General	Model Number	CBA27UHE-042	CBA27UHE-048	CBA27UHE-060
Data	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	Net face area - ft.²	7.22	7.22	8.33
Coil	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 9	12 x 9	12 x 9
	Blower motor output - hp	1	1	1
¹ Filters	Size of filter - in.	20 x 24 x 1	20 x 24 x 1	20 x 24 x 1
Shipping Data -1	package lbs.	186	186	199
ELECTRICAL	L DATA		'	'
	Voltage - 1 phase - 60hz	208/230V-1ph	208/230V- 1ph	208/230V- 1ph
	Voltage - 3 phase - 60hz		³ 460V-1ph	³ 460V-1ph
² Maximum ovei	rcurrent protection (unit only) - All voltages	15	15	15
Minim	num circuit ampacity (unit only) - 208/230V	10	10	10
	Blower Motor Full Load Amps - 208/230V	7.6	7.6	7.6
N	linimum circuit ampacity (unit only) - 460V		5	5
	Blower Motor Full Load Amps - 460V		4	4
OPTIONAL A	ACCESSORIES - ORDER SEPA	ARATELY	'	'
iComfort® E30 Sm	nart Wi-Fi Thermostat	15S63	15S63	15S63
Outdoor Tempera	ture Sensor	X2658	X2658	X2658
Downflow Combu	stible Flooring Base	44K15	44K15	44K15
Downflow Conver	rsion Kit	83M57	83M57	83M57
Electric Heat - Sec	e Electric Heat Data tables		5 to 25 kW	1
Electric Heat Circ	uit Breaker Cover Kit	82W01	82W01	82W01
Healthy Climate	UVC-24V (24V)	X9423	X9423	X9423
Germicidal Light	Shielding Baffle (required)	Y2120	Y2120	Y2120
	UVC-41W-S (110/230v-1 ph)	X9424	X9424	X9424
	Shielding Baffle (required)	X9900	X9900	X9900
Horizontal Suppo	rt Frame Kit	56J18	56J18	56J18
Side Return Unit	Stand (Upflow Only)	45K32	45K32	45K32
Single Point Power	er Source Control Box	21H39	21H39	21H39
Wall Hanging Bra	cket Kit (Upflow Only)	45K30	45K30	45K30
High Performance	Economizer (Commercial Only)	10U53	10U53	10U53
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¹ Disposable frame type filter.

² HACR type circuit breaker or fuse.

 $^{^{\}rm 3}$ Blower motor is 460V - 1 phase. Optional electric heat is 460V - 3 phase.

BLOWER DATA

CBA27UHE-018 BLOWER PERFORMANCE

External		Air Volume and Motor Watts												
Static	Tap 1		Tap 2		Tap 3		Tap 4		Tap 5					
Pressure in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts				
.10	717	66	707	63	735	74	781	81	959	133				
.20	596	58	570	54	636	70	737	91	922	144				
.30	473	56	430	48	603	77	697	101	877	150				
.40	402	61	335	54	540	81	651	105	846	161				
.50	358	67	302	60	492	92	607	117	811	173				
.60	295	74	248	63	434	94	561	121	769	179				
.70	262	79	202	72	399	103	507	131	727	187				
.80	N/A	N/A	N/A	N/A	348	108	459	137	695	196				

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.

CBA27UHE-024 BLOWER PERFORMANCE

External				Aiı	r Volume an	d Motor Wa	itts			
Static	Та	Tap 1		Tap 2		Tap 3		p 4	Та	p 5
in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
.10	767	78	753	75	826	88	957	131	1095	189
.20	662	68	648	66	791	100	937	142	1063	199
.30	615	76	612	77	750	108	895	149	1040	211
.40	561	83	539	83	711	116	861	160	1010	226
.50	522	87	507	89	681	126	821	172	970	230
.60	450	96	438	93	628	134	778	175	944	237
.70	419	100	411	103	584	142	750	186	905	248
.80	365	110	358	108	521	147	702	194	864	256

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.

CBA27UHE-030 BLOWER PERFORMANCE

External				Ai	r Volume an	d Motor Wa	itts			
Static	Tap 1		Tap 2		Та	Tap 3		p 4	Tap 5	
Pressure in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
.10	1061	115	1104	126	1169	154	1212	166	1278	200
.20	941	103	973	118	1070	144	1157	173	1241	210
.30	789	90	848	104	1019	151	1121	185	1201	223
.40	640	83	789	111	991	165	1077	199	1169	233
.50	525	93	728	118	946	175	1038	209	1124	244
.60	469	101	629	128	900	181	1006	215	1100	256
.70	434	104	581	139	851	194	956	230	1051	268
.80	365	116	521	155	754	208	915	237	1000	275

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.

CBA27UHE-036 BLOWER PERFORMANCE

External	Air Volume and Motor Watts at 208V											
Static	Tap 1		Та	Tap 2		Tap 3		Tap 4		р 5		
Pressure in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts		
.10	1074	134	1099	147	1264	206	1343	240	1498	340		
.20	962	121	1027	143	1222	220	1291	253	1467	344		
.30	887	126	989	153	1192	234	1269	266	1433	364		
.40	852	136	944	164	1144	242	1224	280	1391	378		
.50	791	150	894	172	1111	257	1194	286	1365	383		
.60	717	160	820	186	1067	266	1153	297	1320	398		
.70	649	168	745	202	1037	270	1118	309	1290	407		
.80	606	183	697	213	999	284	1081	317	1247	422		

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

CBA27UHE-042 BLOWER PERFORMANCE

External		Air Volume and Motor Watts												
Static	Tap 1		Tap 2		Ta	Tap 3		p 4	Tap 5					
Pressure in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts				
.10	1282	177	1346	201	1497	261	1489	261	1723	396				
.20	1143	159	1278	204	1475	281	1461	273	1690	408				
.30	1067	162	1233	209	1447	297	1427	290	1656	434				
.40	1024	175	1199	223	1406	315	1407	305	1639	436				
.50	920	189	1154	235	1376	320	1360	324	1599	462				
.60	923	197	1099	252	1345	338	1328	336	1573	473				
.70	838	204	1022	267	1294	358	1303	351	1541	485				
.80	815	218	1003	275	1238	375	1228	373	1494	515				

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.

CBA27UHE-048 BLOWER PERFORMANCE

External	Air Volume and Motor Watts												
Static	Tap 1		Tap 2		Та	Tap 3		p 4	Tap 5				
Pressure in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts			
.10	1359	190	1509	257	1718	362	1773	401	1903	511			
.20	1238	174	1473	273	1690	380	1758	419	1899	515			
.30	1135	172	1453	289	1658	397	1707	434	1868	535			
.40	1090	180	1450	290	1619	412	1687	449	1830	553			
.50	1032	195	1374	315	1588	431	1660	465	1801	558			
.60	980	204	1336	331	1561	440	1618	472	1770	582			
.70	929	223	1295	339	1510	457	1593	493	1733	600			
.80	867	235	1227	363	1488	473	1552	508	1703	618			

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.

CBA27UHE-060 BLOWER PERFORMANCE

External	Air Volume and Motor Watts											
Static	Tap 1		Та	Tap 2		Tap 3		p 4	Tap 5			
Pressure in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts		
.10	1404	206	1704	340	1886	453	1928	481	2268	800		
.20	1295	194	1658	349	1849	467	1905	510	2228	829		
.30	1256	204	1631	365	1806	489	1869	525	2192	830		
.40	1199	217	1594	386	1784	505	1842	546	2169	856		
.50	1145	236	1549	394	1751	523	1799	548	2136	870		
.60	1091	248	1508	413	1720	534	1775	569	2106	894		
.70	978	270	1474	433	1683	549	1741	592	2089	907		
.80	946	279	1440	453	1655	566	1709	611	2050	925		

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.

REPLACEMENT CIRCUIT BREAKERS										
Voltage	Description	Catalog No.	Voltage	Description	Catalog No.					
	25 amp, 2 pole	41K13		30 amp, 3 pole	64W47					
	30 amp, 2 pole	17K70		35 amp, 3 pole	41K14					
	35 amp, 2 pole	72K07	208/240V - 3 Phase	40 amp, 3 pole	41K16					
208/240V - 1 Phase	40 amp, 2 pole	49K14	200/240V - 3 Phase	45 amp, 3 pole	18M86					
	45 amp, 2 pole	17K71		50 amp, 3 pole	41K15					
5	50 amp, 2 pole	41K12		60 amp, 3 pole	41K17					
	60 amp, 2 pole	17K72								

SINGLE PHASE

				Input		² Blower		
	Model Number	No. of Stages	Volts	kW	¹ Btuh	Motor Full Load Amps	³ Minimum Circuit Ampacity	⁵ Maximum Overcurrent Protection
2.5 kW	ECB29-2.5 (12L27)	1	208	1.9	6,400	4.1	16	20
4 lbs.	Terminal Block		220	2.1	7,200	4.1	18	20
			230	2.3	7,800	4.1	18	20
			240	2.5	8,500	4.1	18	20
4 kW	ECB29-4 (12L30)	1	208	3.0	10,250	4.1	23	⁴ 25
4 lbs.	Terminal Block ECB29-4CB (12L45)		220	3.4	11,450	4.1	26	30
	30A Circuit breaker		230	3.7	12,550	4.1	26	30
			240	4.0	13,650	4.1	26	30
5 kW	ECB29-5 (12L35)	1	208	3.8	12,800	4.1	28	430
4 lbs.	Terminal Block ECB29-5CB (12L47)		220	4.2	14,300	4.1	31	35
	35A Circuit breaker		230	4.6	15,700	4.1	31	35
			240	5.0	17,100	4.1	31	35
6 kW	ECB29-6 (12L44)	1	208	4.5	15,400	4.1	32	4 35
4 lbs.	Terminal Block ECB29-6CB (12L49)		220	5.0	17,100	4.1	36	40
	40A Circuit breaker		230	5.5	18,800	4.1	36	40
			240	6.0	20,500	4.1	36	40
8 kW	ECB29-8 (12L50)	1	208	6.0	20,500	4.1	41	⁴ 45
5 lbs.	Terminal Block ECB29-8CB (12L52)		220	6.7	22,900	4.1	47	50
	50A Circuit breaker		230	7.3	25,100	4.1	47	50
			240	8.0	27,300	4.1	47	50
9 kW	ECB29-9CB (13T79)	2	208	6.8	23,100	4.1	46	4 50
5 lbs.	60A Circuit breaker		220	7.6	25,800	4.1	52	60
			230	8.3	28,200	4.1	52	60
			240	9.0	30,700	4.1	52	60
10 kW	ECB29-10 (13T83)	2	208	7.5	25,600	4.1	50	4 50
6 lbs.	Terminal Block ECB29-10CB (13T87)		220	8.4	28,700	4.1	57	60
	60A Circuit breaker		230	9.2	31,400	4.1	57	60
			240	10.0	34,100	4.1	57	60

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

² Amps shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

⁵ HACR type circuit breaker or fuse.

SINGLE PHASE

				Input		² Blower		
	Model Number	No. of Stages	Volts	kW	¹ Btuh	Motor Full Load Amps	³ Minimum Circuit Ampacity	5 Maximum Overcurrent Protection
4 kW	ECB29-4 (12L30)	1	208	3.0	10,250	4.1	23	425
4 lbs.	Terminal Block ECB29-4CB (12L45)		220	3.4	11,450	4.1	26	30
	30A Circuit breaker		230	3.7	12,550	4.1	26	30
			240	4.0	13,650	4.1	26	30
5 kW	ECB29-5 (12L35)	1	208	3.8	12,800	4.1	28	430
4 lbs.	Terminal Block ECB29-5CB (12L47)		220	4.2	14,300	4.1	31	35
	35A Circuit breaker		230	4.6	15,700	4.1	31	35
			240	5.0	17,100	4.1	31	35
6 kW	ECB29-6 (12L44)	1	208	4.5	15,400	4.1	32	435
4 lbs.	Terminal Block ECB29-6CB (12L49)		220	5.0	17,100	4.1	36	40
	40A Circuit breaker		230	5.5	18,800	4.1	36	40
			240	6.0	20,500	4.1	36	40
8 kW	ECB29-8 (12L50)	1	208	6.0	20,500	4.1	41	⁴ 45
5 lbs.	Terminal Block ECB29-8CB (12L52)		220	6.7	22,900	4.1	47	50
	50A Circuit breaker		230	7.3	25,100	4.1	47	50
			240	8.0	27,300	4.1	47	50
9 kW	ECB29-9CB (13T79)	2	208	6.8	23,100	4.1	46	⁴ 50
5 lbs.	60A Circuit breaker		220	7.6	25,800	4.1	52	60
			230	8.3	28,200	4.1	52	60
			240	9.0	30,700	4.1	52	60
10 kW	ECB29-10 (13T83)	2	208	7.5	25,600	4.1	50	4 50
6 lbs.	Terminal Block ECB29-10CB (13T87)		220	8.4	28,700	4.1	57	60
	60A Circuit breaker		230	9.2	31,400	4.1	57	60
			240	10.0	34,100	4.1	57	60

 $^{^{\}mbox{\tiny 1}}$ Electric heater capacity only - does not include additional blower motor heat capacity.

² Amps shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

⁵ HACR type circuit breaker or fuse.

SINGLE PHASE

	Madal Number	No.		Inpu	ıt	² Blower Motor Full	³ Min Cir Amp	imum cuit acity	Overc	imum urrent ection		Point Source
	Model Number	of Stages	Volts	kW	¹ Btuh	Load Amps	Ckt 1	Ckt 2	Ckt 1	Ckt 2	³ Minimum Circuit Ampacity	⁵ Maximum Overcurrent Protection
4 kW	ECB29-4 (12L30)	1	208	3.0	10,250	4.1	23		⁴ 25			
4 lbs.	Terminal Block		220	3.4	11,450	4.1	26		30			
	ECB29-4CB (12L45) 30A Circuit breaker		230	3.7	12,550	4.1	26		30			
	JUA Circuit breaker		240	4.0	13,650	4.1	26		30			
5 kW	ECB29-5 (12L35)	1	208	3.8	12,800	4.1	28		430			
4 lbs.	Terminal Block		220	4.2	14,300	4.1	31		35			
	ECB29-5CB (12L47) 35A Circuit breaker		230	4.6	15,700	4.1	31		35			
	33A Circuit breaker		240	5.0	17,100	4.1	31		35			
6 kW	ECB29-6 (12L44)	1	208	4.5	15,400	4.1	32		435			
4 lbs.	Terminal Block		220	5.0	17,100	4.1	36		40			
	ECB29-6CB (12L49)		230	5.5	18,800	4.1	36		40			
	40A Circuit breaker		240	6.0	20,500	4.1	36		40			
8 kW	ECB29-8 (12L50)	1	208	6.0	20,500	4.1	41		4 45			
5 lbs.	Terminal Block		220	6.7	22,900	4.1	47		50			
	ECB29-8CB (12L52)		230	7.3	25,100	4.1	47		50			
	50A Circuit breaker		240	8.0	27,300	4.1	47		50			
9 kW	ECB29-9CB (13T79)	2	208	6.8	23,100	4.1	46		4 50			
5 lbs.	60A Circuit breaker		220	7.6	25,800	4.1	52		60			
			230	8.3	28,200	4.1	52		60			
			240	9.0	30,700	4.1	52		60			
10 kW	ECB29-10 (13T83)	2	208	7.5	25,600	4.1	50		⁴ 50			
6 lbs.	Terminal Block		220	8.4	28,700	4.1	57		60			
	ECB29-10CB (13T87)		230	9.2	31,400	4.1	57		60			
	60A Circuit breaker		240	10.0	34,100	4.1	57		60			
12.5 kW	ECB29-12.5CB (13T88)	2	208	9.4	32,000	4.1	24	38	425	440	62	70
10 lbs.	(1) 30A Circuit breaker		220	10.5	35,800	4.1	27	43	30	45	70	70
	& (1) 45A Circuit breaker		230	11.5	39,200	4.1	27	43	30	45	70	70
			240	12.5	42,600	4.1	27	43	30	45	70	70
15 kW	ECB29-15CB (13T91)	2	208	11.3	38,400	4.1	28	45	430	445	73	80
12 lbs.	(1) 35A Circuit breaker		220	12.6	43,000	4.1	31	52	35	60	83	90
	& (1) 60A Circuit Breaker		230	13.8	47,000	4.1	31	52	35	60	83	90
			240	15.0	51,200	4.1	31	52	35	60	83	90
THREE P	PHASE											
8 kW	ECB29-8 (12L61)	1	208	6.0	20,500	4.1	26		30			
5 lbs.	Terminal Block		220	6.7	22,900	4.1	29		30			
			230	7.3	25,100	4.1	29		30			
			240	8.0	27,300	4.1	29		30			
10 kW	ECB29-10 (12L62)	1	208	7.5	25,600	4.1	31		35			
6 lbs.	Terminal Block		220	8.4	28,700	4.1	35		35			
			230	9.2	31,400	4.1	35		35			
			240	10.0	34,100	4.1	35		35			
15 kW	ECB29-15CB (12L63)	1	208	11.3	38,400	4.1	44		45			
12 lbs.	(1) 50A Circuit breaker		220	12.6	43,000	4.1	50		50			
			230	13.5	47,000	4.1	50		50			
			240	15.0	51,200	4.1	50		50			

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

² Amps shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

⁵ HACR type circuit breaker or fuse.

SINGLE PHASE

	Model Number	No. of		Inpu	ıt	² Blower Motor Full	Cir	imum cuit acity	Overc	imum current ection	Single Power	Point Source
	Model Number	Stages	Volts	kW	¹ Btuh	Load Amps	Ckt 1	Ckt 2	Ckt 1	Ckt 2	³ Minimum Circuit Ampacity	⁵ Maximum Overcurrent Protection
4 kW	ECB29-4 (12L30)	1	208	3.0	10,250	4.1	23		425			
4 lbs.	Terminal Block ECB29-4CB (12L45)		220	3.4	11,450	4.1	26		30			
	30A Circuit breaker		230	3.7	12,550	4.1	26		30			
			240	4.0	13,650	4.1	26		30			
5 kW	ECB29-5 (12L35)	1	208	3.8	12,800	4.1	28		4 30			
4 lbs.	Terminal Block ECB29-5CB (12L47)		220	4.2	14,300	4.1	31		35			
	35A Circuit breaker		230	4.6	15,700	4.1	31		35			
			240	5.0	17,100	4.1	31		35			
6 kW	ECB29-6 (12L44)	1	208	4.5	15,400	4.1	32		435			
4 lbs.	Terminal Block ECB29-6CB (12L49)		220	5.0	17,100	4.1	36		40			
	40A Circuit breaker		230	5.5	18,800	4.1	36		40			
			240	6.0	20,500	4.1	36		40			
8 kW	ECB29-8 (12L50)	1	208	6.0	20,500	4.1	41		445			
5 lbs.	Terminal Block ECB29-8CB (12L52)		220	6.7	22,900	4.1	47		50			
	50A Circuit breaker		230	7.3	25,100	4.1	47		50			
			240	8.0	27,300	4.1	47		50			
9 kW	ECB29-9CB (13T79)	2	208	6.8	23,100	4.1	46		⁴ 50			
5 lbs.	60A Circuit breaker		220	7.6	25,800	4.1	52		60			
			230	8.3	28,200	4.1	52		60			
			240	9.0	30,700	4.1	52		60			
10 kW	ECB29-10 (13T83)	2	208	7.5	25,600	4.1	50		⁴ 50			
6 lbs.	Terminal Block ECB29-10CB (13T87)		220	8.4	28,700	4.1	57		60			
	60A Circuit breaker		230	9.2	31,400	4.1	57		60			
			240	10.0	34,100	4.1	57		60			
12.5 kW	ECB29-12.5CB (13T88)	2	208	9.4	32,000	4.1	24	38	⁴ 25	440	62	70
10 lbs.	(1) 30A Circuit breaker and (1) 45A Circuit breaker		220	10.5	35,800	4.1	27	43	30	45	70	70
	(1) 10/10/10/10/10/10/10/10/10/10/10/10/10/1		230	11.5	39,200	4.1	27	43	30	45	70	70
			240	12.5	42,600	4.1	27	43	30	45	70	70
15 kW	ECB29-15CB (13T91)	2	208	11.3	38,400	4.1	28	45	430	445	73	80
12 lbs.	(1) 35A Circuit breaker and (1) 60A Circuit Breaker		220	12.6	43,000	4.1	31	52	35	60	83	90
	(1) 007 t Ollouit Broaker		230	13.8	47,000	4.1	31	52	35	60	83	90
			240	15.0	51,200	4.1	31	52	35	60	83	90
20 kW	ECB29-20CB (13T92)	2	208	15.0	51,200	4.1	46	50	4 50	4 50	96	100
19 lbs.	(1) 60A Circuit breaker and (1) 60A Circuit Breaker		220	16.8	57,300	4.1	52	57	60	60	109	125
	(1) 00/1 Oil Oil Di Calco		230	18.4	62,700	4.1	52	57	60	60	109	125
			240	20.0	68,200	4.1	52	57	60	60	109	125

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

² Amps shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

⁵ HACR type circuit breaker or fuse.

THREE PHASE

	Madal Number	No. of		Inp	ut	² Blower Motor Full	Cir	imum cuit acity		imum urrent ection	Single Power	Point Source
	Model Number	Stages	Volts	kW	¹ Btuh	Load Amps	Ckt 1	Ckt 2	Ckt 1	Ckt 2	³ Minimum Circuit Ampacity	⁵ Maximum Overcurrent Protection
8 kW	ECB29-8 (12L61)	1	208	6.0	20,500	4.1	26		30			
5 lbs.	Terminal Block		220	6.7	22,900	4.1	29		30			
			230	7.3	25,100	4.1	29		30			
			240	8.0	27,300	4.1	29		30			
10 kW	ECB29-10 (12L62)	1	208	7.5	25,600	4.1	31		35			
6 lbs.	Terminal Block		220	8.4	28,700	4.1	35		35			
			230	9.2	31,400	4.1	35		35			
	ECR20.10 (29K47)		240	10.0	34,100	4.1	35		35			
•	ECB29-10 (28K47)	1	440	8.4	28,700	2.1	16		20			
	(3) 20A Fuses		460	9.2	31,400	2.1	17		20			
			480	10.0	34,100	2.1	17		20			
15 kW	ECB29-15CB (12L63)	1	208	11.3	38,400	4.1	44		445			
12 lbs.	(1) 50A Circuit breaker		220	12.6	43,000	4.1	50		50			
			230	13.5	47,000	4.1	50		50			
			240	15.0	51,200	4.1	50		50			
	ECB29-15 (28K48)	1	440	12.6	43,000	2.1	23		25			
	(3) 25A Fuses		460	13.5	47,000	2.1	24		25			
			480	15.0	51,200	2.1	25		30			
20 kW	ECB29-20CB (12L64)	2	208	15.0	51,200	4.1	31	26	35	4 30	57	60
19 lbs.	(2) 35A Circuit breaker		220	16.8	57,300	4.1	35	30	35	430	65	70
			230	18.4	62,700	4.1	35	30	35	4 30	65	70
	Siravit 1 Minimum Circuit Amana		240	20.0	68,200	4.1	35	30	35	4 30	65	70

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

² Amps shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

⁵ HACR type circuit breaker or fuse.

SINGLE PHASE

	Model Number	No. of	Volts	kW	¹Btuh	² Blower Motor Full	' (linimu Circui mpaci	it	Ov	/laxim ercuri rotecti	ent		le Point r Source
	Woder Number	Stages	Input	Input	Input	Load Amps	Ckt 1	Ckt 2	Ckt 3	Ckt 1	Ckt 2	Ckt 3	³ Minimum Circuit Ampacity	Maximum Overcurrent Protection
4 kW	ECB29-4 (12L30)	1	208	3.0	10,250	7.6	28			30				
4 lbs.	Terminal Block ECB29-4CB (12L45)		220	3.4	11,450	7.6	30			30				
	30A Circuit breaker		230	3.7	12,550	7.6	30			30				
			240	4.0	13,650	7.6	30			30				
5 kW	ECB29-5 (12L35)	1	208	3.8	12,800	7.6	32			35				
4 lbs.	Terminal Block ECB29-5CB (12L47)		220	4.2	14,300	7.6	36			440				
	35A Circuit breaker		230	4.6	15,700	7.6	36			440				
			240	5.0	17,100	7.6	36			440				
6 kW	ECB29-6 (12L44)		208	4.5	15,400	7.6	37			40				
4 lbs.	Terminal Block ECB29-6CB (12L49)		220	5.0	17,100	7.6	41			445				
	40A Circuit breaker		230	5.5	18,800	7.6	41			445				
			240	6.0	20,500	7.6	41			445				
8 kW	ECB29-8 (12L50)	1	208	6.0	20,500	7.6	46			50				
5 lbs.	Terminal Block		220	6.7	22,900	7.6	51			460				
	ECB29-8CB (12L52 50A Circuit breake		230	7.3	25,100	7.6	51			460				
			240	8.0	27,300	7.6	51			460				
9 kW	ECB29-9CB (13T79)	2	208	6.8	23,100	7.6	50			4 50				
5 lbs.	60A Circuit breaker		220	7.6	25,800	7.6	56			60				
			230	8.3	28,200	7.6	56			60				
			240	9.0	30,700	7.6	56			60				
12.5 kW	()		208	9.4	32,000	7.6	28	38		30	440		66	80
10 lbs.	(1) 30A Circuit breaker and (1) 45A Circuit breaker		220	10.5	35,800	7.6	31	43		435	45		75	80
	(1) 43A Circuit breaker		230	11.5	39,200	7.6	31	43		435	45		75	80
			240	12.5	42,600	7.6	31	43		435	45		75	80
15 kW	ECB29-15CB (13T91)		208	11.3	38,400	7.6	32	45		35	445		77	80
12 lbs.	(1) 35A Circuit breaker and (1) 60A Circuit breaker		220	12.6	43,000	7.6	36	52		440	60		88	90
	(1) OUA Circuit breaker		230	13.5	47,000	7.6	36	52		440	60		88	90
			240	15.0	51,200	7.6	36	52		440	60		88	90
20 kW	ECB29-20CB (13T92)		208	15.0	51,200	7.6	50	50		4 50	4 50		100	125
19 lbs.	(1) 60A Circuit breaker and (1) 60A Circuit breaker		220	16.8	57,300	7.6	56	57		60	60		114	125
	(1) OUA Circuit breaker		230	18.4	62,700	7.6	56	57		60	60		114	125
			240	20.0	68,200	7.6	56	57		60	60		114	125
25 kW	ECB29-25CB (12L59)	3	208	18.8	64,100	7.6	47	38	38	4 50	440	440	123	125
19 lbs.	(1) 60A Circuit breaker and		220	21.0	71,700	7.6	53	43	43	60	45	45	140	150
	(2) 45A Circuit breakers		230	23.0	78,300	7.6	53	43	43	60	45	45	140	150
			240	25.0	85,300	7.6	53	43	43	60	45	45	140	150

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

² Amps shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

 $^{^{\}mbox{\tiny 5}}$ HACR type circuit breaker or fuse.

THREE PHASE

	Model Number	No. of		Inpu	ıt	² Blower Motor Full	Cir	imum cuit acity	Overc	imum urrent ection		Point Source
	woder Number	Stages	Volts	kW	¹ Btuh	Load Amps	Ckt 1	Ckt 2	Ckt 1	Ckt 2	³ Minimum Circuit Ampacity	⁵ Maximum Overcurrent Protection
8 kW	ECB29-8 (12L61)	1	208	6.0	20,500	7.6	30		30			
5 lbs.	Terminal block		220	6.7	22,900	7.6	33		35			
			230	7.3	25,100	7.6	33		35			
			240	8.0	27,300	7.6	33		35			
10 kW	ECB29-10 (12L62)	1	208	7.5	25,600	7.6	36		40			
6 lbs.	Terminal Block		220	8.4	28,700	7.6	40		40			
			230	9.2	31,400	7.6	40		40			
			240	10.0	34,100	7.6	40		40			
	ECB29-10 (28K47)	1	440	8.4	28,700							
	(3) 20A Fuses		460	9.2	31,400							
			480	10.0	34,100							
15 kW	ECB29-15CB (12L63)	1	208	11.3	38,400	7.6	49		50			
12 lbs.	50A Circuit breaker		220	12.6	43,000	7.6	55		460			
			230	13.5	47,000	7.6	55		⁴ 60			
			240	15.0	51,200	7.6	55		460			
_	ECB29-15 (28K48)	1	440	12.6	43,000							
	(3) 25A Fuses		460	13.5	47,000							
			480	15.0	51,200							
20 kW	ECB29-20CB (12L64)	2	208	15.0	51,200	7.6	36	26	440	430	62	70
19 lbs.	(2) 35A Circuit breaker		220	16.8	57,300	7.6	40	30	440	4 30	70	70
			230	18.4	62,700	7.6	40	30	440	430	70	70
			240	20.0	68,200	7.6	40	30	440	430	70	70
_	ECB29-20 (28K49)	1	440	16.8	57,300							
	(3) 35A Fuses		460	18.4	62,700							
			480	20.0	68,200							
_	⁶ ECB29-20 (28K51)	1	550	16.8	57,300							
	(3) 25A Fuses		575	18.4	62,700							
			600	20.0	68,200							
25 kW	ECB29-25CB (12L65)	2	208	18.8	64,100	7.6	42	33	⁴ 50	435	62	70
19 lbs.	(2) 45A Circuit breaker		220	21.0	71,700	7.6	47	38	4 50	440	85	90
			230	23.0	78,300	7.6	47	38	⁴ 50	440	85	90
			240	25.0	85,300	7.6	47	38	4 50	440	85	90
_	ECB29-25 (28K50)	1	440	21.0	71,700							
	(3) 40A Fuses		460	23.0	78,300							
			480	25.0	85,300							
_	⁶ ECB29-25 (28K52)	1	550	21.0	71,700							
	(3) 35A Fuses		575	23.0	78,300							
			600	25.0	85,300							
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							

 $^{^{\}mbox{\scriptsize 1}}$ Electric heater capacity only - does not include additional blower motor heat capacity.

 $^{^{\}rm 2}\,\mbox{Amps}$ shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

⁵ HACR type circuit breaker or fuse.

⁶ Blower motor is rated at 460V.

SINGLE PHASE

	E PRASE	No.		Inpu	ıt	² Blower Motor		/linimu Circui mpaci	t	Ov	laxim ercuri otecti	ent		Point Source
	Model Number	of Stages	Volts	kW	¹ Btuh	Full Load Amps	Ckt 1	Ckt 2	Ckt 3	Ckt 1	Ckt 2	Ckt 3	3 Minimum Circuit Ampacity	5 Maximum Overcurrent Protection
4 kW	ECB29-4 (12L30)		208	3.0	10,250	7.6	28			30				
4 lbs.	Terminal Block ECB29-4CB (12L45)		220	3.4	11,450	7.6	30			30				
	30A Circuit breaker		230	3.7	12,550	7.6	30			30				
			240	4.0	13,650		30			30				
5 kW 4 lbs.	ECB29-5 (12L35) Terminal Block		208	3.8	12,800	7.6	32			35				
1 100.	ECB29-5CB (12L47)		220	4.2	<u> </u>		36			440				
	35A Circuit breaker		230 240	4.6 5.0	15,700	7.6 7.6	36			⁴ 40				
6 kW	ECB29-6 (12L44)	1	208	4.5	17,100 15,400		37			40				
4 lbs.	Terminal Block		220	5.0	17,100	7.6	41			445				
	ECB29-6CB (12L49)		230	5.5	18,800		41			445				
	40A Circuit breaker		240		20,500	7.6	41			445				
8 kW	ECB29-8 (12L50)	1	208	-	20,500	7.6	46			50				
5 lbs.	Terminal Block		220	6.7	22,900	7.6	51			460				
	ECB29-8CB (12L52) 50A Circuit breaker		230	7.3	25,100	7.6	51			460				
			240	8.0	27,300	7.6	51			460				
9 kW	ECB29-9CB (13T79)		208	6.8	23,100	7.6	50			4 50				
5 lbs.	60A Circuit breaker		220	7.6	25,800	7.6	56			60				
			230		28,200	7.6	56			60				
			240		30,700	7.6	56			60				
12.5 kW 10 lbs.	 ECB29-12.5CB (13T88) (1) 30A Circuit breaker 		208	9.4	32,000	7.6	28	38		30	⁴40		66	70
10 100.	& (1) 45A Circuit breaker		220	10.5	35,800	7.6	31	43		435	45		75	80
			230	11.5	39,200	7.6	31	43		435	45		75	80
			240		42,600		31	43		435	45		75	80
15 kW	ECB29-15CB (13T91)		208	11.3	38,400	7.6	32	45		35	445		77	80
12 lbs.	(1) 35A Circuit breaker & (1) 60A Circuit breaker		220	12.6	43,000	7.6	36	52		440	60		88	90
	. ,		230	13.5	47,000	7.6	36	52		440	60		88	90
			240	15.0	51,200	7.6	36	52		440	60		88	90
20 kW	ECB29-20CB (13T92)		208	15.0	51,200	7.6	50	50		450	450		100	125
19 lbs.	(1) 60A Circuit breaker & (1) 60A Circuit breaker		220	16.8	57,300	7.6	56	57		60	60		114	125
	, , , , , , , , , , , , , , , , , , , ,		230	18.4	62,700	7.6	56	57		60	60		114	125
			240	20.0	68,200	7.6	56	57		60	60		114	125
25 kW	ECB29-25CB (12L59)		208	18.8	64,100	7.6	47	38	38	4 50	440	440	123	125
19 lbs.	(1) 60A Circuit breaker & (2) 45A Circuit breakers		220	21.0	71,700	7.6	53	43	43	60	45	45	140	150
	(2) To to Tour broakers			_	78,300		53	43	43	60	45	45	140	150
			240	25.0	85,300	7.6	53	43	43	60	45	45	140	150

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

² Amps shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

 $^{^{\}mbox{\tiny 5}}$ HACR type circuit breaker or fuse.

THREE PHASE

	Model Number	No. of		Inpu	ıt	² Blower Motor Full	³ Mini Cire Amp	cuit	Overc	imum urrent ection		Point Source
	woder Number	Stages	Volts	kW	¹ Btuh	Load Amps	Ckt 1	Ckt 2	Ckt 1	Ckt 2	³ Minimum Circuit Ampacity	⁵ Maximum Overcurrent Protection
8 kW	ECB29-8 (12L61)	1	208	6.0	20,500	7.6	30		30			
5 lbs.	Terminal block		220	6.7	22,900	7.6	33		35			
			230	7.3	25,100	7.6	33		35			
			240	8.0	27,300	7.6	33		35			
10 kW	ECB29-10 (12L62)	1	208	7.5	25,600	7.6	36		40			
6 lbs.	Terminal Block		220	8.4	28,700	7.6	40		40			
			230	9.2	31,400	7.6	40		40			
_			240	10.0	34,100	7.6	40		40			
	ECB29-10 (28K47)	1	440	8.4	28,700	4.0	18		20			
	(3) 20A Fuses		460	9.2	31,400	4.0	19		20			
			480	10.0	34,100	4.0	20		25			
15 kW	ECB29-15CB (12L63)	1	208	11.3	38,400	7.6	49		50			
12 lbs.	50A Circuit breaker		220	12.6	43,000	7.6	55		⁴ 60			
			230	13.5	47,000	7.6	55		460			
_			240	15.0	51,200	7.6	55		⁴ 60			
_	ECB29-15 (28K48)	1	440	12.6	43,000	4.0	25		30			
	(3) 25A Fuses		460	13.5	47,000	4.0	26		30			
			480	15.0	51,200	4.0	27		30			
20 kW	ECB29-20CB (12L64)	2	208	15.0	51,200	7.6	36	26	⁴ 40	430	62	70
19 lbs.	(2) 35A Circuit breaker		220	16.8	57,300	7.6	40	30	440	430	70	70
			230	18.4	62,700	7.6	40	30	440	4 30	70	70
_			240	20.0	68,200	7.6	40	30	440	430	70	70
	ECB29-20 (28K49)	1	440	16.8	57,300	4.0	33		35			
	(3) 35A Fuses		460	18.4	62,700	4.0	34		35			
_			480	20.0	68,200	4.0	35		40			
	⁶ ECB29-20 (28K51)	1	550	16.8	57,300	4.0	27		30			
	(3) 25A Fuses		575	18.4	62,700	4.0	28		30			
			600	20.0	68,200	4.0	29		30			
25 kW	ECB29-25CB (12L65)	2	208	18.8	64,100	7.6	42	33	⁴ 50	435	75	80
19 lbs.	(2) 45A Circuit breaker		220	21.0	71,700	7.6	47	38	4 50	440	85	90
			230	23.0	78,300	7.6	47	38	⁴ 50	440	85	90
			240	25.0	85,300	7.6	47	38	⁴ 50	440	85	90
	ECB29-25 (28K50)	1	440	21.0	71,700	4.0	39		40			
	(3) 40A Fuses		460	23.0	78,300	4.0	41		45			
			480	25.0	85,300	4.0	42		45			
	⁶ ECB29-25 (28K52)	1	550	21.0	71,700	4.0	32		35			
	(3) 35A Fuses		575	23.0	78,300	4.0	34		35			
			600	25.0	85,300	4.0	35		40			

 $^{^{\}mbox{\scriptsize 1}}$ Electric heater capacity only - does not include additional blower motor heat capacity.

 $^{^{\}rm 2}\,\mbox{Amps}$ shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

⁵ HACR type circuit breaker or fuse.

⁶ Blower motor is rated at 460V.

SINGLE PHASE

	Model Number	No.		Inpu	ıt	² Blower Motor	'	/linimi Circui mpaci	t	Ov	laxim ercurr otecti	ent		e Point Source
	Model Number	of Stages	Volts	kW	¹ Btuh	Full Load Amps	Ckt 1	Ckt 2	Ckt 3	Ckt 1	Ckt 2	Ckt 3	³ Minimum Circuit Ampacity	⁵ Maximum Overcurrent Protection
4 kW	ECB29-4 (12L30)		208	3.0	10,250	7.6	28			30				
4 lbs.	Terminal Block ECB29-4CB (12L45)	1	220	3.4	11,450	7.6	30			30				
	30A Circuit breaker		230	3.7	12,550		30			30				
			240	4.0	13,650	7.6	30			30				
5 kW 4 lbs.	ECB29-5 (12L35) Terminal Block		208	3.8	12,800	7.6	32			35				
4 103.	ECB29-5CB (12L47)		220	4.2	14,300	7.6	36			440				
	35A Circuit breaker		230	4.6	15,700	7.6	36			440				
C LAM	FCD20 C (421 44)	1	240		17,100		36			440				
6 kW 4 lbs.	ECB29-6 (12L44) Terminal Block		208	4.5 5.0	15,400 17,100	7.6 7.6	37 41			40 4 45				
	ECB29-6CB (12L49)		230	5.5	18,800	7.6	41			445				
	40A Circuit breaker		240	6.0	20,500	7.6	41			445				
8 kW	ECB29-8 (12L50)	1	208	6.0	20,500		46			50				
5 lbs.	Terminal Block		220	6.7	22,900	7.6	51			460				
	ECB29-8CB (12L52) 50A Circuit breaker		230	7.3	25,100	7.6	51			460				
	oort on our breaker		240	8.0	27,300	7.6	51			460				
9 kW	ECB29-9CB (13T79)		208	6.8	23,100	7.6	50			4 50				
5 lbs.	60A Circuit breaker		220	7.6	25,800	7.6	56			60				
			230	8.3	28,200	7.6	56			60				
			240	9.0	30,700		56			60				
12.5 kW			208	9.4	32,000	7.6	28	38		30	⁴ 40		66	70
10 lbs.	(1) 30A Circuit breaker & (1) 45A Circuit breaker		220	10.5	35,800	7.6	31	43		435	45		75	80
			230	11.5	39,200	7.6	31	43		435	45		75	80
			240	12.5	42,600	7.6	31	43		435	45		75	80
15 kW	ECB29-15CB (13T91)		208	11.3	38,400	7.6	32	45		35	445		77	80
12 lbs.	(1) 35A Circuit breaker & (1) 60A Circuit breaker		220	12.6	43,000	7.6	36	52		440	60		88	90
	. ()		230	13.5	47,000	7.6	36	52		440	60		88	90
			240	15.0	51,200	7.6	36	52		440	60		88	90
20 kW	ECB29-20CB (13T92)		208	15.0	51,200	7.6	50	50		450	4 50		100	125
19 lbs.	(1) 60A Circuit breaker & (1) 60A Circuit breaker		220	16.8	57,300	7.6	56	57		60	60		114	125
	()		230	18.4	62,700	7.6	56	57		60	60		114	125
			240	20.0	68,200	7.6	56	57		60	60		114	125
25 kW	ECB29-25CB (12L59)		208	18.8	64,100	7.6	47	38	38	4 50	440	440	123	125
19 lbs.	(1) 60A Circuit breaker & (2) 45A Circuit breakers		220	21.0	71,700	7.6	53	43	43	60	45	45	140	150
	a (2) 40A Circuit breakers		230	23.0	78,300	7.6	53	43	43	60	45	45	140	150
			240	25.0	85,300	7.6	53	43	43	60	45	45	140	150

 $^{^{\}mbox{\tiny 1}}$ Electric heater capacity only - does not include additional blower motor heat capacity.

 $^{^{\}rm 2}\,\mbox{Amps}$ shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

⁵ HACR type circuit breaker or fuse.

THREE PHASE

	Model Number	No. of		Inpu	ıt	² Blower Motor Full		imum cuit acity	Overc	imum urrent ection		Point Source
	Woder Number	Stages	Volts	kW	¹ Btuh	Load Amps	Ckt 1	Ckt 2	Ckt 1	Ckt 2	³ Minimum Circuit Ampacity	⁵ Maximum Overcurrent Protection
8 kW	ECB29-8 (12L61)	1	208	6.0	20,500	7.6	30		30			
5 lbs.	Terminal block		220	6.7	22,900	7.6	33		35			
			230	7.3	25,100	7.6	33		35			
			240	8.0	27,300	7.6	33		35			
10 kW	ECB29-10 (12L62)	1	208	7.5	25,600	7.6	36		40			
6 lbs.	Terminal Block		220	8.4	28,700	7.6	40		40			
			230	9.2	31,400	7.6	40		40			
			240	10.0	34,100	7.6	40		40			
_	ECB29-10 (28K47)	1	440	8.4	28,700	4.0	18		20			
	(3) 20A Fuses		460	9.2	31,400	4.0	19		20			
			480	10.0	34,100	4.0	20		25			
15 kW	ECB29-15CB (12L63)	1	208	11.3	38,400	7.6	49		50			
12 lbs.	50A Circuit breaker		220	12.6	43,000	7.6	55		⁴ 60			
			230	13.5	47,000	7.6	55		460			
			240	15.0	51,200	7.6	55		⁴ 60			
_	ECB29-15 (28K48)	1	440	12.6	43,000	4.0	25		30			
	(3) 25A Fuses		460	13.5	47,000	4.0	26		30			
			480	15.0	51,200	4.0	27		30			
20 kW	ECB29-20CB (12L64)	2	208	15.0	51,200	7.6	36	26	440	4 30	62	70
19 lbs.	(2) 35A Circuit breaker		220	16.8	57,300	7.6	40	30	440	4 30	70	70
			230	18.4	62,700	7.6	40	30	440	4 30	70	70
			240	20.0	68,200	7.6	40	30	440	4 30	70	70
_	ECB29-20 (28K49)	1	440	16.8	57,300	4.0	33		35			
	(3) 35A Fuses		460	18.4	62,700	4.0	34		35			
			480	20.0	68,200	4.0	35		40			
_	⁶ ECB29-20 (28K51)	1	550	16.8	57,300	4.0	27		30			
	(3) 25A Fuses		575	18.4	62,700	4.0	28		30			
			600	20.0	68,200	4.0	29		30			
25 kW	ECB29-25CB (12L65)	2	208	18.8	64,100	7.6	42	33	45	435	75	80
19 lbs.	(2) 45A Circuit breaker		220	21.0	71,700	7.6	47	38	4 50	440	85	90
			230	23.0	78,300	7.6	47	38	4 50	440	85	90
			240	25.0	85,300	7.6	47	38	4 50	440	85	90
_	ECB29-25 (28K50)	1	440	21.0	71,700	4.0	39		40			
	(3) 40A Fuses		460	23.0	78,300	4.0	41		45			
			480	25.0	85,300	4.0	42		45			
_	⁶ ECB29-25 (28K52)	1	550	21.0	71,700	4.0	32		35			
	(3) 35A Fuses	·	575	23.0	78,300	4.0	34		35			
			600	25.0	85,300	4.0	35		40			
			000	20.0	00,000	7.0	00		70			

 $^{^{\}mbox{\scriptsize 1}}$ Electric heater capacity only - does not include additional blower motor heat capacity.

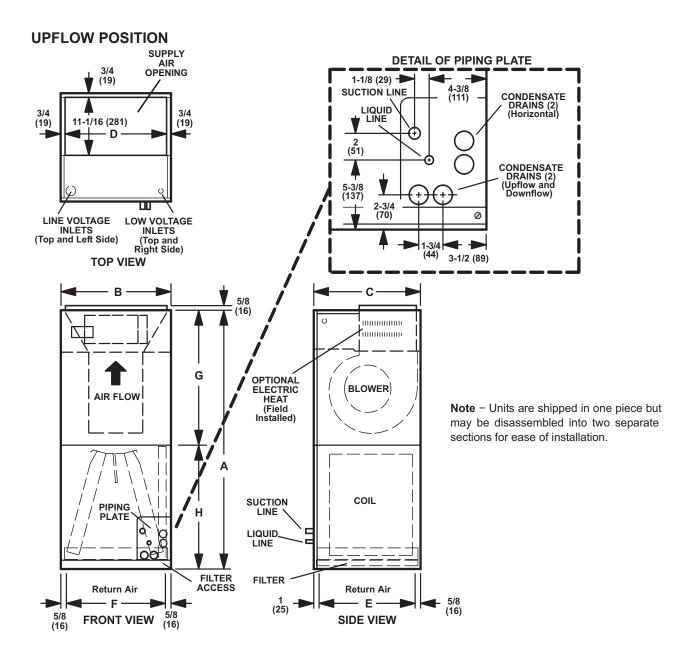
 $^{^{\}rm 2}\,\mbox{Amps}$ shown are for blower motor only.

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.

⁴ Bold text indicates that the circuit breaker on "CB" circuit breaker models must be replaced with size noted. See Table on Page 9.

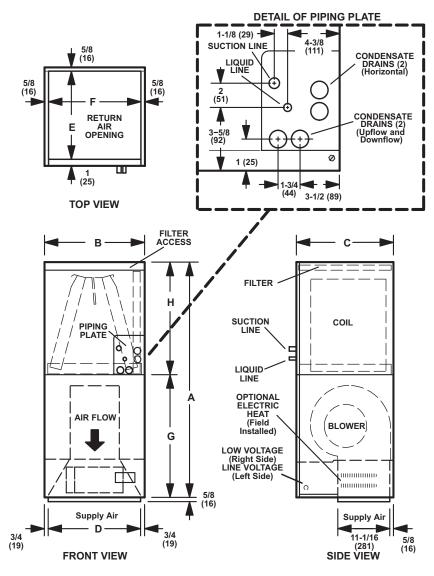
⁵ HACR type circuit breaker or fuse.

⁶ Blower motor is rated at 460V.



Model No.		Α	В	С	D	E	F	G	Н
CBA27UHE-018	in.	49-1/4	21-1/4	20-5/8	19-3/4	19	20	24-5/8	24-5/8
CBA27UHE-024	mm	1251	540	524	502	483	508	625	625
CBA27UHE-030	in.	51	21-1/4	22-5/8	19-3/4	21	20	26-3/8	24-5/8
CBA27UHE-036	mm	1295	540	575	502	533	508	670	625
CBA27UHE-042	in.	58-1/2	21-1/4	24-5/8	19-3/4	23	20	27-7/8	30-5/8
CBA27UHE-048	mm	1486	540	625	502	584	508	708	778
CRASZULE 060	in.	62-1/2	21-1/4	24-5/8	19-3/4	23	20	625 26-3/8 670 27-7/8	34-5/8
CBA27UHE-060	mm	1588	540	625	502	584	508	708	879

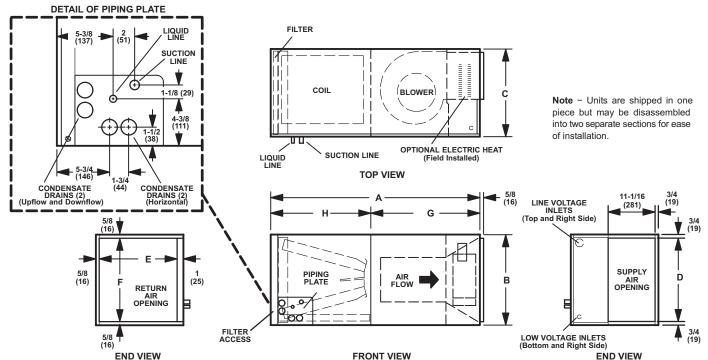
DOWNFLOW POSITION with Optional Downflow Conversion Kit (Required)



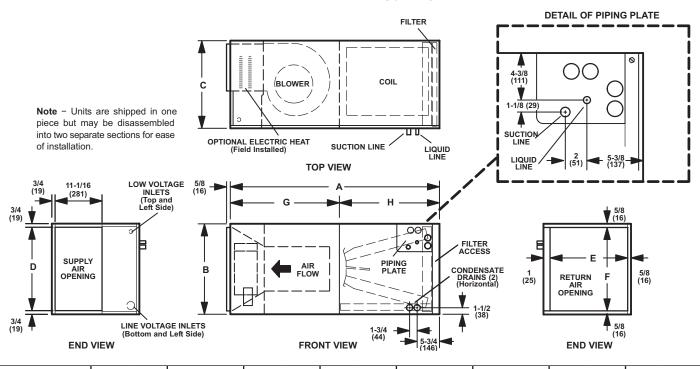
Note – Units are shipped in one piece but may be disassembled into two separate sections for ease of installation.

Model No.		Α	В	С	D	Е	F	G	Н
CBA27UHE-018	in.	49-1/4	21-1/4	20-5/8	19-3/4	19	20	24-5/8	24-5/8
CBA27UHE-024	mm	1251	540	524	502	483	508	625	625
CBA27UHE-030	in.	51	21-1/4	22-5/8	19-3/4	21	20	26-3/8	24-5/8
CBA27UHE-036	mm	1295	540	575	502	533	508	670	625
CBA27UHE-042	in.	58-1/2	21-1/4	24-5/8	19-3/4	23	20	27-7/8	30-5/8
CBA27UHE-048	mm	1486	540	625	502	584	508	708	778
CBA27UHE-060	in.	62-1/2	21-1/4	24-5/8	19-3/4	23	20	27-7/8	34-5/8
CDAZI OFIE-000	mm	1588	540	625	502	584	508	708	879

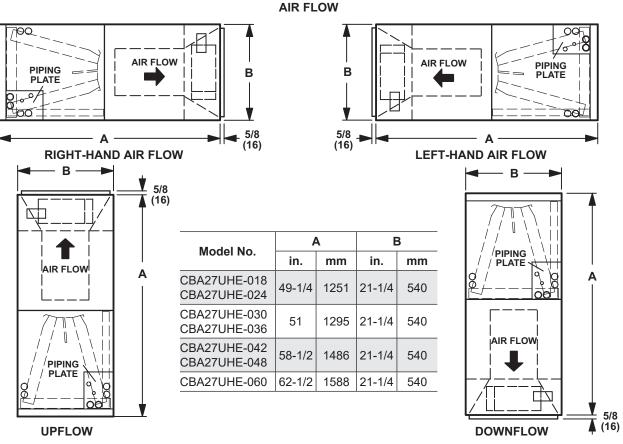
RIGHT-HAND AIR DISCHARGE



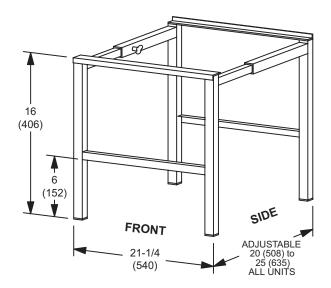
LEFT-HAND AIR DISCHARGE



Model	_ A	A	E	3			[)	E		F	=	0	}	H	1
No.	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
CBA27UHE-018 CBA27UHE-024	49-1/4	1251	21-1/4	540	20-5/8	524	19-3/4	502	19	483	20	508	24-5/8	625	24-5/8	625
CBA27UHE-030 CBA27UHE-036	51	1295	21-1/4	540	22-5/8	575	19-3/4	502	21	533	20	508	26-3/8	670	24-5/8	625
CBA27UHE-042 CBA27UHE-048	58-1/2	1486	21-1/4	540	24-5/8	625	19-3/4	502	23	584	20	508	27-7/8	708	30-5/8	778
CBA27UHE-060	62-1/2	1588	21-1/4	540	24-5/8	625	19-3/4	502	23	584	20	508	27-7/8	708	34-5/8	879



SIDE RETURN UNIT STAND (Upflow Only)



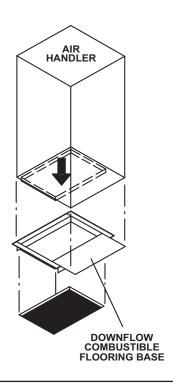
INSTALLATION CLEARANCES WITH ELECTRIC HEAT					
Cabinet	0 inch (0 mm)				
To Plenum	1 inch (25 mm)				
To Outlet Duct within 3 feet (914 mm)	1 inch (25 mm)				
Floor	See Note #1				
Service / Maintenance	See Note #2				

¹ Units installed on combustible floors in the downflow position with electric heat require optional downflow combustible flooring base.

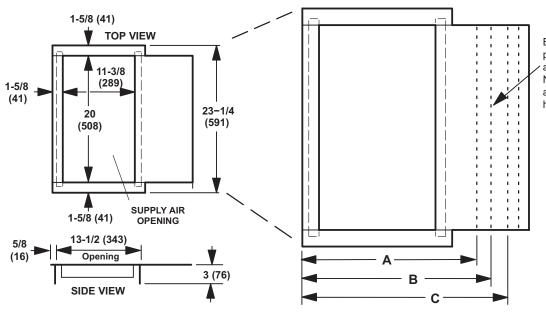
² Front service access - 24 inches (610 mm) minimum.

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

DOWNFLOW COMBUSTIBLE FLOORING BASE



Catalog No. - 44K15



Break off extended width at pre-perforated line to fit specific air handler application.

NOTE - Width of base includes an additional 2 in. (51 mm) for air handler positioning adjustment.

Model No	018,	024	030,	036	042, 048, 060		
Model No.	in.	mm	in.	mm	in.	mm	
Α	22-5/8	575					
В			24-5/8	625			
С					26-5/8	676	

REVISIONS				
Sections	Description of Change			
Ontional Association	Corrected catalog number for Downflow Conversion Kit.			
Optional Accessories	Added iComfort® E30 Smart Thermostat.			





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