

**CB21V AND CBH21V SERIES
UP-FLOW, DOWN-FLOW AND HORIZONTAL
BLOWER COIL UNITS**

**CB21V/
CBH21V**

***36,800 to 64,500 Btuh (10.8 to 18.9 kW) Cooling Capacity**
36,400 to 55,500 Btuh (10.7 to 16.3 kW) Heat Pump Heating Capacity
12,800 to 102,400 Btuh (3.8 to 30.0 kW) Optional Electric Heat

*ARI Standard 210/240 Ratings With Matching Outdoor Unit

Bulletin #210055
January 1995
Supersedes
April 1994

Applications — The CB21V and CBH21V blower coil units are designed for multi-position installation in a basement, utility room, alcove, closet, crawlspace or attic. Several models are available in varying sizes with a wide range of heating and cooling capacities. See tab sections, Cooling Units — Condensing Units or Heat Pump — Outdoor Units for system match-ups. Optional field installed electric heaters are available in several sizes for additive heating.

CB21V models are applicable to up-flow or down-flow discharge air applications. Units are shipped for up-flow applications and may easily be field converted to the down-flow position by turning the unit upside down and repositioning the coil, drip shields and cabinet access panel. Filter mounting rails are provided on the return air opening in the cabinet. Filters are not furnished and must be ordered extra. An optional additive base is available for models with electric heat installed in the down-flow position on combustible floors.

CBH21V models are designed for horizontal discharge air applications. Units are furnished with left hand air discharge as standard and may be field changed to right hand discharge by turning the unit over (end for end) and repositioning the coil. CBH21V-51 and CBH21V-65 models are furnished in a two piece cabinet with blower and optional electric heaters in one section and the evaporator coil in the other. Hardware is furnished for field connection of cabinets. Filter mounting rails are provided on the return air opening in the cabinet. Filters are not furnished and must be ordered extra.

Units are equipped with a variable speed motor (VSM) which maintains a specified air volume throughout the external static range. The motor is controlled by the BDC2 blower drive control. This electronic control allows the blower to operate at three of the twelve air volumes or speeds available. The three speeds may be field selected on the BDC2 control depending on the blower coil unit size and air volume desired. See blower performance tables.

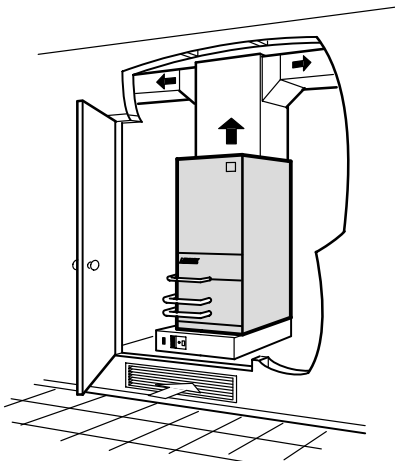
Approvals — Blower coil units are tested with matching condensing units in the Lennox Research Laboratory environmental test room in accordance with ARI Standard 210/240-89. Optional electric heaters are rated in accordance with U.S. Department of Energy (DOE) test procedures and Federal Trade Commission (FTC) labeling regulations. Blower performance data is according to actual unit tests conducted in Lennox air test chamber. Blower-coil units and components within are bonded for grounding to meet safety standards for servicing required by U.L., C.S.A., NEC and CEC.

CB21V MODEL — UP-FLOW

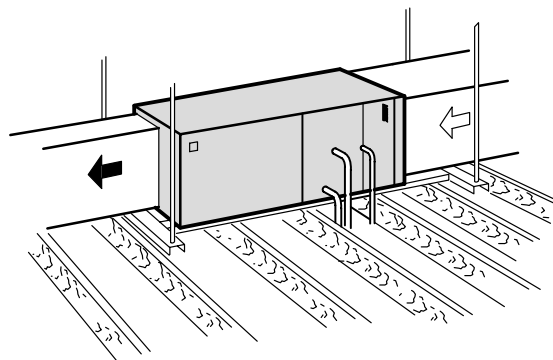
CB21V MODEL — DOWN-FLOW

CBH21V MODEL — HORIZONTAL

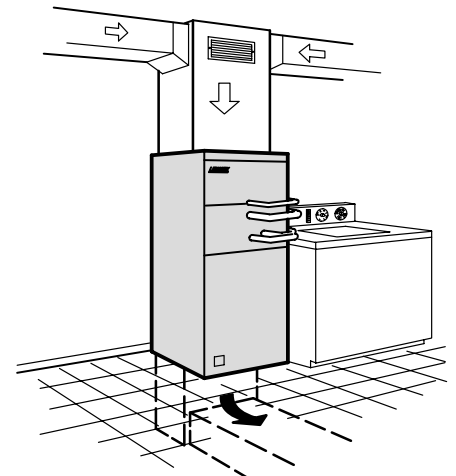
Typical Applications



Up-Flow Installation
with optional electronic air cleaner



Horizontal Installation



Down-Flow Installation

♣ The maple leaf symbol in this bulletin denotes Canadian only usage where applicable

NOTE — Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability.

FEATURES

Warranty — CB21V/CB21V units have a limited warranty for five years in residential installations and one year in non-residential installations. Refer to the Lennox Equipment Limited Warranty certificate included with the unit for details.

Unit Cabinet — Constructed of heavy gauge galvanized steel and completely insulated with thick fiberglass insulation. The pre-painted steel cabinets have a finish of mildly textured enamel with a primer coat on the unpainted side of all panels. Removable panels provide complete service access. Electrical inlets are provided in both sides of cabinet.

Copper Tube/Enhanced Fin Evaporator Coil — Lennox designed twin coils, assembled in a 'V' configuration, provides extra large surface and contact area, excellent heat transfer and low air resistance for maximum efficiency. Precise circuiting gives uniform refrigerant distribution. Lennox fabricated coil is constructed of 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. Rifled tubing provides superior refrigerant flow for maximum heat transfer. Flared shoulder tubing joints and silver soldering provide tight, leakproof joints. Long life copper tubing is easy to field service. Coil is thoroughly factory tested under high pressure to insure leakproof construction.

Drain Pan — Deep, corrosion resistant galvalume drain pan has dual pipe drains extended outside of cabinet for ease of connection. See dimension drawings.

OPTIONAL ACCESSORIES (Must Be Ordered Extra)

Air Filters (Not Furnished) — Filters must be ordered extra. See Specifications tables for sizes. Filter rails are provided in the return air opening of unit. See dimension drawings.

Electric Heat (Optional) — Additive electric heaters field install internal to the unit cabinet and are available in several kw sizes, see Electric Heat table. The helix wound nichrome bare heating elements are exposed directly in the air stream resulting in instant heat transfer, low element temperatures and long service life. Each heating element is equipped with accurately located limit control with fixed temperature off setting and automatic reset. In addition, elements have supplemental thermal cutoff safety fuses providing positive protection in case of excessive temperatures. Cutoff fuses are mounted external to the element face plate for quick and easy replacement. Thermal sequencer relay brings the heating elements on and off line, in sequence and equal increments, with a time delay between each element. Sequencer also initiates and terminates blower operation. Heating control relay(s), is furnished as standard. Heaters are equipped with factory wired circuit breakers to provide overload and short circuit protection. Breakers are current sensitive and temperature actuated to shut off heater if current draw is excessive. Must be reset manually. Circuit breakers qualify as the disconnect means at unit in many areas and eliminate the need for a field provided disconnect. Consult local electrical code in your area. Control box and access cover are constructed of heavy gauge galvanized steel. Heaters are factory assembled with controls installed and wired and only require plug-in field connection.

Circuit Breakers — ECB21-12.5, 15, 20, 25 and 30 kW (208/240v-1ph and ECB21-15, 20 and 25 kW (208/240v-3ph) electric heaters are equipped with circuit breakers to provide overload and short circuit protection. Breakers are factory wired and mounted on electric heat units. Circuit breakers (manual reset) are current sensitive and temperature actuated to shut off power to heater if current draw is excessive. Circuit breakers qualify as a means of unit disconnect in many areas and eliminate the need for a field provided disconnect. Consult local electrical code in your area.

Blower — Equipped with a Lennox designed and built direct drive blower. Each blower is statically and dynamically balanced as an assembly before it is installed in the unit. Variable speed motor (VSM) is resiliently mounted. Motor circuit breaker is provided for overload and short circuit protection. Accessible external to cabinet, manually reset.

BDC2 Blower Control — Blower control interfaces the VSM motor with the thermostat and optional CCB1 humidity control. Solid-state board controls the evaporator humidity by controlling the blower speed and the compressor speed on two speed outdoor units. The BDC2 control has four diagnostic indicator lights (ON/OFF - HEAT - HI/LOW - CFM) to assist in servicing. Control is factory installed in the unit control box. The three speeds, heating, high speed cooling and low speed (cooling or continuous fan) are made by simple jumper pins on the board. Accessory relay terminals provide connections for power humidifiers or electronic air cleaners.

Transformer and Terminal Strip — A 24 volt transformer and terminal strip are furnished as standard equipment and are factory installed in the unit control box.

Refrigerant Line Connections — Suction (vapor) and liquid lines have sweat connections and extend outside of the cabinet for ease of connection. See dimension drawings for locations.

Check and Expansion Valve Furnished — Check and expansion valve furnished and factory installed on all models.

Single Point Power Source Control Box (Optional) — Control box (21H39) may be used with optional electric heat when two or three circuits (if required by code) are specified. Field installs external to the unit cabinet on either side or top. Provides single power service connection to the unit. Constructed of heavy gauge steel with baked enamel finish, prepunched mounting holes, electrical inlet knockouts and terminal strip. Removeable cover provides easy access. Box is 7 in. x 7 in. x 4 in. deep (178 mm x 178 mm x 102 mm), shipping weight 5 lbs. (2 kg).

Down-Flow Additive Base (Optional) — An optional additive base is required for models with electric heat installed in the down-flow position on combustible floors. Base is not furnished and must be ordered extra for field installation. See Specifications table and dimension drawing.

CCB1 EfficiencyPlus™ Humidity Control (Optional) — The CCB1 humidity control (35H00) is an electronic control which installs next to the room thermostat and allows the selection of the desired indoor humidity level in the cooling mode. During the heating season the control is inoperable. The CCB1 controls the indoor humidity by altering the indoor blower speed and the compressor speed. Humidity level desired may be accomplished by adjusting a vertical slide to a set point on a scale of 40% thru 60% with 50% recommended as the initial set point. Five indicator lights (MIN — MAX) in a bar graph configuration indicate the difference in the actual relative humidity and the set point. This indicates the demand imposed on the system equipment, the more lights on, the longer the equipment will operate to obtain the desired humidity level. If no lights are on, the humidity is at or below the set point. The control is not furnished and must be ordered extra.

SPECIFICATIONS – CB21V UP-FLOW/DOWN-FLOW

Model Number		CB21V-41	CB21V-51	CB21V-65	
Evaporator Coil	Net face area – ft. ² (m ²)	5.27 (0.49)	7.0 (0.65)	7.0 (0.65)	
	Tube outside diameter – in. (mm)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	
	Number of rows	3	3	3	
	Fins per inch (fins per m)	13 (512)	14 (551)	14 (551)	
	Suction (vapor) line connection – in. (mm) sweat	3/4 (19)	7/8 (22.2)	1-1/8 (28)	
	Liquid line connection – in. (mm) sweat	★3/8 (9.5)	★3/8 (9.5)	★3/8 (9.5)	
Condensate drain connection – in. (mm)		(2) 3/4 (19) PVC	(2) 3/4 (19) PVC	(2) 3/4 (19) PVC	
Nominal cooling capacity – tons (kW)		3 (10.6)	4 (14.1)	5 (17.6)	
Refrigerant		HCFC-22			
Blower wheel nominal diameter x width	in.	10 x 9	12 x 9	12 x 9	
	mm	254 x 229	317 x 229	317 x 229	
Blower motor output – hp (W)		1/2 (373)	1 (746)	1 (746)	
††Number and size of filters	in.	(1) 20 x 20 x 1	(1) 20 x 25 x 1	(1) 20 x 25 x 1	
	mm	(1) 508 x 508 x 25	(1) 508 x 635 x 25	(1) 508 x 635 x 25	
Electrical characteristics		208/230 volt 60 hertz – 1 phase			
Shipping weight – lbs. (kg) 1 package		167 (76)	209 (95)	213 (97)	
Number of packages in shipment		1	1	1	
↔ Optional Accessories (Must Be Ordered Extra) ↔					
Down-Flow Combustible Base	Catalog number	85G53	85G54	85G54	
	Shipping weight – lbs. (kg)	8 (4)	8 (4)	8 (4)	
Optional Electric Heat Capacity	ECB21-5	*Output – Btuh (kW)	18,000 (5.3)	19,000 (5.6)	19,000 (5.6)
		†A.F.U.E.	100%	100%	100%
	ECB21-6	*Output – Btuh (kW)	22,000 (6.4)	23,000 (6.7)	23,000 (6.7)
		†A.F.U.E.	100%	100%	100%
	ECB21-7	*Output – Btuh (kW)	25,000 (7.3)	26,000 (7.6)	26,000 (7.6)
		†A.F.U.E.	100%	100%	100%
	ECB21-8	*Output – Btuh (kW)	29,000 (8.5)	30,000 (8.8)	30,000 (8.8)
		†A.F.U.E.	100%	100%	100%
	ECB21-10	*Output – Btuh (kW)	35,000 (10.3)	37,000 (10.8)	37,000 (10.8)
		†A.F.U.E.	100%	100%	100%
	ECB21-12.5	*Output – Btuh (kW)	44,000 (12.9)	46,000 (13.5)	46,000 (13.5)
		†A.F.U.E.	100%	100%	100%
	ECB21-15	*Output – Btuh (kW)	53,000 (15.5)	54,000 (15.8)	54,000 (15.8)
		†A.F.U.E.	100%	100%	100%
	ECB21-20	*Output – Btuh (kW)	70,000 (20.5)	71,000 (20.8)	71,000 (20.8)
		†A.F.U.E.	100%	100%	100%
	ECB21-25	*Output – Btuh (kW)	----	88,000 (25.8)	88,000 (25.8)
		†A.F.U.E.	----	100%	100%
ECB21-30	*Output – Btuh (kW)	----	105,000 (30.8)	105,000 (30.8)	
	†A.F.U.E.	----	100%	99.9%	

†Annual Fuel Utilization Efficiency based on DOE test procedures and according to FTC labeling regulations

††Filters are not furnished and must be ordered extra.

*Includes additional blower motor heat capacity.

★3/8FF x 1/2FF (9.5mm x 12.7mm) Adaptor furnished with unit for expansion valve connection to unit.

SPECIFICATIONS — CBH21V HORIZONTAL

Model Number		CBH21V-41	CBH21V-51	CBH21V-65	
Blower section		----	B21V-51/65	B21V-51/65	
Evaporator coil section		----	CH21-51	CH19-65	
Evaporator Coil	Net face area — ft. ² (m ²)	5.27 (0.49)	7.22 (0.67)	7.22 (0.67)	
	Tube outside diameter — in. (mm)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	
	Number of rows	3	3	3	
	Fins per inch (fins per m)	13 (512)	14 (551)	14 (551)	
	Suction (vapor) line connection — in. (mm) sweat	3/4 (19)	7/8 (22.2)	1-1/8 (28)	
	Liquid line connection — in. (mm) sweat	★3/8 (9.5)	★3/8 (9.5)	★3/8 (9.5)	
Condensate drain connection — in. (mm)		(2) 3/4 (19) MPT	(2) 3/4 (19) MPT	(2) 3/4 (19) MPT	
Nominal cooling capacity — tons (kW)		3 (10.6)	4 (14.1)	5 (17.6)	
Refrigerant		HCFC-22			
Blower wheel nominal diameter x width	in.	10 x 9	12 x 9	12 x 9	
	mm	254 x 229	317 x 229	317 x 229	
Blower motor output — hp (W)		1/2 (373)	1 (746)	1 (746)	
††Number and size of filters	in.	(1) 20 x 20 x 1	(1) 20 x 25 x 1	(1) 20 x 25 x 1	
	mm	(1) 508 x 508 x 25	(1) 508 x 635 x 25	(1) 508 x 635 x 25	
Electrical characteristics		208/230 volt 60 hertz — 1 phase			
Shipping weight — lbs. (kg)	Blower section	178 (81)	118 (54)	118 (54)	
	Coil section		122 (55)	122 (55)	
Number of packages in shipment		1	2	2	
↔ Optional Accessories (Must Be Ordered Extra) ↔					
Optional Electric Heat Capacity	ECB21-5	*Output — Btuh (kW)	18,000 (5.3)	19,000 (5.6)	19,000 (5.6)
		†A.F.U.E.	100%	100%	100%
	ECB21-6	*Output — Btuh (kW)	22,000 (6.4)	23,000 (6.7)	23,000 (6.7)
		†A.F.U.E.	100%	100%	100%
	ECB21-7	*Output — Btuh (kW)	25,000 (7.3)	26,000 (7.6)	26,000 (7.6)
		†A.F.U.E.	100%	100%	100%
	ECB21-8	*Output — Btuh (kW)	29,000 (8.5)	30,000 (8.8)	30,000 (8.8)
		†A.F.U.E.	100%	100%	100%
	ECB21-10	*Output — Btuh (kW)	35,000 (10.3)	37,000 (10.8)	37,000 (10.8)
		†A.F.U.E.	99.9%	100%	100%
	ECB21-12.5	*Output — Btuh (kW)	44,000 (12.9)	46,000 (13.5)	46,000 (13.5)
		†A.F.U.E.	99.9%	100%	100%
	ECB21-15	*Output — Btuh (kW)	53,000 (15.5)	54,000 (15.8)	54,000 (15.8)
		†A.F.U.E.	100%	100%	100%
	ECB21-20	*Output — Btuh (kW)	70,000 (20.5)	71,000 (20.8)	71,000 (20.8)
		†A.F.U.E.	99.8%	99.8%	100%
	ECB21-25	*Output — Btuh (kW)	----	88,000 (25.8)	88,000 (25.8)
		†A.F.U.E.	----	99.8%	99.9%
	ECB21-30	*Output — Btuh (kW)	----	105,000 (30.8)	105,000 (30.8)
		†A.F.U.E.	----	99.9%	99.9%

†Annual Fuel Utilization Efficiency based on DOE test procedures and according to FTC labeling regulations

††Filters are not furnished and must be ordered extra.

*Includes additional blower motor heat capacity.

★3/8FF x 1/2FF (9.5mm x 12.7mm) Adaptor furnished with unit for expansion valve connection to unit.

ELECTRIC HEAT DATA – CB21V/CBH21V-41

Blower Coil Unit Model Number	Electric Heat Model Number & Shipping Weight	Number of Steps & Phase	Volts Input	kW Input	**Btuh Input	*Minimum Circuit Ampacity		
						●Circuit 1 Blower	Circuit 2	Circuit 3
CB21V-41 CBH21V-41	ECB21-5 (28H46) 4 lbs. (2 kg)	1 step 1 phase	208	3.8	12,800	6.8	22.7	----
			220	4.2	14,300	6.8	23.9	----
			230	4.6	15,700	6.8	25.0	----
			240	5.0	17,100	6.8	26.0	----
	ECB21-5 (28H51) 6 lbs. (3 kg)	3 steps 3 phase	208	3.8	12,800	6.8	13.0	----
			220	4.2	14,300	6.8	13.9	----
			230	4.6	15,700	6.8	14.4	----
			240	5.0	17,100	6.8	15.0	----
	ECB21-6 (28H47) 5 lbs. (2 kg)	2 steps 1 phase	208	4.5	15,400	6.8	27.2	----
			220	5.0	17,100	6.8	28.4	----
			230	5.5	18,800	6.8	30.0	----
			240	6.0	20,500	6.8	31.3	----
	ECB21-7 (28H48) 5 lbs. (2 kg)	2 steps 1 phase	208	5.3	17,900	6.8	31.7	----
			220	5.9	20,100	6.8	33.5	----
			230	6.4	21,900	6.8	34.9	----
			240	7.0	23,900	6.8	36.5	----
	ECB21-7.5 (28H52) 6 lbs. (3 kg)	3 steps 3 phase	208	5.6	19,200	6.8	19.5	----
			220	6.3	21,500	6.8	20.6	----
			230	6.9	23,500	6.8	21.6	----
			240	7.5	25,600	6.8	22.5	----
	ECB21-8 (28H49) 5 lbs. (2 kg)	2 steps 1 phase	208	6.0	20,500	6.8	36.2	----
			220	6.7	22,900	6.8	38.1	----
			230	7.3	25,100	6.8	39.9	----
			240	8.0	27,300	6.8	41.7	----
	ECB21-10 (28H50) 5 lbs. (2 kg)	2 steps 1 phase	208	7.5	25,600	6.8	45.0	----
			220	8.4	28,700	6.8	47.7	----
			230	9.2	31,400	6.8	49.9	----
			240	10.0	34,100	6.8	52.2	----
	ECB21-10 (28H53) 6 lbs. (3 kg)	3 steps 3 phase	208	7.5	25,600	6.8	26.0	----
			220	8.4	28,700	6.8	27.5	----
			230	9.2	31,400	6.8	28.9	----
			240	10.0	34,100	6.8	30.2	----
ECB21-12.5 (28H54) 10 lbs. (5 kg)	3 steps 1 phase	208	9.4	32,000	6.8	37.7	18.9	
		220	10.5	35,800	6.8	39.9	19.9	
		230	11.5	39,200	6.8	41.6	20.8	
		240	12.5	42,600	6.8	43.3	21.8	
ECB21-15 (28H55) 10 lbs. (5 kg)	3 steps 1 phase	208	11.3	38,400	6.8	45.2	22.7	
		220	12.6	43,000	6.8	47.7	23.9	
		230	13.5	47,000	6.8	49.9	25.0	
		240	15.0	51,200	6.8	52.2	26.0	
ECB21-15 (28H56) 9 lbs. (4 kg)	3 steps 3 phase	208	11.3	38,400	6.8	39.2	----	
		220	12.6	43,000	6.8	41.3	----	
		230	13.5	47,000	6.8	43.3	----	
		240	15.0	51,200	6.8	45.2	----	
ECB21-20 (28H57) 14 lbs. (6 kg)	4 steps 1 phase	208	15.0	51,200	6.8	45.0	45.0	
		220	16.8	57,300	6.8	47.8	47.8	
		230	18.4	62,700	6.8	49.9	49.9	
		240	20.0	68,200	6.8	52.2	52.2	

*Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

**Electric heater capacity only – does not include additional blower motor heat capacity.

●Circuit 1 is minimum circuit ampacity for blower motor only.

ELECTRIC HEAT DATA — CB21V/CBH21V-51 & -65

Blower Coil Unit Model Number	Electric Heat Model Number & Shipping Weight	Number of Steps & Phase	Volts Input	kW Input	**Btuh Input	*Minimum Circuit Ampacity			
						●Circuit 1 Blower	Circuit 2	Circuit 3	Circuit 4
CB21V-51 CBH21V-51 AND CB21V-65 CBH21V-65	ECB21-5 (28H46) 4 lbs. (2 kg)	1 step 1 phase	208	3.8	12,800	11.0	22.7	----	----
			220	4.2	14,300	11.0	23.9	----	----
			230	4.6	15,700	11.0	25.0	----	----
			240	5.0	17,100	11.0	26.0	----	----
	ECB21-5 (28H51) 4 lbs. (2 kg)	1 step 3 phase	208	3.8	12,800	11.0	13.0	----	----
			220	4.2	14,300	11.0	13.9	----	----
			230	4.6	15,700	11.0	14.4	----	----
			240	5.0	17,100	11.0	15.0	----	----
	ECB21-6 (28H47) 5 lbs. (2 kg)	2 steps 1 phase	208	4.5	15,400	11.0	27.2	----	----
			220	5.0	17,100	11.0	28.4	----	----
			230	5.5	18,800	11.0	30.0	----	----
			240	6.0	20,500	11.0	31.3	----	----
	ECB21-7 (28H48) 5 lbs. (2 kg)	2 steps 1 phase	208	5.3	17,900	11.0	31.7	----	----
			220	5.9	20,100	11.0	33.5	----	----
			230	6.4	21,900	11.0	34.9	----	----
			240	7.0	23,900	11.0	36.5	----	----
	ECB21-7.5 (28H52) 6 lbs. (3 kg)	3 steps 3 phase	208	5.6	19,200	11.0	19.5	----	----
			220	6.3	21,500	11.0	20.6	----	----
			230	6.9	23,500	11.0	21.6	----	----
			240	7.5	25,600	11.0	22.5	----	----
	ECB21-8 (28H49) 5 lbs. (2 kg)	2 steps 1 phase	208	6.0	20,500	11.0	36.2	----	----
			220	6.7	22,900	11.0	38.1	----	----
			230	7.3	25,100	11.0	39.9	----	----
			240	8.0	27,300	11.0	41.7	----	----
	ECB21-10 (28H50) 5 lbs. (2 kg)	2 steps 1 phase	208	7.5	25,600	11.0	45.0	----	----
			220	8.4	28,700	11.0	47.7	----	----
			230	9.2	31,400	11.0	49.9	----	----
			240	10.0	34,100	11.0	52.2	----	----
	ECB21-10 (28H53) 6 lbs. (3 kg)	3 steps 3 phase	208	7.5	25,600	11.0	26.0	----	----
			220	8.4	28,700	11.0	27.5	----	----
			230	9.2	31,400	11.0	28.9	----	----
			240	10.0	34,100	11.0	30.2	----	----
	ECB21-12.5 (28H54) 10 lbs. (5 kg)	3 steps 1 phase	208	9.4	32,000	11.0	37.7	18.9	----
			220	10.5	35,800	11.0	39.9	19.9	----
			230	11.5	39,200	11.0	41.6	20.8	----
			240	12.5	42,600	11.0	43.4	21.8	----
	ECB21-15 (28H55) 10 lbs. (5 kg)	3 steps 1 phase	208	11.3	38,400	11.0	45.2	22.7	----
			220	12.6	43,000	11.0	47.7	23.9	----
			230	13.5	47,000	11.0	49.9	25.0	----
			240	15.0	51,200	11.0	52.2	26.0	----
ECB21-15 (28H56) 9 lbs. (4 kg)	3 steps 3 phase	208	11.3	38,400	11.0	39.2	----	----	
		220	12.6	43,000	11.0	41.3	----	----	
		230	13.5	47,000	11.0	43.3	----	----	
		240	15.0	51,200	11.0	45.2	----	----	
ECB21-20 (28H57) 14 lbs. (6 kg)	4 steps 1 phase	208	15.0	51,200	11.0	45.0	45.0	----	
		220	16.8	57,300	11.0	47.8	47.8	----	
		230	18.4	62,700	11.0	49.9	49.9	----	
		240	20.0	68,200	11.0	52.2	52.2	----	
ECB21-20 (28H60) 19 lbs. (9 kg)	6 steps 3 phase	208	15.0	51,200	11.0	26.0	26.0	----	
		220	16.8	57,300	11.0	27.6	27.6	----	
		230	18.4	62,700	11.0	28.9	28.9	----	
		240	20.0	68,200	11.0	30.2	30.2	----	
ECB21-25 (28H58) 18 lbs. (8 kg)	5 steps 1 phase	208	18.8	64,100	11.0	45.0	45.0	22.7	
		220	21.0	71,700	11.0	47.8	47.8	23.9	
		230	23.0	78,300	11.0	49.9	49.9	25.0	
		240	25.0	85,300	11.0	52.2	52.2	26.0	
ECB21-25 (28H61) 19 lbs. (9 kg)	6 steps 3 phase	208	18.8	64,100	11.0	32.7	32.7	----	
		220	21.0	71,700	11.0	34.4	34.4	----	
		230	23.0	78,300	11.0	36.0	36.0	----	
		240	25.0	85,300	11.0	37.7	37.7	----	
ECB21-30 (28H59) 19 lbs. (9 kg)	6 steps 1 phase	208	22.5	76,900	11.0	45.0	45.0	45.0	
		220	25.2	86,000	11.0	47.8	47.8	47.8	
		230	27.5	94,000	11.0	49.9	49.9	49.9	
		240	30.0	102,400	11.0	52.2	52.2	52.2	

*Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

**Electric heater capacity only — does not include additional blower motor heat capacity.

●Circuit 1 is minimum circuit ampacity for blower motor only.

BLOWER DATA

CB21V/CBH21V-41 BLOWER PERFORMANCE 0 through 0.60 in. w.g. (0 Through 150 Pa) External Static Pressure Range

"ADJUST" Jumper Setting	BDC2 Jumper Speed Positions																							
	"HEAT" Speed								"LOW" Speed (Cool Or Continuous Fan)								"HIGH" Speed (Cool)							
	1		2		3		4		1		2		3		4		1		2		3		4	
	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
+	1230	580	1340	630	1480	700	1600	755	850	400	950	450	1060	500	1150	545	1150	545	1250	590	1490	705	1600	755
NORM	1125	530	1225	580	1325	625	1425	670	750	355	850	400	950	450	1025	485	1025	485	1125	530	1325	625	1425	670
-	980	460	1080	510	1190	560	1260	595	650	305	730	345	830	390	900	425	900	425	1000	470	1190	460	1260	595

NOTE — The effect of static pressure, filter and electric heater resistance is included in the air volumes listed.

CB21V-51/CBH21V-51 AND CB21V/CBH21V-65 BLOWER PERFORMANCE 0 through 0.60 in. w.g. (0 Through 150 Pa) External Static Pressure Range

"ADJUST" Jumper Setting	BDC2 Jumper Speed Positions																							
	"HEAT" Speed								"LOW" Speed (Cool Or Continuous Fan)								"HIGH" Speed (Cool)							
	1		2		3		4		1		2		3		4		1		2		3		4	
	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
+	1650	780	1800	850	2000	945	2200	1040	935	440	1060	500	1265	595	1425	670	1650	780	1780	840	1955	925	2160	1020
NORM	1500	710	1650	780	1800	850	1950	920	850	400	950	450	1150	545	1300	615	1500	710	1650	780	1800	850	1950	920
-	1340	630	1480	700	1630	770	1760	830	750	355	850	400	1025	485	1110	525	1350	635	1485	700	1560	735	1760	830

NOTE — The effect of static pressure, filter and electric heater resistance is included in the air volumes listed.

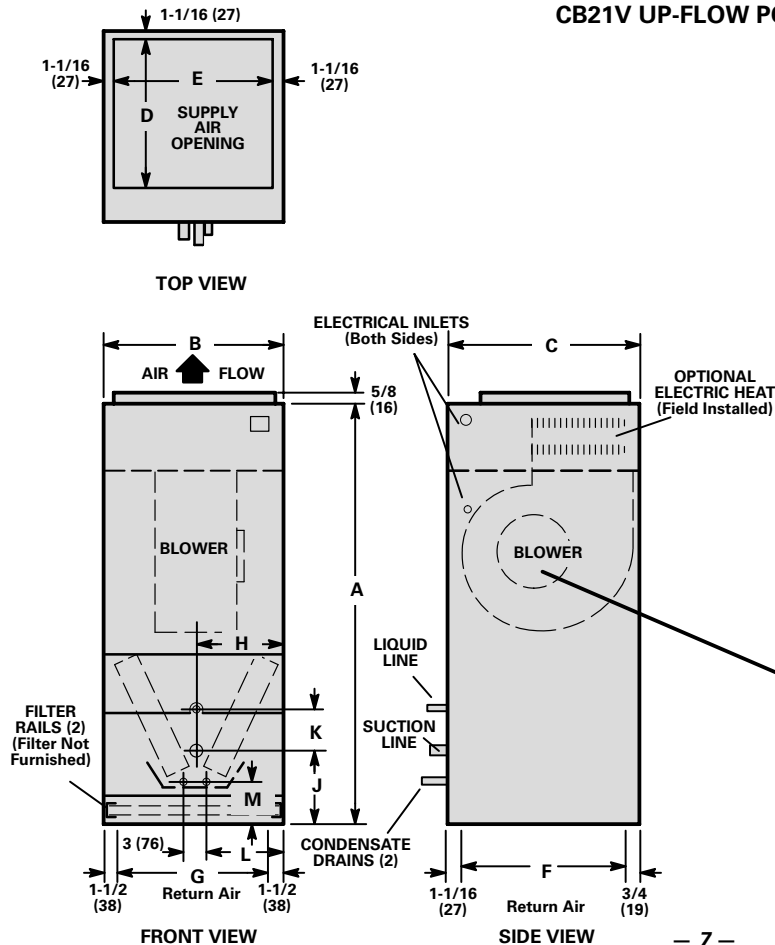
INSTALLATION CLEARANCES — ALL MODELS

Cabinet	0 inch (0 mm)
Plenum and Outlet duct on blower/coil units	1 inch (25 mm)
Plenum and Warm air duct within 3 feet (914mm) of cabinet	1 inch (25 mm)
Floor	*Combustible

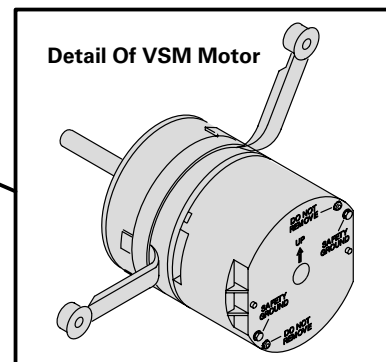
*When unit is installed in the down-flow position with electric heat on a combustible floor an optional down flow base is required.

DIMENSIONS — inches (mm)

CB21V UP-FLOW POSITION



Model No.	CB21V-41		CB21V-51 & -65	
	inch	mm	inch	mm
A	51	1295	60	1524
B	21-1/2	546	23-1/4	591
C	23-1/4	591	25-1/4	641
D	18	457	20	508
E	19-1/8	486	20-7/8	530
F	21-7/16	545	23-7/16	595
G	18-1/4	464	20	508
H	10-3/4	273	11-5/8	295
J	10-5/16	262	11-11/16	297
K	5-1/4	133	10	254
L	9-3/16	233	10-1/16	256
M	5-3/16	132	7-11/16	195

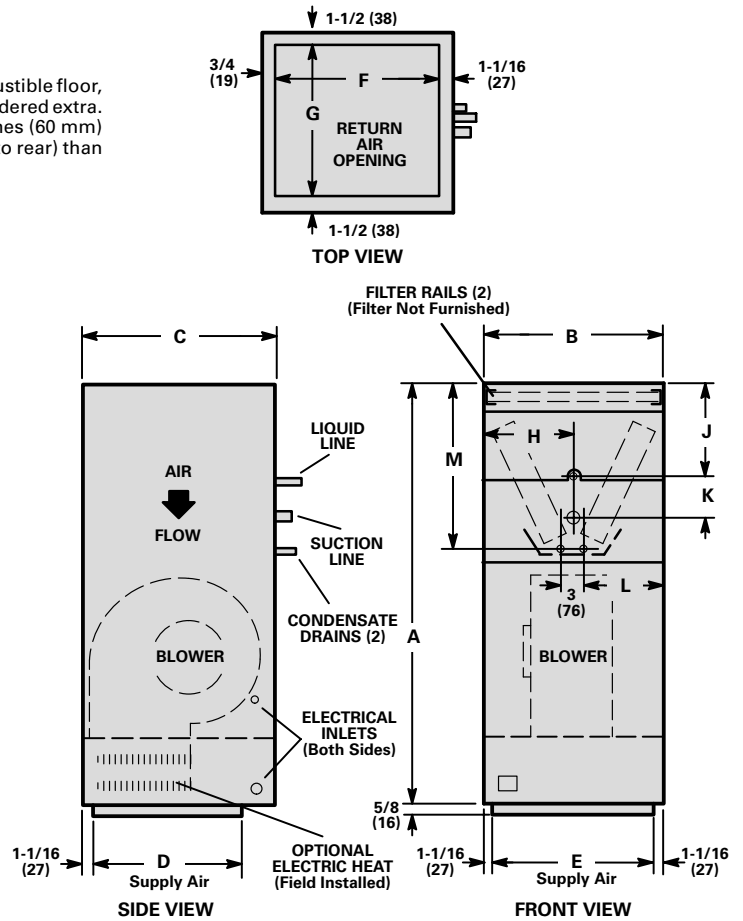


DIMENSIONS — inches (mm)

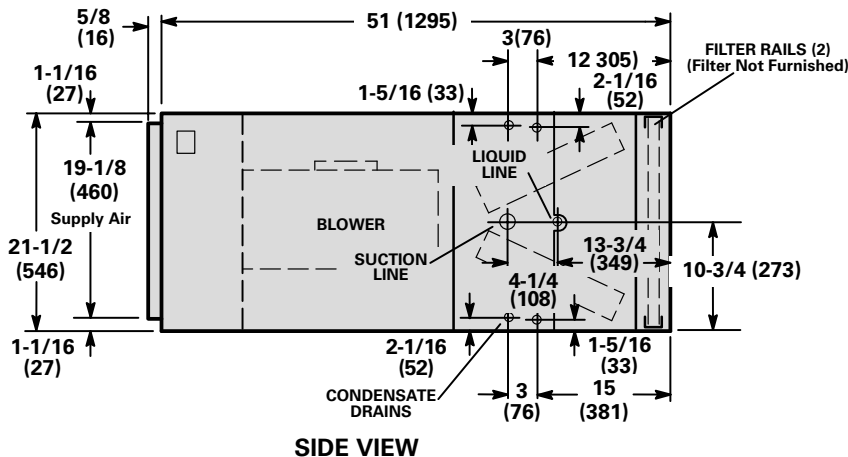
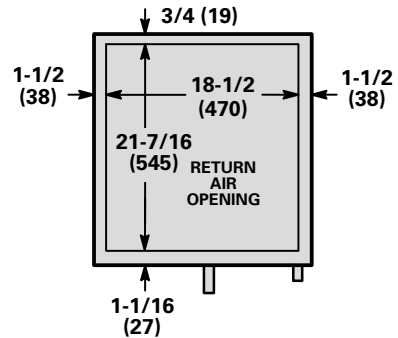
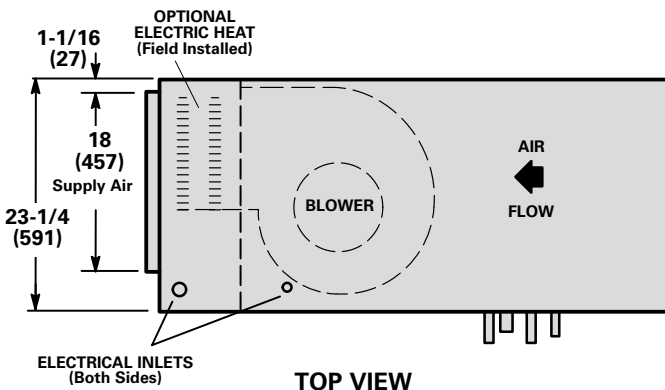
CB21V DOWN-FLOW POSITION

NOTE — When unit with optional electric heat is installed on a combustible floor, an additive base is required. Base is optional and must be ordered extra. When using additive base make opening in floor 2-3/8 inches (60 mm) larger (side to side) and 2-1/2 inches (64 mm) larger (front to rear) than unit supply air opening.

Model No.	CB21V-41		CB21V-51 & -65	
	inch	mm	inch	mm
A	51	1295	60	1524
B	21-1/2	546	23-1/4	591
C	23-1/4	591	25-1/4	641
D	18	457	20	508
E	19-1/8	486	20-7/8	530
F	21-7/16	545	23-7/16	595
G	18-1/4	464	20	508
H	10-3/4	273	11-5/8	295
J	12-3/4	324	11-7/18	302
K	5-1/4	133	10	254
L	9-3/16	233	10-1/16	256
M	22	559	25-7/8	657

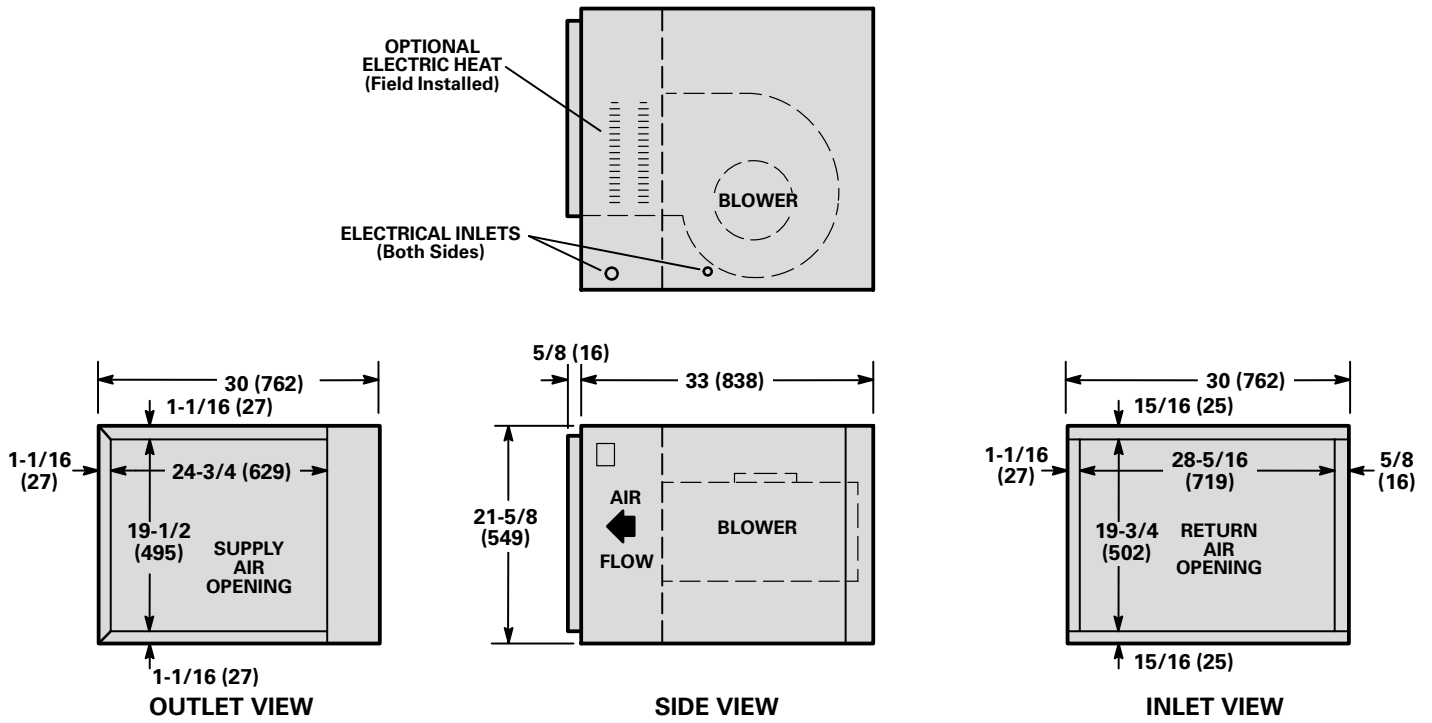


CBH21V-41 HORIZONTAL MODELS

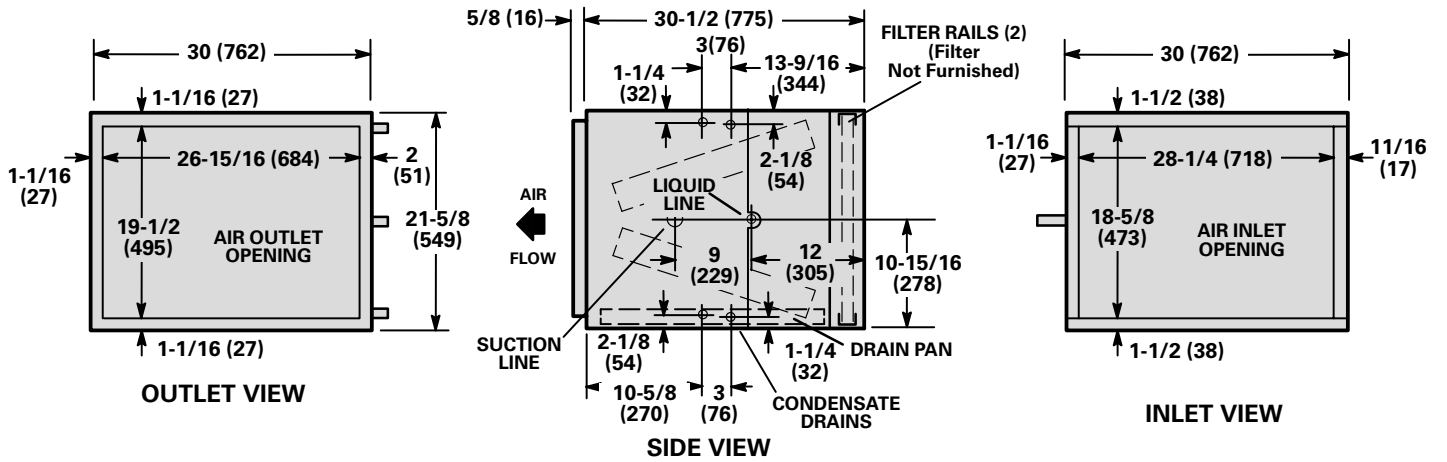


NOTE — Units are shipped with left hand air discharge. For right hand air discharge, turn unit over (end for end) and reposition coil.

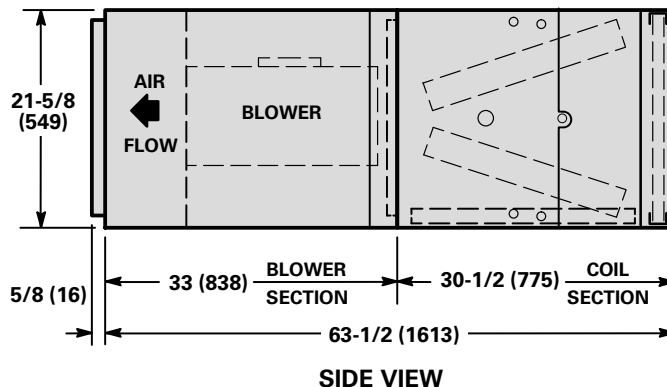
B21V-51 and -65 BLOWER SECTION



CH21-51 and CH19-65 COIL SECTION



CBH21V-51 and -65 HORIZONTAL MODELS



NOTE – Units are shipped with left hand air discharge. For right hand air discharge, turn unit over (end for end) and reposition coil.