



# ADVANCED COMMERCIAL CE2000 Energy Recovery Ventilator

PRODUCT  
SPECIFICATIONS  
& TECHNICAL  
DATA

## Standard Features



*Interior Unit CE2000i*



*Exterior Unit CE2000e (shown with roof curb)*

### NOMINAL CAPACITY

1000-2500 CFM

### CASING

Double-wall cabinet  
White exterior paint, 22-gauge galvanized steel  
18-gauge galvanized steel interior walls  
Access doors with quarter-turn handles  
18-gauge stainless steel drain pan  
Drain Connections: 1" NPT  
Insulation: 2" (51 mm)

### MOUNTING

On roof curb or on platform

### PLATE EXCHANGER

Material: Enthalpy  
Quantity: 3  
Pitch: 0.13" (3.3 mm)  
Dimensions: 18" x 18" x 15.67"  
(457 mm x 457 mm x 398 mm)



### BLOWERS

Quantity: 2

- Forward-curved
- Permanently sealed and lubricated ball bearings
- Power transmission by adjustable pulleys and belts

### MOTORS

Type: Inverter duty 10:1, ODP or TEFC, EPAct or Premium  
Maximum Power: 3 hp  
Drive Assembly/Blower: On vibration-isolating springs

### FILTERS

Type: MERV 8  
Quantity: 2 per circuit  
Dimensions: 20" x 20" x 4" (508 mm x 508 mm x 102 mm)

### ELECTRICAL & CONTROLS

- Start/stop dry contact and general alarm dry contact
- Occupancy control dry contact
- Fan interlock dry contact
- 24VAC, 20VA power available for accessories
- Access panel with non-fused disconnect (NEMA 4)
- Single-point power connection
- 120, 208, 230 V / 1ph / 60Hz
- 208, 230, 460, 575 V / 3ph / 60Hz

### WARRANTY

- Core: Limited 10-year warranty
- All Other Covered Components: Limited 2-year warranty

### LISTED BY



# Optional Features

## FROST PREVENTION/CONTROL OPTIONS

Frost control activated by a temperature reference

Set point: 14°F (-10°C)

Internal Pre-Heat by Electric Coil:

- Powered by unit
- Factory calibrated
- SCR control

Internal Pre-Heat by Hot Water Coil:

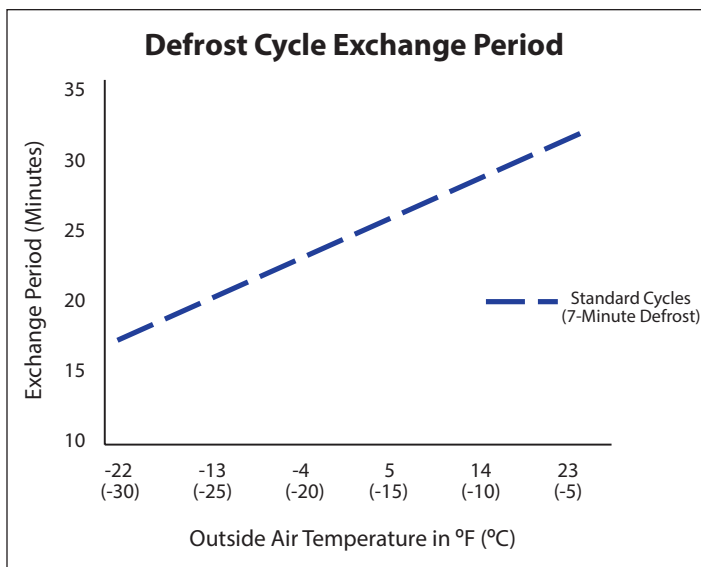
- 0-10 V signal on the control panel
- Front or back piping connections

Internal Face and Bypass Damper:

- Fresh air deviation

Defrost Cycles:

- Exhaust Only or Recirculation
- Comes with motorized and insulated damper on OA only
- See table below for temperature references



## AVAILABLE OPTIONS

### Cabinet Options:

- Supply and Exhaust Hoods with bird screens
- Roof Curb: 14" (356 mm) high, 18-gauge galvanized steel, insulation optional
- Front or back piping connections (drain pan and water coil and/or cooling connections)
- Pool Construction: TEFC motors, stainless steel interior, and epoxy-coated fans (NOTE: ERV not recommended for indoor pool applications)

## AVAILABLE OPTIONS

### Components Options:

- Final MERV 13 filters added to the fresh air circuit
- Motorized and insulated dampers (on OA and/or EA openings)
- Non-insulated backdraft damper (on EA opening only)
- Post-Heat by Electric Coil: Powered by unit
- Post-Heat by Hot Water Coil: 0-10VDC signal to maintain supply air temperature, or 0-10VDC signal by others
- Cold Water Cooling Coil: Control by others, comes with 18-gauge stainless steel drain pan
- DX Cooling Coil: All controls and condensation unit by others, comes with 18-gauge stainless steel drain pan

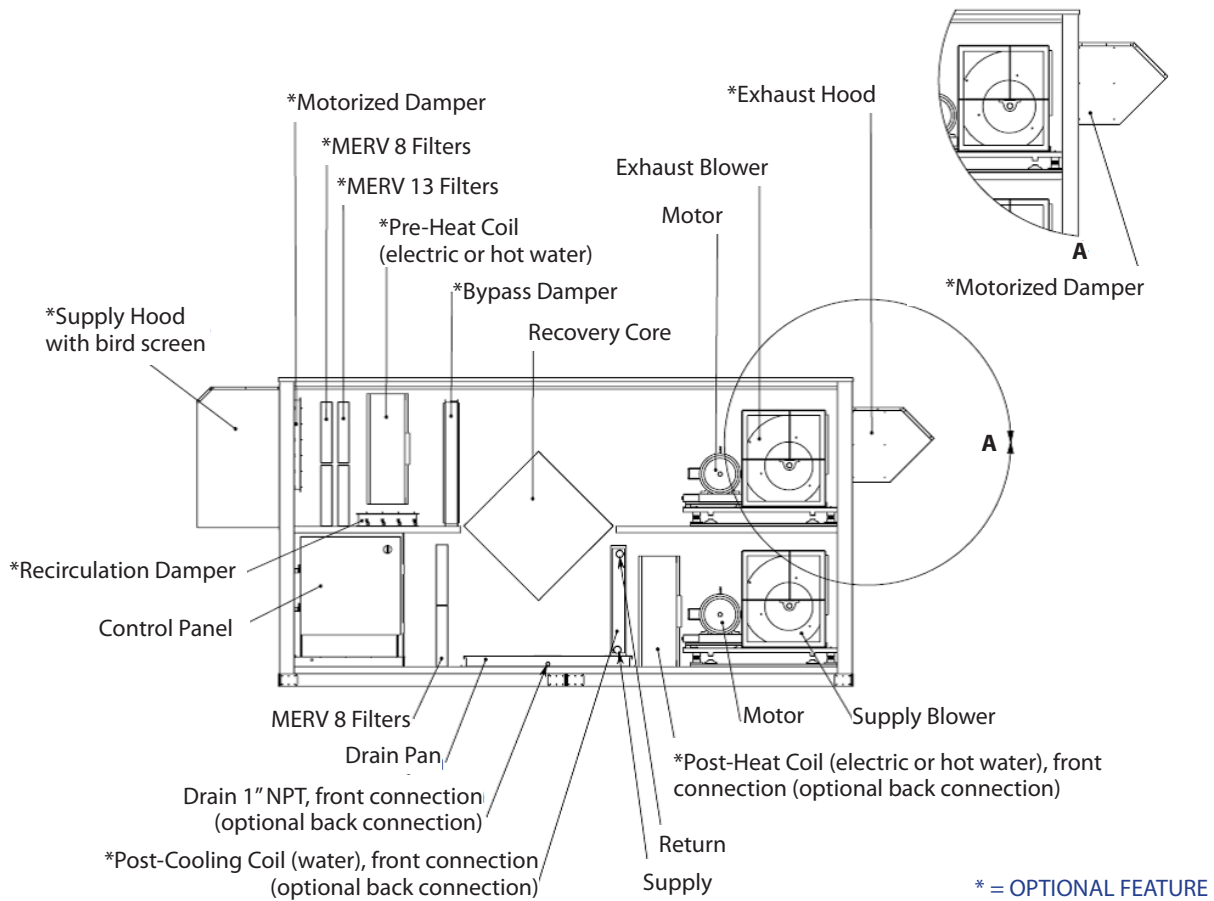
### Blower Motor Options:

- TEFC, Premium (only available with ≥1.5hp/ 3ph)
- 2-Speed motors (only available with ODP, EPAct motors)
- Programmable 2-Speed (VFD)
- Variable Frequency Drive (VFD), 0-10VDC control signal by others
- Backward-inclined blowers

### Control Options:

- Economizer Cycle: Free cooling management by temperature sensor on OA (available with face and bypass damper only)
- Dirty Filters Contact: Will close a dry contact when dirty filters are detected
- Low Airflow Switch: Will open a dry contact when no airflow is detected on supply blower
- Low Temperature Limit: Unit will stop if fresh air supply is under set point (adjustable) for more than 5 minutes
- Phase Loss Detection: Unit will stop when a phase loss occurs, automatic restart (3-phase power only)
- Damper End Switch: Unit start up conditional to dampers opening
- Recirculation Dry Contact: For unoccupied mode, must select recirculation defrost option
- Terminals for OA and/or EA damper power and control (24VAC, 10VA): Included when OA/EA damper selected
- Programmable Timer
- CO<sub>2</sub> or Relative Humidity (RH) Sensor: Sequence of operations must be verified by factory
- BacNet Compatible Controller
  - Available Upgrades:
    - » IP Communication Network Module
    - » MS/TP Communication Network Module
    - » Remote Keypad
    - » Remote Keypad with Touchscreen

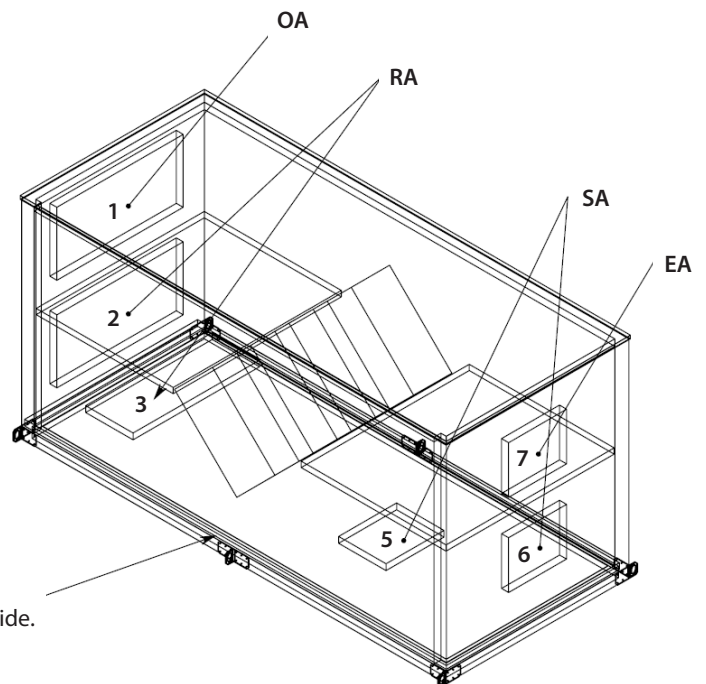
# Components & Configurations



AVAILABLE CONFIGURATIONS
1-2-6-7
1-3-5-7
1-3-6-7
1-2-5-7

Mirror Image Cabinet Also Available

LEGEND	
RA	Return Air
SA	Supply Air
OA	Outside Air
EA	Exhaust Air



Access internal components on this side.

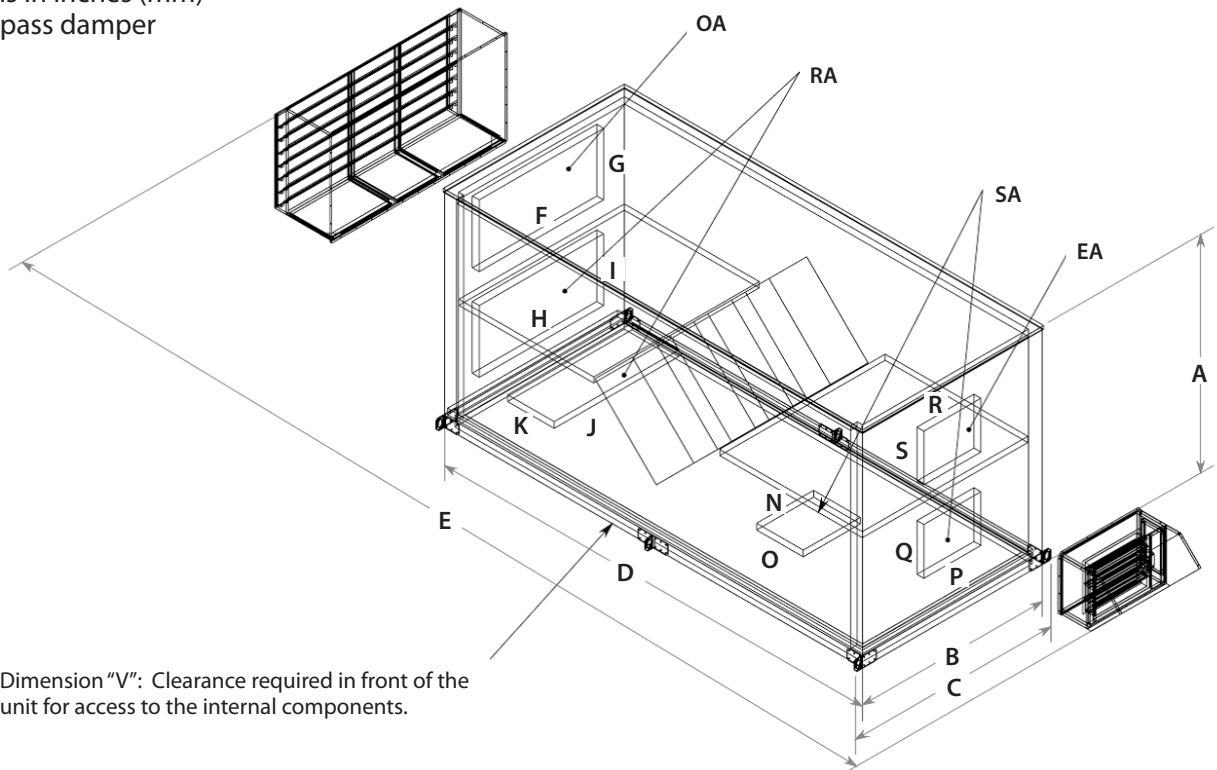
# Dimensions & Weights

CABINET*																		
Unit	Height		Width				Length											V
	A	B	Overall		Overall - Standard				Overall - 1 Coil Option				Overall - 2 Coils Option					
			C		D	E		D	E		D	E						
	Overall	Base - Standard	Standard	Hoods Option	Base - Standard	Standard	Motorized Exhaust Damper Option	Hoods Option	Base - Standard	Standard	Motorized Exhaust Damper Option	Hoods Option	Base - Standard	Standard	Motorized Exhaust Damper Option	Hoods Option		
CE2000	70.9 (1801)	52.4 (1331)	58.3 (1480)	58.5 (1486)	101.7 (2583)	105.1 (2670)	111.8 (2840)	142.1 (3609)	121.7 (3091)	124.9 (3172)	131.8 (3348)	162.1 (4117)	141.7 (3599)	144.9 (3680)	151.8 (3856)	182.1 (4625)	47 (1194)	
CE2000BP**	70.9 (1801)	64.5 (1638)	70.5 (1791)	70.5 (1791)	101.7 (2583)	105.1 (2670)	111.8 (2840)	142.1 (3609)	121.7 (3091)	124.9 (3172)	131.8 (3348)	162.1 (4117)	141.7 (3599)	144.9 (3680)	151.8 (3856)	182.1 (4625)	47 (1194)	

OPENINGS															
Unit	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
CE2000	28 (711)	12 (305)	28 (711)	12 (305)	28 (711)	12 (305)	N/A	N/A	18 (457)	16 (406)	18 (457)	16 (406)	18 (457)	16 (406)	
CE2000BP**	28 (711)	12 (305)	28 (711)	12 (305)	28 (711)	12 (305)	N/A	N/A	18 (457)	16 (406)	18 (457)	16 (406)	18 (457)	16 (406)	

\* All dimensions in inches (mm)

\*\* Unit with bypass damper



WEIGHT - CE2000†	
Minimum	2001 lbs (908 kg)
Maximum	2835 lbs (1286 kg)

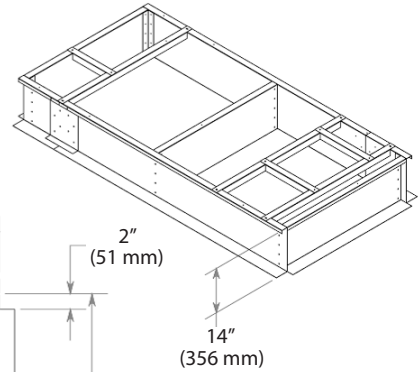
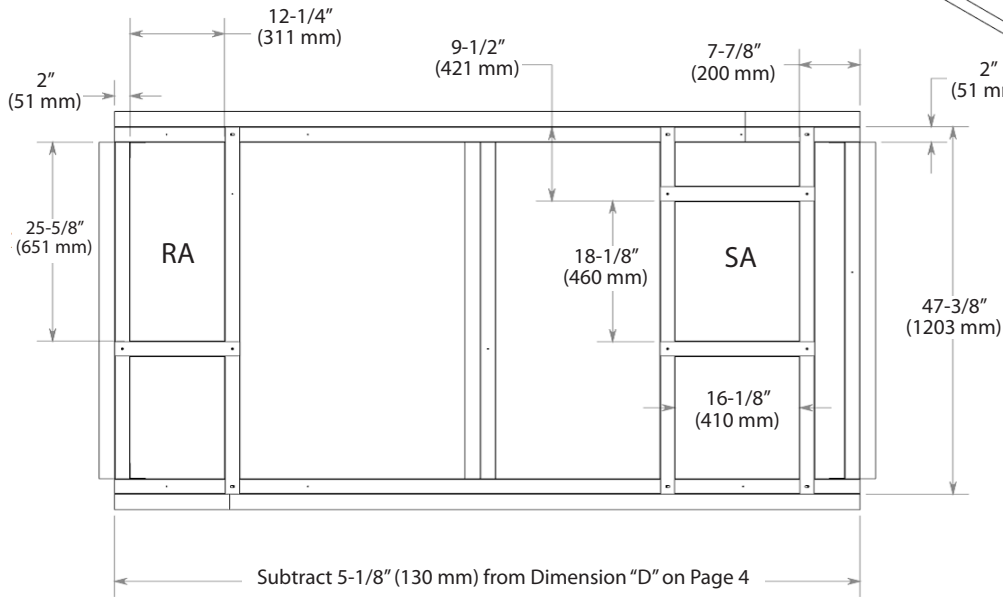
WEIGHT - CE2000BP†	
Minimum	2337 lbs (1060 kg)
Maximum	3142 lbs (1425 kg)

† Actual weight may vary by ±10%. Shipping weight calculated after final selection. Roof curbs shipped separately.

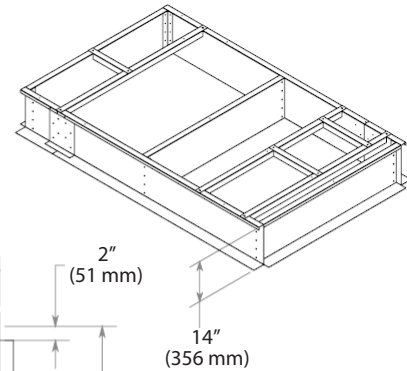
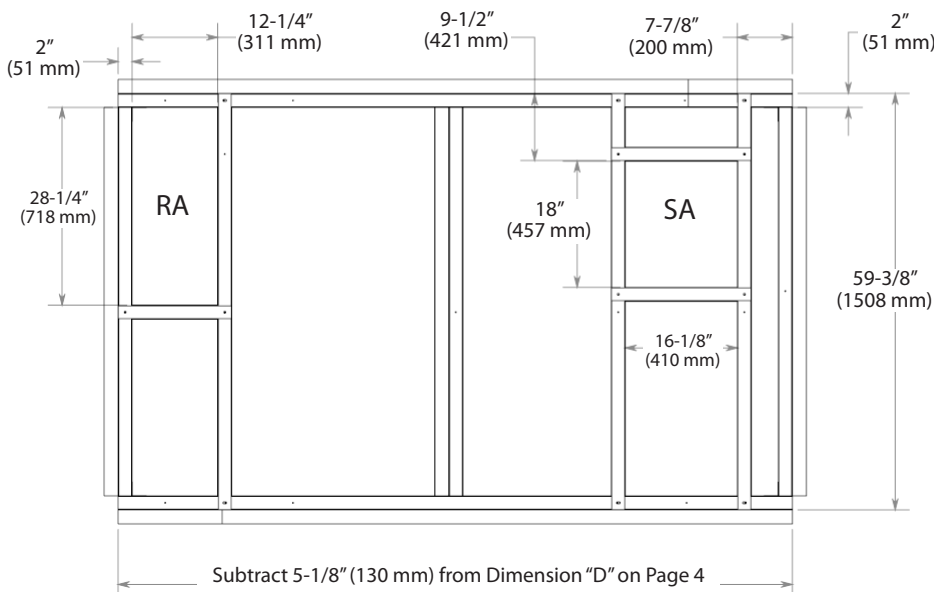
# Roof Curb Dimensions

NOTE: Drawings not to scale

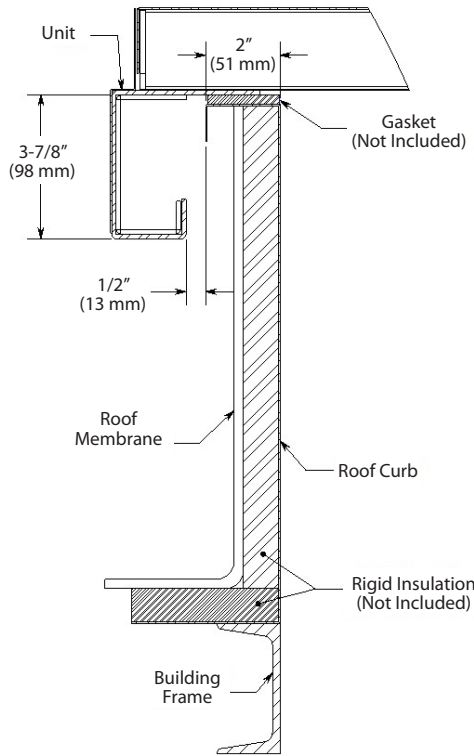
## CE2000



## CE2000BP

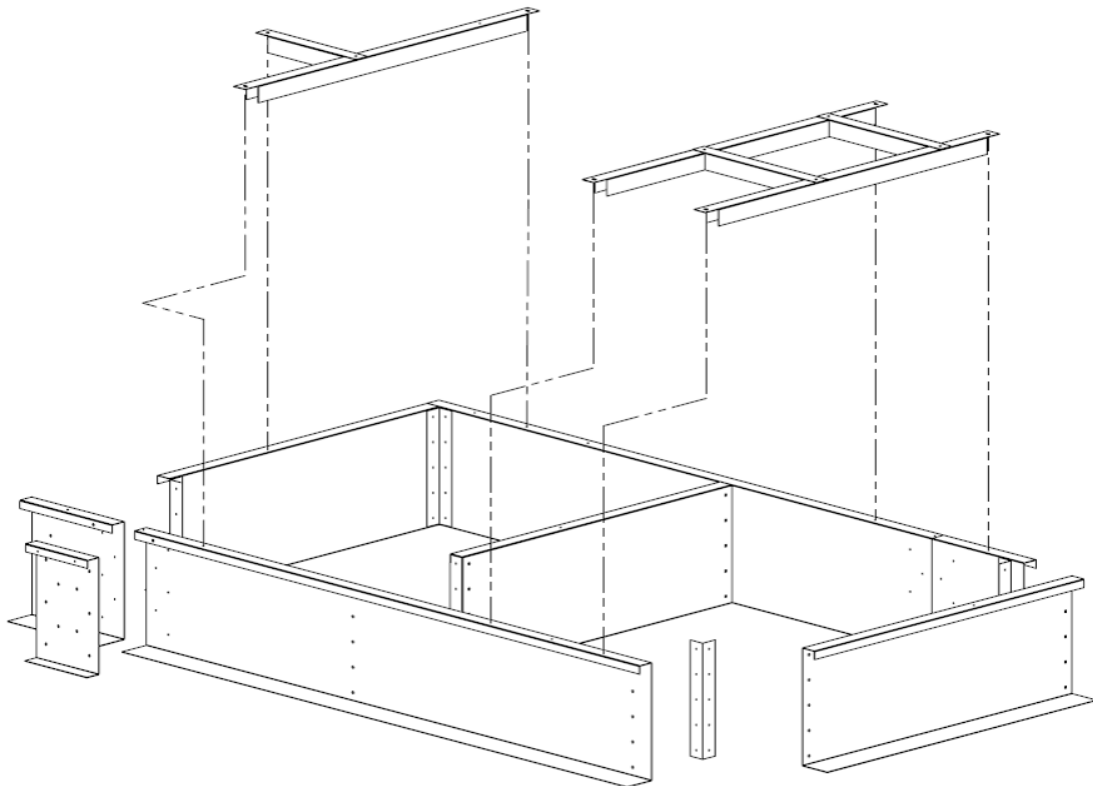


# Roof Curb Assembly



ROOF CURB WEIGHTS & DIMENSIONS	
Unit	CE2000
Roof Curb Weight	130 lbs (59 kg)
Shipping Weight	175 lbs (79 kg)
Shipping Dimensions (W x H x D)	96" x 24" x 25" (2438 mm x 610 mm x 635 mm)

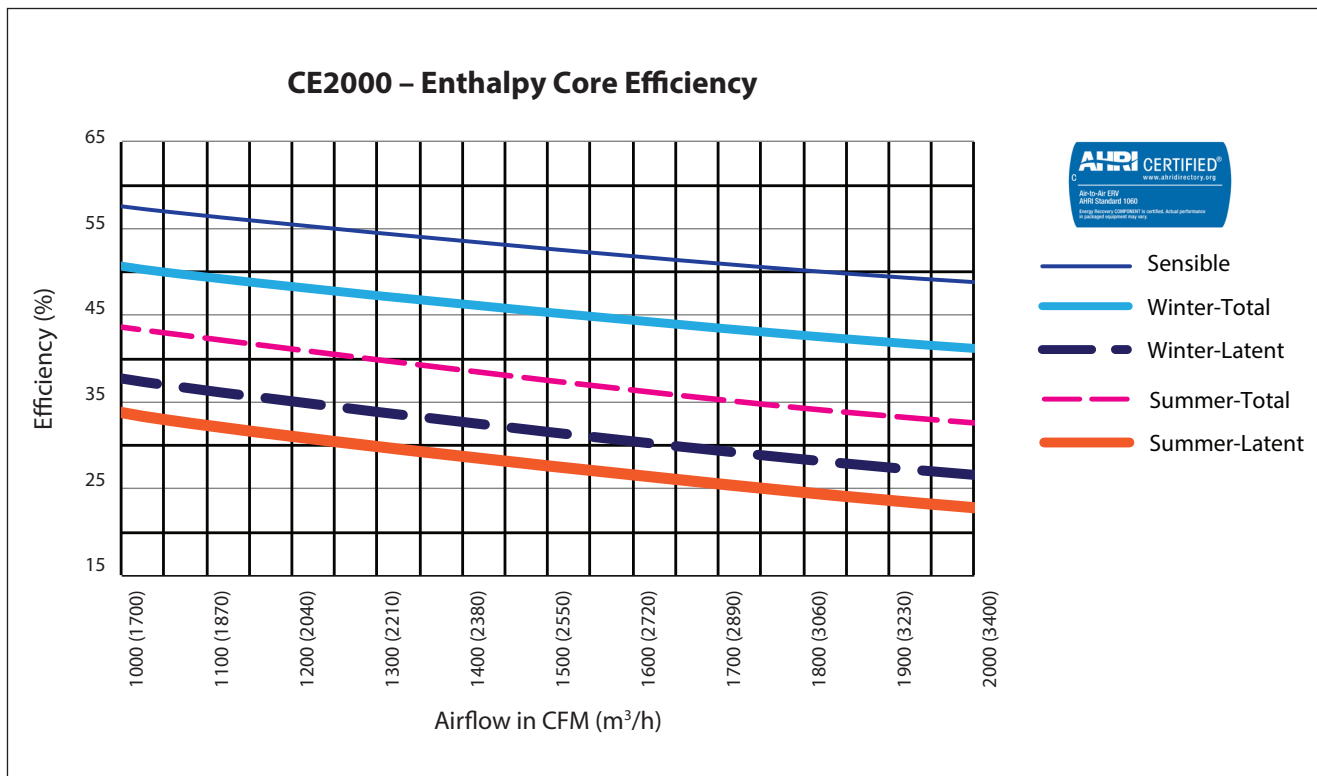
ROOF CURB WEIGHTS & DIMENSIONS	
Unit	CE2000BP
Roof Curb Weight	140 lbs (64 kg)
Shipping Weight	185 lbs (84 kg)
Shipping Dimensions (W x H x D)	96" x 24" x 25" (2438 mm x 610 mm x 635 mm)



# Enthalpy Core Performance

AHRI STANDARD CONDITIONS	CONDITIONS		AHRI STANDARD CONDITIONS	CONDITIONS	
	Winter	Summer		Winter	Summer
Outside Temperature			Exhaust Air Temperature		
Dry Bulb	35°F (1.7°C)	95°F (35°C)	Dry Bulb	70°F (21.1°C)	75°F (23.9°C)
Wet Bulb	33°F (0.6°C)	78°F (25.6°C)	Wet Bulb	58°F (14.4°C)	63°F (17.2°C)

Note: Efficiencies are based on AHRI standard winter conditions.



## Motor Selection – Enthalpy Core

SUPPLY/EXHAUST																				
MOTOR	AIRFLOW	EXTERNAL STATIC PRESSURE (IN H <sub>2</sub> O) - SUPPLY/EXHAUST																		MOTOR
		0.25 (60 Pa)			0.50 (125 Pa)			0.75 (185 Pa)			1.00 (250 Pa)			1.25 (310 Pa)			1.50 (375 Pa)			
	CFM (m <sup>3</sup> /h)	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	
3/4 hp	1000 (1700)	859	0.25	0.30	968	0.32	0.39	1065	0.39	0.47	1150	0.46	0.55	1227	0.53	0.64	1297	0.61	0.73	3/4 hp
	1100 (1870)	871	0.28	0.34	978	0.36	0.43	1074	0.43	0.52	1160	0.51	0.61	1238	0.58	0.70	1310	0.67	0.80	1 hp
	1200 (2040)	884	0.32	0.38	989	0.40	0.48	1084	0.47	0.57	1170	0.55	0.67	1249	0.64	0.76	1322	0.73	0.87	
	1300 (2210)	898	0.36	0.43	1000	0.44	0.53	1094	0.52	0.63	1180	0.61	0.73	1260	0.70	0.84	1334	0.79	0.95	1.5 hp
	1400 (2380)	911	0.41	0.49	1012	0.49	0.59	1104	0.58	0.69	1190	0.67	0.80	1270	0.76	0.91	1345	0.86	1.03	
	1500 (2550)	925	0.46	0.55	1024	0.54	0.65	1114	0.63	0.76	1200	0.73	0.87	1280	0.83	0.99	1356	0.93	1.11	
	1600 (2720)	940	0.51	0.61	1036	0.60	0.72	1125	0.69	0.83	1210	0.79	0.95	1290	0.90	1.08	1366	1.00	1.20	
	1700 (2890)	955	0.57	0.68	1048	0.66	0.80	1136	0.76	0.91	1220	0.86	1.04	1300	0.97	1.17	1375	1.08	1.30	
1 hp	1800 (3060)	970	0.63	0.76	1061	0.73	0.88	1147	0.83	1.00	1230	0.94	1.13	1309	1.05	1.26	1384	1.16	1.40	2 hp
	1900 (3230)	986	0.70	0.84	1075	0.80	0.96	1158	0.91	1.09	1240	1.02	1.22	1318	1.14	1.36	1392	1.25	1.50	
	2000 (3400)	1002	0.77	0.93	1088	0.88	1.05	1170	0.99	1.19	1250	1.10	1.32	1327	1.22	1.47	1400	1.34	1.61	
1.5 hp	2100 (3570)	1018	0.85	1.02	1102	0.96	1.15	1182	1.07	1.29	1260	1.19	1.43	1335	1.31	1.58	1407	1.44	1.73	3 hp
	2200 (3740)	1035	0.93	1.12	1117	1.04	1.25	1194	1.16	1.39	1270	1.28	1.54	1343	1.41	1.69	1413	1.54	1.84	
	2300 (3910)	1052	1.02	1.22	1132	1.13	1.36	1206	1.26	1.51	1280	1.38	1.66	1351	1.51	1.81	1419	1.64	1.97	
	2400 (4080)	1070	1.11	1.33	1147	1.23	1.47	1219	1.35	1.63	1290	1.48	1.78	1358	1.61	1.93	1424	1.75	2.10	
	2500 (4250)	1088	1.20	1.44	1162	1.33	1.59	1232	1.46	1.75	1300	1.59	1.91	1365	1.72	2.06	1428	1.86	2.23	

NOTE:  
hp = bhp x 1.2

## Additional Air Pressure Drop with MERV 13 Filters

Airflow CFM (m <sup>3</sup> /h)	APD in. H <sub>2</sub> O (Pa)
1000 (1700)	0.04 (10)
1100 (1870)	0.05 (13)
1200 (2040)	0.06 (16)
1300 (2210)	0.08 (19)
1400 (2380)	0.09 (22)
1500 (2550)	0.10 (25)
1600 (2720)	0.11 (28)
1700 (2890)	0.12 (31)

Airflow CFM (m <sup>3</sup> /h)	APD in. H <sub>2</sub> O (Pa)
1800 (3060)	0.14 (34)
1900 (3230)	0.15 (37)
2000 (3400)	0.16 (40)
2100 (3570)	0.17 (43)
2200 (3740)	0.19 (46)
2300 (3910)	0.20 (49)
2400 (4080)	0.21 (53)
2500 (4250)	0.22 (56)



**aldes** ▲ = Standard Feature    □ = Optional Feature (check the box to select this option)    Send finished selection to American ALDES.

## MODEL

Series: Advanced Commercial (CE)    Nominal Capacity: 1000-2500 CFM    Application:  Interior (i)     Exterior (e)

## CASING

### Cabinet Finish

- Painted
- Pool Construction

### Supply & Exhaust Hoods

- Optional (exterior models)

### Duct Configuration (see pg. 3)

- 1-2-6-7
- 1-3-5-7
- 1-3-6-7
- 1-2-5-7

### Mirror Image Cabinet

- Optional

### Roof Curb (exterior models)

- None
- Insulated
- Non-Insulated

### Piping Connections

- Front
- Back

## ELECTRICAL REQUIREMENTS

- 120V/1ph/60Hz
- 208V/1ph/60Hz
- 230V/1ph/60Hz
- 208V/3ph/60Hz
- 230V/3ph/60Hz
- 460V/3ph/60Hz
- 575V/3ph/60Hz

## FILTERS

- MERV 8
- MERV 13 (Final Filter)

## FROST CONTROL

- None
- Exhaust Defrost <sup>1</sup>
- Recirculation <sup>1</sup>
- Pre-Heat (Electric Coil)
- Pre-Heat (Hot Water Coil)
- Face & Bypass Damper

## BLOWERS & MOTORS

### Supply Blower

- 3/4 hp     2 hp
- 1 hp     3 hp
- 1.5 hp

### Exhaust Blower

- 3/4 hp     2 hp
- 1 hp     3 hp
- 1.5 hp

### Motor Type

- ODP, EPAAct <sup>2</sup>
- ODP, Premium <sup>3</sup>
- TEFC, EPAAct <sup>2</sup>
- TEFC, Premium <sup>4</sup>

### Blower Type

- Forward Curved
- Backward Inclined

### Blower Control

- Single Speed
- 2-Speed <sup>5</sup>
- Programmable 2-Speed (VFD)
- VFD

## HEATING OPTIONS

- None
- Post-Heat (Electric Coil)
- Post-Heat (Hot Water Coil)

## COOLING OPTIONS

- None
- Cold Water Cooling Coil
- DX Cooling Coil

## ADD-ONS

- Motorized & Insulated Damper for EA
- Non-Insulated Backdraft Damper for EA
- Motorized & Insulated Damper for OA<sup>1</sup>
- Terminals for OA and/or EA damper power and control (24VAC, 10VA)
- Low Temperature Limit
- Economizer Cycle
- Dirty Filters Contact
- Low Airflow Switch
- Phase Loss Detection
- Damper End Switch
- Recirculation Dry Contact <sup>6</sup>
- Programmable Timer
- CO<sub>2</sub> Sensor <sup>7</sup>
- Relative Humidity Sensor <sup>7</sup>
- BacNet Compatible Controller
  - With IP Module
  - With MS/TP Module
  - With Remote Keypad
  - With Remote Keypad (Touchscreen)
- Spare MERV 8 Filters QTY: \_\_\_\_\_
- Spare Belts QTY: \_\_\_\_\_

<sup>1</sup> OA Motorized & Insulated Damper included with exhaust defrost and recirculation  
<sup>2</sup> EPAAct efficiency only available when Premium efficiency is not available (e.g., with single-phase motors)  
<sup>3</sup> ODP, Premium only available with ≥ 3 hp/ 3ph motors  
<sup>4</sup> TEFC, Premium only available with ≥ 1.5 hp/ 3ph motors  
<sup>5</sup> 2-Speed only available with ODP, EPAAct motors  
<sup>6</sup> Recirculation Dry Contact requires selection of recirculation defrost  
<sup>7</sup> Sequence of operations must be verified by factory

Project:		Architect:	
Location:		Engineer:	
Model #:		Contractor:	
Quantity:		Comments:	
Submitted By:			
Date:			

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