



Comfort Where It Counts.

CAH\_12-S1HA9000  
Cassette Air Handler  
Single - Zone Heat Pump

Rev. 1.1 [09/07]

JOB NAME: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
PURCHASER: \_\_\_\_\_  
ENGINEER: \_\_\_\_\_  
SUBMITTED TO: \_\_\_\_\_ FOR: REFERENCE [ ] APPROVAL [ ] CONSTRUCTION [ ]  
SUBMITTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
UNIT DESIGNATION: SCHEDULE #: \_\_\_\_\_ MODEL #: \_\_\_\_\_

Manufacturer reserves the right to change these specifications at any time without incurring obligation.

Note: CAC\_ = CACA and/or CACB



**▲ PERFORMANCE:**

Performance certified in accordance with ARI 210/240

**COOLING**

Indoor design conditions: 80°F Dry Bulb / 67°F Wet Bulb  
Outdoor design conditions: 95°F

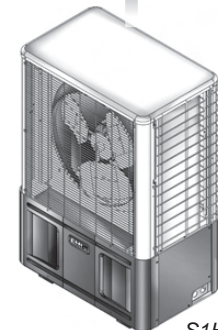
**HEATING**

Indoor design conditions: 70°F Dry Bulb / 57°F Wet Bulb  
Outdoor design conditions (High): 47°F Dry Bulb / 43°F Dry Bulb  
Outdoor design conditions (Low): 17°F Dry Bulb / 15°F Dry Bulb



CAHA/CAHB

SYSTEM CAPACITIES					
Models		Cooling			
Indoor	Outdoor	Capacity	SEER	SHR	EER
CAH_12	S1HA9000	9,000 Btuh (2.6 Kw)	13.0	0.80	11.60
		Heating			
		High Temperature	Low Temperature	HSPF	COP
		8,000 Btuh (2.3 kW)	4,800 Btuh (1.4 kW)	7.7	3.3



S1HA

**▲ STANDARD FEATURES:**

**INDOOR UNIT:**

- In ceiling mounted unit
- Connections for 24V remote wall thermostat
- Custom control board with anti-short cycle timer
- Relays and connectors to condensing unit
- Condensate Pump with 36" (0.9 m) lift – from base of unit
- 24V / 40VA Transformer
- Fans are backward curved impeller centrifugal design
- Single fan w/fire retardant plastic impeller
- Fan purge for improved efficiency
- Freeze protection



EMI ENGINEERING SUBMITTAL

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**▲ STANDARD FEATURES:**

**INDOOR UNIT:** *Continued*

- Motor is multispeed, enclosed type w/thermal protection and sealed lifetime bearings
- Permanent, washable filter (user accessible)
- Branch duct knockouts on three sides for remote discharge locations (Use up to 2 non-adjacent)
- Fresh air intake capability on two sides of cabinet
- Four plastic air vanes are equipped w/manually adjusted air vanes
- Custom Control Board with 7-day, 4 event/day, Programmability (CAHB12 only)
- Infrared Hand-Held Controller (CAHB12 only)
- One year Limited Parts Warranty

**OUTDOOR UNIT:**

- Single Zone, Heat Pump, Side Discharge Unit
- Standard Operating Low Ambient in Cooling 32 °F (0 °C)

- Internally Enhanced Copper Tube/Enhanced Aluminum Fin Outdoor Coil
- R-22 Refrigerant
- Duratec Compressor Protection Package which includes the following items:
  - Suction Accumulator
  - Filter Drier
  - Loss of Charge Switch
  - Crankcase heater
  - Start assist
- High Pressure Switch (*manual reset*)
- Factory Installed Compressor Start Assist Capacitor
- Coated Wire Grille Condenser Coil Protection and Fan Guard
- Five years Limited Compressor Warranty, One year Limited Parts Warranty

*Please use check-box to select Options and Accessories.*

**▲ FACTORY INSTALLED OPTIONS:**

**INDOOR UNIT**

***Power Connection:***

- 208/230-1-60

***Electric Heat:***

- None
- 1.5 kW (208/230 Volt)

**OUTDOOR UNIT**

***Power Connection:***

- 115-1-60
- 208/230-1-60

***Condenser Coil:***

- Copper Tube/ Copper Fin
- Copper Tube/ Post-Coat Aluminum Fin

**▲ FIELD INSTALLED ACCESSORIES:**

**INDOOR UNIT**

- 24 Volt Wall Thermostat**

**OUTDOOR UNIT**

- Wind Baffle/Hail Guard, Architectural Louver Kit** (*Required for cooling operation to 0° F (-18° C)*)

***Refrigerant Line Sets***

- 10'
- 25'
- 50'

**EMI ENGINEERING SUBMITTAL CAH\_12-S1HA9000**

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**ELECTRICAL SPECIFICATIONS**

Indoor Unit	V-Ph-Hz	Voltage		Indoor Fan Motor		Heater		Unit FLA	MCA	MOCP
		Min	Max	RLA	HP	kW	Amps			
CAH_12	208/230-1-60	197	240	0.35	0.1	-	-	0.4	0.5	15
						1.5	6.52	6.9	8.6	15

Outdoor Unit	Power Supply V-1-60			Control* V-1-60	Compressor			Outdoor Fan Motor			Unit FLA	MCA	MOCP
	Volts	Min	Max		Qty	RLA	LRA	Qty	FLA	HP			
S1HA9000	115	104	126	24	1	6.6	39.2	1	1.4	0.125	8.0	9.7	15
	208/230	197	240	24	1	3.4	23.0	1	0.8	0.125	4.2	5.1	15

*Note: \* - Control Voltage is supplied from the indoor unit. No separate supply required.*

**SOUND DATA**

Unit	Sound dBA	
	High	Low
CAH_12	41	39
S1HA9000	59	

*Note: Sound data for indoor unit at high speed, 230 V Sound data for outdoor unit at 230V*

**WEIGHT DATA**

Unit	Weight, lbs (kg)
CAH_12	70 (31.8)
S1HA9000	98 (45)

**INTERCONNECTING TUBING SPECIFICATIONS**

Indoor Unit	Outdoor Unit	Maximum Separation, Equivalent ft (m)	Maximum Elevation Difference, ft (m)	Liquid Line OD	Suction Line OD	Condensate Line ID
CAH_12	S1HA9000	100 (30.5)	35 (10.7)	1/4"	1/2"	1/2"

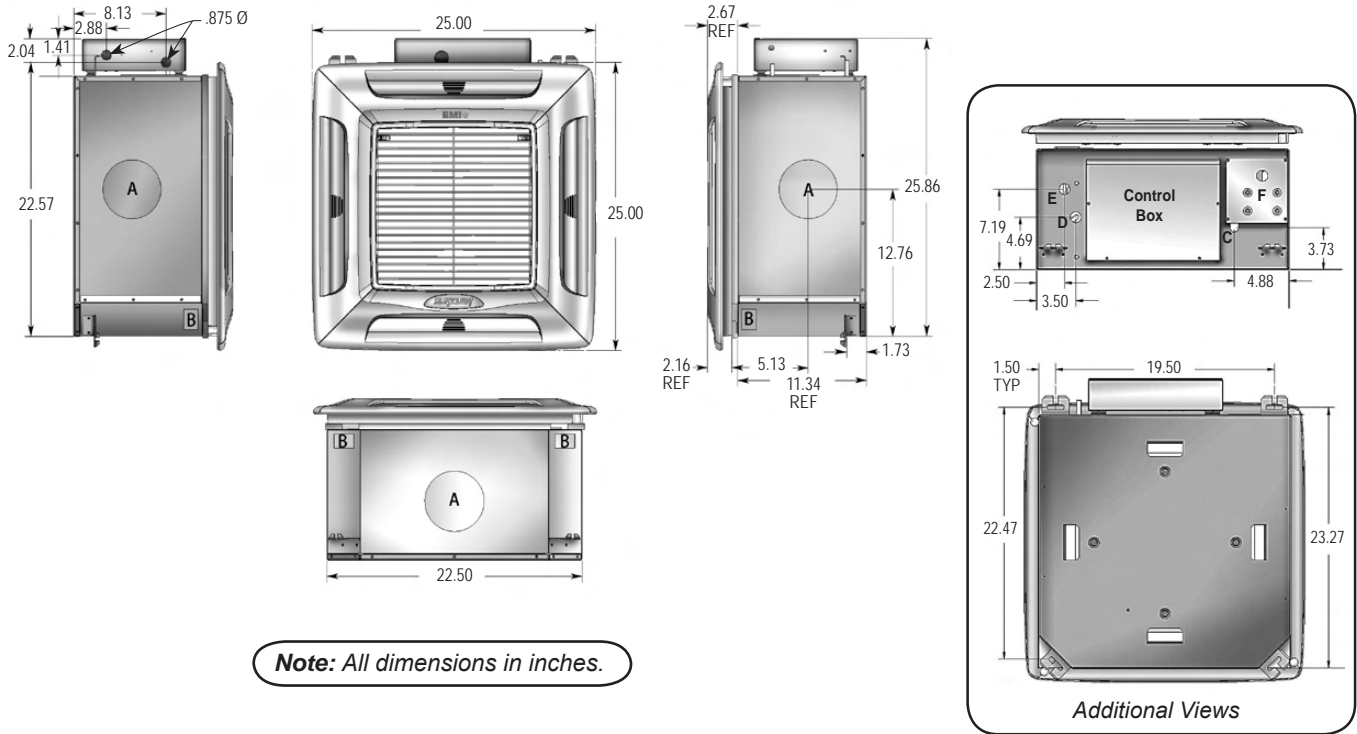
**INDOOR AIR FLOW**

Indoor Unit	CFM (l/s)		Coil	ft/min (m/s)	Air Throw, ft. (m)
	High Speed	Low Speed			
CAH_12	380 (180)	335 (158)	Dry	900 (4.6)	15 (4.6)

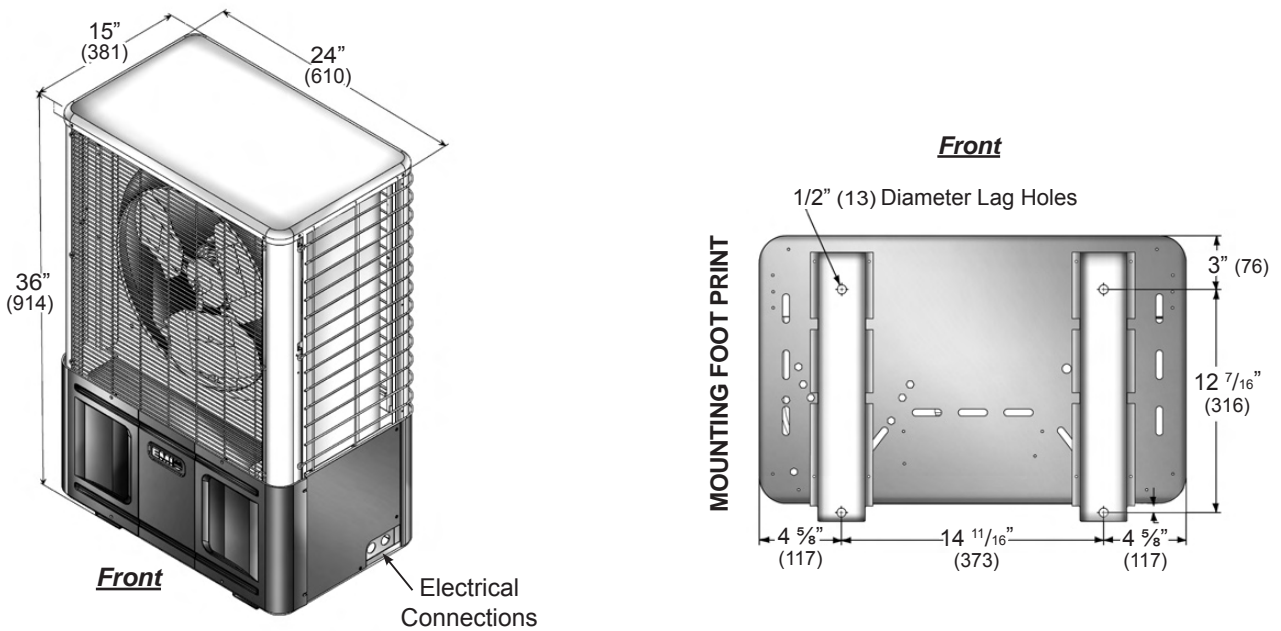
PHYSICAL DIMENSIONS

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INDOOR UNIT



OUTDOOR UNIT



Note: Numbers in ( ) are mm.