



*Comfort Where It Counts.*



Cassette 12 Model Shown

**Heat Pump Nominal Circuit Capacities:**  
9,000 - 12,000 - 18,000 - 24,000 Btuh

**Straight Cool Nominal Circuit Capacities:**  
30,000 - 36,000 Btuh

**PRODUCT DESCRIPTION**

The EMI AmericaSeries Cassette Air Handler is available in three cabinet sizes with four output capacities from 9,000 - 24,000 Btuh, and two cooling only capacities from 30,000 - 36,000 Btuh. Key features include a condensate pump with safety switch and a 36" (0.9 m) lift\*, electric heat is a factory installed option **ONLY (there are no field installed electric heat kits available)**, fresh air inlet and branch duct knockouts, and motorized air vanes (Cassette 24 & 36 only). The Cassette Air Handler accepts a 24 Volt thermostat control (thermostat not included). Designed for low noise levels, easy installation and maintenance and a slim line fascia, all ensure minimum intrusion into the working environment.

Additionally, the CAHB/CACB models utilize an Infrared Hand Held Controller providing access to the programmability functions of the control.

Due to ongoing product development, all designs and specifications are subject to change without notice.

\* Condensate pump lift measured from the base or bottom of the unit.

**STANDARD FEATURES**

▲ **Capacities/Efficiency** - This American-made Cassette Air Handler produces system SEER's meeting or exceeding 13, when matched with EMI's S1C/S1H single zone or S2C/S2H dual zone side discharge, T2C/T2H, T3C/T3H, and T4C/T4H top discharge condensing units. Refer to specifications contained in this document.

**CACA/CAHA & CACB/CAHB CASSETTE DUCTLESS SPLIT SYSTEM AIR HANDLER**

P/N 240005843 Rev. A [05/08]

▲ **Materials of Construction** - Galvanized steel cabinet with fire-resistant thermal and acoustic foam insulation and light grey high-impact ABS fascia. An Expanded Polystyrene drain pan with a tough fire retardant thermoplastic liner.

▲ **Air Systems:**

- Fans are backward curved impeller centrifugal design; dynamically and statically balanced; and mounted on integral mounting rails.
- Single Fan models, Cassette 12 & 24, designed with fire retardant plastic or aluminum impellers.
- Twin Fan models, Cassette 36, designed with fire retardant plastic impellers.
- Motors are multispeed, enclosed type with thermal protection and sealed lifetime bearings.
- Permanent, washable filter (user accessible).
- Branch duct knockouts on three sides for remote discharge locations (using no more than two non-adjacent sides).
- Fresh air intake capability on three sides of cabinet (2 on Cassette 12).
- Four plastic air vanes; motor driven with auto sweep or fixed position stop setting on models Cassette 24 & 36 (models Cassette 12 equipped with manually adjusted air vanes).

▲ **Coil** - Is seamless, rifled copper tubing, arranged in staggered configuration, with enhanced aluminum fins, tested to 600 psig. The tubes are mechanically expanded for secure bonding to fin shoulder.

▲ **Refrigeration Circuit** - Units are equipped with a serviceable fixed orifice expansion device and use R22 refrigerant only.

▲ **Controls and Components (factory installed or supplied):**

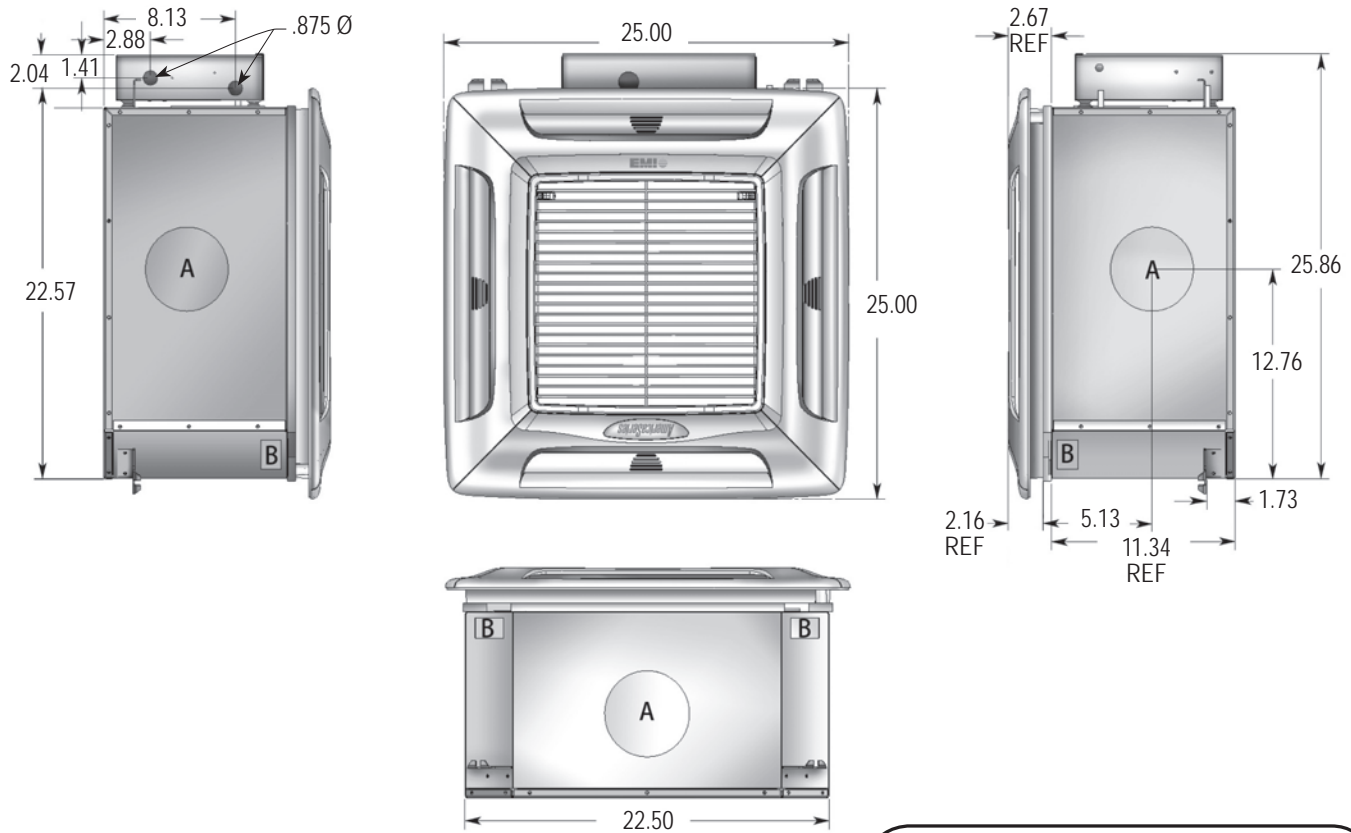
- Connections for 24V remote wall thermostat (All models)
- Custom control board featuring 7-day, 4 event/day, programmability configuration, and multiple modes of operation (CACB & CAHB only)
- Controls also feature anti-short cycle timer, post purge fan relay, and an on board 30 amp electric heat relay (All models)
- Condensate Pump with 36" (0.9 m) lift measured from base of unit (All models)
- Infrared Hand Held Controller (CACB/CAHB only)
- 24V / 40VA Transformer (All models)

▲ **System Options:**

- 24V remote wall thermostat
- Electric Heat (@ 230V), 1.5 kW ( Cassette 12), 3 kW ( Cassette 24) and 5 kW ( Cassette 36)

# CASSETTE DIMENSIONS

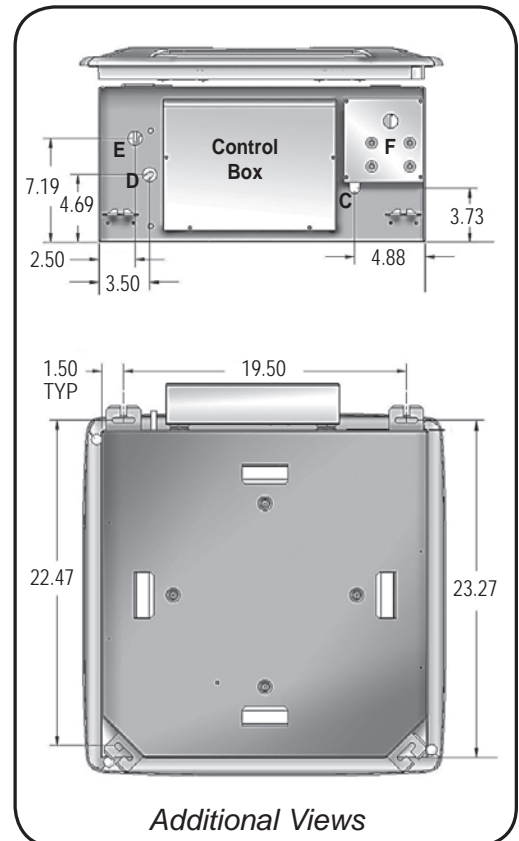
## SMALL CABINET • Cassette 12 • 9,000 - 12,000 Btuh



**Note:** All dimensions in inches.

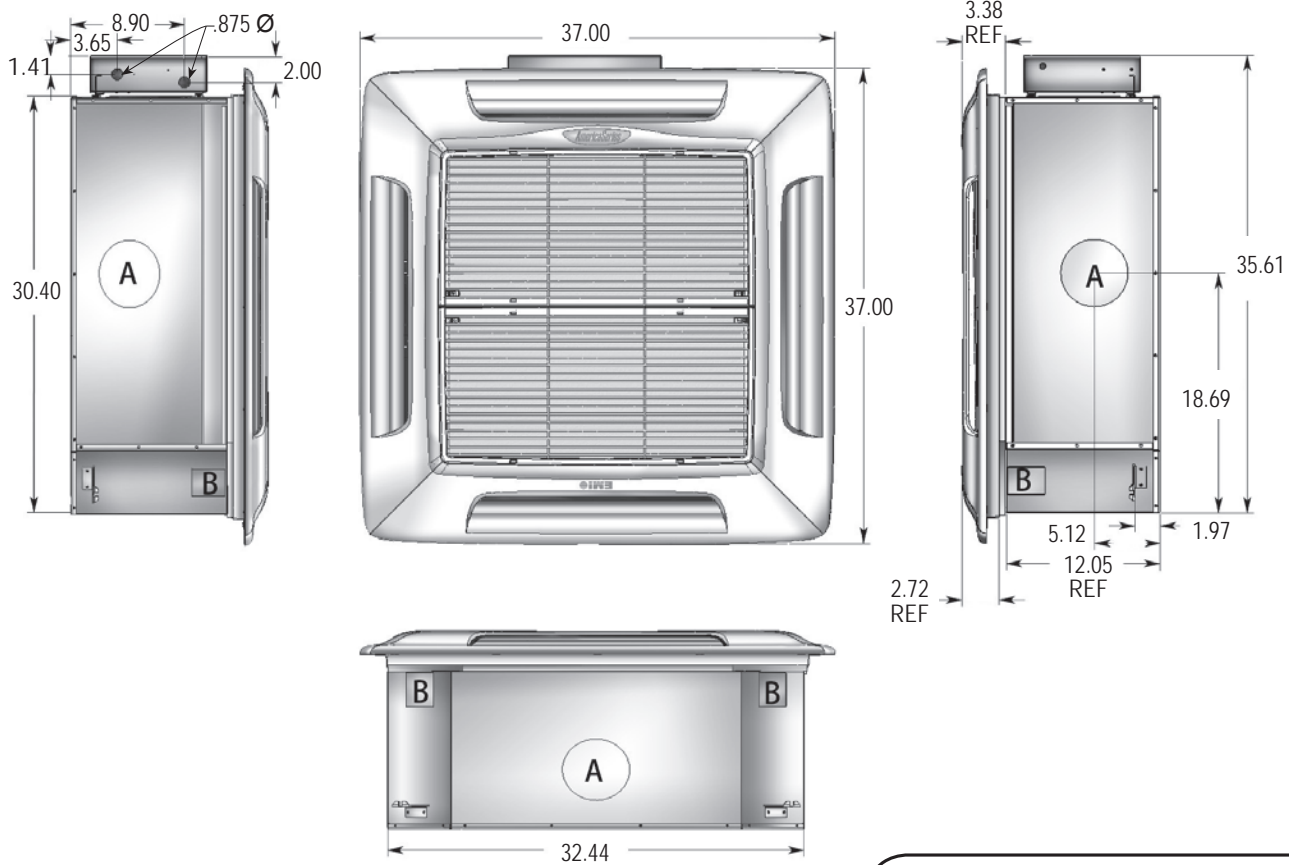
Cassette 12

FEATURE	QTY.	SIZE
<b>A</b> Optional Discharge Knockout	3	5¼" Ø
<b>B</b> Fresh Air Inlet Knockout	2	1¼" x 2½"
<b>C</b> Condensate Discharge	1	½" Ø
<b>D</b> Suction	1	½" Ø
<b>E</b> Liquid	1	¼" Ø
<b>F</b> Condensate Pump Access	1	-



# CASSETTE DIMENSIONS

## MEDIUM CABINET • Cassette 24 • 18,000\* - 24,000 Btuh

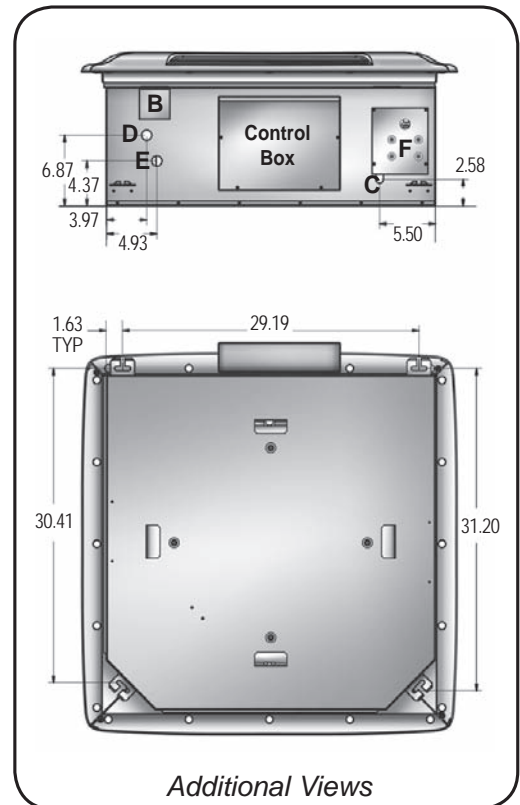


**Note:** All dimensions in inches.

Cassette 24

FEATURE	QTY.	SIZE
A	3	5 1/4" Ø
B	3	3" x 3"
C	1	1/2" Ø
D	1	3/4" Ø*
E	1	3/8" Ø
F	1	-

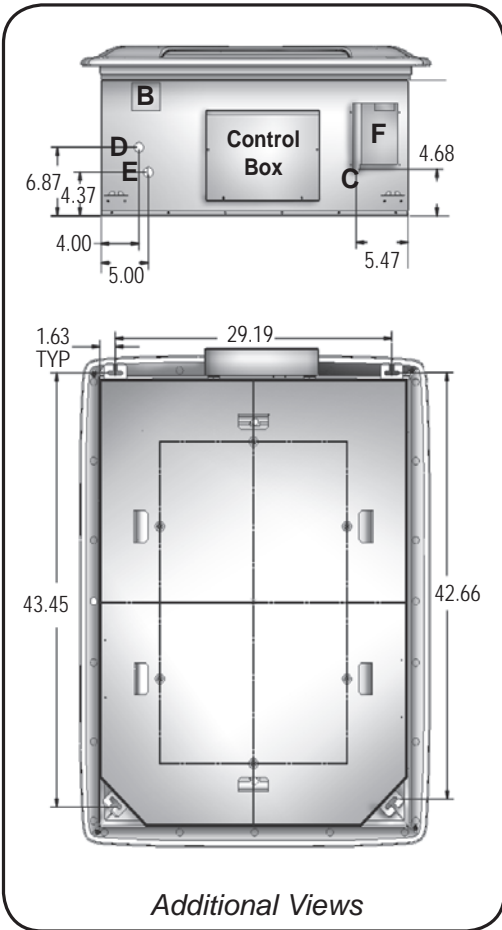
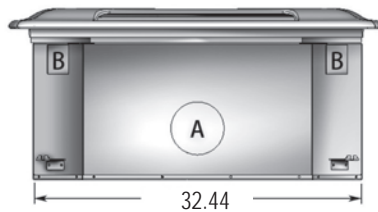
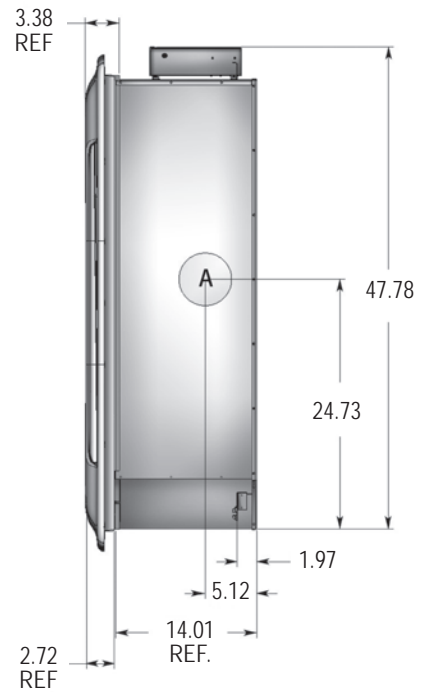
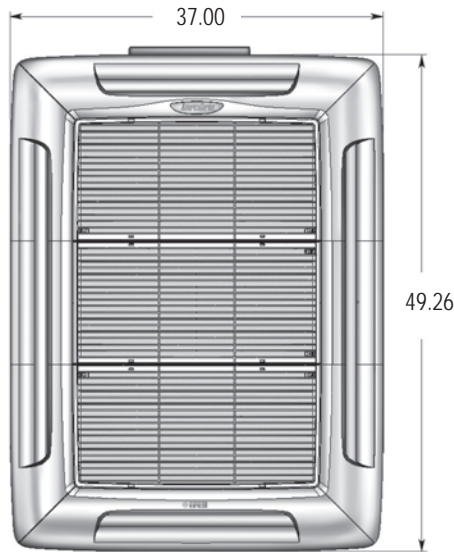
\*18,000 Btuh must be bushed down to 3/8"



Additional Views

# CASSETTE DIMENSIONS

## LARGE CABINET • Cassette 36 • 30,000 - 36,000 Btuh



**Note:** All dimensions in inches.

Cassette 36

FEATURE	QTY.	SIZE
A	3	5/4" Ø
B	3	3" x 3"
C	1	1/2" Ø
D	1	3/4" Ø
E	1	3/8" Ø
F	1	-

## ELECTRICAL SPECIFICATIONS AND PERFORMANCE DATA

NOTE: Due to EMI's ongoing product development program, all designs and specifications are subject to change without notice.

CASSETTE ELECTRICAL SPECIFICATIONS									
Model #	Fan Motor			Elect Heat		Total AMPS	Min Volt	M.C.A.	HACR BRKR
	Volts/HZ/PH	RLA	H.P.	kW	AMPS				
CAH_12	208/230/60/1	0.35	1/10	-	-	0.4	197	0.5	15
CAH_12	208/230/60/1	0.35	1/10	1.5	6.52	6.9	197	8.6	15
CAH_24	208/230/60/1	0.55	1/8	-	-	0.6	197	0.7	15
CAH_24	208/230/60/1	0.55	1/8	3	13.04	13.6	197	17.0	20
CAC_36	208/230/60/1	0.5, 0.5	1/10, 1/10	-	-	1.0	197	1.2	15
CAC_36	208/230/60/1	0.5, 0.5	1/10, 1/10	5	21.74	22.7	197	28.3	30

DISCHARGE AIR VOLUME "Dry Coil"		
Model	High Speed CFM	Low Speed CFM
12	380 (180 L/S)	335 (158 L/S)
24	700 (330 L/S)	620 (293 L/S)
36	1,300 (614 L/S)	1,160 (548 L/S)

INDOOR SOUND LEVELS (dBA)		
Model	High Speed	Low Speed
12	41	39
24	44	42
36	51	49

SHIPPING WEIGHT	
Model Size	Lbs.
12	70 (31.8 kg)
24	108 (49.1 kg)
36	146 (66.4 kg)

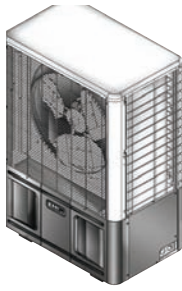
CASSETTE TECHNICAL DATA			
REFRIGERATION	12	24	36
Refrigerant Type	R22		
CONNECTIONS	12	24	36
Suction	1/2"	3/4"*	3/4"
Liquid	1/4"	3/8"	3/8"
Condensate Drain	1/2" I.D.	1/2" I.D.	1/2" I.D.
Branch Duct	5 1/4" Ø	5 1/4" Ø	5 1/4" Ø
Fresh Air Duct	1 1/4 x 2 1/2"	3" x 3"	3" x 3"
FILTRATION	12	24	36
Type	Washable Mesh		
Quantity	1	2	3
Efficiency	80%		
CONDENSATE PUMP	12	24	36
Maximum Head	36" (0.9 m)**		
Min. Flow Rate	2.5 GPH (9.5 l/h)		

\*Must bush down to 5/8" interconnect for 18K system.

\*\* Measured from bottom of unit.

## CASSETTE SYSTEM MATCHES

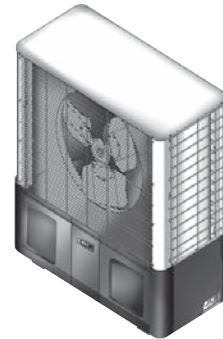
**S1C/S1H  
Side  
Discharge**



**Cassette**



**S2C/S2H  
Side  
Discharge**



**NOTE:** CAH\_ refers to CAHA or CAHB  
CAC\_ refers to CACA or CACB

COOLING SYSTEMS WITH CASSETTE UNITS						
Cassette	Condenser	Btuh	SEER	SHR	EER	Ref.
CAH_12	S1C9000	9,000	13.0	0.79	11.7	R22
CAH_12	S1C2000	11,800	13.0	0.72	12.2	R22
CAH_24	S1C8000	18,000	13.0	0.76	12.3	R22
CAH_24	S1C4000	23,000	13.0	0.67	11.8	R22
* CAC_36	S1C3000	30,000	14.0	0.82	12.0	R22
CAC_36	S1C6000	36,000	13.0	0.74	12.0	R22

SYSTEMS WITH HEAT PUMP CASSETTE UNITS									
Cassette	Condenser	Cooling Btuh	Heating Btuh	SEER	HSPF	SHR	EER	COP	Ref.
CAH_12	S1H9000	9,000	8,000	13.0	7.7	0.80	11.6	3.3	R22
CAH_12	S1H2000	11,600	10,800	13.0	8.0	0.72	11.4	3.4	R22
CAH_24	S1H8000	18,000	15,000	13.0	7.7	0.78	12.0	3.3	R22
CAH_24	S1H4000	23,000	20,000	13.0	7.7	0.69	11.7	3.3	R22

COOLING SYSTEMS WITH S2C SIDE DISCHARGE							
Cassette	Qty	Condenser	Btuh	SEER	SHR	EER	Ref
CAH_12	2	S2C9900	17,600	13.0	0.81	11.3	R22
CAH_12	2	S2C2200	23,000	13.0	0.74	11.4	R22
CAH_12	2	S2C9200	20,400	13.0	0.77	11.4	R22

SYSTEM OPTIONS WITH S2H SIDE DISCHARGE									
Cassette	Qty	Condenser	Cooling Btuh	Heating Btuh	SEER	SHR	EER	COP	Ref
CAH_12	2	S2H9900	18,600	15,700	13.0	0.79	11.7	3.1	R22
CAH_12	2	S2H2200	22,600	20,000	13.0	0.75	11.6	3.1	R22
CAH_12	2	S2H9200	20,600	18,000	13.0	0.77	11.6	3.1	R22

**\* Important** - This system has been designed and manufactured to meet ENERGY STAR criteria for energy efficiency. However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency. Installation of this product should follow the manufacturer's refrigerant charging and air flow instructions. **Failure to confirm proper charge and airflow may reduce energy efficiency and shorten equipment life.**

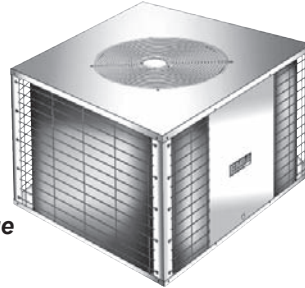


## CASSETTE SYSTEM MATCHES



**Cassette**

**T2C/T2H, T3C/T3H,  
T4C/T4H Top Discharge**



**NOTE:** CAH\_ refers to CAHA or CAHB  
CAC\_ refers to CACA or CACB

SYSTEM OPTIONS WITH T2C TOP DISCHARGE							
Cassette(s)	Qty	Condenser	Btuh	SEER	SHR	EER	Ref.
CAH_24	2	T2C8800	34,000	13.0	0.79	11.4	R22
CAH_24	2	T2C4400	45,000	13.0	0.69	11.2	R22
CAH_12+CAH_24	1+1	T2C9800	26,400	13.0	0.82	11.4	R22
CAH_24	2	T2C8400	39,000	13.0	0.74	11.3	R22
CAH_12 + CAH_24	1+1	T2C2400	34,000	13.0	0.75	11.4	R22

SYSTEM OPTIONS WITH T2H TOP DISCHARGE										
Cassette	Qty	Condenser	Cooling Btuh	Heating Btuh	SEER	HSPF	SHR	EER	COP	Ref
CAH_24	2	T2H8800	36,000	26,400	13.0	7.7	0.75	12.6	3.1	R22
CAH_24	2	T2H8400	42,000	32,600	13.0	7.7	0.71	12.4	3.1	R22
CAH_24	2	T2H4400	48,000	40,000	13.0	7.7	0.67	12.0	3.1	R22
CAH_12 + CAH_24	1+1	T2H9800	27,200	21,200	13.0	7.7	0.76	12.2	3.1	R22
CAH_12 + CAH_24	1+1	T2H2400	35,000	30,000	13.0	7.7	0.69	11.8	3.1	R22

SYSTEM OPTIONS WITH T3C TOP DISCHARGE							
Cassette(s)	Qty	Condenser	Btuh	SEER	SHR	EER	Ref.
CAH_12 + CAH_24	2 + 1	T3C9940	40,000	13.0	0.82	11.3	R22
CAH_12	3	T3C9990	26,400	13.0	0.87	11.4	R22
CAH_12	3	T3C2220	34,400	13.0	0.76	11.4	R22
CAH_12 + CAH_24	2 + 1	T3C9280	37,800	13.0	0.80	11.3	R22
CAH_12 + CAH_24	2 + 1	T3C9240	42,500	13.0	0.79	11.3	R22
CAH_12 + CAH_24	2 + 1	T3C2280	40,500	13.0	0.76	11.2	R22
CAH_12	3	T3C9220	31,800	13.0	0.80	11.4	R22
CAH_12	3	T3C9920	29,000	13.0	0.83	11.4	R22
CAH_12 + CAH_24	2 + 1	T3C9980	35,200	13.0	0.83	11.4	R22
CAH_12 + CAH_24	2 + 1	T3C2240	45,500	13.0	0.75	11.2	R22

## CASSETTE SYSTEM MATCHES

**NOTE:** CAH\_ refers to CAHA or CAHB  
CAC\_ refers to CACA or CACB

SYSTEM OPTIONS WITH T3H TOP DISCHARGE										
Cassette	Qty	Condenser	Cooling Btuh	Heating Btuh	SEER	HSPF	SHR	EER	COP	Ref
CAH_12	3	T3H9920	29,800	25,800	13.0	7.7	0.78	11.7	3.1	R22
CAH_12 + CAH_24	2+1	T3H9980	36,400	29,000	13.0	7.7	0.77	12.2	3.1	R22
CAH_12 + CAH_24	2+1	T3H9940	42,500	35,800	13.0	7.7	0.72	11.9	3.1	R22
CAH_12	3	T3H9220	31,800	27,800	13.0	7.7	0.76	11.6	3.1	R22
CAH_12 + CAH_24	2+1	T3H9280	38,500	31,000	13.0	7.7	0.75	12.1	3.1	R22
CAH_12 + CAH_24	2+1	T3H9240	44,500	37,800	13.0	7.7	0.71	11.8	3.1	R22
CAH_12 + CAH_24	2+1	T3H2280	40,500	33,200	13.0	7.7	0.75	12.0	3.1	R22
CAH_12 + CAH_24	2+1	T3H2240	46,500	40,000	13.0	7.7	0.71	11.8	3.1	R22
CAH_12	3	T3H2220	34,000	30,000	13.0	7.7	0.75	11.6	3.1	R22

SYSTEM OPTIONS WITH T4C TOP DISCHARGE							
Cassette	Qty	Condenser	Btuh	SEER	SHR	EER	Ref.
CAH_12	4	T4C9999	35,200	13.0	0.87	11.4	R22
CAH_12	4	T4C2222	46,000	13.0	0.76	11.4	R22
CAH_12	4	T4C9222	43,000	13.0	0.77	11.4	R22
CAH_12	4	T4C9992	37,800	13.0	0.79	11.4	R22
CAH_12	4	T4C9922	40,500	13.0	0.82	11.4	R22

SYSTEM OPTIONS WITH T4H TOP DISCHARGE										
Cassette	Qty	Condenser	Cooling Btuh	Heating Btuh	SEER	HSPF	SHR	EER	COP	Ref
CAH_12	4	T4H9999	37,200	31,800	13.0	7.7	0.80	11.9	3.2	R22
CAH_12	4	T4H9992	39,000	33,800	13.0	7.7	0.78	11.8	3.1	R22
CAH_12	4	T4H9922	41,000	35,800	13.0	7.7	0.77	11.7	3.1	R22
CAH_12	4	T4H9222	43,000	37,800	13.0	7.7	0.75	11.5	3.1	R22
CAH_12	4	T4H2222	45,000	40,000	13.0	7.7	0.75	11.6	3.1	R22

