



Comfort Where It Counts.

CAH/CAHW DUCTLESS SPLIT SYSTEM CASSETTE EVAPORATOR

P/N# 240003234 Rev. 1.7 [03/05]



Nominal Capacities:

9,000 - 12,000 - 15,000/18,000 - 24,000
30,000 - 36,000 - 42,000 - 48,000 Btuh

PRODUCT DESCRIPTION

The CAH/CAHW Cassette Evaporator is available in three cabinet sizes with nine cooling and heat pump output capacities from 9,000-48,000 Btuh. Fan speed adjustments are available in all three cabinet sizes to obtain required performance. Key features include a condensate pump with safety switch and an 18" lift; electric heat; fresh air inlet and branch duct knockouts; and motorized air vanes (18-48 only). The CAH/CAHW accepts a 24 volt thermostat control (thermostat not included) or an infrared microprocessor control can be obtained as a factory installed option. Hot water coils are available on all CAHW models in place of electric heat.

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

STANDARD FEATURES

▲ **Capacities/Efficiency** - The CAH/CAHW Cassette Evaporator produces system SEER's exceeding 10.0. Refer to specifications for EMI's SCC and C10 single zone condensing units; MC2 or MC4 multi-zone condensing units; SHC heat pumps; and MH2 or MH4 limited range multi-zone heat pumps.

▲ **Materials of Construction** - Galvanized steel cabinet with fire-resistant thermal and acoustic foam insulation and pearl grey high-impact polystyrene fascia.

▲ Air Systems:

- Fans are backward curved impeller centrifugal design; dynamically and statically balanced; and mounted on integral mounting rails.
- Single Fan models (09-24) designed with fire retardant aluminum/plastic impellers.
- Twin Fan models (30-48) 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 two sides for remote discharge locations.
- Fresh air intake capability on three sides of cabinet (2 on CAH 09-12).
- Four flock coated air vanes; motor driven with auto sweep or fixed position stop setting on models 18-48 (models 09-12 equipped with manually adjusted air vanes).

▲ **Coil** - Coil is seamless, copper tubing, arranged in staggered configuration, with enhanced aluminum fins, tested to 460 psig. The tubes are mechanically expanded for secure bonding to fin shoulder.

▲ **Refrigeration Circuit** - Units are equipped with a bi-directional equalized thermostatic valve with built in check valve and bleed orifice port.

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

- Connections for 24V remote wall thermostat.
- Custom control board featuring anti-short cycle timer; 60 second post purge fan relay; and on board 30 amp electric heat relay.
- Relays and connectors to condensing unit.
- Electric Heat
 - 1.5KW (9,000-12,000 Btuh)
 - 3KW (15,000/18,000-24,000 Btuh)
 - 5KW (30,000-48,000 Btuh)
- Condensate Pump with 18" lift.
- 24V Transformer.

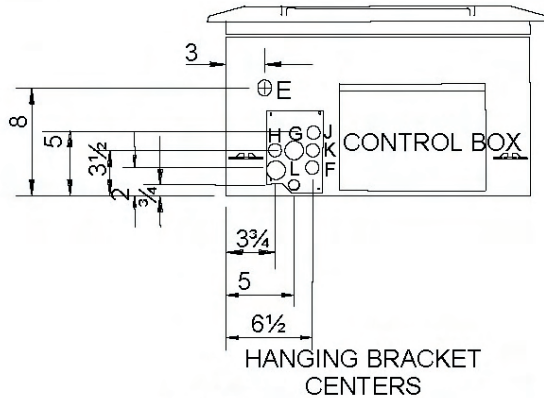
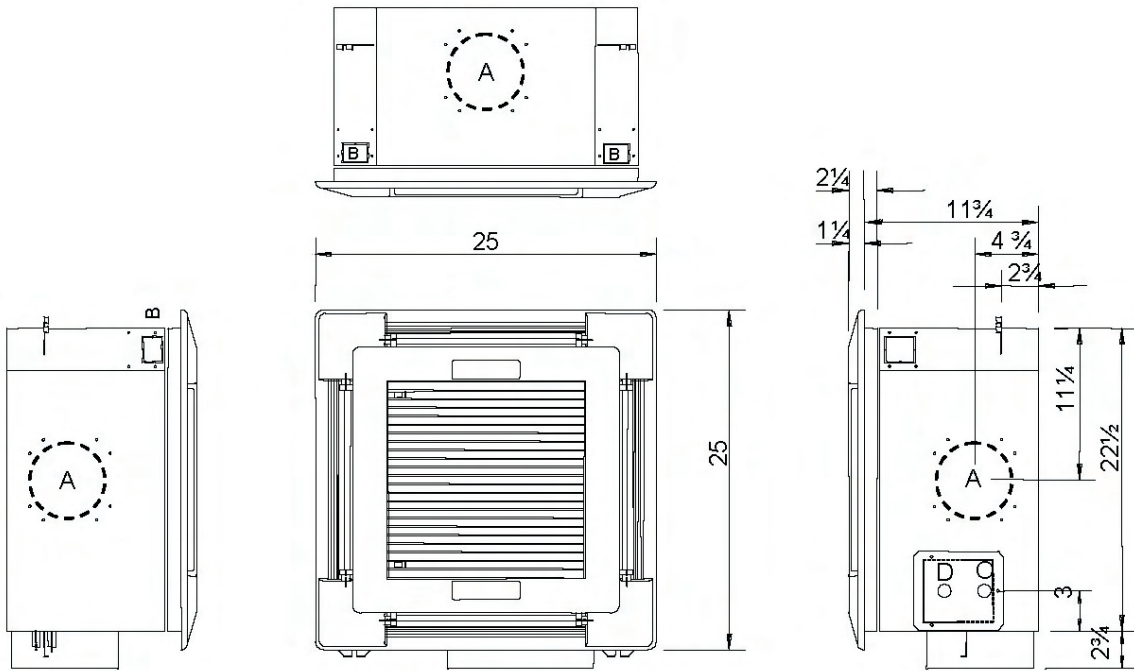
▲ System Options:

- 24V remote wall thermostat.
- Infrared microprocessor control (factory installed only).

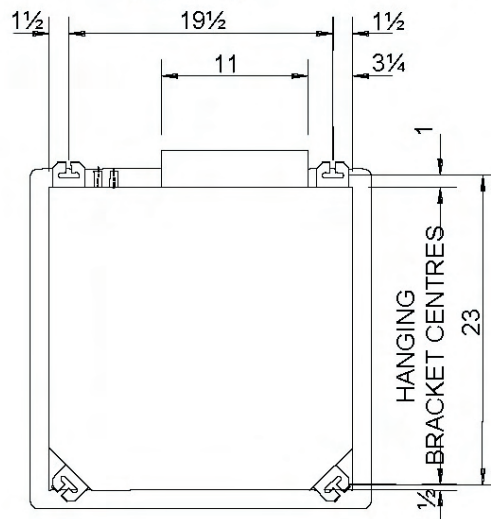
CAH/CAHW CASSETTE DIMENSIONS

SMALL CABINET

- CAH 9,000 - 12,000
- CAHW 9,000 ONLY



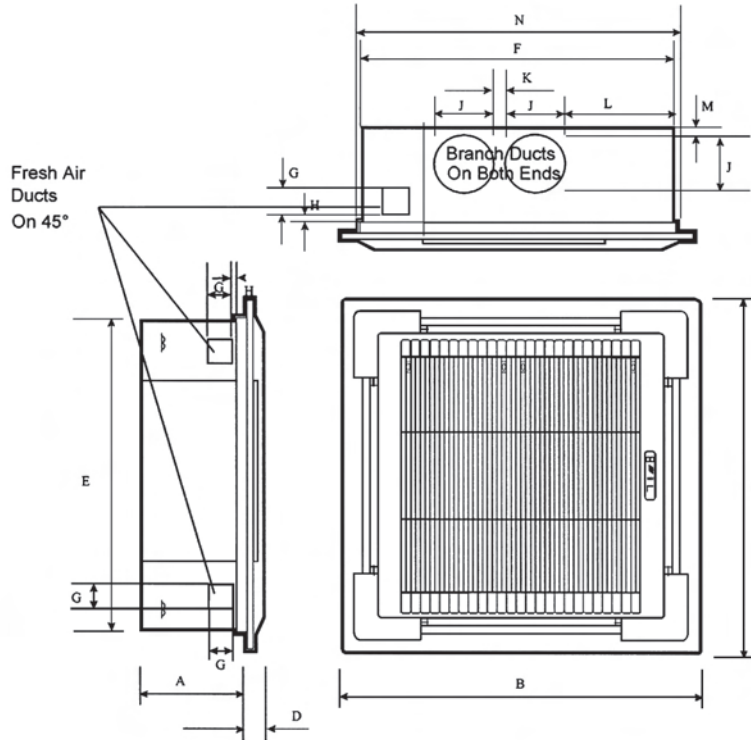
- A OPTIONAL DISCHARGE KNOCKOUT
Ø 5" (3 OFF)
- B FRESH AIR INLET KNOCKOUT Ø 3"
QTY. 2)
- C CONDENSATE DISCHARGE (1/2")
- D CONDENSATE SUMP INSPECTION
HOLE
- E AUXILIARY DRAIN TRAY INLET TO
MAIN TRAY (1/2")
- F CHILLED WATER COIL VENT
- G CAH 09/12 OUTLET (1/2")
- H CAH 09/12 INLET (1/2")
- J 1/2" LPHW INLET (CHILLED WATER)
- K 1/2" LPHW OUTLET (CHILLED WATER)
- L CAH 09/12 LIQUID (1/4")



CAH/CAHW CASSETTE DIMENSIONS

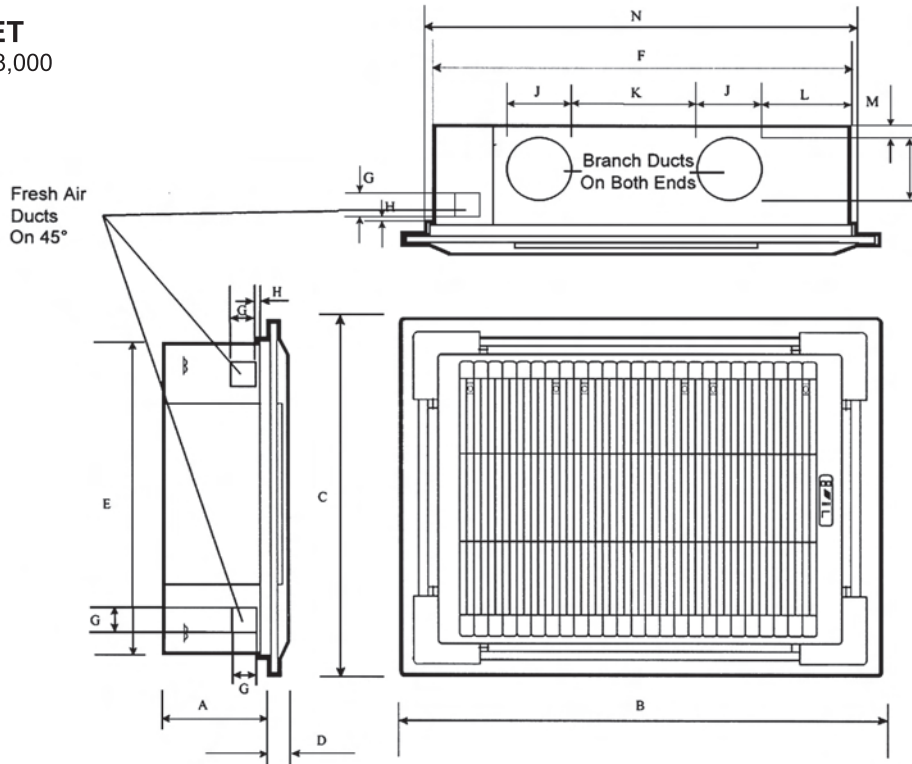
MEDIUM CABINET

- CAH 15,000 - 24,000
- CAHW 12,000 - 24,000



LARGE CABINET

- CAH/W 30,000 - 48,000



CASSETTE DIMENSIONS (INCHES)

SIZE	A	B	C	D	E	F	G	H	J	K	L	M	N
MEDIUM	11	37	37	1 $\frac{3}{4}$	32 $\frac{3}{4}$	32 $\frac{3}{4}$	2 $\frac{3}{4}$	$\frac{1}{2}$	Ø 5	3 $\frac{1}{4}$	9 $\frac{1}{2}$	$\frac{3}{4}$	33 $\frac{1}{4}$
LARGE	13	49 $\frac{1}{4}$	37	1 $\frac{3}{4}$	32 $\frac{3}{4}$	45	2 $\frac{3}{4}$	$\frac{1}{2}$	Ø 6	13 $\frac{1}{4}$	9 $\frac{1}{2}$	$\frac{3}{4}$	45 $\frac{1}{2}$

ELECTRICAL SPECIFICATIONS AND PERFORMANCE DATA

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

ELECTRICAL SPECIFICATIONS				
STANDARD UNIT DATA		SMALL	MEDIUM	LARGE
POWER SUPPLY		230V/1PH/60HZ	230V/1PH/60HZ	230V/1PH/60HZ
FULL LOAD AMPS	A	0.4	0.6	0.9
MIN. CIRCUIT AMPACITY (MCA)	A	0.5	0.75	1.13
REC. FUSE	A	15	15	15
WITH OPTIONAL ELECTRIC HEAT ¹		SMALL	MEDIUM	LARGE
POWER SUPPLY		230V/1PH/60HZ	230V/1PH/60HZ	230V/1PH/60HZ
ELECTRIC HEAT CAPACITY	KW	1.5	3.0	5.0
HEATER AMPS	A	6.52	13.1	21.7
FULL LOAD AMPS	A	7	13.7	22.6
MIN. CIRCUIT AMPACITY (MCA)	A	8.8	17.1	28.3
REC. FUSE WITH HEAT	A	15	20	30
WITH OPTIONAL BOOST TRANSFORMER ²		SMALL	MEDIUM	LARGE
POWER SUPPLY		115V/1PH/60HZ	115V/1PH/60HZ	115V/1PH/60HZ
FULL LOAD AMPS	A	0.8	1.2	1.8
MIN. CIRCUIT AMPACITY (MCA)	A	1.0	1.5	2.26
REC. FUSE	A	15	15	15

(1) STANDARD UNIT FITTED WITH OPTIONAL ELECTRIC HEATING ELEMENTS. AVAILABLE WITH 230V MODEL UNITS ONLY.

(2) STANDARD UNIT FITTED WITH OPTIONAL BOOST TRANSFORMER FOR CONNECTION TO A 115V ELECTRICAL SUPPLY. ELECTRIC HEAT IS NOT AVAILABLE WITH THIS OPTION.

CAHW HOT WATER CASSETTE CAPACITIES (Hot Water 180°F Inlet/160° F Outlet)				
Model	Air ON °F DB/50% RH	TC Btuh	Flow GPM	P.D. FT. H ₂ O
09/12	50°	19,800	2.0	10.0
	60°	17,100	1.7	8.4
	70°	14,000	1.4	6.7
15	50°	40,600	4.1	9.0
	60°	36,950	3.8	8.1
	70°	33,270	3.4	6.3
18/24	50°	46,060	4.7	10.9
	60°	41,930	4.3	9.4
	70°	37,770	3.8	8.1
30/36	50°	62,500	6.4	10.8
	60°	56,940	5.8	9.2
	70°	51,350	5.2	7.3
42/48	50°	67,310	6.8	12.0
	60°	61,310	6.2	10.2
	70°	55,270	5.6	8.6

CAH/CAHW TECHNICAL DATA					
REFRIGERATION	09-12	15	18-24	30-36	42-48
NUMBER OF CIRCUITS	1	1	1	1	1
REFRIGERANT TYPE	R22	R22	R22	R22	R22
CABINET DIMENSIONS	09-12	15	18-24	30-36	42-48
HEIGHT	10-3/4"	9-1/2"	9-1/2"	11-1/2"	11-1/2"
WIDTH	22-1/2"	32-1/4"	32-1/4"	44-1/2"	44-1/2"
DEPTH	22-1/2"	32-1/4"	32-1/4"	32-1/4"	32-1/4"
WEIGHT	40 LBS.	64 LBS.	64 LBS.	97 LBS.	97 LBS.
FASCIA DIMENSIONS	09-12	15	18-24	30-36	42-48
HEIGHT	2-1/4"	3"	3"	3"	3"
WIDTH	25"	37"	37"	49-1/4"	49-1/4"
DEPTH	25"	37"	37"	37"	37"
WEIGHT	5 LBS.	18 LBS.	18 LBS.	21 LBS.	21 LBS.
CONNECTIONS	09-12	15	18-24	30-36	42-48
SUCTION	1/2"	1/2"	5/8"	3/4"	3/4"
LIQUID	1/4"	1/4"	3/8"	3/8"	3/8"
CONDENSATE	1/2"	1/2"	1/2"	1/2"	1/2"
BRANCH DUCT DIAMETER	5"	5"	5"	6"	6"
FRESH AIR DUCT DIAMETER	3"	3"	3"	3"	3"
HOT WATER INLET*	1/2"	1/2"	1/2"	1/2"	1/2"
HOT WATER OUTLET*	1/2"	1/2"	1/2"	1/2"	1/2"
FILTRATION	09-12	15	18-24	30-36	42-48
TYPE	WIRE FRAMED PERIFRAME				
QUANTITY	1	2	2	3	3
ARRESTANCE	80%	80%	80%	80%	80%
CONDENSATE PUMP	09-12	15	18-24	30-36	42-48
MAXIMUM HEAD	18"	18"	18"	18"	18"
NOMINAL FLOW RATE (GPM)	0.1	0.1	0.1	0.1	0.1

* 3/4" SUCTION AT EMI CONDENSER. ** 7/8" SUCTION AT EMI CONDENSER.

INDOOR SOUND LEVELS (dB)			
Model	High Speed	Medium Speed	Low Speed
09-12	39	37	35
15/18	43	41	39
24	47	43	41
30-36	48	47	45
42-48	49	48	47

DISCHARGE AIR VOLUME			
Model	High Speed CFM	Med. Speed CFM	Low Speed CFM
09-12	400	340	300
15/18	615	550	490
24	750	615	550
30-36	996	890	784
42-48	1123	996	890



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