

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: CAH_ = CAHA and/or CAHB



▲ PERFORMANCE:

Performance certified in accordance with ARI 210/240

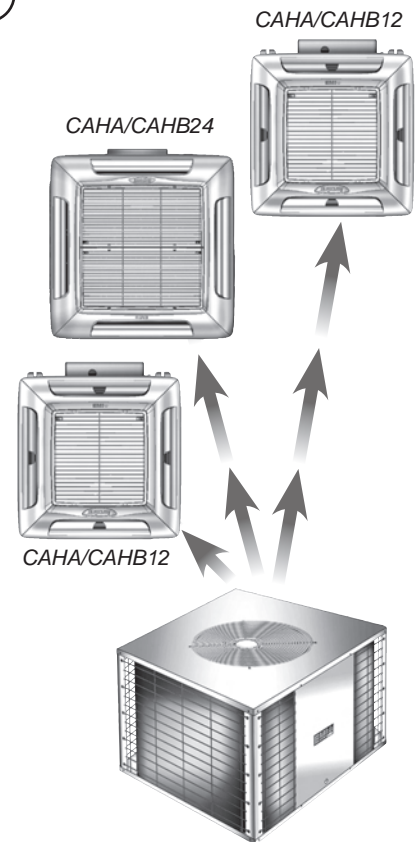
Note: 35°F ambient, minimum operating temperature for compressor.
System will automatically switch to electric heat if option is ordered.

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



Top Discharge Condensers

CAH_ / T2HA, T3HA, OR T4HA SYSTEM CAPACITIES							
Model		Cooling				Heating	
Outdoor	Indoor Air Handler	Btuh (kW)	SEER	SHR	EER	Btuh (kW)	COP
T2HA8800	(2) CAH_24	36000 (10.5)	13	0.75	12.6	26400 (7.7)	3.1
T2HA8400	(2) CAH_24	42000 (12.3)	13	0.71	12.4	32600 (9.5)	3.1
T2HA4400	(2) CAH_24	48000 (14.0)	13	0.67	12.0	40000 (11.7)	3.1
T2HA2400	(1) CAH_12 (1) CAH_24	35000 (10.2)	13	0.69	11.8	30000 (8.8)	3.1
T2HA9800	(1) CAH_12 (1) CAH_24	27200 (8.0)	13	0.76	12.2	21200 (6.2)	3.1
T3HA9990	(3) CAH_12	27800 (8.1)	13	0.80	11.9	23800 (7.0)	3.2
T3HA9920	(2) CAH_12 (1) CAH_24	29800 (8.7)	13	0.78	11.7	25800 (7.6)	3.1
T3HA9980	(2) CAH_12 (1) CAH_24	36400 (10.7)	13	0.77	12.2	29000 (8.5)	3.1
T3HA9940	(2) CAH_12 (1) CAH_24	42500 (12.4)	13	0.72	11.9	35800 (10.5)	3.1
T3HA9220	(3) CAH_12	31800 (9.3)	13	0.76	11.6	27800 (8.1)	3.1
T3HA9280	(2) CAH_12 (1) CAH_24	38500 (11.3)	13	0.75	12.1	31000 (9.1)	3.1

Circuit Designators: 9 = 9000 Btuh 2 = 12000 Btuh 8 = 18000 Btuh 4 = 24000 Btuh (ex. - 8400 consists of one 18000 Btuh compressor and one 24000 Btuh compressor)



Chart continued next page

EMI ENGINEERING SUBMITTAL

EMI ENGINEERING SUBMITTAL CAH_ / T2HA-T3HA-T4HA

(Continued) CAH_ / T2HA, T3HA, OR T4HA SYSTEM CAPACITIES

Model		Cooling				Heating	
Outdoor	Indoor Air Handler	Btuh (kW)	SEER	SHR	EER	Btuh (kW)	COP
T3HA9240	(2) CAH_12, (1) CAH_24	44500 (13.0)	13	0.71	11.8	37800 (11.1)	3.1
T3HA2280	(2) CAH_12, (1) CAH_24	40500 (11.9)	13	0.75	12.0	33200 (9.7)	3.1
T3HA2240	(2) CAH_12, (1) CAH_24	46500 (13.6)	13	0.71	11.8	40000 (11.7)	3.1
T3HA2220	(3) CAH_12	34000 (10.0)	13	0.75	11.6	30000 (8.8)	3.1
T4HA9999	(4) CAH_12	37200 (11.0)	13	0.80	11.9	31800 (9.3)	3.2
T4HA9992	(4) CAH_12	39000 (11.4)	13	0.78	11.8	33800 (9.9)	3.1
T4HA9922	(4) CAH_12	41000 (12.0)	13	0.77	11.7	35800 (10.5)	3.1
T4HA9222	(4) CAH_12	43000 (12.6)	13	0.75	11.5	37800 (11.1)	3.1
T4HA2222	(4) CAH_12	45000 (13.2)	13	0.75	11.6	40000 (11.7)	3.1

Circuit Designators: 9 = 9000 Btuh 2 = 12000 Btuh 8 = 18000 Btuh 4 = 24000 Btuh (ex. - 8400 consists of one 18000 Btuh compressor and one 24000 Btuh compressor)

CAH_ / T2HA, T3HA, OR T4HA CIRCUIT PERFORMANCE DATA

Model		Circuit	Cooling Btuh (kW)	Heating Btuh (kW)
Outdoor	Indoor Air Handler			
T2HA8800	(2) CAH_24	1	18,000 (5.3)	13,200 (3.9)
		2	18,000 (5.3)	13,200 (3.9)
T2HA8400	(2) CAH_24	1	18,000 (5.3)	13,200 (3.9)
		2	24,000 (7.0)	20,000 (5.9)
T2HA4400	(2) CAH_24	1	24,000 (7.0)	20,000 (5.9)
		2	24,000 (7.0)	20,000 (5.9)
T2HA2400	(1) CAH_12 (1) CAH_24	1	11,300 (3.3)	10,000 (3.0)
		2	24,000 (7.0)	20,000 (5.9)
T2HA9800	(1) CAH_12 (1) CAH_24	1	9,300 (2.7)	8,000 (2.3)
		2	18,000 (5.3)	13,200 (3.9)
T3HA9990	(3) CAH_12	1	9,300 (2.7)	8,000 (2.3)
		2	9,300 (2.7)	8,000 (2.3)
		3	9,300 (2.7)	8,000 (2.3)
T3HA9920	(3) CAH_12	1	9,300 (2.7)	8,000 (2.3)
		2	9,300 (2.7)	8,000 (2.3)
		3	11,300 (3.3)	10,000 (3.0)
T3HA9980	(2) CAH_12 (1) CAH_24	1	9,300 (2.7)	8,000 (2.3)
		2	9,300 (2.7)	8,000 (2.3)
		3	18,000 (5.3)	13,200 (3.9)
T3HA9940	(2) CAH_12 (1) CAH_24	1	9,300 (2.7)	8,000 (2.3)
		2	9,300 (2.7)	8,000 (2.3)
		3	24,000 (7.0)	20,000 (5.9)
T3HA9220	(3) CAH_12	1	9,300 (2.7)	8,000 (2.3)
		2	11,300 (3.3)	10,000 (3.0)
		3	11,300 (3.3)	10,000 (3.0)
T3HA9280	(2) CAH_12 (1) CAH_24	1	9,300 (2.7)	8,000 (2.3)
		2	11,300 (3.3)	10,000 (3.0)
		3	18,000 (5.3)	13,200 (3.9)
T3HA9240	(2) CAH_12 (1) CAH_24	1	9,300 (2.7)	8,000 (2.3)
		2	11,300 (3.3)	10,000 (3.0)
		3	24,000 (7.0)	20,000 (5.9)

Model		Circuit	Cooling Btuh (kW)	Heating Btuh (kW)
Outdoor	Indoor Air Handler			
T3HA2280	(2) CAH_12 (1) CAH_24	1	11,300 (3.3)	10,000 (3.0)
		2	11,300 (3.3)	10,000 (3.0)
		3	18,000 (5.3)	13,200 (3.9)
T3HA2240	(2) CAH_12 (1) CAH_24	1	11,300 (3.3)	10,000 (3.0)
		2	11,300 (3.3)	10,000 (3.0)
		3	13,200 (3.9)	20,000 (5.9)
T3HA2220	(3) CAH_12	1	11,300 (3.3)	10,000 (3.0)
		2	11,300 (3.3)	10,000 (3.0)
		3	11,300 (3.3)	10,000 (3.0)
T4HA9999	(4) CAH_12	1	9,300 (2.7)	8,000 (2.3)
		2	9,300 (2.7)	8,000 (2.3)
		3	9,300 (2.7)	8,000 (2.3)
		4	9,300 (2.7)	8,000 (2.3)
T4HA9992	(4) CAH_12	1	9,300 (2.7)	8,000 (2.3)
		2	9,300 (2.7)	8,000 (2.3)
		3	9,300 (2.7)	8,000 (2.3)
		4	11,300 (3.3)	10,000 (3.0)
T4HA9922	(4) CAH_12	1	9,300 (2.7)	8,000 (2.3)
		2	9,300 (2.7)	8,000 (2.3)
		3	11,300 (3.3)	10,000 (3.0)
		4	11,300 (3.3)	10,000 (3.0)
T4HA9222	(4) CAH_12	1	9,300 (2.7)	8,000 (2.3)
		2	11,300 (3.3)	10,000 (3.0)
		3	11,300 (3.3)	10,000 (3.0)
		4	11,300 (3.3)	10,000 (3.0)
T4HA2222	(4) CAH_12	1	11,300 (3.3)	10,000 (3.0)
		2	11,300 (3.3)	10,000 (3.0)
		3	11,300 (3.3)	10,000 (3.0)
		4	11,300 (3.3)	10,000 (3.0)

EMI ENGINEERING SUBMITTAL CAH_ / T2HA-T3HA-T4HA

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

▲ **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 with aluminum impeller
- Fan purge for improved efficiency
- Freeze protection
- Motors are 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 three sides of cabinet
- Four plastic air vanes; motor driven w/auto sweep or fixed position stop setting
- Custom Control Board with 7-day, 4 event/day, Programmability (CAHB12 & CAHB24 only)
- Infrared Hand-Held Controller (CAHB12 & CAHB24 only)
- One year Limited Parts Warranty

OUTDOOR UNIT:

- Top Condenser Air Discharge Unit
- Independent Circuits, up to four circuits
- Standard Operating Low Ambient in Cooling 32 °F (0 °C)
- Internally Enhanced Copper Tube/Enhanced Aluminum Fin Outdoor Coil
- R-22 Refrigerant
- Factory installed Hard Start Assist
- Suction Accumulator (9,000, 12,000, 18,000 Btuh circuits only)
- Solid Core Filter Drier
- Loss of Charge Switch (9,000, 12,000, Btuh circuits only)
- Compressor Crankcase Heater (9,000, 12,000, Btuh circuits only)
- High Pressure Switch (manual reset) (18,000 & 24,000 Btuh circuits only)
- 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) (CAH_12 only)
- 3.0 kW (208/230 Volt) (CAH_24 only)

OUTDOOR UNIT

Power Connection:

- 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

Refrigerant Line Sets

- 10'
- 25'
- 50'

EMI ENGINEERING SUBMITTAL CAH_ / T2HA-T3HA-T4HA

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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
CAH_24	208/230-1-60	197	240	0.55	0.125	-	-	0.6	0.7	15
						3.00	13.04	13.6	17.0	20

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			
T2HA8800	208/230	197	240	24	2	5.4	36.0	1	1.8	0.33	12.6	14.0	15
T2HA8400	208/230	197	240	24	1	5.4	36.0	1	1.8	0.33	16.0	18.2	25
					1	8.8	54.0						
T2HA4400	208/230	197	240	24	2	8.8	54.0	1	1.8	0.33	19.4	21.6	30
T2HA2400	208/230	197	240	24	1	4.3	27.0	1	1.8	0.33	14.9	17.1	25
					1	8.8	54.0						
T2HA9800	208/230	197	240	24	1	3.4	23.0	1	1.8	0.33	10.6	12.0	15
					1	5.4	36.0						
T3HA9990	208/230	197	240	24	3	3.4	23.0	1	1.8	0.33	12.0	12.9	15
T3HA9920	208/230	197	240	24	2	3.4	23.0	1	1.8	0.33	12.9	14.0	15
					1	4.3	27.0						
T3HA9980	208/230	197	240	24	2	3.4	23.0	1	1.8	0.33	14.0	15.4	20
					1	5.4	36.0						
T3HA9940	208/230	197	240	24	2	3.4	23.0	1	1.8	0.33	17.4	19.6	25
					1	8.8	54.0						
T3HA9220	208/230	197	240	24	1	3.4	23.0	1	1.8	0.33	13.8	14.9	15
					2	4.3	27.0						
T3HA9280	208/230	197	240	24	1	3.4	23.0	1	1.8	0.33	14.9	16.3	20
					1	4.3	27.0						
					1	5.4	36.0						
T3HA9240	208/230	197	240	24	1	3.4	23.0	1	1.8	0.33	18.3	20.5	25
					1	4.3	27.0						
					1	8.8	54.0						
T3HA2280	208/230	197	240	24	2	4.3	27.0	1	1.8	0.33	15.8	17.2	20
					1	5.4	36.0						
T3HA2240	208/230	197	240	24	2	4.3	27.0	1	1.8	0.33	19.2	21.4	30
					1	8.8	54.0						
T3HA2220	208/230	197	240	24	3	4.3	27.0	1	1.8	0.33	14.7	15.8	20
T4HA9999	208/230	197	240	24	4	3.4	23.0	1	1.8	0.33	15.4	16.3	20

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

EMI ENGINEERING SUBMITTAL CAH_ / T2HA-T3HA-T4HA

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ELECTRICAL SPECIFICATIONS *Continued*

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			
T4HA9992	208/230	197	240	24	3	3.4	23.0	1	1.8	0.33	16.3	17.4	20
					1	4.3	27.0						
T4HA9922	208/230	197	240	24	2	3.4	23.0	1	1.8	0.33	17.2	18.3	20
					2	4.3	27.0						
T4HA9222	208/230	197	240	24	1	3.4	23.0	1	1.8	0.33	18.1	19.2	20
					3	4.3	27.0						
T4HA2222	208/230	197	240	24	4	4.3	27.0	1	1.8	0.33	19.0	20.1	25

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

SOUND DATA

Unit	Sound dBA	
	High	Low
CAH_12	41	39
CAH_24	44	42
T2HA	70	
T3HA	70	
T4HA	70	

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)
CAH_24	108 (49.1)
T2HA	325 (147.7)
T3HA	325 (147.7)
T4HA	325 (147.7)

INTERCONNECTING TUBING SPECIFICATIONS

Indoor Unit	Outdoor Circuit Capacity	Maximum Separation, Equivalent ft (m)	Maximum Elevation Difference ft (m)	Liquid Line OD	Suction Line OD	Condensate Line ID
CAH_12	9,000 Btuh	100 (30.5)	35 (10.7)	1/4"	1/2"	1/2"
CAH_12	12,000 Btuh	100 (30.5)	35 (10.7)	1/4"	1/2"	1/2"
CAH_24	18,000 Btuh	100 (30.5)	35 (10.7)	3/8"	5/8"*	1/2"
CAH_24	24,000 Btuh	100 (30.5)	35 (10.7)	3/8"	3/4"	1/2"

* CAH_24 Suction Connection size is 3/4" O.D. and must bush down to 5/8" at the CAH_24 for 18,000 Btuh circuit capacity.

INDOOR AIR FLOW

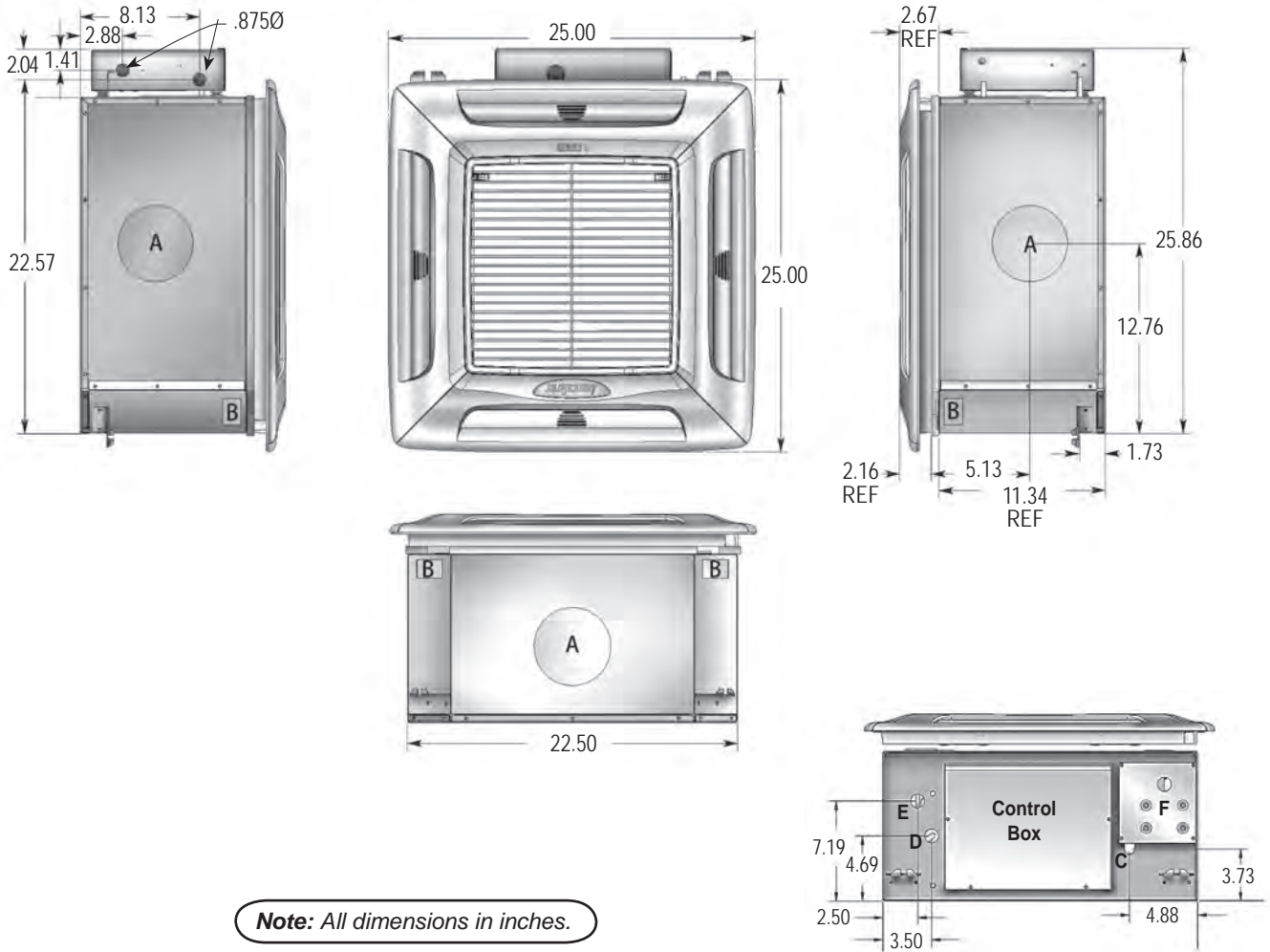
Indoor Unit	CFM (l/s)		Coil	ft/min (m/s)	Air Throw, ft. (m)
	High Speed	Low Speed			
CAH_12	380 (180)	335 (158)	Dry	900 (4.6)	15 (4.6)
CAH_24	700 (330)	620 (293)		1,225 (6.2)	24 (7.3)

PHYSICAL DIMENSIONS

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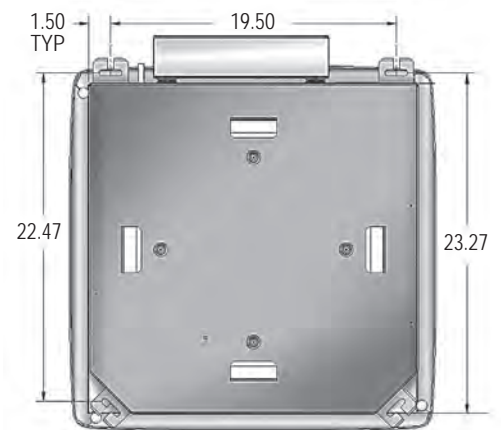
INDOOR UNIT

Cassette 12 • 9,000-12,000 Btuh



Cassette 12

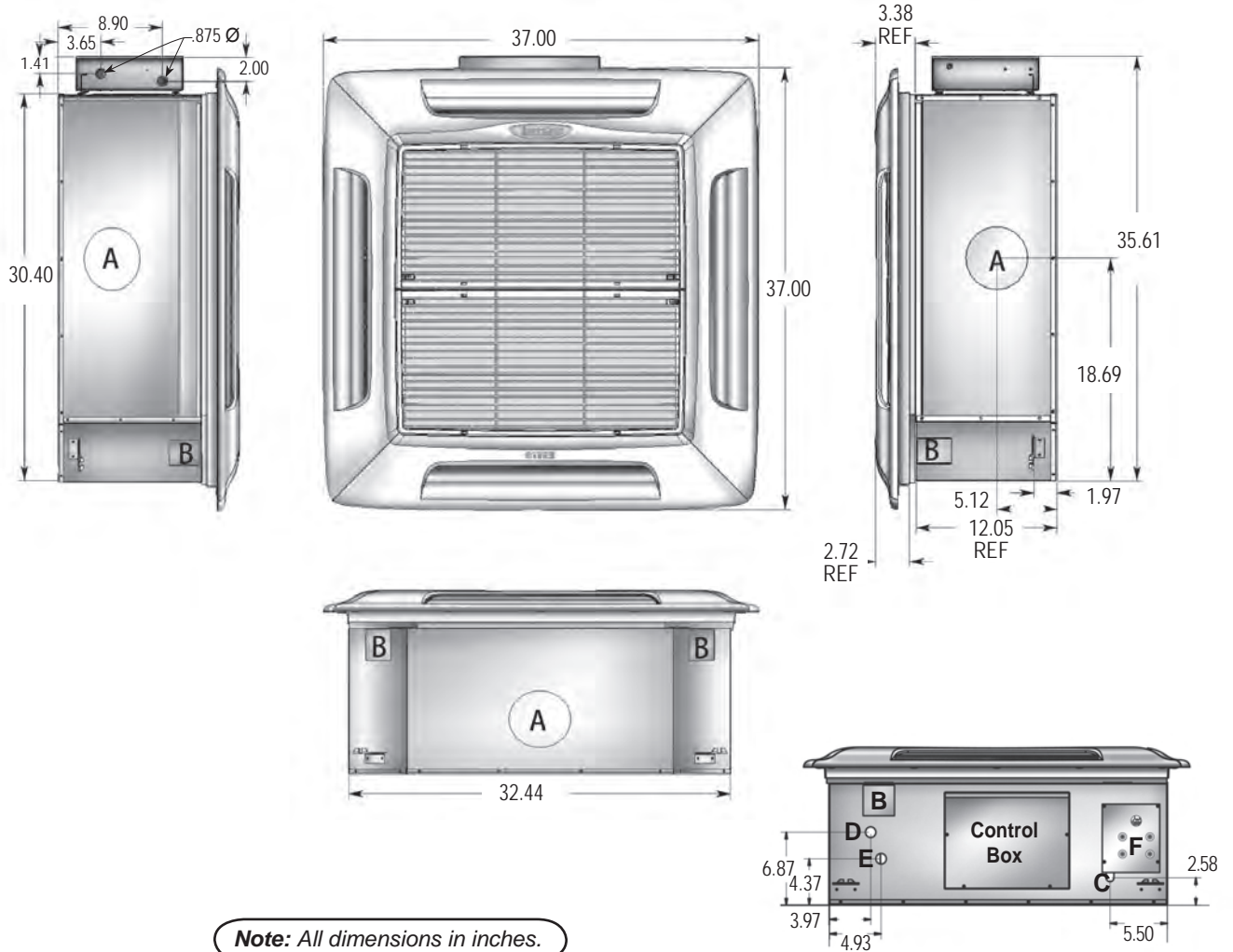
FEATURE	QTY.	SIZE
A Optional Discharge Knockout	3	5¼" Ø
B Fresh Air Inlet Knockout	2	1¼" x 2½"
C Condensate Discharge	1	½" Ø
D Suction	1	½" Ø
E Liquid	1	¼" Ø
F Condensate Pump Access	1	-



PHYSICAL DIMENSIONS

INDOOR UNIT

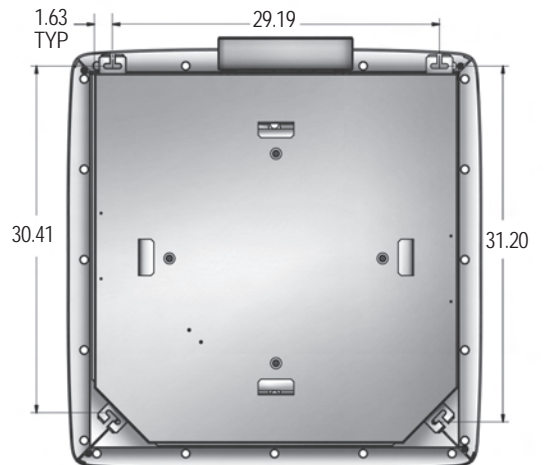
Cassette 24 • 18,000 - 24,000 Btuh



Cassette 24

FEATURE	QTY.	SIZE
A Optional Discharge Knockout	3	5¼" Ø
B Fresh Air Inlet Knockout	3	3 x 3"
C Condensate Discharge	1	½" Ø
D Suction	1	¾" Ø*
E Liquid	1	⅜" Ø
F Condensate Pump Access	1	-

* 18,000 Btuh must be bushed down to 5/8"

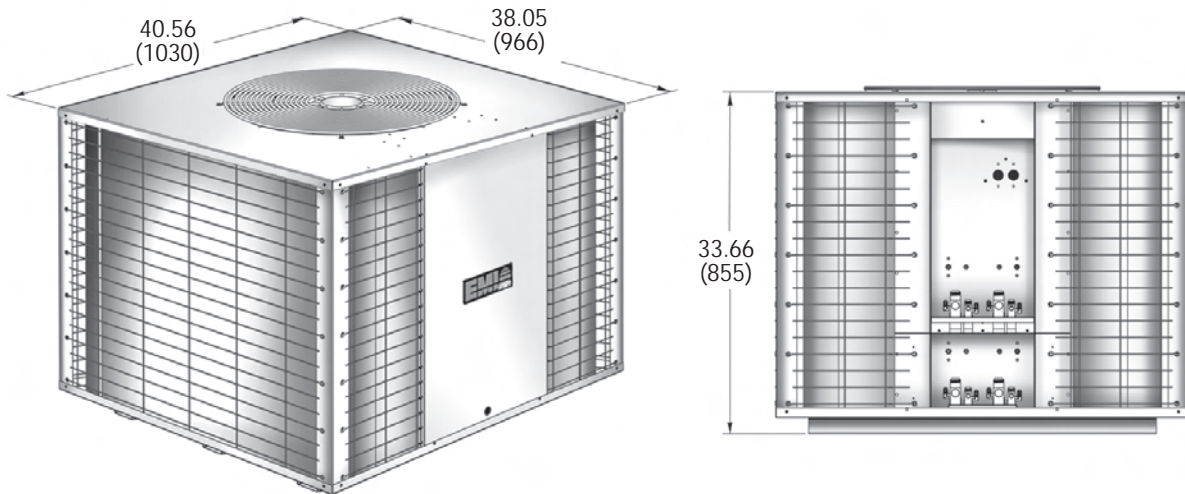


EMI ENGINEERING SUBMITTAL CAH_ / T2HA-T3HA-T4HA

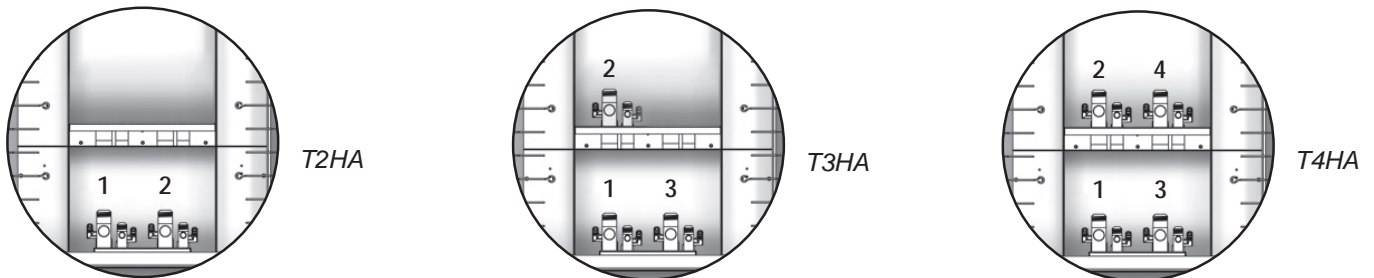
PHYSICAL DIMENSIONS

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OUTDOOR UNIT



Circuit Connection Locations



Note: Numbers in () are mm.