

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.



**▲ PERFORMANCE:**

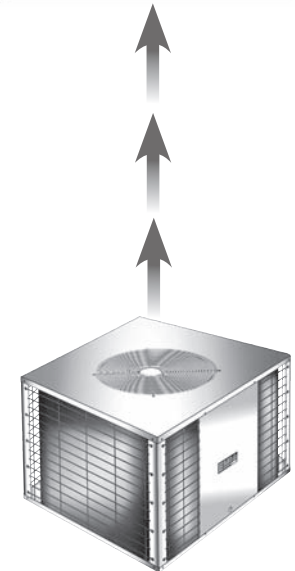
Performance certified in accordance with ARI 210/240

**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



Top Discharge Condensers

UNHA / T2HA, T3HA, OR T4HA SYSTEM CAPACITIES							
Model		Cooling			Heating		
Outdoor	Indoor Air Handler	Btuh (kW)	SEER	SHR	EER	Btuh (kW)	COP
T2HA8800	(2) UNHA24	36000 (10.5)	13	0.72	12.4	29000 (8.5)	3.3
T2HA8400	(2) UNHA24	42000 (12.3)	13	0.68	12.2	34800 (10.2)	3.2
T2HA4400	(2) UNHA24	48000 (14.0)	13	0.65	12.1	40500 (11.9)	3.2
T2HA2400	(1) UNHA12 (1) UNHA24	35000 (10.2)	13	0.67	12.0	30200 (8.8)	3.2
T2HA9800	(1) UNHA09 (1) UNHA24	27200 (8.0)	13	0.74	12.3	22400 (6.6)	3.3
T3HA9990	(3) UNHA09	27800 (8.1)	13	0.80	12.2	24000 (7.0)	3.3
T3HA9920	(2) UNHA09 (1) UNHA12	29800 (8.7)	13	0.76	12.1	26000 (7.6)	3.3
T3HA9980	(2) UNHA09 (1) UNHA24	36400 (10.7)	13	0.76	12.3	30400 (8.9)	3.3
T3HA9940	(2) UNHA09 (1) UNHA24	42500 (12.4)	13	0.71	12.1	36200 (10.6)	3.2
T3HA9220	(1) UNHA09 (2) UNHA12	31800 (9.3)	13	0.74	12.0	28000 (8.2)	3.3
T3HA9280	(1) UNHA09 (1) UNHA12 (1) UNHA24	38500 (11.3)	13	0.73	12.2	32400 (9.5)	3.3

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 UNHA-T2HA-T3HA-T4HA

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

Model		Cooling				Heating	
Outdoor	Indoor Air Handler	Btuh (kW)	SEER	SHR	EER	Btuh (kW)	COP
T3HA9240	(1) UNHA09, (1) UNHA12, (1) UNHA24	44500 (13.0)	13	0.69	12.0	38000 (11.1)	3.2
T3HA2280	(2) UNHA12, (1) UNHA24	40500 (11.9)	13	0.76	12.1	34500 (10.1)	3.3
T3HA2240	(2) UNHA12, (1) UNHA24	46500 (13.6)	13	0.68	12.0	40000 (11.7)	3.2
T3HA2220	(3) UNHA12	34000 (10.0)	13	0.72	12.0	30000 (8.8)	3.3
T4HA9999	(4) UNHA09	37200 (11.0)	13	0.8	12.2	32000 (9.4)	3.3
T4HA9992	(3) UNHA09, (1) UNHA12	39000 (11.4)	13	0.77	12.1	34000 (10.0)	3.3
T4HA9922	(2) UNHA09, (2) UNHA12	41000 (12.0)	13	0.76	12.1	36000 (10.6)	3.3
T4HA9222	(1) UNHA09, (3) UNHA12	43000 (12.6)	13	0.72	11.9	38000 (11.1)	3.3
T4HA2222	(4) UNHA12	45000 (13.2)	13	0.72	12.0	40000 (11.7)	3.3

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)

### UNHA / T2HA, T3HA, OR T4HA CIRCUIT PERFORMANCE DATA

Model		Circuit	Cooling Btuh (kW)	Heating Btuh (kW)	Model		Circuit	Cooling Btuh (kW)	Heating Btuh (kW)
Outdoor	Indoor Air Handler				Outdoor	Indoor Air Handler			
T2HA8800	(2) UNHA24	1	18,000 (5.3)	14,500 (4.3)	T3HA2280	(2) UNHA12 (1) UNHA24	1	11,300 (3.3)	10,000 (3.0)
		2	18,000 (5.3)	14,500 (4.3)			2	11,300 (3.3)	10,000 (3.0)
1	18,000 (5.3)	14,500 (4.3)	3	17,900 (5.2)			14,500 (4.3)		
T2HA8400	(2) UNHA24	2	24,000 (7.0)	20,200 (5.9)	T3HA2240	(2) UNHA12 (1) UNHA24	1	11,300 (3.3)	10,000 (3.0)
		1	24,000 (7.0)	20,200 (5.9)			2	11,300 (3.3)	10,000 (3.0)
2	24,000 (7.0)	20,200 (5.9)	3	23,900 (7.0)			20,000 (5.9)		
T2HA4400	(2) UNHA24	2	24,000 (7.0)	20,200 (5.9)	T3HA2220	(3) UNHA12	1	11,300 (3.3)	10,000 (3.0)
		1	24,000 (7.0)	20,200 (5.9)			2	11,300 (3.3)	10,000 (3.0)
2	24,000 (7.0)	20,200 (5.9)	3	11,300 (3.3)			10,000 (3.0)		
T2HA2400	(1) UNHA12 (1) UNHA24	2	24,000 (7.0)	20,200 (5.9)	T4HA9999	(4) UNHA09	1	9,300 (2.7)	8,000 (2.3)
		1	11,000 (3.2)	10,000 (3.0)			2	9,300 (2.7)	8,000 (2.3)
T2HA9800	(1) UNHA09 (1) UNHA24	2	18,000 (5.3)	14,500 (4.3)			3	9,300 (2.7)	8,000 (2.3)
		1	9,200 (2.7)	8,000 (2.3)			4	9,300 (2.7)	8,000 (2.3)
T3HA9990	(3) UNHA09	2	9,200 (2.7)	8,000 (2.3)	T4HA9992	(3) UNHA09 (1) UNHA12	1	9,300 (2.7)	8,000 (2.3)
		1	9,200 (2.7)	8,000 (2.3)			2	9,300 (2.7)	8,000 (2.3)
		3	9,200 (2.7)	8,000 (2.3)			3	9,300 (2.7)	8,000 (2.3)
4	11,200 (3.3)	10,000 (3.0)							
T3HA9920	(2) UNHA09 (1) UNHA12	1	9,200 (2.7)	8,000 (2.3)	T4HA9922	(2) UNHA09 (2) UNHA12	1	9,300 (2.7)	8,000 (2.3)
		2	9,200 (2.7)	8,000 (2.3)			2	9,300 (2.7)	8,000 (2.3)
		3	11,300 (3.3)	10,000 (3.0)			3	11,200 (3.3)	10,000 (3.0)
4	11,200 (3.3)	10,000 (3.0)							
T3HA9980	(2) UNHA09 (1) UNHA24	3	17,900 (5.2)	14,400 (4.2)	T4HA9222	(1) UNHA09 (3) UNHA12	1	9,300 (2.7)	8,000 (2.3)
		1	9,200 (2.7)	8,000 (2.3)			2	11,200 (3.3)	10,000 (3.0)
		2	9,200 (2.7)	8,000 (2.3)			3	11,200 (3.3)	10,000 (3.0)
4	11,200 (3.3)	10,000 (3.0)							
T3HA9940	(2) UNHA09 (1) UNHA24	3	17,900 (5.2)	14,400 (4.2)	T4HA2222	(4) UNHA12	1	11,200 (3.3)	10,000 (3.0)
		1	9,200 (2.7)	8,000 (2.3)			2	11,200 (3.3)	10,000 (3.0)
		2	9,200 (2.7)	8,000 (2.3)			3	11,200 (3.3)	10,000 (3.0)
4	11,200 (3.3)	10,000 (3.0)							
T3HA9220	(1) UNHA09 (2) UNHA12	3	23,900 (7.0)	20,000 (5.9)	4	11,200 (3.3)	10,000 (3.0)		
		1	9,200 (2.7)	8,000 (2.3)					
		2	11,300 (3.3)	10,000 (3.0)					
T3HA9280	(1) UNHA09 (1) UNHA12 (1) UNHA24	3	11,300 (3.3)	10,000 (3.0)					
		1	9,200 (2.7)	8,000 (2.3)					
		2	11,300 (3.3)	10,000 (3.0)					
T3HA9240	(1) UNHA09 (1) UNHA12 (1) UNHA24	3	17,900 (5.2)	14,400 (4.2)					
		1	9,200 (2.7)	8,000 (2.3)					
		2	11,300 (3.3)	10,000 (3.0)					

## EMI ENGINEERING SUBMITTAL UNHA-T2HA-T3HA-T4HA

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

### ▲ **STANDARD FEATURES:**

#### **INDOOR UNIT:**

- Ceiling-Suspended or Floor Console mounted without any field modification
- Internally Enhanced Copper Tube/Enhanced Aluminum Fin Indoor Coil
- Unit-mounted, Infrared compatible control package, configurable to either unit mount or 24 Volt wall thermostat
- Control programming stored in non-volatile memory (*unit will restart following power failure*)
- Indoor coil freeze protection
- Anti-short cycle compressor protection
- Fan purge
- Dry mode for humidity control (*requires electric heat*)
- Factory-installed condensate pan overflow protection
- Factory-supplied molex-type connector for condensate pump power and control connections
- 24-7 programming
- 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 control (18,000 and 24,000 Btuh zones)
- 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:**

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

##### **Electric Heat:**

- None
- 0.75 / 3.0 kW (115/230 Volt)
- 1.25 / 5.0 kW (115/230 Volt) for UNHA24 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**

##### **Condensate Pump:**

- 48" (1.2 m) Lift
- 144" (3.7 m) Lift
- Floor Mount Trim Kit** (*Required for Floor Mount with Condensate Pump accessory*)
- 24 Volt Wall Thermostat**
- Infrared Hand-held Controller**

#### **OUTDOOR UNIT**

- Wind Baffle/Hail Guard, Architectural Louver Kit**

##### **Refrigerant Line Sets**

- 10'
- 25'
- 50'

## EMI ENGINEERING SUBMITTAL UNHA-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			
UNHA09 UNHA12	115-1-60	104	126	0.64	0.02	-	-	.64	0.8	15
						0.75	6.50	7.14	8.9	15
	208/230-1-60	197	240	0.34	0.02	-	-	0.34	0.4	15
						3.00	13.04	13.38	16.7	20
UNHA24	115-1-60	104	126	1.20	0.08	-	-	1.20	1.5	15
						0.75	6.52	7.72	9.7	15
						1.25	10.90	12.10	15.1	20
	208/230-1-60	197	240	0.56	0.07	-	-	0.56	0.7	15
						3.00	13.04	13.60	17.0	20
						5.00	21.74	22.30	27.9	30

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						

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

## EMI ENGINEERING SUBMITTAL UNHA-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			
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
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
UNHA09 or UNHA12	51
UNHA24	56
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)
UNHA09	92 (41.8)
UNHA12	95 (43.2)
UNHA24	116 (52.7)
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
UNHA09	9,000 Btuh	100 (30.5)	35 (10.7)	1/4"	1/2"	1/2"
UNHA12	12,000 Btuh	100 (30.5)	35 (10.7)	1/4"	1/2"	1/2"
UNHA24	18,000 Btuh	100 (30.5)	35 (10.7)	3/8"	5/8"*	1/2"
UNHA24	24,000 Btuh	100 (30.5)	35 (10.7)	3/8"	3/4"	1/2"

\* UNHA24 Suction Connection size is 3/4" O.D. and must bush down at the UNHA Unit.

### INDOOR AIR FLOW

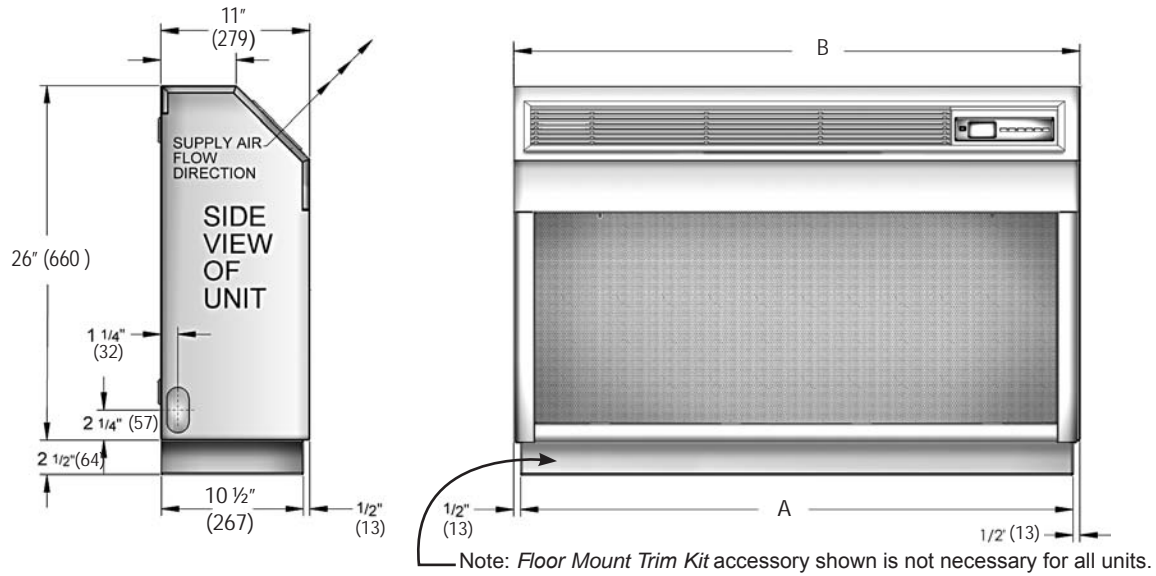
Indoor Unit	CFM (l/s)		Coil	ft/min (m/s)	Air Throw, ft. (m)
	High Speed	Low Speed			
UNHA09 or UNHA12	425 (200)	375 (175)	Dry	900 (4.6)	15 (4.6)
UNHA24	700 (350)	550 (250)		1,225 (6.2)	24 (7.3)

# EMI ENGINEERING SUBMITTAL UNHA-T2HA-T3HA-T4HA

## PHYSICAL DIMENSIONS

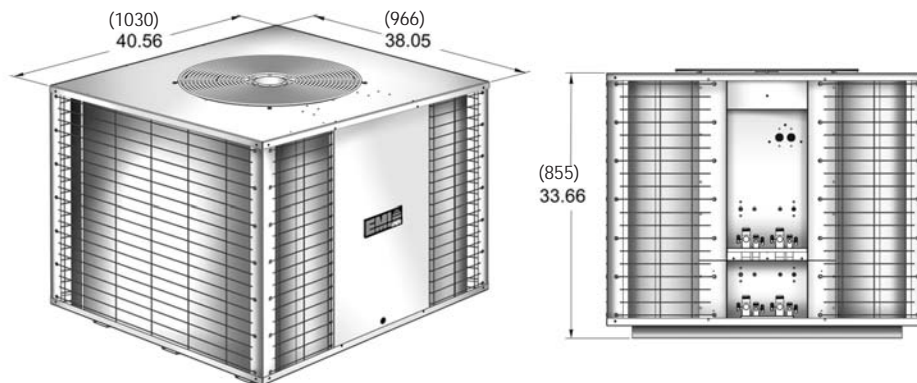
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### INDOOR UNIT

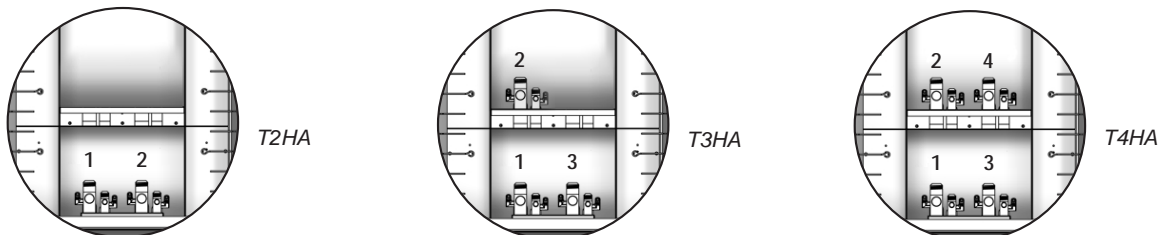


UNHA PHYSICAL DIMENSIONS		
Model	"A" Depth Inches (mm)	"B" Length Inches (mm)
UNHA09/12	40 1/2" (1029)	41 1/2" (1054)
UNHA24	50 1/2" (1283)	51 1/2" (1308)

### OUTDOOR UNIT



### Circuit Connection Locations



Note: Numbers in ( ) are mm.