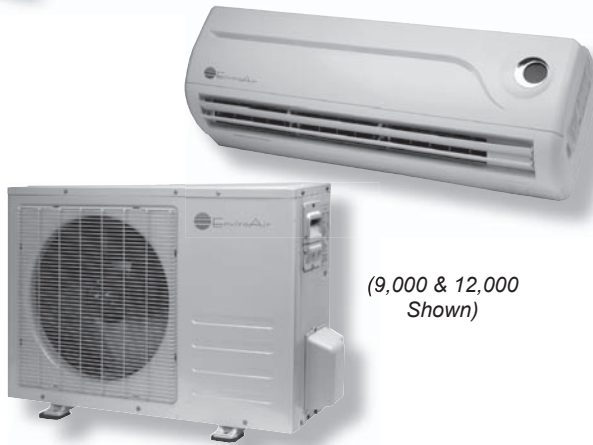




**EnviroAir Single Zone System  
K1CA & KWCA – Straight Cool / K1HA &  
KWHA – Heat Pump**

P/N# 240006738, Rev. 1.0 [04/07]



(9,000 & 12,000  
Shown)

**ENVIROAIR DUCTLESS SPLIT  
AIR CONDITIONING SYSTEM**

Nominal Capacities:  
9,000-24,000 Btuh (2.6-7.1 kW)  
Cooling Only and Heat Pump

**PRODUCT DESCRIPTION**

The EnviroAir High Wall Ductless Split Air Conditioners are efficient systems with cooling and heat pump capacities from 9-24,000 Btuh (2.6-7.1 kW). Designed for quiet operation and boasting compact dimensions, the EnviroAir system includes advanced features like auto-restart and a full feature remote control. Comprised of three standard components - the KWCA/KWHA High Wall air handler, the K1CA/K1HA condenser, and an infrared handheld remote control - the EnviroAir system is engineered to the highest performance and reliability standards. The KWCA/KWHA air handler is equipped with permanent washable air filters as well as motorized air sweeps for enhanced air circulation (KWCA/KWHA18-24), and the K1CA/K1HA condensing unit is equipped as standard with a high efficiency rotary compressors. The unit's interconnecting circuitry and standard power supply is 115 V (K1CA9000/KWCA09, K1HA9000/KWHA09, K1CA2000/KWCA12, and K1HA2000/KWHA12) or 208/230 V (K1CA8000/KWCA18, K1HA8000/KWHA18, K1CA4000/KWCA24, and K1HA4000/KWHA24).

EMI recommends the EnviroAir system for residential and light commercial cooling applications. The EnviroAir system will operate in cooling mode down to 60 °F (15.5 °C) outdoor temperature. For critical cooling areas such as computer rooms where constant duty is required no matter what the outdoor temperature, please refer to the EMI AmericaSeries product line or contact customer service for more information.

The EnviroAir system is backed with the standard limited warranty that applies to all EMI equipment. For a copy of this limited warranty, please contact EMI customer service or refer to the website at [www.enviromaster.com](http://www.enviromaster.com).

▲▼ **Indoor High Wall Unit** - The KWCA/KWHA is a ductless type evaporator combining attractive appearance with the highly efficient conditioning of small to midsize commercial or residential spaces. The angled faces of the unit provide separation of intake and discharge air, eliminating recirculation.

▲▼ **Outdoor Condensing Unit** - The K1CA/K1HA condenser is an air cooled, high efficiency condensing unit, designed specifically to meet and/or exceed current standards for system energy efficiency ratings. The K1CA/K1HA provides cooling/heat pump operation for the KWCA/KWHA evaporator and its compact design allows flexibility in the location and mounting of the unit while its advanced air flow design maximizes the heat transfer capability of the enhanced fin coil.

**CONTROLS AND COMPONENTS  
(Factory Installed or Supplied)**

▲▼ **Indoor High Wall Unit**

- Infrared microprocessor controls
- 115-1-60 (KWCA/KWHA09-12), 208/230-1-60 (KWCA/KWHA18-24)
- Auto-restart
- Multiple operating modes including: Cooling, Heating, Dehumidification, and Fan Only
- Timed operation
- Motorized air sweeps

▲▼ **Outdoor Condensing Unit**

- Main power connection, 115-1-60 (K1CA/K1HA9000 and K1CA/K1HA2000), 208/230-1-60 (K1CA/K1HA8000 and K1CA/K1HA4000)
- High voltage terminals (for interconnecting with KWCA/KWHA evaporator)
- High efficiency rotary compressors
- Enhanced Outdoor Coils
- Efficient and Quiet Outdoor Fan System

▲▼ **Accessories** - 25 ft. (7.5 m) interconnecting tube set insulated with flare fittings, interconnecting wire harness, 6 ft. (1.8 m) additional condensate tube, wall sleeve, insulation and escutcheon plate.

## SYSTEM PERFORMANCE

▲▼ **System Performance** - is rated in accordance with ARI 210/240.

SYSTEM PERFORMANCE COOLING				
Indoor Unit KWCA	Outdoor Unit K1CA	Capacity Btuh (kW)	SEER/EER	SHR
09	9000	9,000 (2.6)	13.0/11.7	0.74
12	2000	12,000 (3.5)	13.0/11.9	0.71
18	8000	18,000 (5.2)	13.0/12.3	0.75
24	4000	24,000 (7.0)	13.0/12.4	0.73

SYSTEM PERFORMANCE COOLING/HEATING							
Indoor Unit	Outdoor Unit	Duty	Capacity Btuh (kW)	SEER/EER	SHR	HSPF/COP*	
KWHA09	K1HA9000	Cooling	9,000 (2.6)	13.0/11.7	0.74	-	
		Heating	47°F	9,000 (2.6)	-	-	7.7/3.6
			17°F	4,600 (1.3)	-	-	
KWHA12	K1HA2000	Cooling	12,000 (3.5)	13.0/11.9	0.71	-	
		Heating	47°F	12,000 (3.5)	-	-	7.7/3.5
			17°F	6,400 (1.9)	-	-	
KWHA18	K1HA8000	Cooling	18,000 (5.2)	13.0/12.3	0.75	-	
		Heating	47°F	18,000 (5.2)	-	-	7.7/3.5
			17°F	9,600 (2.8)	-	-	
KWHA24	K1HA4000	Cooling	24,000 (7.0)	13.0/12.4	0.73	-	
		Heating	47°F	24,000 (7.0)	-	-	7.7/3.8
			17°F	12,500 (3.7)	-	-	

NOTE: Due to ongoing development programs, product design, specifications, and performance data may change without notice. Please contact the factory for more information.

\* COP at 47 °F heating condition.

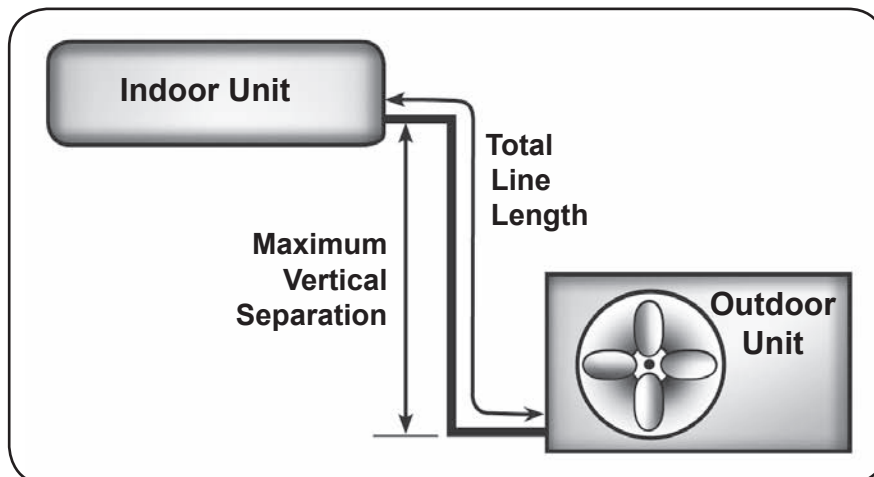
## APPLICATION DATA

### ▲▼ Line Length and Vertical Separation

EnviroAir systems can be installed with the indoor unit above the outdoor unit or vice versa with no more than 16.5 ft (5 m) vertical distance. The maximum line length allowed is listed in the table to the right. Tubing run lengths/lifts that exceed these parameters will void the warranty.

The outdoor units are pre-charged for line lengths less than 16.5 ft (5 m). For line sets longer than this length, but not exceeding the limits, refrigerant must be added.

Duty	Maximum Line Length/Vertical Separation			
	Systems		Maximum Separation, ft (m)	
	Outdoor	Indoor	Total Line Length	Vertical
Cooling Only	K1CA9000	KWCA09	32.8 (10.0)	16.4 (5.0)
	K1CA2000	KWCA12		
	K1CA8000	KWCA18		
	K1CA4000	KWCA24		
Heat Pump	K1HA9000	KWHA09	32.8 (10.0)	16.4 (5.0)
	K1HA2000	KWHA12	50.0 (15.0)	
	K1HA8000	KWHA18		
	K1HA4000	KWHA24		



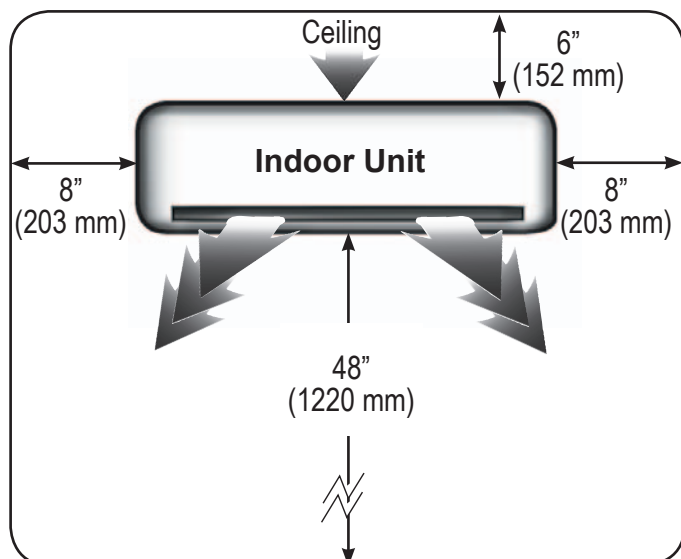
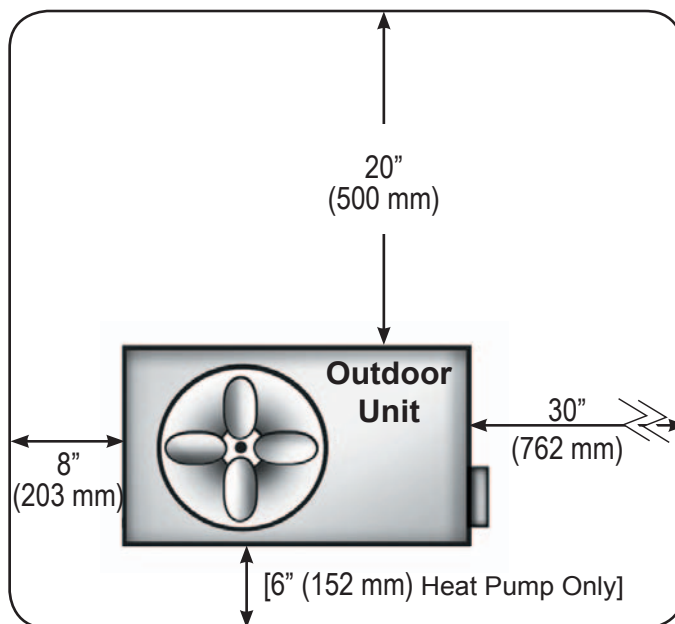
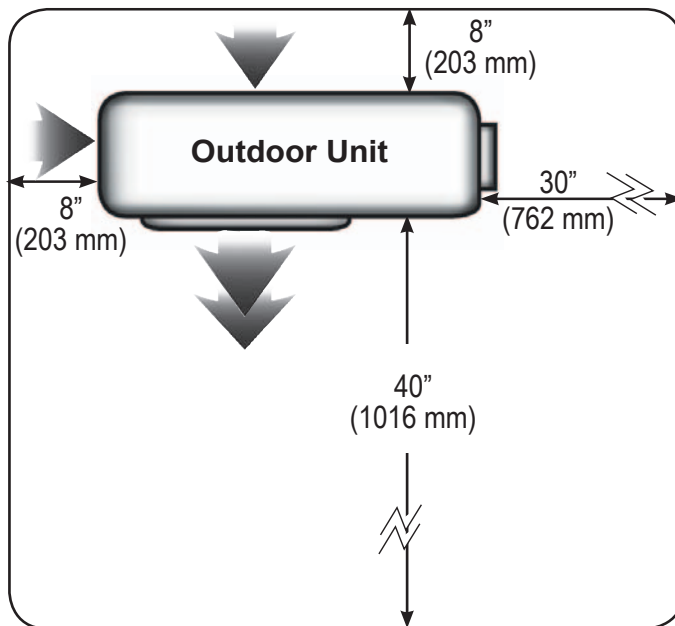
## APPLICATION DATA

### ▲▼ Service and Air Flow Requirements

The figure to the right depicts the minimum recommended Airflow and Service Clearances for the outdoor units (follow all local codes). A minimum of 2 sides of the machine must be open for proper operation. Be sure that the airflow is unimpeded. When placing the unit, also consider a location that will allow for proper airflow. Avoid installing the unit in areas where corrosive chemicals are used.

For heat pump applications it is recommended unit be installed on base of at least 6" (152 mm) to allow for defrost condensate to drain away.

The figure below depicts the minimum recommended Airflow and Service Clearances for the indoor units (follow all local codes). It is recommended that the indoor unit be installed at least 72" (1.83 m) above the floor for proper cooling. Be sure that the airflow is unimpeded. When placing the unit, also consider a location that will be able to provide airflow to all areas of the room. Avoid installing the unit in areas of very high humidity and heat (such as over a stove), areas where corrosive chemicals are used, or areas of high electromagnetic noise generation.



## SOUND SPECIFICATIONS

OUTDOOR UNIT	SOUND RATING (dBA)
K1CA9000 & K1HA9000	54
K1CA2000 & K1HA2000	58
K1CA8000 & K1HA8000	56
K1CA4000 & K1HA4000	59

INDOOR UNIT	SOUND RATING (dBA)	
	Low Speed Fan	High Speed Fan
KWCA09 & KWHA09	42	56
KWCA12 & KWHA12	45	55
KWCA18 & KWHA18	50	65
KWCA24 & KWHA24	48	62

## SPECIFICATION DATA

NOTE: Due to ongoing development programs, product design, specifications, and performance data may change without notice.

K1CA/KWCA 09, 12, 18 & 24 Electrical Specifications												
Capacity Btu/h		Volts/Hz/Ph	Compressor		Cond Fan		Indoor Fan		Total	MCA	Max Fuse	Minimum Voltage
Cooling	Heating		RLA	LRA	Watts	RLA	Watts	RLA				
9,000	–	115/60/1	7.5	47	35	0.81	16	0.35	7.2	10.6	15	104
12,000	–	115/60/1	9.9	53	45	0.8	16	0.35	9.6	14.0	20	104
18,000	–	208/230/60/1	6.6	42	60	0.85	40	0.4	6.5	9.5	15	197
24,000	–	208/230/60/1	10	46	60	0.9	40	0.4	8.1	13.8	23.8	197
9,000	9,000	115/60/1	7.5	47	35	0.81	16	0.35	7.2	10.6	15	104
12,000	12,000	115/60/1	9.9	53	45	0.8	16	0.35	9.6	14.0	20	104
18,000	18,000	220/60/1	6.6	42	60	0.85	40	0.4	6.5	9.5	15	197
24,000	24,000	208/230/60/1	10	46	60	0.9	40	0.4	8.1	13.8	23.8	197

Model KWCA/KWHA	Power & Control*		Indoor Fan Motor		
	V-Ph-Hz		Qty	FLA	Watts
09A	115-1-60		1	0.35	16
12A	115-1-60		1	0.35	16
18D	208/230-1-60		1	0.40	40
24D	208/230-1-60		1	0.40	40



**Notes:**

FLA..... Full Load Amps	MOC..... Maximum Overcurrent
Hz..... Hertz, frequency	Protection Amps, Fuse or
LRA..... Locked Rotor Amps	HACR-type Circuit Breaker
Max..... Maximum	Ph..... Phase
MCA..... Minimum Circuit Ampacity	RLA..... Rated Load Amps
Min..... Minimum	V..... Voltage

\* NOTE: Power is supplied from the outdoor unit.

### INDOOR UNIT SPECIFICATIONS

Model	Nominal Capacity		Weight		Shipping Dimensions**			Net Dimensions			Piping Connections		
	Cooling kBtu/h (kW)	Heating* kBtu/h (kW)	Shipping lbs (kg)	Operating lbs (kg)	Width in. (mm)	Depth in. (mm)	Height in. (mm)	Width in. (mm)	Depth in. (mm)	Height in. (mm)	Refrigerant		Condensate
											Suction Line,	Liquid Line	Size, in. OD (mm)
KWCA09 KWHA09	9 (2.6)	9 (2.6)	26.5 (12)	19.8 (9)	33.8 (859)	13.8 (351)	10.3 (262)	30.9 (784)	11.0 (279)	6.9 (175)	Flare 1/2	Flare 1/4	5/8 (17)
KWCA12 KWHA12	12 (3.5)	12 (3.5)	35.3 (16)	30.9 (14)	39.8 (1011)	13.8 (351)	10.3 (262)	36.2 (919)	11.0 (279)	6.9 (175)	Flare 1/2	Flare 1/4	5/8 (17)
KWCA18 KWHA18	18 (5.2)	18 (5.2)	48.5 (22)	39.7 (18)	50.8 (1290)	15.6 (396)	12.4 (315)	42.1 (1069)	12.8 (325)	8.9 (226)	Flare 5/8	Flare 3/8	5/8 (17)
KWCA24 KWHA24	24 (7.1)	24 (7.1)	52.9 (24)	44.1 (20)	52.6 (1336)	15.4 (391)	12.0 (305)	48.8 (1240)	12.8 (325)	8.9 (226)	Flare 5/8	Flare 3/8	5/8 (17)

### OUTDOOR UNIT SPECIFICATIONS

Model	Nominal Capacity		Weight		Shipping Dimensions**			Net Dimensions			Piping Connections						
	Cooling kBtu/h (kW)	Heating* kBtu/h (kW)	Shipping lbs (kg)	Operating lbs (kg)	Width in. (mm)	Depth in. (mm)	Height in. (mm)	Width in. (mm)	Depth in. (mm)	Height in. (mm)	Refrigerant [R-410A] Metering Device - Capillary			Accessory Tubing Set			
											Factory Charge, lbs (kg)	Suction Line	Liquid Line	Shipping Dimensions in. (mm)			Ship. Wght. lb. (kg)
														Width	Depth	Length	
K1CA09 K1HA09	9 (2.6)	9 (2.6)	77.2 (35)	68.3 (31)	37.0 (940)	13.4 (340)	23.4 (594)	31.3 (765)	8.9 (226)	21.4 (544)	1.96 (0.89)	Flare 1/2	Flare 1/4	26.8 (681)	4.0 (102)	26.8 (681)	15.4 (7)
K1CA12 K1HA12	12 (3.5)	12 (3.5)	116.8 (53)	105.8 (48)	39.2 (996)	16.4 (417)	27.2 (691)	33.5 (851)	11.4 (290)	24.0 (610)	2.54 (1.16)	Flare 1/2	Flare 1/4	26.8 (681)	4.0 (102)	26.8 (681)	15.4 (7)
K1CA18 K1HA18	18 (5.2)	18 (5.2)	147.7 (67)	136.7 (62)	40.6 (1031)	17.1 (434)	37.8 (960)	36.0 (914)	13.0 (330)	32.9 (835)	4.4 (2.0)	Flare 5/8	Flare 3/8	27.4 (696)	7.1 (180)	27.4 (696)	19.8 (9)
K1CA24 K1HA24	24 (7.1)	24 (7.1)	147.7 (67)	136.7 (62)	40.6 (1031)	17.1 (434)	37.8 (960)	34.3 (871)	11.4 (290)	33.5 (851)	5.3 (2.41)	Flare 5/8	Flare 3/8	27.4 (696)	7.1 (180)	27.4 (696)	19.8 (9)

Notes: \* Heating Capacity applies to K1HA/KWHA units only.

\*\* Dimensions provided indicate packaging dimensions for the unit. Actual shipping dimensions will depend on shipping method, skid size, how many parts, etc.