



S1CA/S1HA 9-24 AND S1CA 30-36 SINGLE ZONE DUCTLESS SPLIT CONDENSING UNIT

P/N 240005841, Rev. 1.3 [09/07]



Nominal Circuit Capacities S1CA/S1HA: 9,000, 12,000, 18,000, 24,000 Btuh and S1CA 30-36 Btuh

PRODUCT DESCRIPTION

EMI offers the AmericaSeries S1CA/S1HA single zone condensing unit, which is designed to meet or exceed a SEER rating of 13.0 when installed with the AmericaSeries line of evaporators. The system is offered for straight cool and heat pump applications and is available in nominal circuit capacities of 9,000, 12,000, 18,000 and 24,000 Btuh for both cooling and heat pump and 30,000-36,000 Btuh for cooling only applications. The S1CA/S1HA system can be recommended for both commercial and residential use.

CONDENSER STANDARD FEATURES

- ▲ **Cabinet**
 - Vertically arranged side discharge
 - Scratch and dent resistant injection molded front access panel
 - Powder coated (2000 hour salt spray tested) 18 and 20 gauge aluminized steel
 - Recessed service valves
 - Easy access hose connections at 45° from valve body
- ▲ **Compressor** is hermetically sealed high efficiency rotary for 9,000-12,000 Btuh and reciprocating or scroll for 18,000-36,000 Btuh (depending on capacity).

Benefit: These are the most efficient (power saving) and durable compressors available for the widest range of Ductless Split system applications.

CONDENSER STANDARD FEATURES *Continued*

- ▲ **Coil** is U-shaped and protected by a wire coil guard. Construction is seamless copper tubing with enhanced aluminum fins. The tubes are mechanically expanded for secure bonding to fin shoulder.

Benefit: The U-shaped coil optimizes the heat transfer surface in a smaller footprint to gain optimum system efficiency.

- ▲ **Fan/Motor** - Fan is a large diameter, high efficiency, three or four blade propeller (depending on capacity). Motor is PSC type with internal overload protection.

- ▲ **Precharged For Condenser And Evaporator:** (Charging of field installed piping required)

- Refrigeration valves – solid brass, sweat connection, easy to access ports
- Up to 100' length interconnect (including 35' vertical lift)

- ▲ **Duratec Performance Package (09-12 only)**

- Oversized suction accumulator with surge baffles and enhanced oil management
- Factory installed solid core filter drier
- Loss of charge switch
- Crankcase heater (heat pump)
- High pressure switch (heat pump)

Benefit: The Duratec Performance Package allows for the widest range of application in the Ductless Split industry. We fully protect the compressor for a range of outdoor ambient conditions and system applications, which extends the life of the system and virtually eliminates failures.

- ▲ Low Ambient operation down to 32° F are standard on all S1HA (heat pumps) factory installed (optional on S1CAs)

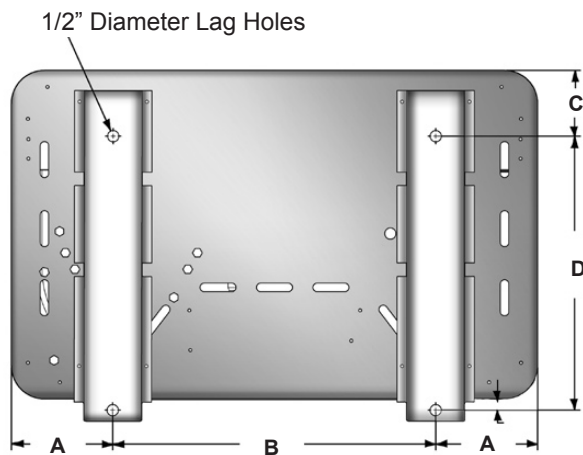
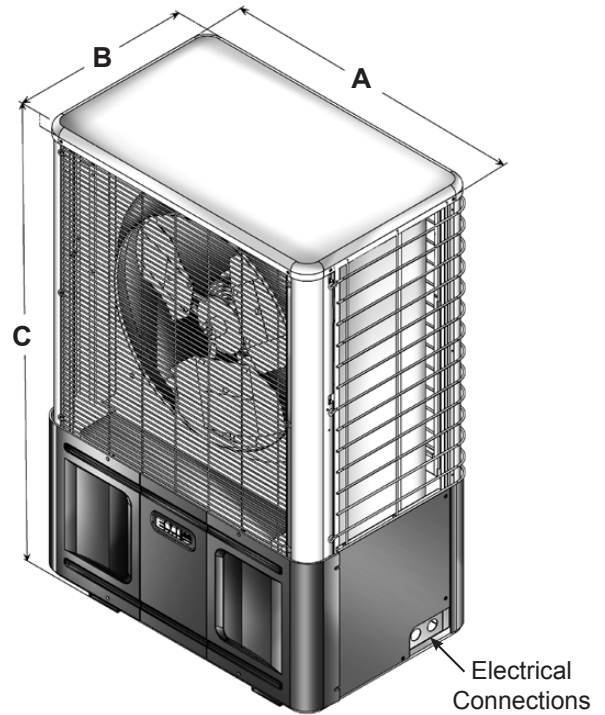
SYSTEM OPTIONS

- Low Ambient operation down to 32° F – Specify this option if the S1CA system will be operated in cooling mode at outside temperatures below 60° F (Field Installed Kit)
- Low Ambient controls for operation down to 0° F for S1CA and S1HA systems (consult factory for availability)
- Hard Start
- 115V (9,000-12,000 Btuh only)
- Copper/copper coils (sea coast use)

S1CA/S1HA SPECIFICATIONS AND DIMENSIONS

NOTE: All EMI products are subject to ongoing development. Design and specifications may change without notice.

PHYSICAL DIMENSIONS			
Model Size	A	B	C
09	24"	15"	36"
12	24"	15"	36"
18	32"	15"	36"
24	32"	15"	40"
30	38"	15"	44"
36	38"	15"	48"



MOUNTING DIMENSIONS				
Model Size	A	B	C	D
S1CA/S1HA9, S1CA/S1HA2	4 5/8"	14 11/16"	3"	12 7/16"
S1CA/S1HA8, S1CA/S1HA4	4 5/8"	22 11/16"	3"	12 7/16"
S1CA3, S1CA6	7"	23 15/16"	3"	12 7/16"



S1CA/S1HA SPECIFICATIONS AND DIMENSIONS

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System Performance Data: Matched With EMI AmericaSeries Indoor Units

S1CA ELECTRICAL SPECIFICATIONS									
Model #	Volts/HZ/PH	Fan Motor		Compressor		Total AMPS	Min Volt	M.C.A.	HACR BRKR
		AMPS	HP	RLA	LRA				
S1C9A	115/60/1	1.4	0.125	6.7	29.0	8.1	104	9.8	15
S1C2A	115/60/1	1.4	0.125	8.4	44.0	9.8	104	11.9	20
S1C9D	208/230/60/1	0.8	0.125	3.5	19.0	4.3	197	5.2	15
S1C2D	208/230/60/1	0.8	0.125	4.5	21.0	5.3	197	6.4	15
S1C8D	208/230/60/1	0.8	0.125	5.4	36.0	6.2	197	7.6	15
S1C4D	208/230/60/1	0.8	0.125	8.0	53.5	8.8	197	10.8	15
S1C3D	208/230/60/1	1.8	0.330	9.8	60.0	11.6	197	14.1	20
S1C6D	208/230/60/1	1.8	0.330	11.8	78.0	13.6	197	16.6	25

S1HA ELECTRICAL SPECIFICATIONS									
Model #	Volts/HZ/PH	Fan Motor		Compressor		Total AMPS	Min Volt	M.C.A.	HACR BRKR
		AMPS	HP	RLA	LRA				
S1H9A	115/60/1	1.4	0.125	6.6	39.2	8.0	104	9.7	15
S1H2A	115/60/1	1.4	0.125	8.6	48.3	10.0	104	12.2	20
S1H9D	208/230/60/1	0.8	0.125	3.4	23.0	4.2	197	5.1	15
S1H2D	208/230/60/1	0.8	0.125	4.3	27.0	5.1	197	6.2	15
S1H8D	208/230/60/1	0.8	0.125	5.4	36.0	6.2	197	7.6	15
S1H4D	208/230/60/1	0.8	0.125	8.0	53.5	8.8	197	10.8	15

INTERCONNECTING TUBING SPECIFICATIONS				
S1 Model	Max. Length	Max. Lift	Liquid Line O.D.	Suction Line O.D.
S1HA9	100'	35'	1/4"	1/2"
S1HA2	100'	35'	1/4"	1/2"
S1HA8	100'	35'	3/8"	5/8"
S1HA4	100'	35'	3/8"	3/4"
S1HA3	100'	35'	3/8"	3/4"
S1HA6	100'	35'	3/8"	3/4"

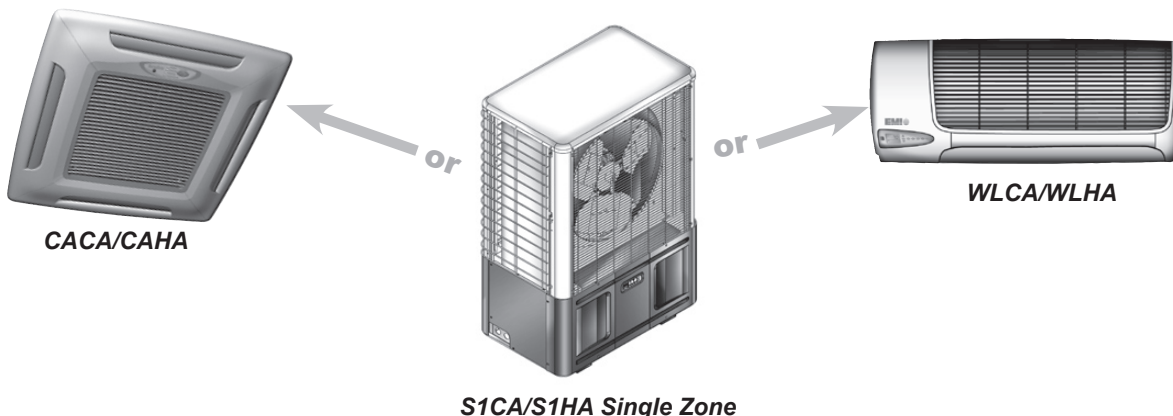
SHIPPING WEIGHT	
Size Btuh	Lbs.
9-12	98
18-24	156
30-36	210

SOUND DATA		
Heat Pump & Cool	Size Btuh	dBA
	09	59
	12	59
	18	62
Cool Only	24	63
	30	68
	36	68

S1CA/S1HA SPECIFICATIONS FOR SYSTEM OPTIONS

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System Performance Data: Matched With EMI AmericaSeries Indoor Units



COOLING SYSTEMS WITH WALL UNITS

Condenser	Wall Unit	Btuh	SEER	SHR	EER	Ref.
S1CA9	WLHA09	9,000	13.0	.79	11.8	R22
S1CA2	WLHA12	12,000	13.0	.74	12.9	R22
* S1CA8	WLHA24	18,000	14.0	.78	13.0	R22
S1CA4	WLHA24	24,000	13.0	.70	12.5	R22
S1CA3	WLCA36	30,000	13.0	.72	12.6	R22
S1CA6	WLCA36	33,600	13.0	.69	12.1	R22

COOLING SYSTEMS WITH CASSETTE UNITS

Condenser	Cassette	Btuh	SEER	SHR	EER	Ref.
S1CA9	CACA/H12	9,000	13.0	.79	11.7	R22
S1CA2	CACA/H12	12,000	13.0	.72	12.2	R22
S1CA8	CACA/H24	18,000	13.0	.76	12.3	R22
S1CA4	CACA/H24	23,000	13.0	.67	11.8	R22
S1CA3	CACA36	30,000	13.5	.82	12.5	R22
S1CA6	CACA36	36,000	13.0	.74	12.6	R22

HEAT PUMPS SYSTEM OPTIONS WITH WALL UNITS

Condenser	Wall Unit	Cooling Btuh	Heating Btuh	SEER	HSPF	SHR	EER	COP	Ref.
* S1HA9	WLHA09	9,000	8,600	14.0	8.2	.75	12.0	3.6	R22
S1HA2	WLHA12	12,000	10,600	13.0	8.2	.73	11.1	3.4	R22
S1HA8	WLHA24	18,000	16,400	13.0	7.7	.73	12.1	3.8	R22
S1HA4	WLHA24	23,000	20,600	13.0	8.3	.71	11.9	3.5	R22

HEAT PUMPS SYSTEM OPTIONS WITH CASSETTE UNITS

Condenser	Cassette	Cooling Btuh	Heating Btuh	SEER	HSPF	SHR	EER	COP	Ref.
S1HA9	CAHA12	9,300	8,000	13.0	7.7	.80	12.4	3.3	R22
S1HA2	CAHA12	11,800	10,800	13.0	7.7	.72	11.4	3.4	R22
S1HA8	CAHA24	18,200	15,000	13.0	7.7	.78	12.3	3.3	R22
S1HA4	CAHA24	24,000	20,000	13.0	7.7	.69	11.7	3.3	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.**

