

EMI *AmericaSeries*
Comfort Where It Counts.

**CHP CEILING MOUNTED
 EVAPORATOR**

P/N# 240003237 Rev. 1.5 [10/06]



COOLING ONLY

Nominal Circuits: 9000, 12000, 18000, 24000 Btuh

PRODUCT DESCRIPTION

The EMI CHP is a highly effective ceiling mounted evaporator for applications where fully exposed or partially recessed cabinetry can be used. For partially recessed mounting, these units easily adapt to standard T-bar, drop ceiling openings. The CHP is designed for applications where the unit may be concealed in soffits or other structural spaces with only the intake and discharge grilles exposed. When concealing the unit make provisions to the soffit for future access to the unit for maintenance purposes. When offering the Infra-Red Control option, due to the fact that the infra-red eye is located on the unit, the CHP model cannot be mounted in a soffit or another structural space.

The aluminum supply air louvers are dual adjustable for air flow direction, to provide air flow throws to suit any installation. The louvers are mounted in an attractive high impact polystyrene front section. The CHP incorporates dual blowers that produce efficient, quiet operation, suitable for both residential and commercial applications. A wide range of options are available for the CHP units, including supplemental electric or hydronic heat options, a field installed condensate pump, and optional digital and hand held IR remote controls.

NOTE: *If equipped with hydronic heat, the CHP will only operate as a single-stage heating unit and not as a two-stage heating unit.*

The CHP models are fast and easy to install with 24V control circuits to the outside unit, standard. Hanger brackets and fresh air openings are standard on all models. Optional trim kits are available for surface mounting applications.

All EMI products are subject to ongoing development programs and design and specifications may change without notice.

▲▼ **Capacities/Efficiencies** - The CHP ceiling mounted evaporators produce system SEER's of 13.0.

▲▼ **Materials of Construction:**

- Fabricated of 20-gauge galvalume steel with powder coat matte finish (in designer white).
- High impact polystyrene air discharge panel.
- Removable, perforated steel inlet grille.
- Discharge grill assembly with adjustable aluminum louvers (bidirectional).
- Galvanized steel condensate drain pan.

▲▼ **Air Systems**

- Fans are forward curve centrifugal type, dynamically balanced and directly mounted to the motor shafts.
- Motors are PSC type with internal thermal overload protection.
- Air stream surfaces are insulated with ½" fiberglass or ½" foil face insulation.
- Permanent electrostatic filter is washable and user accessible.

▲▼ **Coil** - Is seamless, copper tubing, arranged in staggered configuration, with enhanced aluminum fins, tested to 400 psig. The tubes are mechanically expanded for secure bonding to fin shoulder.

▲▼ **Refrigeration Circuit** - CHPs are equipped with piston-type expansion devices. Connections are male flare type.

▲▼ **Factory Installed Controls and Components:**

- Connections for 24V thermostat.
- Custom developed control board featuring antishort cycle timer, 60 sec. post purge fan relay and onboard 30 amp electric heat relay.
- Open wire electric heaters are available on all sizes (all with automatic reset high temperature cutout and redundant high temperature fuse link).
- Low Volt transformer

SYSTEM OPTIONS

- Single-stage hydronic heating coil (one row type) w/sweat connections
- Condensate Pump
- Models 12- 24:** 1.5 GPH, 4' Max. Lift, 50' Max. Run
- 24V thermostat • Electric heat • Trim kit
- Infrared control package
- Hand held IR remote control (requires IR control package)

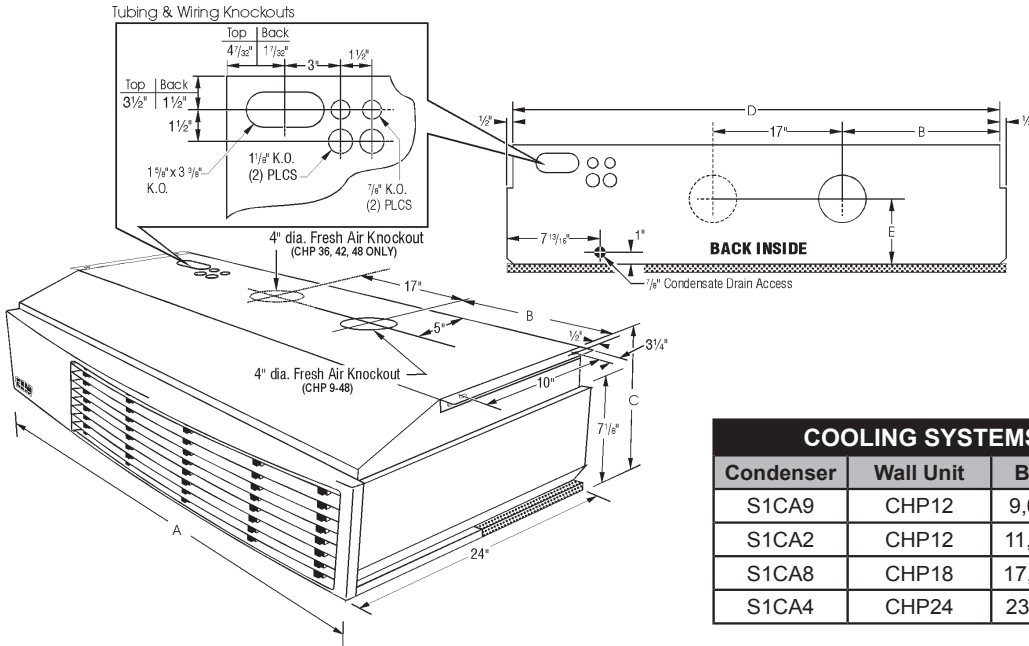
NOTE: *CHP 12 units built after 4/05 may need a Piston/Orifice Change at time of installation (factory supplied). Refer to chart below.*

Model # Air Handler	Condenser Btuh	Factory Installed		Field Changeover	
		Part # Piston/Orifice	Piston/Orifice Size	Part # Piston/Orifice	Piston/Orifice Size
CHP12	9,000	240-4064	.044"	240-727	.041"
	12,000			NO CHANGE	

CHP Dimensions and Specifications

NOTE: Due to EMI's ongoing development programs, design and specifications may change without notice.

Model#	Width "A"	Width "B"	Width "C"	Width "D"	Width "E"	Drain Hose	Shipping Wt.	Ref. Line Sizes	
								Liquid (Flare)	Suction (Flare)
12	42"	16½"	10¾"	41"	5½"	1/2" I.D.	115	1/4"	1/2"
18	49"	19"	10¾"	48"	5½"	5/8" I.D.	135	3/8"	5/8"
24	49"	19"	10¾"	48"	5½"	5/8" I.D.	135	3/8"	3/4"
								Flare nuts not included	



CHP OBSERVED SOUND LEVELS (230V Low Speed Fan)	
Model#	dBA
12	46.3
18	50.8
24	56.0

COOLING SYSTEMS WITH CEILING UNITS						
Condenser	Wall Unit	Btuh	SEER	SHR	EER	Ref.
S1CA9	CHP12	9,000	13.0	.79	11.6	R22
S1CA2	CHP12	11,800	13.0	.74	11.7	R22
S1CA8	CHP18	17,600	13.0	.78	11.8	R22
S1CA4	CHP24	23,200	13.0	.70	11.5	R22

CHP ELECTRICAL SPECIFICATIONS					
Model#	Voltage	Hertz	Fan FLA	Min. Ampacity *(1)	Max. Fuse *(1)
12	115	60	1.4	1.8	15
12	208/230	60	0.6	0.8	15
18	208/230	60	1.1	1.4	15
24	208/230	60	1.1	1.4	15

*(1) If electric heaters are installed, use Min Amp and Max Fuse from Heater Options Chart.

CHP DISCHARGE AIR SPEED AND THROW				
Model#	CFM	Coil	FPM	Throw/Ft.
12	350	Dry	290	12.4
18	800	Dry	533	18.6
24	800	Dry	533	18.6

CHP WITH ELECTRIC HEAT OPTIONS						
Model#	Voltage	KW	Htr Amps	Total Amps	Min. Cir. Amps	Max. Fuse
12	208/230	3	13.1	13.7	17.1	20
18	208/230	5	21.7	22.8	28.6	30
24	208/230	5	21.7	22.8	28.6	30

CHP HYDRONIC HEAT SPECIFICATIONS (Single-stage Heating Only)				
Model#	EWT °F	GPM	Btuh	PD Ft. H ₂ O
12	140	2	14,500	3.4
	180	2	22,900	3.4
18	140	4	27,200	5.2
	180	4	43,200	5.2
24	140	4	29,800	5.2
	180	4	47,300	5.2



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