



## CFA1012A (1 Ton)

### Environmental Control Unit



CFA1012A

### General Description

The Industrial Climate Engineering CFA1012A line of Environmental Control Units (ECU) are designed for the telecommunication cabinet. The slim profile allows the unit to be mounted quickly and simply on the exterior of the building on either side of the splice chamber. CFA1012A units have, as standard, the necessary features to maintain the proper temperature control demanded by the telecommunications industry. The CFA1012A is designed for use in ambient temperatures from 0°F (-18°C) to 120°F (48°C). Their low noise level makes them ideal for installation in urban and residential areas. The CFA1012A is available in a nominal cooling capacities of 1 ton (12,000 BTUH). CFA1012A units are ETL listed. All ICE units are manufactured and tested to UL Std. 1995, 2nd Ed. and CAN/CSA C22.2 No. 236-95, 4th Ed.

### Operation

The CFA1012A ECU is controlled by a thermostat that senses the internal cabinet temperature. When cooling is desired, the compressor, evaporator blower and condenser fan turn on. Cool air is discharged near the bottom of the CFA1012A into the cabinet. When two CFA1012As are used on the same cabinet, a CommStat 6 or CommStat 4 provides temperature control of the redundant units and equal run time on both units. A field installed jumper wire on the low voltage control board in the CFA1012A will permit the evaporator blower to run continuously. The CFA1012A can also be immediately shut off when used in cabinets with a fire or smoke alarm system. Please refer to the Operation & Maintenance Manual for details. Electric heat is optional.



## Features and Benefits

### Wide Range of Operation Conditions

- Low Ambient Control Cycles for Condenser Fan
- 3.6 kW Electric Heat

### Built-In Reliability

- High Pressure Switch with Lockout Relay and Frost Sensor
- Compressor Time Delay Prevents Rapid Cycling

### Rugged Construction

- Copper Tube, Aluminum Fin Evaporator & Condenser Coil
- High Efficiency Compressor
- Baked On Finish Over Galvanneal Steel
- Decorative Coil Guards



## Standard Features

### Designed for operation to 0°F (-18°C)

- Low ambient control cycles condenser fan to maintain proper refrigerant pressures.
- 3.6 kW of electric heat.

### Built-in Reliability

- High pressure switch with lockout relay and frost sensor protect refrigerant circuit.
- Compressor time delay prevents rapid cycling of the compressor.

### Vandal Resistant

- All mounting holes are inside the cabinet.
- Powder coated finish for long term durability.

### Ease of Installation

- Factory installed disconnect.
- Can be installed on either side of splice chamber.
- Built-in mounting holes.

### Remote Alarm Capability

- Dry contacts can be used for remote alarm or notification upon lock-out.

### Rugged Construction

- Copper tube, aluminum fin evaporator and condenser coils.
- High efficiency compressor.
- Baked on neutral tan finish.
- Decorative coil guard.

### Ease of Service

- All service access from front and top of unit.

## Model Identification

Example	C	F	A	1	0	1	2	A	A	0	3	6	A	+	+	1	+	3	D	A	+	A	1	1	+	+	+	+	+	+
Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

1	Unit Designation/Family	C = Industrial Climate Engineering (ICE)
2	Energy Efficiency Ratio (EER)	F = EER <9
3	Refrigerant Type	A = R-410a
4	Compressor Type/Quantity	1 = Single
5	Unit Capacity/Nominal Cooling (BTUH)	012 = 12,000
6		
7	System Type	A = Air Conditioner
9	Power Supply (Volts-Hz-Ph)	A = 208/230-60-1
10	Heat Designation	036 = 3.6KW
11	@ Rated Voltage	
12	KW = Kilowatt	
13	Ventilation Configuration	A = Solid Front Door
14	Dehumidification	+ = None
15	Controls	+ = None
16	Operating Condition	1 = Low Ambient w/FCC

17	Indoor Air Quality Features	+ = None
18	Air Flow	3 = Bottom Supply/Top Return (Counter)
19	Compressor Location	D = Left Hand
20	Filter Option	A = 2" Pleated (MERV 8)
21	Corrosion Protection	+ = None
22	Engineering Revision Level	A1
24	Cabinet Color	1 = Beige
25	Sound Attenuation	+ = None
26	Security Option	+ = None
27	Fastener/Drain Pan Option	+ = None
28	Unused	+ = None
29	Unused	+ = None
30	Special Variation	+ = None

## Accessories

### ► Supply Grille

For CFA1012A..... P/N 80685  
13" x 5" (330 mm x 125 mm)

### ► Return Grille

For CFA1012A..... P/N 80680  
13<sup>3</sup>/<sub>4</sub>" x 11<sup>3</sup>/<sub>4</sub>" (349 mm x 298 mm)

## Controllers and Thermostats

### ► Thermostats and Controllers for ICE Air Conditioners

See the *Marvair Thermostats and Controllers Product Data Sheet* for the thermostats and controllers for use with Marvair and ICE air conditioners.

## Summary Ratings

ELECTRIC HEAT		036 = 3.6 kW	
BASIC MODEL	VOLTS-HZ-PH	CKT #1	
		MCA	MFS
CFA1012A	208/230-60-1	19.7	20

MCA = Minimum Circuit Ampacity (Wire Sizing Amps) MFS = Max. Fuse Size or HACR circuit breaker

## Electrical Characteristics

BASIC MODEL	COMPRESSOR					OUTDOOR MOTOR				INDOOR MOTOR			
	TYPE	VOLTS-HZ-PH	RLA	LRA	MCC	VOLTS-HZ-PH	RPM	FLA	HP	VOLTS-HZ-PH	RPM	FLA	HP
CFA1012A	Rotary	208/230-60-1	6.3	29.0	9.8	208/230-60-1	1050	0.50	1/15	208/230-60-1	1600	0.95	1/8

RLA = Rated Load Amps LRA = Locked Rotor Amps MCC = Maximum Continuous Current RPM = Revolutions per Minute  
FLA = Full Load Amps HP = Horsepower

## Unit Load Amps

BASIC MODEL NUMBER	VOLTS-HZ-PH	CURRENT AMPS		LOAD OF RESISTIVE HEATING ELEMENTS ONLY (AMPS)	TOTAL MAXIMUM HEATING AMPS (STANDARD UNIT)
		AC UNIT	IBM		
CFA1012A	208/230-60-1	7.75	0.95	15.00	15.95

IBM = Indoor Blower Motor

## Air Flow

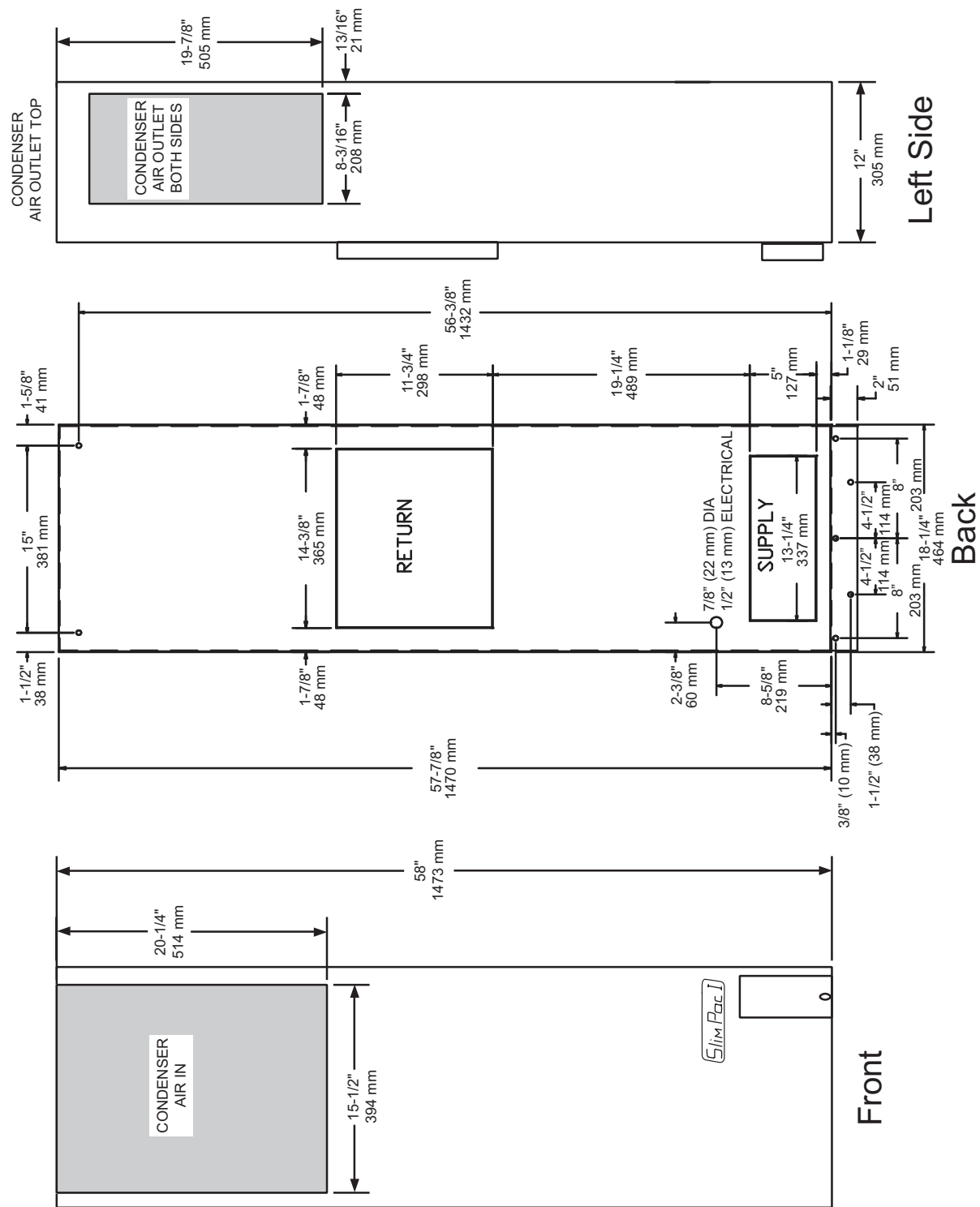
CFM @ ESP (Dry Coil)						
Model	.00	.05	.10	.15	.20	.25
CFA1012A	510	470	450	420	390	360

CFM = Cubic Feet/Minute Indoor Air Flow  
ESP = External Static Pressure in Inches WG

## CFA1012A Total & Sensible Cooling Capacity

Data based upon 80°F Dry Bulb/ 67°F wet bulb return air temperature at Various Outdoor Temperatures. Airflow at 450 CFM											
Outdoor temperature	70°F	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°	120°F
Total cooling (BTUH)	10,570	10,370	10,170	9,975	9,788	9,600	9,165	8,730	8,105	7,480	6,860
Sensible Cooling (BTUH)	6,930	6,860	6,790	6,720	6,655	6,590	6,435	6,280	6,065	5,850	5,640
Data based upon 26.5°C Dry Bulb/ 19.5°C wet bulb return air temperature at Various Outdoor Temperatures. Airflow at 760 m3/hr.											
Outdoor temperature	21°C	24°C	26.5°C	29°C	32°C	35°C	38°C	40.5°C	43.3°C	46°	48.4°C
Total cooling (kW)	3.10	3.04	2.98	2.92	2.87	2.81	2.69	2.56	2.37	2.19	2.01
Sensible Cooling (kW)	2.03	2.01	1.99	1.97	1.95	1.93	1.89	1.84	1.78	1.71	1.65

Dimensional Data – CFA1012A



Weight

CFA1012A 160 lbs/73 kg

## Notes

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*Please consult the Industrial Climate Engineering website at [www.acice.com](http://www.acice.com) for the latest product literature. Detailed dimensional data is available upon request. A complete warranty statement can be found in each product's Installation/Operation Manual, on our website. As part of the ICE continuous improvement program, specifications are subject to change without notice.*



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