Marvair®
AIRXCEL™, Inc.
ISO 9001 2000 REGISTERED COMPANY

SlimPac™ I – Environmental Control Units

Models ECUA12ACA & ECUA18ACA

General Description

The Marvair SlimPac™ 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. SlimPac units have, as standard, the necessary features to maintain the proper temperature control demanded by the telecommunications industry. The SlimPac is designed for use in ambients 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 SlimPac is available in nominal cooling capacities of 1 and 1-1/2 tons (12,000 and 18,000 BTUH). The SlimPac units are ETL listed (pending). Both units are manufactured and tested to UL Std. 1995, 2nd Ed. and CAN/CSA C22.2 No. 236-95, 2nd ED.


ECUA12


ECUA18

Operation

The SlimPac ECU is controlled by a thermostat that senses the internal cabinet temperature. When cooling is desired, the compressor, evaporator blower and condenser fan (ECUA12) or blower (ECUA18) turn on. Cool air is discharged near the bottom of the SlimPac into the cabinet. When two SlimPacs are used on the same cabinet, the CommStat 3 or Marvair LL357 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 SlimPac will permit the evaporator blower to run continuously. The SlimPac 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.

Standard Features

R-410A Refrigerant

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

- Low ambient control cycles condenser fan (ECUA12) or condenser blower (ECUA18) to maintain proper refrigerant pressures.
- 3.6 kW of electric heat is optional.
- Timed low pressure by-pass for low ambient start-up (ECUA18).

Built-in Reliability

- High and low pressure switches with lockout relay protect refrigerant circuit (ECUA18).
- High pressure switch with lockout relay and frost sensor protect refrigerant circuit (ECUA12).
- Compressor time delay prevents rapid cycling of the compressor.

Vandal Resistant

- All mounting holes are inside the ECU.
- 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.

Accessories

Grilles

Supply Grille – P/N 80685
13” x 5” (330 mm x 125 mm)

Return Air Filter Grille – P/N 80680
17” x 12” (358 mm x 305 mm)

Thermostats

CommStat 3 Lead/Lag Controller, P/N S/04581
A digital, programmable thermostat designed to operate two SlimPacs in a fully or partial redundant application. (See the CommStat 3 Product Data Sheet for details.)

LL357D4 Lead/Lag Controller, P/N S/07529
Two stage cool and heat thermostat with solid state module for redundant operation with adjustable interstage differential. (See the LL357D4 Product Data Sheet for details.)

Thermostat, P/N 50123
One stage cool, one stage heat, seven day programmable. Fan switch: auto & on, auto-changeover system switch, keypad lockout, non-volatile program memory.

Model Identification

ECU A • AC A – 036

- 036 = Electric Heat Designator = 3.6 kW
- A = Voltage (A) = 208/230V, 1ø, 60 Hz
- AC = Air Conditioner
- • = Nominal Cooling Capacity (12) - 12,000 BTUH (18) = 18,000 BTUH
- A = R-410A Refrigerant
- ECU = (ECU) Environmental Control Unit

Example:
ECUA18ACA-036 =
Counterflow Vertical Package ECU Nominal 1.5 tons; 208/230V, 1ø, 60 Hz; 3.6 kW Electric Heat

Summary Ratings

ELECTRIC HEAT		000 = None		036 = 3.6 kW	
		CKT #1		CKT #1	
BASIC MODEL	VOLTAGE / PHASE / HZ	MCA	MFS	MCA	MFS
ECUA12ACA (N)	208-230/1/60	9.3	15	19.7	20
ECUA18ACA (N)	208-230/1/60	14.9	20	20.4	25
MCA =Minimum Circuit Ampacity (Wire Sizing Amps) MFS = Max. Fuse Size or HACR circuit breaker					

Electrical Characteristics

	COMPRESSOR					OUTDOOR MOTOR				INDOOR MOTOR			
BASIC MODEL	TYPE	VOLTS-HZ PH	RLA	LRA	MCC	VOLTS-HZ PH	RPM	FLA	HP	VOLTS-HZ PH	RPM	FLA	HP
ECUA12ACA (N)	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
ECUA18ACA (N)	Scroll	208/230-60-1	9.0	48.0	14.0	208/230-60-1	825	2.00	1/3	208/230-60-1	1075	1.60	1/4
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	VOLTAGE HERTZ PHASE	CURRENT AMPS		LOAD OF RESISTIVE HEATING ELEMENTS ONLY (AMPS)	TOTAL MAXIMUM HEATING AMPS (STANDARD UNIT)
		AC UNIT	IBM	3.6 kW	3.6 kW
ECUA12ACA (N)	208/230-60-1	7.75	0.95	15.00	15.95
ECUA18ACA (N)	208/230-60-1	12.60	1.60	15.00	16.60
IBM = Indoor Blower Motor					

Air Flow

CFM @ ESP (Dry Coil)						
Model	**.00**	**.05**	**.10**	**.15**	**.20**	**.25**
ECUA12	510	470	450	420	390	360
ECUA18	750	710	680	650	625	600
CFM = Cubic Feet/Minute Indoor Air Flow ESP = External Static Pressure in Inches WG						

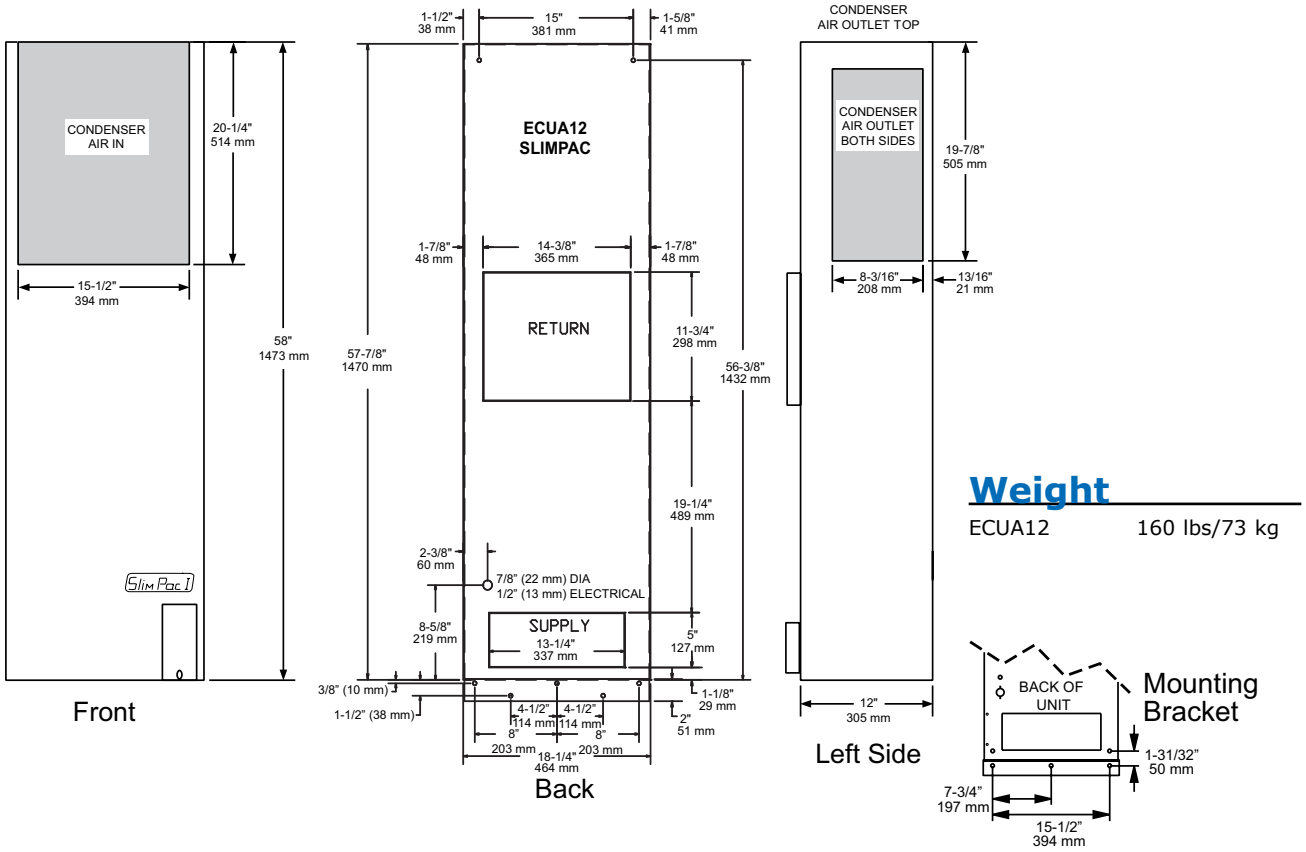
ECUA12 Total & Sensible Cooling Capacity

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

ECUA18 Total & Sensible Cooling Capacity

Data based upon 80°F Dry Bulb/ 67°F wet bulb return air temperature at Various Outdoor Temperatures. Airflow at 500 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)	16,075	15,770	15,470	15,170	14,885	14,600	13,938	13,275	12,325	11,375	10,430
Sensible Cooling (BTUH)	9,835	9,725	9,610	9,500	9,395	9,290	9,050	8,810	8,470	8,130	7,800
Data based upon 26.5°C Dry Bulb/ 19.5°C wet bulb return air temperature at Various Outdoor Temperatures. Airflow at 850 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)	4.71	4.62	4.53	4.44	4.36	4.28	4.08	3.89	3.61	3.33	3.06
Sensible Cooling (kW)	2.88	2.85	2.82	2.78	2.75	2.72	2.65	2.58	2.48	2.38	2.29

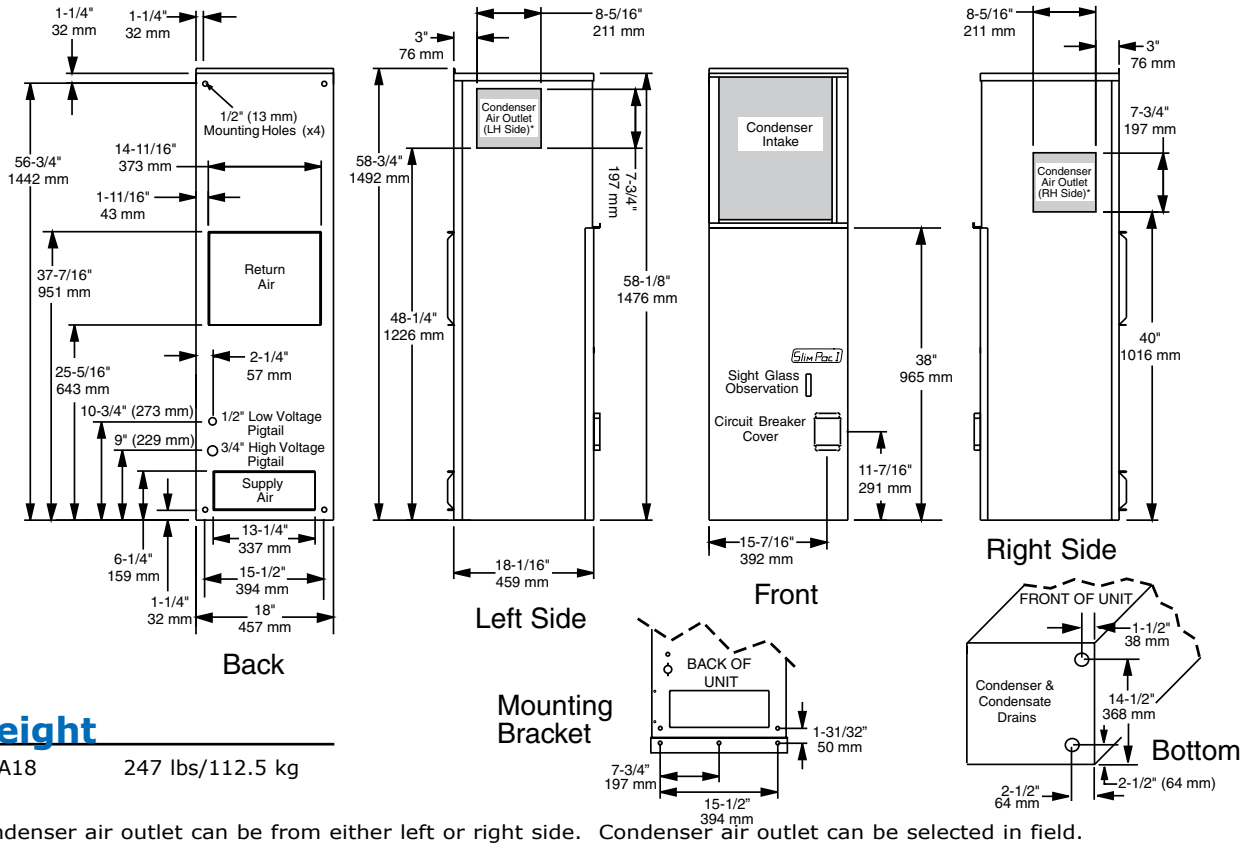
Dimensional Data – SlimPac (ECUA12)



Weight

ECUA12 160 lbs/73 kg

Dimensional Data – SlimPac (ECUA18)



Weight

ECUA18	247 lbs/112.5 kg

*Condenser air outlet can be from either left or right side. Condenser air outlet can be selected in field.

Please consult the Marvair® website at www.marvair.com for the latest product literature. Complete installation instructions are in the SlimPac Manual. Detailed dimensional data available upon request. A complete warranty statement can be found in each product's Installation/Operation Manual, on our website or by contacting Marvair at 229-273-3636. As part of the Marvair continuous improvement program, specifications are subject to change without notice.

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