Industrial Climate Engineering™

AIRXCEL®

ECUA12ACA & ECUA18ACA "SlimPac" (1 & 1.5 Ton) Environmental Control Units

ECUA12 ECUA18

Intertek

Designed, Engineered & Assembled In the USA

General Description

The Industrial Climate Engineering 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. Both units are manufactured and tested to UL 1995 current edition. and CAN/CSA C22.2 No. 236-95, 2nd ED.

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 ICE 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.

Features and Benefits

Wide Range of Operation Conditions

- *Low Ambient Control Cycles for Condenser Fan*
- *Optional 3.6 kW Electric Heat*
- *Timed Low Pressure Bypass for Low Ambient Start-Up (ECUA18)*

Built-In Reliability

- *High and Low Pressure Switch with Lockout Relay (ECUA18)*
- *High Pressure Switch with Lockout Relay and Frost Sensor (ECUA12)*
- *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 (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.

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
- (12) = 12,000 BTUH (18) = 18,000 BTUH = Nominal Cooling Capacity
- 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

Accessories

➤ **Supply Grille**
For ECUA12/18..... P/N 80685
13" x 5" (330 mm x 125 mm)

➤ **Return Grille**
For ECUA12/18..... P/N 80680
13¾" x 11¾" (349 mm x 298 mm)

Controllers and Thermostats

➤ Controllers

CommStat 6 2/4 HVAC Controller NEW! ..... *P/N 70705*
CommStat 6 4/8 HVAC Controller NEW! ..... *P/N S/12087-04*
CommStat 6 6/12 HVAC Controller NEW! ..... *P/N S/12087-06*

The CommStat 6 is an HVAC controller, is available in two configurations, and is designed specifically for controlling up to six redundant air conditioners with two stage compressors in a shelter or enclosure. The **CommStat 6 4/8** Controls up to four single or two-stage air conditioners (8 Stages max.) and the **CommStat 6 6/12** Controls up to six single or two-stage air conditioners (12 Stages max.)

In addition to the control of the air conditioners, the CommStat 6 has multiple configurable outputs for remote alarms or notification. The CommStat 6 is factory programmed with standard industry set points, but can be configured on site. Settings are retained indefinitely in the event of a power loss.

CommStat 4 HVAC Controller ..... *P/N S/07846*

The CommStat 4 HVAC controller is designed specifically for controlling two redundant air conditioners, heat pumps or air conditioners with 2-stage compressors. The CommStat 4 has seven outputs for remote alarms or notification. Status LED's indicate HEAT, COOL, POWER and the LEAD unit. When a fault is detected, an alarm LED flashes and the LCD screen displays the fault.

The CommStat 4 uses RS-485 communications via a RJ11 jack. It can be daisy chained with a second CommStat 4 controllers for controlling up to four air conditioners in one shelter. When two CommStat 4 controllers are daisy chained together, one is the MASTER and the other controller is the SLAVE. Any settings to the MASTER unit immediately take effect on the SLAVE unit. See the CommStat 4 Product Data Sheet for complete details.

CommStat3™ Lead/Lag Microprocessor Controller ..... *P/N S/04581*

Solid state controller designed to operate a fully or partially redundant air conditioning system. Ensures equal wear on both air conditioners while allowing the lag unit to assist upon demand. Lead/ lag changeover is factory set at 7 days, but is field programmable in 1/2 day increments from 1/2 to 7 days. The CommStat 3™ Controller has LED's to indicate status & function, digital display of temperature, a comfort override button for energy savings, five alarm relays, a built in temperature sensor and is fully programmable. See CommStat 3™ Controller Product Data Sheet for details on operation & installation.

➤ Thermostats & Thermostat Guards

Thermostat ..... *P/N 50218*
Digital, non-programmable thermostat. 1 stage cool and 1 stage heat. Auto-changeover.

Thermostat ..... *P/N 50252*
Non-programmable digital thermostat with backlit display. 2 stage heat and 2 stage cool. Auto change-over.

Thermostat ..... *P/N 50123*
Digital thermostat. 1 stage heat, 1 stage cool. 7 day programmable. Fan switch: Auto & On. Auto-change over. Keypad lockout. Non-volatile program memory.

Thermostat ..... *P/N 50107*
Digital thermostat. 2 stage heat, 2 stage cool. 7 day programmable. Fan switch: Auto & On. Auto-change over. Status LED's. Backlit display. Programmable fan. Non-volatile program memory.

Thermostat Guard ..... *P/N 50092*
Thermostat guard for use with the 50123 and 50107 thermostats.

Summary Ratings

ELECTRIC HEAT		000 = None		036 = 3.6 kW	
BASIC MODEL	VOLTAGE / PHASE / HZ	CKT #1		CKT #1	
		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

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
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						

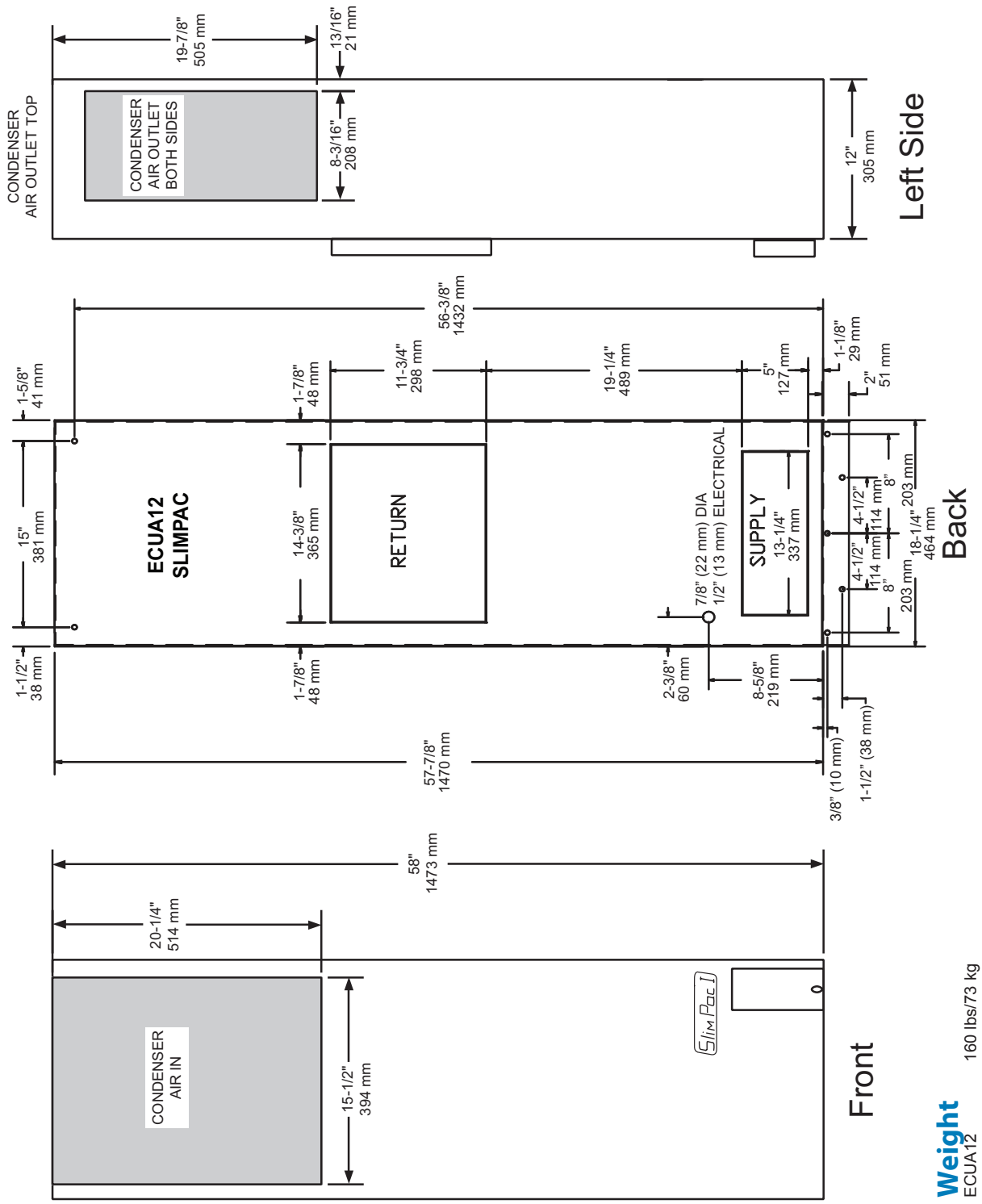
ECUA12 Total & Sensible Cooling Capacity

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

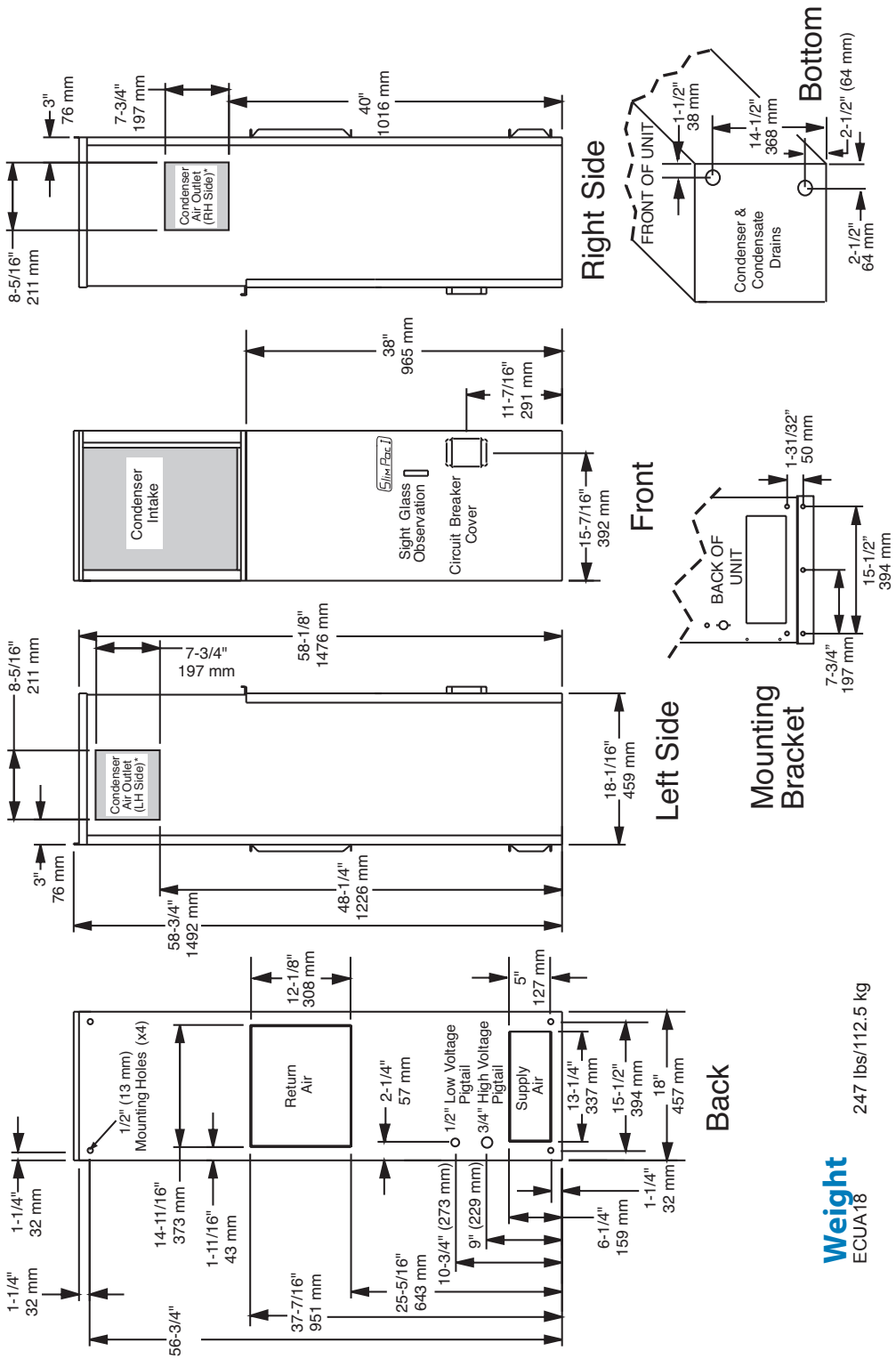
Data based upon 80°F Dry Bulb/ 67°F wet bulb return air temperature at Various Outdoor Temperatures. Airflow at 500 CFM											
Outdoor temperature	70°F	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°	120°F
Total cooling (BTUH)	16,075	15,770	15,470	15,170	14,885	14,600	13,938	13,275	12,325	11,375	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

Please consult the Industrial Climate Engineering website at 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.

Industrial Climate Engineering™

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