FC SERIES | 5-10 KW | EMEA EDITION

Mission Critical Free Cooling

PRECISION COOLING SYSTEM

Akrivis

GREEN TECHNOLOGY

EDGE COMPUTING

FREE COOLING

PLUG & PLAY

LOW FOOTPRINT

FC Series | 5-10KW

- Developed at an established centre of excellence in critical air solutions and backed by an agile, attentive and collaborative team
- Customised solutions tailored to meet any network requirement and customer specifications
- Prolongs existing air conditioner life and reduces maintenance costs
- Provides convenient cooling back-up in case of power or existing air conditioner failure
- EC fans, with low bearing temperature operation, provide long term maintenance-free operation
- Developed for seamless outdoor installation
- Wall-mount Environmental Control Systems
- Achieve PUE as low as 1.04
- Up to 85% reduction in OPEX costs
- Up to 80% reduction in CO2 emissions
- Fully packaged “plug & play” solution
- Wall Mount microprocessor control system
- Fully BMS comms compatible
- Remote monitoring & logging

Free Cooling System

INTELLIGENT, COMPACT, EFFICIENT

The Akrivis FC (Free Cooling) Series features a range of scalable packaged air handling units which have been designed to provide free air cooling for mulitple applications within the telecom and modular data centre sectors, such as remote plant rooms, telecoms shelters, re-locatable equipment buildings, control rooms, switch rooms and industrial process rooms.

The system can be used as a stand-alone cooling system or can be integrated with existing cooling equipment to facilitate both mechanical cooling and free cooling options.

All Akrivis products are supplied with highly energy efficient EC fan motors. EC fans allow unique precision control of the air delivery from the Akrivis unit in constant air volume & constant static pressure applications.

FEATURES

Standard Features

- 2 base options
- Capacities ranging from 5-10kW
- Single & Twin fans
- PUE as low as 1.04
- Stand-alone or scalable
- Integratable with existing cooling plant / equipment to facilitate both mechanical and free cooling options.
- Integrated weather louvre and wall mounted air outlet louvre
- Wall mount microprocessor control system
- 48V Free Cooling fan provides cooling in the event of mains power failure
- EC fans allowing for precise air flow rates and are more efficient than AC fans
- Wide operating range -25°C to +50°C
- G4 /MERV8 filtration with pressure monitoring
- High quality powder coat paint in customer specific RAL colours
- Multiple units on site are networked to optimize load sharing and duty/assist operations
- Remote monitoring and on-site controller access via Ethernet
- A single touch screen display can be used to manage the various controllers connected to the same local network

Optional Features

- Fire damper
- Filter clog switch
- EC fan - 48VDC or 230VAC power supply
- Temperature control module
- User specific controls
- Sand trap louvres
- F7/MERV13 filtration
- VOC sensors
- Ultra-Fine Particle Sensors
- Remote monitoring via site supervision
- Centralized data collection
- Mobile-ready local supervisor

TECHNICAL SPECIFICATIONS

Technical Data – 48 VDC EMEA Edition

		FC300 Single Fan	FC600 Dual Fan
Free Cooling Capacity[1]	kW	5	10
Max Free Cooling Airflow	m^3/H	2800	5600
Sound Pressure Level[2] (est)	dB (A)	48	51
Dimensions[3] (WxDxH)	mm		
Fan Box		590 x 565 x 206	1160 x 590 x 310
Inlet Sand Trap		633 x 564 x 319	1235 x 565 x 370
Outlet Sand Trap		460 x 460 x 50	460 x 460 x 50
Full Load Amps (@48 VDC)	Amps	4.2A	2 x 4.2A
Fan Volts	V	48 VDC	48 VDC
Fan Watts (at full speed)	W	285	570
Fan RPM	RPM	1430	1430

1. FC Capacity @ 5°C delta T, rated with two-stage filtration: G4 Coarse 70%, F7 ePM1 55%.
2. Measured at 2m from the unit, in free field conditions
3. Width is measured to outside of fixing flanges

Technical Data for AC model is project specific and available on request

FC300

FC600

Intelligent Controls

Tailor made software for each solution

Utilizing both state-of-the-art controllers and bespoke software controllers makes local and remote connectivity a key innovation of the FC Series. Real time monitoring of operating conditions on installed units, recording of data in abnormal situations, maintenance management, setting desired temperature are just some of the features available at any time and from anywhere.

Controls Features

- Integrated Ethernet & USB Interfaces
- BMS connectivity
- Open protocols: SNMP, Modbus®, BACnet™, HTTP, FTP
- Flexible I/O
- Remote connectivity
- Centralized data collection
- Wide range of HMI user interfaces
- Mobile-ready local supervisor

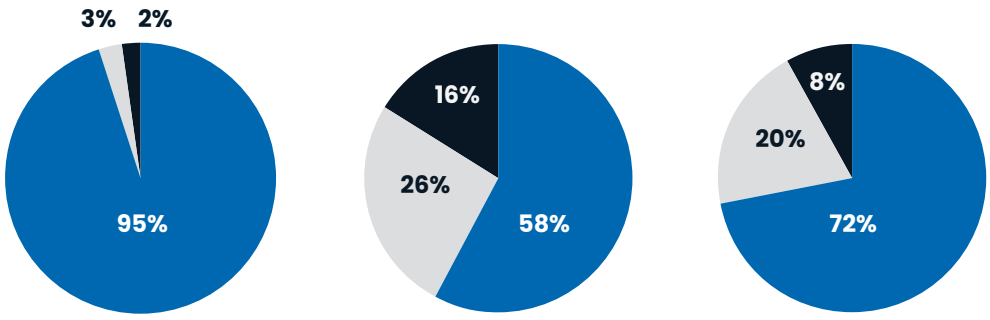
Reduce OPEX costs by up to 85%

Specifically designed to reduce carbon footprint and minimise energy consumption, the Akrivis Free Cooling System utilises free-cooling as much as possible, enabling cost and energy saving benefits associated with a reduction of up to 98% in AC working time. The below charts show actual savings recorded in several cities throughout the Gulf at 35˚C shelter set point.

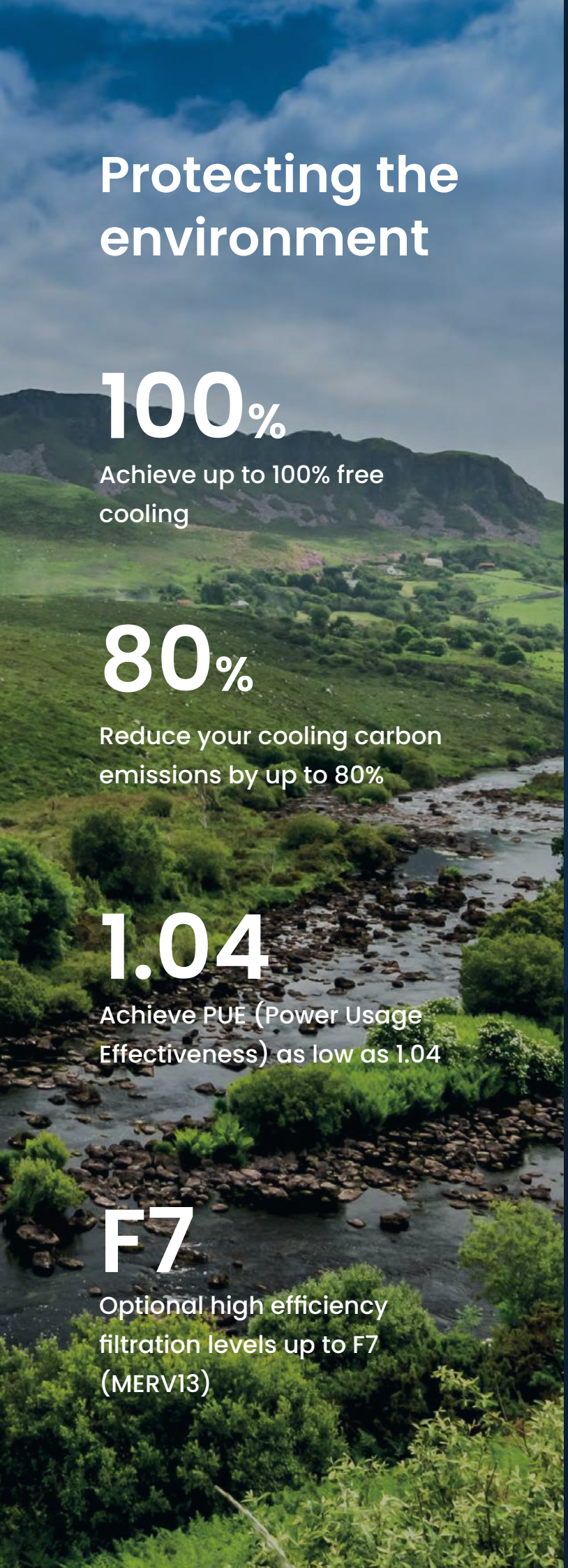
PUE as low as 1.04, making the FC Series cooling system one of the most efficient on the market.

Free Cooling System

Actual Savings recorded at several cities for 35°C shelter set point



City - Duration	Abha - June	Riyadh - April	Dubai - March
Reduction in AC Working Time	98%	84%	92%
Power Saving	2,080 KW	1,823 KW	1,980 KW
Carbon Emission Reduction	1,183 KG CO_2	1,037 KG CO_2	0.847 KG CO_2



Protecting the environment

100%

Achieve up to 100% free cooling

80%

Reduce your cooling carbon emissions by up to 80%

1.04

Achieve PUE (Power Usage Effectiveness) as low as 1.04

F7

Optional high efficiency filtration levels up to F7 (MERV13)

Mission Critical Air Cooling

With a low carbon footprint

Akrivis solutions cool equipment and deliver optimum conditions in mission critical applications. Specialist units, customised to your needs, delivering exceptional performance, outstanding reliability, and ultra-low energy usage.

PLUG & PLAY

Low-energy, air cooling tailored to meet any network requirement and customer specifications.

ENERGY EFFICIENCY

Enabling distributed, modular, stable, low-energy infrastructure.

MINIMIZED ENVIRONMENTAL IMPACT

The FC Series uses the latest technologies to reduce the impact on the environment. ebm-papst EC fans ensure maximum potential savings and maintain low noise levels for use in residential areas. EC Fans (Electronically Commutated DC Motors) feature very high motor efficiencies, up to 45% higher than a comparable 3-phase motor, up to 65% higher than a I-phase AC motor and up to 35% higher than an AC motor/VSD combination.

SPEND UP TO 100% OF THE YEAR FREE COOLING

Specifically designed to reduce carbon footprints and minimize energy consumption, the FC Series utilizes free cooling as much as possible. As technologies develop and higher room set point temperatures are permitted, the savings can grow exponentially. The table below outlines the potential free cooling available across several cities based on an array of setpoints.

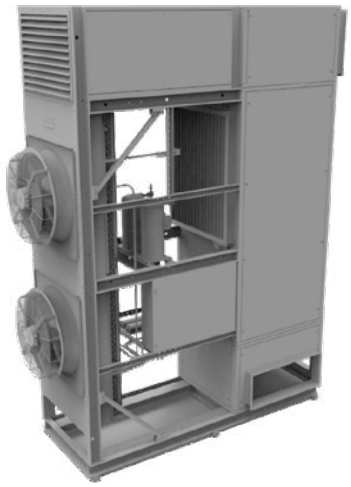
SETPOINT	FREE COOLING AVAILABLE	LONDON	FRANKFURT	RIYADH	NAIROBI	VANCOUVER	DUBAI
22°C 71.6°F	UP TO 17°C UP TO 62.6°F	7250.98 (83%)	7643.88 (87%)	1976.69 (23%)	3414.14 (39%)	7477.29 (85%)	470.03 (5%)
25°C 77°F	UP TO 20°C UP TO 68°F	8196.77 (94%)	8236.37 (94%)	2763.92 (32%)	5615.35 (64%)	8273.97 (94%)	1277.20 (15%)
27°C 80.6°F	UP TO 22°C UP TO 71.6°F	8493.64 (97%)	8466.81 (97%)	3278.14 (37%)	6693.44 (76%)	8572.45 (98%)	2057.91 (23%)
29°C 84.2°F	UP TO 24°C UP TO 75.2°F	8641.23 (99%)	8606.35 (98%)	3799.89 (43%)	7650.79 (87%)	8700.97 (99%)	2836.95 (32%)
31°C 87.8°F	UP TO 26°C UP TO 78.8°F	8716.82 (99%)	8690.49 (99%)	4373.73 (50%)	8367.77 (96%)	8744 (99%)	3565.59 (41%)
33°C 91.4°F	UP TO 28°C UP TO 82.4°F	8748.15 (99%)	8731.6 (99%)	5011.05 (57%)	8688.53 (99%)	8756.96 (99%)	4317.15 (49%)
35°C 95°F	UP TO 30°C UP TO 86°F	8756.6 (99%)	8751.09 (100%)	5657.08 (65%)	8755.82 (100%)	8759.2 (100%)	5134.64 (59%)

Based on Free Cool ΔT : 5°C

Explore the Full Akrivis Critical Cooling Range at akrivis.com

AKRIVIS EC SERIES | 5-25KW

Packaged Units for Modular Data Centres and other Mission Critical Applications



AKRIVIS EC SERIES | 25-50KW

Packaged units for Modular Data Centres and other Mission Critical Applications

AKRIVIS DC800 SERIES

CRAC & CRAH units for Data Centres and other Mission Critical Applications

AKRIVIS FC SERIES

Free Cooling Unit for Telecom and other Mission Critical Applications

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