

Precision Cooling... ...right to the very Edge



AUBREN believes that sustainability and modular construction, needs to be a huge focus as the next wave of IT infrastructure is put in place.

It is predicted that by 2025, 75% of all enterprise data will be created and processed at the Edge [Gartner]. This will cause energy usage within networks and edge spaces to outpace datacentres.

There will continue to be a large shortfall in the requirement for skilled site construction personnel and consequently most of this infrastructure will have to be fabricated in factory environments using packaged components and systems that are easy to install, commission and maintain.

With these industry constraints in mind, Aubren has developed the 'Akrivis' range of fully packaged air conditioning units which are typically mounted to the outer

walls of Prefabricated Modular Data Centres (PMDC's). Akrivis, the Greek word for 'precise' or 'accurate', describes exactly what Aubren has achieved – systems that can operate in the most demanding environments, using the least amount of energy, and still delivering exactly the specified indoor air climate.

As the Akrivis units are fully packaged, factory or site installation is simple – connect the electrical power and communication cables – Akrivis units are ready to run. There is no requirement for refrigeration charging, pipe welding or commissioning as all of this is carried out by Aubren in a controlled factory environment. When multiple units are deployed on the same PMDC, for capacity or backup redundancy reasons, they are simply connected to a single LED touchscreen from which all of the units can be accessed.

Off-site remote monitoring, parameter updating and logging of conditions is available. Akrivis cooling solutions are developed to avoid using indoor space, and offer seamless outdoor installation. They can be used for new or retrofit installations where substantial space and energy savings can be achieved. There are also indoor mounted models in the range.

Akrivis software is used to manage the dual cooling modes so that maximum energy efficiency is achieved. The outdoor air temperature, and importantly for PMDC's air quality, is carefully monitored so that the system seamlessly moves from free-cooling mode to variable speed mechanical cooling as required. Machine Learning software features are deployed to fine tune each installation, matching the free cooling parameters with the heat load pattern on the PMDC.

Cooling capacities ranging from 600W to 50 Kw are available so that Akrivis solutions can be deployed across small applications such from street telecom cabinets to large PMDC's for Fibre to the Home, Fibre connectivity applications and Edge Datacentre installs.

Akrivis cooling is already being deployed across many of the critical bandwidth infrastructure companies providing the connectivity between Europe's network of large data centres. Projects currently underway include the fibre links between Paris and Marseille and Paris and Strasbourg. Subsea fibre landing stations require the precision and reliability offered by Akrivis, as was the case for the recently deployed link between Galway and Iceland. Sustainability is fast becoming the new standard for investing. Sustainable companies can outperform their competitors, showing better returns and corporate longevity. Sustainability leaders secure lower cost capital at an average of ~100 basis points less than sector laggards. Consequently, when the largest Fibre to the Home network rollout in the UK was being planned, Akrivis cooling solutions with PUE levels as low as 1.04 were the obvious choice.

Even in warm climates, and with the correct hardware and software, very substantial savings can be achieved by managing the deployment of free ambient and mechanical cooling. Pre-Covid, the Akrivis solutions were deployed across one thousand two hundred of the du Telecom sites in United Arab Emirates. With this investment, du Telecom achieved a 20% reduction in electricity consumed across their network and delivered upon their corporate sustainability goals.

All Akrivis products are designed, tested and manufactured at the Aubren manufacturing facilities in Portlaoise. The company operates from several locations in the town and at the headquarters in the IDA Business & Technology Park. A new R&D testing facility was opened last year. This test facility enables the Company to simulate a range of climatic and heat load conditions that a PMDC is likely to encounter. The Company has now secured an expansion site on the J17 Industrial Park in Portlaoise where a 5500 M² facility is planned.

Aubren is not new to the area of providing energy efficient cooling solutions. As the technology delivery partner for fan manufacturer ebm-papst in Ireland, the Aubren team are actively involved with the design and fabrication of the fan arrays deployed in many of the hyperscale data centre builds both in Ireland and as far away as Australia. This activity also extends to energy saving retrofit projects, and presently underway is the replacement of all fans in one of the early built Dublin data centres.

Aubren was founded in 2010 when current CEO Aubrey Nuzum, purchased the Irish subsidiary of German company ebm-papst one of the world's largest producers of fan technology, and with whom Aubren still maintains a close business relationship. Last year, BGF – Ireland's largest growth capital investor – led a €7M investment round in Aubren.

Aubren employs 82 people in Portlaoise. The company is a centre of excellence in mission critical air solutions, moving, cleaning, heating or cooling. The Aubren engineering team works with client companies from across the world to develop air technologies and products which are manufactured at the Company.



“The performance of our employees, the partnership with our customers, the input of our suppliers and the cooperation with industry experts are the basis for our creation of Akrivis. Together, we create products which allow our customers achieve their commercial, reliability and sustainability goals. Innovation, progress and sustainability are the guiding principles of our activities, and so our engineering team are constantly at work developing new, intelligent, and energy-efficient solutions for our customers precisely tailored to their applications”.
Aubrey Nuzum – CEO

www.akrivis.com





Mission-critical air cooling

With a low carbon footprint

Akrivis solutions cool equipment and deliver optimum conditions in prefabricated modular data centres. Specialist units, customised to your needs, delivering exceptional performance, outstanding reliability, and ultra-low energy usage.



PLUG & PLAY

Low-energy, air cooling in all types of prefabricated modular data centres.



ENERGY EFFICIENCY

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

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)

Let's Talk

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