



# Data Centre & Mission Critical Solutions

## Discover our product range



# The Rise of the Data Centre

**For over 35 years, IT critical infrastructures have been cooled by a range of innovative, energy efficient air conditioning systems manufactured by Weatherite Air Conditioning.**

Digitisation constitutes a massive shift in technology across the industry, commerce and society in general. It affects the way people live, work, travel, shop and communicate.

Digitisation also affects the way companies operate, how customers are acquired and how enterprises do business.

Digitised technologies such as smart consumer devices, IoT, the use of AI/ML/DL, autonomous vehicles, big data analysis, advanced robotics and new forms of visualisation, through augmented and virtual reality, are all contributing to the continuing development of digitisation.

The need to develop faster and broader services is driving the need for more, smarter, faster, energy efficient Data Centres that can deliver solutions now - and in the future.

Operating 24 hours a day, 365 days a year, these Data Centres consume vast amounts of energy and generate significant amounts of heat - and this heat needs to be effectively controlled to ensure the efficient, reliable, continual operation of the Mission Critical IT systems housed within these Data Centres.

For over 35 years, IT critical infrastructures have been cooled by a range of innovative, energy efficient air conditioning systems manufactured by Weatherite Air Conditioning. With over 20,000 cooling units currently in operation across Europe, we understand the importance of delivering a solution that reduces operational costs and energy consumption - whilst maximising cooling efficiencies.

Partner with Weatherite for data cooling solutions that ensure reliability, efficiency, and cost-effectiveness.



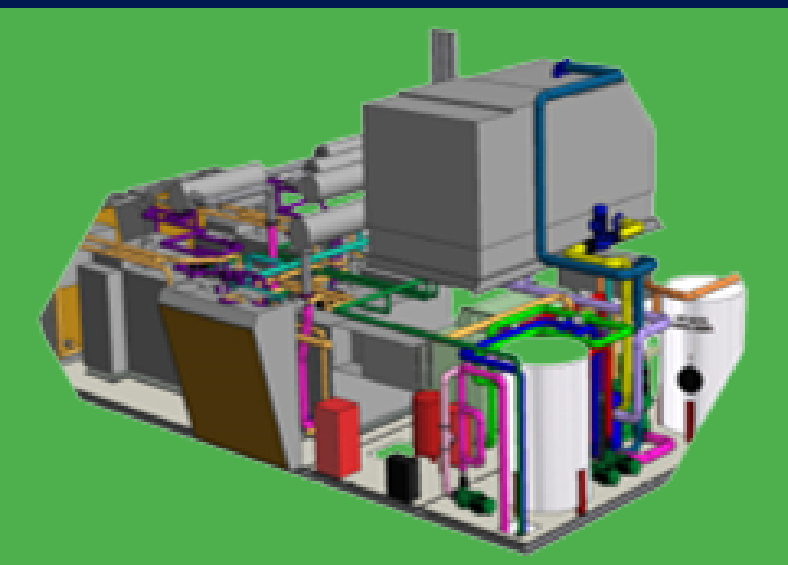


## Europe's leading manufacturers

Since we were founded in 1972, we've become one of Europe's leading bespoke cooling equipment manufacturers. Offering innovative, energy saving solutions - and we're dedicated to staying at the forefront in developing and delivering solutions that provide long-term reliability, efficiency, sustainability and confidence to Data Centre owners across the globe.

## Made-to-measure cooling solutions

Weatherite Air Conditioning Ltd designs, manufactures and services a wide range of 'IT Mission Critical' cooling solutions, each one made-to-measure to suit each individual Data Centre, small medium or hyperscale.



## Innovation drives everything we do

Continuous investment in product design, manufacturing, and support services makes us a leader in state-of-the-art Data Centre cooling solutions. With thousands of units in operation, Weatherite ensures optimum quality, energy efficiency, and reliability - delivering the right solution first time.

## We're environmentally conscious

We have been developing innovative, energy saving, environmentally sensitive solutions in air conditioning and air handling for over 50 years. Manufacturing products that may affect the environment is a responsibility we take very seriously.



# Discover our data cooling range

**We deliver cooling solutions to some of Europe's most prestigious organisations.**

The expertise we have gained over the past 50 years, means that we can deliver highly advanced, innovative cooling and air movement solutions - meeting our customer's exact requirements.

Rather than supplying an 'off-the-shelf' product, which may or may not offer the right solution, we will work with you to design and build a tailor-made system to meet your exact requirements.





# The Weatherite - Product Range



Direct Outside Air Cooling Solutions



Rooftop / External Packaged Cooling Solutions



Direct Adiabatic Cooling Solutions



Indirect Adiabatic Cooling Solutions



Precision Cooling Solutions



In-Row Cooling Solutions



Cabin / Switchroom Cooling Solutions



Aisle Containment Solutions



Wisp Air - Air Handling Unit



Pure Air 50 - Packaged AHU



Packaged Plantroom

For more information call Weatherite Air Conditioning Ltd on **0121 665 2266**, email: [sales@weatheritegroup.com](mailto:sales@weatheritegroup.com) or visit the website [www.weatheritegroup.com](http://www.weatheritegroup.com)

## Sustainable Cooling Solutions



**DESIGN**



**BUILD**



**TEST**



**DELIVER**



**SUPPORT**



# Direct Outside Air Free Cooling

**Rising energy costs and the increasing focus on sustainability are driving the demand for more efficient cooling solutions, particularly in IT Mission Critical environments.**

With cooling systems accounting for approximately 40% of a Data Centre's total energy consumption, finding a solution that minimises energy use while maintaining optimal performance is crucial.

Direct free cooling offers a highly effective way to reduce energy consumption by up to 90%. By utilising filtered outside air, this method significantly decreases reliance on condensers and compressors, leading to lower operational costs and an extended lifespan for critical equipment. It also provides an environmentally friendly approach to cooling, helping businesses meet sustainability targets.

With over 30 years of expertise in designing and manufacturing direct outside air free cooling solutions, Weatherite has more than 15,000 units in operation across the UK. Our proven systems deliver reliable, energy-efficient cooling, ensuring Data Centres operate at peak efficiency while reducing both costs and environmental impact.

## Features

- Extensive use of free-cooling capabilities - dramatically reducing energy consumption.
- Extensive range of options to suit most Data Centres.
- Free-cooling for up to 90% of the year - minimum mechanical cooling.
- Variable air flow technology.
- EC Fan technology.
- A range of filtration options available up to EU7 grade.
- Low running and maintenance costs.
- Reduced PUE.
- Top up cooling by DX and Chilled Water configurations available.

## Benefits

- High energy efficiency through the direct use of free outside air.
- Dramatically lower energy consumption compared to conventional systems.
- Lower capital investment than with conventional indirect free cooling systems.
- Minimum utilisation of mechanical cooling elements.
- Substantially increased life span of the cooling system.
- Extended service interval - lowering on-going maintenance costs.
- N+1 resilience achieved at much lower capital cost.

## System Options

- Can be installed internally or externally.
- Left or right handed versions.
- Up-Flow or Down-Flow versions.
- Available in Direct Expansion (DX) and Chilled Water (CW) configurations.
- Filters G4 up to F7.
- Cooling range from 8kW to 125kW.
- Humidity control options available.



**For full comprehensive details please ask for a copy of our FreTec Direct Outside Air Cooling brochure.**





# Rooftop/External - Packaged Direct Outside Air Cooling

**With 45+ years of expertise, our rooftop cooling solutions are engineered to meet the strict demands of modern high-performance Data Centres.**

Our fully packaged, self-contained solutions provide the widest use of free-cooling but also have the back-up of being able to deliver part or full mechanical cooling - as and when needed.

Packed with the latest cooling technologies, these self-contained, highly reliable units can deliver cooling capacities from 10kW up to 360kW and are specifically designed to match the demands of any size Data Centre.

## Features

- Modular, self contained design - incorporating all necessary equipment.
- Extensive use of free-cooling capabilities - dramatically reducing energy consumption.
- Extensive range of capacities available from 10kW to 360kW.
- Low installation costs (arrives pre-tested and pre-commissioned).
- Direct free-cooling for up to 90% of the year - therefore, minimum mechanical cooling necessary.
- High efficiency EC Fan technology.
- A range of filtration options available up to EU7 grade.
- Low running and maintenance costs.
- DX and Chilled Water configurations available.
- Contaminant monitoring options available.

## Benefits

- Lower capital investment than with conventional indirect free cooling system.
- Dramatically lower energy consumption compared to conventional systems.
- High energy efficiency through the direct use of free outside air for the majority of the time.
- Substantially increased life span of the cooling system.
- Minimum utilisation of integrated mechanical cooling elements.
- Maintenance conducted outside of Data Centre.
- Extended service interval - lowering on-going maintenance costs.
- N+1 resilience achieved at much lower capital cost.





# Direct Adiabatic Cooling

**Direct free cooling is a proven way to efficiently cool Data Centres, cutting energy costs, emissions, and capital expenditure, while adiabatic technology enables year-round operation without mechanical cooling.**

Weatherite's Direct Adiabatic Cooling Units use an evaporative process to lower temperatures by over 10°C in peak summer, cutting energy use for mechanical cooling.

Combining direct outside air cooling with adiabatic technology can eliminate mechanical refrigeration, reducing energy, capital, and maintenance costs.

## Features

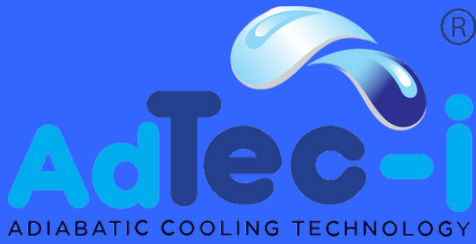
- Environmentally friendly, sustainable cooling solution.
- No refrigerants - uses natural, outside air Adiabatic cooling process.
- Tried and test Adiabatic wetted cooling pad solution.
- EC Fan technology - low energy, variable speed drive.
- Low carbon and energy use.
- Smart controls.
- Low running and maintenance costs.

## Benefits

- Substantial energy savings.
- Low running and maintenance costs.
- Low capital costs.
- Environmentally friendly, sustainable cooling method.
- Exploits the absolute maximum amount of free cooling available.
- Reduced PUR.







# Indirect Adiabatic Cooling

**Indirect free cooling combined with evaporative cooling offers great benefits for Data Centres, but many systems require too much space. That's why we developed the compact 'AdTec-I' Indirect Adiabatic Cooling Solution.**

Weatherite's AdTec-I Indirect Adiabatic Cooling Solution seamlessly integrates outside air free cooling with highly efficient Adiabatic cooling within a compact, self-contained unit. This innovative system delivers significant energy savings, lowers capital expenditure (CapEx), reduces CO2 emissions, and requires minimal ongoing maintenance. Thanks to its advanced design, the need for mechanical cooling is drastically minimized, and in certain regions, additional backup cooling may not even be necessary.

With over 45 years of industry expertise, Weatherite has continuously refined and developed adaptable Adiabatic cooling solutions specifically designed to meet the needs of both new-build projects and existing legacy Data Centres. By prioritizing innovation and energy efficiency, Weatherite ensures optimal performance, sustainability, and cost-effectiveness for modern data center cooling requirements.

## Features

- Unique flexible design.
- Tried and tested Adiabatic wetted cooling pad solution.
- Substantially reduced capital costs.
- Minimal water consumption.
- High efficiency EC Fan technology - low energy, variable speed drive.
- 'Smart Control' technology.
- Extremely low carbon footprint.
- Low running and maintenance costs.
- A range of self-contained, packaged solutions up to 350kW.
- Flexible design - to suit each individual application.

## Benefits

- Substantially reduced energy usage.
- Lower initial capital costs - compared to a number of other Adiabatic cooling solutions.
- Longer maintenance intervals.
- Environmentally friendly, sustainable cooling method.
- Exploits the absolute maximum amount of free cooling available.
- Scalable solution - to match each individual Data Centre.
- Suitable for new or retrofit applications.
- Reduced PUE.





# Precision Cooling Solutions

**Efficient, energy-saving cooling is vital for Data Centre performance. Backed by 45+ years of expertise, our Precision Data Centre Cooling Range delivers innovative solutions with exceptional features and benefits.**

With extensive expertise in Data Centre cooling, we design and build tailored solutions for both new facilities and upgrades of existing ones. Our precision cooling equipment ensures reliable, efficient 24/7 operation, delivering exceptional economy and accuracy to keep mission-critical IT systems running smoothly.

Our fully packaged designs maximise cooling capacity while optimising space, providing high-performance, energy-saving solutions. Whether you're constructing a new Data Centre or retrofitting an existing one, Weatherite delivers the perfect precision cooling solution to meet your needs.

## Features

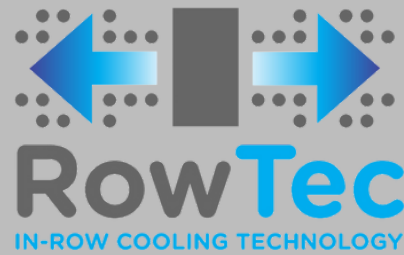
- Compact design.
- DX Chilled Water versions available.
- Environmentally friendly, sustainable cooling solution.
- Available in up flow or down flow configurations
- EC Fan technology - as standard.
- Low noise levels.
- Low energy usage.
- Intelligent controls - maximising.

## Benefits

- Substantial energy savings and reduced carbon footprint.
- Highly efficient, reliable operation - 24 hours a day.
- Minimum space take-up - due to innovative design.
- Suitable for new or legacy applications.
- High efficiency filters - helping reduce power usage.
- Solutions designed to suit each individual Data Centre.







# In-Row Cooling Solutions

**The Weatherite In-Row Cooling Range is ideal for Data Centres with or without a floor void and offers an extremely versatile, highly efficient cooling solution.**

Our In-Row cooling solutions provide precision cooling across full rack height, reducing hot spots. Compatible with aisle configurations and containment systems, they maximize efficiency with digital scroll compressors and variable-speed EC fans for superior energy savings.

## Features

- Compact cabinet design with high cooling capacity - minimising floor space requirements.
- Variable speed EC Fan technology - minimising power, to match demand.
- Easy to install and maintain - only front and back access required.
- Quiet, high efficiency scroll compressors.
- A range of cooling capacities from 10kW to 65kW.
- Flexible/versatile cooling solution.

## Benefits

- Scalable solution.
- Predictable cooling - positioning the In-Row unit close to the heat load source.
- Predictable cooling - positioning the In-Row unit close to the heat load source.
- Minimised risk of hot spots at the rack level.
- Horizontal airflow design - suitable for non-raised or raised floors.
- Can be used in HAC or CAC applications to further improve the Data Centres cooling efficiency.
- Modular, self-contained unit - making it ideal when server/rack demand increases.
- Fast and easy installation.
- Easy service accessibility.





# Pressurisation Solutions

## PressureTech' - Weatherite's Self Contained, Fully Integrated Pressurisation Solution.

Weatherite's PressureTec units condition outside air for delivery into the cold aisle, hot aisle, or directly into the data hall when containment isn't used. As a fully packaged solution, everything needed for precise air conditioning is built into a single unit, eliminating the need for remote systems. The unit requires only electrical and water connections, drainage, and monitoring/alarm integration, with options for diverse power supplies backed by generators and UPS.

Designed for external environments, PressureTec units feature durable, weatherproof construction for long life and minimal maintenance. Incorporating advanced technology like EC Fans and energy-saving techniques, the solution streamlines installation by removing the need for multiple trades, ensuring Weatherite delivers a fully integrated system tailored to the client's needs.



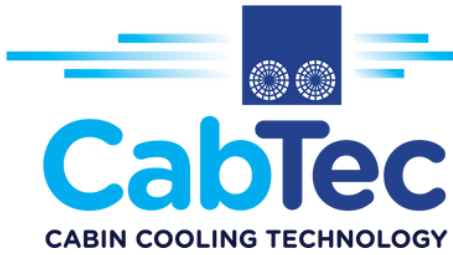
## The PressureTec Solution Incorporates:

- Automatic mixing of a percentage of the return room air with highly filtered outside air.
- Filters to clean the incoming outside air, which can include:
  - Particular Prefilters
  - Particular Final Filters
  - Chemical Filters
  - Cooling (including de-humidification)
  - Heating
  - Humidification
  - Latest Trend controls with MMI display - to operate the whole conditioning and pressurisation process, BMS connectivity via BACnet or MODBUS

## Benefits Include:

- Packaged units - incorporating everything required - no additional equipment needed.
- Each solution is specifically designed to meet the location's environmental requirements.
- Designed to meet the client's exact requirements.
- Weather protection built in as standard.
- Single point of responsibility for system design, manufacture and commissioning. Installation can also be included, if required.
- Latest technologies fitted as standard.
- No need for multi tradespeople.





# Cabin Cooling Technology

**With over 35 years of expertise in cooling telecommunications infrastructure, our self-contained Cabin Coolers are specifically designed to deliver reliable cooling for base stations, telecom cabins, equipment rooms, and similar applications.**

The Weatherite range of self-contained Cabin Coolers provides an efficient and space-saving solution for temperature control. These units are specifically designed for continuous 24/7/365 operation in environments with limited internal space.

Prioritising energy efficiency, Weatherite Cabin Coolers maximise the utilisation of free outside air. By leveraging free-cooling capabilities, these externally mounted units significantly reduce energy consumption compared to traditional cooling systems. This makes them an environmentally conscious and cost-effective choice.

Engineered for ease of installation, Weatherite Cabin Coolers offer a comprehensive approach to temperature management. These units incorporate three distinct modes of operation: fresh air free cooling, refrigeration mode, and electrical heating.

This multi-modal approach ensures optimal temperature control throughout the year, seamlessly adapting to changing conditions. By intelligently switching between these modes, the system maintains a consistent and comfortable environment while minimising energy expenditure.

## Features

- Packaged, self-contained solution.
- A range of models to suit most applications.
- Up to 100% free cooling.
- EC Fans as standard.
- Low operating noise levels.
- Easy to install and commission.
- Easy to service and maintain.
- Secure, temper proof fixings.
- Highly efficient, low energy solution.
- Trend IQ4xcite controls with remote interrogation.
- High efficiency scroll compressors.

## Benefits

- Significant reduction in energy costs.
- Free cooling for up to 90% of the year (UK)
- High efficiency operation - year round.
- Minimal maintenance required.
- Years of efficient, quiet operation - for minimal capital outlay.
- Up to three stages of operation - for maximising cooling efficiencies.
- Self-contained, packages, secure solution.
- High efficiency filtration.
- Remote interrogation and monitoring.
- Internal or external options.
- Upflow or downflow options.





# Aisle Containment Solutions

**Bespoke Aisle Containment Solutions - AirBox® from Weatherite Aluminium Solutions is designed to enhance the efficiency of Mission Critical Data Centers. AirBox® significantly improves cooling efficiency, leading to reduced energy consumption and lower operational costs.**

## Features

- Eliminating temperature fluctuation - protecting servers from potential damage.
- Improving uptime by reducing usage of mechanical cooling.
- Eliminating hot spots.
- Lowering PUE.
- Reducing energy consumption and associated CO2 emissions.
- Improved Net sensible cooling capacity of cooling system.
- Reducing humidification / de-humidification related costs.

## Benefits

- Free site survey - to carefully assess your requirements.
- Detailed proposals - created by our experienced technical teams.
- Bespoke design - no building or air flow requirement is too complex - our engineers can design a system to meet your exact needs.
- High quality manufacture - all AirBox® structural elements are manufactured at our own, purpose-built, manufacturing facility.
- Trouble-free installation - expert installation teams, deliver excellent results for every application.

**For full comprehensive details please ask for a copy of our Airbox® Aisle Containment brochure.**



# PureAir50

## Packaged AHU Heat Pumps

**Our Packaged AHU Heat Pumps prioritise energy efficiency and environmental impact, incorporating cutting-edge technology to deliver the most efficient solutions on the market.**

Weatherite Air Conditioning offers a comprehensive range of bespoke, packaged AHU heat pumps, featuring the latest advancements in heat pump technology.

With 50 years of expertise in designing and manufacturing custom air movement solutions, each unit is meticulously configured to meet the specific needs of every application, ensuring optimal performance, efficiency, and long-term reliability.

### **Benefits Include:**

- Exceptional quality, reliability, and performance.
- Cutting-edge technology incorporated as standard.
- Optimum air quality, 24/7, all year round.
- Wide range of options and functions available.
- Advanced control technology for maximum efficiency.
- Double-skinned unit construction, BS EN 1886 certified.
- Manufactured, tested, and pre-commissioned in our purpose-built facility.
- Available in single/multi-piece or flatpack for easy on-site assembly.
- Quick, easy installation with only ductwork and mains connections required.







## WispAir Air Handling Units

**WispAir is our range of advanced, energy efficient, fully compliant, quality Air Handling Units.**

The WispAir range offers a diverse selection of air handling units (AHUs) designed for energy efficiency, reliability, and longevity.

Built with advanced construction techniques, high-quality components, and cutting-edge control technologies, these AHUs ensure optimal system performance. With airflows ranging from 0.3m<sup>3</sup>/s to 35m<sup>3</sup>/s, plus bespoke solutions for larger applications, WispAir units cater to a wide range of requirements.

Each unit is constructed using a proven double-skinned, fully insulated method, enhancing durability and efficiency while meeting BS EN1886:2007 mechanical performance standards for superior quality and reliability.



Fully compliant with ISO 9001:2015 and ISO 14001:2015, WispAir units adhere to the latest ISO, BS, and EN standards, ensuring exceptional performance and sustainability. Aligned with ErP Eco-Design Directives, they minimize environmental impact while maximizing efficiency. Designed to be quiet, compact, and cost-effective, WispAir units suit applications from small offices to large commercial buildings. With extensive customization options and rigorous testing, each unit is tailored to meet specific project needs, delivering long-lasting, high-performance results.

### Features:

- Comprehensive range of configurations.
- Customisable shape, size, and performance.
- Supply, extract, and heat recovery options.
- Extensive range of operating duties.
- Exceptional acoustic and vibration control.
- Robust construction with quiet operation.
- Independently tested to BS EN1886:2007.
- Fully ErP compliant.
- Available in multi-sections or flat-pack for easy installation.
- UK designed and manufactured.

# Packaged Plantrooms

Demand for off-site manufacture of packaged plantrooms / energy centres within the construction industry has steadily increased over recent years.

More and more new build and refurbishment projects are also being designed with pre-fabricated, off-site plants, providing the optimum solution and it is more cost effective.

Work on configuring and building the plantroom can also commence in tandem with the main construction work and will be unaffected by on-site influences such as weather, health and safety issues and unforeseen disruption. A construction site is far from ideal to construct and install a plantroom and the benefits of undertaking the work within a clean and dedicated factory environment speaks for themselves.

## Bespoke Plantrooms - Multiple Services

At Weatherite, we design, build, test and pre-commission made to measure packaged plantrooms to suit each clients specific requirement and, with over 40 years expertise, we will deliver a highly efficient, energy saving, quality solution, incorporating the very latest components, innovation and energy saving capabilities.

Our range of Packaged Plantroom solutions can incorporate a range of services to suit the client including:

- Heating plant
- Hot water generation
- Cooling and refrigeration
- Switchgear distribution
- Chiller plant
- Pump rooms
- Generator plant
- Water filtration
- Air handling plant
- Steam plant for heating or process systems
- Self contained Biomass energy centres
- Combined heat & power (CHP) or combined cooling, heat & power (CCHP)



For more information call Weatherite Air Conditioning Ltd on 0121 665 2266 or email our team on [sales@weatheritegroup.com](mailto:sales@weatheritegroup.com). Visit our website [www.weatheritegroup.com](http://www.weatheritegroup.com)





# Experience & Expertise in Data Centre Cooling

Over 50 years of innovation, quality and service

As one of the UK's leading cooling equipment manufacturers, Weatherite is committed to continually developing energy efficient, sustainable cooling solutions to meet the challenges facing today's Data Centre professionals.

Operating from our 'state-of-the-art' manufacturing facilities in the heart of the West Midlands, the Weatherite Group has invested significantly in advanced technology and CNC / CAD production systems which, combined with our highly experienced R&D, design and production teams, enables us to produce high quality solutions that combine substantial operational efficiency with low energy consumption.

Within Weatherite Group's resources we have the ability to not only supply the optimum cooling solution for your Data Centre but, if required, we can also provide full installation and commissioning services, ensuring our products operate at peak efficiency from day one. To ensure they perform efficiently throughout their lifetime, we can also provide full service and maintenance support.

For a complete Data Centre cooling solution from a single source, contact our experts.

Weatherite Group H.Q. Weatherite House,  
Credenda Road, West Bromwich,  
West Midlands, B70 7JE, UK  
Tel: +44 (0)121 665 2266  
Email: sales@weatheritegroup.com



Members of

