



Weatherite

AIR CONDITIONING LIMITED



Cooling Solutions

from the Data Centre Experts

The Rise of the Data Centre

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

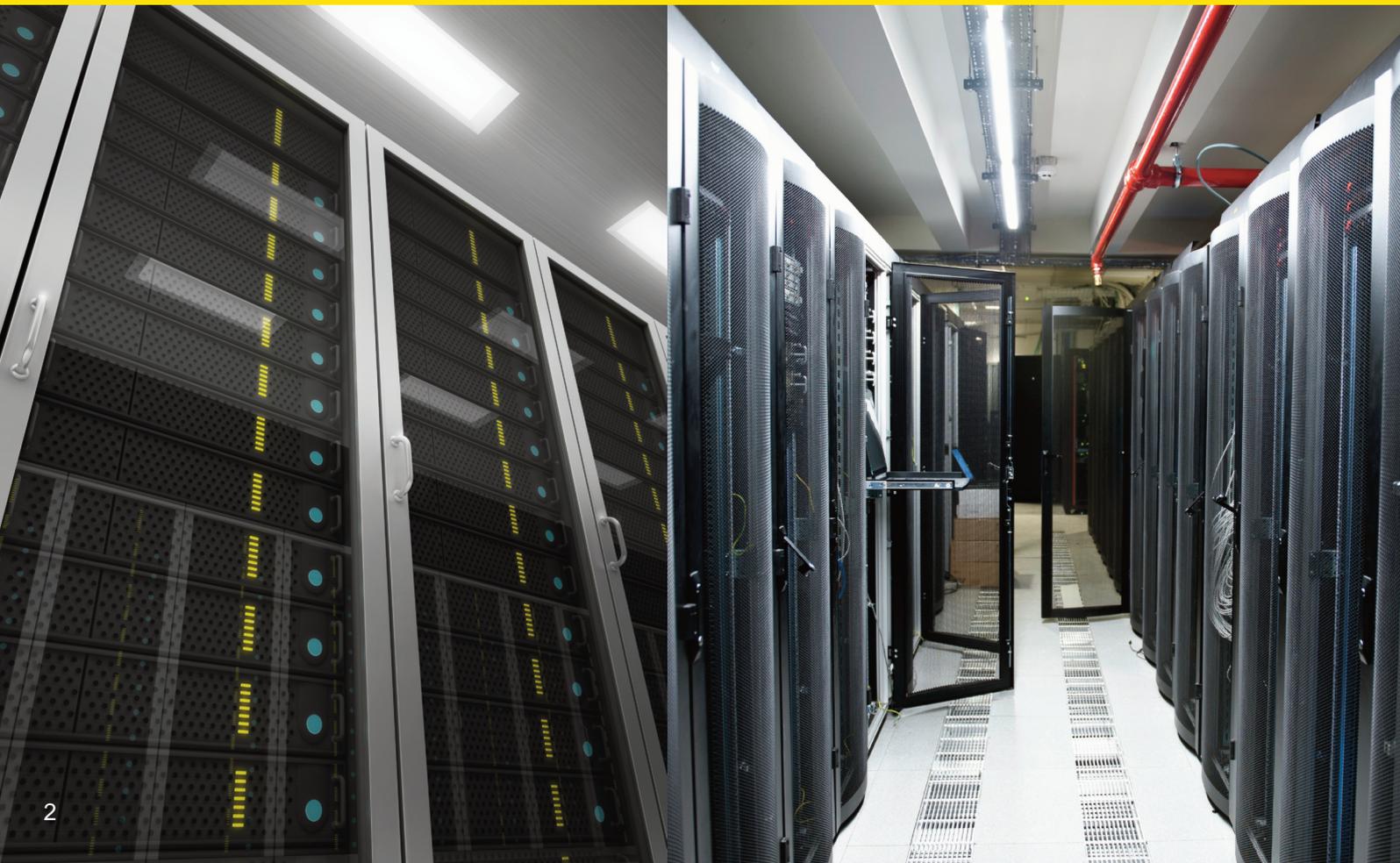
Digitisation also affects the way companies operate, how customers are acquired and how enterprises do business.

Digitised technologies such as the Internet of Things (IoT), 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 drive 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 12,000 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 capacity.





Keeping Data Centres Cool- It's exactly what we do!!

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 large.

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 and confidence to data centre owners across Europe.

Continuous investment in our product design and development programmes, our manufacturing capabilities and our extensive support services mean we are one of the leaders in delivering a range of state-of-the-art, data centre cooling solutions to suit almost every requirement. With thousands of cooling units in operation today providing optimum quality, energy efficiency and reliability, Weatherite will deliver the right cooling solution-first time.

The **Weatherite Cooling Range:**

-  Direct Outside Air Cooling Solutions
-  Rooftop / External Packaged Cooling Solutions
-  Direct Outside Air Adiabatic Cooling Solutions
-  Indirect Adiabatic Cooling Solutions
- In-Row Cooling Solutions
- Precision Cooling Solutions
- Cabin / Switchroom Cooling Solutions
-  Aisle Containment Solutions

This brochure highlights the range of Data Centre cooling solutions we offer. For more comprehensive information please refer to individual product brochure or visit www.datacentre-cooling.com.

The rising costs of energy and the drive to be greener are resulting in greater demands to conserve energy, particularly within the growing IT Mission Critical environment.

Cooling data centres accounts for approximately 40% of the total energy usage per annum so, finding a cooling solution that can minimise energy consumption and provide an environmentally sensitive solution makes perfect sense.

When it comes to minimising energy consumption and costs associated with keeping a data centre at optimum temperature, utilising modulating quantities of direct free cooling offers the potential of saving up to 90% for energy usage- especially in moderate and cold climates.

Using highly filtered outside air is a tried and tested way of cooling Data Centres and can be utilised for the majority of the year. Also, by utilising the highly filtered direct free outside air, condenser, compressor and fan operation is kept to an absolute minimum- all year round.

Utilising direct outside air, particularly within moderate or cool climates, can also result in considerably extending the lifespan of the cooling equipment. Perhaps that's why the likes of Google, Microsoft and Amazon utilise direct outside air cooling solutions.

At Weatherite, we've been designing and manufacturing direct outside air free cooling solutions for over 30 years and have over 12,000 units currently in operation.



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 hand 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 Free Cooling product brochure.

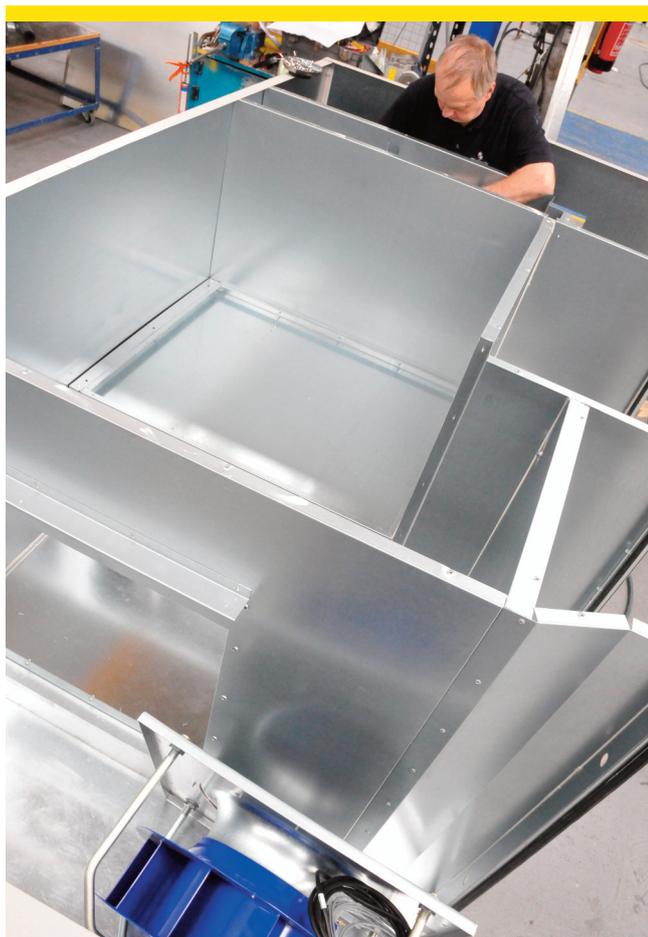


With over 45 years expertise in delivering large rooftop/externally positioned, fully packaged cooling solutions, our data centre cooling technology is specifically designed to meet the most stringent needs of today's high performance Data Centres.

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.

Each of our Rooftop/External packaged Data Centre cooling solutions are individually manufactured to meet the exact needs of each individual Data Centre and we pride ourselves on delivering exactly the right energy saving, high performance, high efficiency, high quality solution.



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 systems
- 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 the Data Centre
- Extended service interval - lowering on-going maintenance costs
- N+1 resilience achieved at much lower capital cost

For full comprehensive details please ask for a copy of our Rooftop/External Packages product brochure.



Direct free cooling is already established as a proven, highly effective way of cooling data centres whilst also lowering energy costs, carbon emissions and capital expenditure. With the addition of adiabatic technology, data centres can usually be cooled all year round without the need for supplementary mechanical cooling.

Weatherite's range of Direct Adiabatic Cooling units incorporate a proven, tried and tested adiabatic system that draws heat from the air by a natural evaporative process, producing a significant temperature drop in excess of 10 degrees C during peak summer temperatures. In many locations around the globe, this can have a massive effect on energy usage which would normally be used for supplementary mechanical cooling.

Direct outside air cooling, with adiabatic supplementary cooling, can negate the need for mechanical refrigeration - reducing capital expenditure even further and lowering running and maintenance costs.

Features:

- Environmentally friendly, sustainable cooling solution
- No refrigerants - uses natural, outside air Adiabatic cooling process
- Tried and tested 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 PUE

For full comprehensive details please ask for a copy of our AdTec-d Adiabatic Cooling product brochure.

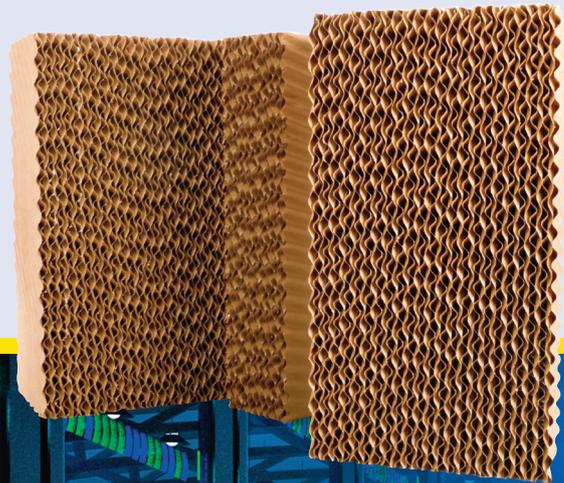


Indirect free cooling, in combination with evaporative cooling, can deliver substantial benefits when looking for a Data Centre cooling solution. However, many solutions currently on the market require a very large footprint for their chosen solution which, when looking at many new Data Centre locations, can prove a major stumbling block. That's why we've developed the 'AdTec-I' Indirect Adiabatic cooling solution.

Weatherite's fully packaged AdTec-I Indirect Adiabatic cooling solution brings the benefits of outside air free cooling and adiabatic cooling but in a much smaller, self-contained solution - resulting in substantial energy savings, lower CapEx costs, lower CO² emissions and less frequent maintenance schedules.

Due to our advanced design technology, the 'Adtec-I' range requires minimal mechanical cooling - significantly reducing the systems running costs and in some global locations, mechanical cooling back-up is not required at all.

With over 45 years expertise in delivering innovative, energy saving cooling solutions, Weatherite has developed a highly versatile adiabatic cooling solution - designed for both new build and legacy Data Centre applications.



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

For full comprehensive details please ask for a copy of our Adtec-I Indirect Adiabatic Cooling product brochure.



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.

Positioned within the server racks, our In-Row cooling solutions delivers precision cooling horizontally across the front of the server racks, acting as a cooling curtain, right up to the full height of the server racks- minimising possible hot spots.

Our In-Row cooling solutions can also be integrated into traditional aisle configurations or, for further cooling performance, incorporated into a hot (HAC) or cold (CAC) aisle containment system - significantly enhancing the facilities efficiency and performance.

Our range of In-Row cooling designs incorporate digital scroll compressors and variable speed EC fans, providing exceptional operational efficiency and 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
- 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

For full comprehensive details please ask for a copy of our In-Row Cooling range product brochure.



Precision Cooling Solutions

Efficient, effective, energy saving cooling systems are paramount to ensuring optimum performance of any Data Centre and, as you would expect from a bespoke, quality cooling equipment manufacturer with over 45 years' experience, our Precision Data Centre cooling range offers a wide selection of innovative, energy saving solutions - with many outstanding features and benefits.

With our extensive knowledge and expertise in Data Centre cooling, we design and build made-to-measure solutions tailored to meet the specific needs of each and every data centre we're involved in - whether it's a brand new build or upgrading/extending an existing facility.

Designed for reliable, efficient, continuous operation 24 hours a day, our range of precision cooling equipment delivers exceptional economy and accuracy - helping keep IT Mission Critical equipment operational.

Our fully packaged designs maximise cooling capacity whilst taking advantage of every inch of space in order to deliver the absolute maximum cooling duty.

So, whether you're building a new Data Centre from scratch, or upgrading/ retrofitting an existing building, Weatherite will deliver exactly the right Precision Cooling solution.

Features:

- Compact design
- DX and Chilled Water versions available
- Environmentally friendly, sustainable cooling solution
- Available in upflow or downflow configurations
- EC Fan technology - as standard
- Low noise levels
- Low energy usage
- Intelligent controls - maximising energy savings

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 fan power usage
- Solutions designed to suit each individual data centre

For full comprehensive details please ask for a copy of our Precision Cooling range product brochure.



Cabin Cooling Technology

With over 35 years' experience cooling telecommunications infrastructure, the Weatherite range of packaged, self-contained, outdoor Cabin Coolers have been specifically designed to cool base stations, telecom cabins, equipment rooms and similar applications.

Designed for where internal space is limited or unavailable, the Weatherite range of self contained Cabin Coolers offers an ideal solution and, operating continuously 24 hours a day, 365 days a year, help reduce energy consumption by utilising the benefits of free outside air.

Externally mounted, the packaged units have been specifically designed to maximise free-cooling capabilities and are quick and easy to install.

The Weatherite range incorporates three methods to control room temperature - fresh air free cooling, refrigeration mode or electrical heating, ensuring optimum temperature is maintained continually throughout the year.

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, tamper 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 - maximising cooling efficiencies
- Self-contained, packaged, secure solution
- High efficiency filtration
- Remote interrogation and monitoring
- Internal or external options
- Upflow or downflow options

For full comprehensive details please ask for a copy of our Cabin Cooling Technology product brochure.



Airbox - The energy efficient addition to your Data Centre air-flow management strategy.

Over 70% of server failures tend to occur in the top third of the rack, where the temperature is generally at its highest.

Therefore, any solution that can reduce this situation should be considered. Also, the separation of hot and cold air is key to any efficient data centre cooling strategy.

Airbox from Weatherite is a bespoke aisle containment solution that provides a highly effective method of controlling air flow within a Data Centre. By preventing hot air mixing with cold inlet air, Airbox dramatically improves the cooling efficiency around the server racks - delivering a number of benefits.

Whether it's a completely new data centre or an upgrade of an existing facility, aisle containment can offer a comprehensive, cost saving, highly efficient addition to your cooling strategy.

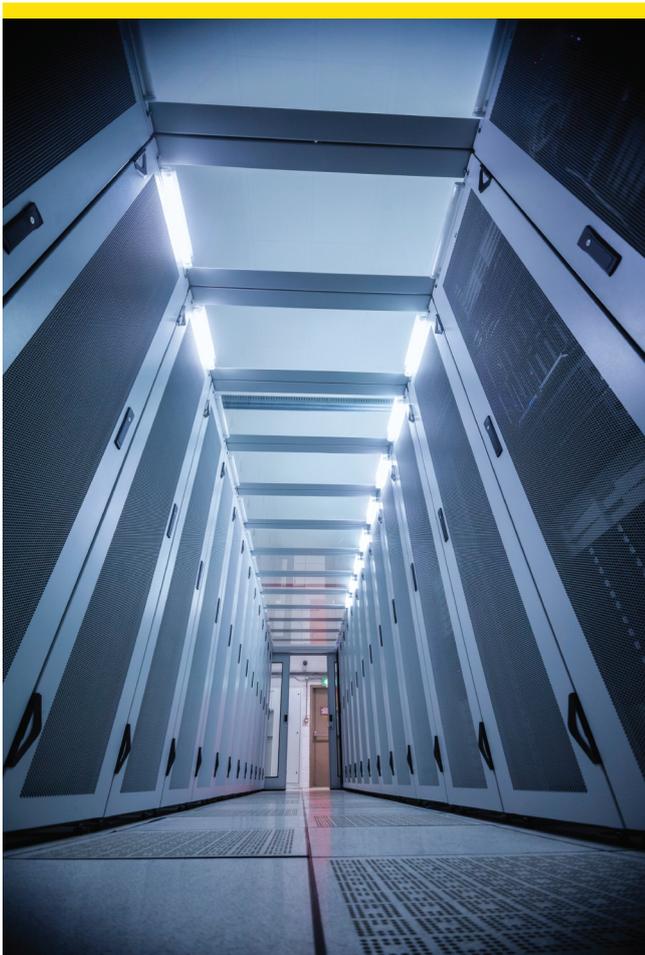
Features:

- Substantial improvement of cooling efficiencies
- Compact, bespoke design to suit each individual data centre
- Solutions for Hot Aisle and Cold Aisle applications
- Suitable for new and existing facilities
- Manufactured and installed by Weatherite - the UK's cooling equipment experts
- Range of access door options and automatic opening roof panel systems

Benefits:

- Provides focused cooling at the racks
- Improves the efficiency of the cooling system
- Helps eliminate temperature fluctuation
- Helps lower energy costs and carbon emissions
- Helps eliminate hot spots
- Can be implemented in new or existing data centres
- Power savings on cooling equipment - extending lifetime of the equipment
- Ideal for new or retrofit applications

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



Why choose Weatherite for your Data Centre Cooling Solution?

Weatherite Air Conditioning Ltd has been developing innovative, forward thinking, energy saving, environmentally sensitive solutions in air conditioning and air handling for over 45 years. Manufacturing products that affect the environment is a responsibility we take very seriously.

As one of Europe's leading manufacturers of made-to-measure Data Centre cooling equipment, we continually strive to stay one step ahead of our competitors in a highly competitive global market place. The expertise we have gained developing highly advanced cooling solutions since 1972, ensures that we meet our customers' high expectations - every time.

Our philosophy of continual investment in our expertise guarantees the development of innovative, energy efficient, long lasting products, supported by first class customer service. The investment we make in training and personal development also demonstrates our philosophy that our people are paramount to the continued success of the Weatherite Group and of course our innovative product range.



Our success is also attributed to our ability to respond rapidly to the needs of each of our customers. Rather than supplying an 'off-the-shelf' product, which may or may not offer exactly the right solution, we design, manufacture, test and pre-commission our equipment to match our customers' specific requirements, guaranteeing the most cost effective, energy-efficient, purpose-built solution.

We deliver cooling solutions to some of Europe's most prestigious organisations and have developed close working relationships.

Never taking anything for granted, we understand that one mistake can result in lost business in the highly competitive markets in which we compete. This is at the forefront of every action we take and every decision we make.



Total Support Services

At Weatherite Air Conditioning Ltd, we don't just design and manufacture innovative, energy saving, sustainable cooling and air movement solutions. We also provide a comprehensive range of support services ensuring ALL our clients receive the very best aftercare support, 24 hours a day - 365 days a year.

With over 35 years' experience and expertise in designing and building made-to-measure IT Critical cooling solutions, we can, if the client requires it, also install, commission and of course, service and maintain all our cooling solutions - ensuring total confidence for the client.

Installation Expertise

Our primary area of expertise is the design and manufacture of made-to-measure, IT Critical cooling equipment containing the most energy efficient, innovative componentry - something we have been doing, with a lot of success, since 1972.

However, if the client requires us to undertake the installation and/or commissioning of our equipment, we are happy to offer this service.

We have highly experienced, qualified teams that can cover every aspect of installation including CDM regulation compliance, health & safety regulations and full risk assessment activities. All our installation teams are fully trained and SKILLcard Accredited professionals who know our equipment inside-out.

Technical Support - at the end of the Phone

Our technical experts are available on the phone and ready to take your call - should you have any concerns. And, with over 45 year's expertise and knowledge behind us, there isn't a lot we don't know about cooling. Just ring **+44 (0) 121 665 2266**.

Comprehensive 24/7 Service & Maintenance Support

We 'never' underestimate the importance of ensuring the cooling solutions we provide each and every one of our clients operates effectively and efficiently 24 hours a day - all year round. That's why we have a totally dedicated 'service & maintenance' company.

Weatherite Service & Maintenance is a leader in the service and maintenance of IT Critical cooling solutions and all our dedicated engineers are fully trained and conversant in all aspects of Health & Safety and CDM regulations associated with safe working within the Data Centre and Telecommunications establishments.



Training & CPD Programmes

Working closely with our clients, we constantly develop dedicated training programmes aimed at providing their staff with basic knowledge and general information relevant to the safe working and inspection of our IT critical cooling systems. We are also more than happy for our clients and their teams to come and view the cooling solutions being built in our state-of-the-art manufacturing facilities. Obviously, for more complex activities we strongly advise that the client utilises our extensive knowledge and years of experience - which we provide 365 days a year.

We also undertake regular CIBSE CPD accredited training programmes which help our clients and their engineering teams, understand more about the range of cooling solutions we manufacture and maintain.

Experience and Expertise in Data Centre Cooling

For over 45 years, Weatherite Air Conditioning Ltd has been delivering cooling solutions across all sectors of industry including IT Mission Critical environments.

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 facility 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, where required, we can also provide full installation and commissioning services, ensuring it operates at peak efficiency from day one. To ensure it performs efficiently throughout its life time, we can also provide full service and maintenance support.

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

on **+44 (0)121 665 2266**

or email: **sales@weatheritegroup.com**

or visit the website: **www.datacentre-cooling.com**



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