



The Critical Cooling Specialists

airedale.com/us



OptiChill free cooling chiller being lifted at Airedale Rockbridge, ready to be delivered to a client data center site.

At Airedale, we believe that air conditioning has a critical role to play in an ever-changing world. We also passionately believe that air conditioning manufacturers must play a responsible role in an era where sustainability is key to the preservation of our planet.

Airedale's core focus is the data center market, where uptime and energy efficiency are critical. Airedale's success is built on our unrivalled pedigree in providing flexible, high-efficiency cooling solutions.

Our systems approach and ability to combine hardware and software ensure that HVAC systems work smarter, not harder, to deliver more cooling for less power, with 24/7 stability and availability.

Our design and integration of building management systems and HVAC controls, paired with a keen eye on operational energy efficiencies at product level, delivers some of the most sustainable and reliable precision

cooling solutions to the most demanding applications on the planet.

All Airedale solutions are backed by a full suite of support services, including commissioning, maintenance, refurbishment, spares and training, delivered by experts with many years' industry experience.

Airedale employs approximately 1,000 people and is owned by the US-based Modine Manufacturing Company.

Airedale has a global network of sites that offer the following:

Production Facilities:

A global network of production plants, bringing the product closer to the project.

Test Centers:

Capable of testing air cooled chillers up to 2MW; the climate temperature being fully controllable anywhere from -4°F to +122°C.

Training School:

Offering a range of approved courses for internal and external cooling engineers.

R&D Laboratories:

State-of-the-art research facilities, led by highly skilled engineers, renowned for their pioneering product development and innovation work.



We are global

Airedale is a global organization, with production sites in Rockbridge (US), Grenada (US), Guadalajara (Spain), Leeds (UK) and Consett (UK).

Our 23,000m² headquarters in Leeds boasts a world-class research and development facility, training school and test center. Our Rockbridge facility in Virginia, US boasts a brand-new test center, accommodating air-cooled chillers up to 2.1MW and water-cooled chillers up to 5MW.

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Precision Cooling



SmartCool™ ONE

1MW CRAH

A large capacity Computer Room Air Handler (CRAH) designed to meet the needs of colocation and hyperscale data centers.

35-1000kW

Chilled water

EER up to 36.1

Downflow

Large surface area slab coils reduce pressure drop and maximize heat transfer

High capacity backward curved EC fans under floor to enhance airflow delivery and efficiency

Various control valve options
LH/RH fluid connections

Designed for close approach
and wide waterside TD's

Helix intelligent unit controls



AireWall ONE™

Parametric Data Center Fan Wall

AireWall One is a dedicated chilled water fan wall unit platform, engineered for data centers and applications with higher return air and water temperatures. This modular fanwall unit is designed to deliver flexibility to work with the space available.

Parametric design, flexible in size and capacity to work with project requirement

Single unit height or stacked unit arrangement to aid with transportation and installation

Provision for ease of lifting and installing using manual handling equipment such as a forklift

Filtration options including MERV 8, MERV 11 and lower grade filter media for temporary use

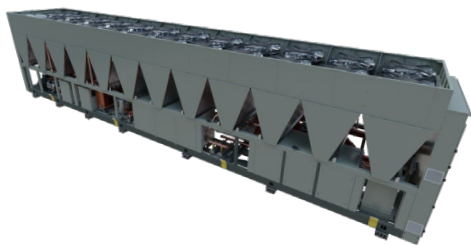
6, 8, 10 row deep chilled water coils

Maximized air flow compatible with solid floor installations

Non-return damper option (drive open/drive close) or fan blanking plates during maintenance



Chillers



OptiChill™

Free Cooling Data Center Screw Chiller

Airedale's original data center chiller platform is based on a screw compressor and has been optimized with a V-block evaporator condenser for high capacity cooling

300 - 550TR

Screw compressor

EER up to 3.86

Refrigerant R513a

High free-cooling capability due to high airflow EC fans and market-leading heat exchangers

Twin screw compressors increase reliability, efficiency and improve overall chiller performance

Optional inverter-controlled pump, combined with flow monitoring, provides effective water management

Helix intelligent controls



TurboChill™

Data Center Chiller R1234ze/ R515B

TurboChill pairs the latest in water cooling technology with the highly efficient TurboCor® compressor range, to deliver our highest capacity, highest efficiency chiller with reduced risk to our planet

300 - 500TR

Liquid refrigerant pump – Supports fast restart, low pressure ratio operation, improves part load efficiencies

Refrigerant R1234ze and R515B

TG380 oil free, centrifugal compressor, optimized for high lift applications

Low peak power for increased efficiency and improved power management

Low starting current for improved resilience of electrical infrastructure

Oil free technology has no performance degradation over the life of the compressor

High ambient operation



We are powered by technology



At Airedale, we design and write our own software for integration with site BMS and control systems, and/or Airedale controls platforms, to meet our clients' requirements.

ACIS

More than just a BMS

ACIS™ provides a scalable, future proof building management system that operates and optimizes a wide range of building services across multiple platforms and protocols. ACIS provides a simple and intuitive interface that facilitates a wide range of monitoring, reporting and diagnostic tools, putting the customer in complete control.

Airedale's 50 years' experience in air conditioning allows ACIS to go far beyond other BMS solutions in selecting optimized operating conditions for HVAC systems. ACIS can also manage a facility's power infrastructure and provide insights into usage and faults.

helix

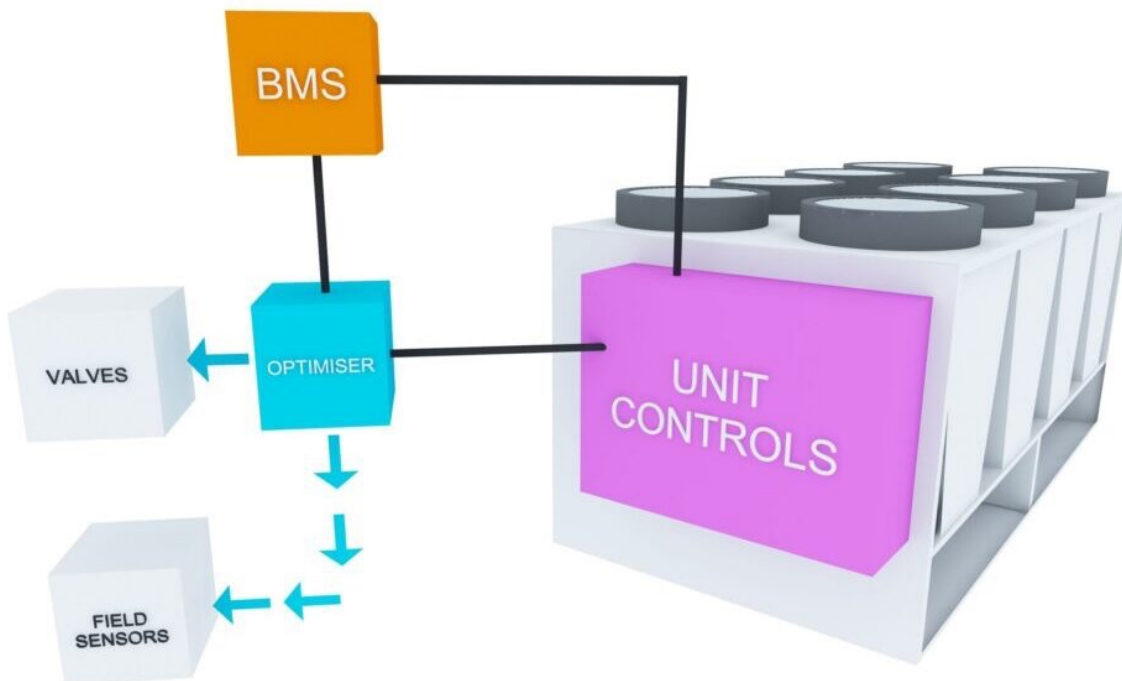
Integrated, Intelligent Controls

Helix™ is a controls platform developed in house by a team of dedicated controls engineers. Helix represents the bonding of hardware, software and innovation provided as standard within every Airedale product, combining the most appropriate hardware and software to provide efficient and effective control.

These software features deliver optimized efficiency, self-diagnostics of faults and compliance with standards and directives; including Ecodesign. Accurate, efficient and safe, Helix is tested and qualified in Airedale's state-of-the-art research and development laboratory.



Cooling System Optimizer



Optimizing cooling equipment is a key component for managing the factors that contribute towards the efficiency and sustainability of a data center.

Airedale is both a software / controls and cooling systems provider, and as such we have unique insights that put us in the best possible position to optimize chilled water systems.

Complex variable flow systems require precise control on several levels. Adding intelligence can transform them into dynamic systems that can adapt and balance themselves, flexing and modulating air and water flow to required loads across the system.



Scan the QR code to find out more about how the Cooling System Optimizer works.

We care for the future

Airedale invests significantly in research and development. Energy efficiency is one of three core pillars that make up our R&D ethos, along with the environment and the deployment of leading-edge technology.



Low GWP refrigerant

Much of our R&D resource is focused on ensuring our solutions are compatible with lower GWP (Global Warming Potential) refrigerants.



Low water usage

Airedale has developed an innovative approach to data center cooling called Water Side Optimization. This delivers increased free cooling potential for best-in-class PUEs, without the use of adiabatic treatments.



Energy efficient solutions

We recognize that providing our customers with energy efficient solutions is a critical sustainable development opportunity for us all.



Controls

Coupling a free cooling HVAC solution with a comprehensive controls platform allows the system to automatically deploy optimized operating settings, maximizing free cooling and reducing energy costs.



Free cooling (water side economization and pump refrigerant economization)

The process of using external ambient temperature to reject heat, rather than using the refrigeration process, can provide significant energy savings when used on an optimized system.

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