Airedale
APPLIED THERMAL INNOVATION



SmartCool™

16 - 140kW

+ Up to 46% more cooling kW/m²
+ EER up to 34% more efficient*

* Compared with our previous generation precision air conditioning units

HFC R410A — HFC R410A
AIR DX — AIR COOLED
WATER DX — WATER COOLED
DOWNFLOW
SCROLL COMPRESSOR
DUAL COOL — DUAL COOL
FREE COOL — FREE-COOLING
EC FAN

www.airedale.com

BRITISH MANUFACTURER | ENERGY EFFICIENCY | CONTROLS | SERVICE | TRAINING

Precision air conditioning

Taking efficiency even further

The SmartCool™ is a next generation, highly efficient, indoor packaged unit providing extremely precise, reliable climate control.

Applied cutting edge technology enables the SmartCool™ to quietly and precisely control room temperature, humidity and air quality to ensure efficient, reliable, 24/7 operation of sensitive systems in data centres and other critical applications.

Optimise your unit selection

The SmartCool™ gives you the flexibility to optimise unit selection to match the considerations of your specific project – whether a new or retrofit application or driven by cost, efficiency, space, noise, resilience and/or ambient conditions.

Choose from 100 downflow models available in:

- 8 system types
- 8 case sizes
- Single or dual circuit featuring:
  - DX air cooled (16 - 140kW)
  - DX air cooled with chilled water (60 - 127kW)
  - DX water cooled (60 - 127kW)
  - DX water cooled with glycol free-cooling (60 - 127kW)

16 - 140kW DX range

EER up to 34% more efficient*

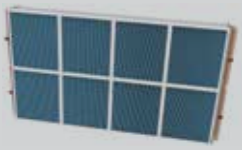
Enhanced by tandem compressors; EC motors; electronic expansion valves and the latest EC plug fan technology

*compared with our previous generation precision air conditioning units

Tandem compressors

Staged cooling

Fixed speed tandem compressors offer four stages of cooling across four system configurations



Large surface area filters

Increased system efficiency

Reduced waterside pressure drops and improved airflow resulting in increased performance and reduced fan power usage

EC backward curved fans with composite impellers

Up to 70% more efficient

Particularly at part load between 30% and 100%; EC fans respond seamlessly to load fluctuations

Variable humidification

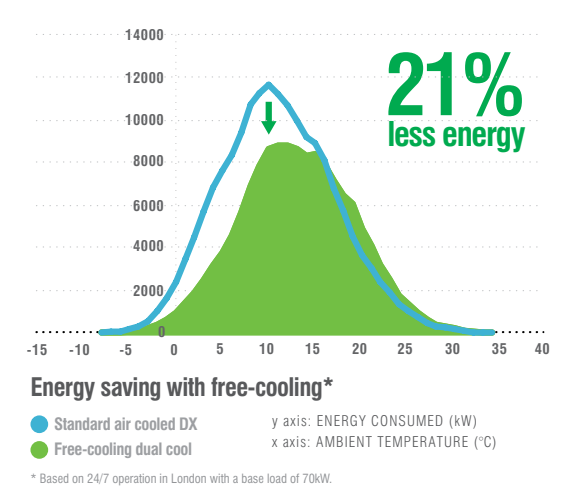
Up to 80% less power

Efficient de-humidification uses less mechanical cooling and minimum re-heat whilst maintaining precise de-humidification control

Efficient slab coil design incorporating dual cool

2N redundancy and free-cooling variant

Two independent cooling mediums in the same case, with automatic changeover and duty share (option on 60 – 127kW models)



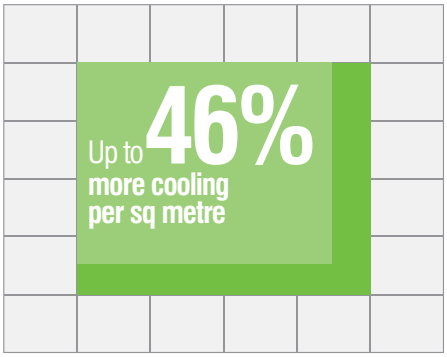
Free-cooling, dual cool SmartCool™

Saving up to £3,600/year more compared with our previous generation precision air conditioning units (£0.10/kWhr)

The SmartCool™ makes use of the ambient air for cooling whenever the outdoor temperature is lower than the room. High room temperatures and the large surface area coils of the SmartCool™ increase the opportunity for free-cooling.

Saving energy and carbon, reducing operating costs

Designed for maximum efficiency, SmartCool™ precision air conditioning pays for itself by reducing operating costs and carbon footprint. Whether the data centre is new and under-populated or density and heat loads are increasing, the SmartCool™ intelligently takes control, switching to the best operating mode and minimising energy consumption whilst maintaining a stable environment.



Less space claim

SmartCool™16 – 60kW DX models typically offer up to 46%* more cooling kW/m²

* than our previous generation precision air conditioning systems

Precise conditioning - true capacity and humidity match

* Based on a total load of 80kW with a variable load of up to 40kW, savings per annum would be £2,135.51(11% less energy consumed)

Unlike many competitor units, the SmartCool™ offers four stage cooling resulting in increased energy saving benefits when variable load is increased.

Staged DX cooling

The SmartCool™ offers four stages of cooling across four system configurations via fixed speed tandem compressors.

Staged cooling continually utilises the maximum coil area within the space enabling capacity to more precisely match the application, reducing power input.

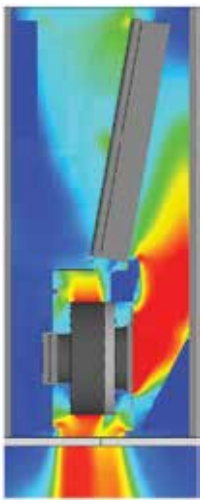
Balancing room temperature and humidity

The balance between temperature and relative humidity is intrinsically linked. By precisely controlling temperature, the SmartCool™ accurately controls humidity. Its control-led, advanced components work in harmony, simultaneously balancing temperature, humidity and air flow to precisely match the load.

Optimised air flow

And pressure management

The SmartCool™ delivers cold air through floor-mounted grilles directly to the front of the server racks. By presenting the right amount of air flow, at the correct temperature to the server inlet, the SmartCool™ ensures optimum air flow management and eliminates hot spots. Further, water side pressure drops are reduced, and unit efficiency is increased, thanks to a new slab coil design.



Smartcool™ D16 - 140kW DX models

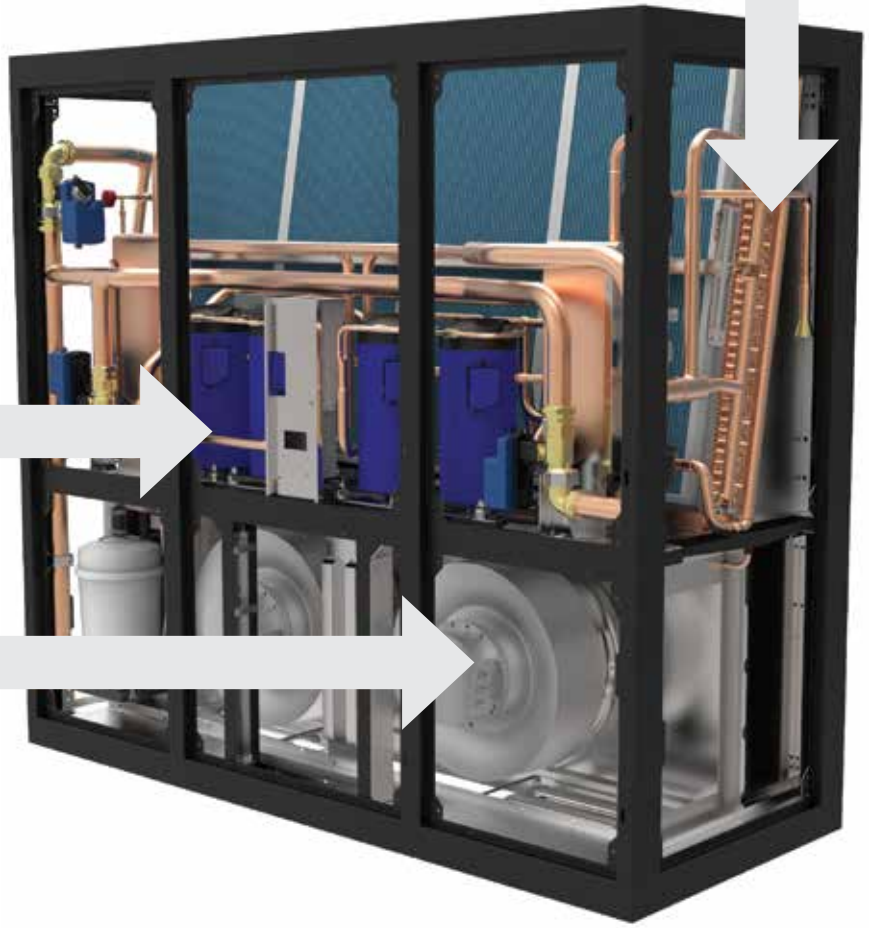
CFD analysis showing improved air flow path

Typically a 50% drop in air volume results in an 83% reduction in fan power input.

Reduced waterside pressure drops

Increases overall system efficiency. With plate condensers and free-cooling coils configured in parallel on the waterside, total unit pressure drop is reduced and efficiency is increased.

A bypass leg integral to the unit with its own control valve ensures that the unit pressure drop can be regulated at all times whether it is operating in free-cooling mode, concurrent cooling or full DX. Controlling to a fixed pressure drop ensures the system flow rate remains constant.



Large surface area filters

Improve air flow resulting in increased performance and reduced fan power usage.

Constant air volume control (option)

Controls air flow through the unit: EC fans speed up to prevent system performance dropping off due to resistance such as dirty filters or ductwork extensions.

Smart accessories

For a wide range of applications

Smart Ambient Cooling Kit

AIR DX

Smart Ambient Cooling Kits are the perfect solution for units which will be operating under extreme conditions. Although our standard units are suitable down to -20˚C our Smart Ambient Kits ensure systems can maintain the same level of precise temperature and humidity control across a wide range of outdoor ambient temperatures.

Our Smart Ambient Cooling Kits:

- Prevent loss of cooling to the application
- Ensure continued operation and system protection
- Provide a robust and safe solution
- Optimise efficiency during low ambient temperature operation
- Increase system reliability
- Protect against the risk of flooded starts

SPECIFICATIONS

Low Ambient Kit
(for temperatures down to -32˚C)

- AC fans supported only
- Shut-off valves
- Ultracapacitor
- Low ambient compatible isolator

Extra Low Ambient Kit
(for temperatures down to -40˚C)

- Liquid receiver (pressure relief valve and changeover device for pressure relief valve maintenance)
- Non-return valve
- Head pressure control valve
- New control strategy for extra low ambient conditions

Smart Hydronics Kit

WATER DX FREE COOL

The Smart Hydronics Kit is an all in one pump package, specifically designed to provide the required flow to all SmartCool units, for the full range of water temperatures and ambient temperatures.

Cost-effective and compact, the Smart Hydronics Kit can operate effectively across a wide range of applications with the many options available. Options include a pressurisation unit, expansion vessel and glycol dosing pot.

SPECIFICATIONS

- 10 different pumps
- Available in run/standby or standalone configuration
- Available in fixed speed or variable configuration
- IE3 motors as standard
- Suitable for both indoor or outdoor application
- BMS compatibility
- Low glycol concentration alarm
- Flanged, threaded, grooved or brazed connections available
- Propylene and Ethylene glycol compatible
- Available in 2 case sizes: HY11 (794mm x 1247mm x 1110mm), HY15 (794mm x 1247mm x 1490mm)
- Both case sizes fit through a standard door or into a lift
- Option for 2n redundancy
- Fully removable panels - easy access for maintenance
- Independently maintainable strainers

Intelligent controls

Seamlessly managing your system

CONTROLS

The control centre of each of our cooling systems is a sophisticated electronic microprocessor with control logic specially developed by Airedale.

The microprocessor uses sensors to send and receive messages to and from active components such as compressors, fans and pumps so they interact with each other, balancing cooling duty, temperature, air flow and pressure to exactly match the application.

By integrating intelligent components, the controller manages and optimises the system's performance and reduces power draw.

Smart networking solutions:

Fully-programmable via the control panel's user-friendly display, the microprocessor can be linked with all standard BMS protocols to:

- **Trigger alarm messages**
- **Send alarm/service messages via email or SMS using an interface**
- **Operate time scheduling**
- **Allow adjustment of temperature setpoints**

Future-proof, flexible, 24/7

As an intelligent stand-alone unit or when networked with up to eight units, the SmartCool™ adapts to your data centre's particular requirements. Its compact, modular design makes it easy for multiple units of different size and capacity to be added as load increases or to eliminate hot spots. Smartly networked standby units ensure 24/7 availability.

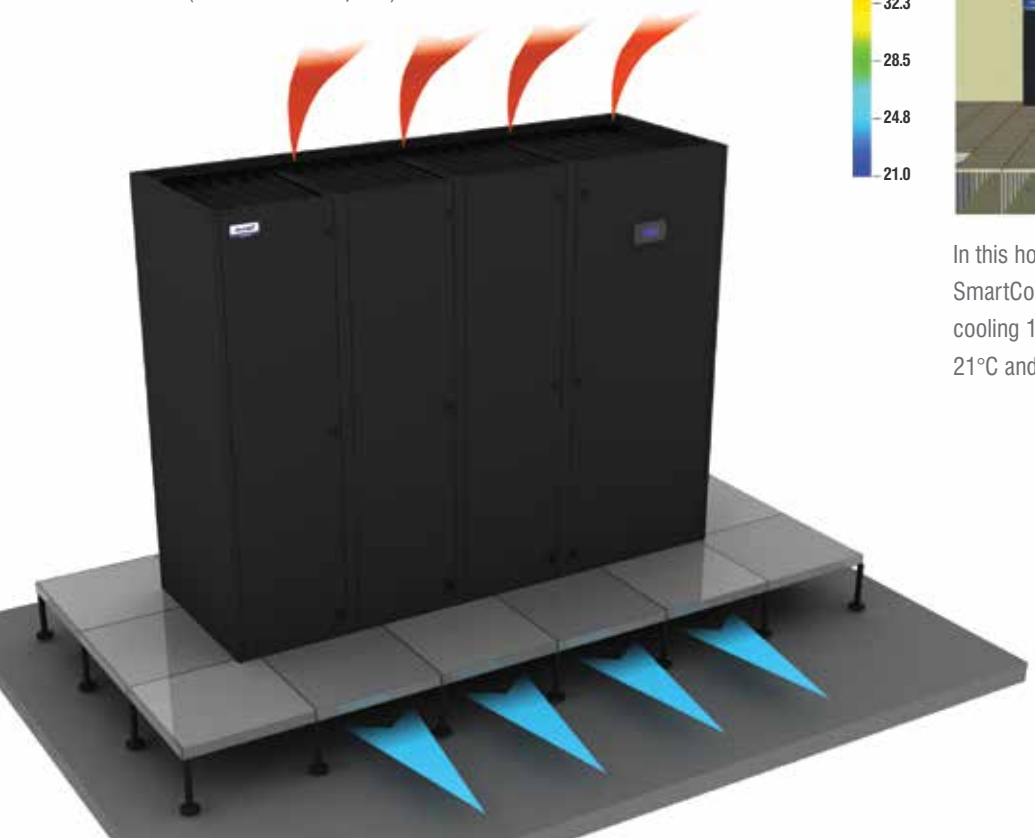
Integration protocols

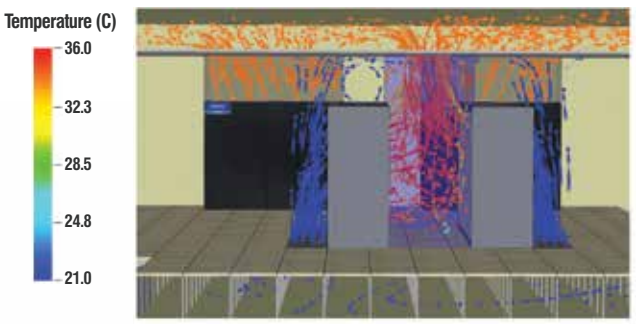
Modbus® BACnet™ SNMP ECHELON The LonWorks Company

30% increase in cooling duty

Typically where the return temperature increases from 24°C to 35°C, the same SmartCool™ unit will increase its cooling duty from 60 to 80kW.

Latest touch screen technology allows the display to be viewed in full colour and in graphical format (available as an option)





In this hot aisle containment system, three SmartCool™ units, configured as 2 run/1 standby, are cooling 10 x 20kW racks; cold aisle temperature is at 21°C and the hot aisle 36°C

Ideal for low / medium density areas

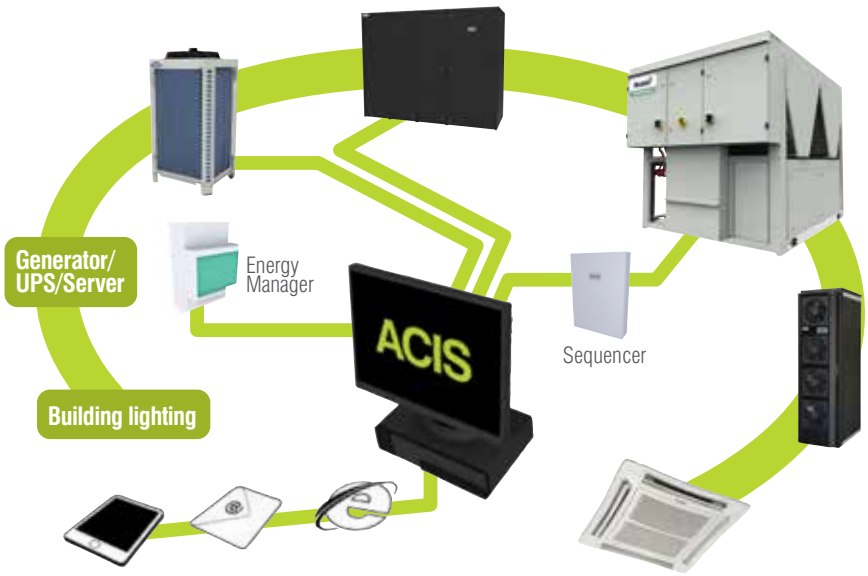
When integrated with hot aisle containment, the performance and efficiency of the SmartCool™ is significantly enhanced and its duty increases in the higher return temperatures.

Building management

Taken to another level

ACIS™ building management system developed by Airedale, enables you to manage smart cooling and other building services, from any manufacturer, in a single, integrated system across multiple sites and communication protocols. ACIS™ sits at the front end of a building system, putting you in control of reducing operating costs.

With the click of a button on a PC, tablet or phone, valuable and intelligent information can be pulled back automatically for remote 24/7 monitoring and maintenance; enhanced system operation and improved decisions.



ACIS

FREE COOL

FREE-COOLING

Integration with a free-cooling chiller

Chilled water models of the SmartCool™ provide even greater efficiency when integrated with one or more Airedale free-cooling chillers which offer concurrent free-cooling - enabling free-cooling to be captured whenever the ambient is below the return water temperature.

When the SmartCool™ unit is in a 24/7 data centre with a typical room temperature of 24°C, the chiller can spend up to 95% of the year with free-cooling active

Cumulative hours, London, UK

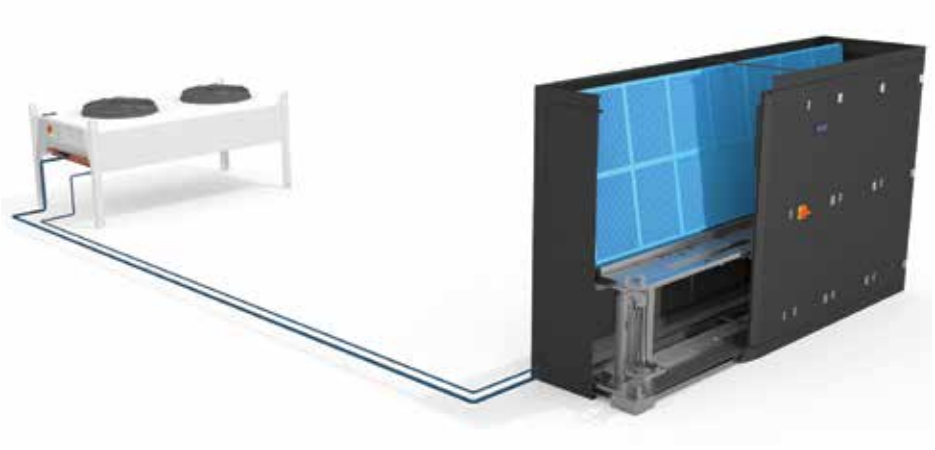
Flexible systems

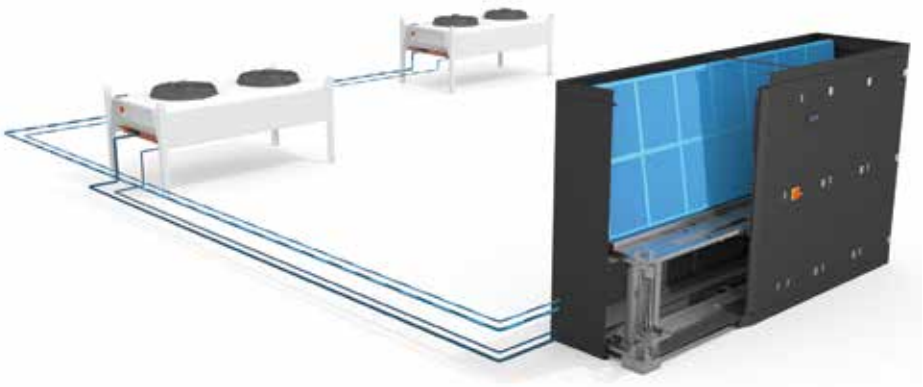
To fit your specific operation

Single circuit

DX Air Cooled (X100, X200)

The SmartCool™ X100/X200 is an air cooled, direct expansion (DX), single circuit system linked to a separate, remotely mounted air cooled condenser. Optimised for heat transfer using energy efficient refrigerant R410A in each circuit, the SmartCool™ system is located within the conditioned space, absorbing room heat and transferring it outside to the condenser. By using tandem fixed scroll compressors across the circuit, capacity can be more precisely matched to application.





Dual circuit

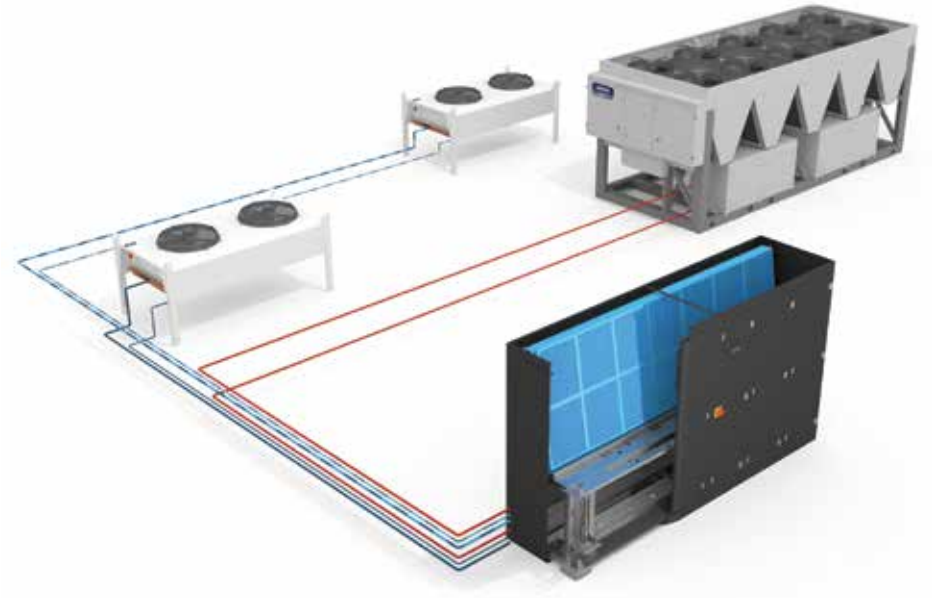
DX air cooled (2X20, X1X1)

An air cooled, R410A double circuit system, the SmartCool™ 2X20/X1X1 is linked to two separate, remotely mounted air cooled condensers. The 2X2O/X1X1 system is located within the conditioned space, absorbing room heat and transferring it outside to the condensers. By using tandem fixed scroll compressors across the circuit, capacity can be more precisely matched to application.

Dual cool

DX air cooled and chilled water (2X2C)

For redundancy in critical applications, the SmartCool™ dual cool 2X2C offers two different cooling mediums, air cooled DX and chilled water, within the same case. The 2X2C system is managed by the AireTronix microprocessor to select which medium acts as the primary source of cooling or which acts as back-up, should the primary source fail or is unable to cope with the heat load.

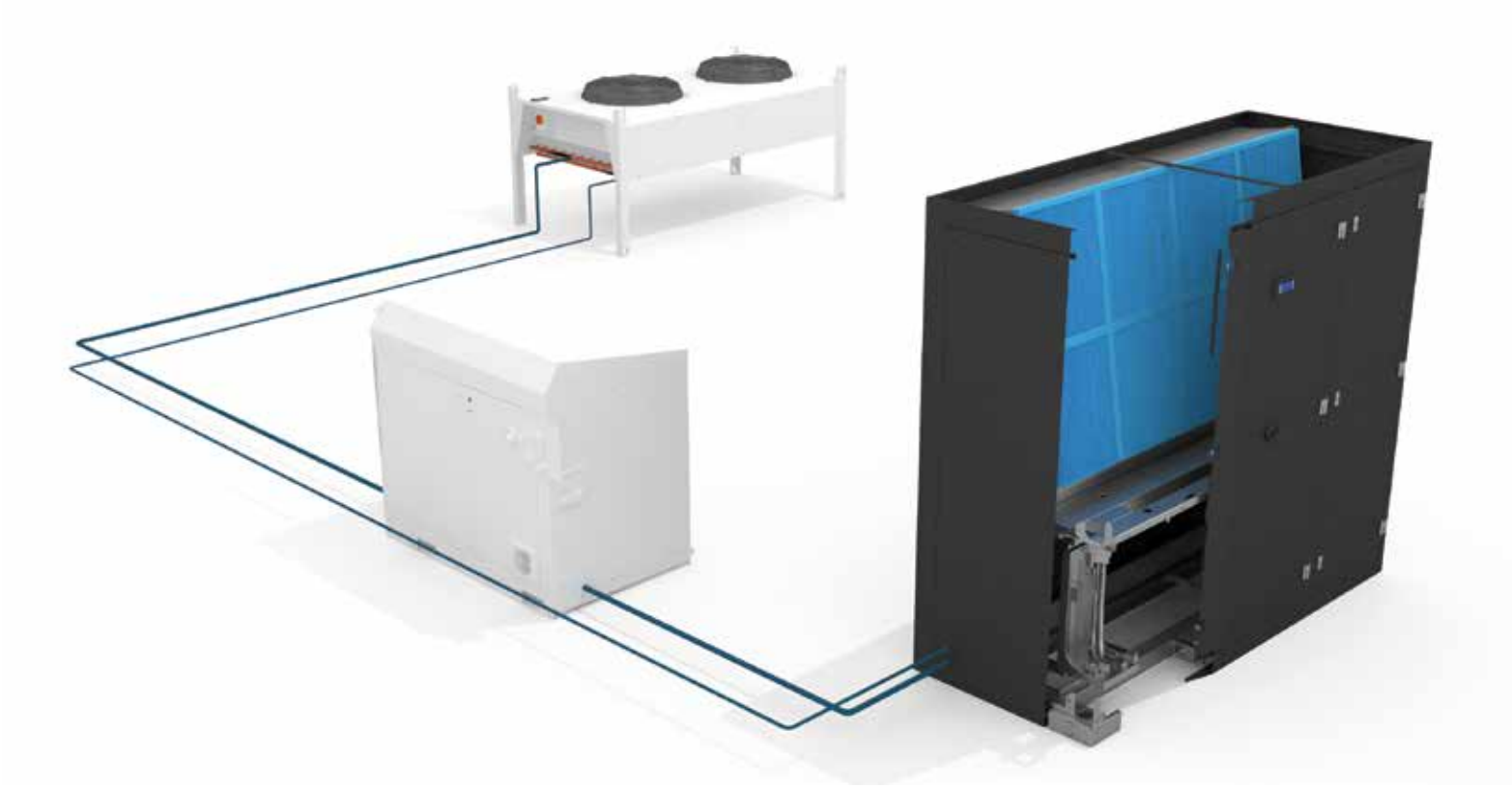


Dual circuit

DX water cooled (2W20)

Suitable for applications favouring reduced refrigerant charges, the SmartCool™ 2W20 is a double circuit system featuring DX cooling within the case and dry coolers outside. Warm room air is passed through an interlaced evaporator coil and an integral plate condenser transfers the heat load to the glycol solution which is then channelled outside to either one or two air cooled dry coolers (capacity dependant).

This system is optionally offered with a Smart Hydronics Kit matched to the piping system.



Dual circuit

DX water cooled with glycol free-cooling (2W2F)

The 2W2F system includes a free-cooling coil in conjunction with the evaporator. In low ambient conditions, particularly in relation to the high temperatures and continuous system operation of a server environment, the 2W2F system will run with minimum energy. At times of higher ambient, sophisticated AireTronix controls technology will modulate the 2-way water regulating valves to transition from free-cooling back to mechanical cooling. Typically the SmartCool™ 2W2F dual circuit free-cooling system uses 21%* less energy than a standard air cooled DX system.

This system is optionally offered with a Smart Hydronics Kit matched to the piping system.

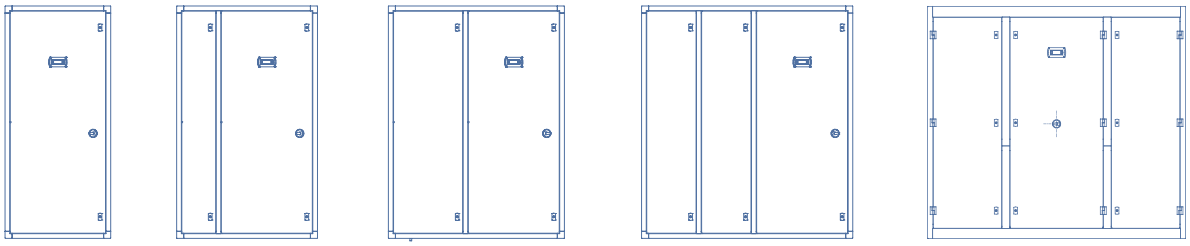
* Based on Met Office average ambient figures for London, UK at 24ºC/45%RH

Specifications at a glance

SmartCool™: Optimising the key drivers in efficient building operation

- Fixed speed tandem scroll compressor DX cooling across single and dual circuits offer 4 stages of cooling.
- Minimum space claim
- Compliant scroll compressors for increased reliability and extended operating envelope
- Fans and all main components accessible from front for easy access / maintenance
- Preconfigured, packaged units with optional, colour touch screen microprocessor display for seamless fine-tuning
- Fits through a standard door
- Robust welded case construction

DX



SC09 SC12 SC15 SC18 SC22

Environment

- Free-cooling dual cool variant uses 21% less energy
- Designed and optimised for R410A which requires only a minimum refrigerant charge and high heat transfer coefficient
- Compliant scroll compressors for increased reliability and extended operating envelope (up to +36°C - model dependant)
- Direct drive, speed controllable, EC backward curved fans (indoor) and axial fans (outdoor) for low sound and power input

Optional

- Refrigerant leak detection for F Gas compliance
- Night-time set-back limits sound emissions in noise sensitive applications by reducing condenser fan speed at pre-set hours

Electrical & Controls

- Advanced AireTronix controls technology managing and optimising the system's performance
- Grundfos flow sensor (DX water cooled and DX water cooled with glycol free-cooling)

Optional

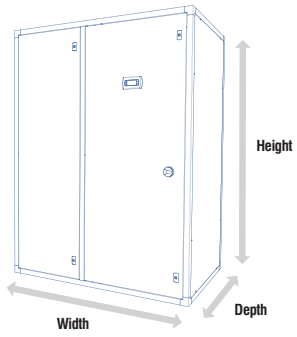
- ACIS™ building management integrates cooling and other building services, improves data and reduces operating costs
- Dual power supply for redundancy and flexibility
- Electrical supply phase rotation protection
- Electronic soft start for minimal full load current (DX models)
- Power monitoring to manage energy consumption
- Ultracap UPS option to backup power to the controller in the event of a power failure
- Drip tray level sensor

Energy-saving

- EC backward curved fans with composite impellers for up to 70% more efficiency; improving air distribution and air management
- Up to 17% more cooling/m^2
- Intelligent, variable head pressure control for increased efficiency (adjustable from display)
- Electronic expansion valves for 30% increase in efficiency
- High efficiency G4 (EU4) rated, pleated disposable filters give superior high performance with lower airside pressure drops

Optional

- Energy Manager for local and remote energy analysis and monitoring



Case size	Height (mm)	Width (mm)	Depth (mm)
1	1980	900	890
2	1980	1200	890
3	1980	1500	890
4	1980	1800	890
5	1980	2200	890
6	1980	2500	890
7	1980	3100	890
8	1980	3500	890

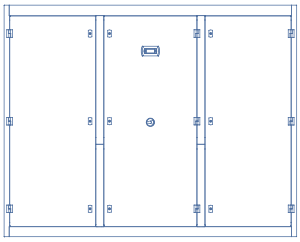
Nomenclature explained

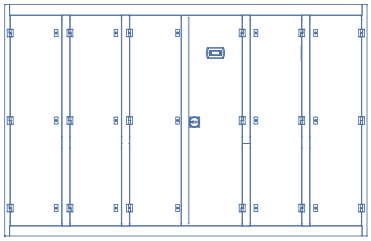
DX Air Cooled Example - SC22D074-2X20-0	SC	22	D	074	-	2	X	2	0	-	0
Dual Cool Example - SC25D092-2X2C-0	SC	25	D	092	-	2	X	2	C	-	0
Water Cooled Example - SC31D108-2W20-0	SC	31	D	108	-	2	W	2	0	-	0
Free Cool Example - SC35D127-2W2F-0	SC	35	D	127	-	2	W	2	F	-	0

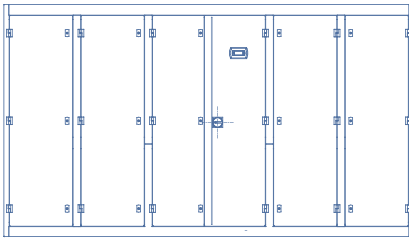
SC	SmartCool
22 - 35	Decimetre Case Width (dm)
D	Downflow
050 - 140	Nominal capacity (kW)
2	Dual DX Circuit
X W	Air Cooled - Compressor Indoor Water Cooled
2	Two Compressors / Circuit
0 C F	No CW Coil Chilled Water Free Cool
0	400/230V 3PH/1PH 50Hz

The nominal cooling capacity is based upon gross total cooling capacity at 24°C / 45%RH return air conditions, 45°C condensing temperature (DX) and 7 / 12°C supply and return water temperatures (CW)

DX or Dual Cool


SC25


SC31


SC35

Mechanical

- 100 models: DX air cooled (16-140kW); DX air cooled with chilled water (60-127kW), DX water cooled (60-127kW), DX water cooled with glycol free-cooling (60-127kW)
- Single circuit DX, Dual circuit DX/DX, Dual cool DX/Free-cooling, DX/CW
- Downflow configuration
- Dual cool with automatic change-over and duty share, for built-in 2N redundancy and flexibility (60 -127kW)
- Slab coil with hydrophilic coated fins; offers two circuits configured to reduce down time (model dependent)
- Large surface area filters for lower airside pressure drop
- Sight glass and filter drier for system reliability
- Front access to all major components for quick and easy service and maintenance
- Lift off door hinges
- 360° unit access via fully detachable panels as well as all service connections located at one end of the unit facilitates installation and maintenance
- Robust welded case construction

Optional:

- Dual purpose condensate pump for humidifier and condensate drains

Precision

- Fixed speed tandem scroll compressor DX cooling across single and dual circuits offer 4 stages of cooling
- 'Draw through' configuration for maximum heat exchanger efficiency (16 – 140kW)

Optional:

- Constant air volume control whereby fans speed changes if faced with system resistance
- Variable air flow in response to changes in room demand (dependent on application)
- High efficiency de-humidification uses less mechanical cooling
- Staged electric heating during de-humidification to ensure thermal balance
- Thyristor-controlled electric heating for precise control

SmartCool™ technical specifications:

Case size (mm)	Model no.	Nominal cooling (kW) TC	Nominal cooling (kW) SC	EER	No. of fans	Air volume m^3/s	Sound pressure @ 3m (dBA)*
	Single circuit						
H x W x D	**X100 - DX air cooled**						
1. 1980(H) x 900(W) x 890(L)	SC09D016-X100-0	17.4	17.3	3.73	1	1.6	64
	SC09D019-X100-0	19.9	19.8	3.50	1	1.8	66
	SC09D023-X100-0	23.5	23.4	3.41	1	1.9	67
	SC09D026-X100-0	26.2	25.1	3.38	1	1.9	67
	X200 - DX air cooled						
2. 1980(H) x 1200(W) x 890(L)	SC12D020-X200-0	22.4	22.3	3.70	1	1.7	59
	SC12D023-X200-0	27.9	27.7	3.56	1	2.1	62
	SC12D029-X200-0	31.3	30.7	3.38	1	2.3	67
	SC12D033-X200-0	36.0	34.1	3.29	1	2.5	68
	SC12D036-X200-0	40.3	36.2	3.26	1	2.5	69
3. 1980(H) x 1500(W) x 890(L)	SC15D027-X200-0	29.5	29.3	3.82	2	2.4	61
	SC15D030-X200-0	33.5	33.3	3.65	2	2.8	69
	SC15D035-X200-0	38.8	38.6	3.41	2	3.3	69
	SC15D040-X200-0	42.9	42.6	3.34	2	3.3	70
	SC15D044-X200-0	45.6	44.2	3.35	2	3.3	70
4. 1980(H) x 1800(W) x 890(L)	SC18D037-X200-0	39.2	39.0	3.59	2	3.3	71
	SC18D040-X200-0	44.4	44.1	3.47	2	3.6	72
	SC18D044-X200-0	48.2	47.9	3.41	2	4.0	74
	X1X1 - DX air cooled						
4. 1980(H) x 1800(W) x 890(L)	SC18D048-X1X1-0	53.7	53.4	3.34	2	4.1	75
	SC18D055-X1X1-0	60.8	56.5	3.36	2	4.1	75
	2X20 - DX air cooled						
5. 1980(H) x 2200(W) x 890(L)	SC22D050-2X20-0	51.0	51.0	3.80	2	4.7	61
	SC22D059-2X20-0	61.9	61.9	3.69	2	5.1	62
	SC22D064-2X20-0	68.7	68.7	3.52	2	5.4	66
	SC22D074-2X20-0	76.9	76.9	3.36	2	5.6	71
6. 1980(H) x 2500(W) x 890(L)	SC25D062-2X20-0	63.9	63.9	3.84	3	5.7	60
	SC25D068-2X20-0	71.0	71.0	3.70	3	5.9	63
	SC25D075-2X20-0	79.7	79.7	3.51	3	6.2	63
	SC25D085-2X20-0	88.8	88.8	3.39	3	6.4	64
	SC25D092-2X20-0	94.8	90.9	3.36	3	6.7	64
7. 1980(H) x 3100(W) x 890(L)	SC31D069-2X20-0	74.1	74.1	3.82	3	6.9	64
	SC31D079-2X20-0	83.7	83.7	3.61	3	7.2	64
	SC31D089-2X20-0	93.6	93.6	3.49	3	7.5	65
	SC31D094-2X20-0	100.0	100.0	3.48	3	7.8	67
	SC31D108-2X20-0	111.8	111.8	3.39	3	8.1	71
	SC31D124-2X20-0	125.7	117.3	3.40	3	8.1	71
8. 1980(H) x 3500(W) x 890(L)	SC35D079-2X20-0	85.8	85.8	3.73	4	7.9	63
	SC35D091-2X20-0	96.3	96.3	3.60	4	8.2	64
	SC35D098-2X20-0	103.0	103.0	3.60	4	8.6	65
	SC35D111-2X20-0	115.6	115.6	3.48	4	9.0	66
	SC35D127-2X20-0	130.5	130.5	3.46	4	9.3	66
	SC35D140-2X20-0	143.2	136.7	3.32	4	9.6	68
	2W20 - DX water cooled						
5. 1980(H) x 2200(W) x 890(L)	SC22D050-2W20-0	51.0	51.0	3.80	2	4.7	61
	SC22D059-2W20-0	61.9	61.9	3.69	2	5.1	62
	SC22D064-2W20-0	68.7	68.7	3.52	2	5.4	66
	SC22D074-2W20-0	76.9	76.9	3.36	2	5.6	71
6. 1980(H) x 2500(W) x 890(L)	SC25D062-2W20-0	63.9	63.9	3.84	3	5.7	60
	SC25D068-2W20-0	71.0	71.0	3.70	3	5.9	63
	SC25D075-2W20-0	79.7	79.7	3.51	3	6.2	63
	SC25D085-2W20-0	88.8	88.8	3.39	3	6.4	64
	SC25D092-2W20-0	94.8	90.9	3.36	3	6.7	64
7. 1980(H) x 3100(W) x 890(L)	SC31D069-2W20-0	74.1	74.1	3.82	3	6.9	64
	SC31D079-2W20-0	83.7	83.7	3.61	3	7.2	64
	SC31D089-2W20-0	93.6	93.6	3.49	3	7.5	65
	SC31D094-2W20-0	100.0	100.0	3.48	3	7.8	67
	SC31D108-2W20-0	111.8	111.8	3.39	3	8.1	71
	SC31D124-2W20-0	125.7	117.3	3.40	3	8.1	71
8. 1980(H) x 3500(W) x 890(L)	SC35D079-2W20-0	85.8	85.8	3.73	4	7.9	63
	SC35D091-2W20-0	96.3	96.3	3.60	4	8.2	64
	SC35D098-2W20-0	103.0	103.0	3.60	4	8.6	65
	SC35D111-2W20-0	115.6	115.6	3.48	4	9.0	66
	SC35D127-2W20-0	130.5	130.5	3.46	4	9.3	66

DX data is based on nominal cooling at 24°C/45%RH 45°C condensing temperatures

TC = Total Cooling
SC = Sensible Cooling
EER = Energy Effi ciency Ratio based on TOTAL input power of compressors and fans
Performance data calculated in accordance with BSEN 14511-2011 and Eurovent 6/6

SmartCool™ technical specifications continued:

Case size (mm)	Model no.	DX cooling (kW) TC	DX cooling (kW) SC	EER	TC Secondary Cooling (kW)	SC Secondary Cooling (kW)	EER	No. of fans	Air volume m^3/s	Sound pressure @ 3m (dBA)*
	Dual cool									
H x W x D	2X2C - DX air cooled / chilled water									
5. 1980(H) x 2200(W) x 890(L)	SC22D050-2X2C-0	51.0	51.0	3.80	68.7	59.2	22.71	2	4.7	61
	SC22D059-2X2C-0	61.9	61.9	3.69	72.7	63.6	18.96	2	5.1	62
	SC22D064-2X2C-0	68.7	68.7	3.52	75.6	67.0	16.56	2	5.4	66
	SC22D074-2X2C-0	76.9	76.9	3.36	77.3	71.5	15.47	2	5.6	71
6. 1980(H) x 2500(W) x 890(L)	SC25D062-2X2C-0	63.9	63.9	3.84	80.8	71.4	20.61	3	5.7	60
	SC25D068-2X2C-0	71.0	71.0	3.70	83.2	74.3	18.60	3	5.9	63
	SC25D075-2X2C-0	79.7	79.7	3.51	86.2	79.8	17.01	3	6.2	63
	SC25D085-2X2C-0	88.8	88.8	3.39	86.9	80.4	15.11	3	6.4	64
	SC25D092-2X2C-0	94.8	90.9	3.36	87.0	80.5	13.38	3	6.7	64
7. 1980(H) x 3100(W) x 890(L)	SC31D069-2X2C-0	74.1	74.1	3.82	100.6	86.4	21.68	3	6.9	64
	SC31D079-2X2C-0	83.7	83.7	3.61	103.9	90.1	19.54	3	7.2	64
	SC31D089-2X2C-0	93.6	93.6	3.49	107.0	93.6	17.69	3	7.5	65
	SC31D094-2X2C-0	100.0	100.0	3.48	109.8	96.9	16.14	3	7.8	67
	SC31D108-2X2C-0	111.8	111.8	3.39	112.8	104.4	14.74	3	8.1	71
	SC31D124-2X2C-0	125.7	117.3	3.40	112.8	104.4	14.74	3	8.1	71
8. 1980(H) x 3500(W) x 890(L)	SC35D079-2X2C-0	85.8	85.8	3.73	115.2	98.4	21.87	4	7.9	63
	SC35D091-2X2C-0	96.3	96.3	3.60	118.9	102.6	19.70	4	8.2	64
	SC35D098-2X2C-0	103.0	103.0	3.60	122.5	106.7	17.77	4	8.6	65
	SC35D111-2X2C-0	115.6	115.6	3.48	126.7	111.5	15.73	4	9.0	66
	SC35D127-2X2C-0	130.5	130.5	3.46	129.5	119.9	14.47	4	9.3	66
	2W2F - DX water cooled / free cooling									
5. 1980(H) x 2200(W) x 890(L)	SC22D050-2W2F-0	51.0	51.0	3.80	68.7	59.2	22.71	2	4.7	61
	SC22D059-2W2F-0	61.9	61.9	3.69	72.7	63.6	18.96	2	5.1	62
	SC22D064-2W2F-0	68.7	68.7	3.52	75.6	67.0	16.56	2	5.4	66
	SC22D074-2W2F-0	76.9	76.9	3.36	77.3	71.5	15.47	2	5.6	71
6. 1980(H) x 2500(W) x 890(L)	SC25D062-2W2F-0	63.9	63.9	3.84	80.8	71.4	20.61	3	5.7	60
	SC25D068-2W2F-0	71.0	71.0	3.70	83.2	74.3	18.60	3	5.9	63
	SC25D075-2W2F-0	79.7	79.7	3.51	86.2	79.8	17.01	3	6.2	63
	SC25D085-2W2F-0	88.8	88.8	3.39	86.9	80.4	15.11	3	6.4	64
	SC25D092-2W2F-0	94.8	90.9	3.36	87.0	80.5	13.38	3	6.7	64
7. 1980(H) x 3100(W) x 890(L)	SC31D069-2W2F-0	74.1	74.1	3.82	100.6	86.4	21.68	3	6.9	64
	SC31D079-2W2F-0	83.7	83.7	3.61	103.9	90.1	19.54	3	7.2	64
	SC31D089-2W2F-0	93.6	93.6	3.49	107.0	93.6	17.69	3	7.5	65
	SC31D094-2W2F-0	100.0	100.0	3.48	109.8	96.9	16.14	3	7.8	67
	SC31D108-2W2F-0	111.8	111.8	3.39	112.8	104.4	14.74	3	8.1	71
	SC31D124-2W2F-0	125.7	117.3	3.40	112.8	104.4	14.74	3	8.1	71
8. 1980(H) x 3500(W) x 890(L)	SC35D079-2W2F-0	85.8	85.8	3.73	115.2	98.4	21.87	4	7.9	63
	SC35D091-2W2F-0	96.3	96.3	3.60	118.9	102.6	19.70	4	8.2	64
	SC35D098-2W2F-0	103.0	103.0	3.60	122.5	106.7	17.77	4	8.6	65
	SC35D111-2W2F-0	115.6	115.6	3.48	126.7	111.5	15.73	4	9.0	66
	SC35D127-2W2F-0	130.5	130.5	3.46	129.5	119.9	14.47	4	9.3	66

CW / Free-cool data is based on nominal cooling at 24°C / 45%RH and 7 / 12°C water inlet / outlet temperature 0% glycol

TC = Total Cooling
SC = Sensible Cooling
EER = Energy Effi ciency Ratio based on TOTAL input power of compressors and fans
Performance data calculated in accordance with BSEN 14511-2011 and Eurovent 6/6

Performance tested

And proven

Quality is assured by our on-site, world-class testing facilities that set the standard as one of the most advanced testing centres of its kind within the global air conditioning industry.

This facility is integral to our development process and ensures our team of designers and engineers conducts a rigorous test program to produce and improve each of our manufactured units.

Designed and built to exceed stringent international standards, our test centre is capable of testing a complete range of air conditioning equipment including precision air conditioning to 250kW and chillers up to 2MW.

We apply a consistent design philosophy which combines innovative sustainability with premium performance and efficiency across each range. Our state-of-the-art, on-site R&D laboratory is BS EN 14511 and BS EN 13053 compliant and allows us to test units for every application.

Our air conditioning units consistently offer some of the industry's leading proven environmental and cost performance figures, combined with the highest quality, reliability and service.

"A factor influencing selection of Airedale was its transparency and facility to witness test. We prefer working with a UK manufacturer who is carrying out product development work and can give us support and reassurance throughout."

Steve Vandyke
Head of Technical Services
National Gallery

"We are targeting a PUE of 1.3 or less"

We have invested in four SmartCool™ precision air conditioning units linked with condensers, enabling us to target PUE of less than 1.3. Airedale provides us with a fully integrated cooling solution designed for maximum efficiency and critical redundancy."

Rob Garbutt
CEO, LDeX

"Delivering the right environment"

Airedale appreciates the principles of energy efficient cooling i.e. the intelligent interaction of temperature, humidity and air and water flows and pressure and the need to deliver only as much air as the servers want to draw."

John Board
Operations manager, Keysource

"Free-cooling makes sense"

Our target is to reduce building energy costs by 7% annually which we have achieved over the past two years. Airedale's free-cooling chillers are already contributing to 3% of this annual saving."

Paul Lovegrove
General Affairs Assistant Manager Epson

"Iceland Frozen Foods has realised savings of £1.5m to date"

By using an Airedale Controls solution, over 500 stores have been upgraded to date, with energy costs reduced on average by £3,000 per store p.a.. Across the whole group this equates to a saving of over £1.5m and a CO_2 reduction of 9,890 tonnes."

Graham Ireland
Building Services Manager
Iceland Frozen Foods

Total support

Whenever you need it

At Airedale, we don't just manufacture and supply cooling and refrigeration products; we also provide a broad range of supporting services to ensure our customers receive the best possible aftersales care.

With more than 40 years' experience in business critical cooling, investing in an Airedale cooling or refrigeration solution means that you can benefit from our advice, expertise and technical support too. From design and selection, through to commissioning and beyond, we make sure your system reduces your total cost of ownership, whilst providing maximum availability and longevity.

Service plans

Maximising your system's effectiveness 24/7

An Airedale service plan provides a planned, preventative maintenance package to sustain the optimum efficiency of your system, enabling the user to see real savings in energy costs and reduced carbon emissions.

With Airedale, you can rest assured that help is never far away. Our 24/7 emergency helpline and call out service is available 365 days of the year, ensuring that we are always on hand to provide expert advice and immediate help, day or night.

A guaranteed emergency response time means that a qualified Airedale engineer will be with you in no time, therefore maximising your system's uptime. Service plans also ensure F Gas compliance and incorporate a full parts and labour warranty for the first 12 months.

For more information visit **www.airedale.com**

* For customers outside the UK, our international distributors trained by Airedale would be pleased to offer service on Airedale units

Talk directly with an experienced engineer

Find out how we design our systems to reduce your whole life costs. Our highly experienced engineers are adept at tailoring our systems to suit your requirements.

+44 (0)113 239 1000

Have complete control of your site

Customers with critical sites can benefit from our remote monitoring facility. Aftersales services include chiller sequencing, network setup and integration as well as a live demonstration and training centre at our head office.

24/7 support; maintenance and spares

Immediate help on hand to keep your critical cooling system operational. Realise the full potential of your system; improve its longevity and efficiency and be F Gas compliant. Avoid downtime with our fast, efficient spares service.

Develop your skills

Learn more about your cooling system by attending an air conditioning and refrigeration course in our purpose-built training school. Train on high-tech cooling systems and fully operational rigs in our dedicated workshops. Industry recognised courses also available. Email **training@airedale.com** for further details.

Distributed by:

Airedale International Air Conditioning Limited | Leeds Road, Rawdon, Leeds LS19 6JY, England
Tel: +44 (0) 113 239 1000 **Fax:** +44 (0) 113 250 7219 **E-Mail:** enquiries@airedale.com

Airedale
APPLIED THERMAL INNOVATION

www.airedale.com

A MODINE Company