

London Data Exchange

Case study



The challenge

London Data Exchange (LDeX) provides purpose-built, enterprise-grade, network-independent, colocation space and high quality data centre solutions designed to deliver total confidence.

With extensive server rack capacity, LDeX builds, manages and maintains its own data centre facilities with total resilience built in as standard. LDeX prides itself in never having experienced a moment of downtime since it started operating. In line with LDeX's requirements, Airedale has provided an integrated, efficient, reliable and expandable cooling solution across three data halls and in the UPS room.

Airedale solution for DC3

- 4 x SmartCool™ 100kW DX dual circuit downflow PAC units providing intelligent environmental control of the data centre space
- 2 x EasiCool™ 20kW downflow PAC units providing cooling of the UPS
- 4 x pairs of CR65 condensers outside the building matched with each SmartCool™
- 2 x CR30 condenser linked with the EasiCool™
- ACIS™ building management system

“ We have invested in Airedale's latest chilled water and DX cooling technologies for the most efficient solutions, enabling us to target PUE of less than 1.3. ”

Rob Garbutt, CEO, LDeX



In more detail

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Integrated cooling solution

Airedale has designed a low energy, resilient cooling solution for the 22,000 square feet, carbon neutral data centre facility. The SmartCool™ units sit within hot aisles. To maximise the cooling potential of the SmartCool™, reduce hot spots and prevent hot return air mixing with room air, each SmartCool™ unit is supplied with a 1,150mm duct extension. This connects into a 600mm ceiling void that is supplied via return air ceiling grilles located above the hot aisles.

Exact capacity match

The SmartCool™ units provide under floor cold aisle delivery at a constant 22°C to contained cold aisles for maximum efficiency. The SmartCool™ features speed controllable fans and multiple cooling stages for exact capacity match, saving substantial amounts of energy when operating at part load. Throughout the facility, the SmartCool™ units offer n + 1 redundancy.

ACIS™ data centre monitoring

The cooling solution is fully controlled and monitored by ACIS™, Airedale's own building energy management system. ACIS™ optimises the cooling solution for maximum efficiency and calculates live PUE. Via a touch screen interface, the operator can monitor room temperature and pressure; the fresh air unit and the UPS battery life, run time and load. ACIS™ also provides alarm management and fire and water detection.

24/7 support

Airedale provides a complete managed service including an emergency helpline, professional support and call-out service, with guaranteed response times by qualified local engineers.



Benefits to LDeX:

Class A EER's

Both precision air conditioning products offer class A Energy Efficiency Ratios.

Up to 70% energy savings

Both the SmartCool™ and EasiCool™ use the latest EC fan technology offering greater control, enabling energy efficiency to be improved.

Maximum efficiency

ACIS™ enables LDeX to fully manage and optimise the whole cooling solution to ensure maximum efficiency.



“Airedale provides us with a fully integrated cooling solution”

Airedale provides us with a fully integrated cooling solution designed for maximum efficiency and critical redundancy. Continued operation of our clients' IT infrastructure and ensuring availability of their data is paramount. We offer our clients complete redundancy on all critical infrastructures to ensure we can maintain suitable temperatures in the event of equipment failure or planned maintenance. Our environmentally responsible approach and carbon neutral status helps our clients take a huge step towards their own environmental goals and carbon reduction commitments.”

Rob Garbutt, CEO, LDeX



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