CASE STUDY

Technology Sector
Precision cooling upgrade for Archive Store

DencoHappel Solutions

DencoHappel®

The Consultation

THE BUSINESS ISSUE

A well known data and records storage company, offering their services to store secure physical documents and electronic data at over 100 sites across the UK.

The company needed to refurbish the controlled cooling system one of their existing facilities by delivering conditioned air through an existing ducted area.

Why this was important?

They needed a system which allowed the main storage area to operate within stringent tolerances – with temperature maintained between 16°C and 19°C, and between 45-60% relative humidity.

These standards were important because their clients' stored data and files needed to be kept in a guaranteed secure, conditional environment; with no risk of degeneration or destruction in accordance with PD5454.

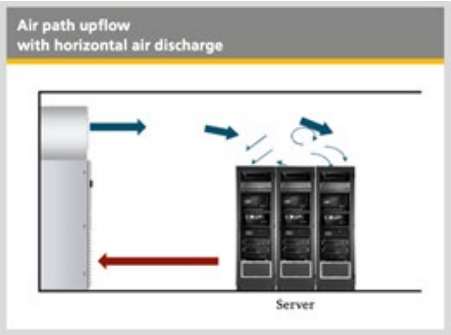
Capabilities

DencoHappel Engineers designed a cooling solution for the main storage area which used products specifically designed for data centre applications; ensuring the desired temperature and humidity tolerances would be maintained. This system would also:

- deliver conditioned air to the storage area through the existing ducting system
- ensure consistent temperature and humidity throughout the entire storage area, with no peaks and troughs

The Solution

DencoHappel products used



A ***Multi*-DENCO® DX** inverter-driven upflow air handling unit delivered close climate control, specifically designed for archive stores and other locations for which require precise climate control is critical.

The unit was situated outside the served space. The conditioned air was distributed throughout the area by a series of grilles with the return air exiting the room, at low level, through a grille at one end of the hall. The air returned to the bottom of the unit.

The ***Multi*-DENCO®** specified included an **inverter-driven full speed controllable compressor**. Using this product meant the variable cooling loads within the main storage hall could be precisely matched,avoiding any large peaks and troughs around the set points and ensuring a stable environment.

Inverter compressors typically around 15% energy when compared to a conventional compressor.

A **DencoHappel Air Cooled Condenser** was also incorporated into the system, to reject the room heat load to outside.

DencoHappel Twin Electronically Commutated (EC) fans from the ***Multi*-DENCO®** range were also specified, for indoor and outdoors usage. These were used to supply and extract air. An intelligent electronic system controls these units to ensure the required tolerances to temperature and humidity offer a comfortable working environment for office workers. Using an EC fan means that power is pulsed on and off electronically, allowing energy saving when compared to ordinary cooling units.

Outcome for the client

The main storage hall now has an even distribution of conditioned air throughout, with all tolerances and industry specifications met.

To find out more

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DencoHappel are global leaders of precision climate control

Our consulting and service teams in your area will be happy to work with you to develop solutions - with expertise and creativity.

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