FläktGroup SEMCO

AIR HANDLING SYSTEMS:
FOR DATA CENTERS

CHALLENGE: OVERHEATING

The servers in the data center will overheat, resulting in millions of dollars in downtime and/or data loss.

SOLUTION:

FläktGroup SEMCO's computer room air handling units (CRAH) keep data center equipment from crashing, by maintaining an acceptable temperature with electrocomutated (EC) fans and chilled water coils. All CRAH units are extremely reliable and require little maintenance during their lifetime, keeping servers up and running, eliminating periods of downtime.

CHALLENGE: HUMIDITY

Too little humidity can create electrostatic discharge build-up, which can damage servers.

SOLUTION:

Adding humidity to a data center environment greatly reduces the possibility of electrostatic build-up that can compromise server integrity. FläktGroup SEMCO offers two kinds of humidification solutions. In these solutions air is directed over either condenser coils (CRAC units) or chilled water coils (CRAH units). Once the air passes over the coils, the water or refrigerant cools the air, causing moisture to condense, and humidity levels to rise, preventingstatic electricity build-up.

CHALLENGE: TEMPERATURE CONTROL

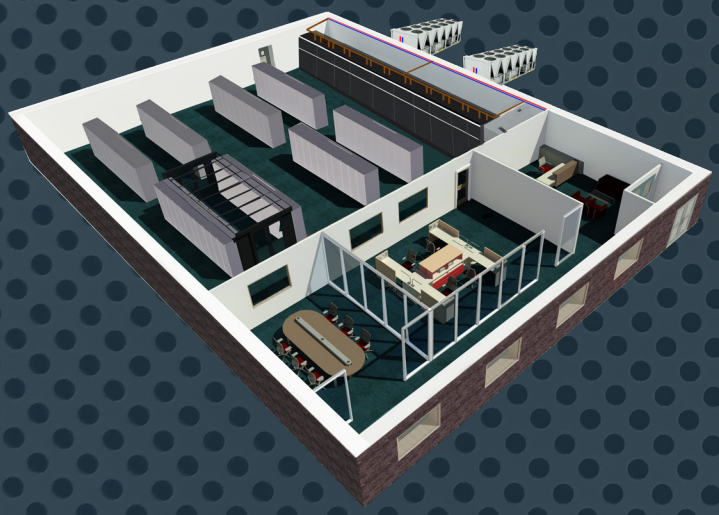
Data centers require precise temperature control in a challenging environment.

SOLUTION:

Both the CRAC and CRAH systems offer better cooling and humidity control than a typical HVAC system.

The CRAH system comes equipped with variable controls, valves, and fans for precise temperature regulation.

Although CRAC units are typically simpler and easier to operate, precision control is harder to achieve because there is usually only one operating mode.



COOLING

VARIABLE SPEED FANS

ENERGY SAVING

Superior data center **cooling,** paired with considerable **energy savings**.

CHALLENGE: ENERGY-EFFICIENCY

Energy-efficient data centers are imperative in minimizing environmental impact and operational costs.

SOLUTION:

CRAH systems are extremely energy efficient, even though they rely on large chillers to supply cold water to coils. Even with the use of large chillers, water is less expensive than CRAC refrigerants, and can be set to chill at non-peak hours during the day, saving energy. At certain times of the year, in cooler climates, CRAH systems can effectively cool and dehumidify air with water sourced from cold lakes and rivers, saving energy by eliminating chiller use during this time. This process is referred to as "free cooling."

CHALLENGE: COMPREHENSIVE OFFERING

Each data center has unique cooling requirements, some of which may need equipment from multiple providers, to ensure that these requirements are met.

SOLUTION:

FläktGroup SEMCO provides an encompassing solution for data center's diverse cooling needs. We can address the distinct needs of different facility scales or different types of units for multiple parts of a single project. Our cooling portfolio includes innovative, energy-efficient CRAH systems designed for medium to large hyper-scale centers exceeding 200 kW in electrical loads, offering expandability and robust performance.
As well as, CRAC systems which cater to small to medium-sized data center cooling needs with loads of 200 kW or less. For smaller footprints, we offer versatile fan coil wall systems that can be easily maneuvered.

For more information on FläktGroup SEMCO Panel Solutions, or to find your local sales representative visit www.semcohvac.com.

***EXCELLENCE** IN SOLUTIONS*

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