Data Centre CRAC Unit Replacement

Key Information

<table>
<thead>
<tr>
<th>Client</th>
<th>Location</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidential</td>
<td>Bedford, UK</td>
<td>Project Management</td>
</tr>
</tbody>
</table>

About the Client

Global Client that has 2 Data Centre’s in the UK. They provide professional services to thousands of clients worldwide, offering services backed up by their own CBRE managed data centres. Data centre space is also operated by CBRE with site resiliency levels for data, power and cooling at N + 1.

The Challenge

The cooling system for their data centre consisted of 17 No. conventional DX CRAC downflow units that were at the end of their usable life & were in need of replacement. As the data centre had to continue to operate, CBRE’s challenge was to replace the CRAC units without causing any hot spots or downtime whilst ensuring an N + 1 resiliency throughout the works. What’s more, the client wanted to utilise free cooling to reduce carbon generation and reduce energy use.

The Solution

The CBRE project team consulted a cooling and installation specialist and together with the client’s design consultant, designed an N + 1 resilient solution that offered the following:

10 No. free cooling VERTIV ECONOPHASE DX downflow CRAC units (no chilled water is utilised in this free cooling solution) were installed in a carefully planned and phased program over a period of 4 months. Only 1 CRAC unit at a time could be replaced to ensure the site upheld an N + 1 resiliency level at all times during the works. 2 No. of the original 17 No. CRAC units were relatively new and were thus retained but left in standby should they be required at any point in the future. All of the units operate as a team, maintaining a constant under floor temperature and pressure as linked to the fire and BMS systems and along with the Ekkosense monitoring system, allow full control of every units as well as every rack’s inlet temperature. The 100% DX based free cooling system offers 100% free cooling for at least 8 months of the year, with an additional couple months of the year in part free cooling / part DX mode.

The Result

The project was delivered on time, within budget & without any disruptions to service. The N + 1 cooling resiliency also offers 8 month of full free cooling and energy savings amounting to around 45%.

Testimonials

“I just wanted to take a moment and thank you for touring us through the work you’ve done in Bedford. You and your team have performed magnificently! The workmanship shows you’re professionalism and pride in what you do. I’m very happy to have you running the projects in EMEA and look forward to our next projects along the way.”

- William J Leuci, PE, Partner, e3i Consultants

Contact Us

Julian Issberner
Head of Projects
t: 07958 165871
e:julian.issberner@cbre.com