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EC Fan Upgrade can save Data Centres 78% in Energy Costs

In an average data centre, cooling constitutes for as much as 50% of the total power consumed and can account for as much as 40-60 percent of operational cost. It is therefore unsurprising that data centres are constantly seeking innovative ways to reduce their energy consumption and subsequently save on running cost. To achieve energy savings and performance increases, a major telecommunications provider required a trial retrofit installation of their existing computer room air conditioning (CRAC) units throughout a building to identify what savings could be achieved.

ebm-papst EC backward curved fans were chosen as a more energy efficient alternative to the clients existing AC equipment. To demonstrate the energy saving potential of ebm-papst EC technology, a comparative study was undertaken against the client's original AC equipment. The power input and airflow of the client's existing CRAC units with AC fans were measured. The AC fans were then replaced by a trial installation of three ebm-papst EC backward curved fans with integrated variable speed control. The installation required minimal modification and took an estimate of two hours to undertake. The power input of the trial unit was then re-measured over a period of 7 days, during which measurements were taken every 10 minutes.

When compared to the data from the client's original CRAC unit, the results confirmed that upgrading to EC technology delivered energy savings of 58%. Furthermore, by running the new EC fans at the same performance levels as the original AC fans, fan speed can be reduced while still maintaining the required level of cooling resulting in total energy saving of 78%.

As a direct result of the savings achieved by the ebm-papst EC fans, the telecommunications client decided to go ahead with a complete upgrade of all CRAC units at the trial site. In addition, plans have been put into place to install ebm-papst EC fans in all the company's data centres. It is projected that the upgrade will deliver energy savings of more than half a million pounds each year and almost

3.3kT of CO₂. Ray O'Connor, Technical Director at Aubren Limited stated, 'We are proud to supply ebm-papst's full range of EC fans and motors. We understand that there are some IT and telecommunications enterprises who may have some apprehensions with regards to changes to their cooling solutions. We work closely with customers in a collaborative capacity to ensure that we deliver solutions that meet their specific needs. We hope that this example provides a tangible demonstration that upgrading to EC fans can not only be relatively simple and cost effective but when it is delivered by a dedicated supplier and an innovative manufacturer, it adds more to the client's bottom line'.



About Aubren

Aubren represents ebm-papst in Ireland and has available for clients a full engineering design and consultancy service. This highly specialist team are experienced in the deployment of such technology in mission critical applications, where energy efficiency is a key client concern.

About ebm-papst

ebm-papst is one of the world's leading producers of motors and fans. With over 15,000 different products, ebm-papst has the ideal solution for virtually all air technology and drive engineering tasks.



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