



Orange Business Services secures  
outstanding energy savings



# Orange Business Services benefit from energy savings by upgrading to EC fan coil units

## Key facts:

- *66% - reduction in energy consumption*
- *10 months - payback period per FCU upgrade (\*\*)*
- *£12,000 - Annual projected savings across 250 FCU (\*)*
- *16 tonnes – reduction in carbon emissions (\*)*
- *Significant noise reduction*



Energy management is a major issue for all UK businesses; with efficiency being one of the key buzz words. When Nick Jones, head of real estate and facility management for UK, Eire & Israel at Orange Business Services (OBS), was looking for ways to reduce the energy consumption at the company's Slough site, he initially considered upgrade options for his fan coil units (FCUs). Incorrect advice from an onsite M&E contractor originally convinced Nick that it was not possible to retrospectively install EC technology in legacy equipment. However, Cinque and air-movement technology specialist ebm-papst countered this and undertook a trial installation to prove their case.

The trial took place on a FCU located in one of the building's meeting rooms. Prior to any work being carried out, the energy consumption and air flow was monitored to enable benchmarking. Cinque, OBS' onsite facilities management company, replaced the original single AC motor driving three impellers with ebm-papst EC dual inlet blowers, with integrated motors and speed control. The retrofit was very simple and required minimal modification to the original mounting points and a simple potentiometer controller was also installed to enable infinitely variable speed control and allow matching of the airflow output to that originally measured.

Once installation of ebm-papst's EC technology was complete, the power input was re-measured and showed a 66% reduction in energy consumption compared with the original AC equipment. This dramatic reduction has meant that each FCU installation has a payback period of just five months, after which OBS will fully benefit from the savings that will be delivered by ebm-papst's EC technology.



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In addition to the core energy savings, ebm-papst's EC technology also delivered considerably quieter operation, creating a more work-friendly environment for OBS staff.

Nick Jones said: "One point to stress about this EC motor install is that our onsite M&E contractor stated categorically that retrospectively installing EC motors on the existing FCUs was not possible. Cinque and ebm-papst proved them wrong and have provided me with a two-fold benefit – lower running costs through greater energy efficiency and longer component life, along with a much better experience for the end users – these motors are so much quieter than the AC motors they replaced.

"I'm so impressed that I've asked Cinque to look at fitting these motors to a further four ground floor meeting rooms and, in the long run, my aim is to overhaul all the FCUs in our HQ building – around 250 in total."

Projected savings demonstrate that extending this across the 250 FCUs onsite has the potential to deliver energy savings of around 109,000 kWh and reduce carbon by more than 16 tonnes each year – equating to projected cost savings of around £12,000.

James Cooper, product manager for ebm-papst, said: "This has been an excellent example of the energy, carbon and cost savings that can be achieved through upgrading to EC technology. The combination of expertise provided by Cinque and ebm-papst has delivered dramatic energy savings for OBS and opened the door to further business opportunities within their HQ building. However, if Nick had followed the initial advice he was given he may never have been able to realise this relatively simple method of reducing energy consumption – or the reduced noise pollution!

(\* ) Calculation based on 12 hours operation per day

(\*\* ) Does not include installation costs as work carried out as ongoing maintenance by the facility managers



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