



Press Release

Odense University Hospital in Denmark scraps expensive fans

The hospital will save DKK 450,000 annually by switching to energy-saving EC fans in half of its existing units.

A thorough renovation of the ventilation systems at Odense University Hospital (OUH) that began in 2012 is now drawing to a close. Parts have been replaced in about half of the units, which means 167 of the old power-hungry fans have been scrapped and replaced by modern energy-saving fans.

The final calculations have not yet been completed for the energy savings, but based on previous results, SE Big Blue, an environmental consultancy, sets the annual savings at approximately 300,000 kWh or the equivalent of DKK 450,000.

The energy renovation was thoroughly prepared based on estimates of the potential savings for the units. OUH drew on the expertise of fan supplier ebmpapst Denmark, which has experience with numerous similar projects.

- We carried out energy calculations for more than 200 fans so the hospital could choose the most well-suited ones with the greatest savings, explains ebmpapst's marketing manager Niels Knokgård, who has worked with renovation projects for several years and has found a surprising amount of savings with a short payback time.

- It's kind of an eye opener for many of our customers that investing in new facilities is not necessary to achieve savings on ventilation. It is both quick and easy to replace the old standard fans with new EC fans, which use far less power and work more efficiently.

OUH wanted to carry out the conversions themselves, so ebmpapst explained how to renovate the ventilation system by building a new plug fan into an existing system.

Up to 70% savings

There are a number of ventilation systems in the project at this big hospital, for example, in the hospital's central kitchen, and a large free cooling system. The savings on each project vary greatly, ranging from 10% at the Department of Psychiatry, where some nearly new standard fans were replaced because due to noise, to up to 70%, where some of the oldest fans were replaced.

Gemma Lloyd
Marketing
ebm-papst UK Ltd
Phone: +44 (0)1245 468555
Fax: +44 (0)1245 466336
gemma.lloyd@uk.ebmpapst.com

[Twitter.com/ebmpapstuk](https://twitter.com/ebmpapstuk)
[Facebook.com/ebmpapstuk](https://facebook.com/ebmpapstuk)
[Youtube.com/ebmpapstuk](https://youtube.com/ebmpapstuk)
www.ebmpapst.co.uk



Press Release

The total savings are up to 35%, says environmental consultant Thorbjørn Anstensrud, SE Big Blue, who is in charge of looking at the numbers.

- The renovation project is not over yet, which is why the final savings cannot yet be nailed down in dollars and cents. Based on the 20 new fans at the Department of Psychiatry, which have an average total system efficiency of 0.62 set in relation to the amount of air, the savings for the 167 fans equal 300,000 kWh annually. This is an estimate, but it's a good indication, says Thorbjørn Anstensrud.

The hospital began the project by replacing fans in 2012, spurred by the new energy labelling scheme, which in contrast to earlier, is based on actual energy consumption as opposed to an estimate.

Facts: From AC to EC

Switching from AC to EC fans saves energy, money, time and space. EC fans also have silent, integrated stepless speed control, offer long life and are easy to install because their size is the same as the AC products they are replacing.

The speed of the AC motor is determined by alternating current frequency, which requires a large amount of energy to regulate the fans up or down. EC fans, on the other hand, use permanent magnets to create a magnetic field inside the motor and electronically controlled direct current to generate the rotation. Functionally, the design is much more efficient and thus greatly reduces losses.

ebm-papst EC fans have an integrated motor, control and impellers, as well as parts optimised to each other. Although they primarily provide significant energy savings, EC fans also rank high above market standards when it comes to noise. This also applies to the entire range of speed. Even at the lowest speeds, AC motors combined with variable speed drives often increase the noise level greatly.

Gemma Lloyd
Marketing
ebm-papst UK Ltd
Phone: +44 (0)1245 468555
Fax: +44 (0)1245 466336
gemma.lloyd@uk.ebmpapst.com

[Twitter.com/ebmpapstuk](https://twitter.com/ebmpapstuk)
[Facebook.com/ebmpapstuk](https://facebook.com/ebmpapstuk)
[Youtube.com/ebmpapstuk](https://youtube.com/ebmpapstuk)
www.ebmpapst.co.uk