Building & Industry
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Odense University Hospital – CO2 reduction and energy savings of more than 50%

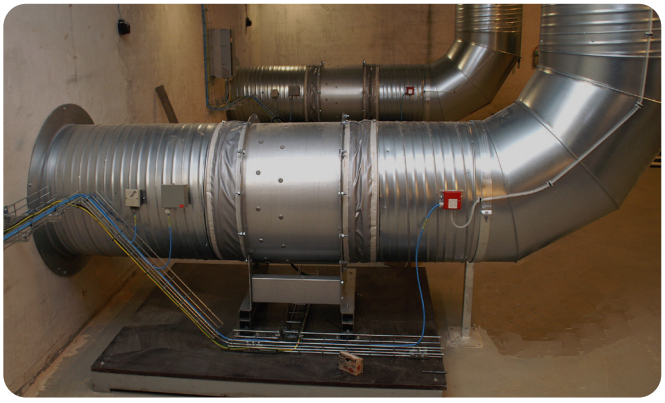
Initial replacement of 35 fans

Odense University Hospital (OUH) covers 280.000 m² which makes it one of the largest heated areas in the Danish healthcare sector. The annual consumption of electricity, water, and heating exceeds 100 million Danish kroner or approx. 13 million Euros, with ventilation being the largest single contributor.

To reduce this load, the OUH has completed the first stage of its fan replacement programme. So far, 35 units have been replaced. The new, energy-efficient fans from NOVENCO work seamlessly with the OUH's ventilation systems from the 1950s and 1960s. The savings have been both immediate and significant.

"In our experience the ROI is shorter the bigger the fan is, and we have seen that the ROI is down to less than one year for our ZerAx fans," says Jørgen Søfeldt, functional manager of plumbing and HVAC at the OUH.

Old fan installed in the 1950s - 1960s



Newly installed ZerAx fans, ensuring efficiency and performance

Odense University Hospital, Denmark

Efficiency rates of about 90%

The old fans operated with efficiencies as low as 40%. The new units deliver around 90% efficiency and run so quietly that noise locks could be removed which reduced system resistance further.

“On paper there are fans that are cheaper to purchase than NOVENCO’s. But when calculating total consumption over their expected lifetime, the picture changes,” explains Søfeldt.

“We want the product with the best efficiency rate. Besides energy savings, we need fans that fit our existing system without issues, backed by solid service and production guarantees.”

Meeting a continuously increasing demand

The hospital’s older on-demand ventilation system served areas with highly varying needs, from surgical departments to offices, and from summer to winter. As the hospital expanded, the demand increased, placing heavy pressure on the 60-year-old system. The new high-efficiency fans significantly reduce both system load and the risk of breakdowns.

Savings with a short ROI

Like many others, the hospital converts CO2 reductions into financial value through energy companies. Instead of taking cash, the hospital reinvests the funds into energy consultants who help identify further savings. The short ROI strengthens the case for additional fan replacements.

“Knowing that we are moving to a new university hospital in 2018, we avoid long-term investments with long ROI.” says Søfeldt.

"We have noted that with each fan we replace, the electricity consumption drops significantly – sometimes by more than 50% for the individual plant."

Jørgen Søfeldt, Functional Manager, Plumbing and HVAC Systems, Odense University Hospital

Facts:

- 34% reduction in energy consumption
- CO2 emissions reduced by 402 tons/year
- ROI down to 1 year