

ENERGY OPTIMISATION ZERAX® FANS MAKE DATA CENTER COOL



ABOUT THE PROJECT

A location for this Data Center in Northern Scandinavia close to the Arctic circle, has been chosen because of the possibility of using natural cooling for this enormous facility. This server facility is expected to be as large as 13 football fields, with an estimated power usage of 120 GW, corresponding to the power use of about 16.000 households. The facility will have substantially lower energy consumption as well as lower set-up and operational costs in comparison to other modern data centres, and it will be one of the world's most energy efficient facilities.

THE SOLUTION

In this project the ZerAx® fans are a key stone ensuring significant reduction of

the energy consumption and saving the environment for 365 tons of CO₂ each year.



Moreover, the noise level at only 84 dB makes this Data Center the quietest data center in the world.

Novenco Building & Industry delivers a complete, automated solution, including supervision and installation.

The automatic solution is based on the thoroughly tested system that is used in Novenco's Car Park System.

The system has fully automatic stand-alone control for each ZerAx® "wall", with network connection to all the other machines in the system, enabling general control and monitoring but also intelligent exchange of operational status so that other systems can take over in case of errors with an individual system.

The system is built with the latest PLC system with a colour touch screen, as well as a fully duplicated frequency transformer set-up as backup.

ENERGY OPTIMISATION ZERAX® FANS MAKE DATA CENTER COOL

FACTS:

- EFFICIENCY UP TO 90%
- NOISE LEVELS AT ONLY 84dB
- SAVES ABOUT 365 TONS CO₂ EACH YEAR

EQUIPMENT DELIVERY FOR 1ST STAGE

AIR INTAKE

52 walls with fans are delivered complete with automatic start-up.

Each wall consists of a specially designed frame that contains 9 ZerAx® AZN 710 fans.

The total number of fans is 468.

ZerAx® type AZN 710 has an efficiency of 89% and is delivered with highly effective motors.

Total air volume is 1200 m³/sec for normal operation, and up to 1300 m³/s at peak (4.32 – 4.68 mill m³/h).



ZerAx® fans installed and ready to be used

EXHAUST

ZerAx® AZN 1250 fans with mounting feet and acoustic diffuser, as well as a frequency transformer.

The total number of fans is 56.

ZerAx® type AZN 1250 has an efficiency of 88% and is delivered with highly effective motors.

Total air volume 1300 m³/s (4,680,000 m³/h).



ZerAx® fan wall