SMART COOLING

CASE STUDY

SEB Bank Data centers

Latvia

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Electricity consumption dropped by **25%** and cooling capacity increased by **23%,** on average, after the installation of the intelligent adiabatic **Smart Cooling™** system at SEB Bank.”

CHECKED AND TESTED FOR PROVEN RESULTS

Efficacy assessment has been conducted and validated. Testing was performed with BTU liquid flow and temperature meter RIF600 and Eniscope energy monitoring equipment.

CUSTOMER

Stockholm-based SEB Bank is one of the largest Scandinavian banks, serving corporate and private individuals. SEB’s main office consists of two ten-story buildings with a combined area of 14,340m^2.

Two Airwell chillers have been installed at the site to ensure the cooling of the bank’s data center.

CHALLENGE

The Airwell facilities needed additional cooling capacity during heat season to ensure the data center was consistently kept cool. In hot summers, when air temperature exceeded +30°C, the equipment was overloaded and periodically switched off. Electricity consumption increased considerably and consequently so did operational costs.

Therefore, it was necessary to provide a solution for ensuring additional cooling capacity during heat season and reduce electricity consumption.

SOLUTION

SEB chose the intelligent adiabatic **Smart Cooling™** system to boost the chillers’ efficiency, reduce compressor load and electricity consumption. Now, during heat season, thanks to the adiabatic system the chillers operate in a lower outdoor temperature mode because the temperature of the air flowing into the condenser is **10-15°C** lower.

Adiabatic system were installed on both cooling facilities of SEB’s data center. These facilities were located on the rooftop and its condensers were subjected to direct sunlight. After the installation of the **Smart Cooling™** system and its uniquely built membranes, additional shading to the condensers were ensured.

RESULTS

SEB’s engineering department stated that after the installation of **Smart Cooling™**, the cooling equipment of the bank has been able to produce the required cooling capacity and the heat exchange has improved considerably.

Measurement shows that cooling capacity increased by **23%** and electricity consumption dropped by **25%**, on average. Compressors work at reduced loads and do not switch off during high-heat times. The return on investment period (ROI) for the **Smart Cooling™** system in this project was of just seven months.

COOLING CAPACITY INCREASED BY ↑23%

ELECTRIC ENERGY CONSUMPTION REDUCED BY ↓25%

ROI 9 MONTHS