

PROJECT MEANDER II AMSTERDAM IMPROVE RELIABILITY & EFFICIENCY CAR PARK VENTILATION SYSTEM



THE CHALLENGE

The existing ventilation system in the garage relied on single-phase, dual speed transformer controlled radial fans. This outdated system suffered from inefficiency and partial malfunction, leading to higher energy consumption and reliability issues.

THE SOLUTION

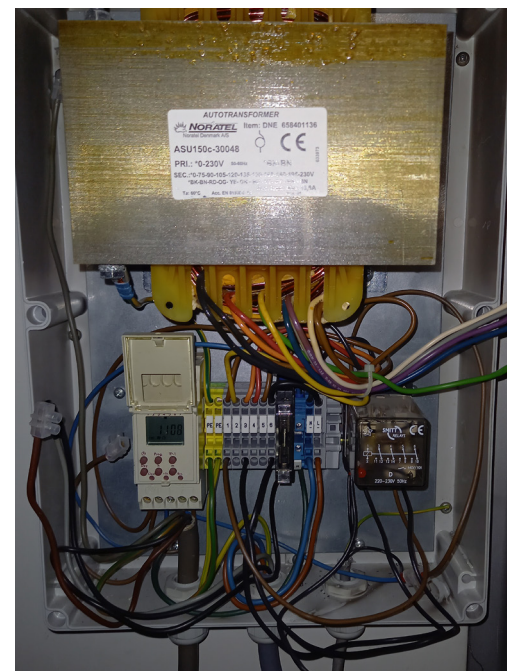
To create a more reliable and efficient solution, the old fans were replaced with two NOVENCO® ZerAx® axial fans. Each ZerAx fan is powered with an 0.8 kW electric motor, resulting in a combined power output of 1.6 kW for both. This represents a significant reduction compared to the 3.2 kW total power of the old system – a 50% energy saving right from the start!

ON DEMAND VENTILATION

A significant part of the solution lies in the frequency drives. These drives enable variable speed control, allowing the fans to be adjusted based on real-time ventilation needs.

During periods with lower traffic flow, such as nighttime, fan speeds can be reduced, leading to even greater energy savings – upwards of 80% or more!

Furthermore, the variable speed frequency drives seamlessly integrate with the existing gas detection system in the carpark. This intelligent combination ensures ventilation is always optimized for current conditions, delivering perfect airflow and superior air quality.



Transformer regulation old system

RETROFITTING CAR PARKS WITH EFFICIENT ZERAX FANS FOR 50-80% ENERGY SAVINGS

FACTS

- OPTIMAL AIRFLOW AND BETTER AIR QUALITY
- IMPROVED OVERALL PERFORMANCE
- INCREASED RELIABILITY
- 50-80% ENERGY SAVINGS
- SPACE SAVING

SPACE SAVING

As illustrated on the right, the new fan installation boasts a compact design compared to the previous system. This space-saving design offers improved access to the nearby staircase door, enhancing overall functionality.

ENHANCED OVERALL PERFORMANCE

The upgrade delivers a multitude of benefits for the garage ventilation system. Beyond the impressive 50% baseline energy savings and the potential for even greater efficiency through on-demand operation, the new system boasts increased reliability, improved sustainability, and optimized airflow – all contributing to a significantly enhanced overall performance for the garage.



The old ventilation system with centrifugal fans



New control panel with frequency inverters and PLC



The new ventilation system with space-saving variable speed NOVENCO ZerAx fans

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