

Building & Industry

NOVENCO 

SCHAKO Group

Fraport AG saves 60% energy with NOVENCO® ZerAx® fans

Energy refurbishment

The Frankfurt Airport Terminal 2 has upgraded the air handling centres in its Buildings 151 (West) and 150 (East) in close cooperation with NOVENCO Building & Industry.

Each centre consists of three identical chambers with a volume flow of 300,000 m³/h per chamber. Together, the system handles an outdoor volume flow of 1,800,000 m³/h.

The air is filtered and heated before large fans distribute it to the downstream air handling units.

The concept

Modern ventilation systems often lose valuable dynamic fan pressure, wasting kinetic energy and increasing operating costs. With today's fan technology, the total pressure — and thus the total airflow energy — is effectively utilised. System efficiencies of up to 85% are achievable.

NOVENCO Building & Industry supports customers in meeting climate targets with cost-efficient, future-ready solutions.



Newly installed ZerAx® axial fans, with reused brackets and diffusers to ensure minimal material usage



Frankfurt Airport, Germany

Summary

The use of ZerAx fans, advanced components and optimised system design shows how much ecological impact can be reduced in large ventilation systems.

At Frankfurt Airport, energy consumption, raw material usage and CO₂ emissions are all significantly lower than with the previous solution.

With 92% fan efficiency, a 98% recyclability rate and a lifetime of more than 20 years, NOVENCO ZerAx axial fans offer a long-term, sustainable and efficient path to a greener future.



Outdated fans at Frankfurt Airport before the upgrade

Retrofit at Frankfurt Airport

- **Customer:** Fraport AG, Frankfurt/Main, Terminal 2
- **Object:** Central air handling, Terminal 2
- **Quantity:** 12 ZerAx fans, each 150,000 m³/h
- **Air volume:** 1.8 million m³/h
- **Energy saving:** Approx. 60% or 4.7 mio kWh annually
- **CO₂ savings:** 2.2 kt
- **Result:** Lower system pressure losses with increased operational availability



ZerAx[®] fans in action, replacing the outdated system