

Building & Industry

**NOVENCO**

SCHAKO Group

# NOVENCO® ZerAx® fans - Innovating AHU concepts

In recent years, heat recovery has become a standard solution for saving energy, and regulatory tightening has accelerated investments in this area. Yet the fan section — responsible for up to 60% of an AHU's electrical consumption — often remains overlooked. With stricter Ecodesign limits on specific fan power (SFPLimit), the design of future AHU concepts is set to change.

## Two tests, two fans, one winner

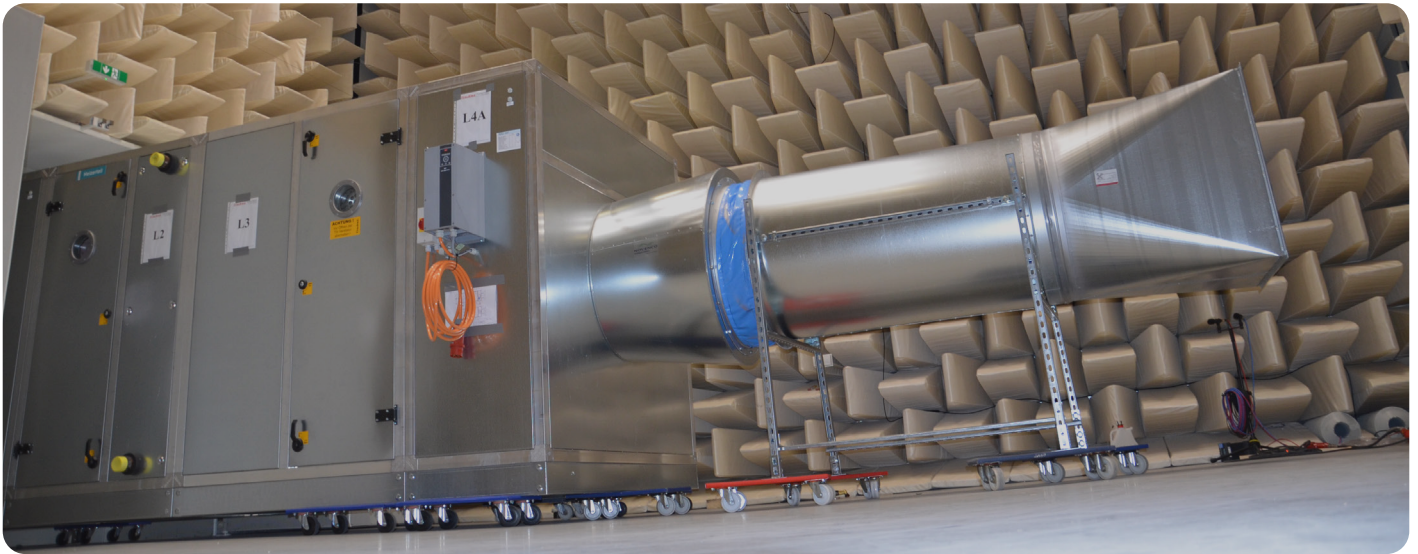
In collaboration with AHU manufacturer Trubel Luft- und Klimatechnik GmbH, NOVENCO Building & Industry carried out a comparative performance test at the TÜV Süd Test Laboratory, renowned worldwide for certifications and approval testing. The test was initiated by one of Germany's largest vehicle manufacturers.

Both systems were tested under identical conditions: same installation points, measuring points and equipment. The only difference was the fan — a premium plug fan from an unspecified manufacturer versus a ZerAx axial flow fan.

A series of structured test runs delivered clear and convincing results. ZerAx emerged as the undisputed winner.



Test preparations



TÜV Süd testing laboratory

## ZerAx proves best in test

After extensive testing, the results were definitive.

- 20% energy savings
- 3 dB lower sound levels in the fan section
- More than 30% reduction in total AHU length compared with the plug-fan system

Although ZerAx technology carries a higher initial cost, the return on investment is achieved within 12 – 18 months.

The performance gap originates from how each fan concept manages airflow. ZerAx fans operate in compact fan sections that guide the airflow smoothly into the duct with minimal loss.

Plug fans can generate high pressure but do so after the airflow has been significantly slowed, causing energy losses and requiring additional power to restore pressure.

The ZerAx diffuser keeps losses to a minimum by delivering a smoother and less turbulent airflow. Combined with the market-leading ZerAx fan efficiency, the result is a long-term, future-ready investment.



ZerAx® axial flow fan in AHU section

### Facts:

- Energy saving of 20%
- 20+ years lifetime
- Compact and easy to install or retrofit
- Very low sound levels in the fan section
- ROI between 12 – 18 months