

PRESS INFORMATION

The Silent Air Taxi Hydrogen-electric, safe, comfortable, and flexible

Aachen-based e.SAT GmbH was founded in 2018 as a manufacturer of electric aircraft. The company is developing the low-noise small aircraft Silent Air Taxi to relieve the main modes of transport on the ground and in the air as well as to reduce individual travel time. The Silent Air Taxi features an innovative 10-metre wide boxwing and a powerful hydrogen-electric propulsion system. The managing directors of e.SAT GmbH are Prof. Dr. Günther Schuh and Prof. Dr. Frank Janser.

Opening up regional air mobility

In future, the Silent Air Taxi will be able to travel to over 350 German airports and airfields. Over 80 per cent of the population live less than 20 kilometres away from one of these airfields. Thanks to the particularly quiet fan coupled with extensive sound insulation of the drive train and the aero-acoustically optimised design of the entire aircraft, a flyover is comparable to everyday noise.

The company's innovative, regional air mobility concepts are aligned with the needs of its customers. This includes, for example, the increased demands on travel times, punctuality and flexibility of air transport. The Silent Air Taxi will initially be built as a passenger aircraft. In addition, a fully automated cargo variant is also being planned. The small aircraft will be able to fly from Aachen to Magdeburg in less than three hours - a door-to-door trip by train or conventional airliner would take 5 hours or more.

Safe and comfortable

The Silent Air Taxi is developed for a variety of possible travel purposes - from business trips to feeder flights to short holidays. The development focuses on safety and comfort.

A particularly high level of safety is achieved through multiple redundancies, especially in the drive train. Developed and certified in accordance with the latest international requirements for aeronautics, the small aircraft will be easy to operate during flight due to its high level of automation and will set new standards in terms of operational safety as well as reliability.

Due to the use of airfields close to urban centres, waiting times before the start of the flight or at baggage claim are excluded. Flight time is also very pleasant - thanks to high-quality



seats, easy entry and exit and plenty of legroom, as well as good visibility through panoramic windows.

Quiet and affordable

The Silent Air Taxi has space for up to four passengers and a pilot. At a cruising speed of over 300 km/h, a flight distance of more than 500 kilometres is possible without a stopover. At the same time, the Silent Air Taxi is extremely quiet and indistinguishable from normal everyday noises on the ground. The likewise very low interior noise levels allow relaxed and restful travel or concentrated work without headsets. The cost of a flight ticket will be comparable to a first-class train ticket. This is made possible by e.SAT's low acquisition and operating costs. During development, the cost structure is kept very low through the space frame, use of mass-produced parts and car-like assembly. Since the beginning of development, the focus has also been on continuously low operating and maintenance costs as well as low energy consumption thanks to the economical and optimised design of the drive train.

Hydrogen-electric to the destination

The efficient combination of fuel cells and batteries forms a unique drive train that is tailored to the specific transport task of the Silent Air Taxi. Optimal operating points during take-off, ascent and cruise ensure high overall efficiency. Due to the high-performance batteries, even short ground times are sufficient for recharge.

The next milestones

Until the entry into service of the Silent Air Taxi in 2025, e.SAT GmbH, together with its partner network, is pushing ahead with the technical development to ensure a maiden flight in 2024. The ongoing conversion of the Aachen-Merzbrück Airfield into a research airfield offers ideal conditions for this.

The network

More than 50 experts from science and industry are currently developing and building the low-noise Silent Air Taxi in collaboration with established companies in the German aviation industry.

The Aachen network includes RWTH Aachen University, the RWTH Aachen Campus, the Air S.Pace Center, the Innovation Factory, the Aachen University of Applied Sciences and the Aachen-Merzbrück research airfield. The latter provides the necessary infrastructure for this development project.



Technical data

- Wingspan: 10 m
- No. of passengers: 4 + 1 (pilot)
- Weight: 2,000 kg (MTOM)
- Drive system: Hydrogen-electric
- Range: more than 500 km
- Cruising speed: 300 km/h
- Takeoff power: approx. 350 kW
- Takeoff run: < 400 m
- Noise emissions: Flyover of a Silent Air Taxi is indistinguishable from everyday background noise

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