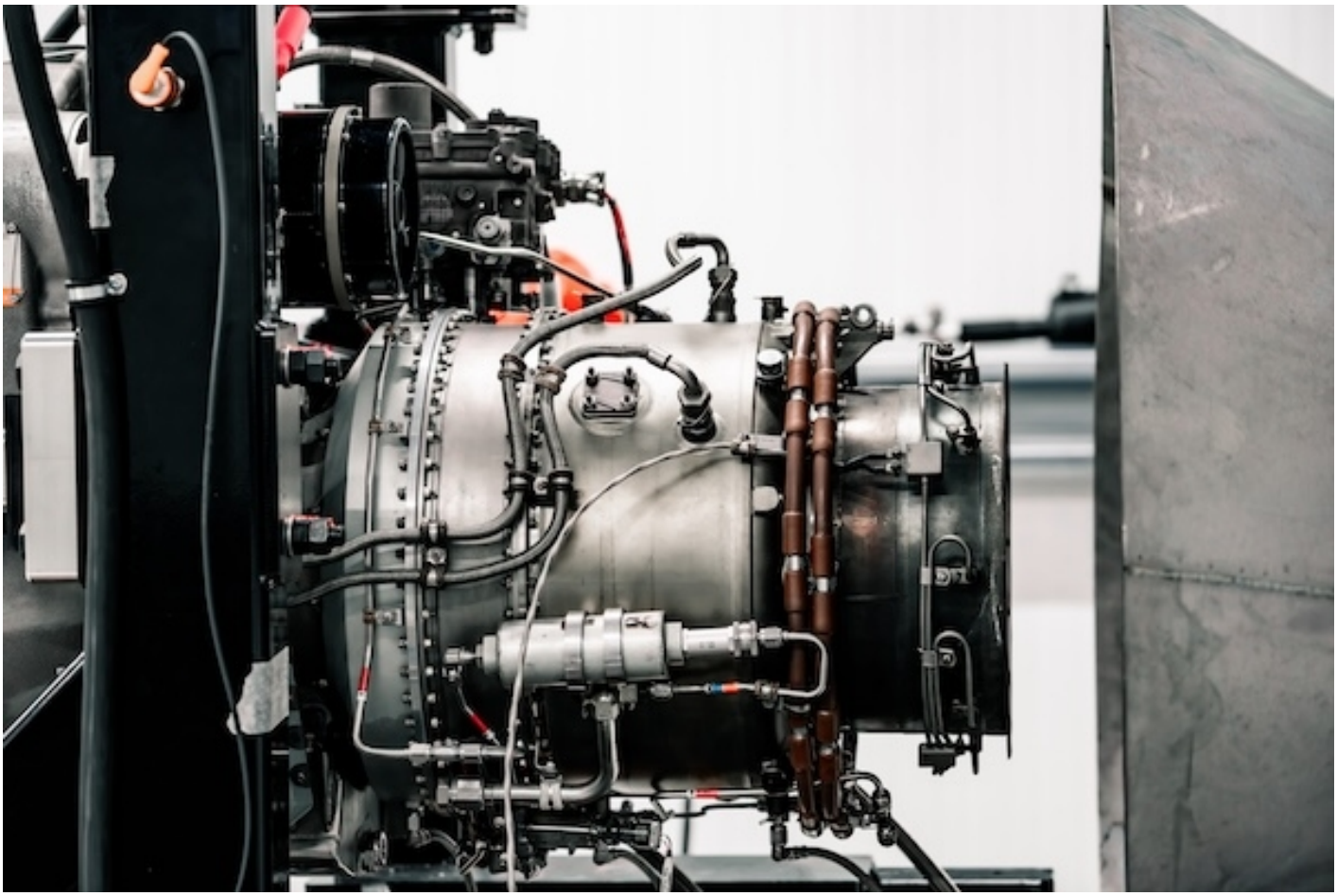
VERTICAL AEROSPACE ADVANCES HYBRID-ELECTRIC TESTING AND BATTERY PRODUCTION

News / Manufacturer



Vertical Aerospace announced two key programme milestones: the start of integration testing for its next-generation hybrid-electric propulsion system, and the production of the first all-electric Valo battery from its upgraded assembly line. These milestones represent continued progress across Vertical's propulsion and energy systems programmes, both of which underpin the Company's all-electric and future hybrid-electric aircraft roadmap.

Stuart Simpson, CEO of Vertical Aerospace, commented**:** "Hybrid capability complements our all-electric Valo platform and unlocks a broader range of civil and defence applications. At the same time, advancing our battery technology and manufacturing capability is critical to certification and scaling production. Together, these milestones demonstrate the strength and breadth of our technology platform."

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Vertical's next-generation hybrid-electric propulsion system has begun testing on its dedicated Hybrid Propulsion Evaluation Rig at the Company's Flight Test Centre at Cotswold Airport, marking a significant milestone after more than two years of development at the Vertical Energy Centre.

The HYPER facility enables full system integration and validation of the hybrid powertrain, including the turbine, generator and associated electrical systems, alongside testing of control architecture, system response and fault scenarios ahead of ground and flight testing. The Company is working with several partners to integrate a SAF-compatible gas turbine with an electric generator, while leading development of system integration, control architecture and software.

This turbogenerator will be integrated into a prototype hybrid-electric Valo aircraft for flight testing and demonstrations, while also supporting the development and validation of technologies for future hybrid variants of the aircraft. These hybrid-electric variants are expected to significantly expand range, payload and operational flexibility. Vertical is targeting certification of its hybrid-electric variant with the UK Civil Aviation Authority and the European Union Aviation Safety Agency.

Vertical has also reached a key milestone in its proprietary battery programme, with the first battery produced on its upgraded assembly line, launched in March 2026, at the Vertical Energy Centre.

The 15,000 sq ft facility, already responsible for the battery systems used in piloted flight testing since 2024, has been enhanced with automated, aerospace-grade manufacturing processes designed to improve efficiency, consistency and performance, while supporting certification and future production.

The battery prototypes will go into rigorous environmental and operational testing. Battery packs produced on the assembly line will be used to support Vertical's certification aircraft as it progresses through the final stages of certification with the UK CAA and EASA, as well as providing initial production capacity ahead of entry into service.

Key targeted capabilities of Vertical's hybrid-electric variant:

- **Range:** Up to 1,000 miles, a 10-fold increase from its all-electric aircraft.
- **Payload:** Configurable to carry up to 1,100 kilograms in Valo's class-leading airframe capacity.
- **Stealth advantages:** Low noise and heat signatures make the hybrid variant well-suited for sensitive missions.
- **Crewed and uncrewed capabilities:** Hybrid-electric technology capable of being deployed autonomously, remotely, or with a pilot. Uncrewed capabilities can be seamlessly integrated into the existing Flight Control System being developed by Honeywell.
- **Mission resilience:** Built off the Valo's industry-leading redundancy and damage tolerance, boosting confidence for mission-critical operations.

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