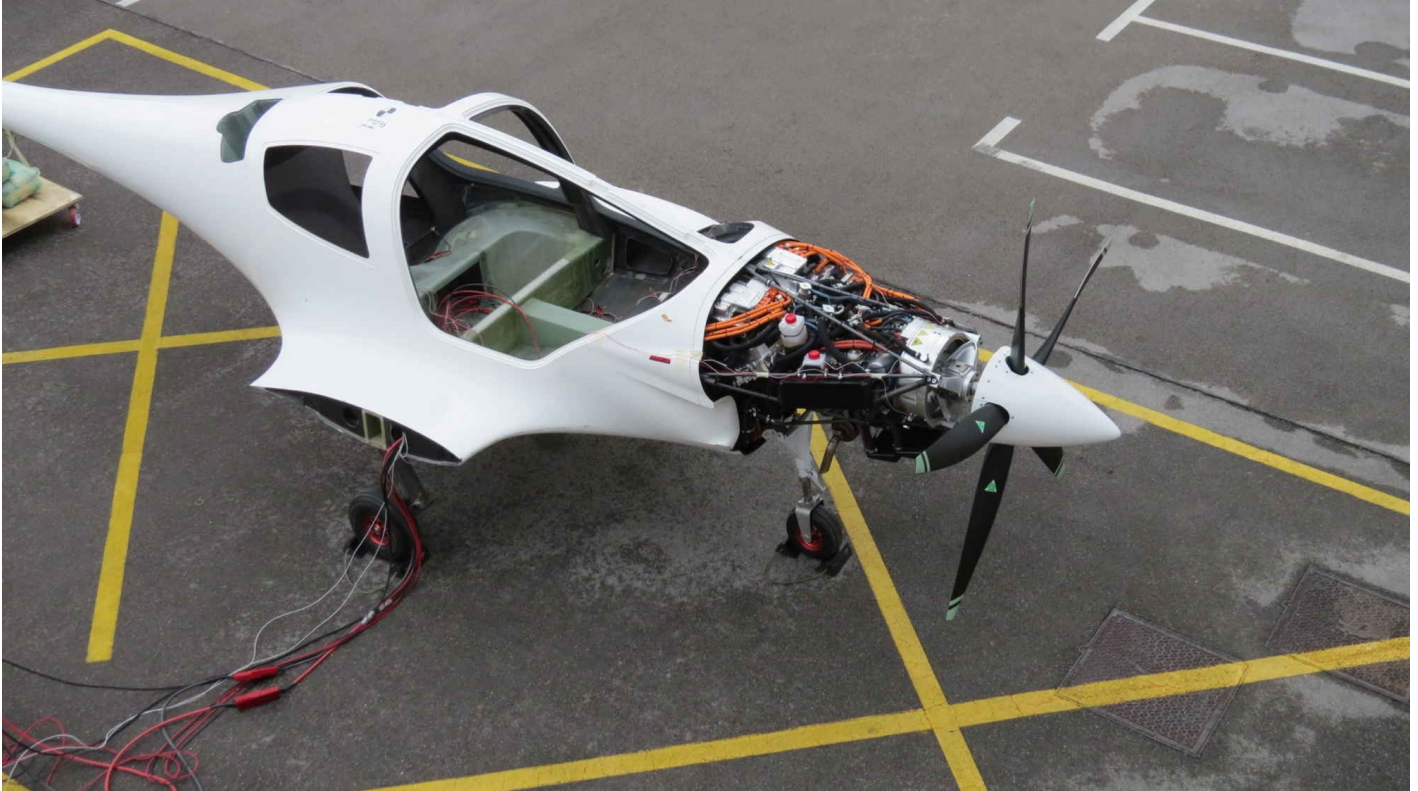


HYBRID ELECTRIC AIRCRAFT MOTOR POWERS UP

News / Manufacturer



A new hybrid electric motor developed through a project named Hypstair has the potential to make a breakthrough in emission-free propulsion in aviation. The motor is being tested on a Pipistrel airplane and was recently powered up for the first time at the factory in Ajdovscina, Slovenia.

Hypstair claims its 200 kW motor is the most powerful hybrid electric powertrain developed for aviation to date, providing an equivalent amount of power as typical general aviation engines. The Hypstair drive motor is designed to deliver 200 kW for takeoff and 150 kW in cruise. The motor can run in electric-only mode, using battery power, generator-only mode or hybrid mode combining the two. A single lever will be used to operate the powerplant and a panel mounted display will provide status and performance data.

For the initial testing, a five-blade, low-rpm propeller has been attached to the motor. The first power-up tested all power modes at low and high power settings.

“[Hypstair] demonstrates the possibility for general aviation class aircraft to be electrically powered and it confirms the vision of Pipistrel — we were the first to design a four-seat aircraft, the Panthera, which can be alternatively equipped with three different propulsion types: piston engine, electric motor or hybrid powertrain,” said Pipistrel’s CEO Ivo Boscarol. “Project Hypstair represents a major step in the direction of a hybrid aircraft and an opportunity for Pipistrel and other general aviation aircraft manufacturers.”

All powertrain components were developed by Siemens, one of the leaders in electric propulsion today. Frank Anton, head of e-aircraft at Siemens AG, says the electric drives are scalable and he expects electric propulsion will be available for larger aircraft in the future.

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