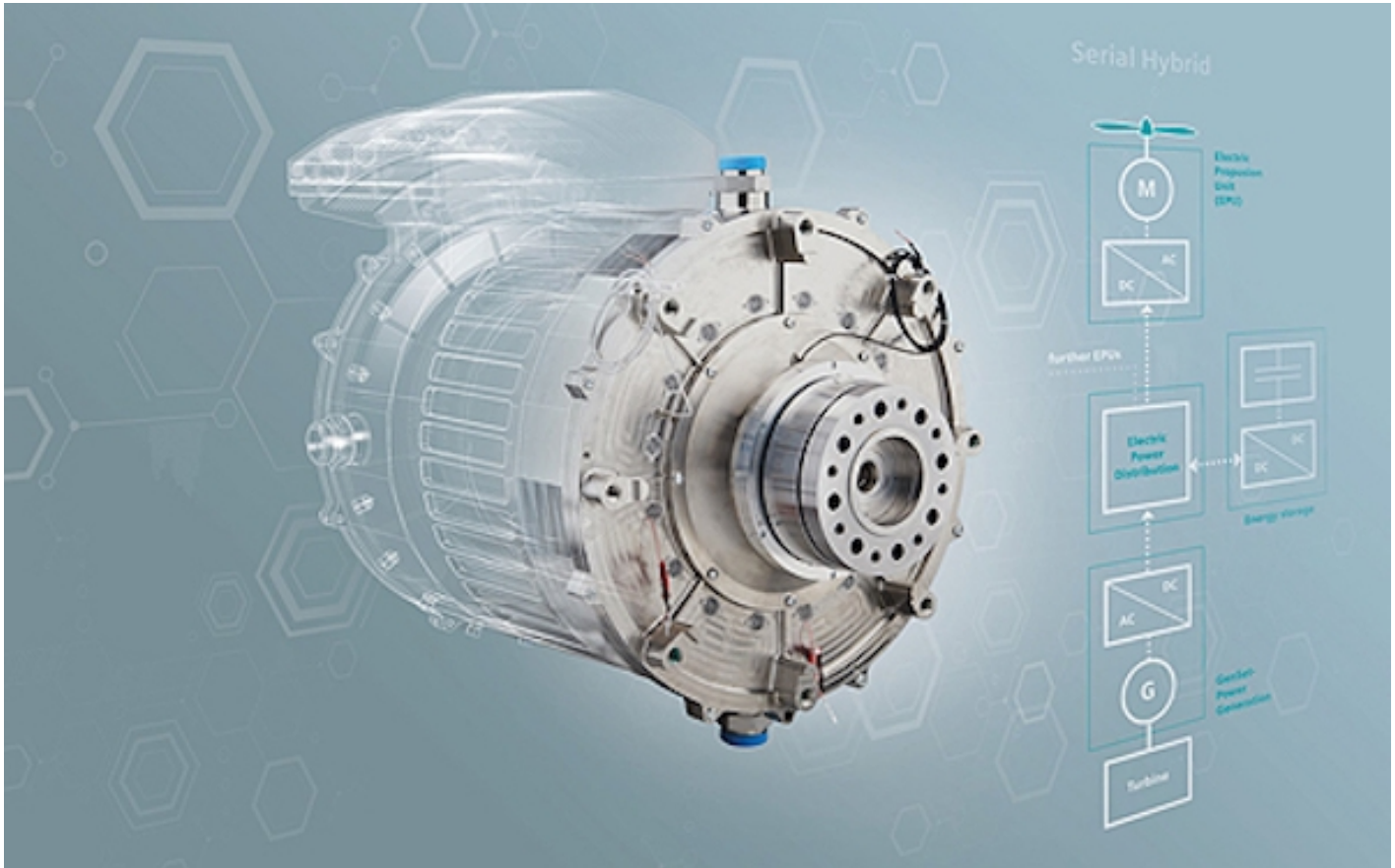




ROLLS-ROYCE ACQUIRES SIEMENS EAIRCRAFT BUSINESS

News / Manufacturer



CO2 emissions in aviation, targets to reduce, alternative fuel, alternative propulsion activities and development. These are topics we hear about almost every day.?

In a move to accelerate the delivery of electrification strategy, Rolls-Royce has entered into an agreement to acquire the electric and hybrid-electric aerospace propulsion activities of Siemens -the eAircraft business. This acquisition is expected to complete late 2019, will Boost Rolls-Royce ambition to play a major role in the 'third era' of aviation.

The eAircraft business, based in Germany and Hungary, employs around 180 specialist electrical designers and engineers who have been developing a range of all-electric and hybrid electric propulsion solutions for the aerospace industry. The eAircraft team are already known to Rolls-Royce as we have worked together on the E-Fan X demonstrator project which, when flying, will demonstrate hybrid electric propulsion at the scale required to power regional aircraft.

Rob Watson, Director – Rolls-Royce Electrical, said: “Electrification is set to have as dramatic an impact on aviation as the replacement of piston engines by gas turbines. We are at the dawn of the third era of aviation, which will bring a new class of quieter and cleaner air transport to the skies.”

“We have already made significant strides in realising our strategy of ‘championing electrification’ and this move will accelerate our ambitions in aerospace by adding vital skills and technology to our portfolio. It brings us increased scale and additional expertise as we develop a product range of hybrid power and propulsion systems. I look forward to welcoming our new colleagues into Rolls-Royce and working with them to pioneer new technologies and solutions.”

Paul Stein, Rolls-Royce Chief Technology Officer, added: “To support the rising demand for air travel while achieving CO2 emissions targets, the aviation industry is developing increasingly environmentally friendly technologies and practices. The electrification of flight is just one part of Rolls-Royce’s commitment to making aviation more sustainable: we are continuing to increase the fuel efficiency of our gas turbines; encouraging the development of environmentally friendly and sustainable aviation fuels; and pursuing the electrification of aviation.”

“We believe that pure electric, or all-electric, propulsion will power smaller aircraft in the foreseeable future, while larger aircraft will rely upon hybrid electric solutions that combine electrification with evolutions of the gas turbine. Additionally, as our group technological portfolio becomes increasingly electrical with the development of hybrid electric trains and microgrids, the capabilities of this world-class team will be a vital part of the future Rolls-Royce.”

As part of this agreement, Rolls-Royce will look for opportunities to work with Siemens as both companies recognise the importance of helping to support national and international goals of CO2 emission reductions for the benefit of society.

We have already made progress towards the electrification of flight, with successful ground tests of a hybrid propulsion system that can be used across a range of smaller transport platforms including EVTOLs (hybrid electric vertical take-off and landing vehicles), general aviation aircraft, and hybrid helicopters. These tests are part of one of the world’s most comprehensive hybrid aerospace turbine engine development and integration programmes, paving the way for experimental test flights in 2021.

The ground tests involved a Rolls-Royce M250 gas turbine – a highly successful engine that has powered more than 170 varieties of fixed-wing military, civilian aircraft and helicopters since its introduction – operating in series hybrid configuration, where the engine operates as a turbo-generator that charges an on-board battery system; parallel hybrid where the aircraft’s thrust is supplied by a combination of the engine and the electrical system; and turbo-electric mode where the engine operates as a pure turbo-generator supplying electric power for thrust and any other power needs on the aircraft.

Last year we unveiled an EVTOL concept, which could be powered by such a hybrid system. We are also developing an all-electric demonstrator aircraft, as part of the ACCEL initiative that will attempt to break the world speed record for all-electric flight.

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