

Press Release

H3 Dynamics Unveils Aero-Compliant 0.4MW Hydrogen Fuel Cell, a Major Leap for Zero-Emission Flight

- New AEROCELL® 400KW is twice the power of any single PEM Fuel Cell globally
- AEROCELL® stacks and systems are modified to comply with aerospace standards
- Can be configured for MW-scale regional aircraft, business jets and e-VTOLs



Captions: Aero-compliant AEROCELL 400KW by H3 Dynamics

Toulouse (France), November 14th, 2024 – [H3 Dynamics](http://H3Dynamics.com) is announcing a major technological leap today with the launch of a new aero-compliant fuel cell stack capable of delivering 0.4MW of electric power from a single unit.

To illustrate the significance of this development, now only three such stacks are sufficient to achieve over 1.2MW power, enough to power a medium sized passenger aircraft. When

compared to any other solution in the market, the total system weight at this power level can be reduced by 50%. With size and weight reduced at the power system level, electric-powered aircraft can now fly further and carry more weight.

Since 2021, H3 Dynamics' team in Toulouse has designed stack and system modifications that able to meet stringent aerospace requirements including special environment conditions, high levels of safety and reliability. The AEROCELL® 400KW makes propulsion or auxiliary power possible for more than one type of aircraft. This includes single stack as well as multi-stack configurations for larger scale 50-100 seater regional electric aircraft.

Based at the heart of Europe's aerospace industry in Toulouse France, H3 Dynamics has been developing different balance of plant elements and aircraft-specific configurations that allow the such fuel cells to operate different speeds, altitudes and within different volume and weight constraints. In an effort to further reduce the weight of each power module, H3 Dynamics is applying alternative materials and system designs to increase power density while ensuring optimal performance, including at high altitude.

H3 Dynamics is already actively working with aircraft OEMs globally including [Airbus UpNext](#), the EU-backed program [Hypotrade](#) led by Pipistrel and NLR, [Qdot Technology](#), [Sea Cheetah](#), [Lyte Aviation](#) and several other programs to be announced soon.

The company's existing AEROCELL® fuel cell product line for aviation includes 50kW, 150kW, 200kW and now 400kW options, addressing a wide variety of aircraft - from unmanned systems to eVTOLs, light business jets, and regional single aisle aircraft.

H3 Dynamics is standardizing key components to facilitate adoption while ensuring compliance with current aerospace standards and the future certification criteria for airborne hydrogen-electric power systems. The company is also planning to start an aviation certified production capability of the world's most powerful and aero-compliant hydrogen-electric power systems in France by end of 2025.

"There is a significant requirements and certification gap between off-the-shelf fuel cell systems available on the market today, and what is expected from the aerospace sector. We are now beyond the technology validation stage, and we are now in the process of setting up a new European value chain within the zero emission hydrogen aviation industry." said Taras Wankewycz, CEO H3 Dynamics.

H3 Dynamics is active is several certification working groups including the [Alliance for Zero Emission Aviation](#) (AZEA), an initiative from the European Commission, as well the WG-80 from EUROCAE, a leading voice on aviation standards and certifications.

From inception in 2015, H3 Dynamics has been engineering aerospace products, rather than hydrogen products - bringing hydrogen technologies to the right level of performance and safety acceptance, with the right integration and packaging standards.

About H3 Dynamics www.h3dynamics.com

H3 Dynamics helps OEMs bridge the gap between hydrogen and aviation, accelerating the world's transition to zero emission flight. The company has a global ambition delivering products and services to the world. H3 Dynamics is a member of the [Alliance for Zero Emission Aviation](#) under the European Commission, Hamburg Aviation, [the Paris Advanced Air Mobility Alliance](#), and [Aerospace Valley](#) in Toulouse.