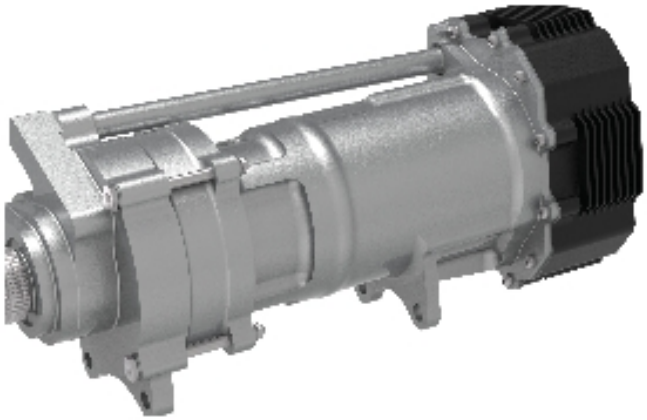
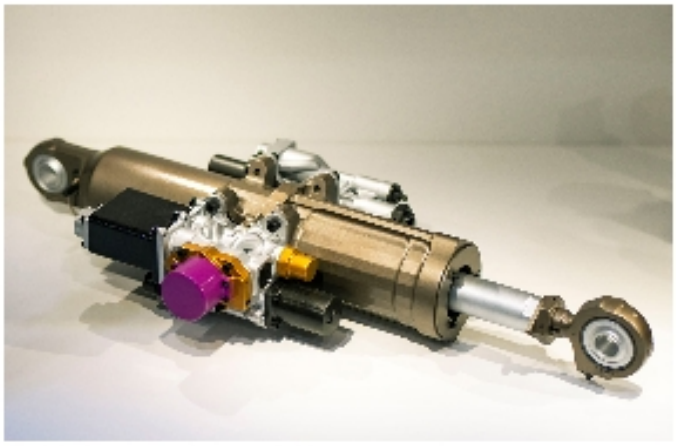
LIEBHERR PRESENTS SOLUTIONS FOR AVIATION AT FARNBOROUGH INTERNATIONAL AIRSHOW 2024

News / Events / Festivals, Manufacturer





At Farnborough International Airshow 2024, Liebherr-Aerospace will present innovative solutions for local, decentralized hydraulic supply, modular electromechanical drives and a compressor for fuel cell technology for on-board energy supply will be for example on display. Under the motto "transform.develop.sustain." Liebherr-Aerospace shows how the company is dealing with the challenges of the aviation industry. The company invests far above the industry average in research and technology including electrification, 3D printing, as well as hydrogen technologies and thus makes a significant contribution to making air transport more environmentally friendly and efficient.

Long wingspan for improved aerodynamics with folding mechanism

Innovative designs of thinner and longer wings support more CO2-efficient flying by improved aerodynamics. Liebherr is supporting this trend by offering reliable folding mechanisms for future more efficient aircraft platforms. An example is the Boeing 777X's folding wingtip, which "beckons" visitors to the Liebherr booth. The moving mock-up (scale 1:1.15) shows how the wingtip of the

extra-long wing can be folded upward to better fit the airport infrastructure. Components of the mechanism, such as the angle gearbox, the power drive unit, and numerous actuators are designed by Liebherr and will be on display.

3D printing and digitization

3D-printed components made by Liebherr are flying every day. The company is constantly developing its capabilities and extending them towards multiple applications. On display at Farnborough International Airshow is an additively manufactured housing of a secondary locking actuator. According to in-depth tests, the aviation-certified housing is of lower weight, and its performance is 100% equivalent to that of a conventionally manufactured component.

In addition, digital means are revolutionizing the way Liebherr designs, builds and maintains aircraft systems. On its way to becoming a model-based enterprise, Liebherr is exchanging models with customers as early as possible to contribute to more efficient aircraft design and development.

Electrification and decarbonization

In aircraft that will be more electric in the future, the engine will be decoupled from onboard power consumers for increased efficiency. Electric power will replace bleed air or hydraulic systems and enable the introduction of electric air management and actuation systems. Liebherr's exhibits show that the company can already master these requirements today: Electromechanical actuators and a hologram of the high-efficiency power pack (HEPP), are on display.

Furthermore, future more sustainable aircraft will require autonomous electrical power generation. Liebherr is working to ensure that hydrogen technology can be used to power non-propulsive systems on board future aircraft using electricity provided by fuel cells. At the same time, thermal management of the whole, i.e. fuel cells and electrified systems, is being ensured.

Leader in the development of electromechanical actuators

As electrification moves on in aviation, Liebherr has further added small electromechanical actuators to its product portfolio. The new concept specifically addresses the quickly emerging AAM (Advanced Air Mobility) sector. It is also essential for smaller aircraft, business jets and helicopters. Liebherr’s product approach offers scalability for small installation envelopes, a favorable power-to-weight ratio and high reliability.

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