

SOLUTIONS FOR THE AVIATION OF TOMORROW: LIEBHERR AT FARNBOROUGH AIRSHOW 2026

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Efforts to increase fuel efficient aircraft operation and an increasing demand for digital solutions are two main drivers for the aviation industry's – a substantial transformation process that will affect the entire value chain for the benefit of the development of next-generation aircraft with advanced aerodynamic designs and innovative propulsion systems. Through its investments into research and technology beyond typical industry standards, Liebherr plays a key role in developing solutions enabling efficient and sustainable air travel.

Alex Vlieland, Chief Customer Officer at Liebherr-Aerospace & Transportation SAS commented: "We are looking forward to joining Farnborough Airshow again this year. Decades of expertise in designing and integrating environmental control and thermal management systems, flight control and actuation, landing gear, as well as signal and power electronics, position us as a key partner for aircraft manufacturers. Building on our core strengths, we constantly push the boundaries of

what is currently achievable. Our advancements in electrification, additive manufacturing, and other innovative technologies will make a substantial impact.”

Leader in the development of electromechanical actuators

For long, Liebherr-Aerospace has led the way of developing electromechanical actuators for medium and large commercial aircraft. The company has recently broadened its portfolio to include smaller actuators, expanding its application range. This new product concept has been specifically designated for the Advanced Air Mobility (AAM) sector, as well as smaller aircraft, business jets, and helicopters. It focuses on scalability for compact installation, an optimized power-to-weight ratio, and exceptional reliability, leveraging Liebherr’s decades of experience and millions of flight hours accumulated across various aircraft programs.

Extended wingspan with folding mechanism for superior aerodynamics

A 1:6 scale operational model of the Boeing 777-9 folding wing tip illustrates how a substantial portion of the wing can be folded upward to fit into existing airport infrastructure. All essential components of this mechanism – including the angled gearbox, power drive unit, and multiple actuators – are engineered qualified and produced by Liebherr. High-aspect-ratio wing designs utilize increased span and reduced thickness, resulting in better aerodynamics and thus improved fuel efficiency. Liebherr is actively supporting this trend by delivering reliable wing folding solutions tailored for the next generation of more efficient aircraft.



Additive manufacturing and thermal management

Liebherr is continuously expanding the use of its additive manufacturing capabilities across diverse applications. For instance, at Farnborough Airshow 2026, a valve block for the Airbus A350 lower cargo door actuation system will be presented – the first complex additively manufactured hydraulic component to enter series production.

Another exhibit demonstrating the successful use of this advanced technology is an air-liquid heat exchanger. Efficient thermal management is increasingly vital as aircraft systems become more electrified. Thermal management solutions are among Liebherr-Aerospace's core competencies, as evidenced by several patents for air-air and air-liquid applications already held by the company.

Liebherr's vapor cycle compressor on display is a crucial component in such air-conditioning systems for aircraft, helicopters, and drones. This compressor enhances thermal management and boosts the efficiency of onboard energy management, especially for additional cooling and in conjunction with highly efficient heat transfer equipment.

Ready for the future with electrification and digitalization

For more than 20 years, Liebherr has been advancing the electrification of aircraft components and systems, positioning itself to deliver efficient solutions for future platforms. In next-generation more-electric aircraft, engines are expected to be decoupled from onboard power consumers to maximize efficiency. In this vision, electrically powered systems will gradually replace bleed air and centralized hydraulic systems. Electric air management and actuation systems will be adopted in due course, as well as autonomous hydraulic power generation.

Liebherr's exhibits showcase the realization of these requirements: highlights include advanced electromechanical actuators, a highly efficient power pack and for air systems, the 100-kW motorized turbo compressor with its dedicated motor control unit, underscoring Liebherr's leadership in technological innovation. Simultaneously, digitalization is rapidly reshaping the design, production, and maintenance of aircraft systems and components. As Liebherr transitions toward a model-based enterprise, it collaborates with customers early in the process, for example by sharing digital models, thus contributing to more efficient aircraft design and development.



Setting the benchmark for narrowbody landing gears

Liebherr's A220 landing gear system is among the most advanced landing gear solutions for modern commercial aircraft. The system contributes significantly to the aircraft's overall efficiency and operational performance thanks to its strong emphasis on weight reduction, reliability, and maintainability.

Utilizing cutting-edge technologies and extensive experience, Liebherr delivers a fully integrated solution that meets the highest safety and durability standards. The A220 landing gear system sets the benchmark for next-generation aircraft, with the A220 main landing gear featured at Liebherr's booth.

A reliable partner in the defense sector

Innovations and solutions that have proven successful in the civil sector are ideally suited for defense applications. Leveraging on its extensive industrial expertise, Liebherr supplies a wide array of onboard systems and comprehensive lifecycle support for numerous airborne defense platforms, including troop and cargo transport, pilot training, aerial refueling, air defense, and reconnaissance missions.

Liebherr's solutions ensure efficient and reliable operation of military aircraft across diverse mission profiles. A particular highlight at Farnborough Airshow is the interactive slider exhibit, which showcases Liebherr's contribution to the Eurofighter Typhoon program.

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