

Aerospace Actuation & Hydraulic Systems Market Forecasts to 2034 - Global Analysis By Component (Pumps, Valves, Reservoirs, Actuators, Power Control Units and Sensors & Electronics), Aircraft Type, System Type, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Aerospace Actuation & Hydraulic Systems Market is accounted for \$14.3 billion in 2026 and is expected to reach \$37.8 billion by 2034 growing at a CAGR of 12.9% during the forecast period. Aerospace actuation and hydraulic systems play a critical role in controlling and moving various aircraft mechanisms with accuracy. Hydraulic systems supply pressurized fluid power, whereas actuators transform that power into controlled mechanical movement for applications such as flight controls, landing gear, brakes, thrust reversers, and other essential functions. Manufacturers focus on achieving high reliability, responsiveness, precision, and force capability in challenging aerospace environments. The development of lightweight components, electro-hydraulic solutions, and more-electric aircraft platforms is driving technological advancement, supporting systems that are smaller, more efficient, reliable, and capable of enhancing overall aircraft safety and performance. According to IATA, worldwide passenger demand increased 5.3% in 2025, while international passenger demand grew 7.1% compared with 2024. The continued expansion of air travel supports increasing aircraft utilization and creates long-term requirements for maintenance and replacement of aircraft systems and components.

Market Dynamics:

Driver:

Increasing adoption of more-electric aircraft

The increasing shift toward more-electric aircraft is significantly supporting demand for advanced aerospace actuation and hydraulic systems. Manufacturers are progressively adopting electro-hydraulic and electromechanical actuators to enhance operational efficiency, simplify aircraft architectures, and provide power when required. These technologies can minimize dependence on centralized hydraulic networks, reduce leakage concerns, and improve maintainability while fitting effectively into modern electrical systems. As aircraft electrification continues to advance, demand is rising for innovative actuators, integrated electronics, and efficient hydraulic solutions across flight-control, landing-gear, braking, and related aerospace applications.

Restraint:

High maintenance and leakage risks

The aerospace actuation and hydraulic systems market faces limitations from the maintenance demands and leakage vulnerabilities associated with conventional hydraulic architectures. Extensive piping, pumps, reservoirs, valves, and fluid-based components require continuous inspection and servicing. Leakage can compromise operational performance and increase maintenance requirements, while continuously pressurized systems may experience additional energy losses. As manufacturers increasingly pursue electrically powered actuation solutions with fewer fluid-based components, the maintenance intensity and leakage risks of traditional hydraulic systems can limit their future adoption across modern aircraft platforms.

Opportunity:

Expansion of more-electric aircraft architectures

The growing shift toward more-electric aircraft architectures offers substantial growth opportunities for companies developing aerospace actuation technologies. Manufacturers are increasingly adopting electromechanical, electro-hydrostatic, and electro-hydraulic solutions to simplify aircraft systems, enhance energy efficiency, and reduce reliance on centralized hydraulic infrastructure. Advances in electric motors, power electronics, thermal control, and fault-tolerant designs are enabling suppliers to create sophisticated actuation products. These developments can expand opportunities across next-generation commercial aircraft, defense platforms, and emerging advanced air-mobility applications requiring efficient and reliable motion-control systems.

Threat:

Competition from electromechanical actuation technologies

Growing adoption of electromechanical and electro-hydrostatic actuation technologies creates competitive pressure for traditional aerospace hydraulic-system providers. Aircraft manufacturers increasingly favor solutions capable of lowering hydraulic-network complexity, improving efficiency, reducing maintenance requirements, and integrating with increasingly electrified aircraft architectures. Continued technological advancement could accelerate their penetration into flight-control and related applications, gradually displacing conventional hydraulic equipment. Consequently, established suppliers may face stronger competition, changing technology preferences, and declining opportunities in traditional centralized hydraulic systems.

Covid-19 Impact:

The COVID-19 crisis created substantial challenges for the aerospace actuation and hydraulic systems market as declining passenger traffic weakened airline finances and reduced demand for new aircraft. During 2020, global passenger demand fell sharply, causing manufacturers to adjust production and delivery schedules. These changes negatively affected suppliers of hydraulic systems, actuators, and related components through postponed orders, reduced production volumes, and supply-chain interruptions. Airbus reported substantially lower commercial aircraft deliveries during 2020, illustrating the broader downturn across aerospace manufacturing.

The actuators segment is expected to be the largest during the forecast period

The actuators segment is expected to account for the largest market share during the forecast period. These devices transform hydraulic power into precise mechanical movement needed for important aircraft operations. They are widely used in flight controls, landing gear, braking systems, thrust reversers, and other applications where dependable actuation is required. Their combination of high force capability, compact construction, accuracy, and reliability makes them well suited to demanding aerospace environments. Furthermore, the growing development of electro-hydraulic and technologically advanced actuators is increasing their relevance across modern aircraft platforms and reinforcing their position within hydraulic system architectures.

The flight control systems segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the flight control systems segment is predicted to witness the highest growth rate. They play a critical role in maintaining aircraft stability, maneuverability, and controlled movement by operating essential flight-control surfaces. The increasing use of fly-by-wire systems, advanced electric actuation, and more-electric aircraft architectures is accelerating development in this area. Greater emphasis on aircraft safety, accurate control, rapid response, and efficiency is also encouraging advanced system integration, strengthening demand for innovative actuation and hydraulic technologies within next-generation aircraft platforms.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share because of its extensive aerospace production base and strong defense industry. The region has a well-established network of aircraft manufacturers, technology providers, component suppliers, and MRO organizations that supports continuous demand for advanced systems. High commercial aircraft utilization and ongoing defense modernization programs further reinforce regional requirements. Moreover, significant aerospace research activities, mature regulatory infrastructure, and investments in innovative aircraft technologies are encouraging the development and adoption of reliable, efficient, and advanced actuation and hydraulic solutions.

Region with highest CAGR:

Over the forecast period, the Asia-Pacific region is anticipated to exhibit the highest CAGR. Expanding aviation fleets, developing regional aircraft manufacturing bases, and increasing military modernization initiatives are contributing to this momentum. Major aerospace markets, including China, India, Japan, and South Korea, are strengthening production capabilities and investing in aviation infrastructure. At the same time, greater deployment of advanced flight-control technologies and increasingly electrified aircraft systems is encouraging demand for innovative actuation and hydraulic equipment. These developments are expected to reinforce Asia-Pacific's position as a key high-growth regional market.

Key players in the market

Some of the key players in Aerospace Actuation & Hydraulic Systems Market include Liebherr-Aerospace Lindenberg GmbH, Moog Inc., Parker Aerospace, Safran Electronics & Defense, Triumph Actuation Products & Services, Woodward HRT, Curtiss-Wright Flight Systems, Arkwin Industries Inc., Whippary Actuation Systems, CESA, GE Aviation, Electromech Technologies, Young & Franklin Tactair, Astronics Corporation, Crane Aerospace & Electronics, ITT Corporation, Kollmorgen Aerospace & Defense and MECAR Aviation Group.

Key Developments:

In July 2026, Moog Inc. announced at the Farnborough International Airshow, the signing of an agreement with AIDC extending their exclusive distribution rights for Moog's military aircraft products in Taiwan through 2031, further strengthening the companies' long-standing partnership. The agreement builds on a successful collaboration that began in 2024 and capitalizes upon AIDC's strong track record supporting Taiwan's defense sector.

In June 2026, GE Aerospace and Wolfspeed Inc. announced they have entered into a

Memorandum of Understanding to collaborate on high-voltage silicon carbide technology for industrial, aerospace and defense markets. Under the agreement, the companies plan to develop standards for high-voltage silicon carbide-based power modules to support solid-state transformers, industrial electrification, and aerospace and defense platforms.

Components Covered:

Pumps

Valves

Reservoirs

Actuators

Power Control Units

Sensors & Electronics

Aircraft Types Covered:

Commercial Aircraft

Military Aircraft

Business Jets

Helicopters

UAVs (Unmanned Aerial Vehicles)

System Types Covered:

Actuation Systems

Hydraulic Systems

Applications Covered:

Flight Control Systems

Landing Gear Systems

Braking Systems

Engine Control Systems

Auxiliary Systems

End Users Covered:

OEM (Original Equipment Manufacturer)

Aftermarket

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

Market share assessments for the regional and country-level segments

Strategic recommendations for the new entrants

Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

Strategic recommendations in key business segments based on the market estimations

Competitive landscaping mapping the key common trends

Company profiling with detailed strategies, financials, and recent developments

Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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