

Aircraft Hydraulic Systems Market Forecasts to 2034 – Global Analysis By Component (Pumps, Reservoirs, Valves, Accumulators and Other Components), System Type, Platform, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Aircraft Hydraulic Systems Market is accounted for \$3.29 billion in 2026 and is expected to reach \$8.74 billion by 2034 growing at a CAGR of 13.2% during the forecast period. Aircraft Hydraulic Systems use fluid pressure to power critical aircraft functions such as landing gear, brakes, flight control surfaces, and steering. These systems provide reliable and efficient force transmission, enabling precise control and operation. Hydraulic systems are essential for both commercial and military aircraft. Advances focus on improving reliability, reducing weight, and enhancing efficiency. Increasing aircraft production and demand for maintenance and upgrades are driving growth in this market.

Market Dynamics:

Driver:

Essential role flight control operations

Hydraulic systems provide the necessary power density to operate critical aircraft functions such as landing gear, brakes, and primary flight controls. Their proven reliability under extreme operating conditions ensures continued adoption across commercial and military fleets. The ability to deliver precise control and responsiveness makes hydraulic systems indispensable. As aircraft designs evolve, hydraulic systems remain a core component of safe and efficient flight operations.

Restraint:

High maintenance and repair costs

Hydraulic systems require regular inspection and servicing to prevent fluid leaks and ensure performance. The complexity of components such as pumps, actuators, and valves increases maintenance expenses. Airlines face additional costs related to downtime during repairs. Environmental concerns regarding hydraulic fluid disposal also add to operational challenges. These factors collectively limit the pace of adoption and modernization.

Opportunity:

Integration with modern aircraft designs

Advanced closed-center configurations are being adopted to improve efficiency and reduce fluid consumption. Hybrid systems combining hydraulic and electric actuation enhance performance while lowering weight. OEMs are designing next-generation aircraft with optimized hydraulic layouts to support automation and digital monitoring. The ability to integrate seamlessly with avionics and flight control systems strengthens the role of hydraulics in future platforms. This ensures continued relevance despite competition from alternative technologies.

Threat:

Shift toward electric actuation systems

Electromechanical actuators offer weight savings, reduced maintenance, and improved energy efficiency. Airlines and OEMs are increasingly exploring more-electric aircraft concepts, which minimize reliance on hydraulic systems. Regulatory emphasis on sustainability further supports the transition to electric alternatives. As adoption of electric actuation accelerates, hydraulic systems face pressure to justify their cost and complexity. This competitive shift challenges long-term market growth.

Covid-19 Impact:

The Covid-19 pandemic disrupted the aircraft hydraulic systems market through reduced aircraft deliveries and delayed retrofit programs. Airlines postponed

investments in hydraulic system upgrades to conserve capital. Supply chain disruptions affected the availability of critical components, slowing production cycles. However, recovery in passenger traffic has reignited demand for reliable hydraulic systems. The pandemic also accelerated interest in predictive maintenance and digital monitoring to reduce downtime. These shifts are expected to reshape adoption trends in the post-pandemic era.

The closed-center systems segment is expected to be the largest during the forecast period

The closed-center systems segment is expected to account for the largest market share during the forecast period as they offer significant operational advantages over open-center systems. Airlines and OEMs prefer closed-center designs for their ability to reduce energy losses and improve system longevity. Their compatibility with advanced avionics and flight control systems further strengthens adoption. The balance of efficiency, reliability, and cost-effectiveness ensures that closed-center systems remain the preferred choice across global fleets.

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

Over the forecast period, the braking systems segment is predicted to witness the highest growth rate due to increasing emphasis on safety and operational efficiency. Airlines are prioritizing braking system upgrades to meet stringent regulatory standards. The integration of advanced hydraulic braking solutions enhances aircraft performance during critical landing phases. Rising fleet sizes across commercial and regional aircraft further boost demand. As braking systems remain essential for safe operations, this segment will expand rapidly in the coming years.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share owing to its strong aerospace industry base. The presence of major OEMs and suppliers ensures steady demand for hydraulic systems. Continuous investments in defense aircraft programs further reinforce regional growth. Airlines in the U.S. and Canada are actively modernizing fleets, supporting adoption of advanced hydraulic technologies. Regulatory emphasis on safety and performance also contributes to North America's leadership position.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by rapid fleet expansion and rising passenger traffic. Countries such as China, India, and Southeast Asia are witnessing strong growth in air travel. Airlines in the region are investing heavily in new aircraft deliveries, boosting demand for hydraulic systems. The rise of low-cost carriers further accelerates adoption of cost-effective solutions. With expanding middle-class populations and increasing disposable incomes, Asia Pacific will remain the fastest-growing regional market.

Key players in the market

Some of the key players in Aircraft Hydraulic Systems Market include Parker Hannifin Corporation, Eaton Corporation plc, Safran S.A., Honeywell International Inc., Collins Aerospace, Moog Inc., Woodward, Inc., Liebherr Group, Triumph Group, Inc., Crane Aerospace & Electronics, Arkwin Industries, Precision Fluid Controls, Hydraulics International, Inc., GKN Aerospace and Meggitt PLC.

Key Developments:

In March 2026, Honeywell officially launched a private offering of \$16 billion in senior notes to finance the planned spin-off of its Aerospace division into an independent entity. This strategic launch positions the new Honeywell Aerospace Inc. to focus exclusively on mission-critical control systems, including its market-leading aircraft hydraulic and thermal management portfolios.

In August 2024, Triumph Group announced the successful testing of its new high-pressure hydraulic pumps designed specifically for GE's next-generation military engine programs. This technical collaboration utilizes Triumph's proprietary intellectual property to reduce engine fuel burn and extend the mission range of advanced combat aircraft.

Components Covered:

Pumps

Reservoirs

Valves

Accumulators

Other Components

System Types Covered:

Open-Center Systems

Closed-Center Systems

Power-by-Wire Systems

Platforms Covered:

Commercial Aircraft

Military Aircraft

Helicopters

Business Jets

UAVs

Applications Covered:

Flight Control Systems

Landing Gear Systems

Braking Systems

Cargo Handling Systems

Other Applications

End Users Covered:

OEMs

MRO Providers

Airlines

Defense Organizations

Other End Users

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

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL AIRCRAFT HYDRAULIC SYSTEMS MARKET, BY COMPONENT

- 5.1 Pumps
- 5.2 Reservoirs
- 5.3 Valves
- 5.4 Accumulators
- 5.5 Other Components

6 GLOBAL AIRCRAFT HYDRAULIC SYSTEMS MARKET, BY SYSTEM TYPE

- 6.1 Open-Center Systems
- 6.2 Closed-Center Systems
- 6.3 Power-by-Wire Systems

7 GLOBAL AIRCRAFT HYDRAULIC SYSTEMS MARKET, BY PLATFORM

- 7.1 Commercial Aircraft
- 7.2 Military Aircraft
- 7.3 Helicopters
- 7.4 Business Jets
- 7.5 UAVs

8 GLOBAL AIRCRAFT HYDRAULIC SYSTEMS MARKET, BY APPLICATION

- 8.1 Flight Control Systems
- 8.2 Landing Gear Systems
- 8.3 Braking Systems
- 8.4 Cargo Handling Systems
- 8.5 Other Applications

9 GLOBAL AIRCRAFT HYDRAULIC SYSTEMS MARKET, BY END USER

- 9.1 OEMs
- 9.2 MRO Providers
- 9.3 Airlines

9.4 Defense Organizations

9.5 Other End Users

10 GLOBAL AIRCRAFT HYDRAULIC SYSTEMS MARKET, BY GEOGRAPHY

10.1 North America

10.1.1 United States

10.1.2 Canada

10.1.3 Mexico

10.2 Europe

10.2.1 United Kingdom

10.2.2 Germany

10.2.3 France

10.2.4 Italy

10.2.5 Spain

10.2.6 Netherlands

10.2.7 Belgium

10.2.8 Sweden

10.2.9 Switzerland

10.2.10 Poland

10.2.11 Rest of Europe

10.3 Asia Pacific

10.3.1 China

10.3.2 Japan

10.3.3 India

10.3.4 South Korea

10.3.5 Australia

10.3.6 Indonesia

10.3.7 Thailand

10.3.8 Malaysia

10.3.9 Singapore

10.3.10 Vietnam

10.3.11 Rest of Asia Pacific

10.4 South America

10.4.1 Brazil

10.4.2 Argentina

10.4.3 Colombia

10.4.4 Chile

10.4.5 Peru

- 10.4.6 Rest of South America
- 10.5 Rest of the World (RoW)
 - 10.5.1 Middle East
 - 10.5.1.1 Saudi Arabia
 - 10.5.1.2 United Arab Emirates
 - 10.5.1.3 Qatar
 - 10.5.1.4 Israel
 - 10.5.1.5 Rest of Middle East
 - 10.5.2 Africa
 - 10.5.2.1 South Africa
 - 10.5.2.2 Egypt
 - 10.5.2.3 Morocco
 - 10.5.2.4 Rest of Africa

11 STRATEGIC MARKET INTELLIGENCE

- 11.1 Industry Value Network and Supply Chain Assessment
- 11.2 White-Space and Opportunity Mapping
- 11.3 Product Evolution and Market Life Cycle Analysis
- 11.4 Channel, Distributor, and Go-to-Market Assessment

12 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 12.1 Mergers and Acquisitions
- 12.2 Partnerships, Alliances, and Joint Ventures
- 12.3 New Product Launches and Certifications
- 12.4 Capacity Expansion and Investments
- 12.5 Other Strategic Initiatives

13 COMPANY PROFILES

- 13.1 Parker Hannifin Corporation
- 13.2 Eaton Corporation plc
- 13.3 Safran S.A.
- 13.4 Honeywell International Inc.
- 13.5 Collins Aerospace
- 13.6 Moog Inc.
- 13.7 Woodward, Inc.
- 13.8 Liebherr Group

- 13.9 Triumph Group, Inc.
- 13.1 Crane Aerospace & Electronics
- 13.11 Arkwin Industries
- 13.12 Precision Fluid Controls
- 13.13 Hydraulics International, Inc.
- 13.14 GKN Aerospace
- 13.15 Meggitt PLC

List Of Tables

LIST OF TABLES

Table 1 Global Aircraft Hydraulic Systems Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Aircraft Hydraulic Systems Market, By Component (2023–2034) (\$MN)

Table 3 Global Aircraft Hydraulic Systems Market, By Pumps (2023–2034) (\$MN)

Table 4 Global Aircraft Hydraulic Systems Market, By Reservoirs (2023–2034) (\$MN)

Table 5 Global Aircraft Hydraulic Systems Market, By Valves (2023–2034) (\$MN)

Table 6 Global Aircraft Hydraulic Systems Market, By Accumulators (2023–2034) (\$MN)

Table 7 Global Aircraft Hydraulic Systems Market, By Other Components (2023–2034) (\$MN)

Table 8 Global Aircraft Hydraulic Systems Market, By System Type (2023–2034) (\$MN)

Table 9 Global Aircraft Hydraulic Systems Market, By Open-Center Systems (2023–2034) (\$MN)

Table 10 Global Aircraft Hydraulic Systems Market, By Closed-Center Systems (2023–2034) (\$MN)

Table 11 Global Aircraft Hydraulic Systems Market, By Power-by-Wire Systems (2023–2034) (\$MN)

Table 12 Global Aircraft Hydraulic Systems Market, By Platform (2023–2034) (\$MN)

Table 13 Global Aircraft Hydraulic Systems Market, By Commercial Aircraft (2023–2034) (\$MN)

Table 14 Global Aircraft Hydraulic Systems Market, By Military Aircraft (2023–2034) (\$MN)

Table 15 Global Aircraft Hydraulic Systems Market, By Helicopters (2023–2034) (\$MN)

Table 16 Global Aircraft Hydraulic Systems Market, By Business Jets (2023–2034) (\$MN)

Table 17 Global Aircraft Hydraulic Systems Market, By UAVs (2023–2034) (\$MN)

Table 18 Global Aircraft Hydraulic Systems Market, By Application (2023–2034) (\$MN)

Table 19 Global Aircraft Hydraulic Systems Market, By Flight Control Systems (2023–2034) (\$MN)

Table 20 Global Aircraft Hydraulic Systems Market, By Landing Gear Systems (2023–2034) (\$MN)

Table 21 Global Aircraft Hydraulic Systems Market, By Braking Systems (2023–2034) (\$MN)

Table 22 Global Aircraft Hydraulic Systems Market, By Cargo Handling Systems (2023–2034) (\$MN)

Table 23 Global Aircraft Hydraulic Systems Market, By Other Applications (2023–2034)

(\$MN)

Table 24 Global Aircraft Hydraulic Systems Market, By End User (2023–2034) (\$MN)

Table 25 Global Aircraft Hydraulic Systems Market, By OEMs (2023–2034) (\$MN)

Table 26 Global Aircraft Hydraulic Systems Market, By MRO Providers (2023–2034)

(\$MN)

Table 27 Global Aircraft Hydraulic Systems Market, By Airlines (2023–2034) (\$MN)

Table 28 Global Aircraft Hydraulic Systems Market, By Defense Organizations

(2023–2034) (\$MN)

Table 29 Global Aircraft Hydraulic Systems Market, By Other End Users (2023–2034)

(\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) are also represented in the same manner as above.

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