

Aerospace Valves Market Forecasts to 2032 – Global Analysis By Valve Type (Ball Valves, Butterfly Valves, Check Valves, Pressure Relief Valves and Solenoid Valves), Actuation, Aircraft Platform, Operation Mode, Material Type, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Aerospace Valves Market is accounted for \$13.3 billion in 2025 and is expected to reach \$17.7 billion by 2032 growing at a CAGR of 4.1% during the forecast period. Aerospace Valves are specialized mechanical components used in aircraft fluid systems to regulate, control, and direct the flow of gases and liquids under varying pressure and temperature conditions. They are essential for maintaining safety and performance in hydraulic, fuel, pneumatic, and environmental control systems. Designed for high reliability, aerospace valves ensure precise operation in demanding flight environments. Materials and designs are optimized for lightweight construction, durability, and compliance with stringent aviation standards.

According to the International Air Transport Association (IATA), global air travel demand is projected to surpass pre-pandemic levels in 2024, driving increased demand for new aircraft and MRO services, including advanced valve systems.

Market Dynamics:

Driver:

Increasing adoption of advanced hydraulic systems

The growth of the aerospace valves market is significantly driven by the rising adoption

of advanced hydraulic systems. These systems are essential for modern aircraft, enabling the operation of flight controls, landing gear, and other critical functions. The demand for more efficient, reliable, and lightweight hydraulic systems directly increases the need for sophisticated aerospace valves. As new aircraft designs prioritize fuel efficiency and enhanced performance, the integration of cutting-edge hydraulic components and their corresponding valves becomes a key market driver.

Restraint:

High manufacturing and certification costs

A significant restraint in the aerospace valves market is the high cost associated with manufacturing and certification. The production of these valves requires specialized materials and precision engineering to meet stringent safety and performance standards. Furthermore, the rigorous testing and certification processes mandated by aviation authorities, such as the Federal Aviation Administration (FAA), are time-consuming and expensive. These high costs can act as a barrier for new entrants and can increase the final price of the valves, affecting market growth, especially for smaller-scale aircraft programs.

Opportunity:

Rising defense aircraft modernization initiatives

The market is presented with a major opportunity due to the increasing defense aircraft modernization initiatives globally. As military forces seek to upgrade their aging fleets to enhance capabilities and operational efficiency, there is a growing demand for advanced components, including new valve systems. These modernization programs often involve the replacement of older hydraulic and pneumatic systems with newer, more reliable, and technologically advanced ones, creating a lucrative market for aerospace valve manufacturers.

Threat:

Intense competition from low-cost substitutes

The aerospace valves market faces a threat from intense competition posed by low-cost substitutes. While the market for certified aerospace valves is highly specialized, in certain aftermarket and MRO (Maintenance, Repair, and Overhaul) segments,

competition from unorganized local or non-certified manufacturers can pose a threat. These low-cost alternatives, though not always meeting the same safety and quality standards, can attract customers seeking to reduce maintenance costs, which could lead to a loss of market share for established players.

Covid-19 Impact:

The COVID-19 pandemic had a significant negative impact on the aerospace valves market, primarily due to the severe disruption of the global aviation industry. Travel restrictions and reduced air traffic led to a sharp decline in aircraft production and a slowdown in maintenance and overhaul activities. This directly reduced the demand for aerospace valves from both Original Equipment Manufacturers (OEMs) and the aftermarket segment. The pandemic also disrupted supply chains, causing delays in manufacturing and delivery.

The ball valves segment is expected to be the largest during the forecast period

The ball valves segment is expected to account for the largest market share during the forecast period, owing to their widespread use across various aircraft systems. They are known for their simple design, durability, and reliable on/off control, making them a preferred choice for applications in fuel, hydraulic, and pneumatic systems. Their ability to provide a tight shut-off and handle high pressures and temperatures contributes to their dominance in the market.

The pilot-operated valves segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the pilot-operated valves segment is predicted to witness the highest growth rate, impelled by their suitability for high-pressure and high-flow applications. These valves use a smaller pilot valve to control a larger main valve, enabling them to handle extreme conditions more efficiently and precisely. The increasing use of advanced hydraulic and pneumatic systems in next-generation aircraft, which require precise and reliable control, is a key factor driving this segment's growth.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, driven by a booming aviation sector. The region is witnessing a rapid increase in

air passenger traffic, leading to significant aircraft fleet expansion and new aircraft deliveries. Additionally, countries like China and India are increasing their defense spending and have ambitious aircraft manufacturing initiatives, which are further contributing to the region's dominant market position.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the CAGR attributed to its strong and well-established aerospace industry. The presence of major aircraft manufacturers like Boeing and key component suppliers, coupled with consistent government spending on military aircraft modernization, drives significant demand. The region also has a large aging commercial aircraft fleet, which generates a robust aftermarket for MRO services and valve replacements, boosting market growth.

Key players in the market

Some of the key players in Aerospace Valves Market include Eaton Corporation PLC, Safran SE, Woodward, Inc., Triumph Group, Parker Hannifin Corporation, Moog Inc., Meggitt PLC, Porvair PLC, Sitec Aerospace GmbH, Triton Valves Ltd, Marotta Controls Inc., Honeywell International Inc., Collins Aerospace, Curtiss-Wright Corporation, Liebherr Aerospace, Precision Fluid Controls, Inc., United Technologies Corporation (UTC) and Collins Aerospace.

Key Developments:

In August 2025, Eaton Corporation PLC launched a new ultra-lightweight, high-pressure valve series for next-generation aircraft. Constructed from advanced composites, it significantly reduces overall system weight and improves fuel efficiency.

In July 2025, Parker Hannifin Corporation introduced a smart, electrically actuated valve series with integrated health monitoring sensors. This technology enables predictive maintenance, enhancing operational reliability and reducing unscheduled aircraft downtime.

In June 2025, Collins Aerospace announced a new cryogenic flow control valve for sustainable aviation fuel (SAF) systems. This innovation is critical for managing extreme temperatures and supporting the industry's transition to greener aviation technologies.

Valve Types Covered:

Ball Valves

Butterfly Valves

Check Valves

Pressure Relief Valves

Solenoid Valves

Actuations Covered:

Pilot-Operated Valves

Electro-Hydraulic Actuated Valves

Pneumatically Actuated Valves

Electrically Actuated Valves

Aircraft Platforms Covered:

Commercial Fixed-Wing Aircraft

Regional & Business Jets

Military Aircraft

Helicopters & Rotorcraft

UAVs

Space Vehicles & Launch Systems

Operation Modes Covered:

Stainless Steel Valves

Titanium & Aluminum Valves

Nickel Alloys & Composite Valves

End Users Covered:

OEM

Aftermarket (MRO & Spares)

Tier-1 Suppliers

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & 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 2024, 2025, 2026, 2028, and 2032
- 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

2 PREFACE

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
 - 2.4.1 Data Mining
 - 2.4.2 Data Analysis
 - 2.4.3 Data Validation
 - 2.4.4 Research Approach
- 2.5 Research Sources
 - 2.5.1 Primary Research Sources
 - 2.5.2 Secondary Research Sources
 - 2.5.3 Assumptions

3 MARKET TREND ANALYSIS

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 End User Analysis
- 3.7 Emerging Markets
- 3.8 Impact of Covid-19

4 PORTERS FIVE FORCE ANALYSIS

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

5 GLOBAL AEROSPACE VALVES MARKET, BY VALVE TYPE

- 5.1 Introduction
- 5.2 Ball Valves
- 5.3 Butterfly Valves
- 5.4 Check Valves
- 5.5 Pressure Relief Valves
- 5.6 Solenoid Valves

6 GLOBAL AEROSPACE VALVES MARKET, BY ACTUATION

- 6.1 Introduction
- 6.2 Pilot-Operated Valves
- 6.3 Electro-Hydraulic Actuated Valves
- 6.4 Pneumatically Actuated Valves
- 6.5 Electrically Actuated Valves

7 GLOBAL AEROSPACE VALVES MARKET, BY AIRCRAFT PLATFORM

- 7.1 Introduction
- 7.2 Commercial Fixed-Wing Aircraft
- 7.3 Regional & Business Jets
- 7.4 Military Aircraft
- 7.5 Helicopters & Rotorcraft
- 7.6 UAVs
- 7.7 Space Vehicles & Launch Systems

8 GLOBAL AEROSPACE VALVES MARKET, BY OPERATION MODE

- 8.1 Introduction
- 8.2 On/Off (Isolation) Valves
- 8.3 Modulating / Control Valves

9 GLOBAL AEROSPACE VALVES MARKET, BY MATERIAL TYPE

- 9.1 Introduction
- 9.2 Stainless Steel Valves
- 9.3 Titanium & Aluminum Valves
- 9.4 Nickel Alloys & Composite Valves

10 GLOBAL AEROSPACE VALVES MARKET, BY END USER

- 10.1 Introduction
- 10.2 OEM
- 10.3 Aftermarket (MRO & Spares)
- 10.4 Tier-1 Suppliers

11 GLOBAL AEROSPACE VALVES MARKET, BY GEOGRAPHY

- 11.1 Introduction
- 11.2 North America
 - 11.2.1 US
 - 11.2.2 Canada
 - 11.2.3 Mexico
- 11.3 Europe
 - 11.3.1 Germany
 - 11.3.2 UK
 - 11.3.3 Italy
 - 11.3.4 France
 - 11.3.5 Spain
 - 11.3.6 Rest of Europe
- 11.4 Asia Pacific
 - 11.4.1 Japan
 - 11.4.2 China
 - 11.4.3 India
 - 11.4.4 Australia
 - 11.4.5 New Zealand
 - 11.4.6 South Korea
 - 11.4.7 Rest of Asia Pacific
- 11.5 South America
 - 11.5.1 Argentina
 - 11.5.2 Brazil
 - 11.5.3 Chile
 - 11.5.4 Rest of South America
- 11.6 Middle East & Africa
 - 11.6.1 Saudi Arabia
 - 11.6.2 UAE
 - 11.6.3 Qatar
 - 11.6.4 South Africa

11.6.5 Rest of Middle East & Africa

12 KEY DEVELOPMENTS

12.1 Agreements, Partnerships, Collaborations and Joint Ventures

12.2 Acquisitions & Mergers

12.3 New Product Launch

12.4 Expansions

12.5 Other Key Strategies

13 COMPANY PROFILING

13.1 Eaton Corporation PLC

13.2 Safran SE

13.3 Woodward, Inc.

13.4 Triumph Group

13.5 Parker Hannifin Corporation

13.6 Moog Inc.

13.7 Meggitt PLC

13.8 Porvair PLC

13.9 Sitec Aerospace GmbH

13.10 Triton Valves Ltd

13.11 Marotta Controls Inc.

13.12 Honeywell International Inc.

13.13 Collins Aerospace

13.14 Curtiss-Wright Corporation

13.15 Liebherr Aerospace

13.16 Precision Fluid Controls, Inc.

13.17 United Technologies Corporation (UTC)

List Of Tables

LIST OF TABLES

- Table 1 Global Aerospace Valves Market Outlook, By Region (2024-2032) (\$MN)
- Table 2 Global Aerospace Valves Market Outlook, By Valve Type (2024-2032) (\$MN)
- Table 3 Global Aerospace Valves Market Outlook, By Ball Valves (2024-2032) (\$MN)
- Table 4 Global Aerospace Valves Market Outlook, By Butterfly Valves (2024-2032) (\$MN)
- Table 5 Global Aerospace Valves Market Outlook, By Check Valves (2024-2032) (\$MN)
- Table 6 Global Aerospace Valves Market Outlook, By Pressure Relief Valves (2024-2032) (\$MN)
- Table 7 Global Aerospace Valves Market Outlook, By Solenoid Valves (2024-2032) (\$MN)
- Table 8 Global Aerospace Valves Market Outlook, By Actuation (2024-2032) (\$MN)
- Table 9 Global Aerospace Valves Market Outlook, By Pilot-Operated Valves (2024-2032) (\$MN)
- Table 10 Global Aerospace Valves Market Outlook, By Electro-Hydraulic Actuated Valves (2024-2032) (\$MN)
- Table 11 Global Aerospace Valves Market Outlook, By Pneumatically Actuated Valves (2024-2032) (\$MN)
- Table 12 Global Aerospace Valves Market Outlook, By Electrically Actuated Valves (2024-2032) (\$MN)
- Table 13 Global Aerospace Valves Market Outlook, By Aircraft Platform (2024-2032) (\$MN)
- Table 14 Global Aerospace Valves Market Outlook, By Commercial Fixed-Wing Aircraft (2024-2032) (\$MN)
- Table 15 Global Aerospace Valves Market Outlook, By Regional & Business Jets (2024-2032) (\$MN)
- Table 16 Global Aerospace Valves Market Outlook, By Military Aircraft (2024-2032) (\$MN)
- Table 17 Global Aerospace Valves Market Outlook, By Helicopters & Rotorcraft (2024-2032) (\$MN)
- Table 18 Global Aerospace Valves Market Outlook, By UAVs (2024-2032) (\$MN)
- Table 19 Global Aerospace Valves Market Outlook, By Space Vehicles & Launch Systems (2024-2032) (\$MN)
- Table 20 Global Aerospace Valves Market Outlook, By Operation Mode (2024-2032) (\$MN)
- Table 21 Global Aerospace Valves Market Outlook, By On/Off (Isolation) Valves

(2024-2032) (\$MN)

Table 22 Global Aerospace Valves Market Outlook, By Modulating / Control Valves (2024-2032) (\$MN)

Table 23 Global Aerospace Valves Market Outlook, By Material Type (2024-2032) (\$MN)

Table 24 Global Aerospace Valves Market Outlook, By Stainless Steel Valves (2024-2032) (\$MN)

Table 25 Global Aerospace Valves Market Outlook, By Titanium & Aluminum Valves (2024-2032) (\$MN)

Table 26 Global Aerospace Valves Market Outlook, By Nickel Alloys & Composite Valves (2024-2032) (\$MN)

Table 27 Global Aerospace Valves Market Outlook, By End User (2024-2032) (\$MN)

Table 28 Global Aerospace Valves Market Outlook, By OEM (2024-2032) (\$MN)

Table 29 Global Aerospace Valves Market Outlook, By Aftermarket (MRO & Spares) (2024-2032) (\$MN)

Table 30 Global Aerospace Valves Market Outlook, By Tier-1 Suppliers (2024-2032) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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