

Aircraft Braking Systems Market Forecasts to 2034 – Global Analysis By Component (Wheels, Brake Discs, Brake Housing, Valves, Actuators, Accumulators, Electronics & Control Units, and Other Components), Actuation Type, Aircraft Type, Fit Type, Material Type, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Aircraft Braking Systems Market is accounted for \$10.1 billion in 2026 and is expected to reach \$16.4 billion by 2034, growing at a CAGR of 5.6% during the forecast period. Aircraft braking systems are critical safety mechanisms designed to decelerate and stop an aircraft during landing, rejected takeoff, and ground operations. These systems convert the aircraft's kinetic energy into heat through friction or electrical resistance, enabling controlled speed reduction and directional stability. Integrated with advanced technologies such as anti-skid control, autobraking, and brake-by-wire systems, aircraft braking systems enhance operational efficiency, reduce stopping distance, minimize tire wear, and ensure safe maneuvering under diverse runway and weather conditions.

Market Dynamics:

Driver:

Increasing global air passenger traffic

As airlines expand their fleets to accommodate more passengers on both existing and new routes, aircraft manufacturers like Boeing and Airbus are ramping up production. This surge in new aircraft deliveries directly fuels the demand for advanced, high-

performance braking systems as original equipment. Furthermore, higher aircraft utilization rates lead to more frequent landings, accelerating the need for maintenance, repairs, and eventual replacement of brakes in the aftermarket, ensuring a robust and continuous demand stream for braking system manufacturers.

Restraint:

High costs of advanced braking materials and maintenance

For aircraft operators, this represents a substantial capital expenditure. Additionally, the maintenance, repair, and overhaul (MRO) of these sophisticated systems require specialized expertise and equipment, leading to high operational expenses. Smaller airlines or those in cost-sensitive markets may find these costs prohibitive, potentially delaying necessary upgrades or opting for less advanced, but more affordable, steel brake alternatives. This cost sensitivity can restrain the widespread adoption of newer, more efficient braking technologies across the entire market.

Opportunity:

Growing demand for lightweight and efficient braking solutions

Carbon brakes, which are significantly lighter than traditional steel brakes, offer substantial fuel savings over an aircraft's lifecycle and allow for greater cargo or passenger capacity. Ongoing innovation in materials science, such as the development of carbon-ceramic composites, promises even greater performance, durability, and weight reduction. As fuel costs remain a primary concern and environmental regulations tighten, airlines are increasingly incentivized to retrofit their existing fleets and specify lightweight brakes on new aircraft orders, presenting a lucrative avenue for market growth and technological differentiation.

Threat:

Supply chain complexities and raw material volatility

The production of key components relies on a steady supply of specialized raw materials, including carbon fibers, ceramics, and high-grade steels and alloys. Geopolitical tensions, trade disputes, or logistical bottlenecks can lead to shortages and price volatility for these critical inputs. Furthermore, the sector depends on a network of specialized sub-tier suppliers for precision-engineered parts. Any disruption, such as a

natural disaster or financial instability at a key supplier, can have a cascading effect, halting production lines for major system integrators and delaying deliveries to aircraft manufacturers and airlines.

Covid-19 Impact:

The COVID-19 pandemic caused an unprecedented downturn in global air travel, leading to widespread fleet groundings and a sharp decline in new aircraft orders. This severely impacted the line-fit segment of the aircraft braking market. However, the aftermarket segment faced a mixed impact; while flight reductions lowered the wear-and-tear on brakes, parked aircraft required preservation maintenance. As the industry recovers, the pandemic has accelerated the focus on operational efficiency and cost reduction, boosting interest in durable, low-maintenance brakes. It also highlighted the need for resilient and localized supply chains to mitigate future global disruptions, prompting manufacturers to reassess their sourcing and production strategies.

The brake discs segment is expected to be the largest during the forecast period

The brake discs segment is expected to account for the largest market share during the forecast period, driven by their role as the primary consumable component in any braking system. These discs, whether constructed from carbon or steel, endure immense thermal and mechanical stress during every landing and rejected takeoff, necessitating frequent inspection and replacement. As global flight cycles increase, the demand for replacement discs in the aftermarket surges.

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

Over the forecast period, the aftermarket segment is predicted to witness the highest growth rate, driven by the expanding global aircraft fleet and rising utilization rates. As aircraft age, the frequency of maintenance, repair, and overhaul (MRO) activities intensifies, creating sustained demand for replacement brakes, discs, and overhaul services. Airlines are increasingly outsourcing MRO to specialized providers to reduce costs and improve operational efficiency.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, due to its status as a leader in aviation technology and innovation. The

United States, home to major OEMs and a vast network of suppliers, is at the forefront of developing next-generation braking materials and systems. A large and mature fleet of commercial and general aviation aircraft creates a robust and continuous demand for aftermarket parts and upgrades. Strong defense spending ensures consistent procurement of advanced military aircraft and related systems.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, fueled by the world's fastest-growing air passenger traffic and the rapid expansion of its airline fleets. Countries like China and India are witnessing a surge in new aircraft orders to meet domestic and international travel demand. This is accompanied by significant investments in new airports and the modernization of existing aviation infrastructure.

Key players in the market

Some of the key players in Aircraft Braking Systems Market include Honeywell International Inc., Lufthansa Technik AG, Safran Landing Systems, AAR Corp., Collins Aerospace, Jay-Em Aerospace & Machine Inc., Parker Hannifin Corporation, Matco Manufacturing Inc., Crane Aerospace & Electronics, Grove Aircraft Braking Systems Inc., Meggitt PLC, Beringer Aero, Moog Inc., Triumph Group, Inc., and Eaton Corporation plc.

Key Developments:

In February 2026, Honeywell announced that it has entered into an amended agreement to acquire Johnson Matthey's Catalyst Technologies business segment, which adjusts the total consideration from \$1.8 billion to \$1.325 billion and extends the long stop date to July 21, 2026. In the event that any of the regulatory approvals are not satisfied by the long stop date, the long stop date may be extended to August 21, 2026, if certain conditions are met.

In October 2025, Eaton announces the start of construction on the first phase of its new 36,000 square meter sustainable facility for advanced manufacturing, engineering and training in Dubai, UAE, in collaboration with Jebel Ali Free Zone (Jafza), the flagship free zone of DP World. This milestone underscores Dubai's commitment, as laid out in its D33 strategy, to high-tech industrial growth and its emergence as a global hub for manufacturing and innovation.

Components Covered:

Wheels

Brake Discs

Brake Housing

Valves

Actuators

Accumulators

Electronics & Control Units

Other Components

Actuation Types Covered:

Power Brake Systems

Boosted Brake Systems

Independent Brake Systems

Aircraft Types Covered:

Fixed Wing Aircraft

Rotary Wing Aircraft

Unmanned Aerial Vehicles (UAVs)

Fit Types Covered:

Line Fit

Retrofit

Material Types Covered:

Carbon Brakes

Steel Brakes

Carbon-Ceramic

End Users Covered:

Original Equipment Manufacturer (OEM)

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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