

# **Aircraft AFP/ATL Composites Market by Aircraft Type (Narrow-Body Aircraft, Wide-Body Aircraft, Regional Aircraft, General Aviation, Helicopter and Military Aircraft), by Application Type (Airframe, Engine Applications, Flight Control Surfaces, and Others), by Fiber Type (Glass Fiber Composites, Carbon Fiber Composites, and Aramid Fiber Composites), by Automation Type (Automated Fiber Placement and Automated Tape Layup), and by Region (North America, Europe, Asia-Pacific, and Rest of the World), Trend, Forecast, Competitive Analysis, and Growth Opportunity: 2019-2024**

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## **Abstracts**

This report, from Stratview Research, studies the global aircraft AFP/ATL composites market over the trend period from 2013 to 2018 and forecast period from 2019 to 2024. The report provides detailed insights into the market dynamics to enable informed business decision making and growth strategy formulation based on the opportunities present in the market.

### **Aircraft AFP/ATL Composites Market: Highlights**

Composite materials have earned a reputed image in the aerospace industry owing to their excellent track record of more than five decades. Due to such incredible properties of composites compared to other materials, Boeing and Airbus scrupulously started investing in these materials in the critical section of an aircraft including airframe. As a

result, the next-generation aircraft: B787 and A350XWB, contain composites in more than 50% of the total structural weight. Composites industry stakeholders are trying to capitalize on the success story of aerospace composites for other industries as well. Several advancements in technologies and materials have gradually been brought in place in order to increase the penetration of composites to such a high level in the next-generation aircraft. Among many advancements, we believe, automation in the layup process is of paramount importance as a skilled technician can only lay up 2.5 lbs. of prepreg manually in an hour, whereas, with the help of AFP/ATL process, prepreg can be laid at more than 50 lbs. per hour.

The global aircraft AFP/ATL composites market is projected to grow at an impressive rate over the next five years to reach US\$ 4,005.1 million in 2024. Increasing production rates of the next-generation composite-rich aircraft A350XWB, B787, and F-35; introduction of fuel-efficient variants of the best-selling aircraft with a greater composites content; A320neo and B737 max; Increasing preference of AFP/ATL process for fabricating critical aerospace composite parts; superior benefits of AFP/ATL over the hand layup process; and rising demand for faster production of composite parts in order to produce a large number of aircraft to meet huge order backlogs are giving an impetus to the growth of AFP/ATL composites in the aerospace industry.

AFP/ATL process enables companies to develop lightweight components with increased durability and shorter processing time. Additionally, AFP/ATL-based composite components also do not get damaged easily; thus, help aircraft manufacturers as well as tier players to reduce their repair cost. These advantages are bolstering the demand for AFP/ATL composites which are continuously replacing traditional hand laid composite parts or metal-cast and stamped parts.

Airbus and Boeing, the two aircraft industry giants, are enjoying a huge order backlog of their major aircraft platforms. Boeing and Airbus had a combined order backlog of 13,379 commercial aircraft by the August 2018. This huge pile of order backlogs will allow both the airframers to roll out their aircraft continuously for the next nine years at current build rates. However, they have strategically been raising the production rates of their key commercial aircraft programs in order to deliver aircraft to their widespread clients at a shorter period. This is generating enormous pressure in the supply chain including tier players to develop parts swiftly in order to meet the expectation of OEMs. Here, AFP/ATL proves to be a game-changing technology as it helps laying up prepreps at a very fast rate with excellent dimensional control; helping tier players to develop parts in stipulated time. It is being noted that all the major tier players have been switching towards AFP/ATL process.

Another trend, which will have a mammoth impact on the supply chain of the market is the recent announcement made by Boeing and Airbus about developing major parts in-house. This is likely to draw a significant impact on the business of tier players in the long run. For instance; Boeing's upcoming wide-body aircraft B777x's wings spars will be manufactured by Boeing itself.

The global aircraft AFP/ATL composites market is segmented based on the aircraft type as Narrow-Body Aircraft, Wide-Body Aircraft, Regional Aircraft, General Aviation, Helicopter, and Military Aircraft. Wide-body aircraft are likely to remain the growth engines of the market during the forecast period. Increasing production rates of the next-generation aircraft programs A350XWB and B787 and increasing penetration of composites in newer variants of aircraft, such as B777x, are driving the wide-body aircraft segment. Military aircraft segment is driven by Lockheed Martin F-35 aircraft whose production rate is also increasing with a target of 160 aircraft per annum by 2023.

Based on the application type, airframe is likely to remain the most dominant segment during the forecast period, whereas engine components are likely to remain the fastest-growing segment in the same period. Increasing composite content in the latest turbofan engines will continue to drive the demand for lightweight AFP/ATL composites in the engine segment in the foreseen future. Similarly, fuselage and wing sections of both next-generation aircraft (B787 and A350XWB) are made using advanced composites fabricated through AFP/ATL process.

Based on the fiber type, carbon fiber composite is projected to remain the most dominant as well as the fastest-growing fiber type market over the next five years. Carbon fiber composite offers numerous advantages, such as high strength-to-weight ratio, high tensile and compressive strength, low coefficient of thermal expansion, and high fatigue resistance at lower weight over counterpart glass fiber composites.

Based on regions, North America is projected to remain the largest as well as the fastest-growing market during the forecast period, driven by the world's largest aircraft OEM, Boeing. The USA is likely to remain the growth engine of the region's market during the forecast period, driven by all the assembly plants of Boeing as well as Lockheed Martin in the country.

Europe is also likely to witness a healthy growth momentum in the coming eons as Airbus, the leading commercial aircraft maker, has incessantly been raising the

production rates of A320 and A350XWB. Also, the region has a good capacity of producing helicopters with the presence of Airbus Helicopters and Russian Helicopters. France, Germany, Russia, and the UK are likely to remain the powerhouses of the region's market in the coming years.

Asia-Pacific currently represents a relatively small growth opportunity; however, is subjected to grow at a handsome rate in the coming years, driven by China, Japan, and India. China and Japan are projected to remain the major markets in the region; however, India is anticipated to be the new growth engine of the region's market. Major Indian conglomerates are increasingly participating in the market with an aim to get the leadership position in India.

The supply chain of this market comprises raw material suppliers, prepreg suppliers, AFP/ATL component manufacturers, tier player, aircraft OEMs, airlines, aircraft leasing companies, and MRO companies. Some of the key players in the aircraft AFP/ATL composites market are Spirit AeroSystems, Premium Aerotech, Kawasaki Heavy Industries, Leonardo S.p.A, Triumph Aerostructures, Mitsubishi Heavy Industries, The Boeing Company, Airbus Group, GKN Aerospace, Bombardier Aerospace, and UTC Aerospace System. The key aircraft OEMs include Boeing, Airbus, Bombardier, Embraer, COMAC, Lockheed Martin, Dassault Aviation, and Gulfstream Aerospace.

### Research Methodology

This report offers high-quality insights and is the outcome of detailed research methodology comprising extensive secondary research, rigorous primary interviews with industry stakeholders and validation and triangulation with Stratview Research's internal database and statistical tools. More than 700 authenticated secondary sources, such as company annual reports, fact book, press release, journals, investor presentation, white papers, patents, and articles have been leveraged to gather the data. We conducted more than 10 detailed primary interviews with the market players across the value chain in all four regions and industry experts to obtain both qualitative and quantitative insights.

### Report Features

This report provides market intelligence in the most comprehensive way. The report structure has been kept such that it offers maximum business value. It provides critical insights into the market dynamics and will enable strategic decision making for the existing market players as well as those willing to enter the market. The following are the key features of the report:

Market structure: Overview, industry life cycle analysis, supply chain analysis

Market environment analysis: Growth drivers and constraints, Porter's five forces analysis, SWOT analysis

Market trend and forecast analysis

Market segment trend and forecast

Competitive landscape and dynamics: Market share, Product portfolio, New product launches, etc.

Attractive market segments and associated growth opportunities

Emerging trends

Strategic growth opportunities for the existing and new players

Key success factors

The global aircraft AFP/ATL composites market is segmented into the following categories:

Aircraft AFP/ATL Composites Market, by Aircraft Type

Narrow-Body Aircraft (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Wide-Body Aircraft (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Regional Aircraft (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

General Aviation (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Helicopter (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Military Aircraft (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Aircraft AFP/ATL Composites Market, by Application Type

Airframe (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Flight Control Surfaces (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Engine (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Others (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Aircraft AFP/ATL Composites Market, by Fiber Type

Glass Fiber Composites (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Carbon Fiber Composites (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Aramid Fiber Composites (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

Aircraft AFP/ATL Composites Market, by Automation Type

Automated Fiber Placement (AFP) (Regional Analysis: North America, Europe, Asia-Pacific, and RoW)

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Aircraft AFP/ATL Composites Market, By Region

North America (Country Analysis: The USA, Canada, and Mexico)

Europe (Country Analysis: France, Germany, the UK, Russia, and Rest of Europe)

Asia-Pacific (Country Analysis: China, Japan, Singapore, and Rest of Asia-Pacific)

Rest of the World (Sub-Region Analysis: Latin America, the Middle East, and Others)

Report Customization Options

With this detailed report, Stratview Research offers one of the following free customization options to our respectable clients:

Company Profiling

Detailed profiling of additional market players (up to 3 players)

SWOT analysis of key players (up to 3 players)

Market Segmentation

Current market segmentation of any one of the applications by fiber type

Competitive Benchmarking

Benchmarking of key players on the following parameters: Product portfolio, geographical reach, regional presence, and strategic alliances

Custom Research: Stratview Research offers custom research services across sectors.

In case of any custom research requirement related to market assessment, competitive benchmarking, sourcing and procurement, target screening, and others, please send your inquiry at [sales@stratviewresearch.com](mailto:sales@stratviewresearch.com)

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