ALBANY

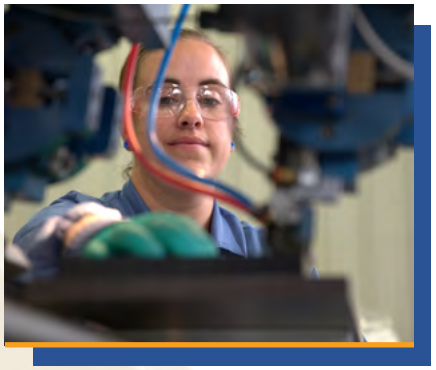
Engineered Composites

MATERIALLY DIFFERENT

ADVANCED COMPOSITES REDEFINED

THE ALBANY ADVANTAGE

From first concept of a new program or requirement to last part shipped in support of it, Albany Engineered Composites (AEC) is our customers' first choice provider for innovative technology and assembly solutions.



PROVEN PERFORMANCE – A PARTNER YOU CAN COUNT ON

- The largest global supplier of aerospace RTM components.
- Operational excellence backed by a single quality system across 11 facilities in 4 countries.

INNOVATION

AEC is innovating across the full spectrum of composite and multi-material design solutions to deliver unparalleled performance, rapid industrialization, and affordability. Sustainable by design with lighter parts, lower energy processes, and recycling material initiatives to help customers meet stricter efficiency and environmental targets.

Dedicated Research & Development facilities in US and Europe

4% Annual Revenue Reinvestment in New Technology

Capabilities range from concept development to low-rate production

SINGULAR FOCUS, GLOBAL REACH

Composite materials and assembly solutions are all we do - so response times are faster, knowledge is deeper and scalability is assured. With 11 modern facilities in 4 countries, all under the same quality and management systems, we provide customers with superior consistency, manufacturing redundancy, co-location opportunities, and outstanding flexibility.

WORLD CLASS TALENT AND CULTURE

Our most important attribute. If you speak to our customers and suppliers, they will tell you what we already know that our Albany culture is special. Internally and externally, we build relationships grounded in mutual respect, open communication, and long-term commitment the foundation of sustained competitive advantage.

PERFORMANCE

AEC is synonymous with best-in-class quality and delivery on the most challenging programs such as LEAP, F-35, 787, CH-53K, JASSM and more.

COMMERCIAL BENEFITS

OUTCOMES FIRST

Your Challenge	Commercial Benefit	Enabling Capability
Cut weight & fuel burn	Up to 30 % mass saving vs metals	3-D Weaving · AFP/ATL
Accelerate time-to-market	Parallel design for manufacture/ assembly and digital twins	Engineering & DfM
Assure rate & cost	Automated lay-up, infusion, global manufacturing, redundancy	Over Braiding · RTM · Assembly Integration

CORE CAPABILITIES & TECHNOLOGIES

ENGINEERING & DESIGN FOR MANUFACTURABILITY

AEC's digital tool-set, including proprietary 3D composite tools, link directly with customer PLM to validate stress, weight, cost, and producibility backed through simulation. This process can cut design loops and lower speed to market as exhibited on programs such as the CFM LEAP engine.

3D WOVEN COMPOSITES

Utilizing a proprietary suite of design and fabrication tools, AEC produces near-net-shape through thickness reinforced composite preforms that eliminate delamination failures and integrate component features. The industrialised processes were proven on the CFM LEAP engine and are being expanded across multiple commercial and defense applications.

HIGH TEMPERATURE COMPOSITES

Carbon-carbon and oxide-oxide composite parts are developed in dedicated research and low rate production facilities to withstand more than 2,300F (1260C) for high temperature applications such as engines, thermal protection systems, and hypersonic structures.

LIQUID RESIN INFUSION

RTM / VARTM / CVM: AEC achieves aerospace quality composite components utilizing multiple liquid resin infusion processes without the need for an autoclave to produce high rates at beneficial economics.

ROBOTIC BRAIDING

Automated braiders form seamless, 3-D hollow preforms for shafts, longerons, and missile skins, reducing scrap and machining while boosting repeatability.

OVER-BRAIDING

Automated braiders form complex shaped preforms to fabricate shafts, ducts, longerons, airfoils, and missile skins. This high rate process allows for significant increases in composite fabrication per hour for complex hollow geometries.

AFP / ATL

Automated placement of both dry and impregnated composite tapes allow for the placement of fiber exactly where the loads and design demands to optimize for weight of highly structural components like skins, spars, and frames.

ASSEMBLY INTEGRATION

Selective use of advanced composite assembly automation allows for a cost effective method of meeting our customers cost and rate targets for critical composite assemblies.

TECHNOLOGY THAT DELIVERS

3-D COMPOSITE STRUCTURES

AEC has industrialized 3-D weaving to create fully integrated composite structures for engines, aerostructures and hypersonic platforms. Near-net-shape preforms with through-thickness reinforcement deliver unmatched structural efficiency.

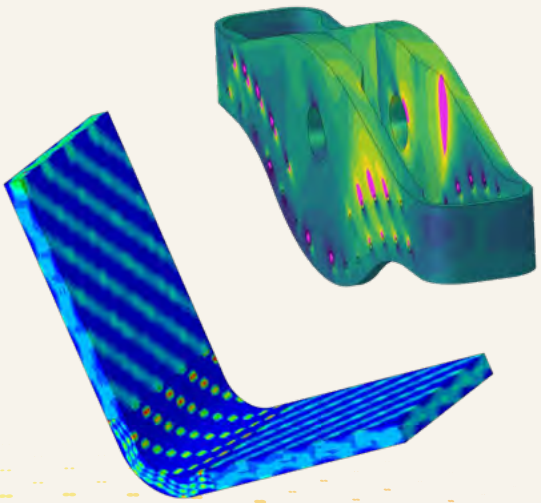
ADVANTAGES

- Tailored, thru-thickness properties
- Eliminates delamination failure modes
- Integrates out-of-plane features (ribs, stiffeners, hard-points)
- Enables unitized designs and reduces mechanical fasteners
- Manufacturing processes are already production-rate proven
- Higher damage tolerance than laminated composites or metals

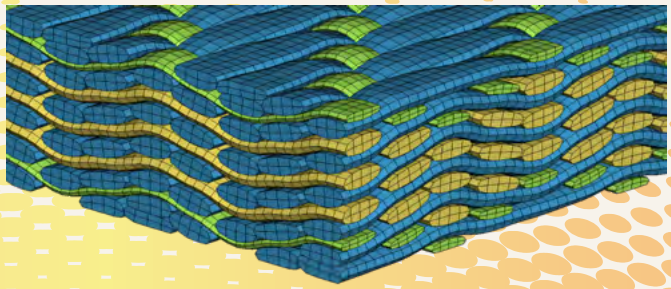
COLLABORATIVE PARTNERSHIP MODEL

AEC is more than a component supplier, we fully integrate our team with yours to speed innovation, design, qualification and rate production.

1. Joint Concept Development & Performance Modelling
2. Cost / Performance Trade Studies
3. Design for Manufacturability & Digital Simulations
4. Material Testing & Qualification Path
5. Design Verification & Inspection
6. Run-at-Rate Validation & Assembly Articles



Result: customers gain a partner they can count on, backed by deep engagement, collaborative technical approaches and flexible investment strategies that keep programs on schedule, on budget and ahead of competition.



PROGRAM SUCCESSES & PARTNERSHIPS

LEAP ENGINE

A key Safran partner, AEC has delivered over 187,000 LEAP fan blades and almost 10,000 fan cases with zero defects / returns

F-35

Supplying 225+ unique composite parts totalling 90,000 + wing skins, lift-fan components and more since inception

BETA ALIA

AEC and Beta have partnered to develop novel design and construction concepts to support this innovative aircraft's production

CH-53K

AEC is producing the integrated assemblies of the tail rotor pylon, aft-transition and sponsons for this next generation heavy-lift helicopter

JASSM

AEC has produced thousands of net-molded braided and infused missile bodies and spars to achieve higher rates, stronger spars, less waste

787

AEC produces the lightweight composite fuselage frames for Sections 41 / 43 / 47 to improve fuel efficiency and reduce assembly time

INDUSTRY-LEADING QUALITY AND DELIVERY PERFORMANCE TO OUR CUSTOMERS

Pratt & Whitney An RTX Business · BOEING · ROLLS ROYCE · SAFRAN · SIKORSKY A LOCKHEED MARTIN COMPANY · LOCKHEED MARTIN · GE Aerospace

GLOBAL LOCATIONS

AEC facilities

1.5 million ft² (140K m²) manufacturing space

Rochester, NH (USA)
Headquarters
Research & Technology Center
Production Facilities
AS9100 Certified

Boerne, TX (USA)
Production Facility
AS9100 and NADCAP Certified

Kaiserslautern, Germany
Production Facility
Research & Technology
AS9100 Certified

Salt Lake City, UT (USA)
Production Facilities
AS9100 and NADCAP Certified

Querétaro, Mexico
Production Facility

Colocated Production with Customer
Rochester, NH (USA)
Commercy, France
Querétaro, Mexico
AS9100 Certified

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