



COMPOSITES

LIGHTWEIGHT AND STRONG

Low-maintenance, low-cost solutions for your aircraft

Collins Composite Center of Excellence designs, tests, manufactures and qualifies a variety of aerospace composite products for aircraft worldwide.

Among our composite products are:

- Fuel pipes
- Fuel isolators
- Hydraulic isolators
- Transmission shafts
- Wing box struts
- Tie rods

Our carbon fiber composite solutions deliver considerable weight reduction over traditional metallic shafts and feature increased durability.

Constructed with a non-conductive glass fiber and an epoxy resin tuned to a specific resistivity, our composite fuel pipes and isolators allow the static charge generated from a lightning strike to dissipate.

Our products require little to no maintenance and are designed to provide low-cost solutions while ensuring high quality and performance.

KEY FEATURES AND BENEFITS

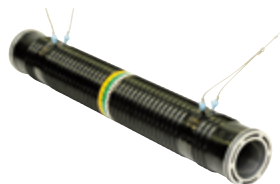
- Reduced weight
- High structural performance
- Tuneable resistivity
- High reliability
- Maintenance free
- Complex curvature
- Integrated design

The expertise to know when composite is the better choice

Whether you need a composite solution for fluid transfer, transmission or structural components, Collins Aerospace can meet your requirements. We offer a Lean manufacturing process with a dedicated research and development team that focuses on driving new technologies – from concept to market – with high customer satisfaction.

Our composite designs can save you significant weight over metallic equivalents. All at a comparable cost that is a result of our automation, Lean manufacturing and low-cost materials processing.

We have developed two highly innovative metal-to-composite joining technologies for the transmission of axial loads. Configuration of the joints comes from our understanding of materials. When the load path and geometry are complex, metal is often advantageous because of its isotropic properties. However, composites can be superior where load paths are aligned with the main fiber direction.



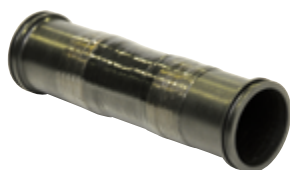
Double wall pipe



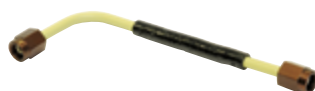
Transmission shaft with flanged end fitting



Torqdisk tripod



Fully composite fuel pipe



Single wall HRF



Composite strut



Automated Production Lines



Automated Fuel Pipe Line

OTHER ACTUATION SYSTEMS CAPABILITIES



Primary – fixed wing

- Elevator
- Aileron
- Rudder
- Spoiler
- Flaperon



Primary – rotorcraft

- Main rotor actuator
- Tail rotor actuator



THSA/HSTA

- Trimmable horizontal stabilizer actuator



High lift

- Power drive unit
- Wing tip brake
- Flap and slat actuators
- Transmission shafts
- Gearbox
- Electronics & Leve



Nacelle actuation

- Thrust reverser actuation system
- Power door opening system



Anti-ice valves

- Butterfly
- In-line poppet
- Pressure regulating
- Engine bleed



Utility actuation

- Weapon bay door drive system
- Wing fold/rotate
- Refuel probe actuator
- Canopy actuator



Missile actuation

- Control actuation system
- Thrust vector actuator



Aftermarket

- 24/7/365 customer support



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