



## 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.

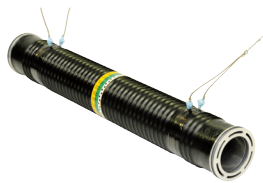
## KEY FEATURES & BENEFITS

- 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.



Double wall pipe



Transmission shaft with flanged end fitting



Torqdisk tripod



Automated Production Lines



Fully composite fuel pipe



Single wall HRF



Composite strut



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



### 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

Specifications subject to change without notice.



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