



## PRIMARY FIXED-WING ACTUATION SYSTEMS

# SAVE WEIGHT, LOWER COSTS

### Large portfolio for commercial and military aircraft

Collins Aerospace brings more than 50 years of flight control experience to customers. We developed the first in-service commercial actuator technologies for fly-by-wire (FBW), electro-hydrostatic actuators (EHA) and electrical back-up hydraulic actuators (EBHA).

With over 10 years of in-service experience supplying EHAs and EBHAs, we have introduced remote electronic unit (REU) actuator technology on recent platforms for local closed loop control and health monitoring.

Collins continues to invest heavily in research and development for more advanced machining and manufacturing solutions. Our large product portfolio supports both commercial and military aircraft. We also offer customized test vertical system integration and iron bird capabilities.

Over  
**10 billion**  
flight hours of  
flight control  
experience

## KEY FEATURES & BENEFITS

- Weight savings
- Increased performance
- Enhanced safety due to increased reliability in highly demanding conditions/environments
- Lower operating life-cycle costs and reduced maintenance costs

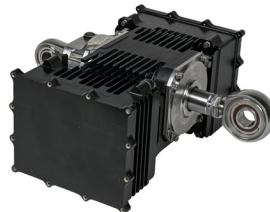
## Advanced primary fixed-wing technology

Collins Aerospace has a large product portfolio created over a long heritage of hydraulic, mechanical and electro-mechanical solutions. We have more than 10 billion flight hours of experience with fly-by-wire actuation systems.

Our fly-by-wire solutions are controlled by servo or direct-drive valves. They use advanced technology for primary flight control actuators used on a range of aircraft – from large commercial, regional and business jets to military fixed-wing platforms.



A380 Rudder EBHA



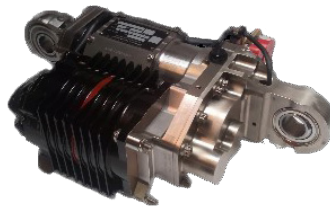
EMA direct drive demo



A380 Elevator EHA



MC-21 Aileron FBW

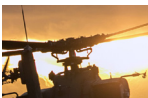


EMA gear drive demo



A320 Elevator FBW

### OTHER ACTUATION SYSTEMS CAPABILITIES



#### Primary-rotocraft

- 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



#### Composites

- Transmission shafts
- Fuel pipes
- Fuel and hydraulic isolators
- Tie rods and struts



#### 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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