



PRIMARY – FIXED-WING ACTUATION SYSTEMS

SAVE WEIGHT, LOWER COSTS

Large portfolio for commercial and military aircraft

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

We have over 10 years of in-service experience supplying EHAs and EBHAs and have introduced SMART actuator technology on recent platforms.

Collins Aerospace continues to invest heavily in research and development for more advanced machining and manufacturing solutions.

We have a large product portfolio supporting both commercial and military aircraft. We also have custom-made test vertical system integration and iron bird capabilities.

KEY FEATURES AND BENEFITS

- Weight savings from product performance with a redundancy of moving parts
- Enhanced safety due to increased reliability in highly demanding conditions/environments
- Lower operating life-cycle costs and reduced maintenance costs from increased reliability



10+ billion flight hours of experience

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.

Fly-by-wire solutions are controlled by servo-valves or direct-drive valves. Fly-by-wire uses 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.



Traditional hydraulic actuator



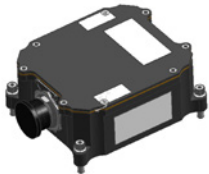
Electro-hydrostatic actuator



Electric backup hydraulic actuator



Electro-mechanical actuator (direct drive)



Flight controls electronic module



Electro-mechanical actuator

OTHER ACTUATION SYSTEMS CAPABILITIES

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 and lever

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