Actuation & Propeller Systems

Actuation & Propeller Systems (APS) is a global leader in actuation and propeller design and manufacturing for commercial and military aircraft. We have decades of experience in propeller and actuation design and manufacturing built on a rich aerospace heritage.

APS has a truly global reach with facilities located in the UK, Europe, US and North Africa, Canada and Singapore which provide design, manufacture, maintenance and support.

Our products range from single actuators to complete flight control systems for fixed wing, rotorcraft and missile segments as well as high power propeller systems, fly-by-wire cockpit and cabin controls, trimmable horizontal stabilizer actuators and flight safety parts for helicopters.

All our products are serviced by a global network including maintenance, repair and overhaul, spare parts, training, logistics and technical support.

New systems are in continual development to meet increasing aircraft demands for safety, efficiency, stability and control for customers worldwide.

Propeller and Actuator manufacturer since the early 1900s for commercial and military applications

World leader in providing Actuation and Propeller Systems

Centres of Excellence in Wolverhampton, UK, for Actuation; Ratier Figeac, France for Propellers; RFM, Morocco, for fly-by-wire Cockpit Controls and Cabin Equipment Assembly and Banbury, UK, for Composites

Extensive experience in Trimable Horizontal Stabilizer Actuators (THSA) design and manufacturing including state of the art A380 and A400M complete THSA Systems

Pioneer of fly-by-wire on civil aircraft more than 650 million flight hours experience with fly-by-wire Actuation
**Advanced Actuation**

Our Actuation Systems business has over 50 years’ experience in fault tolerant flight controls and actuation systems. As a pioneer of fly-by-wire on civil aircraft APS has over 650 million flight hours experience with fly-by wire actuation.

We are leading the way with power-by-wire and 5,000 psi flight control technology on civil aircraft and strive to develop excellent solutions for both civil and military customers.

Our customers are as diverse as our product range. We provide a wide range of actuation systems, tailored to meet specific needs but utilizing the same core competencies for electric, hydraulic and geared rotary actuation and power transmission systems. This includes flight controls for fixed wing aircraft, rotor actuation for helicopters, nacelle actuation, guided weapons control actuation and special purpose utility actuation including Lockheed Martin F-35 JSF program weapons bay door.

- High Performance Actuators
- High Reliability
- Maximum Maintainability
- Lower Operating Lifecycle Costs
- Reduced Cost of Maintenance

Close on-site collaboration with customers enables the smartest solutions – development of the 5,000 psi A380 hydraulic EBHA and EHA flight control actuation; Dassult Falcon F7X flap and airbrake and F-35 JSF weapons bay door drive systems including many more programs.

**Composites**

Our Composites business based in Banbury, UK, is a centre of excellence for advanced composite products and systems. It is a leader in the design, development and manufacture of advanced composite products and systems and has established an international reputation for its innovation, quality and successful development of composite solutions across a wide business spectrum, from the medical imagery sector to aerospace and defence, automotive and clean energy generation.

We provide:

- Torsion
- Rods
- Struts
- Suspension systems
- Pressure vessels
- Flywheel rotors
- High speed rotating equipment
- Flexible couplings
- Fuel pipes
- Highly resistive fuel system fittings
- High pressure hydraulic isolators
Large composite propellers for all major civil and military turboprop aircraft

Actuation & Propeller Systems is a leading supplier of propeller systems for turboprop-powered aircraft. Our propeller business began in the early 1900s, and today we support more than 350 commercial and military operators worldwide, with over 16,000 turboprop propellers. Our propeller technology has progressed through the years to current state of the art use of composite blades, digital controls, and individual blade replacement systems.

APS engineering performs system design, integration, detailed design and testing of the complete systems.

Other proficiencies include aerodynamics, structures, control dynamics, software and icing analysis. APS manufactures the key components of the system including the blades and hubs.

Propeller manufacturer since the early 1900s for commercial and military applications
Manufactures 4, 6 and 8 all-composite bladed propellers
State of the art digital electronic control system controlling our propellers
Propellers for a wide range of engines from 2,000 to 11,000 SHP
On wing individual blade replacement capability with each propeller

Cockpit & Cabin Controls

Our Ratier-Figeac business is a centre of excellence for fly-by-wire Cockpit Controls (side sticks, rudder controls, thrust controls) and safety of flight Cabin equipment (door dampers, propeller & rotor brakes). Cockpit Controls benefit from nearly 30 years of experience in human factors with test pilots and airline pilots.

We use the latest technologies developed through continuous innovation to bring to the market the most reliable, mature and advanced products available.

Complete pilot / cockpit fly-by-wire interfaces, door dampers, propeller & rotor brake systems
Worldwide customer base with more than 12,000 aircraft flying with our cockpit & cabin controls
Highly reliable, commercially proven, flexible, optimized solutions
Pilots’ flight situation awareness using active feed technology

Trimmable Horizontal Stabilizer Actuators

Design and manufacturing, including state of the art A380 and A400M complete THSA Systems.

Largest THSA System developed for a commercial platform
Three power channels (two hydraulic motors and one electric motor)
Dual load path
5,000 psi hydraulic power supply
150 million of flight hours accumulated since the 1970s

UTC Aerospace Systems

More Technologies.
More United.

For more information, please visit our website: www.utcaerospacesystems.com

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