



Aerospace Technical Services

Stirling Dynamics' aerospace engineering team delivers the most flexible and value-added solutions to our customers.

Stirling has been supplying high calibre, independent and impartial, technical engineering services to the aerospace market for over 30 years. This includes fixed and rotary wing platforms in both civil and military arenas. These services are provided for new aircraft designs, modification and conversion programmes. The same expertise is also invaluable in support of accident investigations and litigation activities.

Our key strength stems from our pool of highly experienced engineers and in-house modelling and simulation toolsets. We have a solid track record in supporting our customers in their interaction with the aviation authorities including the Civil Aviation Authority (CAA), the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA). We are approved to the global aerospace quality standard AS9100 and are also a member of the ITAR Approved Community.

Our Core Capabilities

- Concept Design
- Reverse Engineering
- Flight Control Systems
- Landing Gear Systems
- Fuel Systems
- Environmental Control Systems
- Avionics
- Loads and Aeroelastics
- Aircraft Flutter
- Aerodynamics / Computational Fluid Dynamics
- Performance
- Stability and Control
- Safety
- Availability, Reliability & Maintainability
- Structures
- Ground Vibration Testing
- Modelling and Simulation





New Aircraft Development

Stirling supports aircraft design teams through stringent EASA, FAA and military regulations, to help certify new aircraft designs. We can offer our customers a complete design and analysis service – from concept-to-certification – by providing niche capabilities in design assessment, detailed modelling and simulation, and ground and flight vibration testing.

Conversions and Modifications

Stirling provides the specialist technical and engineering support to aircraft conversion and modification programmes of any size. We have extensive experience of passenger-to-freighter conversions; integration of new stores; increased gross weight; added equipment – internal and external; aerodynamic shape changes; engine modifications; hush-kits; structural modifications; and aerial firefighting conversions.

Offering a Flexible Working Approach

Stirling recognises that every client has their own preferred way of working and we adopt a flexible contracting approach to cater for this. We are happy to work with you on an hourly rate basis, limit of liability, incentive-based models, risk sharing, fixed price or any combination of these options, depending on your requirements.

Stirling engineers are deployed all around the world and have provided direct, on-site team augmentation and knowledge transfer as far afield as Canada and Japan. Additionally, due to a very well-developed set of communication tools and reporting processes, the majority of our work can be carried out very successfully from our UK offices, regardless of customer location.

Programmes

- Airbus Single Aisle Aircraft (Loads, Aerodynamic Data, Landing Gear System, Fuel System)
- Airbus A350 (Loads, Aerodynamic Data, Landing Gear System)
- Bombardier C-Series (Independent Gust, Landing and Component Loads Review)
- Bombardier Global 7000/8000 (Design Gust, Component and Landing Loads)
- MitAC MRJ (Safety, Landing Gear System, Integrated Aircraft Ground Simulation Model)
- Passenger-to-Freighter Conversion of Single Aisle Aircraft (ECS, Loads and Flutter)
- Cessna CJ 1 – Modification (Loads and Flutter)
- Cobham – Falcon 20 (Flutter Signatory)
- Leonardo (Safety)
- Elbit Mirage 2000 (Reverse Engineering and Aircraft Certification)
- Non-EU Customer – New Design of a Light Utility Helicopter (Landing Gear Design)