



PYLONS & STORES CLEARANCE

DELIVERING OPTIMISED PYLON DESIGN AND ANALYSIS
PACKAGES FOR MILITARY & CIVIL PROGRAMMES

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CAPABILITY STATEMENT

OUR CAPABILITY

- Design Integration – Structural optimisation, Material selection, Weight and Manufacturing requirements.
- Structural Strength analysis.
- Fatigue, Damage Tolerance & Durability analysis.
- Dynamic & Stiffness assessment.
- High energy Impact assessment.
- Simulation, FEA development, Verification & Validation.
- Structural test definition and interpretation of results, including verification of Finite Element Models.
- Big Data – Database development for large analysis data sets and extraction of relevant information.
- Delegated Authority for the Approval of new designs, modifications or repaired structures.
- Certification documentation and in-depth understanding of Airworthiness requirements for relevant agencies.

OUR EXPERIENCE

- P-8A Poseidon Wing & Fuselage Stores Pylon F&DT Design & Certification.
- Harrier I & II MIL-1760 Upgrade Modification Analysis, Assessment and Stores Clearance.
- A400M EIS Flap Beam Fitting Modification Static/F&DT Design & Certification.
- A400M Refuelling Probe Static and F&DT Design Analysis.
- A320NEO F&DT Certification Analysis of Engine Pylon Wing Side Attachment.

AIRBUS DELEGATED SIGNATORIES

- DFM & Static Certification for Metallic & Composite structure on A350 FTE.
- FEA Approval for A350 FTE & A400M.
- Static and F&DT Approval for A320NEO.

OTHER HISTORIC APPROVALS

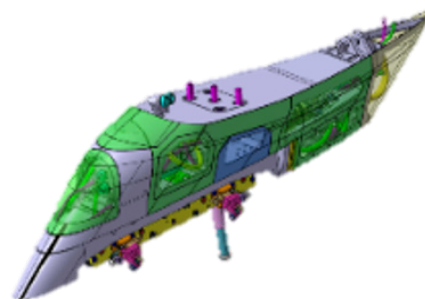
- Boeing Wide Body Stow Bins Lead.
- Static Signature for Harrier I & II.



EXPERIENCE AT A GLANCE

CASE STUDY — P-8A POSEIDON PYLON DESIGN & CERTIFICATION

- Supported conceptual design iteration in conjunction with Smiths Industries (now GE Aviation) for both Fuselage & Wing mounted Pylons and integration with associated aircraft hard points.
- Introduced novel fully machined component concept for Wing Pylons.
- Performed all Structural support activities and acted as Smiths Industries structural representatives during all integration activities with the end customer (Boeing).
- Developed all FEA models and performed all validation and verification activities.
- Generated all Design and Certification reports for both Fuselage & Wing Pylons.
- Performed all F&DT analysis and spectra development activities, producing subsequent Certification reports.
- Supported all manufacturing and industrialisation activities for structural issues.
- Post production support and enhanced clearances for new stores introduced post service entry.



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PYLON CAPABILITY STATEMENT


CASCADE
ENGINEERING

DEPENDABLE ENGINEERING,
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