



DATUM VEGA

SPACECRAFT STRUCTURAL ENGINEERING & QUALIFICATION

**Rigorous analysis.
Confident qualification.**



Datum Vega is a Toulouse-based spacecraft structural-engineering company providing structural analysis, qualification, verification, test support, and specialist engineering services for spacecraft, payloads, and flight hardware. Alongside engineering services, we develop custom engineering software, tools, and workflow automation.



Spacecraft & Flight Hardware Experience

Our founders bring senior industry experience from Boeing, Northrop Grumman, and Airbus U.S. Space & Defense, supporting satellites, spacecraft, payloads, and flight hardware, including direct experience with:

LEO / MEO / GEO Satellites | Human Space Systems | Mission Extension & Servicing Vehicles | Propulsion Systems including Hall Effect Thrusters | Tanks & COPVs | Avionics, Electronics & PCBs | Heat Pipes



Structural Engineering & Analysis

Extensive experience with industry-standard analysis methods, aerospace practices, and commercial engineering software across spacecraft structures and flight hardware.

Finite Element Modeling & Analysis (FEM / FEA) | Linear & Nonlinear Static Analysis | Metallic & Composite Structures | Stress & Margins of Safety | Bolted & Bonded Joints | Sizing & Optimization | Fatigue | Fracture Mechanics | Damage Tolerance

Modal Analysis | Sine Vibration | Random Vibration | Shock Analysis | Dynamic Response | Craig-Bampton / Component Mode Synthesis | Thermoelastic & Vibroacoustic Analysis | Coupled Loads Analysis (CLA)

Femap | Nastran | Ansys | Abaqus | Patran | HyperMesh | NASGRO | VA One



Qualification, Test & Correlation

We support structural qualification from requirements and analysis through environmental testing, model correlation, and documentation. We have extensive familiarity with NASA and ECSS standards and guidelines.



How We Support Your Team

We deliver defined engineering work packages or provide independent specialist support, from rapid technical assessments to longer-term program support.

Analysis & Review Work Packages | Independent Technical Review | Troubleshooting & Risk Reduction | Specialist Capacity | Supplier & Analysis Oversight



Engineering Tools, Automation, AI & the Chronos Initiative

We develop analysis tools, FEM processors, engineering databases, and automated workflows to improve efficiency, consistency, and traceability. We apply artificial intelligence (AI) to add clear engineering value. These capabilities are being integrated into Chronos, our structural-engineering platform in development.



Toulouse, France
+33 7 66 38 10 76

contact@datumvega.com
www.datumvega.com

