

DELIVERING TRUST

2025

AEROESPACIAL AEROSPACE

LARGEST TECHNOLOGICAL INFRASTRUCTURE IN PORTUGAL PROVIDING SERVICES FOR MULTIPLE INDUSTRY BRANCHES

60 YEARS OF EXPERIENCE 16 SA ACCREDITED LABS



TURNOVER OF

89M€
IN 2023

OPERATING IN

10 COUNTRIES

1700 EMPLOYEES







PROVIDING SERVICES FOR MULTIPLE SEGMENTS IN THE AEROSPACE INDUSTRY SINCE 2003











SERVIC SEGMENTS	ES TECHNOLOGY DEVELOPMENT	TECHNICAL INSPECTIONS	TESTING	ENGINEERING	COMPUTED TOMOGRAPHY & ADDITIVE MANUFACTURING
GROUND INFRASTRUCTURE					
MANUFACTURING					
FLIGHT & SPACE SEGMENTS					
DIGITAL SYSTEMS & EARTH OBSERVATION					



AEROSPACE | TECHNOLOGY DEVELOPMENT

- Aero structures
- Materials coatings
- Integrated inspection systems
- Maintenance technologies and techniques
- Enabling technologies:
 - Additive Manufacturing
 - Artificial Intelligence
 - Virtual Reality / Augmented Reality





AEROSPACE | TECHNICAL INSPECTIONS

- Continuously in Guiana Space Centre since 2003
- Technical inspections:
 - Quality
 - Safety
 - Environment



AEROSPACE | TESTING

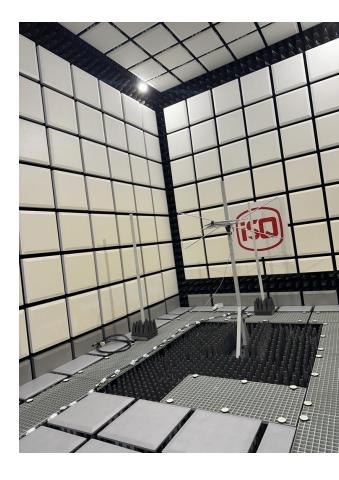
ENVIRONMENTAL TESTING	EQUIPMENT	SPECS	AVAILABILITY
EMC	Custom made	Semi-anechoic chamber EMC and ESD up to 3 m of distance	Operating
VIBRATION & SHOCK	LDS V9-SPA176K-105 LDS V850.440 LDS V9940	Up to 105 kN Up to 22 kN Up to 300 kN	Operating Operating Q1 2026
TVAC	Custom made TVC Large vacuum system Small vacuum system	Useful volume of 2,0 m ³ Useful volume of 30 m ³ Useful volume of 2,7 m ³	Operating <u>Q1 of 2027</u> <u>Q3 of 2026</u>





AEROSPACE | ENVIRONMENTAL TESTING - EMC

CHAMBER TYPE	Semi-anechoic
DIMENSIONS	8000 x 5000 x 5500 mm
DUT1 DISTANCE	Up to 3m
TESTING CAPABILITIES	Space Industry (ESA ECSS-E-ST-20-07C Rev.2)
	Military and Defence Industry (MIL-461G and RTCA-DO-160G standards)



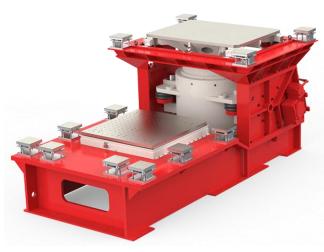


AEROSPACE | ENVIRONMENTAL TESTING – VIBRATION AND SHOCK

EQUIPMENT	LDS V9940	LDS V9	LDS V850-440
AVAILABILITY	January 2026	Ready	Ready
MAXIMUM SINE FORCE	300 kN	105 kN	22 kN
FREQUENCY	5 – 2000 Hz	5 – 2700 Hz	5 – 3000 Hz
SLIP TABLE	Table/head expander of 800 Kg	HBT1220 horizontal table of 1,2 x 1,2 meters and 250 Kg	40 Kg table No head expander
CLIMATIC CHAMBER	No	Temperature: -40°C to 120°C Humidity: 10% to 98% Temperature cycling slope: 4°C/min between -20°C and 60°C	No
CLEANLINESS	ISO 8 up to ISO 5	Up to ISO 8	Up to ISO 8
AMPLIFIER	DPA384K	SPA176K	SPA32K









AEROSPACE | ENVIRONMENTAL TESTING - THERMAL VACUUM

EQUIPMENT	LARGE VACUUM SYSTEM	SMALL VACUUM SYSTEM	CUSTOM MADE 2 M ³
AVAILABILITY	January 2027	<u>July 2026</u>	Ready
INTERNAL DIMENSIONS	ø3200mm x 3800mm	ø1500mm x 1500mm	ø1234mm x 1803mm
USEFUL VOLUME	30.000 L	2.700 L	2.000 L
THERMAL CYCLING RANGE	-150°C to 150°C	-180°C to 150°C	-140°C to 200°C
TEMPERATURE CLIMBING RATE	Heating: up to +5K/min Cooling: up to -3K/min	Heating: up to +2,5K/min Cooling: up to -3K/min	up to +-10K/min
MINIMUM PRESSURE	5e-7mbar	1e-6mbar	1e-6mbar
COLD TRAP	Yes	Yes	No
CLEANLINESS	ISO 8 up to ISO 5	ISO 8 up to ISO 5	Up to ISO 8
DATA ACQUISITION	TBC	TBC	DAQ eurothermal chessel 61080A with 43 type K thermocouples and 20 analog inputs.









AEROSPACE | STRUCTURAL TESTING

EQUIPMENT	DETAILS
REINFORCED FLOOR	16 m x 24 m reinforced floor with anchor channel (0.05 m gap via HEB200 profiles) 400 kN Load capacity (traction/compression) per linear channel meter
HYDRAULIC POWER	MTS Model 505.120 SilentFlo
SERVICE & DISTRIBUTION MANIFOLDS	MTS Model 293.22 Hydraulic Service Manifold (2 stations, 378 lpm total, 200 bar) MTS Hydraulic Distribution Manifold: 2 units, 8 channels each (16 total)
ACTUATOR SET 1	MTS Model 201.60 Hydraulic Actuator (Tension: 649 kN, Compression: 1014 kN) Stroke: 1000 mm, double acting, with displacement transducer Swivel Base (249B.M730): ±730 kN, tilt ±17°, swivel -80°/+90° Swivel Rod End (249R.M730): same capacity & angles
ACTUATOR SET 2	MTS Model 201.45 Hydraulic Actuator (Tension: 443 kN, Compression: 649 kN) Stroke: 762 mm, double acting, with displacement transducer Swivel Base (249B.M500): ±500 kN, tilt ±6°, swivel -30°/+90° Swivel Rod End (249R.M500): same capacity & angles
CONTROL SYSTEMS	MTS FlexTest 100 Controller (494.10 chassis) with AeroPro software $4 \times$ MTS 494.40 I/O Carriers (each with $4 \times$ 494.26 digital universal conditioners) \rightarrow up to 8 actuators supported

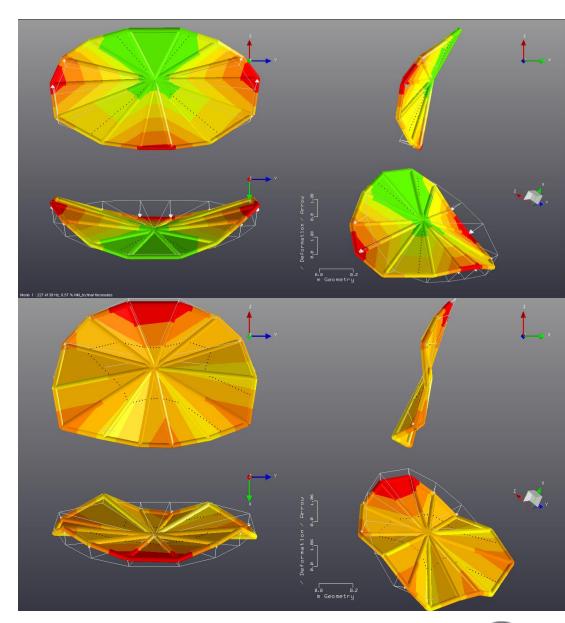








- Condition assessment and life extension
- Circular Economy
- Industrial Safety
- Production technologies
- Quality Assurance
- Risk assessment and systems dependability
- Verification by analysis





AEROSPACE | ADDITIVE MANUFACTURING

- 3D scanning and reverse engineering
- Topological design and optimization
- Thermomechanical simulation
- Powder development and adaptation
- Powder qualification
- Production (PBF-LB, DED-ARC, DED-LB)
- Post-processing of parts manufactured by additive manufacturing
- Characterization of the produced parts
- Destructive and non-destructive tests
- Microstructural analysis and chemical composition
- Corrosion tests
- Training





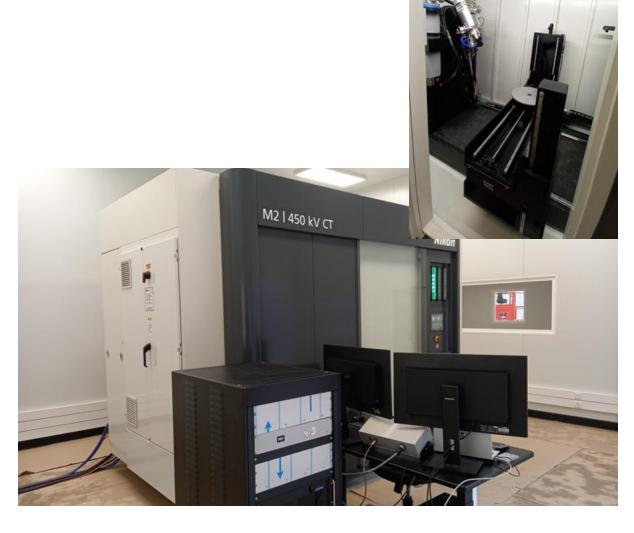
AEROSPACE | COMPUTED TOMOGRAPHY

• CT NIKON 450kv with two x-ray sources: 225kv and 450kv

Rotating target technology

• It measures and determines the exact position of the various components inside the volume.

 It has an evolved 3d reconstruction tool, which allows modelling the object and thus enhances the evaluation of its integrity.



AEROSPACE | CLIENTS & REFERENCES





EO SATELLITE

- Environmental tests;
- Sollar array deployment mechanism tests.



IXV SPACEPLANE (ESA)

- Verification by test and qualification of the non-ablative thermal protection systems
- Extensive test campaigns for the technology development (phase C) and Systems Qualification (phase D)
- Mechanical
- Thermomechanical
- Thermo-vacuum
- Dynamic
- Materials characterisation

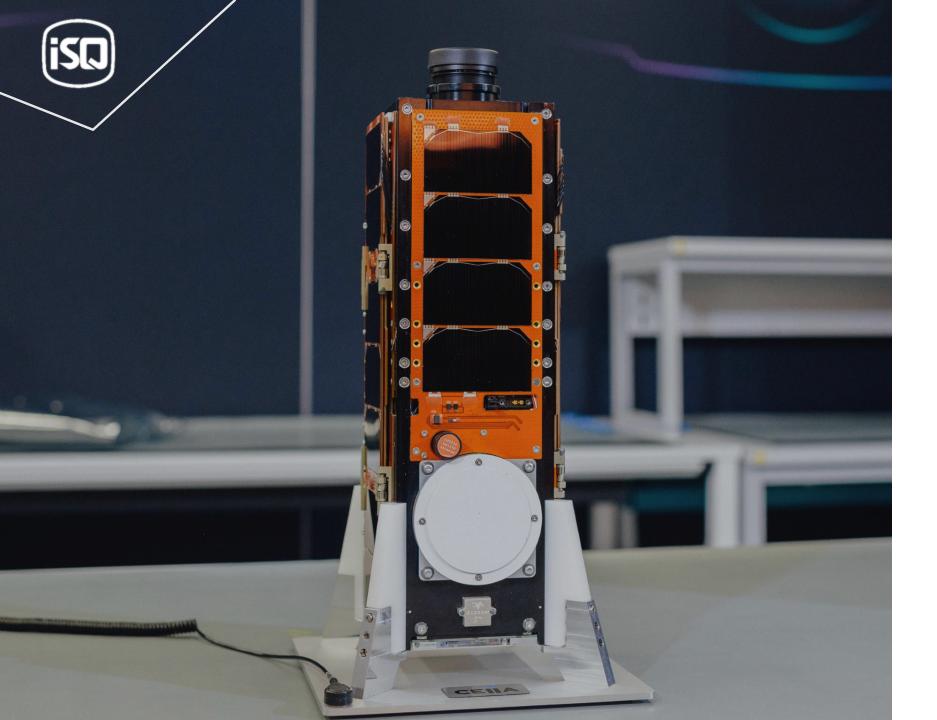


EUROPEAN SPACE CENTRE

FRENCH GUYANA

2003

Quality Assurance of Assembly
Integration and Testing of Launchers
and payloads; Safety of operations and
erection of new infrastructures
Resident team at the European Space
Centre in French Guyana as a part of
the GIE ESQS
Plurianual contracts
Permanent full time team @CSG since



AEROS MH-1

- 2nd portuguese satellite to ever be deployed (2024)
- Environmental tests (shaker TVC)



IXV SPACEPLANE (ESA)

Verification by test of the design of a crushable thermal protection system of a earth re-entry capsule

Extensive test campaigns for the technology development (phase C)

- Mechanical;
- Thermomechanical;
- Thermo-vacuum;
- Dynamic;
- Materials characterisation.



UPGRADE

GRAVITY FIELS ASSESSMENT

- Estimation of water motion beneath Earth's near surface, by searching for minute changes in our planet's gravity acceleration:
- Definition of requirements;
- Concept development and validation;
- AIT of a self-stabilizing miniaturized spacecraft



INFANTE

SATELLITE DEMONSTRATOR

Quality Assurance of the assembly, integration, and verification by test and analysis.

Tier 1 partner of the R&D project, with responsibilities:

- Project Quality Assurance;
- Verification Planning and Plan;
- Product Assurance Plan;

Verification by test and analysis:

- Mechanical;
- Thermomechanical;
- Thermo-vacuum;
- Dynamic.



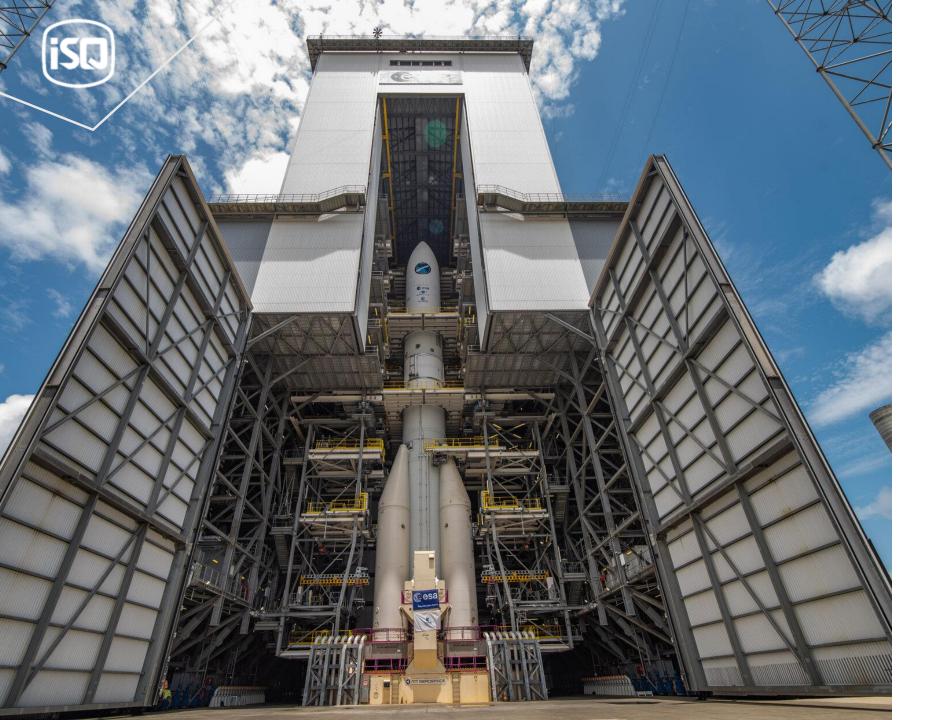


VIRIATO

DELTA-V DEMONSTRATOR

- Operations Concept
- Logistics Concept
- Requirements for the Ground
 Segment
- Applicable legislation
- Quality Assurance Plan

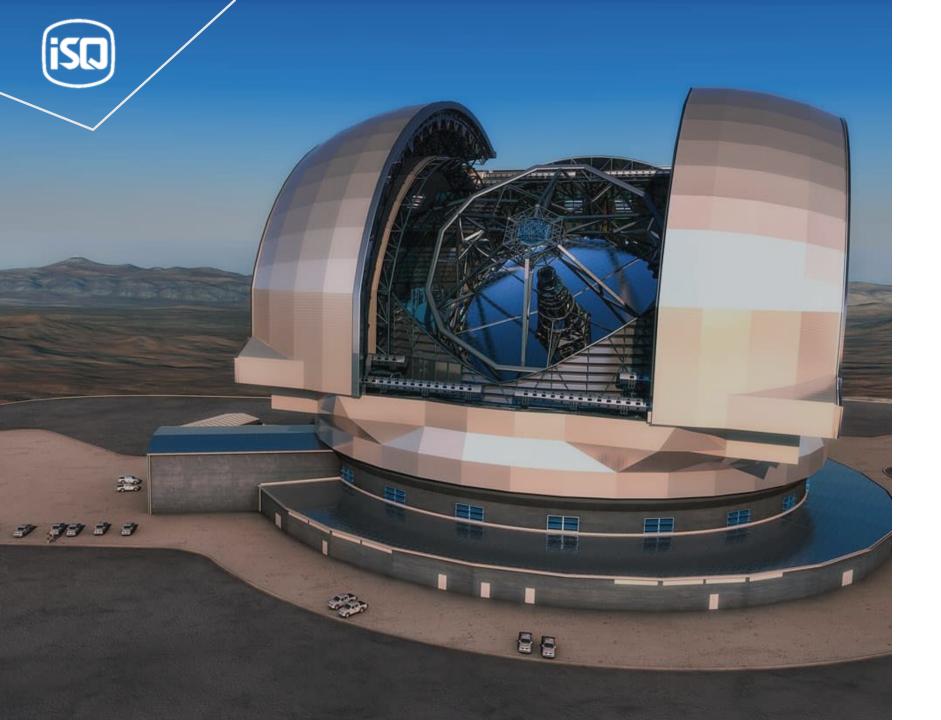




ARIANE 6 LAUNCHPAD

SAFETY ENGINEERING – FRENCH GUYANA

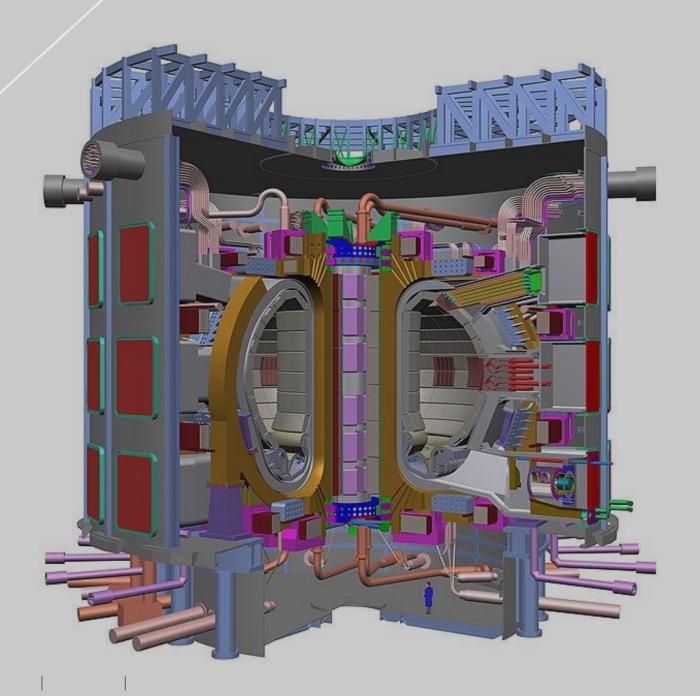
- Definition of the site's safety organization;
- Technical Inspections;
- Document management;
- Implementation of corrective measures;
- Technical support and follow-up of all relevant Change Notices;
- Technical enquiries;
- Training



ESO

Quality Assurance and Quality
Control activities for the
erection and integration of the
European Extremely Large
Telescope (E-ELT)
(started in 2016)





ITER F4E

NUCLEAR FUSION DEMONSTRATION REACTOR

Destructive and non-destructive testing of materials and mock-ups at room and elevated temperatures @ ISQ labs

Quality Assurance: support to audits and QA activities

Resident, Itinerant and Spot Surveillance Inspectors at the premises of F4E suppliers

Plurianual contracts w/ 20 inspectors full time



H2020 CLEAN SKY II

MAINTENANCE OPERATIONS WITH SUPPORT OF DIGITAL TOOLS

Project AIRMES

- Integration of aeronautical maintenance and its digitalization using virtual and augmented reality systems.
- To promote a more efficient
 aviation operation with the use of a
 suitable prognostic system (Big data
 analysis). Development of
 collaborative platforms with
 integration of mobile tools



H2020 CLEAN SKY II

INNOVATIVE TESTING OF AEROSTRUCTURES

Project PASSARO

- Development of Advanced materials solutions, for a highly integrated cockpit.
- Condition monitoring and diagnostic status (SHM)
- Simulation and validation of structural behavior and Electromagnetic Compatibility (EMC) in a Virtual Certification perspective.
- Eco-efficient manufacturing Resource management
- Industry 4.0 applied functional testing

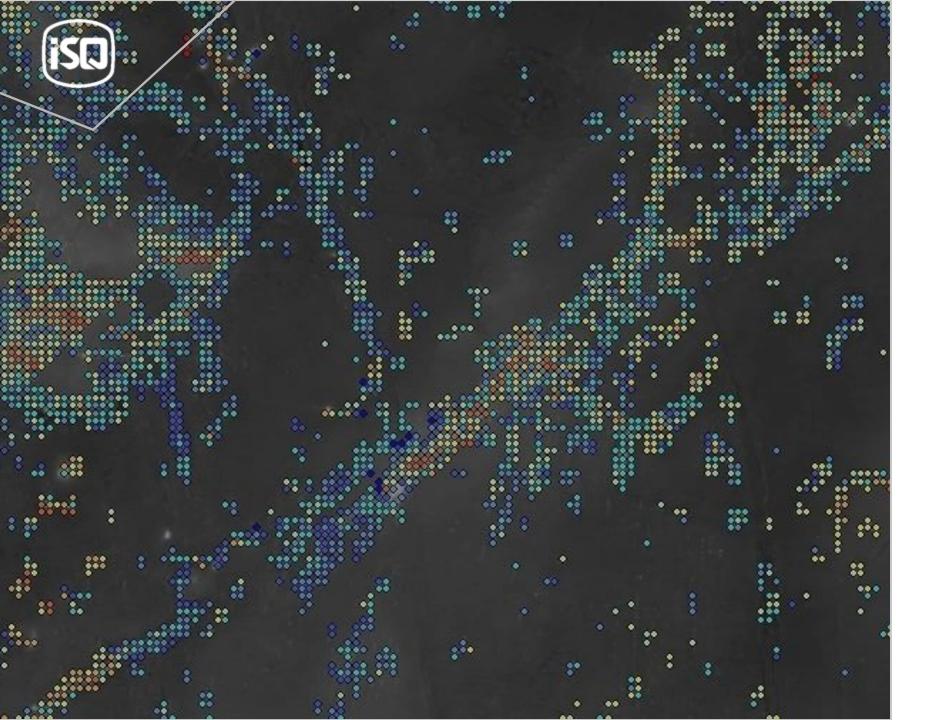


EMBRAER

STRUCTURAL TEST CAMPAIGN OF A WING DEMONSTRATOR

Extensive test campaign of a wing demonstrator made mostly with composite materials, including:

- static and fatigue testing,
- non-destructive inspections,
- Damage and testing of carbon composite panels,
- Rigs engineering



SAGRES SMART

SUPPORT FOR GEOLOGICAL PROSPECTION AT SEABED BASED IN SPACE ASSETS

Development of a web-based service based on a decision-support platform (DSP) that merges multisource earth observation (EO) data with artificial intelligence/machine learning (AI/ML) to improve responsible prospection and exploration (P&E) activities for the deep-sea mining (DSM) industry

DeepFocus (ISQ spinoff)

Provide on demand, high level, relevant data on seabed-mineral resources and related abundance over large ocean areas



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