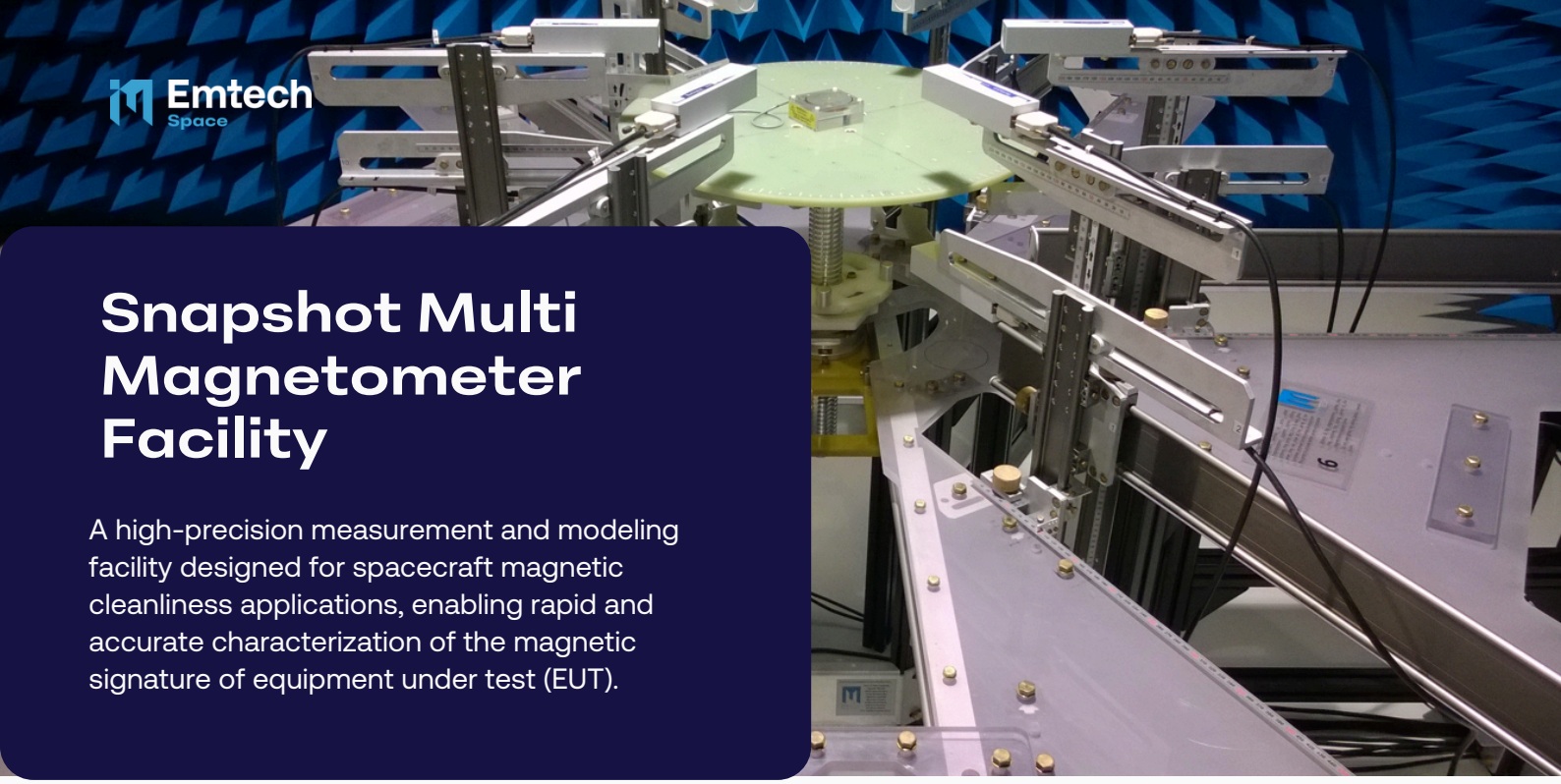


Snapshot Multi Magnetometer Facility

A high-precision measurement and modeling facility designed for spacecraft magnetic cleanliness applications, enabling rapid and accurate characterization of the magnetic signature of equipment under test (EUT).

Integrated Measurement and Modelling System

Developed through ESA programs and validated in operational environments such as ESTEC, combines optimized magnetometer configuration, dedicated processing software, and proven modeling accuracy.

- Speed and Efficiency
- Precision and Quality
- Agility and Automation

- **High Spatial Resolution:** Multi-magnetometer setup enabling accurate & flexible magnetometer positioning.
- **End-to-End Operation:** Unified system including Data Acquisition (DAQ) & mechanical structures.
- **Part of Emtech Magnetics Ecosystem:** Easy Integration with additional tools including DC & AC Modelling and more.

Multi-magnetometer architecture

Typically utilizes 12 fluxgate or search coil sensors arranged around a fixed test article for instantaneous data acquisition.

Measurement Software

Dedicated environment for data filtering, calibration, and automated processing.

Snapshot Acquisition

Captures the full Equipment Under Test (EUT) magnetic signature in less than one second.

Integrated Magnetic Dipole Modeling (MDM)

Reconstruct equivalent dipole and quadrupole representations of the EUT magnetic behavior

Flexible Design

Mechanical structure allowing adjustable sensor positioning to support various EUT configurations.

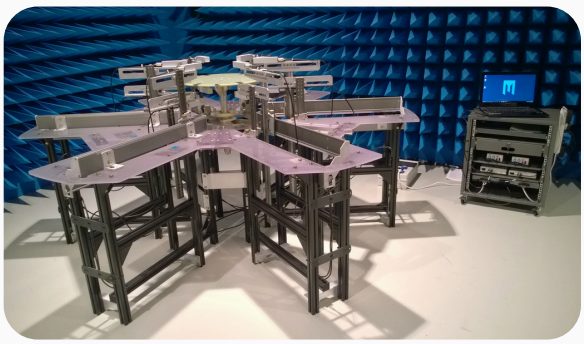
Specifications*

Measuring Elements

Magnetometers
Up to 12
Type
Fluxgate
Brand
Bartington Mag03-MS series
Range
70 or 100µT
Power Supply Units
2xBartington PSU1
1xBartington deca PSU
Software Application
Graphical User Interface
Measurement Configuration
Data Acquisition & Processing
Solver Interface
Measurement Data Reporting

Mechanical

Concept
Common Panel Design
Scheme: Circular (~2,3m)
Magnetometers Support System
Up to 12 Magnetometers
Gradiometers Support
(optional, via adaptors)
Radial Movement
(5 to 100 cm from centre)
Vertical Movement
Continuous, ~± 35 cm from z=0
EUT Support System
Z-axis movement
Continuous, ~± 25 cm from z=0
Easy EUT loading
(EUT support table can be moved at the outer perimeter of the facility)

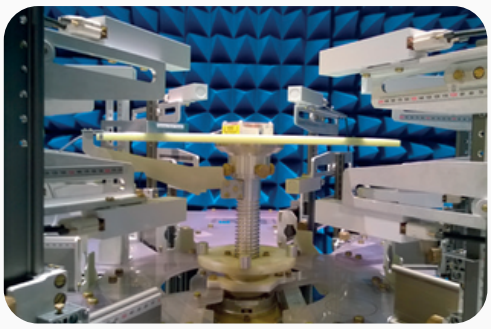


*Contents are subject to change without prior notice.

Facility Main Elements

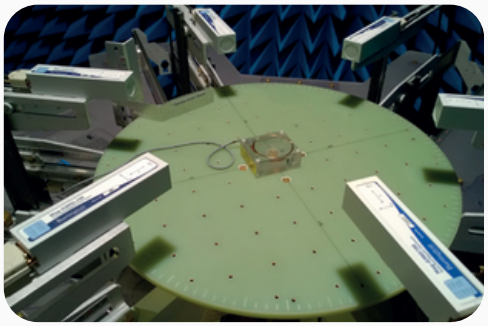
Mechanical support system

- Hosts the magnetometers and the EUT support table.



Magnetometers & DAQ

- Measurement of the EUT magnetic field and data collection



Software application

- Controls the operation of snapshot MMF, data processing.

Proven Capability

- **Validated:** Successfully used in ESA ESTEC for space missions.
- **Accurate**: High fidelity with proven small discrepancy between measured data and theoretical models.
- **Reliable**: Consistent results with low residual errors across multiple test cases

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