

3m Compliant EMC Anechoic Test Chambers (Semi)



GLOBAL EMC
ELECTROMAGNETIC SHIELDING & ANECHOICS EST. 1994

Choose The Test Chamber For

Electrical and electronic devices must comply with Electromagnetic Compatibility (EMC) standards for both radiated emissions and immunity in most countries. This test chamber ensures compliant emission and immunity tests can be performed to a wide range of standards.



CE Marking

EMC directive and FCC requirements.



Compliant

Complaint Radiated Emission - Electro-Magnetic Interference (EMI) to CISPR 16-1-4 / EN55016-1-4.



Immunity

Compliant Radiated Immunity - Electro-Magnetic Susceptibility (EMS) to EN/IEC6100-4-3.



CISPR Standards

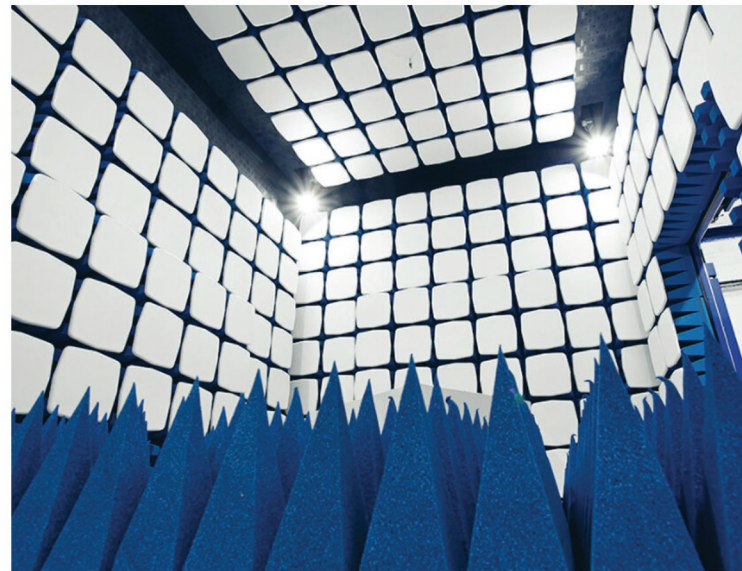
Compliant for CISPR 32 (Multimedia), CISPR 11 (Medical) and CISPR 25 (Vehicle) standards.

Shaped Around Your Products

The 3m-SAC-C is designed and manufactured to meet the dimensions, weight and required test standards of your products. With an external height of 5.5 meters, the test chamber can perform sweeping height antenna measurements from 1.0 to 4.0 meters whilst seamlessly coordinating with the flush-mounted turntable installed in the test chamber.

The modular shielding system enables the test chamber to be designed for larger product ranges by increasing the dimensions in 100mm increments. A large range of high-performance accessories allows all services and penetrations to be integrated into the shield, without compromising the shielding performance.

All test chambers require a point of entry. The design and manufacture of the shielded door is critical to both ease of use and shield effectiveness. Each shielded door is handcrafted in Great Britain to the exact dimensions required. This ensures the equipment under test can be easily transported inside the test chamber regardless of weight or size. With a full range of ultra-low friction manual swing, pneumatic or sliding doors entering and exiting a test chamber has never been easier.



3m

A 3-meter test distance between the antenna and equipment under test is available in this test chamber. This test distance is widely used and accepted around the world in a large range of regulatory or standard-based test configurations.

Semi-Anechoic

The walls and ceiling are lined with anechoic material to absorb reflections of electromagnetic waves inside the chamber. This creates a stable and repeatable environment to perform testing, mimicking and open area test site (OATS).

EMC

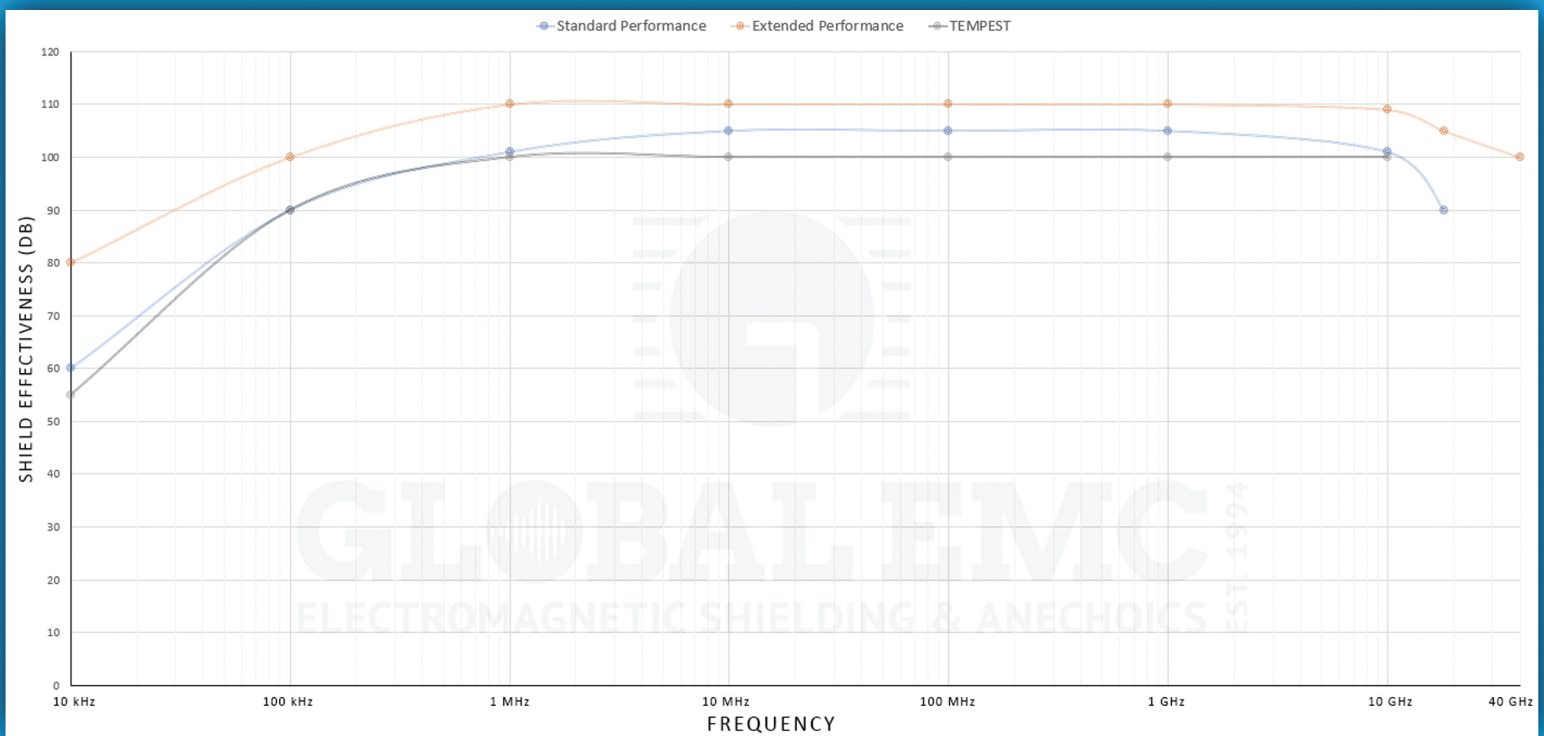
Electromagnetic compatibility or EMC testing gives the manufacturer of a product the ability to demonstrate the ability of their product. That it can function without causing interference to other devices (Emissions) and can also work satisfactorily in the proximity of other electrical and electronic devices (Immunity). The 3m-SAC-C can be used for both Immunity and Emission testing.

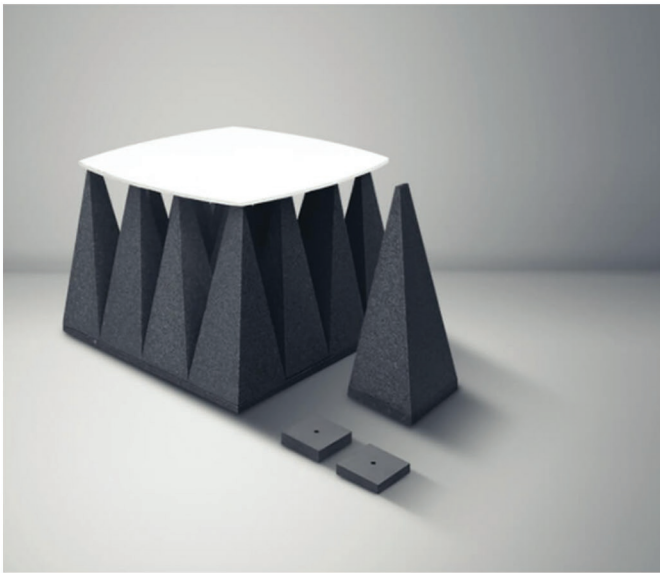
Test Facility

The external construction is an EMI/RFI shielded room, using a Faraday cage principle. This is to stop unwanted signals from the ambient environment entering the chamber and causing interference whilst tests are being performed. It also provides a safe and legal environment for immunity testing to take place. This means that, unlike Open Area Test Sites (OATS), the 3m-SAC-C can be installed in Urban and Industrial environments where high levels of RF interference are present.



Shielding Effectiveness tested to EN50147-1





High-Performance Anechoic Lining

Ferrite Tiles & Absorbers – The walls and ceiling of the test chamber are precisely lined with the latest generation gapless Hybrid Pyramid absorbers and Ferrite tiles.

The Pyramidal absorbers are precisely doped to ensure a smooth transition between the high performance of the Ferrite tiles at lower frequencies to the Pyramidal absorbers in higher frequencies.

The “plug-in” base system of the absorbers means that individual absorber cones can be replaced if accidentally damaged during operation of the test chamber. This reduces the cost of repairs and time taken for the test chamber to become fully operational again.

Frequency Test Range

Low	High	Optional
30MHz	18GHz	40GHz

Minimum Dimensions

Length	Width	Height
9.00m	6.00m	6.00m

Key Features

Radiated immunity - Compliant to IEC/EN 61000-4-3 80 MHz – 6,000 MHz (18 GHz optional).

Shield effectiveness to EN 50147-1.

Bespoke solution upon request. Test facility can be configured to your exact requirements.

Industry-leading low maintenance shielded door with copper-beryllium knife-edge seals.

Latest technology high-performance GF 102 ferrite tiles to all walls, ceiling and partial floor covering.

Radiated emissions - Compliant to CISPR 16-1-4 frequency range of 30 MHz to 6 GHz (18 GHz optional).

Designed and manufactured to the highest standards in Great Britain.

Up to 3 meters measuring distance between the Antenna and EUT.

Lighting, power filter, penetration and static ventilation panels all as standard.

Moulded polystyrene pyramidal Hybrid Absorbers to all walls, ceiling and partial floor covering. (Absorber coverage as far as physically possible).

Full Specification

External Dimensions
9m (L) x 6m (W) x 5.5m (H)*

Shield
Modular 2mm steel “pan” shield.

Filters
1 x 32A 230V Single phase (2 line).

Access Ramp
This feature is optional.

Additional Options Include:

Turntable, mast, controller, Air conditioning / HVAC, Anti chamber (control room), Fume extraction, Fire detection, CCTV, White caps to absorbers, additional filters & Audio communication.

*All dimensions and quantities can be altered upon request (subject to compatibility).

Shielded Pedestrian Door (Clear Opening)
1000mm (W) x 2000mm (H)*

Frequency Test Range
30 MHz to 18 GHz (40 GHz optional).

Penetration Panel Connectors
2 x Precision N type. & 2 x Fibre.

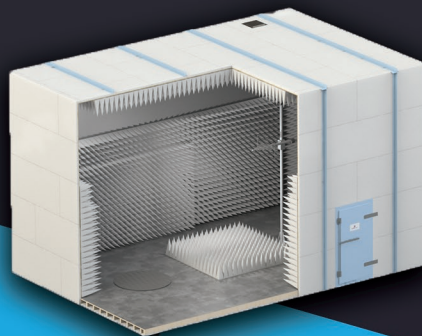
Lighting
4 x LED Lighting 1 x Emergency light.

Steel Structure
Self-supporting structure to industry standards.

Floor Loading (Standard)
500kg/m².*

Honeycomb Vents
2 x 300mm (W) x 300mm (H) (static air).

Power Distribution
4 x 230V AC DSSO Sockets.



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