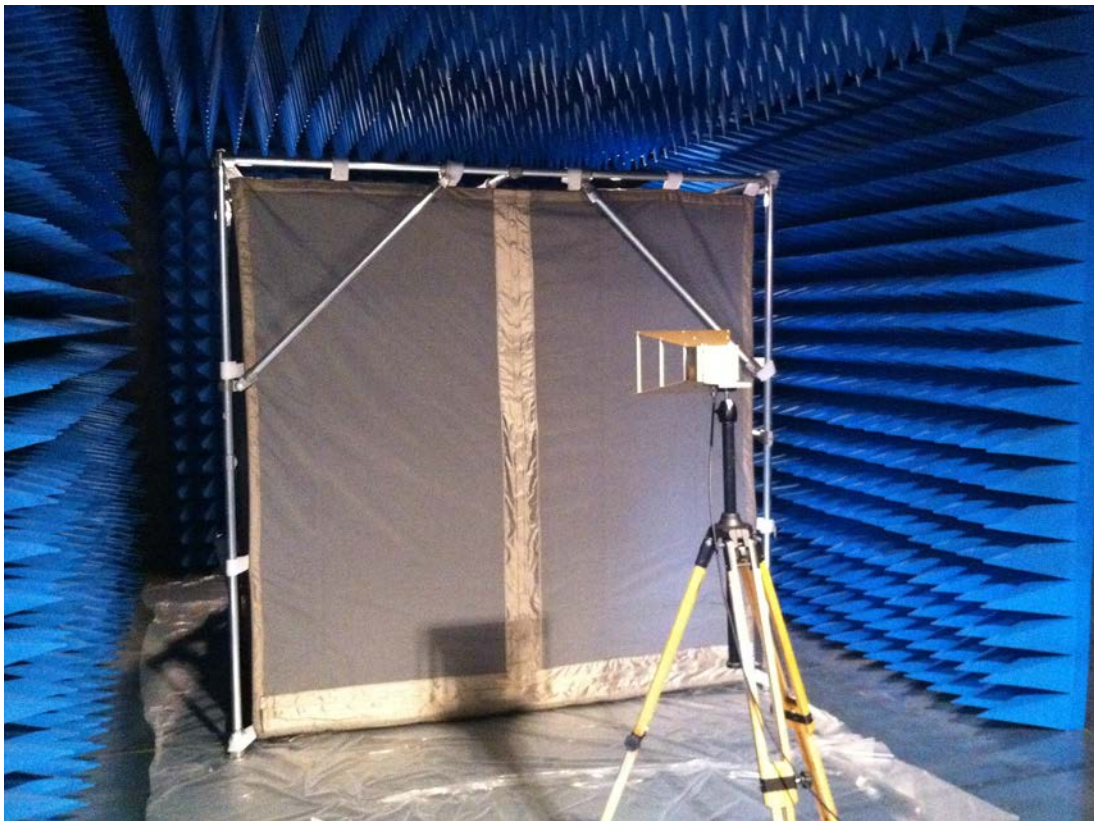


# SOLEMI<sup>®</sup> tend

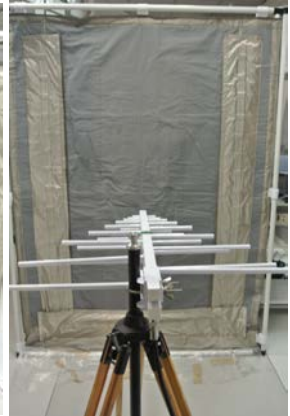
WORLD'S FIRST EMC TENT AND EMC FABRIC MANUFACTURER

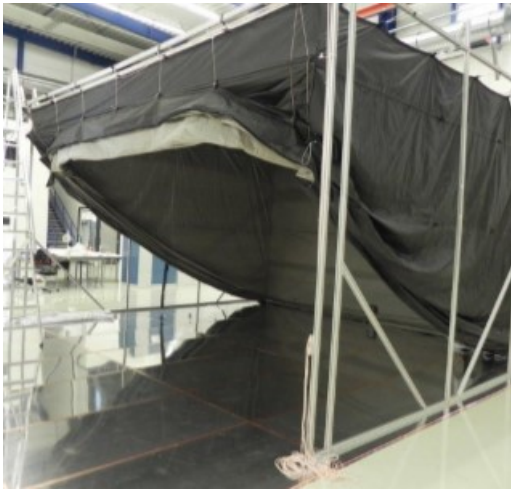


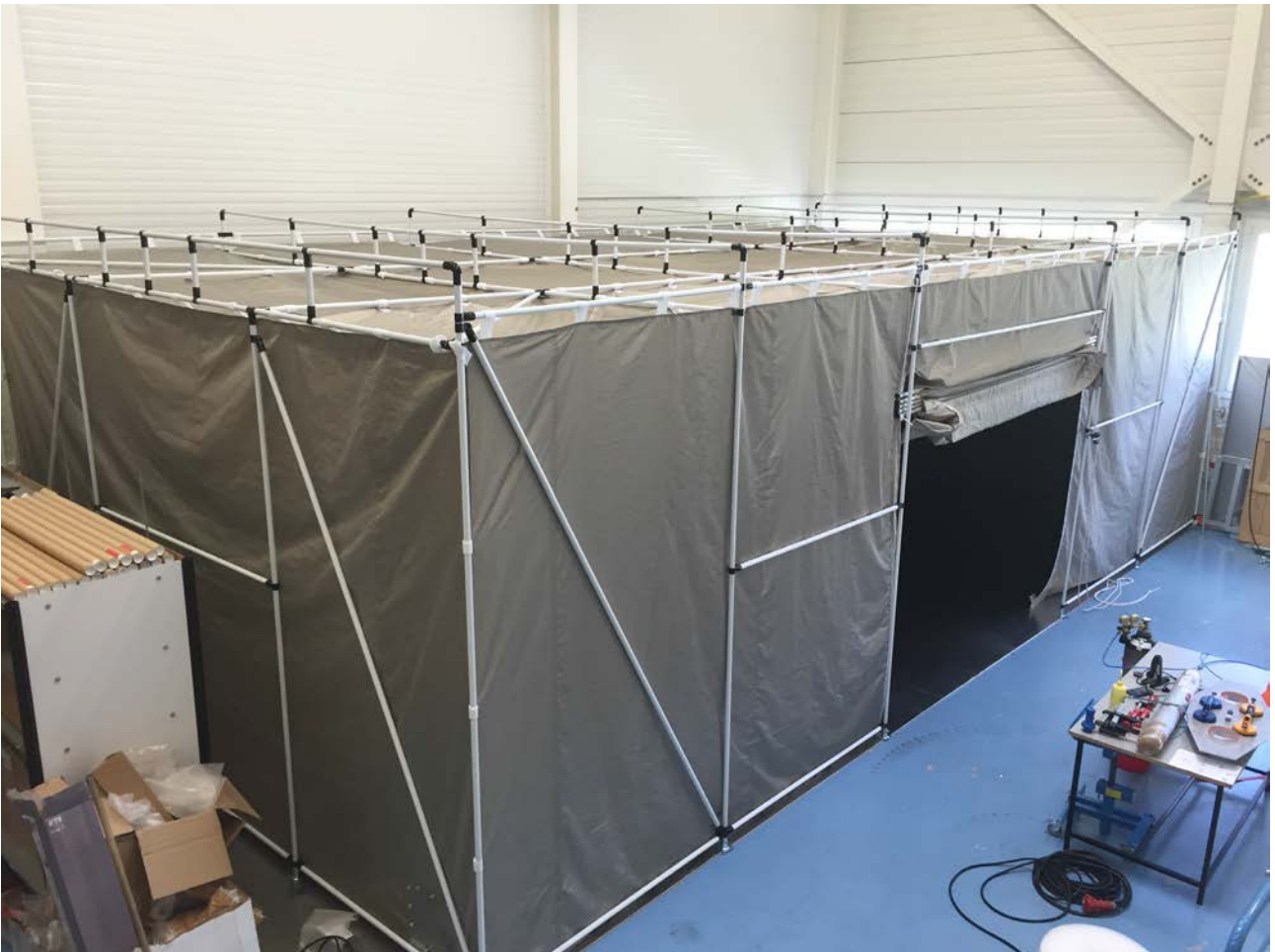
**WERKSVERTRETUNG FÜR DEUTSCHLAND, ÖSTERREICH UND DIE SCHWEIZ**

More than 250 tents made, we can make it as you want!

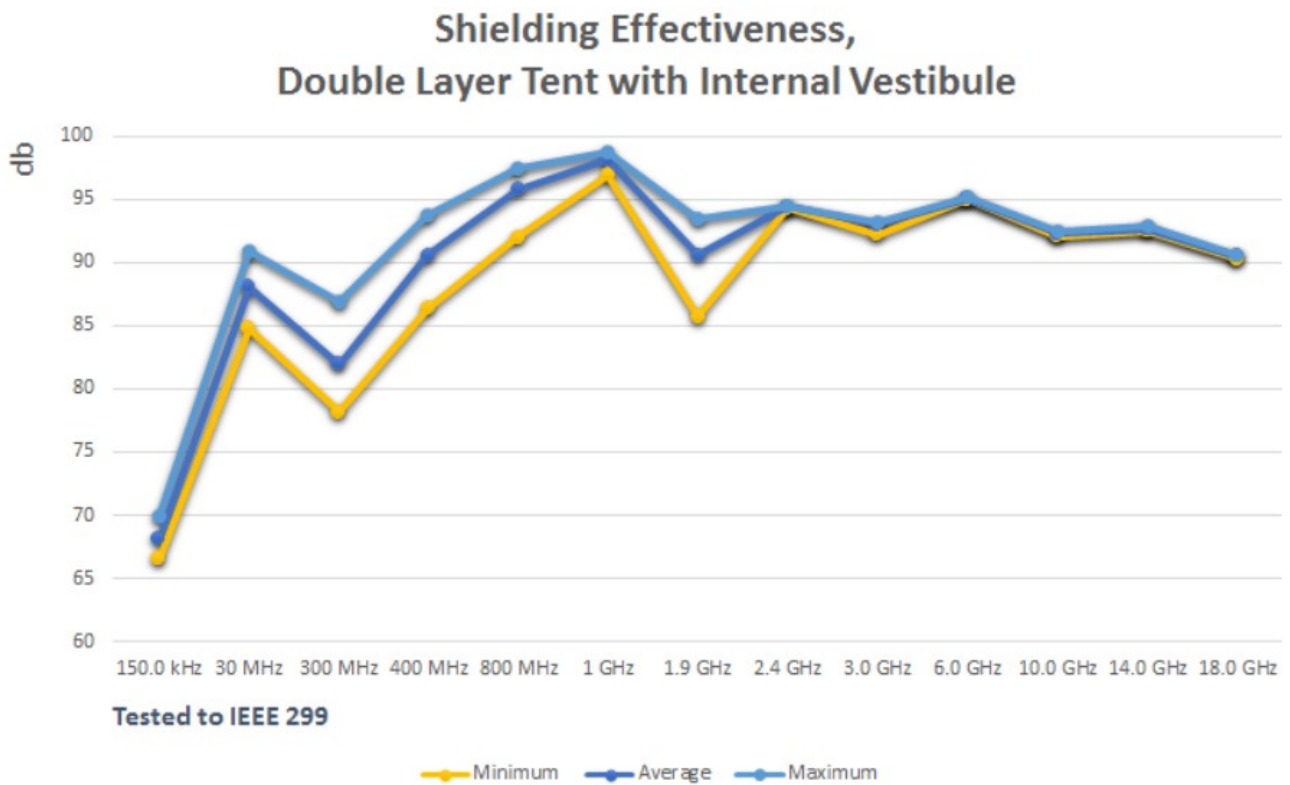
*DETAILS SEE PAGE 11*







To assure your portable enclosure meets your RF isolation needs, suppliers' data on shielding effectiveness should be carefully scrutinized to assure it meets minimum shielding requirements. SOLIANI EMC uses IEEE:299-2006 third party testing to measure minimum shielding effectiveness achieved on the fully assembled enclosures at different locations within the tent at different frequencies. this test on Soliani EMC tent's high attenuation tent with internal vestibule resulted in at least a -85.7db attenuation from 1 Mhz to 18Ghz when taking measurements through the wall at multiple locations.



## SPECIFICATIONS

Made in Italy with material metalized in Italy as well

Standard Attenuation Portable Tent Enclosures include:

- Multiple layers of Galileo conductive fabric
- White ESD fabric layer inside tent (on request)
- Internal or external vestibule entryway system
- Single or double patented door seal systems
- Steel frame or inflatable
- High-performance power & data filtering
- Complete shielded ventilation system
- RF shielded floor between two layers of heavy duty tarp
- Tent storage and transit bag
- Complete installation instructions

### PATENTED DOOR SYSTEM



SOLIANI EMC's exclusive patented door seal system ensures the isolation of the internal enclosure. Operations being conducted inside the enclosure do not need to be shut down if anyone exits or enters.

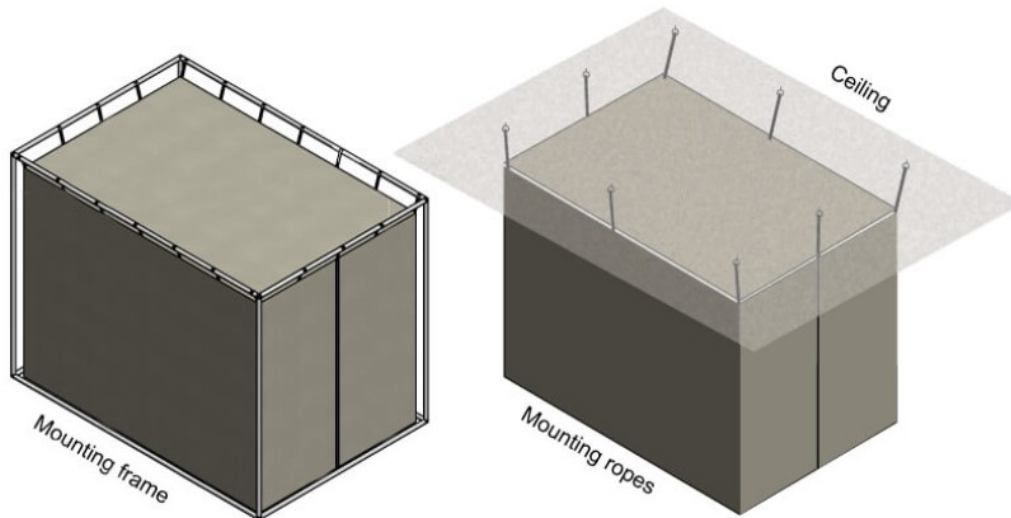
The patented single door sealing system features a lightweight, easy-to-use double magnet closure that maximizes RF isolation and EMI shielding. Both the interior and exterior doors feature SOLIANI EMC's exclusive door system.



The EMI/RFI-shielded tents are made of highly conductive, lightweight, and ultra-strong textile. By default the Shielded tents are delivered with multiple ropes so they can be easily attached to a ceiling, or they can come with a self-standing frame.

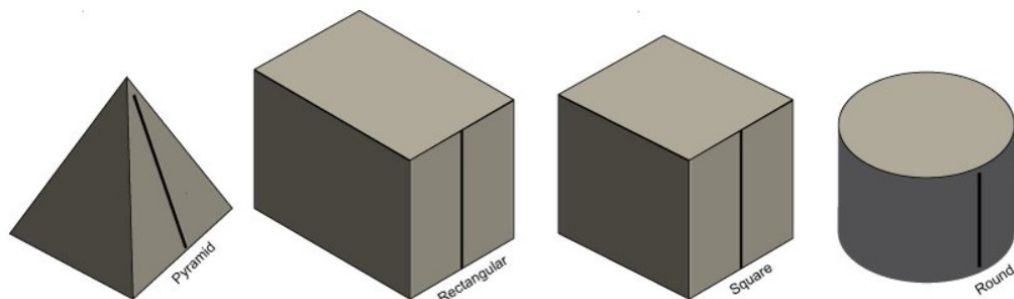
Typical applications are EMC experiments, RF measurements, mobile military or forensic activities, and personal protection in the field. Faraday tents offer a mobile solution for only a fraction of the cost compared to a conventional Faraday cage.

### Mounting options



### Features:

- Semi-permanent, easier to install, store and transport than metal wall chambers
- Lower in cost and weight than a permanent welded shielded chamber
- 10:1 weight ratio to a welded screen room
- Removable “hardware cloth” panels
- Internal frame
- Over 70dB attenuation over the range of 20MHz to 18 GHz (IEEE™ 299)
- Constructed with acrylic coated Ni conductive fabric.
- Optional cleaning to ISO Class 7 (Class 10,000 –Fed. Std. 209)



## APPLICATIONS

### Automotive

The megatrend of connectivity is not stopping at the commercial vehicle industry either. Everyone wants and needs to be connected everywhere. In order to ensure this, the number of radio services and their channel utilisation is increasing. However, the existing frequency bands were no longer sufficient, which is why we had to switch to free higher frequencies.

In addition to connectivity, the automotive industry also focuses on safety, and trouble-free functionality, which is why the frequency range to be examined has been extended from immunity tests to the Super High Frequency (SHF) frequency range.

But as we know, the topic of shading in an absorber hall increases with increasing frequency, while the transmitting lobes of the measuring antennas decrease. To ensure the desired test coverage, however, more and more antenna positions are required as the frequency increases. Particularly long and large vehicles are severely affected.

The measurement method in a Mode Turbulence Chamber (MTC) does not present this problem. Due to the desired reflections on the chamber walls, the test object is subjected to the test field at once from all sides and directions due to the statistical field homogeneity.

As known, there are two different measurement options in one MTC. First, the “tuned mode” in which the mode stirrer is rotated step by step and then measured and the “stirring mode” in which the mode is continuously rotated and measured simultaneously.

The “tuned mode” requires, on the one hand, solid walls and a stirrer. On the other hand, the measuring process takes an extremely long time, since each stirrer position must be measured, and decay time is required. This does not represent a time advantage over several antenna positions and is therefore of no interest to the automotive industry.

In this case, the “stirring mode” remains in which average field strength is set on the test object during the measurement. The average field strength depends on the chamber, the stirrer and the test piece itself. A pure control of the amplifier (open loop) via characteristic curves would require a time-consuming calibration. Why choose a field strength controlled system with 8 fast field probes (closed loop).

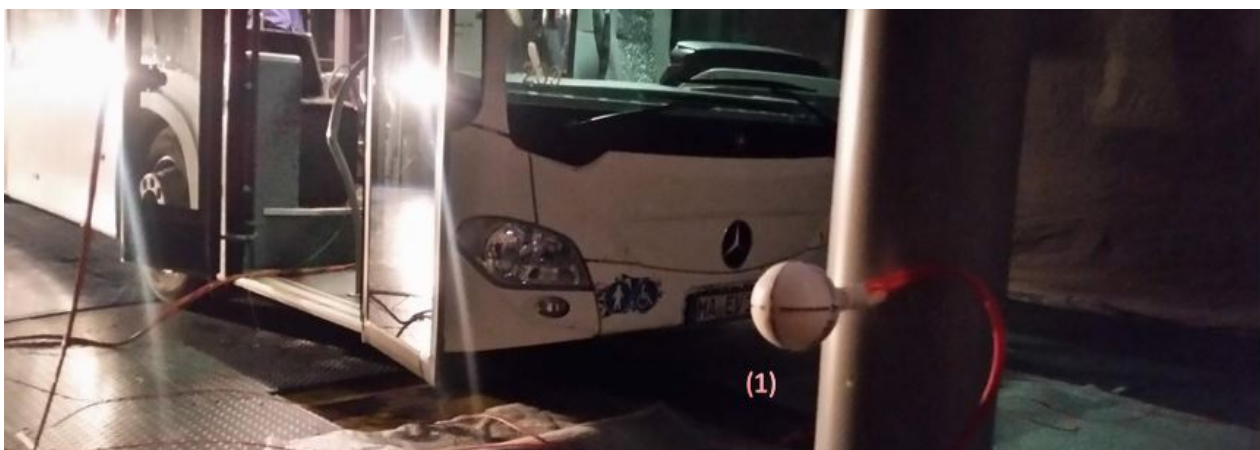


Figure 1: Bus in the test field, field probe on the mast (1)



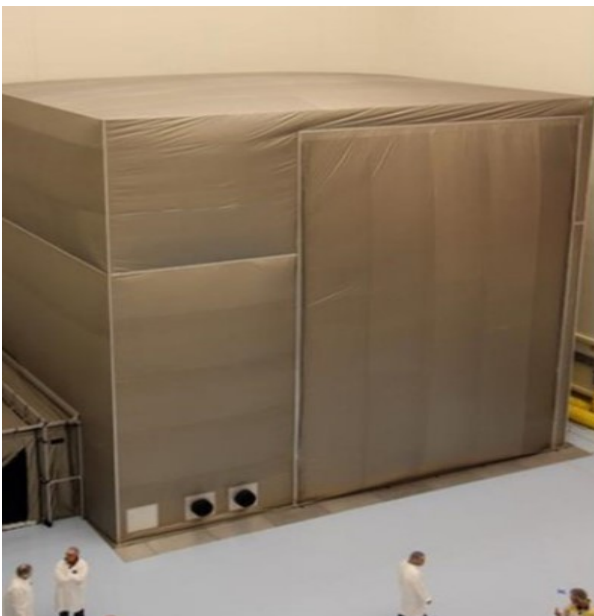
The 8 probes, see Figure 7 (1), stretch the test volume. They are positioned on four PVC masts around the vehicle. The distance to the vehicle should be  $> 1$  m and more than  $\lambda/4$  of the lower frequency from the walls [6].

The antenna should not be directed directly at the vehicle but in the direction of the oscillating device behind the moving wall.



Figure 2: Truck in the test field defined test volume within the columns is irradiated with a LogPer antenna.

### Space and laboratory



When equipment is too large or requires special provisions (loads, drives, water, emission of toxic fumes and such), testing in a typical semi-anechoic room may not be feasible. Temporary screen rooms consisting of hardware cloth can be built around the test area to reduce the ambient for radiated emission testing and to contain the RF field during radiated susceptibility testing. Since the room may be highly reflective, care must be taken to identify any resonances. Several antenna positions may be required in order to reduce the effect of the resonances.

## Military

SOLIANI EMC RF isolating security tents are designed for portable, secure communications applications\* where specific signal attenuation is required. Our RF security shielding pouches are also designed to isolate wireless communications devices. Soliani EMC's engineering staff will also collaborate with your team to custom design lightweight, collapsible, secure RF security solutions that meet your specific applications. SOLIANI EMC can secure your electronics including laptops, printers and communications



systems with portable, RF Security table top tents. Tempest secure keyboards, high attenuation power filtering, and RF shielded windows allow full access to standard laptop computers. SOLIANI EMC has worked with many government agencies providing RF security applications RF isolation for police and emergency response agencies Transportation security, including aviation and maritime transportation Research on next-generation security technologies

NATO Registered

ITAR registered – US Dept. of State – Office of Defense Trade Compliance

Cage Code: A1040



\* RF isolation is one part of a secure communications protocol. Please make sure your operation is in compliance with all sections of the protocol.