SELECT™ FABRICATORS

MADE IN USA

RF/EMI Shielded Modular Enclosure

Large Scale • Semi-Permanent • Removable Fabric Panels • High Attenuation • Fully Customized • Anechoic Foam Walls

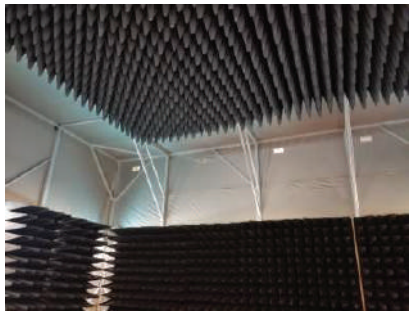
Overview:
A large scale RF shielded tent to be used to reduce the radio frequency (RF) environment for Electromagnetic Compatibility (EMC) testing, large vehicle/aerospace testing, or any other custom RF shielding need.

Meets United States Military - MIL-STD-461G (appendix A):
"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."

United States
Patent Awarded
March 2018
(US Pat. No. 9,930,816)

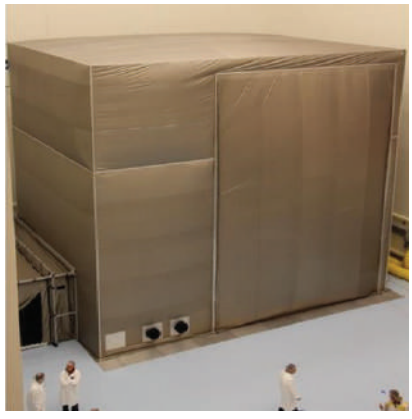
Shielding Effectiveness: Average of-85 dB attenuation over the range of 20 MHz to 18 GHz.

Material: Constructed using Nova Select™ acrylic coated Ag/Cu/Ni conductive fabric. Berry Amendment compliant options available.



Internal Frame: The internal framing is a free-standing, weight bearing, aluminum channeled, post and beam frame which is custom designed to meet the project specifications and sizes. This internal frame will support the weight of port plates, vents for both intake and exhaust, the modular fabric paneling, and RF anechoic foam panels. The patented design also includes a method to conductively connect every frame member in the system.

Removable Fabric Paneling: The removable panels of this design is made from NovaSelect™ conductive silver/copper/nickel fabric, externally coated with an acrylic that minimizes particle shedding and metal plating breakdown, RoHS compliant, and is cleanroom Class 10,000 compatible. Each panel can be removed from the internal aluminum frame for access to the test space as well as accommodate the installation process. Every modular panel has stainless steel grommets installed around the outside perimeter to allow for stud/clamp connection to frame system and aluminum panel floor system.



Metal Ground Floor: For large and heavy equipment under test, the new temporary screen room design includes an aluminum sheet ground plane system which is also conductively connected to the frame and modular panels while allowing heavy units to enter and exit without damaging the enclosure or the conductivity. The floor panels use a rabbet edge design and are connected together with an EMI gasket and flush-mount clamping bar. The perimeter floor plates contain hardware for clamping the tent's modular fabric panels and establishes the RF tight seal.

Anechoic Foam Paneling: Anechoic foam panels can be ordered to custom specifications and dimensions and installed on the internal frame.

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