EMI-RFI/STC Shielding Assembly with Split Frame and Adjustable Seals

Frequently Asked Questions

Ceco Door
ASSA ABLOY

Q. What is EMI-RFI/STC shielding?

A. EMI-RFI shielding protects the data and electronics of your device or sensitive equipment. The Sound Transmission Class (STC) feature includes sound abatement materials that prevents unwanted noise and protects sensitive communication. EMI-RFI/STC shielding often consists of a metallic screen that surrounds sensitive electronics and absorbs the interference transmitted through the air. EMI-RFI/STC shielding prevents anyone from accessing data you store on an RFID chip or embed in a device. Electromagnetic Interference (EMI), Radio Frequency Interference (RFI), and Sound Transmission Class (STC) reduces electronic signal integrity and strength which can cause poor performance in sensitive communication systems and devices. Radio Frequency Interference (RFI) is the disturbance caused by unwanted radio frequency signals that interfere with the proper functioning of wireless communication systems or electronic devices. EMI-RFI/STC shielding serve the dual purpose of keeping out external signals and preventing internal signals from interfering with other components on the same device.

Q. How does EMI-RFI/STC shielding work?

A. Conductive enclosures composed of EMI-RFI/STC shielding materials are used to block electrostatic fields. Also known as a "Faraday Cage", this cage blocks static and non-static electric fields from passing through the shielding barrier. EMI-RFI/STC shielding materials, such as conductive metals or conductive coatings, create a barrier between the electronic device and external electromagnetic fields or radio frequency signals. These conductive materials act as a shield, reflecting or diverting electromagnetic waves away from sensitive components and preventing EMI-RFI/STC penetration into the device.

Q. What materials are used for EMI-RFI/STC shielding?

A. Adjustable EMI-RFI/STC shielding absorbs sound, radio and magnetic waves. A commonly used shielding method is to provide a EMI-RFI/STC protective barrier with a suitable material, typically copper, silver or nickel in the form of sheets, films, tape, seals, gaskets, and the like or with coatings that contain very small particles of the shielding material. EMI-RFI/STC shielding effectiveness depends on factors like material conductivity, thickness, and the frequency range of the interfering signals. STC is used as a measure of a material's ability to reduce sound," and effectively mitigate any adverse noise levels that could impede a person's use of a residential or commercial structure. The STC rating or sound abatement protection is a function of the EMI-RFI/STC opening assembly component materials and adjustable EMI-RFI/STC sealing system.

Q. Why are EMI-RFI/STC shielded assemblies Important?

A. EMI -RFI/STC shielding is necessary in healthcare facilities for preventing electrostatic and/or radio interference with medical equipment that can lead to errors, data loss , and equipment damage. Shielding can also help improve electronic device performance by reducing interference from outside sources.

Q. Where are EMI-RFI/STC shielded openings used?

A. Medical facilities, data centers, business offices, test labs, security centers, financial centers, government-military facilities.

Q. Why are EMI-RFI/STC shielded assemblies needed?

A. EMI-RFI/STC shielding is used to help reduce or eliminate interference that can lead to errors, data loss, equipment damage, and to protect confidential information. EMI-RFI/STC shielding prevents interference from local EMI-RFI/STC transmitters: such as radio towers, TV broadcast, production welders, airport radar and MRI test equipment. STC shielding or sound insulation shields you from the invasion of sound from the outside and protects sensitive communication on the inside of the structure.

Q. Is there a EMI-RFI/STC shielding test standard or criteria to follow?

A. Yes. IEEE 299 Standard Method for Measuring the Effectiveness of Electromagnetic Shielding Enclosures for Shielding Effectiveness, from 9 kHz to 18 GHz, ICD-705 (Group 3 and 4) standard and specific TEMPEST applications. Products with EMI-RFI/STC Shielding ratings are designed for a very specific performance level and may be limited, please verify the type and level of EMI-RFI/STC protection required.

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EMI-RFI/STC Shielding Assembly with Split Frame and Adjustable Seals FAQ Continued

Q. What are the available opening sizes?
A. Singles: 2'0" x 6'8" up to 4'0" x 8'0"
Pairs: 4'0" x 6'8" up to 8'0" x 8'0" with fixed or removable mullion

Q. Can the EMI-RFI/STC shielded openings be fire rated?
A. Yes, openings are fire rated up to 90 minutes

Q. What accessories are supplied with the assembly?
A. EMI-RFI/STC Shielding Assembly is equipped with Stainless Steel Hollow Metal EMI-RFI/STC Shielding door, EMI-RFI/STC Stainless Steel "split" frame, adjustable EMI-RFI/STC seals, conductive caulk and tape, Pemko threshold, and cam-lift hinges.

Q. Can the EMI-RFI/STC shielded openings be ordered with other specialty requirements?
A. Consult Specialty Technical Support for additional options: fire ratings, sound ratings, bullet ratings, blast ratings, and lead-lined.

Q. What hardware can be used?
A. Tested with Cylindrical, Mortise, Exit Device and Lockmaster (SCIF) latching hardware along with cam-lift hinges.

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