

SHIELDING SERIES 83 RADIO FREQUENCY SHIELDED ENCLOSURE



SERIES 83

- **Conductive Material Lining**
- **Flexible Shielding Solution**
- **Excellent Low Frequency AC Magnetic Field Attenuation**
- **100 dB of Attenuation From 30 kHz to 10 GHz**
- **Durable Construction**
- **Flexibility to Fit Most Applications**

ETS-Lindgren's Series 83 Radio Frequency Shielded Enclosures provide a premium custom shielding solution for highly specialized applications, including electron microscopes, physiological studies, and other sensitive environments requiring precise electromagnetic interference (EMI) control. These enclosures are meticulously engineered to meet the unique requirements of each project, ensuring optimal performance and adaptability.

The Series 83 enclosures leverage advanced RF shielding materials that can be tailored to accommodate specific design needs, making them an exceptionally versatile option. Whether you need to integrate specialized equipment or meet stringent operational standards, the Series 83 delivers exceptional flexibility, reliability, and precision.

With a commitment to quality and innovation, ETS-Lindgren's expert team works closely with clients to design, fabricate, and install these enclosures, ensuring seamless integration and superior EMI protection for even the most demanding applications.

Product Features Construction

The Series 83 RF Shielding is constructed using G60 grade, 11-gauge galvanized steel, chosen for its superior shielding performance and exceptional durability. Each panel is designed to resist airborne moisture-induced warping, providing structural stability that ensures long-lasting performance in demanding environments. The robust construction lends itself to a rugged structural design, making the Series 83 shielding ideal for applications requiring both high shielding effectiveness and physical durability.

Performance

Engineered for precision and reliability, the Series 83 RF Shielding incorporates a conductive material lining designed to attenuate EMI/RFI signals effectively. Tested in accordance with IEEE-299, it achieves outstanding shielding performance with a typical attenuation of 100 dB from 14 kHz to 1 GHz. Beyond its high-frequency shielding capabilities, the Series 83 excels in low-frequency attenuation, delivering 26 dB and 30 dB of attenuation at 50 Hz and 60 Hz, respectively. This makes it particularly well-suited for applications requiring protection from AC magnetic fields.

Enhanced Features

The Series 83 shielding system is engineered for flexibility, with customizable design options to meet specific project requirements. Its rugged design ensures reliability across various specialized applications, from electron microscopy to physiological research. The panels are easy to install and maintain, offering a long-term, cost-effective solution for shielding needs. Additionally, the seamless integration of its conductive lining ensures consistent attenuation, even under challenging conditions.

Whether your project demands high-performance shielding or specialized low-frequency attenuation, ETS-Lindgren's Series 83 RF Shielding delivers an unmatched combination of durability, flexibility, and precision.

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Product Configuration

- Sheets of 11-gauge Conductive Material are Laminated to a 12.7 mm (0.5 in) High-density Particle or Plywood Board Core
- Series 83 Shielded Modular Panel Sections are Assembled with a Clamping System into a Self-supporting Room Structure
- Panels are joined together with an extruded hat and flat and cove clamping system to provide uniform and consistent pressure contact against the shielded panel mating surfaces. These structural clamping sections are zinc-plated to resist corrosion and are joined with self-taping zinc-plated fasteners, spaced 10.16 cm (4.0 in) on center to ensure a secure shield.
- Corners of the shielded room are secured with precision-machined trihedral end cap sections. To maintain electrical isolation, a 6-mil. dielectric vapor barrier and 3.175 mm (.125 in) dielectric underlayment are placed beneath the shielded floor panels. Counter-sunk floor screws in the clamping system ensure a smooth floor surface.
- Attractive Vinyl Floor Tiles Applied with Adhesive over the Exposed Steel Surface as a Durable Wearing Surface

Technical Specifications

Electrical	
Magnetic	26dB @ 50Hz; 30 dB @ 60 Hz; 110 dB @ 30 kHz to 30 MHz
Electric	110 dB @ 50 Hz to 30 MHz
Planewave	110 dB @ 30 MHz to 1 GHz
Microwave	100 dB @ 10 GHz

