SHIELDING SINGLE KNIFE EDGE RF SHIELDED DOOR (SKE)

SINGLE KNIFE EDGE RF SHIELDED DOOR

- **Precision-machined Aluminum Hinges with Thrust Bushings for Sag-free Mounting and Smooth Operation**
- **Easily Replaceable Beryllium Copper Finger Stock Around the Perimeter of RCM Receiver**
- **Easy-to-Mount to Modular and Welded Shielded Enclosures**
- **Heavy-Duty Cam Latch Strikes for Two-Point Latching**
- **One Year Parts Warranty**
- **Semi-Automatic Latching System**
  - **RCM (Recessed Contact Mechanism) for RF Shielding**
  - **Automatic Latching**
  - **Assisted Door Closing**
  - **Emergency Release**
  - **Long Life Expectancy with Minimal Maintenance**
  - **Interlock with Additional Electro-latch Doors**
  - **Battery Back-up Upgrade**
  - **Interface with Security Systems**
  - **Acoustic Package Option**

ETS-Lindgren's Single Knife Edge (SKE) Shielded Door is designed for outstanding reliability, performance, and longevity in RF-shielded environments. The SKE Door (S201) features a precision-engineered knife edge, a proven Recessed Contact Mechanism (RCM), and a two-point latching system, ensuring reliable shielding, exceptional performance, and ease of maintenance.

This door is compatible with modular, welded, and pan-formed RF shielded enclosures, as well as anechoic chambers. Its robust construction and rigid design, with a flush surface against the inner chamber wall, optimize the installation of resistive and ferrite tile absorbers. Built to endure heavy industrial use, the SKE Door is a durable, long-lasting choice for high-demand environments.

Whether for new installations or retrofitting into existing enclosures, the SKE Door offers a high-performance shielding solution for a variety of RF and EMI applications.

Product Features

Construction

The ETS-Lindgren Single Knife Edge (SKE) Door (Series 201) is a robust solution designed for reliable RF shielding and ease of maintenance. It consists of a factory-assembled door leaf and frame that ensure consistent electrical contact around the entire perimeter. The door panel is laminated on both sides with 24-gauge steel, enhancing its durability. The door leaf features a bronze knife edge extrusion, while the receiver housing is mounted securely to the frame.

The door frame incorporates a recessed channel lined with two rows of beryllium copper finger stock, which can be easily maintained and serviced. This ensures reliable RF shielding over time. The cam-driven locking system includes a multi-point latch that can be operated from either side of the door. With a simple manual rotation of the lever handle, the mechanism pulls the knife edge into its final closed position, securing an RF-tight seal. Precise alignment of the bronze knife edge with the Recessed Contact Mechanism (RCM) ensures dependable contact for maximum shielding performance.

Standard single personnel doors come equipped with three precision-machined aluminum hinges, each fitted with adjustable thrust bushings. These allow for fine adjustments to the door leaf within the frame and ensure compensation for varying load conditions, guaranteeing smooth operation and optimal RF shielding integrity.

Operation

The SKE Door features an easy-to-use bar handle on both sides of the door leaf for smooth latching and unlatching. This action controls the external double cam roller assembly, which raises or lowers to engage or release the knife edge, ensuring secure and reliable sealing.

Interfaces

The SKE Door is highly versatile and can be integrated with various locking mechanisms, latches, and security systems. Options include locking hasps, panic release systems, and contact mechanisms for emergency power cut-off or fire detection closure systems. Additionally, the door can be equipped with a ramp to facilitate the transportation of heavy equipment into the shielded area, making it ideal for a range of high-security and industrial applications.

Performance

The standard SKE Door, when tested in accordance with the procedures of MIL-STD-285, NSA 65-6/NSA 94-106, ITSG-02/IEEE 299 or EN 50147-1, will exhibit shielding attenuation levels of 110 dB at frequencies up to 1 GHz and 100 dB up to 10 GHz.

SEMI-AUTOMATIC ELECTRO-LATCH OPTION

Semi-Automatic Electro-Latch Option

ETS-Lindgren's Single Knife Edge (SKE) Door with Semi-Automatic Electo-Latch offers superior knife edge door reliability, performance and longevity. The SKE Door (S201) features a precision-formed knife edge, a proven Recessed Contact Mechanism (RCM), and an Automatic Latching with Assisted Door Closing to deliver reliable shielding, exceptional performance, and easy maintenance.

The emergency release system consists of two handles located at each side of the door, which when pulled to a horizontal position, can be removed to enable the door to be opened in the event of a power outage.

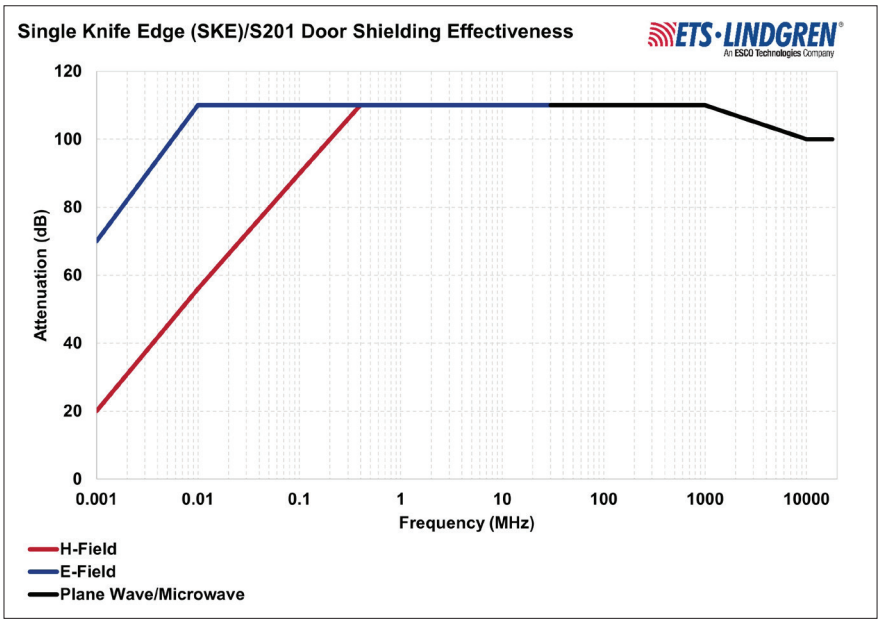
The Series 201 personnel doors have three precision-machined aluminum hinges. Each is fitted with adjustable thrust bearings that enable the door leaf to be accurately adjusted within the frame and to compensate for varying loads conditions.

The Semi-Automatic Series 201 Door can interface with a variety of locks, latches and security systems. Locking hasps and panic release systems may be incorporated, as well as contact mechanisms for emergency power cut-off and fire detection closure systems. The door can also be equipped with a ramp for heavy equipment transportation into the shielded area.

Technical Specifications

Performance[1]	
Magnetic Fields	20 dB @ 1 KHz, 55 dB @ 10 KHz, 90 dB @ 100 kHz, 100 dB @ 200 kHz, 110 dB @ 400 kHz to 30 MHz
Electric Fields	90 dB @ 1 KHz, 110 dB @ 10 KHz to 30 MHz
Plane Waves	110 dB @ 30 MHz to 1 GHz
Microwaves	100 dB @ 10 GHz to 18 GHz

[1] Performance when tested in accordance with the procedures of MIL-STD-285, NSA 65-6/NSA 94-106, MIL-STD-285/IEEE 299 or EN 50147-1.



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