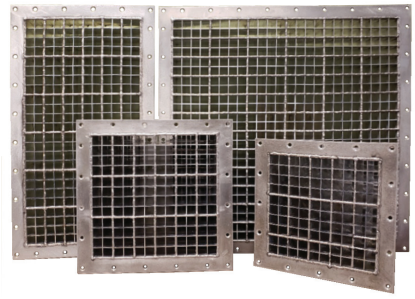
# MEDICAL SHIELING MEDICAL EMI/RFI SHIELDED WAVEGUIDE AIR VENTS



**MEDICAL EMI/RFI SHIELDED WAVEGUIDE AIR VENTS**

- **Available in a Variety of Dimensions to Match Duct Sizes**
- **Can be Fastened to All RF Shielding Type Designs**
- **Extruded Aluminum for Superior RF Performance and Corrosion Resistance**
- **Minimal Air Flow Resistance and Pressure Drop**
- **Continuous Welded for Seamless RF Performance**
- **Bronze Arc Pprayed Flange for Mounting to All RF Shield Types**

**ETS-Lindgren's Medical EMI/RFI Shielded Waveguide Air Vents** ensure efficient air circulation while effectively blocking electromagnetic interference from entering shielded environments, such as MRI rooms. Constructed with open-cell extruded aluminum channels, these vents provide superior airflow without the clogging issues often seen in honeycomb designs. The electric field, planewave, and microwave shielding performance meet rigorous MRI standards, delivering optimal ventilation and consistent shielding to support high-quality imaging and safety in medical environments.

### Product Features

### Versatile Mounting Methods

The sealing between vent and shield is critical for optimal shielding performance. To achieve this, ETS-Lindgren recommends the following waveguide-to-shield seals:

- **Shield Fastening:** The aluminum waveguides are equipped with a welded perimeter flange featuring countersunk mounting holes spaced 3 inches apart. These allow for secure attachment of the waveguide to the RF shield wall or ceiling. The flange is coated with bronze arc spray to prevent galvanic reactions between dissimilar metals. For optimal performance, the contact surfaces of the RF shield must be rigid enough to evenly distribute pressure along the flange, ensuring a tight seal for maximum shielding. To prevent issues with metal reactions, it's essential to use compatible metals and space fasteners no more than 3 inches apart.
- **Duct Fastening:** When metal ducts are connected to waveguide air vents on the outside of the shielded wall or ceiling, a dielectric spacing collar is required to create a non-conducting break. This break prevents RF currents from transferring from the metal ducts to the shield wall, thereby preserving shielding effectiveness. The dielectric break can be made from materials such as rubber or canvas boots, wooden spacing collars, or other dielectric mediums.

### Minimum Resistance to Air Flow

The aluminum tube design optimizes both shielding performance and airflow. The geometry of the tubes maximizes open space while the uniformity and depth of the tubes minimize air turbulence, ensuring high airflow efficiency without compromising shielding effectiveness.





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