

Open Shielding Box Data Sheet

The **Open Shielding Box** consists of bolted aluminum perforated panels (thickness 1,5 mm) and structural aluminum profiles used to make the walls, the ceiling, and the floor of the shielded room. The system must be demountable and relocatable without any disruptive intervention. The shielding shall be free standing and self supporting without any connections to the parent building's walls and ceiling.

| RF SHIELDING DOOR

The door size is 1.02 x 2.10 (WxH) mt. The door is made of perforated aluminum with a fingerstock gasket around the entire width of the door. The gasket provides electrical continuity between the door itself and the door frame. The gasket can be inspected for maintenance and can be easily replaced without affecting the structure of the door. The door is hinged to the structural profiles of the box. From an electrical point of view then, the door is configured as a shielding panel. The opening and closing operations of the door are carried out manually by a chrome-plated handle.

| WALLS

The vertical shielding walls are made of aluminum profiles and aluminum perforated panels connected to the floor and to the ceiling by bolted aluminum angular profiles. The total electrical insulation is greater than 3 KOhm. No wood is allowed in the walls core structure.

| CEILING

The shield on the ceiling is made of aluminum profiles and aluminum perforated panels. No wood is allowed in the ceiling's core structure.

| FLOOR

The shield on the floor is made of aluminum profiles and aluminum panels in which dielectric insulating material panels are placed. Aluminum plates (thickness 5 mm) are placed on top of the dielectric insulating material panels and are covered with a layer of PVC.

| SHIELDED PATIENT VIEWING PANEL

The viewing panel allows for the patient to be monitored during the examination. It is comprised of a horizontal, aluminum, perforated panel that is connected to the structure by a tubular aluminum frame.

| RF WINDOW

Is an alternative to the shielded patient viewing panel. The viewing window allows the patient to be monitored during the examination from the control MR room. It is constituted by an aluminum frame on which are fixed two steel wire meshes. The aluminum frame with wire meshes is electrically connected to the rest of the shield through steel gaskets.

OSB

For a better MRI

RF Shielding Material	Light Blue or White, Powder Coated, Perforated Aluminum
RF Shielding Assembly Type	Bolted
RF Shielding Attenuation	90 dB (5 MHz ÷ 1 GHz Range)
Door	Light Blue or White, Powder Coated, Perforated Aluminum, manual, sliding
Magnetic shielding	available on request according to site requirements
MRI Penetration Panel Frame	included
Internal Utilities Penetration Panel	included (customizable according to required accessories)
Electric System and Cabling	According to custom needs
Lighting System	Halogen lamps (White LEDs or RGB LEDs available on request)
Why we choose aluminum vs copper?	Aluminum is strong enough to form a self standing structure, while copper must be attached to the parent wall. Moreover, the shielding efficiency of aluminum is greater than copper in a wide range of frequencies.
Why we choose aluminum vs galvanized steel?	Aluminum provides a better attenuation. It is more efficient on 60 Hz magnetic field fluctuations. Galvanized steel becomes magnetized and each mechanical vibration will introduce a magnetic field fluctuation. Furthermore, aluminum is lighter than galvanized steel.
Why we do not have wood in our structural system?	Wood is not a reliable material for long term use. Wood's sensitivity to humidity and other environmental factors will cause shielding systems to leak. A problem could arise early in time, for instance if the wood gets damaged from humidity or thermal dilatation, and can jeopardize an entire installation.

ISO 9001
ISO 17025
ISO 14001
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