

For over 30 years, SIEPEL has been designing, manufacturing and installing shielded rooms for various application fields: sensitive information protection (Tempest and Forensic), EMC anechoic chambers, RF and antenna measurements anechoic chambers, compact ranges, reverberation chambers, etc...

These shielded enclosures are entirely produced in our facility in la Trinité sur Mer, France.



## MAIN ADVANTAGES OF SIEPEL TECHNOLOGY

- **Modular Structure:**
  - High shielding effectiveness performances
  - Self-standing structure, totally independent from host building
  - Long term reliability through the years (20 years performance warranty)
  - Incomparable flexibility:
    - Any shape modification possible (enlargement, reduction),
    - 100% dismantlable for relocation,
    - Possible addition of new items: feed-through panels, honeycomb air vents, waveguide pipe penetrations, filters...
  - Assembly through the interior: enables to optimize enclosure dimensions compared to available space inside the room.
  - Customizable finishing: wallpaper, wall covering for meeting rooms...
- **High performances doors:**
  - Knife edge technology associated with multi-point latching enables to maintain a perfect electrical contact between the perimeters of both door leaf and frame
  - Based on a reliable design (single knife), they have excellent durability and high performance shielding
- Easy installation adapted to host room of ferrite tiles and electromagnetic absorbers.
- Ability to meet any specific requirement with high reactivity thanks to unique integration site: Siepel's R&D, Design office, manufacturing departments are all located in a single site.

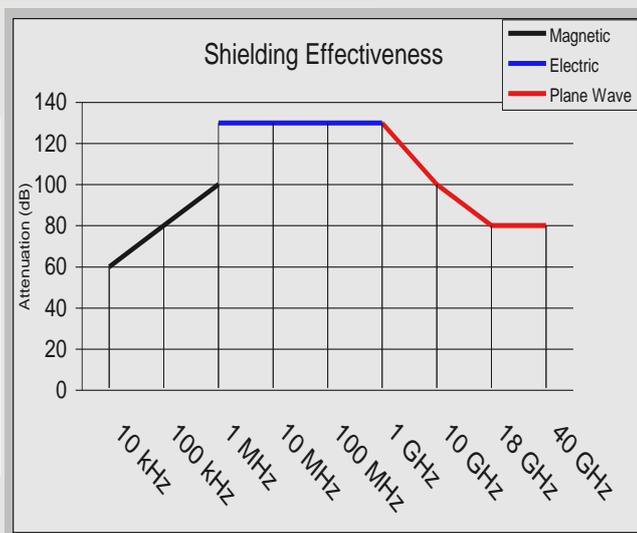


## SHIELDING EFFECTIVENESS PERFORMANCES

Attenuation performances guaranteed meet specifications of applicable standards, as indicated below for the EN 50147-1:

Frequencies	Guaranteed values*	Typical Values**
<b>H-Field</b>		
10 kHz	60 dB	≥ 65 dB
100 kHz	80 dB	≥ 90 dB
1 MHz	100 dB	≥ 120 dB
<b>E-Field</b>		
Up to 1 GHz	130 dB	≥ 140 dB
10 GHz	100 dB	≥ 110 dB
18 GHz	80 dB	≥ 90 dB
40 GHz	80 dB	≥ 90 dB

\* Minimum guaranteed values according to EN 50147-1  
 \*\* Typical measured performances according to EN 50147-1



## PANELS & DOORS FEATURES

Panels and doors of shielded rooms are of composite materials of 20 mm thick: They are made of high quality particle boards, pressed under 200 bars (density: 700 kg/m<sup>3</sup>) compliant with EN312-1/2/3/4/5 standards coated on both sides with galvanized steel sheet 6/10<sup>th</sup> mm thick compliant with EN 10142 standard.

They can be cut to specific dimensions required.

## ASSEMBLY OF PANELS

The assembly of panels is made **without drilling any hole** in the shielding and **without gasket**, using electro-galvanized steel framing (OMEGA profiles).

**Self-tapping screws**, fixed every 95 mm, ensure a perfect mechanical assembly, with no risk of corrosion and no possibility for the screws to be loosened. The assembly is realized without insert or washer to provide an **outstanding electric conductivity**.

The overall structure is strongly reinforced through the installation of external stiffeners (special shaped steel profiles, as per SIEPEL design) wherever needed on the shielded enclosure or through a structure.

## SHIELDED DOORS

Door is the critical point of any shielded room, in terms of shielding effectiveness performances; that's the reason why SIEPEL only propose high performances doors, such as:

- Single, double or triple leaf
- Swinging or sliding

All SIEPEL doors are compliant with given shielding effectiveness performances.

They have been tested for 500 000 typical opening cycles.

Accessories available on demand:

- Electrical or pneumatic latching system,
- Fully automated actuation,
- Access control system



Our technical know-how combined with our integrated design and manufacturing departments allow us to meet your requirements of customized dimensions suitable for big EUT's.

Doors with standard dimensions are available off the shelf: 0.9/1.2/1.5 x 2.13(h) m, 1.2/1.5 x 2.43(h) m.

## QUALITY MEASURES & CONTROLS

SIEPEL does no compromise on performances and quality.

Qualified staff, measuring tools and instruments from DC to 40 GHz are available in our workshop (in France) to check shielding performances.

Quality procedures are rigorously followed regarding the control and traceability of rooms' components.

We are also at your disposal for **copper rooms** or **architectural shielding materials**.  
The **modular structure** described here is also used for **shielded cabinets**.

