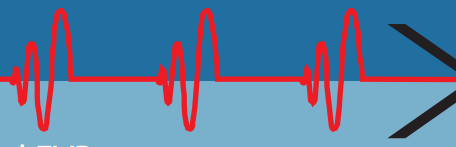


# Faraday cage



Faraday cage for medical solutions

KNF & MRI rooms, shielding of EEG, EMG, ENG and EVP rooms.

Shielding against electromagnetic radiation is frequently applied in rooms where sensitive medical measurements/prerecordings are made (neuro-physiology and MRI rooms). Electro-magnetic radiation can disturb the results of these measurements seriously. For this reason these spaces must be constructed as a Faraday cage. Our Faraday cages meet the attenuation requirements for screening/shielding hospital rooms and other healthcare.

## Features

- Applicable for new construction and modernisation
- Optional standard medical finishing of wall, floors and ceilings
- No need for raised or expensive epoxy floors
- Optional removable ceiling
- Completely maintenance free
- Turn key produced incl. measurement report
- Customer-specific design
- 10 years guarantee

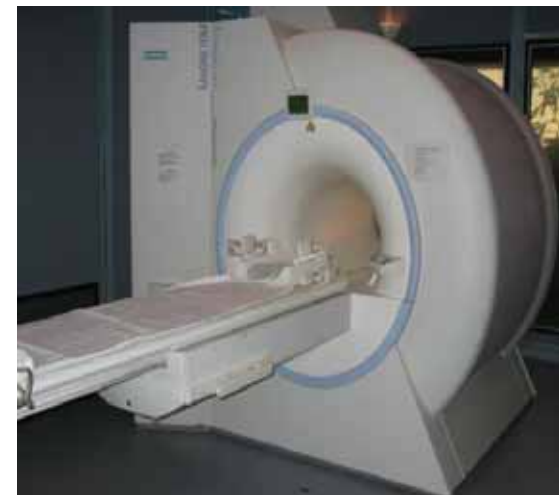
## Reasons for screening/shielding

Shielding prevents interference of nearby electronic equipment, by the device in the room. It will also prevent interference with the operation of the device / the measurements due to electromagnetic radiation from the surroundings (for example mobile phones used in a hallway, or nearby transformer spaces). The manufacturer of the device may demand that shielding be implemented.

Shielding will also protect medical staff and patients against detrimental electro-magnetic radiation.



Medical Mu-Copper™ cage with screened windows

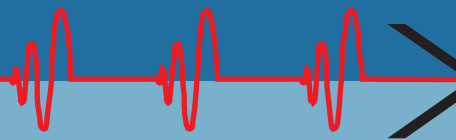


MRI-room



Electromagnetically screened/shielded room

# Faraday cage



Faraday cage for medical solutions

KNF & MRI rooms, shielding of EEG, EMG, ENG and EVP rooms.

## Applications

- KNF-rooms (EEG/ EMG /ENG / EP)
- Electro-magnetic therapy
- Physiotherapy
- Electron microscope
- MRI-rooms

## The material

Holland Shielding Systems B.V. has developed Mu-copper™ foil. Mu-copper has very high attenuation levels, both with respect to electric fields (up to 120dB), and magnetic fields.

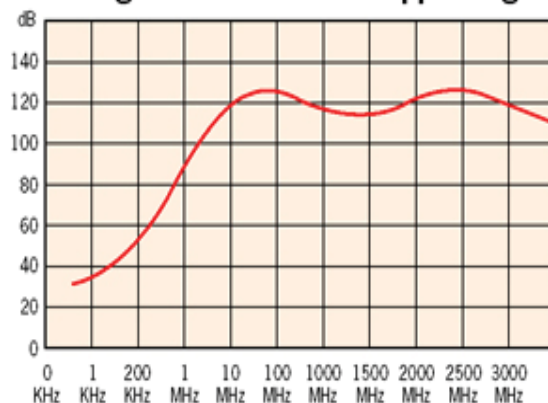
It can be installed very easily like wallpaper with a special adhesive, onto walls, ceilings and floors. The Mu-copper™ foil pieces are soldered to each other. Because of this it is possible to create a high-quality Faraday cage economically and in a very short period of time.

Depending on the quality of the doors, ventilation panels, wire-filters and windows, attenuation levels levels up to 100 dB can be realized in an existing space, without loss of space and within a few days



Medical mu-copper™ faraday cage

## Shielding Performance Mu-copper cage



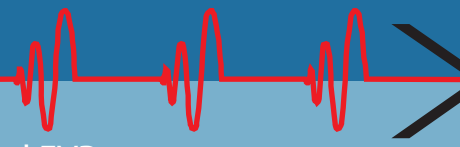
Attenuation characteristics Mu-copper™ cage\*



Screened removable ceiling

\* Measuring results strongly depend on the quality of doors, ventilation panels, wire-filters, windows, etc.

# Faraday cages



Faraday cage for medical applications  
KNF & MRI rooms, shielding of EEG, EMG, ENG and EVP rooms.

## Example project

For the project mentioned below Holland Shielding Systems B.V. was approached by construction management of a hospital where a prominent surgeon was conducting research with KNF measurements.

The doctor's KNF measurements were subject to interference by electronic equipment in the surrounding area, which he wanted to prevent in the future. It was further required that the room could be used as an OR (operation room).

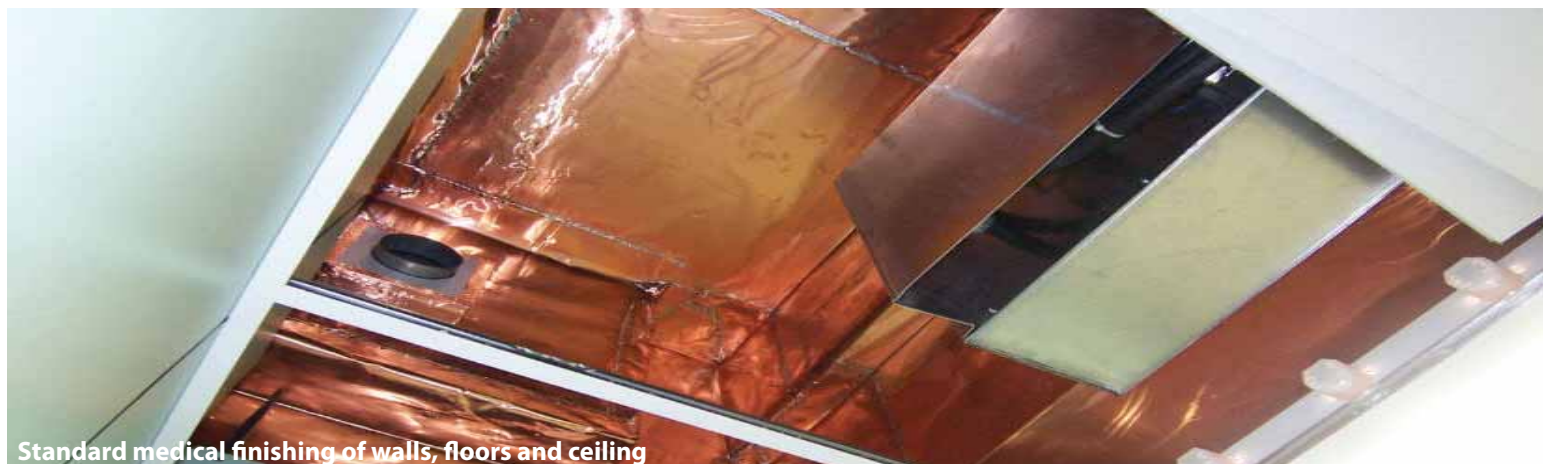
This requirement had consequences for the design of the Faraday cage / the elektro magnetic screened room. Particularly in the plenum it was necessary to apply extra screening supplies.



Screened/shielded OR-space



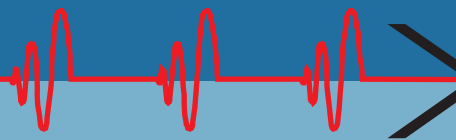
OR-plenum



Standard medical finishing of walls, floors and ceiling

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# Faraday cage



Faraday cage for medical applications

KNF & MRI rooms, shielding of EEG, EMG, ENG and EVP rooms.

## Components

The screened rooms can be equipped with the following components:

Standard shielded door or sliding-door.

Screened windows in aluminium or wooden frames (plastic or metal also possible).

Ventilation panels in all dimensions.

Wire- and signal-filters in 1-phase or 3-phase implementation (220-600 V, 1-600 A) and waveguides for optical connections.

We also offer medical solutions for water piping, medical gases and ventilation.

## More than medical applications only

In addition to medical applications we also offer solutions for screening transformer rooms (magnetic screening), EMC test rooms, computer rooms, medical research rooms, treatment chambers for physiotherapy, radar-screening, tempest sites, military EMC-screening or even screening complete buildings, for example for secret services.



Screened windows for daylight accession

**References:** a random excerpt from our customer portfolio



Max Planck Institute for Psycholinguistics

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## Holland Shielding Systems BV

Faraday cage for medical solutions