



RADIOFREQUENCY SHIELDING FOR MAGNETIC RESONANCE TOMOGRAPHS

Safety through precision



PLANNING



The concept

Modern MRT systems require a Faraday cage for radiofrequency shielding. Our RF cage designs are geared to meet the typical needs of MRT system users and to create optimum conditions for perfect image quality. As system providers, we undertake the turnkey completion of your project – from the initial discussions right up to detailed project planning, logistics and final acceptance with all necessary measurements.

Delivery on time

Thanks to our highly experienced, expert and motivated team, your project will be completed on schedule and fully in accordance with your specifications.

Our quality management system has been certified under DIN ISO 9001 since 1996, guaranteeing consistently high quality standards in planning, design, assembly and handover of the cabin at the installation site.

Detailed planning

Implementing your requests and ideas is our number one priority. Our planners and designers incorporate your requests into the implementation planning, taking into account both on-site conditions and the specifications of the MRT manufacturer involved. The documentation of the implementation planning is prepared in both a digital and printed version.

Development

Our radiofrequency shielding systems are in-house developments. They are subject to constant quality controls and continuous further development in keeping with the latest state-of-the-art. The constantly evolving demands of the respective MRT manufacturer are immediately considered in production. Our aim is to combine high technical functionality with a pleasant atmosphere for both the patient and the operator.

PRODUCTION



The Principle

Each of our RF cabins is individually adapted to the on-site conditions. The cabins consist of preassembled elements installed on-site as part of the building, or as self-supporting constructions in cases where space permits this. We also have a great degree of experience and know-how regarding the special sheet-steel and aluminium cabins that are required for the operation of some MRT systems.

The total concept of our turnkey assembly also comprises extra sound damping measures in wall, ceiling, floor, door and window construction. The supply of all the necessary RF conduits and magnet-specific components rounds off our range of services.

Design

The supporting frame for copper-shielded cabins consists of partially glued and interlocked laminated wood. The wood has been treated in an environmentally compatible manner to

combat mould and pest attack.

The installation process is divided into three stages:

- Construction of the supporting frame for the cabin
- Fitting of the shielding line
- Construction of all the interior fittings including electrical installation as per the IEC 60364-7-710 international standard.

The assembly steps are all coherently aligned with one another. Depending on the size of the cabin in question, assembly times generally range from seven to ten days.

The concluding radio frequency measurements in accordance with the MRT manufacturer's specifications or internationally applicable IEE E 299 standard are performed and documented by our experienced employees.



ASSEMBLY



Special feature

The parts used in the cabin's construction, some of which are prefabricated, are initially fitted without copper shielding. This is to enable modifications to be made to the whole of the cabin construction during on-site installation without lengthy delays ensuing for the overall progress of the project. This special feature means that "last minute" changes required by the client pose no problem and demonstrates the unique flexibility of the whole concept.





Customised equipment

Choose from a wide range of designs when equipping your cabin.

- Daylight windows
- Openable daylight windows
- Manually or electrically operated RF leaf door
- Suspended ceilings
- Diverse wall coverings
- MR-suitable, specialist furniture
- Stylish accessories
- Lighting concepts
- Floor coverings from prestigious manufacturers

The technical resources available mean your individual ideas need know practically no bounds.

Make your personal ideas a reality: we'll be happy to be there for you every step of the way.



Certified RF measuring methods



Precision RF elements



In-house development department



Complete electrical installation



Sophisticated sound damping concept

Results



With more than 1,200 cabins completed (as at 1/08), we are one of the world's leading FR specialists.

Europe

No of completed RF cabin projects: **930**

Of which in Germany:

No of completed RF cabin projects: **520**

Near East

No of completed RF cabin projects: **120**

Rest of Africa

No of completed RF cabin projects: **50**

Middle East

No of completed RF cabin projects: **50**

Rest of Asia

No of completed RF cabin projects: **20**

Latin America

No of completed RF cabin projects: **120**



SCHUTZTECHNIK

SAFETY THROUGH PRECISION

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