

## Important Factors to Consider When Choosing RF Shielding: How to Avoid Artifacts

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What is the best way to insure a high rate of return for your investment in a new MRI? Certainly generating clear images every day without having any downtime due to artifacts. Surrounding your new MRI with the highest quality of radio frequency shielding will prevent such downtime. When choosing an RF Shielding company a customer needs to take into account all that a company can and should provide for them. A shielding company is not just providing a product whether it be copper, aluminum, or galvanized steel but also their expertise in the field. The company must bring competency and quality.

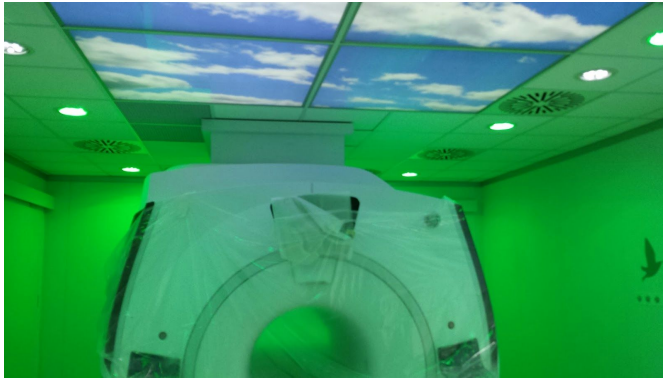


MRIs require RF shielding and can also require magnetic shielding; however, this is determined on a site-by-site basis. All MRI systems have their own requirements for shielding, space, acoustics, vibration, power, air conditioning, and so on. These requirements can be obtained for your system from your MRI manufacturer. However if you are obtaining a used or refurbished MRI system, you may have difficulty obtaining the same level of information and/or support from the original equipment manufacturer (OEM). Whoever is providing your equipment should also provide you with OEM documentation. You can also obtain support from your RF shielding vendor.

Upfront costs can blur decision making and cause us to be very present minded and only focused on the near future. Often times when new MR rooms are being constructed it appears that choosing a company that provides cheaper RF shielding is a viable solution. Judging a company solely based on price can often lead to more problems down the road. Will choosing a product that costs less today save you money in the future? Chances are if it is an inferior

product the answer would be no. Decision makers need to think about the opportunity cost of a day, maybe a week, of their MRI not scanning because of artifacts that can occur due to poor RF shielding. With the potential for service in the future, decision makers should also know what type of support services their shielding vendor can provide them.

Having a wealth of knowledge and technical support is a key component to look for when choosing a shielding vendor. Can they tell from a dicom file what the problem is or do they have



to go through a list of troubleshooting?

Size of the company is also important and can sometimes affect how quickly they can get to a site. If their engineers are at a sight installing a shield, how many days will it take from them to send someone to service yours? Has the company you are purchasing from been in business for many

years or just starting out? This is something to consider when looking at warranties of an RF shield. It is great to have a five year warranty as long as the company will not be out of business by then.

In combination with RF shielding, site audits and the ability to test and approve everything which goes inside the room must be provided. The manufacturer should have a wealth of knowledge and experience to be able to provide a customer with a complete solution from start to finish. Expertise in shielding cannot be stressed enough, especially if a MR systems starts to experience artifacts. Customers deserve to have a shielding company that can perform a site audit and be able to solve a problem caused by external factors unrelated to the MR scanner.