

FFS INNOVATION PVT. LTD.

INNOVATIVE MRI RF SHIELDING & INTERIOR SOLUTIONS FOR A SAFER IMAGING AND ENVIRONMENT



AT FFS INNOVATION,
CREATIVE SOLUTIONS LEAD TO
ENDLESS POSSIBILITIES

About Us

FFS Innovation follows stringent quality control systems that help us deliver innovative technological solutions for our clients.

FFS Innovation Private Limited is a leading MRI cage manufacturing company in India. Specializing in providing cutting-edge solutions for Magnetic Resonance Imaging (MRI) equipment, we have been able to make an indelible mark in the industry. With more than 19 years of cumulative experience, FFS Innovation ensures to manufacture top-notch quality MRI RF Shielding Cages with remarkable attenuation ratings of over 100 dB.

Along with manufacturing, our highly qualified team of professionals holds expertise in providing interior design services for MRI Cages. We focus on delivering premium quality interiors for MRI Cages that can be customized as per the needs & preferences of the clients. Being an ISO-Certified company, we take the responsibility to ensure the accuracy and functioning of our products. Our manufacturing plant is well-equipped with the latest equipment and machinery.



Our Philosophy

We are known for delivering the best-in-class products and services because of our commitment towards our work.



MISSION

To deliver premium-quality MRI RF Shielding cages that are safe and reliable.



VISION

To become a globally recognized name for delivering innovative and accessible medical imaging solutions.



Products & Services

Our range of products are RF penetrations, air filters, med-gas waveguides, Door, Viewing Window, EMI/RFI Gaskets, & power filters.

FFS Innovation is a leading MRI RF CAGE manufacturing company that deals in a wide range of products and services designed to cater to the needs of the healthcare industry. Our extensive portfolio of services includes MRI Radio Frequency shielding cage, Modular & Customized interiors, Skylight and Virtual Window Acoustic Shielding, RF Testing, RF Cage Modification & Magnetic shielding.

We provide comprehensive services for the design, supply, installation, and maintenance of RF-shielded rooms and enclosures for medical imaging systems such as MRI machine in healthcare industries. Our range of products also extends to the RF penetrations, products including air filters, med-gas waveguides, Door, Viewing Window, EMI/RFI Gaskets, and power filters.

Modular & customised interior MRI cage designs

For interior design, we offer Standard Design, Exclusive Designs, Acoustic Designs, Sky-Light Virtual Windows and Ambient Lighting Solutions. Our creative team creates aesthetically pleasing and functional spaces that cater to the specific needs of our clients. Acoustic Interior Designs focus on creating spaces that offer superior soundproofing, ensuring a comfortable and distraction-free environment. With a focus on enhancing the ambience and atmosphere of any space, we provide virtual skylight solutions in the Scan Room. If the room permits, we also offer customized solutions to the customers according to their needs and preferences to create a pleasant & welcoming atmosphere for patients.

Our LED Ambience Lighting Solutions are designed to allow variation in light colour and intensity and therefore help patients relax by creating a comforting ambience during the patient's imaging process.





MRI RF Shielding Cage

Our high-quality raw materials are procured from reliable & trusted sources to ensure accurate performance of our products.

RF Shielding Cage

Holding expertise of more than 6 years in manufacturing MRI RF Shielding cage, and 19 year project experience, we have garnered a strong client base across the country. The unique panel clamping system ensures stability and smooth functioning of the RF shielding cage. The team at FFS Innovation specializes in manufacturing and installing ferrous & non-ferrous enclosures like GI, Aluminium & copper faraday cage chambers to effectively protect against RF interference.

Our rigorous quality control systems and attention to details ensure that every installation exceeds the expectations of our clients.



Our RF Shielding cages are structured to fulfil long-term performance needs.



shielding services, we pay attention to

attenuation and testing.

Attenuation & Testing

Our onsite testing services are well managed with the latest equipment and machinery that help us perform comprehensive testing to guarantee the effectiveness of our RF shielding solutions. To ensure the performance and accuracy of MRI systems, we carefully carry out the process of reduction in the strength of electromagnetic signals to prevent RF interference from entering or leaving the scan room. FFS Innovation pays attention to quality checks to ensure the balance between RF shielding systems and attenuation levels.

Product Highlights

From planning to installation, we work tirelessly to ensure the highest productivity of MRI scan rooms.



RF Cage & Flooring

With a focus on the efficiency and productivity of our product, we deliver the best possible results for patients & doctors.

RF Cage

The RF Cage manufactured by FSS Innovation uses high-quality copper, aluminum, and Galvanized steel to ensure the safety and reliability of the MRI shielding cage. The premium quality copper offers superior attenuation to prevent RF interference from disrupting scans and negatively impacting image quality.

Its sturdy construction and precise engineering ensure reliable performance, even in demanding MRI environments.



Our RF enclosure consists of RF Doors, RF windows, RF air vent filters, etc to provide a complete solution to our clients.



Our flooring options are designed to provide maximum RF protection and smooth finishing.

Flooring

Flooring is a crucial aspect to ensure the sturdiness of RF shielding for MRI scan rooms. We offer a monolithic-type modular RF flooring system. It is the recommended choice for MRI RF shielding cage chambers. Our RF flooring system consists of copper/ GI/ Alu sheets soldered/ joined together to form a continuous shielded plane. One layer of vinyl sheet is laid below the copper/ GI/ Alu sheet on the floor. To provide electrical insulation and moisture resistance, an 18 mm x 2 Nos HDHMR board is laid over copper/ GI/ Alu sheets. The layers are installed and adhered together.

RF Door & Window

We guarantee high-quality RF door solutions that meet the specific needs of the clients.



PRODUCT SPECIFICATIONS		
Inner Size Specification (Without Frame)	118o x 2100 mm (± 5mm)	
Outer Size Specification (With Frame)	1240 ×2160mm (±2mm)	
Material	Copper foil wood & acoustic materials	
Shielding Frequency STC	63MHz-127MHz≥100dB	
Net Weight	95kg (±5kg)	

RF Door

RF doors are a critical component of MRI shielding, designed to maintain a secure and effective RF-shielded environment within the scan room. RF doors are made from high-quality shielding materials, and are engineered to reduce electromagnetic interference and provide maximum protection to medical imaging equipment.

We at FFS Innovation, strive to create door designs with maximum protection for both MRI machines and patients, with special attention to safety, durability, and performance. The doors are also available in various sizes and styles to meet the specific requirements of our clients.

RF Window

RF windows protect the functionality of medical equipment and ensure the safety of patients and staff in MRI rooms. FFS Innovation designs RF windows to offer maximum shielding performance, low residual magnetic field, and clear visibility. We use high-quality raw materials and cutting-edge technology to ensure that our RF windows provide superior performance and durability. At FFS Innovation, we prioritize our client's needs and work closely with clients to bring out the best solutions at competitive prices. We have garnered trusted relationships with our clients who approach us for their needs related to the upgradations of RF windows or for the installation of new ones.



PRODUCT SPECIFICATIONS		
Inner Size Specification (Without Frame)	1200 × 900mm (±5mm)	
Outer Size Specification (With Frame)	1250 × 950mm (±5mm)	
Material	SS mesh and Al alloy frame	
Shielding Frequency STC	10MHz-130MHz≥100dB	
Net Weight	40 kg (±5kg)	

RF Penetrations

We strive to provide a safe and secure environment for patients by delivering best-in-class products & services.

RF Penetrations- Air Filter

At FSS Innovation Private Limited, we understand the importance of maintaining a controlled environment within an MRI room. Our trained technicians create structured RF shields around the MRI to ensure the smooth passage of air and other materials through RF filters or waveguides. Our RF filters are mounted on the RF shield and provide a penetration point for electrical power or powered outlets within the MRI room while accommodating data cables.

PRODUCT SPECIFICATIONS	
Size Available (L*W)	300 x 600mm (customized size)
Thickness (Unit: mm)	25 mm also customized size accepted
Cell Hole Size (Unit: mm)	3.2 4.2, also customized accepted
Material	Stainless Steel Brass
Frame	H mode, C mode, Round mode



Med Gas Waveguides



Med Gas Waveguides are crucial to ensure the safety and comfort of the patients undergoing MRI procedures. The penetrations in the RF shield allow the flow of medical gases into the MRI room, providing essential respiratory support to the patients. At FFS Innovation Private Limited, we focus on the reliability of Med Gas Waveguides by understanding the medical gas being used & the required flow rate. Our commitment to excellence and attention to detail ensures that the installation of Med Gas Waveguides is done with precision and accuracy.

PRODUCT SPECIFICATIONS		
Size Available (L*W)	250 x 100	
Thickness (Unit: mm)	1.8 Kg	
Cell Hole Size (Unit: mm)	16, 25,30,50 are normal and also others	
Material	Line-Line, Line-Case	
Frame	220V for two lines, 440V for four lines	

EMI Power Filter

We guarantee high-quality RF door solutions that meet the specific needs of the clients.





EMI Power Filter

PERFORMANCE DATA	
Voltage Drop	Less than 1V
Overload	150% of rated current for 1 minute
Harmonic Distortion	Less than 2% @ full rated current
Leakage Current	Current:≤2mA@250VAC and 50Hz
Dielectric Withstanding Voltage	1000VDC (line to line) 1000VDC (line to case)
DC Insulation Resistance	As Per MIL-STD-202 Method 202
Terminal Strength	As Per MIL-STD-202 Method 211
Temperature Rise	As Per MIL-F-15733
Shielding effective	100dB@1M-150MHz
Climatic Classification	25/085/21
Rated Voltage	250VAC
Rated current	10A 16A 25A 30A

FFS Innovation Private Limited offers top-notch quality EMI Power Filters to ensure the safety of all power circuits entering the MRI room from unwanted RFI/ EMI signals. Our filters are designed to eliminate unwanted signals. We make sure to bond grounding wires directly to the filter Ground stud. With our strong focus on quality, we make use of industry-approved filters, with a voltage drop of less than 1V, 150% of rated current for 1 minute, and leakage current conforming to less than equal to 2mA@250VAC and 50Hz. Our filters are available with a rated current of 10A, 16A, 25A & 30A, ensuring that all the electrical power needs in the MRI room are met. Our DC Insulation Resistance is as per MIL-STD-202 Method 202. With a Dielectric withstanding voltage of 1000VDC (line to line) & 1000VDC (line to the case), we make sure to achieve the best results. The terminal strength of our power filter is as per MIL-STD-202 Method 211. The temperature rise conforms to MIL-F-15733. We abide by industry standards and strive to deliver safe and effective products to our customers.

Cage Interior Design

FFS Innovation holds an expertise in creating an aesthetically pleasing environment with our standard interior designs.

Standard Interior Design

Our team of experts works with the clients to create a space that not only meets functional needs but enhances the patient's experience. From flooring to lighting, we use the latest design trends and high-quality materials to bring innovative ideas to life. We have turned multiple MRI RF Shielding cages into exceptional & comfortable spaces with a focus on innovation & creativity.





Exclusive Interior Design

We offer exclusive interior design services to help create an environment that is welcoming, comfortable, and functional. Our team of experts strives to create a customized design plan that perfectly balances aesthetics, functionality and safety. We at FFS Innovation Private Limited have the skills and experience to bring the imagination into life. Our exclusive interior design services include everything from flooring and wall coverings to lighting and furniture, ensuring that every detail is taken care of.

Cage Interior Design

We guarantee high-quality RF door solutions that meet the specific needs of the clients.



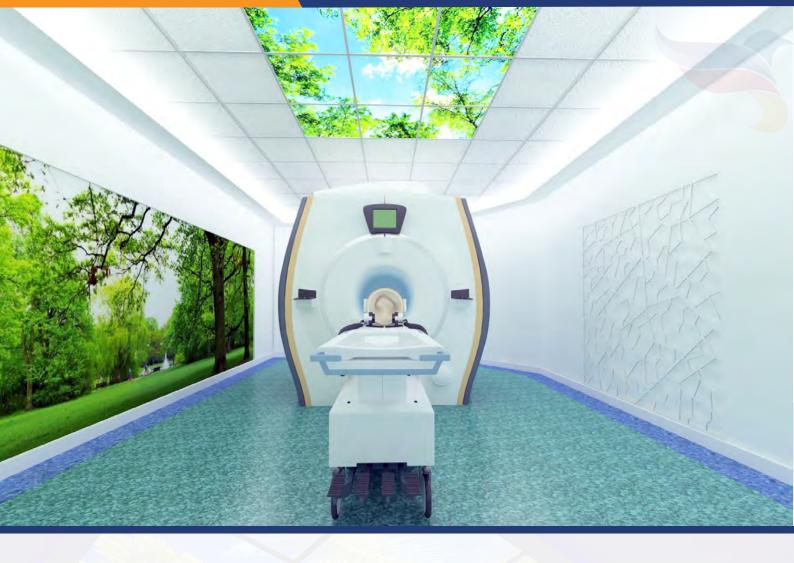
Acoustic Interior Design

Our specialized Acoustic Interior and Design service provides a noise-free environment to the patients. FFS Innovation offers a comprehensive range of custom acoustic interior design services. Our team of experts has the knowledge and experience to help create the perfect balance between comfort and functionality. The acoustic designs range from soundproofing to noise reduction, and sound dampening to ensure a quiet and relaxing atmosphere in the MRI suite. Procuring the highest quality raw material from trusted sources, we provide ideal solutions for the specific needs of our clients.

Virtual Skylight Windows & LED Ambience Lighting

FFS Innovation Private Limited offers LED Ambience
Lighting, virtual skylights and Window Solutions designed
to create a warm and inviting atmosphere. Our LED
lighting not only provides a welcoming ambience but
also helps in reducing eye strain. We offer customized
lighting solutions keeping in mind the specific needs of
our clients. FFS Innovation offers beautifully lit facilities
while reducing energy and maintenance costs through our
customized LED Ambience Lighting Solutions. The virtual
skylight helps the patient relax and makes them feel more
comfortable and calm.





The ambient lighting solution provided by us is available in different colour variations. Our highly qualified team of professionals assess the scanning room and creates a well-researched plan to install the virtual light and window to benefit the patients. With a focus on providing a well-ventilated, eye appealing & unique design, we at FFS Innovation strive to deliver cost-effective solutions to clients.



Plant & Machinery

FFS Innovation Private Limited possesses a state-of-the-art manufacturing unit located in Sakrawati Industrial Area, New Delhi.

Our varied range of cutting-edge equipment & machinery has the capacity of manufacturing 8-10 MRI shielding cages per month. We stay updated with the latest market trends and continuously upgrade our technologies. Our in-house R&D facility is well-equipped with advanced features that guarantee optimal performance, improved efficiency, and increased productivity.





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