

Since 1972, **UNIVERSAL SHIELDING CORP.**

has specialized in all phases of designing, manufactur-

ing, installing, and testing shielded enclosure systems for

a wide variety of clients in government, industry, and

medical institutions. Our experienced technical staff of

designers, engineers, and professional engineers have

been designing shielded enclosures for more than 33

years. In 1977, in collaboration with Downstate

University in Brooklyn, New York, **USC** developed one

of the first shielded enclosures which was especially

designed to be utilized with Magnetic Resonance

Imaging (MRI) equipment.

Today, **UNIVERSAL SHIELDING** is acknowledged

as a leader in the field, providing safe, interference-free

environments for even the most sensitive MRI

equipment. As a competitive force in today's industry,

USC's wide range of capabilities ensures quality control

throughout your entire project.

USC is extremely proud of its

reputation for safety, on-time

delivery, reliability, and

expertise. **USC** has all

necessary insurances and

qualifies for bonding.

A Leader in the Industry

All of our shielded enclosures are customized to meet your specific needs and the requirements of your MRI manufacturer by:

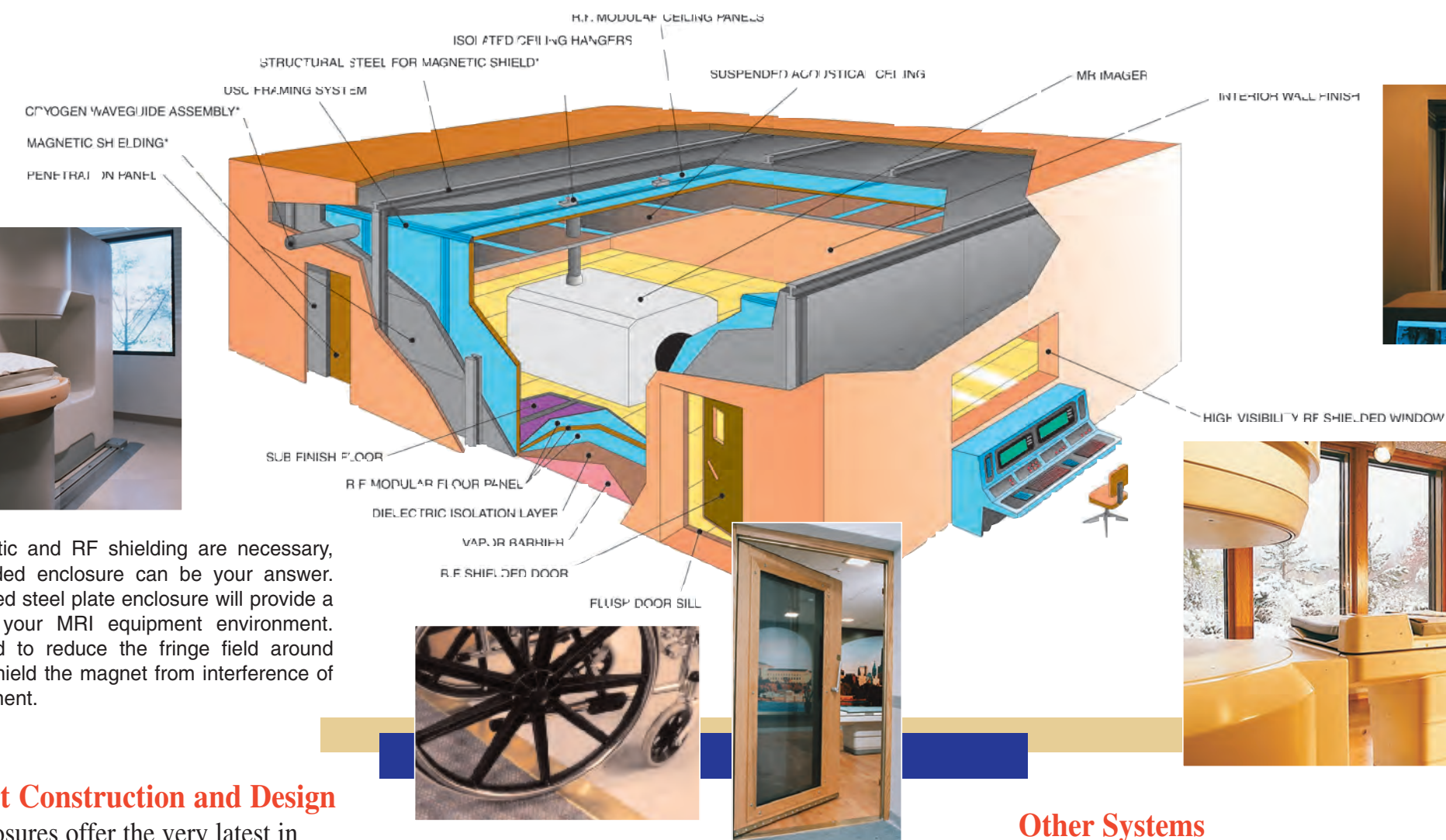
- Protecting the surrounding environment from exposure to high-intensity magnetic fields, generated by the imager.
- Providing an interference-free environment for the sensitive MRI receivers.

Universal Shielding Corp.

- Designs, manufactures, installs, and tests its enclosures to the satisfaction of the customers.
- Offers a complete "TURN-KEY" installation.
- Provides any accessories your system may require, including power and telephone filters, radio frequency (RF) air vents, Cryogen RF waveguide pipes, penetration panels with connectors, copper ground planes, removable panels for magnet entry, ceiling hatches, RF shielded windows and skylights.
- Provides environmental, power distribution, and lighting systems, attractive interior decor treatment, sprinkler system, etc.



RF Shielded Enclosure / Magnetic Steel Enclosure



Where magnetic and RF shielding are necessary, a cost-effective welded enclosure can be your answer. A prefabricated welded steel plate enclosure will provide a contained area for your MRI equipment environment. This system is used to reduce the fringe field around the magnet and/or shield the magnet from interference of the external environment.

*WHEN NECESSARY

State-of-the-Art Construction and Design

Our shielded enclosures offer the very latest in construction and design; RF windows, RF skylights, and walls of glass are available, enabling patients to be comfortable during examination.

All of our components are manufactured specifically by us and are numbered for customized fit at the jobsite. This assures a timely, quality installation.

Whether you need a self-standing enclosure or one supported by the existing parent room structure, our staff will work together with you to customize a system that meets your every need.

Shielded Construction Prefabricated Modular System

Our shielded enclosures are six-sided units, consisting of panels joined together with a unique electro-zinc steel framing system. Our panels consist of a wood core material with 26-gauge

galvanized steel laminated to each surface.

This system will attenuate the RF energy, leaving or entering the enclosure.

If the magnetic gauss field is to be reduced, 11-gauge metal can be laminated on both sides of the wood core.

Magnetic Shielded Construction

To reduce high intensity magnetic fields, USC will fabricate and install the shielded enclosure consisting of magnetically treated steel plates and its associated supporting structure. These plates are fabricated to the requirements of the MRI supplier and are constructed of mill-certified 1006 low carbon steel. Each plate is fully annealed after fabrication to ensure the maximum in magnetic permeability. These plates are welded or bolted together at the installation site by our experienced field crew.

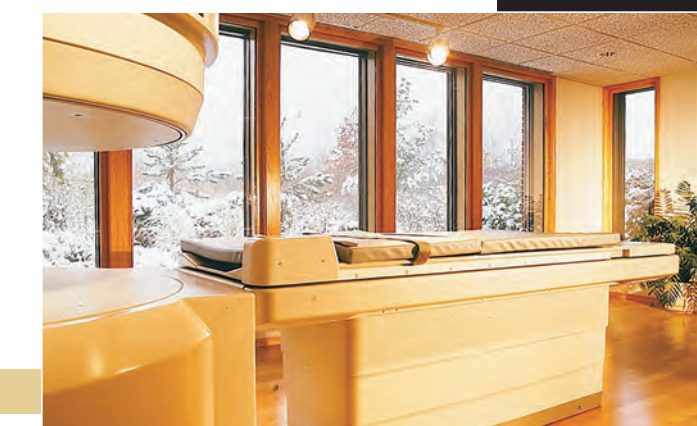
Installation And On-Site Testing

Our services include both installation and testing by our experienced field crews. After your installation is complete (and prior to the installation of the interior finishes), a Qualification Test is performed to ensure that the enclosure meets all MRI shielding specifications. The interior finishes and MRI unit are then installed and an attenuation acceptance test is performed. Upon completion of the acceptance test, a report is issued.

In addition, we can perform magnetic field intensity gauss measurements after the installation of the magnet.



View through RF window



Other Systems

If non-ferrous enclosures are desired, USC will provide copper laminated panels with a brass framing system.

Isolation

The enclosure construction is continuously monitored to insure that a minimum electrical isolation of 10,000 ohms is maintained between enclosure and ground.

Shielded Doors

Designed specifically for medical application, our custom built, shielded doors offer the utmost in protection, featuring a damage-free closure seal guaranteed to prevent

RFI/EMI leakage. Our doors are constructed from lightweight material and utilize a cam latch, making them extremely easy to operate. Brass extrusion enables the RF sealing fingerstock to be completely concealed to prevent accidental damage (See Figs.1 and 2). All doors are available in a wide variety of natural wood or laminated finishes. They provide a clear, 4' x 7' opening with a flush doorsill.

Custom Windows

Our RF shielded windows are designed to meet MRI attenuation specifications. Crafted from a double layer of wire cloth with associated glazing, each window is coated to minimize visual moire patterns. A sliding window assembly is available.

Windows may be fabricated for skylight as well as for large viewing areas.

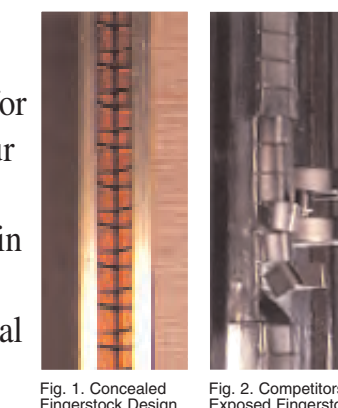


Fig. 1. Concealed Fingerstock Design

Fig. 2. Competitors, Exposed Fingerstock

The Most Versatile Enclosure Systems on the Market Today

- Our enclosures provide both radio frequency (RF) attenuation as well as magnetic field attenuation.
- Our unique modular enclosure units can be adapted to fit any space available.
- Our enclosures are designed to be freestanding or supported from parent room ceiling. Parent room wall and ceiling preparation are not required to install our shield.
- Our enclosures can be enlarged to accommodate future MRI magnets.
- All of our enclosures can readily support interior finishes and systems.

Fast, Reliable Service

- Our enclosures can be erected quickly and easily, at any desired site.
- We test as well as install our systems, eliminating costly delays.
- Our experienced field reps and technicians are available throughout the United States and the world to provide quick service to all of our customers.

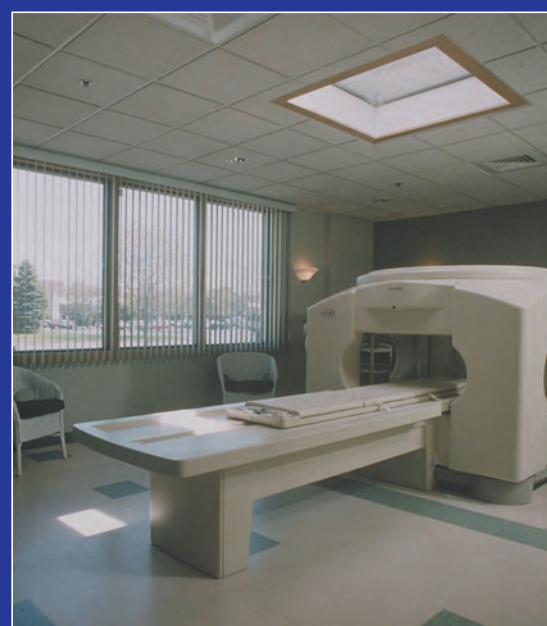


Every Safety Standard Met

- All of our shielded enclosures exceed MRI vendor attenuation limits and provide additional shielding in the VHF-UHF frequencies.
- Our enclosures will maintain their shielding integrity after being dismantled and reassembled.
- Our modular system has a fire rating Class A Interior Finish.

Durable, Custom-Crafted Components

- Each individual component of our shielded enclosures is carefully constructed to provide many years of longevity.
- Each shielded enclosure component is manufactured at our modern 20,000 square foot, environmentally controlled facility.
- All of our products are completely prefabricated and easy to assemble on site resulting in rapid installation.



Recent Projects

In the past 30 years, Universal Shielding Corporation has built more than 15,000 enclosures. Our reliability and the extraordinary scope and quality of our services have earned us a well-deserved reputation. Our customers include all the major MRI manufacturers. The following is a partial listing of prestigious clients with whom we have worked on a variety of successful projects:

MRI/COMPUTERIZED IMAGING, BRONX, NY
 MRI/ASSOC. OF QUEENS, NY
 MRI/CENTRAL SUFFOLK, MRI, SMITHTOWN, NY
 MRI/HOSPITAL FOR JOINT DISEASE, NEW YORK, NY
 MRI/LONG ISLAND DIAGNOSTIC, STONY BROOK, NY
 MRI/MEDICAL DIAGNOSTIC, EAST ISLIP, NY
 MRI/METROPOLITAN RADIOLOGICAL, JACKSON HEIGHTS, NY
 MRI/EDGEWATER IMAGING, EDGEWATER, NJ
 MRI/METROPOLITAN RADIOLOGICAL, OAKLAND GARDENS, NY
 MRI/RITTENHOUSE IMAGING, PHILADELPHIA, PA
 MRI/KEARNEY, NJ
 MRI/ORGL UPTOWN, INC., NEW YORK, NY
 MRI/MEXICO CITY, MEXICO, D.V.
 MRI/HARTSDALE IMAGING, HARTSDALE, NY
 MRI/CANARSIE, BROOKLYN, NY
 MRI/NMR OF AMERICA, ELGIN, IL
 MRI/MORRIS-SUSSEX, RANDOLPH, NJ
 MRI/ST. CHARLES HOSPITAL, LULING, LA
 MRI/NEUROLOGY CENTER, LEESBURG PIKE, VA
 MRI/WHEATON, VA
 MRI/WEST END, NEW YORK, NY
 MRI/ORTHAPEDIC ASSOC., FT. LAUDERDALE, FL
 MRI/MONTGOMERY MRI, MONTGOMERY, AL
 MRI/CHILDRENS HOSPITAL OF PHILADELPHIA, PHILADELPHIA, PA
 MRI/MONMOUTH DIAGNOSTIC IMAGING, NJ
 MRI/TIAJUANA, MEXICO, D.V.
 MRI/HOLLY AVENUE, FLUSHING, NY
 MRI/NEW JERSEY IMAGING CENTER, JERSEY CITY, NJ
 MRI/FORNAR CORPORATION
 MRI/BARLETT MEMORIAL HOSPITAL, JUNEAU, AK
 MRI/OTSUKA/CHEMAGNETICS, FT. COLLINS, CO.
 MRI/PACHUCA, HGS. MEXICO
 MRI/ELMHURST, NY

MRI/V.A. HOSPITAL, LOS ANGELES, CA.
 MRI/NORTHWEST HOSPITAL, SEATTLE, WA
 MRI/GUADALAJARA, MEXICO
 MRI/FLATBUSH, NY
 MRI/NORTHWEST TEXAS HOSPITAL, AMARILLO, TX
 MRI/SKAGIT VALLEY HOSPITAL, MT. VERNON, WA
 MRI/NORTH JERSEY IMAGING CENTER, WEST NEW YORK, NJ
 MRI/ADVANCED DIAGNOSTIC, TRENTON, NJ
 MRI/RADIOLOGY IMAGING, WAYNE, NJ
 MRI/MAPLEWOOD, NJ
 MRI/HUDSON RADIOLOGY, BAYONNE, NJ
 MRI/DOSHI DIAGNOSTIC, BENSONHURST, NY
 MRI/CENTRAL MAGNETIC IMAGING, MIAMI, FL
 MRI/ST. JOSEPH HOSPITAL, TACOMA, WA
 MRI/MEMORIAL HOSPITAL OF TAMPA, TAMPA, FL
 MRI/FRANCIS SCOTT KEY MEDICAL CTR., BALTIMORE, MD
 MRI/METROPOLITAN RADIOLOGICAL, ASTORIA, NY
 MRI/WINDHAM HOSPITAL, WILLIMANTIC, CT
 MRI/GRANT HOSPITAL, CHICAGO, IL
 MRI/HOWARD UNIVERSITY, WASHINGTON, DC
 MRI/FRESH MEADOWS MEDICAL ASSOC, QUEENS, N.Y.
 MRI/SOUTH SHORE IMAGING, ROCKVILLE CENTER, NY
 MRI/LASER IMAGING, ST. LOUIS, MO
 MRI/INSTITUTE AT MIDTOWN, JERSEY CITY, NJ
 MRI/DIVINE PROVIDENCE HOSPITAL, WILLIAMSPORT, PA
 MRI/VINELAND IMAGING CENTER, VINELAND, NJ
 MRI/ROCKVILLE, MD
 MRI/CROSSROAD RADIOLOGY, ELLICOTT CITY, MD
 MRI/UNIVERSITY OF MARYLAND, BALTIMORE, MD
 MRI/CENTRAL ARKANSAS HOSPITAL, SEARCY, AR
 MRI/BLOOMFIELD IMAGING, BLOOMFIELD, NJ
 MRI/NORTHEAST MEDIAL CENTER, HUMBLE, TX
 MRI/MT. RAINER IMAGING, PUYALLUP, WA
 MRI/METROPOLITAN RADIOLOGICAL, ASTORIA, NY

We would welcome the opportunity to discuss your next project with you. For additional information about our MRI shielded enclosures contact:
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**MRI
Enclosures**

Designing
Manufacturing
Installing

Worldwide Since 1972

