



Ferroguard® Wall Mounted systems offer the potential for an elegant, unobtrusive installation as part of a new facility design.

# Ferroguard® Wall Mounted System

Protection for your patients, staff and equipment

[www.metrasens.com](http://www.metrasens.com)

High magnetic fields generated by MRI equipment create constant dangers that require diligent attention and refined safety procedures. Ferroguard® is a patented screening system designed to prevent patient injury and equipment damage that can occur when ferromagnetic objects are brought into the magnetic field of an MRI unit.

## Key Features

Ferroguard® Wall Mounted Systems offer the potential for an elegant, unobtrusive installation as part of a new facility design, or as a retrofit application within existing facility layouts.

- The Ferroguard® Wall Mounted System can be deployed in an Entryway mode either side of the doorway or in a corridor leading to the MR door. The system has been designed with flexibility in mind to cope with more challenging facility layouts without compromising any performance criteria
- Ferroguard® provides real-time monitoring of the local ferromagnetic environment through its unique and intuitive Beacon Display System
- Innovative patented design with real-time visual display at eye level giving advance warning of the presence of dangerous ferromagnetic objects
- Sensitivity can be varied to suit prevailing conditions and perceived local risk factors.
- Flexible sensor configuration reduces false alarms from potential interfering sources
- Patented secondary audible alarm system with adjustable volume control
- 180° Rotating Optical sensors ensure proper pole alignment even in difficult or challenging locations, where space may be a premium
- Unobtrusive deployment for facility layouts where space is restricted
- Robust design able to withstand busy hospital environments.
- 110v/240v mains power supply normally located in false ceiling with option for UPS.
- For new facilities Metrasens can work with your design architect or facility project manager to optimize the MRI layout to incorporate the Ferroguard® Wall Mounted System

## Modes of Operation

The flexibility of Ferroguard® allows users to select their preferred mode of operation based around their perceived risk levels. With variable sensitivity, units can be set to detect both large or small ferromagnetic objects which may be inadvertently brought into the MRI room. All Ferroguard® Wall Mounted systems are ideally suited to offer:

Ferroguard® Environment Monitoring

simultaneously with either

Ferroguard® Pre-screening mode

or

Ferroguard® Entryway mode



## Ferroguard® Environment Monitoring

Ferroguard® is the only ferromagnetic detection system available that provides continuous, active monitoring of the ferromagnetic environment. Through its intuitive Beacon display, Ferroguard® provides staff with real-time visual feedback as to the presence of moving ferromagnetic objects in the vicinity of the MRI unit.

Ferroguard® can also be used to periodically test equipment ensuring that only those items that are MRI Safe are brought into the MR room itself. Ferroguard® is a passive system, completely safe to use in the clinical environment, and will not adversely affect other equipment located in the MRI facility.

## Ferroguard® Entryway mode

Ferroguard® Wall Mounted System operating in an Entryway mode is located in the vicinity of the entrance doorway to the magnet itself. The two poles can be mounted flexibly in advance of the MR door taking account of local variances in facility layout. The sensitivity is set at an appropriate level to reduce the chances of a major projectile incident involving larger ferrous objects e.g. tools, cleaning equipment, cylinders etc...

The Beacon display gives staff early warning of the presence of a large ferrous object well in advance of the portal threshold. If ignored then the secondary audible alarm is triggered once the portal threshold is crossed.



## Ferroguard® Pre-screening mode

Ferroguard® Wall Mounted System can be deployed to operate in a Pre-screen mode. Where the facility layout justifies using the wall mounted system, the sensitivity can be adjusted to an extremely high level in order to detect small ferromagnetic objects e.g. coins, keys, hairpins etc...

Scanning requires patients to simply pass between the two poles in order to complete the screening process.

## Ferroguard® Benefits Summary

- Provides real-time monitoring of the local ferromagnetic environment
- Gives advance visual warning of the presence of dangerous ferromagnetic objects
- Secondary audible alarm should the threshold be breached during alert conditions
- Reduced chance of the "projectile effect"
- Increased staff awareness of projectile hazards with intuitive Beacon display
- Reduced chance of patient injury
- Visual feedback can be used to test MRI Safe equipment
- Reduced chance of equipment damage or need to quench
- Reduced chance of system downtime.
- Reduce chance of the need to repeat a scan
- Reduced costs to hospital facility.
- Lifetime cost effective with payback after the prevention of a single incident



## Safety Guidance

Ferromagnetic detectors are recommended by the 2007 ACR Guidance document for MR safe Practices

*"Ferromagnetic detection systems have been demonstrated to be highly effective as a quality assurance tool, verifying the successful screening and identifying ferromagnetic objects which were not discovered by conventional screening methods"*

The Joint Commission Sentinel Alert #38 on MRI Accidents recommends the ACR Guidance Document and in particular the need for double check screening procedures, including as an example, the use of Ferromagnetic Detection Systems.

MHRA Safety Guidelines for MRI have been updated to include the availability of Ferromagnetic detection systems. (DB 2007 (03)).

For further information about the range of Ferroguard® solutions contact:

### North America

#### Metrasens Ltd.

16567 Pasture Drive  
Lemont  
IL 60439  
USA

**Tel:** +1 (630) 215-3387

**Email:** [contact@metrasens.com](mailto:contact@metrasens.com)

### Europe

#### Metrasens Ltd.

Malvern Hills Science Park  
Geraldine Road  
Malvern  
Worcs WR14 3SZ  
UK

**Tel:** +44 (0)1684 585285

**Fax:** +44 (0)1684 893555

**Email:** [contact@metrasens.com](mailto:contact@metrasens.com)