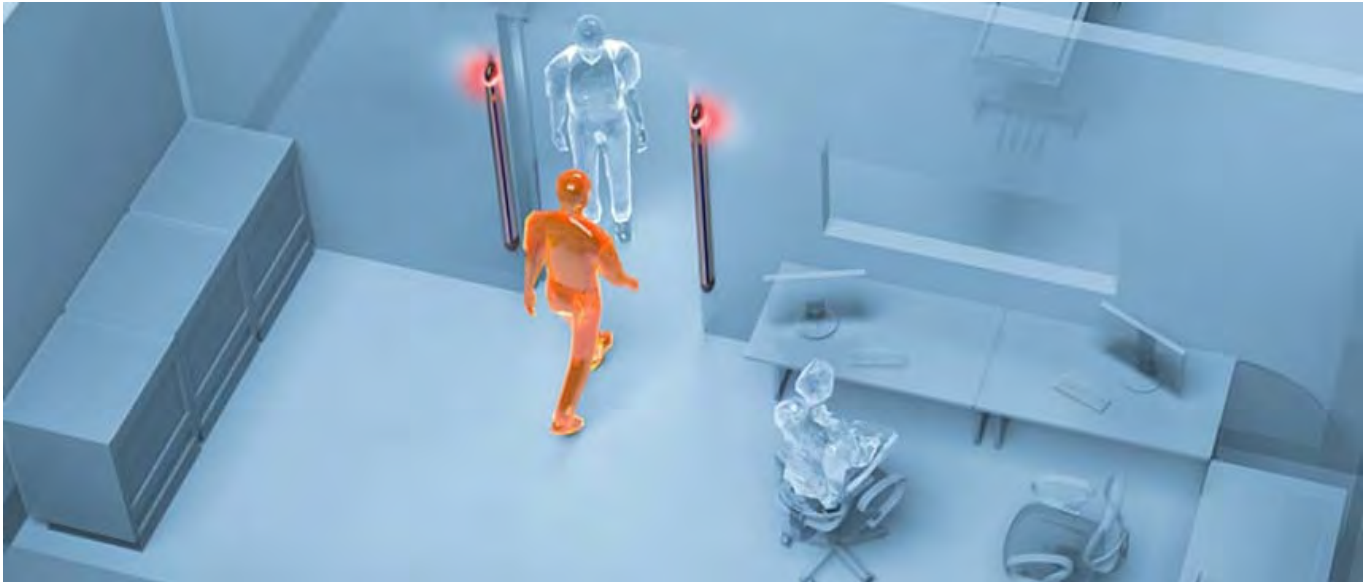


CEFI30-Guard - Objects Detection



Ferromagnetic objects taken through the MRI door in to Zone IV can lead to serious injury, time consuming delays, and costly damage to your valuable imaging system.

When ferrous objects reach the MRI magnet's fringe field, they can be strongly attracted, at high speed, towards the bore of the magnet. This frightening and dangerous phenomenon is known as the projectile effect. Although MRI safety procedures are in place in all MRI facilities, intended to prevent such incidents, the number of MRI projectile events continues to rise year-on-year.

Distinguishing between MRI safe and unsafe items is always a challenge for staff. For example, a pair of safe non-ferrous scissors may be visibly identical to a pair of ferrous scissors that could become a dangerous projectile if taken close to the magnet. Additionally, the information gained in traditional screening processes may be inaccurate, as patients are not always reliable in reporting all ferrous items on their person or conveying their complete medical history.

The CEFI30-Guard ferromagnetic detection systems (FMDS) for MRI safety clearly identify ferromagnetic hazards and provide valuable objective data to help MRI staff make accurate safety-decisions to significantly enhance the overall effectiveness of your MRI safety processes. And now, CEFI30 Safety Suite* provides automated data capture, MRI-safety-metrics and reporting, for one magnet or many, from everywhere you go.

- **480%** increase in MRI accidents over 10 years**
- **35** countries around the world have MRI facilities being protected by CEFI30-Guard systems
- **9/10** of the US' Top 10 Best Hospitals have deployed CEFI30-Guard MRI safety systems***

HAVE CONFIDENCE IN THE MOST EFFECTIVE RISK DETECTION FOR MRI SAFETY

World-leading sensors; simple, clear alerts; and planning and installation particular to your MRI facility; all ensure that your CEF130-Guard products will provide you with superior, uncompromised MRI safety protection. CEF130-Guard Screener will detect the smaller risk items that other systems just miss; and with any of the CEF130-Guard entry control systems, you can be confident of receiving clear, simple to understand, alerts, in advance of the risk item entering Zone IV.



ACHIEVE FULL COMPLIANCE WITH MRI SAFETY GUIDELINES

Selecting CEF130-Guard FMDS systems will enable you to meet ACR guidance to screen patients “approaching Zone IV”. Locating an FMDS within the doorframe inside Zone IV is simply too late to meet recommendations and too late to prevent risks becoming incidents. And be assured that all CEF130-Guard MRI safety systems are true FMDS, not traditional metal detectors that the ACR recommends against.

For MRI facilities in the USA, CEF130-Guard Assure with MRI-Safety-Manager is the only FMDS enabling you to simply categorize “unintentional” entry of ferromagnetic items into Zone IV, as required by Joint Commission accreditation standards.

THE HIGH QUALITY YOU EXPECT IN A MRI SAFETY PRODUCT

Our award-winning products are the only FMDS designed and manufactured under ISO9001 international quality standards, just like every other item of medical equipment in your facility. CEF130-Guard systems are robust enough to cope with your busy environment and styled to fit in with the best facility design.

We are proud to partner with the leaders in MRI including: Philips Invivo, GE Healthcare, Philips Healthcare, and Siemens Healthineers. CEF130-Guard MRI safety solutions are available globally through CEF130’ expert local distributors.



CEFI-30 GUARD SCREENER
YOUR SIXTH SENSE IN MRI SAFETY

DETECTING RISK ITEMS THAT OTHER SYSTEMS MISS

Fast, effective, Zone II screening to prevent incidents from the smallest, hidden items.

Despite careful, guideline compliant screening procedures, small ferrous objects inadvertently concealed on a patient, visitor or staff member may present a significant risk within your MRI facility.

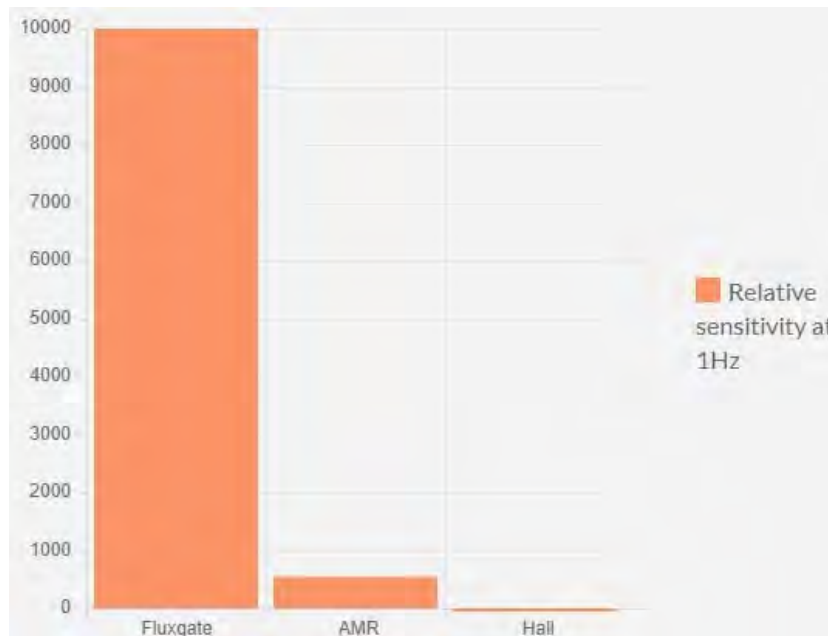
CEFI30-Guard Screener is the most sensitive ferromagnetic detection system (FMDS) for MRI safety available providing whole body screening with superior detection.



FIND THE RISKS OTHER SYSTEMS MISS

Only CEFI30-Guard Screener uses Fluxgate sensors, making it the most sensitive FMDS available (minimum detectable magnetic signal, 80 pTesla, 0.8 μ Gauss). Despite its compact design, it's super-sensitive to smaller risk-items all the way from the top-of-the-head to the tip-of-the-toes of the tallest patient.

Choose CEFI30-Guard Screener to detect the items other FMDS and conventional metal detectors miss.



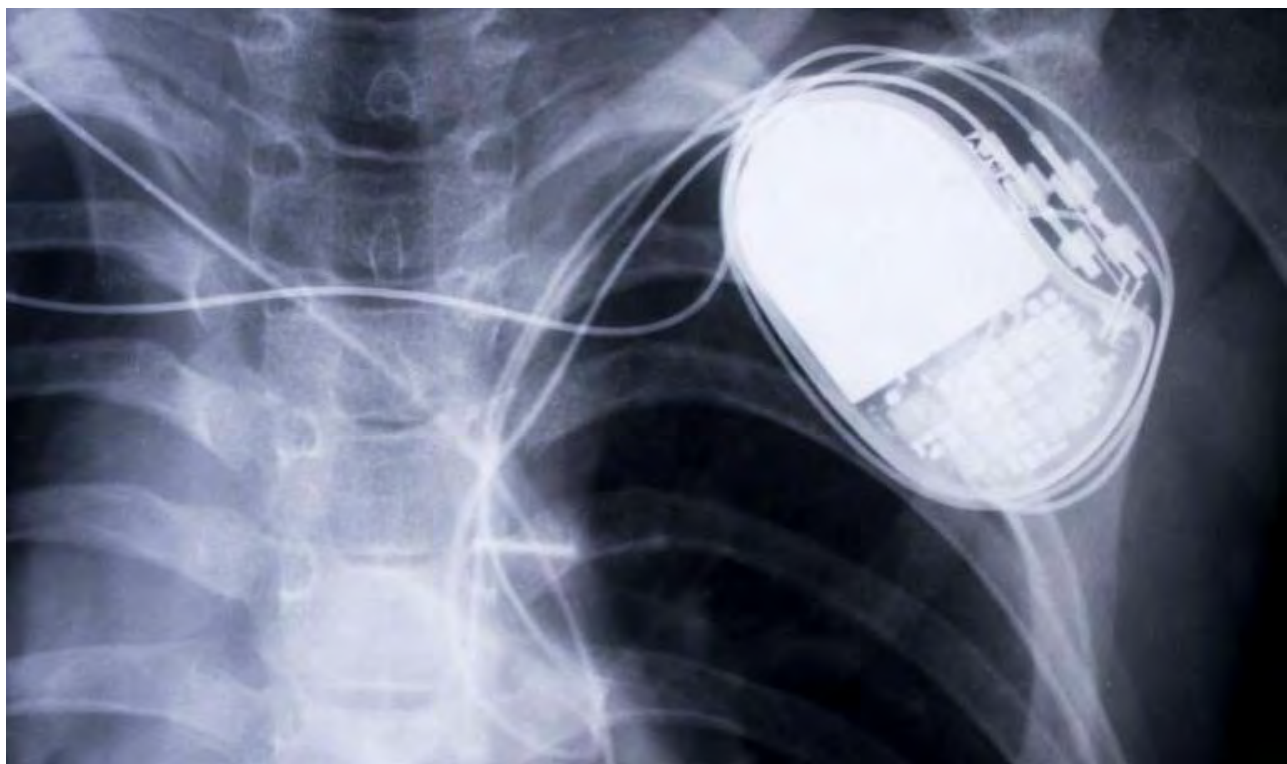
FASTER, MORE RELIABLE AND BETTER ACCEPTED BY YOUR PATIENTS

Unlike hand wands which depend on the diligence of the user, CEFI30-Guard Screener provides consistent and reliable screening every time. By adding objectivity, CEFI30-Guard Screener helps to take pressure off you and your team. It's also less intrusive than a hand wand screening, eliminating invasive pat-down procedures and creating a more comfortable screening experience for your patient.



NEW SCREENING POSSIBILITIES FOR LEADERS IN THE FIELD

CEFI30-Guard Screener's superior sensors are making it the system of choice for implant detection studies*, for protecting against unexpected ferromagnetic implants entering Zone IV.



CEFI30-GUARD SCREENER AT A GLANCE

A true FMDS

as recommended by the ACR for use in MRI facilities. The ACR specifically recommends against the use of conventional metal detectors for MRI screening

Implant Detection

The Fluxgate sensor's greater sensitivity can detect indwelling ferromagnetic materials ¹⁻⁴

Preserves image quality

Keeps small ferrous items out of the MRI room, reducing artifacts and avoiding time-wasting rescans and restarts

Simple to adopt

Take the pressure off your staff and add objectivity to your screening

Accessible for every budget

A must-have addition to your MRI safety procedures.

Entirely passive

Completely safe to use on all patients, including those with implants

The quality you expect

The only FMDS designed under ISO9001 international quality standards



CEFI30-Guard Screener Technical Specifications

Operating Conditions

- CEFI30-Guard Screener is to be operated indoors only (Pollution Degree 2)
- It can be operated at any altitude up to 2000m
- Ambient temperature 41°F – 104°F (5°C – 40°C), humidity 20% to 90% (non-condensing)
- Permitted voltage range 100 V AC- 240V AC, 50 Hz-60Hz
- Temporary overvoltage must not exceed 264V
- Equipment will withstand transient over voltages in accordance with category 2 of IEC 60364-4-443

Weights and Dimensions

Item	Weight	Height/ Length	Width	Depth
Sensor Unit	12lbs (5.4kg)	54.5" (1380mm)	3.9" (100mm)	2.4" (60mm)
Power Supply	0.4lbs (0.2kg)	4.0" (100mm)	1.8" (46mm)	1.5" (28mm)
Wall Poster	0.2lbs (0.1kg)	23.5" (595mm)	16.5" (420mm)	n/a
Floor Mat	0.3lbs (0.15kg)	n/a	23.6" (600mm)	25.6" (650mm)
Shipping Carton	22lbs (10kg)	58.5" (1490mm)	8" (200mm)	5.5" (140mm)

Power Supply

Voltage Input	100-240 VAC, 50-60Hz
Current Draw	0.3A

Note: The power adaptor and any associated cords supplied with your CEFI30-Guard Screener *must not* be replaced, and must be examined and supplied only by the provider.

Compliance

CE

RoHS

IEC61326-1:2005-Electrical equipment for measurement, control and laboratory use- EMC Requirements- Part 1: General Requirements

IEC61010-3-2:2005+A1:2008+A2:2009, IEC61010-3-3:2008- Immunity for residual, commercial and light-industrial environments- EMC

CEFI-30 GUARD ASSURE Always On, Always Detecting

MORE TRUSTWORTHY DETECTION AND LOWEST ALARM FATIGUE

The ferromagnetic detection system (FMDS) that gives you the confidence it will do its job when it really matters.

CEFI30-Guard Assure is the most capable entry control FMDS for MRI safety available

ALWAYS DETECTING BEFORE, NOT BEYOND THE DOOR

CEFI30-Guard Assure is always wall-mounted outside the MRI door in Zone III, rather than inside the door frame like alternative FMDS. This means no detection gaps or sensor activation delays – even with outswing doors.

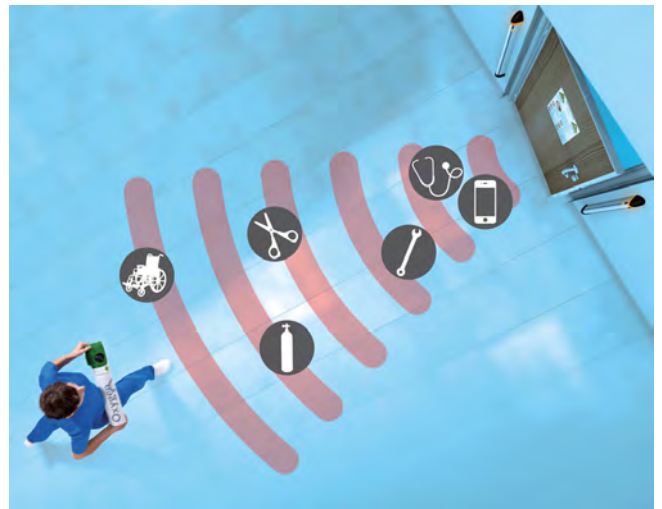
Choose CEFI30-Guard Assure and be confident that your FMDS will be active and will alert you in those crucial seconds that make the difference between incident and catastrophe.



CLEAR, SIMPLE ALERTS

With its clear and intuitive eye-level traffic light display, CEFI30-Guard Assure's Visual Early Warning (ViEW®) technology gives you time to react to prevent an accident.

A secondary audible alert gives additional warning if the Visual Early Warning is ignored.



LOWEST PROBABILITY OF ALARM FATIGUE



Alarm fatigue is consistently identified as the most serious technology-related safety issue.** CEFI30-Guard Assure's Smart Alarm™ has been shown to reduce extraneous audible alerts by 85%.*** Never an alarm on exiting the room, never an alarm through door movement. Smart Alarm™ works with any MRI shielded door without compromising detection of risk items.

CEFI30-GUARD ASSURE AT A GLANCE

Trustworthy detection

Always on, always detecting before, not beyond the door.

Clear, simple alerts

Intuitive, eye-level, traffic light display alerts you to risk items.

Secondary audible alert

In case the Visual Early Warning System is ignored.

Lowest probability of alarm fatigue

No alarms through door movement or when exiting the room.

Built to last

Constructed from ruggedized, industrial grade aluminium and will look good for years to come.

The quality you expect

The only FMDS designed under ISO9001 international quality standards.

All-inclusive installation support

Professional installation by fully certified CEFI30-Guard engineers.

CEFI30-Guard Assure Technical Specifications

WEIGHTS & DIMENSIONS

Physical Specification:

Part	Weight	Height	Width	Depth
Sensor Units (each)	9.8lb (4.5kg)	53.9" (137cm)	3.1" (8cm)	3.5" (9cm)
Hub Unit	13.0lb (5.9kg)	13" (33cm)	15" (38cm)	3" (7.6cm)
Door Sensor	0.5lb (225g)	3-11" variable (7.6 – 28cm)	7" (18cm)	1.75" (4.5cm)
Door Vane	23oz (649g)	6" (15cm)	16" (40cm)	3.5" (9cm)
Retro-Reflector	0.4oz (10g)	1.5" (3.8cm)	2" (5cm)	¼" (0.64cm)

Packaging Specifications:

Part	Weight	Height	Width	Depth
Packaging as shipped.	55lb (25kg)	8.7" (22cm)	60" (151cm)	14.2" (36cm)

Operating Characteristics:

Range	Recommended maximum sensor unit separation is 6' (1.8m).
Display Response.	Response time for Beacon display <0.1s. Average Display Reset Time <0.3ms. Magnitude display is indication only for purposes of alerting staff.
Audible alarm response time.	<1ms from optical beam break.

Controls:

For safety reasons CEFI30-Guard Assure has **no user controls**. All control settings are set during installation by the installer. Settings are agreed between the installer and the MRI Manager or Safety Officer.

Part	Controls
Sensor Units	Sensitivity for visual warning and audible alarm. Volume of audible alarm.
Hub Unit	Software based via USB to laptop. Multiple parameters. System Reset switch

Power supply:

CEFI30-Guard Assure uses AC power with no special requirements which is directly wired to the Assure Hub (AHUB) Unit via an isolation switch (not supplied). CEFI30-Guard Assure should be kept permanently switched on. Isolation from the hospital AC power is via the isolation switch.



The isolation switch and wiring to the Hub Unit are not a part of the product and are the responsibility of the hospital to maintain.

Voltage Input	100-240 VAC, 47-63Hz
Current draw	1A Max

COMPLIANCE

CEFI30-Guard Assure is in accordance with the following Directives

- **2014/30/EU** Conforms with the essential protection requirements of the Electromagnetic Compatibility Directive and its amending directives
- **2014/35/EU** Conforms with the safety objectives of the Low Voltage Directive and its amending directives
- **2011/65/EU** Conforms with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

CEFI30-Guard Assure has been designed and manufactured to the following standards;

- **EN 61326-1:2013** Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements
- **EN 61010-1:2010** Safety requirements for electrical equipment for measurement, control and laboratory use – Part 1: General requirements

and is **CE** and **ETL** Marked.