



SAFER | G

**THE WORLD'S FIRST SENSOR-BASED ROTARY RIG
GUARDING SYSTEM**

www.equipgroup.com

WHAT IS IT?

SAFER G

Sensor activated failsafe enabled drill rig guard

A **self-checking safety device** for the protection of persons encroaching too close to the rotating part of a drilling rig.

The safety device **detects persons** encroaching within pre-defined zone/s and generate an electrical signal to switch off rotation to **prevent entanglement** of such persons.



WHAT CAN IT DO FOR ME?

SAFER G is a **sensor-based guarding system** that allows for **increased access** and **productivity** whilst operating on site, removing the need for restrictive and fully enclosing guarding systems.

- Improves rig **productivity**.
- Improves **personnel protection**.
- Complies with **all safety and machinery legislation**.
- Complies with **EN 16228 Parts 1 & 2**.
- Compatible with all rig types.
- Creates a **safer work environment**.





WHAT HEALTH AND SAFETY CERTIFICATIONS DOES IT CARRY?

Notified Body
Intertek



ITS15 MC8380 Issue 1

Declaration of Conformity

We Equip Group trading as Equip Geosolutions Limited and Equip Training Limited

of The Paddocks, Home Farm Offices, The Upton Estate, Banbury, Oxfordshire, OX15 6HU, United Kingdom

In accordance with the following Directives :
Machinery Directive 2006/42/EC

Hereby declare that:

Product Name: SAFER G
Product Description: Sensor system to guard rotating parts of machinery
Model Number: 6956211A

Is in conformity with the applicable requirements of the following harmonised Standards :

Ref No.	Title
EN 16228:2014	Drilling and Foundation Equipment Safety
EN 13849:2008	Safety related Parts of Control systems
EN 13855 :2010	Positioning of Safeguards (with respect to Approach Speeds of parts of The Human Body)
EN 61496 :2013	Safety of machinery. Electro -sensitive protective equipment
EN 620 61:2005	Safety of machinery. Functional safety of safety -related electrical, electronic and programmable electronic control system.
EN 300 440:2015	Radio equipment to be used in the frequency range below 9kHz
EN 301 489:2002	Electromagnetic compatibility and Radio spectrum Matters for radio equipment and services

I hereby declare that the equipment name above has been disposed to comply with the relevant sections of the above referenced harmonised Standards. The product conforms with all applicable Essential Requirements of the Directives.
Name and address of the employer authorising this certificate:
Equip Group
Home Farm Offices
The Upton Estate
Banbury
Oxfordshire
OX15 6HU
United Kingdom

Name: Julian Lovell
Position: Managing Director
Date: 27th November 2015



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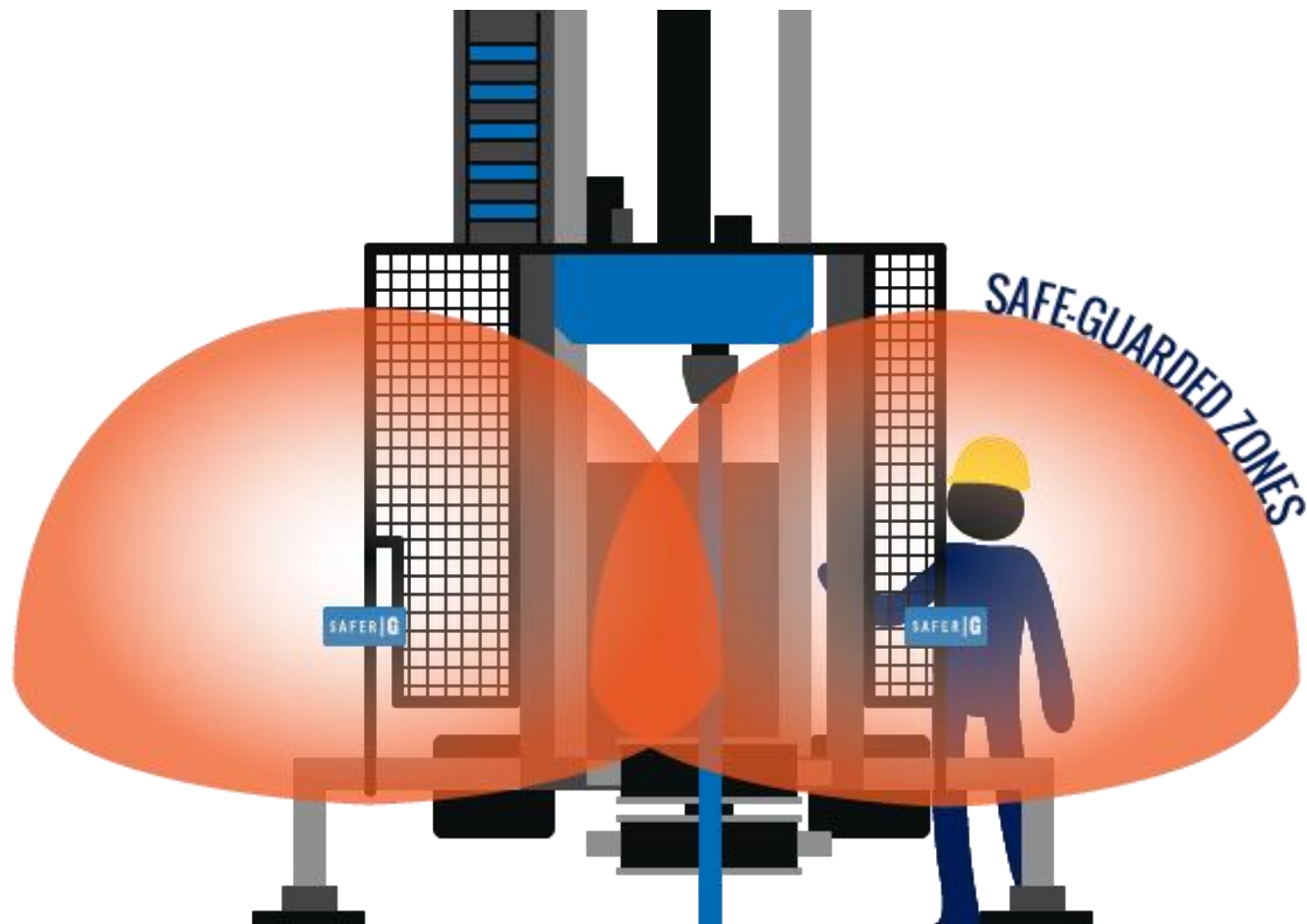


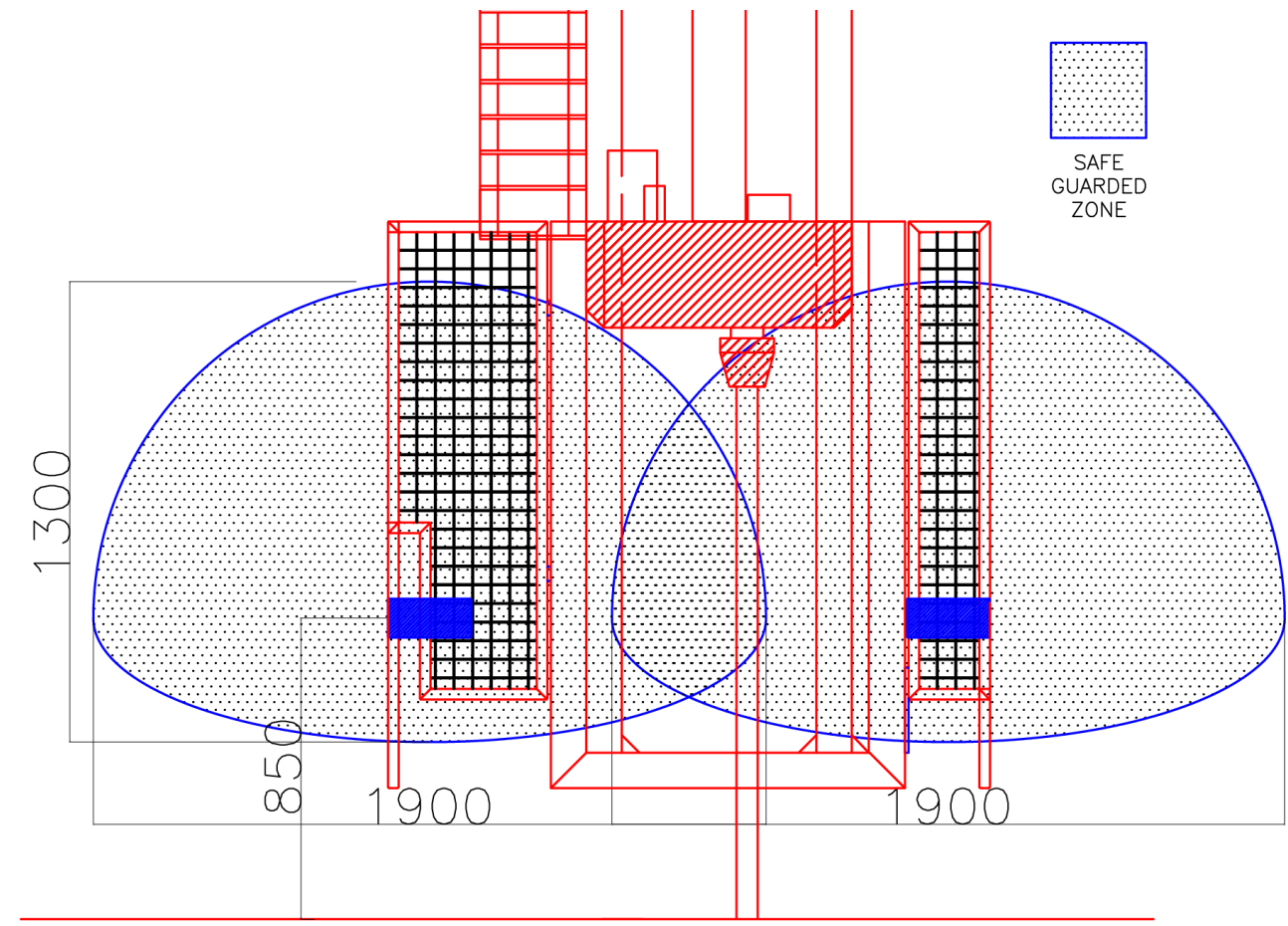
Carries **FULL CE marking** as a safety device.

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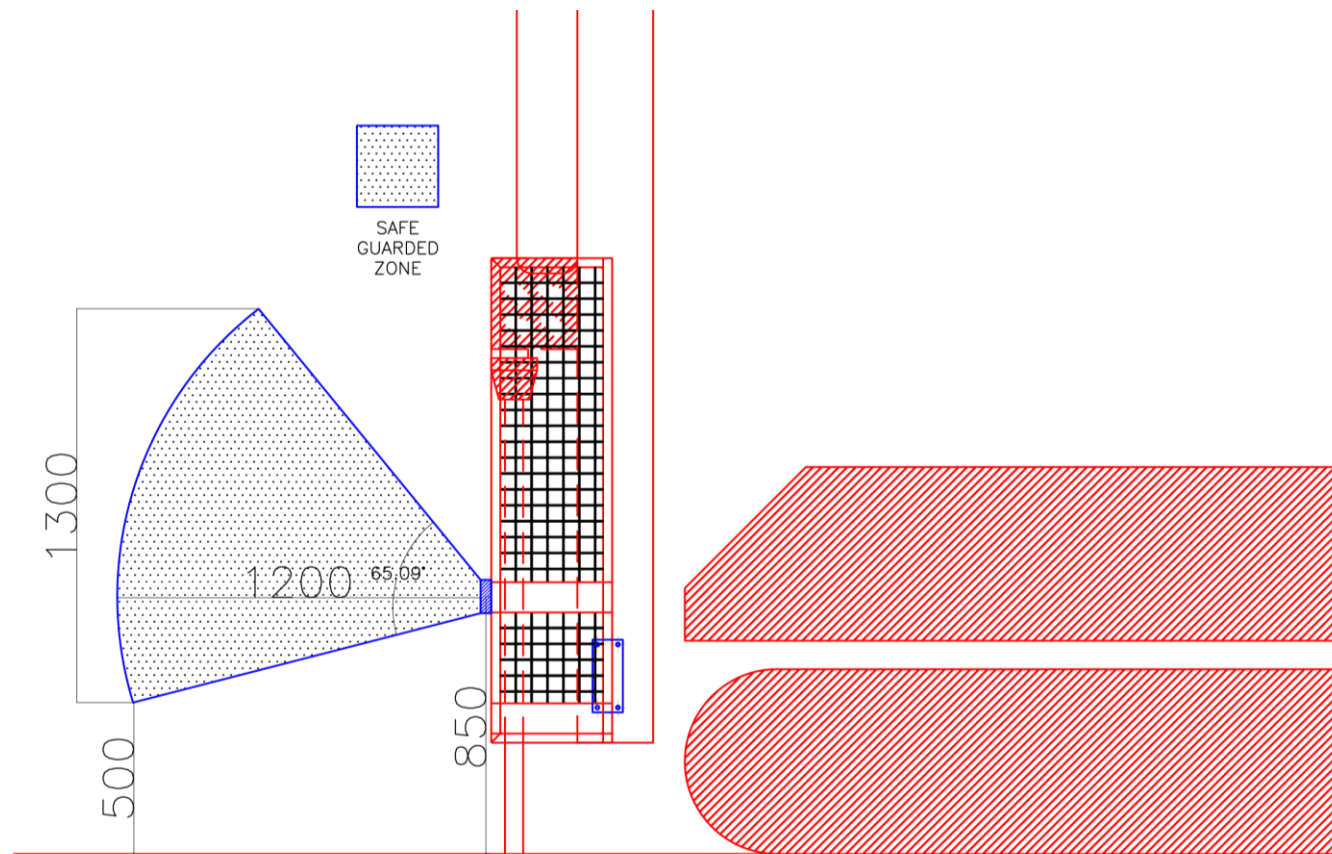
HOW DOES IT WORK?





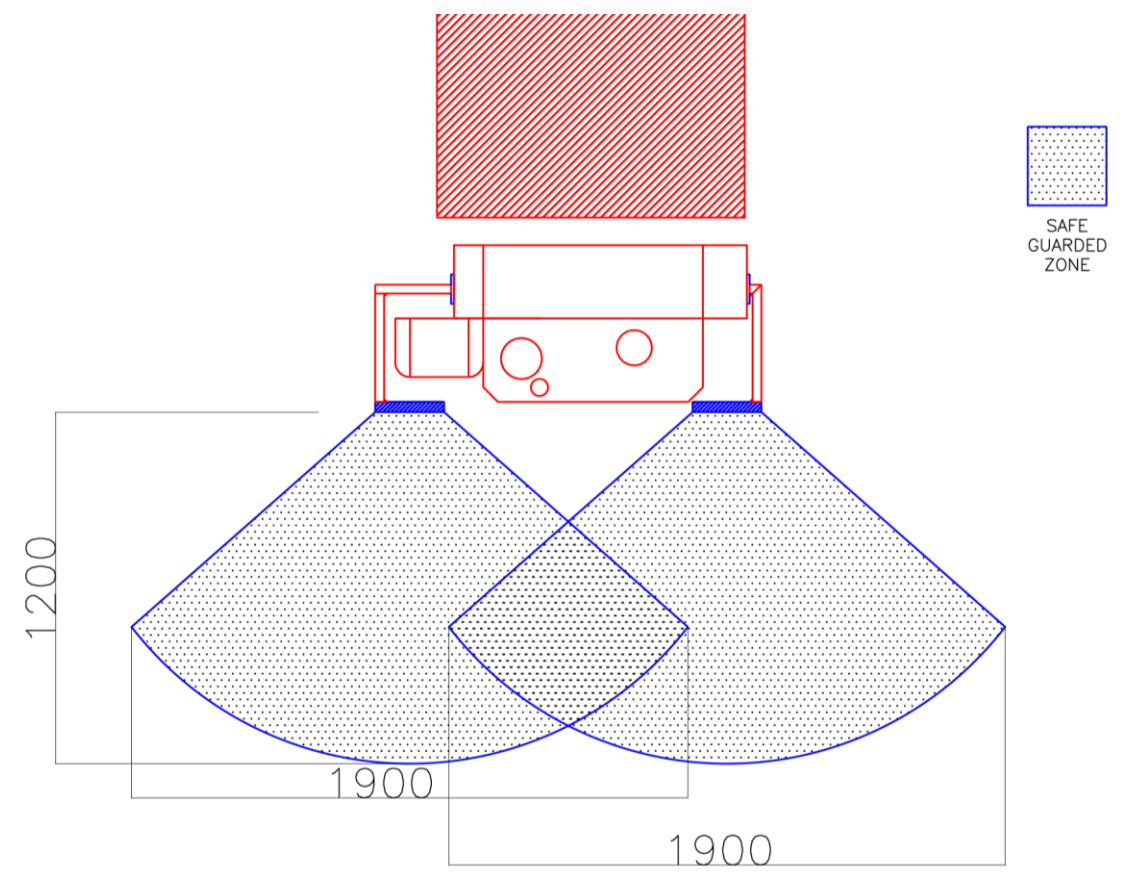
SENSOR ARRAY

Front / Vertical



SENSOR ARRAY

Side / Vertical



SENSOR ARRAY

Plan



PROVEN IN THE GEOTECHNICAL MARKET

Being used on working sites across the country.

TECHNICAL SPECIFICATIONS

The system has been designed principally to meet the requirements of EN 61496-1:2013 Safety of machinery - Electro-sensitive protective equipment - Part 1: General requirements and tests.

- Independently **evaluated and approved** by a Notified Body.
- Safety integrity evaluated.
- Assigned **Safety Integrity Level SIL1** (according to EN61508 and EN 62061 or PLR 'c' as detailed in EN13849).
- Meets the requirements of EN 16228:2014 Drilling and foundation equipment – Safety.
- Employs **Category 3 architecture**.





TECHNICAL SPECIFICATIONS

SENSOR SPECIFICATIONS (Typical)

Electronics:	Solid state
Connector:	Deutsch DT series
Sealing:	Encapsulated to protect from dust and moisture to IP67.
Housing Material:	Polycarbonate
Outside Dimensions:	11.1cm H x 23.5cm W x 4.4cm D (4.38"x 9.24" x 1.75")
Weight:	0.68 kg (1.5 lb)
Operating Temperature:	-20°C to +50°C
Vibration:	25G RMS all three axes
Shock:	25G all three axes
Mounting:	Four 5.6mm (0.22") diameter holes on 8.54" horizontal centres and 2.00" vertical centres. Unit is supplied with #10 stainless steel screws for mounting purposes. Recommended torque is 2.26 Nm (22 inch-lbs).

ELECTRICAL SPECIFICATIONS

Input Voltage:	9-32VDC, over voltage protected to 150V
Input current:	0.2 amp maximum, inrush current limited to 1A
Polarity:	Negative ground, Polarity protected to 150V
Power Connection:	Two 20 AWG wires
Auxiliary Output:	Single 20 AWG wire, +150V tolerant
Inactive State:	High impedance
Max Response Time:	359 ms

OPERATING CHARACTERISTICS

Minimum Range:	1.20m
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OTHER POSSIBLE APPLICATIONS: ROCK ANCHORING RIGS

Advantages

- Would protect side access from masts
- Would avoid the use of complicated long guards
- Would improve production rates
- Would detect personnel loading new rods

This application would need further work to determine optimal mounting locations and angles of detection required for particular configurations and applications.





SAFER | G

WANT MORE INFORMATION?

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