

# Thermo Scientific RadEye GR 210 HGT

Wireless Radiation Detection System  
for Grapple Installation

The new RadEye GR series offers grapple-mounted radiation detection capability to minimize the threat of radioactive material in the scrap metal stream. The special „HGT“ design allows the installation of the radio and the power supply behind a grapples guard plate between the hydraulic cylinders.

- Rugged Gamma radiation detection and alarm system
- Small investment & low cost of ownership
- Multiple portable RadEye R display units possible
- High battery lifetime
- Low maintenance requirements
- Straightforward installation process
- Simple and comprehensive data logging and reporting
- Special adoption to grapple guard plates



The Thermo Scientific RadEye™ GR 210 HGT brings a highly sensitive gamma radiation detector close to material being handled with a grapple. The detector is ruggedly shock mounted inside its protective dome. This combination has proven very durable in the harsh conditions of scrap metal handling.

The detector radiation signal output is passed to a radio device mounted behind a guard plate. From there the data is wirelessly transmitted to the RadEye R, a data display and alarming unit located in the crane's cabin in direct view of the operator.

The many decades of experience we have in detecting radioactive orphan sources results in the following unique design benefits.

The low power consumption concept of the allows 600 - 1300 hr of the grapple detector

operation without battery exchange (4 x AA size) leading to unmatched low maintenance requirements.

The wireless RadEye R can be operated for 600 hrs with two standard AAA sized batteries, is mounted in the crane cabin by a suction cup holder and can move easily with the grapple to an alternative crane. Up to 1600 sets of radiation data are stored automatically in the RadEye R while keeping the user informed about all key live data via its LCD display, LED light and acoustic sounder.

The RadEye GR 210 HGT is a powerful radiation search tool while minimizing the impact on operators workflow and grapple capacity.



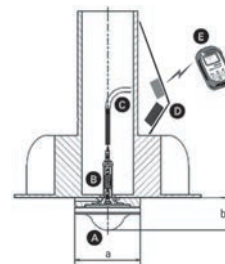
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**Radio & battery modules**  
The radio module with its chip antenna is permanently fixed behind one guard plate. The battery module is locked in a metal bracket with snap-in locks to allow easy exchanged at low detector power.



A) Detector unit  
B) Bushing  
C) Cable routing  
D) Radio & Battery modules  
E) RadEye R receiver  
Approx. dimensions:  
a) 210 mm, 8.3"  
b) 105 mm, 4.1"



### RadEye GR 210 # 425520901

#### Detector unit

Baseplate to be welded to grapple	Diameter 210 mm (8.3")
Protection dome	2 l volume
Sealed scintillation detector	Nal(Tl) with PMT & shock absorber
Sensitivity	Alarms on an unshielded Cs-137 source of 0.2 MBq in 0.4 m, 16" distance within 5 sec.
Total weight	11 kg, 24.3 lbs

#### Radio & battery unit

Radio module	Approx. space requirement: 72 mm x 32 mm x 100 mm, weight: < 1kg
Wireless data communication	ZigBee, 1 mW, range max. 100 m, 328 ft
Quick exchange battery module	4 AA batteries; operation time 600 - 1300 h; spare module included
Battery module bracket with snap-in locks	Approx. space requirement: 160 mm x 160 mm x 30 mm, weight < 1kg

#### Display, alarm and data logger unit RadEye R

See item RadEye R # 4255220 below	1 pcs. RadEye R is included
Fixing inside the crane cabin	1 pcs. gooseneck adapter included; installation via suction cup; # 425522005

### RadEye R # 4255220 (option 2nd RadEye R receiver)

#### Display, alarm and data logger unit RadEye R

Portable module	2 AAA batteries operation time approx. 600 h; weight is less than 0.2 kg, 0.4 lbs; Wireless data receiving (ZigBee); additional units can listen to one radio
Alarm annunciation	85 dB in 30 cm distance; high power LED
Internal data logger	1600 data sets; history data with set time interval; event log
PC – interface	IR (standard) or Bluetooth™ (option)
Belt holster (option)	Holster for RadEye R, # 425067046

### Software (optional, configuration of a RadEye GR 210 does not require a PC)

#### Software (operation requires hardware accessories for PC connection of the RadEye R receiver unit)

Setup & Maintenance	Radeye.EXE, # 425069951; configuration and parameter filing data download to PC; interlock of menu functions
Documentation	GateCheck.EXE, # 425069953; easy to use; protocols per batch, day or week; configurable setup
PC connection via Bluetooth	Bluetooth battery lid, # 425067087; active Bluetooth increases the battery consumption
PC connection via USB	USB data cable # 4254026 + desktop holder # 425067060; recommended data communication connection to a PC

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