

RadEye PRD-CD

Contraband and Radioactivity Detection System



detection
radiation
contraband



The Thermo Scientific™ RadEye™ PRD-CD System can positively detect contraband such as drugs, explosives, weapons, currency. It is a fast and effective way of detecting any material of a density that is typical of contraband substances in tires, doors and fuel tanks etc.

The system consists of a RadEye PRD-CD gamma pager combined with a RadEye contraband adapter made of a low activity Ba-133 source that is embedded in a tungsten collimator with shutter.

Voids with metal walls up to 1 cm of steel yield a very different backscatter signal if empty or filled with contraband. The signal shows up in one channel of the dual channel display.

Hidden radioactive material typically shows in both channels (depending on energy). Closing the Ba-133 source further increases the sensitivity to detect hidden radioactive material of low gamma energy – if necessary.

Thus the investigated void object is scanned for hidden radioactive material simultaneously and without any additional efforts or time requirement.

The related radiation detection sensitivity for hidden radioactive sources is much better than for conventional belt worn radiation pagers. Assuming a distance of 10 cm versus 1 m for a belt-worn pager, the signal is 100 x larger.

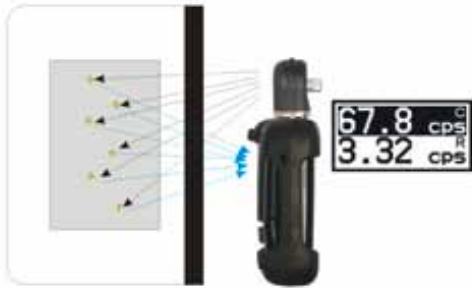
The new Thermo Scientific RadEye PRD-CD System for contraband and radioactivity detection is ideal for border inspection. Robust and simple to use.

Key Features and Benefits:

- The RadEye CD detects possible contraband or explosive materials in known voids and the existence of unexplained voids
- Detection of contraband in vehicle Cavities
- Highly sensitive to drugs, cigarettes, explosives and alcohol
- Typically 1 s measuring time is sufficient
Simultaneous quick detection of hidden radioactive material
- Single or dual channel display for contraband and/or radioactivity indication
- Easy to operate
- Light weight system, approx. 500 g only
- Long operation time on standard Batteries
- Low activity Ba-133 source



RadEye PRD-CD



Hidden **Contraband** is detected by backscattering.

The dual channel capability of the system results in a huge cost and time reduction for customs and law enforcement organizations. The rugged transport case includes two reference spots for a quick performance check prior to operation.

All accessories like poles, Bluetooth-cover, software and holster can be used for the RadEye PRD-CD System also.



RadEye PRD-CD and RadEye contraband adapter



Hidden **Radioactivity** is detected in both measuring channels.



RadEye PRD-CD System
(performance verification area on the left)

RadEye PRD-CD System

Dimensions RadEye PRD-CD with contraband adapter	140 mm x 67 mm x 41 mm with rubber protection
Weight RadEye PRD-CD with contraband adapter	approx. 300 g
Dimensions / Weight RadEye PRD-CD	105 mm x 67 mm x 41 mm with rubber protection / 160 g
Source activity	185 kBq; 5 μ Ci
Transport case	270 x 246 x 124 mm (10.6 x 9.7 x 4.9 inch), Model PeliTM 1200 Case or equal; weight approx. 2.2 kg (4.8 lbs)
Performance verification area	Integrated into transport case
Measuring range	0.01 μ Sv/h – 250 μ Sv/h [1 μ R/h - 25 mR/h]
Energy range (+/- 30 %)	60 keV - 1.3 MeV, excellent detection from 30 keV
Response	1.5 cps per μ R/h [150 cps per μ Sv/h] for Cs-137 (662 keV) 30 cps per μ R/h [2000 cps per μ Sv/h] for Am-241 (60 keV)
Operation time	AAA standard cells: approx. 1000 h

Order Information

RadEye PRD-CD System	#425069060
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