

Discovery RPM™

Advanced Primary Screening



Smarter Decisions

With NORM (Naturally Occurring Radioactive Materials) making up between 2% and 3% of all containerized cargo, the challenge at every primary screening location is to manage radiation alarms from legitimate materials whilst maintaining threat resilience and efficiency. With high sensitivity threat detection, high performance NORM classification, calibration free operation and a measurement of the detection capability during each occupancy, the Discovery RPM delivers new operational NORM management.

Confidence in Results

The Discovery RPM exceeds ANSI N42.35 radiation detection requirements whilst reducing alarms on legitimate cargoes or “nuisance alarms” by between 75% and 95%. This enables Customs Officers and Port staff to efficiently manage cargo screening channels where high volumes NORM materials have traditionally reduced overall operational efficiency.

Benefits

- High Speed NORM Management: (75- 95% correct commodity classification)
- Low False Alarm Rates: <1 in 10,000
- Intuitive Operation: Deep Discovery™ Software Suite with capability verification
- Zero Maintenance: Real time continuous calibration of the detection chain
- ³He Free Neutron Detection: Proprietary Neutron Blade Technology
- OEM Command and Control Compatibility

Discovery Technology®

Discovery Technology is the core of all Symetrica systems. In the Discovery RPM it provides the best in class NORM source verification and neutron detection through; enhanced PVT detector designs, advanced classification algorithms, and a unique patented stabilization system.

Discovery RPM Threat Resilience

The Discovery RPM was entered into ITRAP+10, a European Union evaluation of commercially-available radiation detection equipment, to demonstrate standard ANSI / IEC standard compliance.

In addition to standard test sources the systems were evaluated against Special Nuclear Materials (including Weapons Grade Plutonium, ²³²U and HEU) and a range of medical isotopes (⁹⁹Tcm, ⁶⁷Ga, ²⁰¹Tl) demonstrate capability against a complete range of isotopes.

Isotope	Height (m)	# Acquisitions	# Detections	Test Case Identifier
Am241	0.2	60	60	Am241-020cm-transit
Am241	2.2	60	60	Am241-220cm-transit
Am241	4.4	60	60	Am241-440cm-transit
Ba133	0.2	60	60	Ba133-020cm-transit
Ba133	2.2	60	60	Ba133-220cm-transit
Ba133	4.4	60	60	Ba133-440cm-transit
Co57	0.2	60	60	Co57-020cm-transit
Co57	2.2	60	60	Co57-220cm-transit
Co57	4.4	60	60	Co57-440cm-transit
Co60	0.2	60	60	Co60-020cm-transit
Co60	2.2	60	60	Co60-220cm-transit
Co60	4.4	60	60	Co60-440cm-transit
Cs137	0.2	60	60	Cs137-020cm-transit
Cs137	2.2	60	60	Cs137-220cm-transit
Cs137	4.4	60	60	Cs137-440cm-transit



Proven Technology

Discovery Technology is deployed in over 1000 system globally from handheld RIDs to radiation portal monitors. This is the current technology of choice for the United States Customs and Border Protection agency in secondary operations based on competitive evaluations where it has significantly offset the need for more expensive technologies (HPGe) with higher cost of ownership.

Discovery Technology is proven and at the core of the Discovery RPM.

Lowest Cost of Ownership

The Discovery RPM incorporates Symetrica's patented stabilization system to maintain factory calibration. This eliminates the need to take known sources through the portal to measure detection capability.

The Discovery RPM, available direct or as part of an OEM package for refresh activities, is the most advanced primary screening solution on the Market.

Verified Capability

- Between 75% and 95% NORM Classification by commodity on over 100,000 routine operational primary scans
- Less than 1 in 10,000 False Alarms
- Masked and shielded source threat resilience
- Independent test data