



RTM644Inc

Large Clearance Monitor



Nuclear
Power



Homeland
Security
& Defense



Industrial and
Manufacturing



Healthcare



Labs and
Education

OVERVIEW

The RTM644Inc is the world's leading clearance monitor for large objects such as pallets, waste bags, grid boxes, 200 l and/or 400 l drums checking for gamma radiation. The goods to be measured are moved into the chamber by a conveyor system.

24 large-area gamma-plastic-scintillation detectors are arranged in 4π geometry ensuring high sensitivity and low detection limits. Geometry and weight of goods are considered, compensating self-shielding effects.

Mesasurement parameters can be matched to specific requirements.

KEY FEATURES

- High throughput: up to 12 tons per hour
- 3-D graphic display of contamination
- High accuracy in locating contamination
- Low detection limits 55 Bq (Co-60, 60 s)
- 24 large-area gamma detectors in 4π measurement geometry
- Measurement units in Bq, Bq/g, Bq/cm²
- 1- or 2-door operation mode
- Doors-open operation mode for particularly long goods

GENERAL LAYOUT

Requirements for clearance measurements are determined individually in each country, depend on applications, and are also subject to constant changes. The Mirion clearance monitors are designed to easily adapt to specific demands and disposal pathway requirements.

The RTM644Inc clearance monitor is built of a measurement chamber with motor-operated swing doors and conveyor system, which is used as a carrier for the goods to be measured. Goods are weighed by integrated scales and checked for gamma radiation in the shielded chamber of 1870 litres. The 24 detectors are arranged in 4π geometry. An intuitive user interface allows for detailed user-specific parameter setting, such as material type and disposal target.

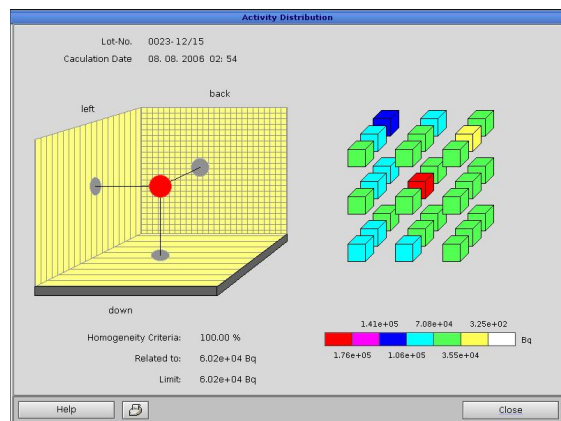


MEASUREMENT

Leading nuclide correlation (Inc) is one of the basic functions of the RTM644Inc. It shortens the calibration procedure to a minimum, and takes influencing factors (mass and geometry of goods) into account.

The total gamma activity in Bq, the specific gamma activity in Bq/g, or the surface gamma activity in Bq/cm² are calculated. The contamination's centre-of-gravity and its distribution are displayed graphically in 3D and colour.

Optional software modules (PCA - partial container activity, detector test, prognosis for free release) help speeding-up the measurement process, making it more convenient and efficient for the user.



Measurement display: System has detected a „Hot Spot“.

TECHNICAL SPECIFICATION

Dimensions	overall: 1900 x 1800 x 2150 mm ³ chamber: 1380 x 1120 x 1210 mm ³ ; 1870 l
Weight	12 000 to 16 000 kg
Detectors	24 Gamma-plastic-scintillation detectors housing: 3 mm aluminum
Shielding	50 mm lead (see also options)
Detection limit	55 Bq (Co-60, 60 s)
Integrated weight scales for goods up to 1000 kg	
Compliant with European Electromagnetic Compatibility Directives Compliance to CSA possible	

OPTIONS

Conveyor belt on exit side
Shielding: 75 mm lead
Camera surveillance system
Uninterruptable power supply
Mobility: clearance monitor and office in containers
PCA software module
Detector test module
Prognosis for free-release software module
Interface to waste management system
Spectrometry integration
Comprehensive implementation of international requirements
Many more options available. Contact us on www.mirion.com.

> GERMANY - HAMBURG

T: +49 40 85193 0 | F: +49 40 85193 256 | E: info-de@mirion.com

> USA - SMYRNA, GEORGIA

T: +1 770 432 2744 | F: +1 770 432 9179 | E: info-us@mirion.com

> FRANCE - LAMANON

T: +33 490 595959 | F: +33 490 595518 | E: info-fr@mirion.com

> FINLAND - TURKU

T: +358 2 4684 600 | F: +358 2 4684 601 | E: info-fi@mirion.com

> CHINA - SHANGHAI

T: +86 21 6180 6920 | F: +86 21 6180 6924 | E: info-cn@mirion.com

Since norms, specification and designs are subject to occasional change, please ask for confirmation of the information given in this publication.

Copyright © 2016 Mirion Technologies, Inc. or its affiliates. All rights reserved. Mirion, the Mirion logo, and other trade names of Mirion products listed herein are registered trademarks or trademarks of Mirion Technologies, Inc. or its affiliates in the United States and other countries. Third party trademarks mentioned are the property of their respective owners.