



# RTM644Inc™

*Large Clearance Monitor*



## FEATURES

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

## DESCRIPTION

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

24 large-area gamma-plastic-scintillation detectors are arranged in 4 $\pi$  geometry ensuring high sensitivity and low detection limits. Geometry and weight of goods are considered, compensating self-shielding effects. Measurement parameters can be matched to specific requirements.



**GENERAL LAYOUT**

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

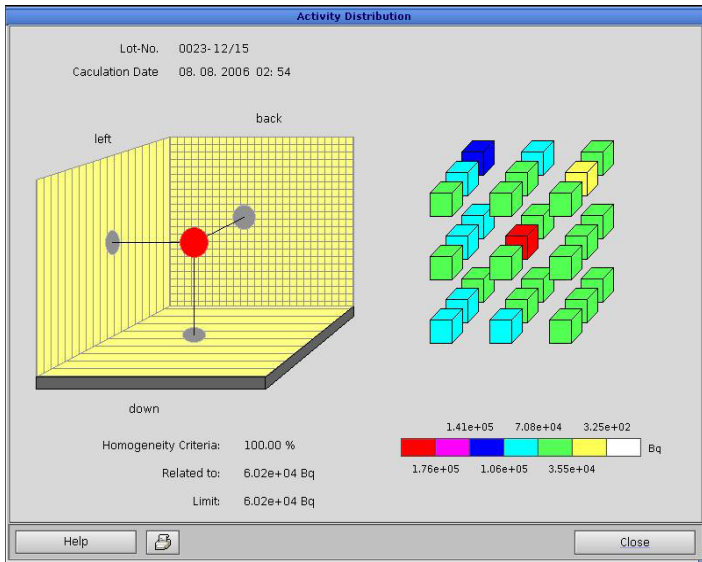
The RTM644Inc clearance monitor has a measurement chamber with motor-operated swing doors and conveyor system, which is used as a carrier for the goods to be measured. Goods are weighed by integrated scales and checked for gamma radiation in the shielded 1,870 liter chamber. The 24 detectors are arranged in 4π geometry. An intuitive user interface allows for detailed user-specific parameter settings, such as material type and disposal target.

**MEASUREMENT**

Leading nuclide correlation (Inc) is one of the basic functions of the RTM644Inc monitor. 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/cm<sup>2</sup> are calculated. The contamination's center of gravity and its distribution are graphically displayed in 3D color.

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



Measurement display:  
System has detected a «Hot Spot»



**TECHNICAL SPECIFICATIONS**

<b>Dimensions</b>	length: 2000 - 3400 mm width: 900 - 1400 mm height: 1730 - 1980 mm  other dimensions possible
<b>Weight</b>	beta plastic scintillation or gas-flow detectors or gamma plastic scintillation or combinations
<b>Detectors</b>	45 Bq (Co-60, 1.2 m/min)
<b>Shielding</b>	0.6 m/min - 12 m/min
<b>Detection limit</b>	55 Bq (Co-60, 60 s)
Integrated weight scales for goods up to 1000 kg	
Compliant with European Electromagnetic Compability 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](http://www.mirion.com).