

# RTM 110

Hand and Foot Contamination Monitor



*detection*  
*identification*  
*radiation*



## A Practical Design for the Measurement of $\alpha$ - $\beta$ - $\gamma$ Contamination

The RADOS RTM110 Hand and Foot Contamination Monitor is used in circumstances not requiring a full body monitor. It is suitable for various applications due to the possibility of having different detectors. The system is based on an industrial personal computer. Extremely robust, real time and multi-tasking Unix-based, operating system, designed for highest performances in process control with an intuitive graphical user interface for greatest ease of use.

- **PC supported measurement electronics with an industrial PC**
- **Fully Networkable**
- **Automatic background subtraction**
- **Automatic adjustment of measurement time**
- **Display of measurement values (cps, cpm, Bq, Bq/cm<sup>2</sup>)**
- **Nuclide pre-selection**
- **Designed according to IEC 61098 (DIN V 44801-10)**

## Characteristics of the detectors

alternatively Xenon detectors (RXE), gas flow-proportional detectors (RGZ) or beta-plastic-scintillation detector (RBP)

- Alpha/Beta-discrimination:
  - electronic pulse height discrimination (for flow-proportional detectors only)
- hand detectors:
  - right and left hand 1 detector each RXE 270 X or RGZ 270 Y or RBP 240
  - right and left hand with 2 detectors RXE 270 X or RGZ 270 Y or RBP 240
- clothing probe:
  - right hand detector detachable
- foot detector:
  - split foot detector for separate measurement of right and left foot, detection area: 2 x 500/550 cm<sup>2</sup> RXE 1000 ZX or RGZ 1100 ZY or RBP 1050

## Physical characteristics

Typical efficiency values	Xenon* detectors (RXE)*		Flow proportional detectors (RGZ)		Beta-plastic* -scintillation detectors (RBP)*	
	hands	feet	hands	feet	hands	feet
<sup>90</sup> Sr/ <sup>90</sup> Y	40%	38%	80%	54%	68%	44%
<sup>36</sup> Cl	24%	22%	40%	26%	37%	28%
<sup>60</sup> Co	12%	11%	25%	17%	18%	14%
<sup>14</sup> C	3%	2.5%	15%	9%	7%	3%
<sup>125</sup> I	4.5%	4%	-	-	-	-
<sup>131</sup> I	21%	20%	30%	23%	16%	12%
<sup>241</sup> Am	-	-	24%	14%	15%	3%

- gas supply for RGZ version
  - these detectors are prepared for connection to an external gas supply with Argon/CO<sub>2</sub> (82/18 %) or Argon/ Methane (P10)
  - gas flow control: Rotameter for setting and monitoring the counting gas, gas consumption approx. 2 – 4 l/h (0.44 - 0.88 gallon (UK)/h)
- electronics:
  - PC-Electronics with 15 in - TFT - colour display Multitasking Operating system QNX

## Electrical characteristics

- power supply: 230 V-240V/1.0 A or 110V/2A

## Mechanical characteristics

- stainless steel housing
- dimensions: width 580, depth 750, height 1700 mm (228 x 295 x 669 in)
- weight: approx. 70 kg (154 lb)

\* No gas supply needed

