



NUCLEAR POWER PLANTS M

WASTE MANAGEMENT RESEARCH INDUSTRY CENTRES & MANUFACTURING

CID-03 CONTINUOUS IODINE DETECTOR

MAIN ADVANTAGES

- Easy replacement of the iodine cartridge
- The detector is designed for continuous measurement during the normal, emergency, or post-emergency conditions at the NPP
- Seismic resistance
- Remote control
- Indication of a clogged filter

PURPOSE

The CID-03 is designed to detect radioactive iodine in the air across a wide range of concentrations, starting from very low levels. The CID-03 signals the presence of iodine to personnel in the radiation-controlled area to ensure their protection against internal contamination.

The air is filtered through an iodine cartridge filled with impregnated activated carbon, which retains the iodine. The radioactive iodine activity in the cartridge is measured by the Nal(TI) scintillation detector.

The CID-03 detector contains a pressure drop sensor on the iodine cartridge, which allows the device to indicate whether the filter is clogged and request the operator to replace it.

Easy cartridge replacement is ensured by a simple mechanism. A ¹³⁷Cs control source is used for detector stabilization.

The detection system is shielded with lead, with a thickness of 1, 5, or 10 cm.

SPECIFICATION

Detector type	scintillation NaI(TI)
Filter media	iodine cartridge TC-45
Cartridge capture efficiency	96 %
Measuring range (131I)	2,5E+00 to 3E+06 Bq/m ³
Shielding (Pb)	1 / 5 / 10 cm
Flow	30 l/min
Weight - shielding 1 cm - shielding 5 cm - shielding 10 cm	60,3 kg 246,4 kg 610,7 kg
Dimensions (W × H × D) - shielding 1 cm - shielding 5 cm - shielding 10 cm	(541 × 332,4 × 307) mm (609 × 473 × 311) mm (658 × 494,5 × 424,2) mm

ACCESSORIES

1-7004-00003 Iodine cartridge with activated ca impregnated with 5 % TEDA	lodine cartridge with activated carbon
	impregnated with 5 % TEDA



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Specification subject to change without prior written notice.