



VF NUCLEAR



NUCLEAR
POWER PLANTS



WASTE
MANAGEMENT



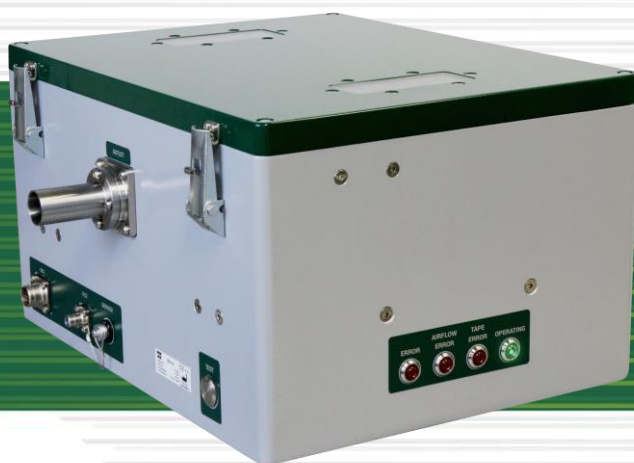
RESEARCH
CENTRES



INDUSTRY
& MANUFACTURING

CPD-14

CONTINUOUS PARTICULATE DETECTOR



MAIN ADVANTAGES

- Moving filter tape
- Operation from 3 months up to several years without filter replacement (depending on the operation mode)
- Continuous or periodic filter movement
- Radon/Thoron compensation
- Background compensation in real time
- Easy maintenance
- Meets the requirements of IEC 60761, IEC 61172, and IEC 61578 standards.

PURPOSE

CPD-14 continuously measures the volumetric activity of alpha and beta active aerosols in the air. The detector is used to protect personnel in monitored areas against internal contamination by radioactive particles.

The air sample enters the detector module, which is mounted within a hermetically sealed box, through an inlet fitting. The air flow then passes through the filter tape, the slot flow rate meter and exits by the outlet fitting.

Aerosol particles are trapped on the filter tape. Three silicon detectors are positioned close to the filter tape to ensure measurement of captured aerosol activity with maximum efficiency. The fourth detector is designed for background compensation. An LED check source is used to check the detectors' correct functioning.

The device is equipped with a pressure sensor that checks the clogging or tearing of the tape by monitoring the pressure loss across the tape.

The detector can be equipped with an internal lead shielding, for work in increased radiation background.

The CPD-14 detector can also be supplied with an integrated RDU-02 display unit. This version does not require connection to an external display unit and can be directly connected to the host system.

SPECIFICATION

Detectors	4 × Si - PIN
Measuring range	
• alpha (^{241}Am)	0.05 to 3.9E+5 Bq/m ³
• beta (^{36}Cl)	0.5 to 5.0E+5 Bq/m ³
Filter tape	25 m
Aerosol filtration efficiency	min 90 %
Nominal air flow (adjustable)	30 l/min
Dimensions (W × H × D)	(430 × 230 × 450) mm
Weight	
• shielding 20 mm	43,5 kg
• shielding 0 mm	23,5 kg
Interface	RS-485
Power supply	24 V DC, max. 15 W
Temperature range	from 5 to 50 °C

MODELS

K1594-01	CPD-14 Detector
K1594-04	CPD-14 detector with integrated RDU-02 display unit

CPD-14

CONTINUOUS PARTICULATE DETECTOR

OPTIONAL FEATURES¹

Model	K1594-01, K1594-04
Shielding	20 mm
Flow rate meter	optionally
Intake and exhaust connections	freely from the place / hose attached with a clip / pipe with a nut M30×1.5
Power supply	24 V DC, max. 15W

¹ Optional features must be specified before ordering

OPTIONAL ACCESORIES

1-7002-00005	Aerosol filter tape 25 m long
	Detector qualification according to IEC 61226

RELATED PRODUCTS

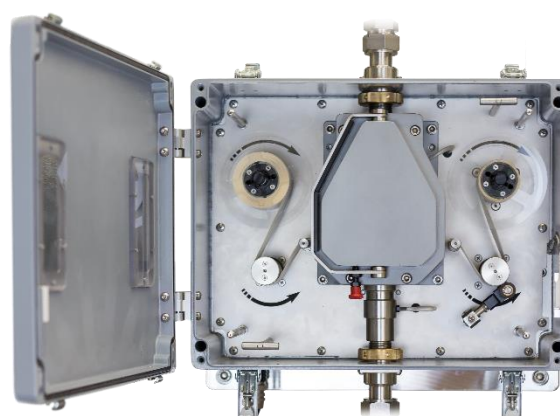
CPM-300	Continuous Particulate Monitor
CPD-16	Continuous Particulate Detector
RDU-02	Radiation Display Unit for up to 4 measurement channels
RDU-22	Radiation Display Unit for up to 16 measurement channels



Continuous Particulate Monitor CPM-300 with RDU-22 display unit



CPD-14 detector with RDU-02 integrated display unit



Opened cabinet of the CPD-14 with 20mm detector shielding