

NUCLEARANCE MAX

Portal Monitoring System for Scrapyards



The detection gate is equipped with two 40 L scintillation detectors that can be used for quick and easy inspection of trucks and cars transporting scrap metal. The high sensitivity of the detection system ensures high reliability of detecting a potential source of ionizing radiation.

Benefits

- Compliant with IEC 62022:2004 standard
- Modular system – different detector configurations can be used
- Fully automated
- Ensure no radioactive source enters the premises
- Can be connected to a camera system for reading vehicle registration plates
- Additional horizontal detector

Key Figures

50 keV - 2 MeV
→ Energy range

5 MPH
→ Recommended vehicle speed

3 μ Ci
→ MDA < 3 μ Ci for Co-60

Product description

The detection system is equipped with two 40 L scintillation detectors which effectively detect radioactive material located or hidden within the cargo space of a vehicle transporting scrap metal for processing. The system ensures a continuous inspection of vehicles passing through the detection gate. In the event of detecting a source of ionising radiation, the operator can take rapid action in accordance with applicable legislation.

Components included in the standard offer:

- 2 x 40 L scintillation detectors
- Control unit with a sound and a visual alarm
- Lead shielding - 10mm thick
- Common user PC with the NuSOFT PortIS (languages included: CZ, FR, IT, SK, EN)
- Recognition sensors
- 2 x poles included

Options:

- 2x camera - license plate reading
- Additional vertical detectors
- Additional horizontal detectors

Specifications

Power supply	120V (60 Hz)
Detectors	2x40 L plastic scintillation detectors
Gamma energy range	50 keV - 2 MeV
Recommended vehicle speed	5 MPH or less
Alarms	Sound and visual (red light indicator or traffic light indicator)
Control unit	Base controller and embedded PC
Software	NuSOFT PortIS package for data analysis and portal management
Environmental protection	IP65
Panel-to-panel distance	12 ft. optimal
Operating temperature	From -22 °F to 131°F
Relative humidity	93% (non-condensing)

The minimum detectable activity (MDA)

The MDAs below are given for natural background conditions, the radioactive source moving at 5mph between the detector panels (12 ft. apart).

Radionuclide	Activity
Cs-137	12 µCi
Co-60	3 µCi
Am-241	34 µCi
Am-241 (shielded)	338 µCi

Product application

- Inspection of vehicles delivering scrap metal for processing
- Inspection of departing vehicles from scrap metal processing plants

NuSOFT PortIS

- Processing of signals from all sensors
- Analysis and development of measured data
- Management of portal gateway parameter settings
- Self-diagnostic functions of the portal gate
- Management of setting of alarms and detection limits
- Traffic management
- Display of recorded data
- Report system and passage database

