

NuCLEARANCE

Portal Monitoring System
for Scrapyards



The detection gate is equipped with two 25 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 ionising 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

Key Figures

50 keV - 2 MeV
→ Energy range

10 km/h
→ Max. vehicle speed

600 kBq
→ MDA < 600 kBq for Cs-137

Product description

The detection system is equipped with two 25 L scintillation detectors which effectively detect radioactive material located or hidden in the cargo space of the vehicle which 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 25 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)
- Recognition sensors
- 2 x poles included

Options:

- 2x camera - ID plate reading
- Additional detectors

Specifications

Power supply	230 V / 50 Hz
Detectors	2x25L plastic scintillation detectors
Gamma energy range	50 keV - 2 MeV
Recommended vehicle speed	Less than 10 km/h
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
Optimal detector distance	From 3000 to 4500 mm
Operating temperature	From -30 °C to + 55 °C
Relative humidity	93% (non-condensing)

The minimum detectable activity (MDA)

The stated MDAs comply with the measurement conditions according to the IEC62244 standard.

Radionuclide	Activity
Cs-137	0.6 MBq
Co-60	0.15 MBq
Am-241	1.7 MBq
Am-241 (shielded)	17 MBq

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

