

NuCLEARANCE Lite

Cost effective portal detection system for scrapyards



The NuCLEARANCE Lite is equipped with two 5L scintillation detector, designed for quick and easy inspection of vehicles transporting scrap metal. The high sensitivity of the detection system guarantees high reliability of detection of potential sources of ionizing radiation for a minimal investment.

Benefits

- Cost effective system to monitor unwanted radioactive material
- Fully automated
- Easy installation and operation

Key Figures

50keV - 2MeV
Energy range

10km/h
Max vehicle speed

180kBq
MDA < 180 kBq pro Cs-137

System description

The detection system is equipped with two 5L scintillation detectors, which effectively detects radioactive material located in the cargo space of the vehicle transporting scrap metal for further processing. The system guarantees continuous inspection of vehicles passing through the detection gate. If an ionizing radiation source is detected, the operator can react quickly in accordance with current legislation. The configuration of the portal parameters are set directly on the portal using a PC with operating software through the RS485 communication interface.

For remote operation of the portal, an optional PC with our NuSOFT PortIS LITE control software is available.

Basic equipment

- 1 or 2x 5 l scintillation detectors
- 1 or 2x steel stands for detector installation
- 1 x control switchboard with USB communication interface
- Visual alarm - flashing light, audible alarm

Options

- External signaling unit with audible and visual alarm
- User PC with PortIS LITE software (language versions CZ, EN, FR, IT, SK, DE) connectable through RS485 interface
- Sensors for passage detection

NuSOFT PortIS LITE package description (optional extension)

- Management of detection system parameter settings
- Vehicle passage control
- Display of measured data
- Database of vehicle scans and measurement results

Application

- Ideal for smaller recycling sites with limited budget
- Cost effective solution to avoid any radioactive incident and reporting

System Specifications

Power supply	230 V / 50 Hz
Detectors	2 x 5 l plastic scintillation detectors
Energy range	50 keV - 2 MeV
Recommended vehicle speed	Less than 10 km/h
Control unit	Local control unit
IP	IP65
Operating temperature	from - 30°C to + 55°C
Operating relative humidity	93 %

Options

Alarm unit	Visual and sound alarm (red light)
PC and Software	NuSOFT PortIS LITE software package
Sensors	For passage detection

Minimum detectable activity (MDA)

The following Minimum Detectable Activities were calculated according to the ISO11929 and they were calculated for point source at a 1 meter distance.

Radionuclides	Activity
Am-241	650 kBq
Cs-137	180 kBq
Co-60	60 kBq