NUVIATECH INSTRUMENTS

SPECIFICATION SHEET

# 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

## Key Figures

**50 keV - 2 MeV**
➥ *Energy range*

**5 MPH**
➥ *Recommended vehicle speed*

**3 µCi**
➥ *MDA < 3µCi 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 scintilation 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 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