

PORTAL D Emergency deployable modular radiation screening system



PORTAL D is a compact modular emergency radiation screening system (designed according to the FEMA-REP-21 standard) suitable for inspecting people and vehicles. The big advantage is its portability and operative assembly which enables rapid deployment at temporary events with larger concentrations of population, at borders, in nuclear facilities and for other homeland security tasks. The system is controlled via a computer equipped with user-friendly operating software. The PORTAL D assembly can be customised to meet specific customer requirements.

Benefits

- Turnkey solution for various emergency tasks
- Lightweight and solid construction
- Operative fast deployment
- Modular system enabling multiple uses, adaptable to vehicle and pedestrian screening
- Led lights for night work
- Easy to fully decontaminate
- Power supply from various independent sources (car battery / battery / mains / diesel generator)

Key figures

50 keV – 3 MeV

↳ Gamma energy range

37 kBq

↳ Detection threshold for ¹³⁷Cs at 662 keV

8 h

↳ Battery operation

Product description

The main supporting durable frame of PORTAL D is composed of precisely shaped lightweight aluminium girders facilitating fast assembly of the system. Depending on the given task, a portal monitor for pedestrians, vehicles or trucks can be constructed.

By default, the system is equipped with up to six 5 litre high-sensitivity plastic scintillation detectors housed in water and dust-resistant boxes that can be easily decontaminated due to their special surface treatment. Their size can be customised as well as the number or types of detectors. Detection units mounted on the aluminium frame are connected with cables to a control unit that serves also as a power supply, battery back-up and enables to connect PC with a SW control application. The control unit is capable to provide power for up to 8 hours of the system operation. The system can also be powered from the mains (230/110 V AC), from the car or a mobile gas/diesel generator.

The system is delivered as a kit that comprises all the necessary components, like connecting cables, traffic lights, a motion sensor, a rain-proof canopy, a printer of protocols and stickers, a LED light for night illumination of the workplace, a power source, a computer and other accessories.



Product specifications

Power supply	Diesel generator, 230 (110) V / 50 (60) Hz, lithium accumulators based on LiFePO 4 (LFP), car cigarette lighter
Battery operation	Up to 8 hours
Detectors	2 - 6 plastic scintillation detectors with a volume of 5 litres, housed in ruggedised cases
Gamma energy range	50 keV to 3 MeV
Alarms	Acoustic and visual
Control unit	Box with electronics for power supply management, connection of detectors and a PC with a SW application and other functions
Software	PortIS package for data processing and system setting
Software capabilities	Measured object identification data input, measured values display and logging, printing protocols, etc.
Frame	Ruggedised, portable aluminium girders
Variable assemblies	For pedestrians, cars and trucks
Operating temperature	From -30 °C to +55 °C
Relative humidity	93% (non-condensing)
Other capabilities	Traffic light control, automatic checking of the system status
Detection threshold	37 kBq for ¹³⁷ Cs at 662 keV for each detector and a source at a distance of 0.5 m from the middle of the total length of the detector

Product applications

- Emergency situations caused by terrorist attacks or incidents in nuclear facilities
- Events with high concentrations of population
- Detection of illicit transportation of nuclear materials
- Cargo contamination control
- Metal recycling factories and scrapyards
- Other homeland security tasks

