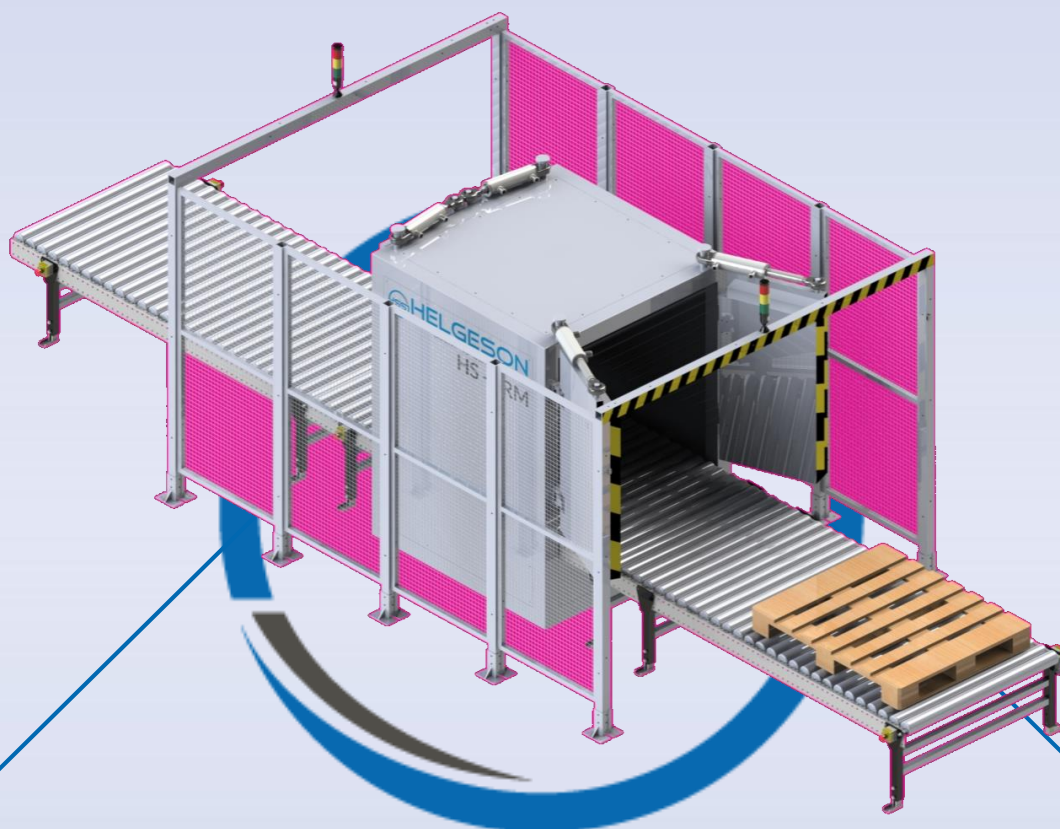
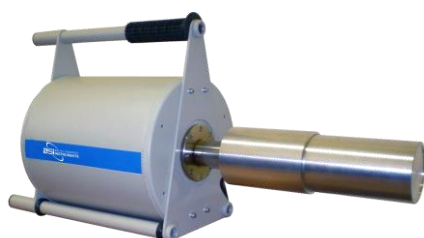


# HS-FRM

The HS-FRM is a free release monitor to be used with different types of waste like drums, containers and big bags. It is a chamber shielded from the influence of external natural radiation and consisting of detectors in each of the 4 side panels, ceiling and floor. This allows to perform a fast and efficient detection and quantification of radiation from the waste present inside the chamber.



The HS-FRM can be customized in order to analyze different types of waste geometries, perform spectrometry analysis with inorganic scintillators or HPGe, etc.



## Special Features:

- Plastic scintillation detectors for the detection of gamma radiation with a minimum of 4 detectors per side
- Easy connection detectors, e.g. USB, which allow its quick replacement in case of failure.
- Lead shielding of 5, 7 or 10 cm on all side panels, floor and ceiling.
- Waste geometries include Cylindrical drums of 200, 400 liters or similar, Containers with dimensions similar to the Euro palette 120 x 80 x 74 and 120 x 100 x 74 cm (L x W x H) and Big bags
- Minimum detectable activity of Co-60 and Cs-137 for the densities indicated between 60 and 150 Bq or that ensure a detection of 0.025Bq/g.
- Measurement times of each container in the order of 1-3 minutes for the limit indicated.
- Ability to distinguish different gamma isotopic compositions present in the waste.
- Ability to identify volumes or areas with waste content different from the rest of the measured container
- Capability of continuous measurement and analysis of the background and detection of its variability to be able to make compensations for the measurement of the material.
- Determination of the uncertainty of the gamma activity determined in the measurement in accordance with UNE-EN ISO 11929-1:2021.
- Calibration/verification module with dummies.
- Database of measurements carried out.
- Isotope Library.
- Library of geometries to be measured.
- Export import of data, preparation of declassification reports.
- Ability to analyze the measures after they have been carried out
- Implementation of different Scale Factors in the final assessment process
- Internal scale indicating the mass of the measured container. The precision is less than 0.5 kg and the maximum mass to be measured of 1500 kg.
- Opening system for entry and exit for measurement in continuous mode, with two automatic shielded motorized doors controlled remotely, equipped with a security system
- Roller Conveyor system automated and controlled remotely
- Security and alarm system, with security stop buttons for the conveyors, entrance and exit doors.
- Safety sensors that detect the dimensions of the object to be measured, in order to prevent damage to the chamber and the waste packages
- Remote control of the measurement process from a control post with fixed computers or laptops that allows both the manual mode and the automatic mode of measurement
- CCTV that allow visualization of the process from the checkpoint.
- Verification and/or calibration dummies
- System control UPS
- System for reading barcodes, QR codes, RFID or similar for visualization, acquisition and management of basic input data of the containers to be measured.
- Laser printer.