

The **Sample Measurement System**(SCS) is used to measure automatically, one by one, a number of samples on a radioactivity detector. This detector, stored in a lead shielding, can be a Germanium detector or any Scintillation detector. The samples are moved by a robot-arm and placed on top of the detector.

A batch of maximum 40 samples can be placed on the system table. The samples are placed in sample-holders; inserts can be delivered to accommodate different kind of sample geometries.



The SCS is designed in such a way that it can make use of existing lead shields and detectors. The control is done via an industrial PLC that is connected to a standard PC using windows as software platform.

Sample movement is realized by a XYZ robot arm. The XY-movement is done by electrical driven tooth belts using stepping motors and the Z-movement is done by a pneumatic cylinder.

Features

- Frame in extruded aluminum profiles with adjustable feet.
- Sliding doors with integrated interlock system for safe access.
- Side shielding in polycarbonate plates.
- Samples are loaded through the standard opening in the top of the lead castle. A sliding lid is installed for shielding during background measurement and sample measurement.



- Capacity: up to 40 samples.
- Various geometries: Kautex bottles, plastic boxes, filters, ...
- A barcode reader to read the barcode placed on the bottom of the samples.



Specifications

- For existing lead castles.
- Tower lamp with visual indication of alarm.
- Dimensions: 3,00x1,10x2,40m (WxDxH).
- Power: 220VAC – 10A – 50HZ.
- Max sample weight 4kg.
- Industrial PLC for:
 - motor control
 - movement control of all pneumatic components
 - digital I/O
 - serial communication to master PC
- Compressed air preparation group with compressor and valve terminal.
- XYZ-movement for sample transportation.
- X movement:
 - range: ± 2000 mm
 - toothed belt axis
 - electrically driven by stepper motor with internal encoder and integrated electronics
 - electronic home and limit switches
- Y movement:
 - range: ± 460 mm
 - toothed belt axes
 - electrically driven by stepper motor with internal encoder and integrated electronics
 - electronic home and limit switches
- Z movement:
 - range: ± 400 mm
 - pneumatic cylinder with pneumatic gripper
 - electronic home and limit switches