

Previous model number: 3700-B25

Waste Segregation Gamma Box Scanner

G3700-B25



Introduction

The ANTECH G3700-B25 is designed for the segregation of gamma-ray emitting waste in large containers. The container travels past the detector station, stopping at multiple measurement points that are pre-determined by the operator. At each point multiple measurements are made simultaneously by collimated High Purity Germanium (HPGe) detectors. The results are corrected for the box geometry and attenuation, and are then combined to produce a result for the total activity of the container. Outliers from this total activity are flagged as possible inconsistencies in the matrix density or source distribution. For the correction of dense matrices there is the option of integrating a transmission source and is applicable to the measurement of waste with a uniform distribution of density and activity.

The G3700-B25 has a versatile modular and flexible design and is able to meet different assay requirements. Although the G3700-B25 has been designed for Standard Waste Boxes (SWB) and B-25 containers, the size and shape of the container can vary as the calibration data stored for each detector is extrapolated to model the actual geometry of each individual container. A typical setup for the G3700-B25 of two detectors either side of the container, scanning at three points down its length, would result in an overall measurement time of 45 minutes (typical).

Features

- Assays containers of varying size up to B-25 and including SWB
- High efficiency, high-resolution HPGe detectors, 2 standard - 4 optional
- Optional transmission source
- Modular design allows flexibility for different measurement conditions
- Multiple detectors provide a faster measurement with lower uncertainty
- Mini-dewar or Xcooler (electromechanical cooling) options

Benefits

- Multiple measurements to detect hotspots
- High sensitivity detectors produce accurate container assay
- Typical measurement time of 45 minutes per container
- Appropriate for the measurement of boxes with a uniform distribution of density and activity
- Suitable for confirmatory measurements of large volumes of waste

Specification

Dimensions (L x W x D)	5097 mm x 5207 mm x 2277 mm (200.67 in x 205 in x 89.65 in)
Maximum container weight	5400 kg (11904.96 lb)
Maximum container dimensions (L x W x H)	1845 mm x 1184 mm x 1310 mm (72.64 in x 46.61 in x 51.57 in)
Germanium coax detector efficiency	Typically 25% or higher efficiency
Transmission Source	Optional, ¹⁵² Eu
Analysis Software	Windows operating platform IsoCorr and GammaVision analysis software
Spectroscopy	DPA or DSPEC Jr2
Power Supply	110 or 240 VAC, 50-60 Hz
Network Connection	Ethernet and USB