



## GAMMA WASTE ASSAY SYSTEMS

# CGO-Smart™

Large items contamination check

The CGO-Smart is intended to check the contamination of large items at the controlled area boundary or in the laundry of nuclear plants.



## FEATURES

- **Reliability:** proven plastic scintillator technology
- **Ergonomics:** user-friendly and intuitive graphical interface
- **Performance:** measurement time automatically shortened thanks to internal algorithm
- **Reactivity:** unique adaptation capability thanks to quick decision algorithm
- **Intelligent:** categorisation of contamination, NORM discrimination and corrected activity count
- **Safety:** designed for secure installation and transportation, modular shielding can be installed on-site.

### NEW

#### “TRACE CO-60” MODE

allows checking that NORM bulk materials don't exceed a preset Co-60 concentration level. MDA can be as low as 3 pCi/g widely independent of NORM activity.

## DESCRIPTION

The CGO-Smart is based on the proven technology of the Smart devices range: using spectrometry and energy analysis, it provides a more reliable contamination measurement and new features.

The CGO-Smart reduced measurement time optimizes the flow of workers. It also provides a unique capability of quick adaptation to background variations.

The CGO-Smart is capable of object profile configuration to adapt the measurement and to compensate the background depression due to a dense object and compensate NORM presence if any.

The CGO-Smart features an intuitive graphical user interface and a compact touchscreen for easy display of additional data, based on level of access.

PHYSICAL CHARACTERISTICS

- **Chamber dimension:** 60.8 x 60.1 x 84 cm (24 x 23.6 x 33 in) or 307 liters(10.84 f³)
- 6 plastic detectors 113,4 liters (4.004 f³)
- 8 spectrometry channels, 256 chanel each
- Spectrum based stabilization for temperature and drift compensation
- **Energy threshold:** 50 keV,
- **Measurement range:** 10 Bq to 106 Bq
- **Homogeneity:** ± 15 % for 6 detectors
- Energy uniformity ± 20 %
- **Background monitoring:** automatically adjust count time to measuring goals, suppression of quick variations, quick follow-up of background variation
- Automatic calculation of measurement time according to threshold, background, risk of false positive and detection probability
- Calculation of the total, surface and mass contamination, with compensation of the background reduction by the object and by the presence of NORM.
- Categorization according to spectral profile
- Spectrum weighted activity
- Contamination localization indication
- Trace mode: Co-60 detection, MDA 0.1 Bq/g in any realistic NORM material (5 / 20 kg, 1 minute)

ELECTRICAL CHARACTERISTICS

- Power Supply: 110 - 230 V, Backup > 10 min.
- 2 external USB connectors, 1 LAN connection
- 2 information reports by isolated relay

ENVIRONMENTAL CHARACTERISTICS

- **Operational temperature:** 5°C to +40°C (41°F to +104°F)
- **Storage temperature:** -25°C to +60°C (-13°F to +140°F)
- CE compliance
- Compliant with ISO 11929:2010

MECHANICAL CHARACTERISTICS

- **Dimensions:**
  - 840 x 892 x 1 550 mm (33.071 in) (Hx xW x D)
- **Mass:**
  - 1 200 kg (2,640 lbs) with 10 mm shielding (0.394 in)
  - 1 600 kg (3,520 lbs) with 25 mm shielding (0.984 inc) (10+15 mm peripherals (0.394 + 0.590 in)



FUNCTIONAL CHARACTERISTICS

- 2 LCD color touchscreens 10”
- Audible alarm
- Item detection by camera or scale
- 2 doors mode, 1 door only, long object mode
- Quick measurement (minimized duration) and precise measurement (fixed duration)
- Configurable reference object list,
- Protected access for user settings, diagnosis or configuration
- Assisted diagnosis and calibration measurement
- Reference isotope choice
- Measurement history, background noise, availability, controls
- Detailed results saving, picture and spectrum
- Export on USB or network.

**Measurement time with 6 detectors and an alarm threshold of 150 Bq Co-60**

Shielding thickness (mm equivalent lead)		10	25	25	25
Background Noise (nSv/h)		100	100	300	1000
Measurement Time Co-60 (s)	Max	27	11	19	30
	Medium	7	4	5	8

