



# CGO-Smart

Surface Contamination Monitor



Nuclear  
Power



Homeland  
Security  
& Defense



Industrial and  
Manufacturing



Healthcare



Labs and  
Education

## OVERVIEW

The CGO-Smart is intended for checking and indicating non-contamination of large objects or a set of object in controlled areas of Nuclear Power Plants.

The **CGO-Smart** is using the proven technology of the **Smart Technologies** range.

Using a spectrometric approach, the **CGO-Smart** exceeds the basic contamination measurement by indicating the level and type of contamination.

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 decrease of the background (due to the object or the presence of NORM in the object.)

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

**Smart.** Technology.

## KEY 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 to background variations
- **Intelligent:** categorisation of contamination, NORM discrimination and corrected activity count
- **Safety:** designed for secure installation and transportation, modular shielding can be installed on-site.

## PHYSICAL CHARACTERISTICS

- Chamber dimension : 60.8 x 60.1 x 84 cm (24 x 23.6 x 33 in) or 307 l (10.84 f³)
- 6 plastic detectors 113,4 litres (4.004 f³)
- 8 spectrometry channels, 256 channels each
- Spectrum based stabilization for temperature and drift compensation
- Energy threshold: 50 keV,
- Measurement range : 10 Bq to 10<sup>6</sup> 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
- Compliant with ISO 11929:2010

## ELECTRICAL CHARACTERISTICS

- Power Supply: 230 V
- Backup > 10 min.
- 2 external USB connectors
- 1 LAN connection via cable gland
- 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:**
- EN 61000-6-2, EN61000-6-4, EN6110-1

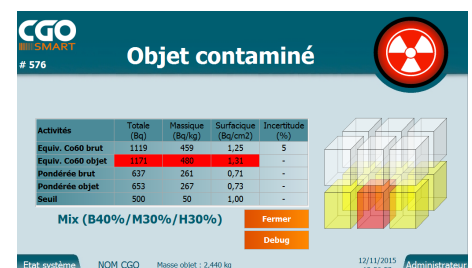
## MECHANICAL CHARACTERISTICS

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

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

## 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, availability, controls
- Detailed results saving, picture and spectrum
- Export on USB or network.



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