H100

Gamma-Ray Imaging Spectrometer

Features

- ✓ Fast, portable, and easy to use imaging spectrometer
- ✓ Rapidly identifies and locates primary source terms
- ✓ Real-time spectroscopy, ID, and imaging
- ✓ Omnidirectional sensing and imaging
- ✓ Better than 1.1% FWHM energy resolution at 662 keV and interaction-by-interaction resolution of ≤0.9% FWHM
- ✓ Energy range covers isotopes of interest up to 3 MeV
- ✓ Industry-leading imaging sensitivity using pixelated CZT technology
- ✓ Precision overlay of gamma-ray and optical images
- ✓ Images both point and distributed sources
- ✓ Ready to use in under 60 s
- ✓ Discrimination between background and sources of interest in less than 1 minute
- ✓ Light weight and highly portable
- ✓ Integrated rangefinder
- ✓ Air/watertight for easy decontamination
- ✓ Dose-range gauge
- ✓ Automatic report generation
- ✓ Annual recalibration and software updates included

"All of our technology that we have—that I've worked with for 30 years—doesn't touch what this shows us."

- RPM, U.S. Nuclear Power Plant

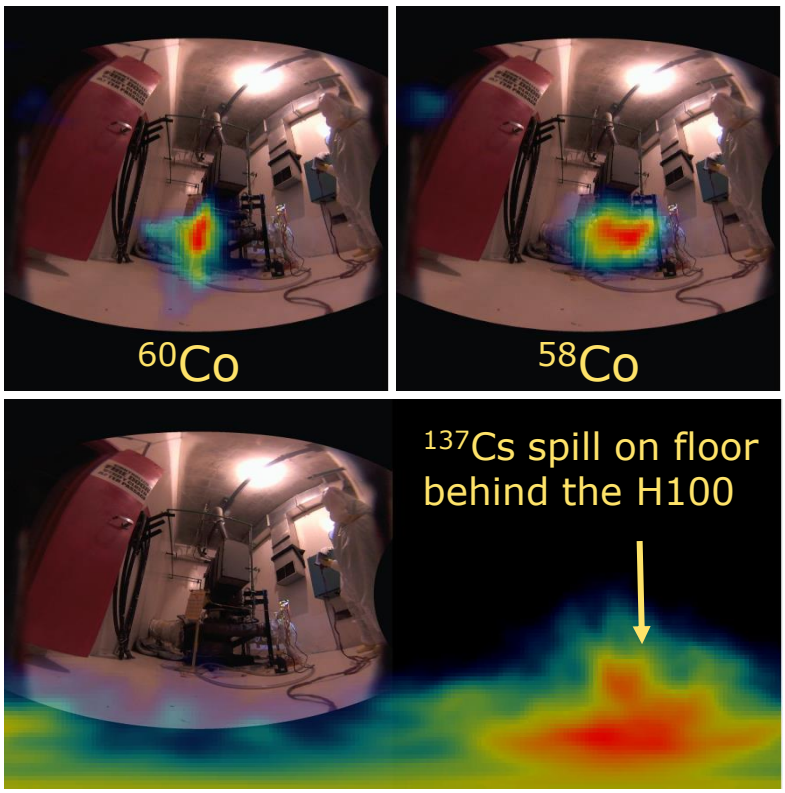
The H3D® H100 is your complete solution for the identification, quantification, and localization of gamma-ray sources at nuclear power plants:

- ❑ Easy to use
- ❑ Highly portable
- ❑ Cost effective

25 years of development and 10+ years of application-specific engineering to the exacting standards of nuclear power plant operators to support:

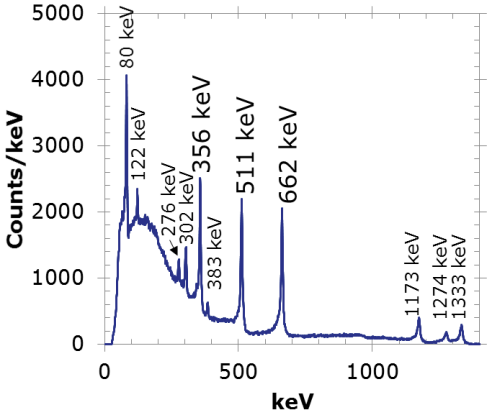
- ❑ Routine monitoring and maintenance
- ❑ Decommissioning operations
- ❑ Emergencies, incidents, and outages

Spectroscopic performance competitive with cryogenically cooled detectors and omnidirectional isotope-specific imaging… at under 8 lbs.



10-minute isotope-specific images of an RHR pump room in a U.S. nuclear facility.

High-Resolution Option (H100⁺)
Receive a unit with the best energy resolution in our inventory.



H100 Specifications

Dimensions:	9.6 in x 3.4 in x 6.9 in (24 cm x 8.6 cm x 18 cm)
…with Add-On Exoskeleton:	14.8 in x 4.7 in x 8.3 in (37.5 cm x 12 cm x 21 cm)
Weight:	7.0 lbs (3.2 kg) 10.2 lbs (4.6 kg) with add-on exoskeleton
Battery Life:	>7 hours at 23° C (73° F) >3 hours at -20° C (-4° F) or 50° C (122° F)
Power Supply:	100-240 V, 47-63 Hz
Startup & Operating Temp.:	-20° C to 50° C (-4° F to 122° F)
Storage Temperature:	-20° C to 60° C (-4° F to 140° F)
Ingress Protection:	IP67 (excluding external media)
Tripod Mounts:	1/4"-20 with reinforced thread 3/8"-16 (with add-on exoskeleton only)
System Cooling:	Proprietary external heat sink and removable fan
User Service:	Removable fan cover; replaceable fan
Rangefinder:	Integrated Class 2 laser; 635 nm; <1 mW
Energy Resolution:	≤1.1% FWHM at 662 keV (coincident interactions combined) ≤0.9% FWHM at 662 keV (coincident interactions separated)
Optical Field of View:	>154° horizontal, >142° vertical; full color
Optical Registration:	±2° to radiation image in front 90° × 90°
Radiation Field of View:	4π (360°) omnidirectional
Angular Precision:	±1° source localization for all 4π (real time)
Angular Resolution:	~30° FWHM for all 4π (real time) ~20° FWHM for all 4π (post processing)
Sensitivity:	Detects ^{137}Cs producing ~3 μR/hr in <1 min (spectroscopy) Localize point source of ^{137}Cs producing ~3 μR/hr in <5 min
Energy Range:	50 keV to 3 MeV (spectroscopy) 250 keV to 3 MeV (imaging)
Crystal Volume:	6 cm^3 CZT (CdZnTe)
Count-Rate Limit:	1 rem/hr (10 mSv/hr) bare-^{137}Cs equivalent
Alarms:	Audio & visual alarms based on dose rate or accumulated dose Silence independently & preemptively; adjustable threshold (Sv/h)
Isotope Library:	Select from 3573 ENDF isotopes & user defined; unlimited
Startup Time:	<60 s at 23° C (73° F)
Display:	8" 1280x800 HD tablet (mountable to back cover)
Tablet Communication:	Peer-to-peer WiFi or Bluetooth, or wired connection
Other Communication:	Ethernet RJ45 port; TCP/IP
Views:	Spectrum, gamma image, optical image, composite image
Data Storage:	Removable USB (64 GB) included
Warranty:	2 years (includes annual recalibration and software updates)
Includes:	Visualizer software for advanced post processing Tablet-mounting bracket Power/accessory cables, stylus, and tablet Transport and storage case
Optional Add-Ons:	Exoskeleton for drop protection External battery

90-s measurements; Shield Verification

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