

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
- ✓ Option for $\leq 0.8\%$ FWHM energy resolution at 662 keV and interaction-by-interaction resolution of $\leq 0.65\%$ 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 20 s
- ✓ Light weight and highly portable
- ✓ Integrated rangefinder
- ✓ Air/watertight for easy decontamination
- ✓ Dose-range gauge
- ✓ Automatic report generation
- ✓ Annual recalibration and software updates included

The H3D[®] H400 is the high-efficiency sibling of the H100. Perform measurements in a third of the time.

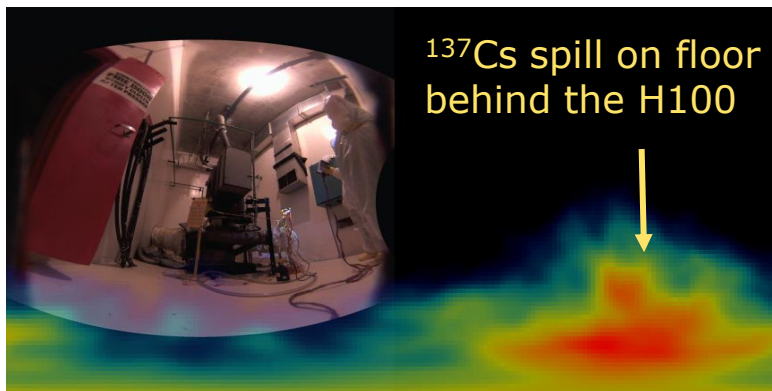
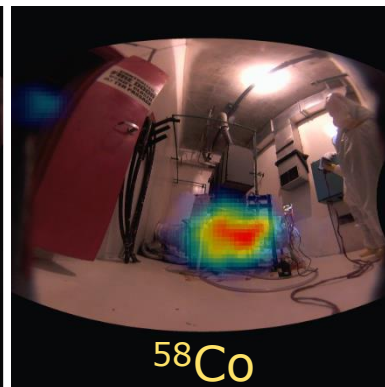
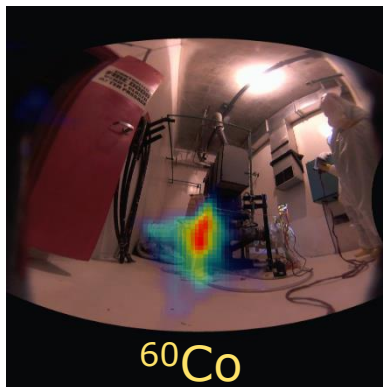
The H400 is optimized for identification and localization of gamma-ray sources at nuclear power plants:

- Easy to use
- Highly portable
- Cost effective

Use the H400 for:

- 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, using the H Series

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

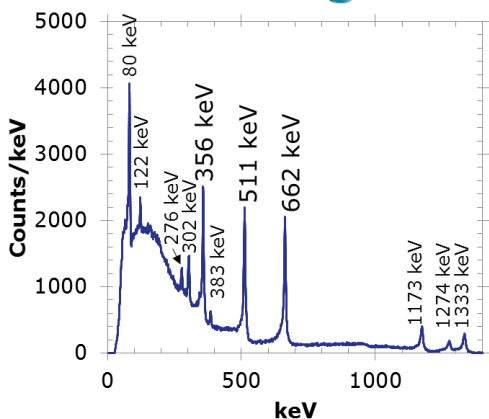
- RPM, U.S. Nuclear Power Plant, describing the H Series

Low-Energy-Imaging Option (H420)

Enable imaging to low energies using integrated coded aperture.
See H420 Specifications Sheet for more information.

High-Resolution Option (H400+)

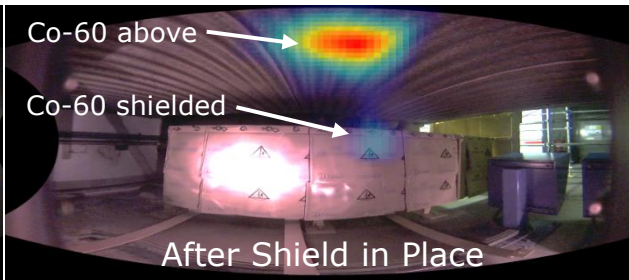
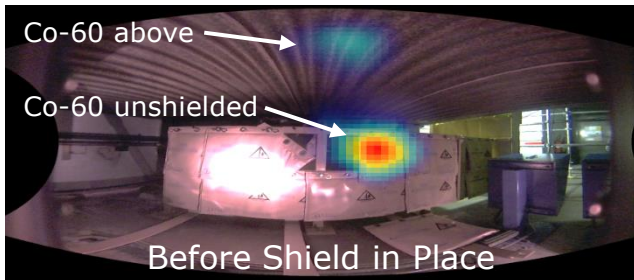
Improve energy resolution to $\leq 0.8\%$ FWHM at 662 keV (coincident interactions combined) and $\leq 0.65\%$ FWHM at 662 keV (coincident interactions separated)



H400 Specifications

- Dimensions: 9.6 in x 3.75 in x 6.9 in (24 cm x 9.5 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: 7.1 lbs (3.2 kg)
- 10.3 lbs (4.7 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: $\leq 1.1\%$ FWHM at 662 keV (coincident interactions combined)
- $\leq 0.9\%$ FWHM at 662 keV (coincident interactions separated)
- Optical Field of View: >154° horizontal, >142° vertical; full color
- Optical Registration: $\pm 2^\circ$ to radiation image in front 90° x 90°
- Radiation Field of View: 4 π (360°) omnidirectional
- Angular Precision: $\pm 1^\circ$ source localization for all 4 π (real time)
- Angular Resolution: $\sim 30^\circ$ FWHM for all 4 π (real time)
- $\sim 20^\circ$ FWHM for all 4 π (post processing)
- Sensitivity: Detects ¹³⁷Cs producing $\sim 3 \mu\text{R/hr}$ in <16 s (spectroscopy)
- Localize point source of ¹³⁷Cs producing $\sim 3 \mu\text{R/hr}$ in <90 s
- Energy Range: 50 keV to 3 MeV (spectroscopy)
- 250 keV to 3 MeV (imaging)
- Crystal Volume: >19 cm³ CZT (CdZnTe)
- Count-Rate Limit: 1 rem/hr (10 mSv/hr) bare-¹³⁷Cs 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
- Exoskeleton for drop protection
- External battery

Optional Add-Ons:



90-s measurements; Shield Verification; Using the H Series



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