P100

Directional Imaging Spectrometer

Features

- ✓ Sensing and imaging over collimated directions, using an embedded tungsten collimator
- ✓ Isotopic quantification of gamma-ray sources
- ✓ Real-time spectroscopy, ID, and imaging
- ✓ Better than 1.1% FWHM energy resolution at 662 keV and interaction-by-interaction resolution of ≤0.9% FWHM
- ✓ No cryogenic cooling required
- ✓ Energy range covers isotopes of interest up to 3 MeV
- ✓ Rangefinder for detector-to-source distance estimation
- ✓ Wireless or wired tablet operation
- ✓ Ready to use in less than 60 s
- ✓ Air/water tight for easy decontamination
- ✓ Images both point and distributed sources
- ✓ Easily exchangeable tungsten plug
- ✓ Operates at high dose rates
- ✓ Tripod mount
- ✓ Annual recalibration and software updates included

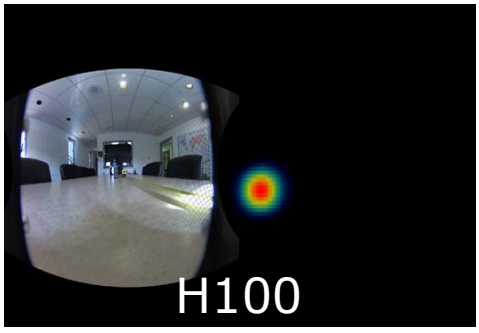
The H3D® P100 is your solution for the identification and quantification of gamma-ray sources in the presence of strong gamma-ray sources:

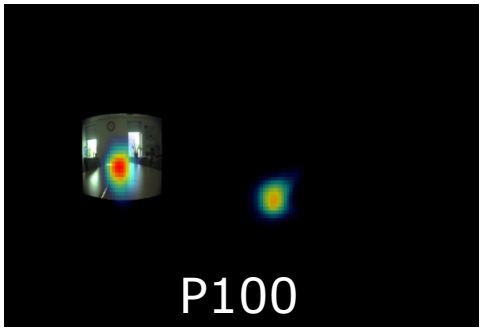
- ❑ Easy to use
- ❑ Portable
- ❑ Cost effective

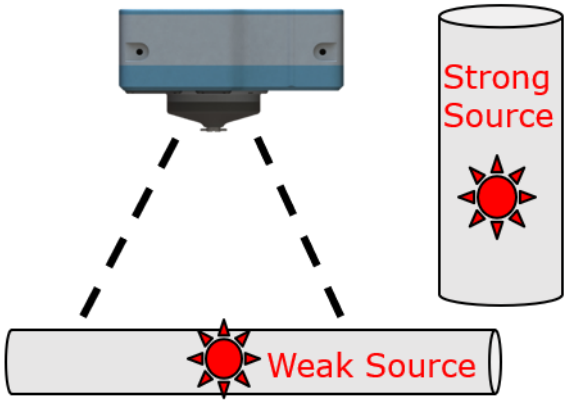
20 years of development and 5+ years of application-specific engineering to the exacting standards of nuclear power plant operators to support:

- ❑ Isotopic characterization
- ❑ Quantitative analysis of radiation in pipes and ducts
- ❑ Emergencies, incidents, and outages
- ❑ Compatibility with SourceTerm software for advanced quantification with user-defined geometries

Spectroscopic performance competitive with cryogenically cooled detectors and directional isotope-specific gamma-ray imaging using a tungsten collimator.







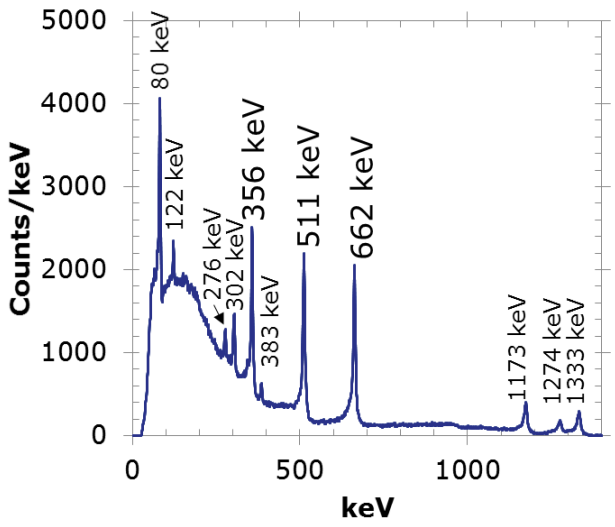
When imaging a weak source in the presence of a strong source, the H100 sees only the strong source, but the P100 can see the weak source because of the P100's collimator.

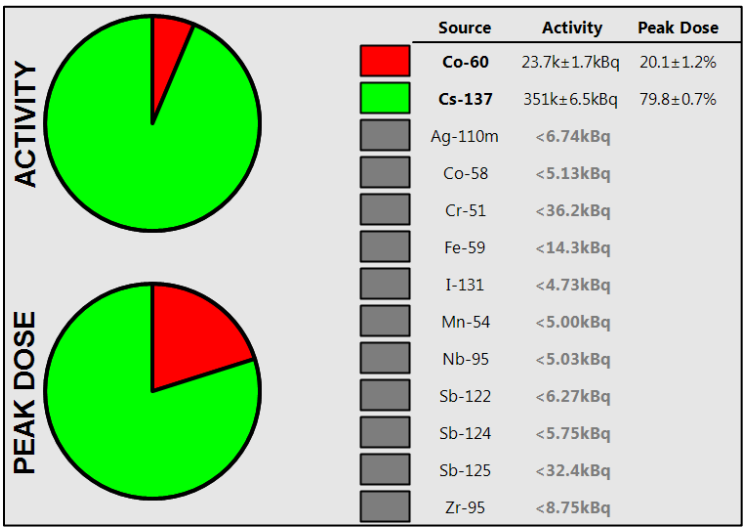
P100 Specifications

Dimensions:	8.9 in x 4.9 in x 6.3 in (22.6 cm x 12.4 cm x 16 cm)
Weight:	25 lbs (11.3 kg)
Collimator Thickness:	1 in (2.54 cm) with removable plug
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 45° C (-4° F to 113° F)
Storage Temperature:	-20° C to 60° C (-4° F to 140° F)
Ingress Protection:	IP65 with fan replacement
Tripod Mount:	1/4"-20
System Cooling:	Proprietary external heat sink and removable 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:	90° horizontal, 90° vertical; full color
Optical Registration:	±2° to radiation image
Radiation Field of View:	4π ; collimated to 90°
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), front bare-^{137}Cs equivalent, without plug 20 rem/hr (200 mSv/hr), front bare-^{137}Cs equivalent, with plug
Isotope Library:	Select from 3573 ENDF isotopes & user defined; unlimited
Startup Time:	<60 s at 23° C (73° F)
User Interface:	8" 1280x800 HD tablet
Tablet Communication:	Peer-to-peer Wifi or Bluetooth, or wired connection
Other Communication:	Ethernet RJ45 port; TCP/IP
Data Storage:	Removable USB (64 GB) flash drive
Warranty:	2 years (includes annual recalibration and software updates)
Includes:	Visualizer software with SourceTerm for advanced post processing Power/accessory cables, stylus, tablet, tripod, and collimator Transport and storage case

High-Resolution Option (P100$^+$)

Receive a unit with the best energy resolution in our inventory.





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