



Gamma-ray HPGe Spectrometer

(Electrically cooled)

Application

Detection, accumulation and processing of gamma and x-ray spectra in conditions, when HPGe detector's cooling by liquid nitrogen is not possible

Features

- No liquid nitrogen necessary
- Detection of radiation possible in any spatial orientation
- Automatic restart after power supply switch-off
- Long-duration continuous operation
- Coaxial of Planar detector can be used

Complete set

- Detection Unit consisting of cryostat, HPGe detector crystal, temperature sensor and heat exchanger
- Gas compressor cooling system with built-in cryocontroller for the provision of automatic monitoring and control of operating modes for HPGe detector and cryosystem
- High pressure gas pipes for connecting the cryosystem to the Detection Unit heat exchanger
- Digital or Analog-digital Multi Channel Analyzer
- Emulation and analysis software

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Specification

Parameter	Value
Energy range, keV	40 - 3000
HPGe detector efficiency, %	30*
Energy resolution for 30% efficiency detector, keV at energy	
122 keV	0.9
1.33 MeV	1.9
Deterioration of energy resolution at 622 keV line as compared with resolution of detector cooled by liquid nitrogen, %	< 5
Overall dimensions	
Detector capsule, mm	Ø90 x 130
Detector capsule with cryocooler, mm	Ø114 x 350
Compressor, mm	445 x 357 x 281
Weight	
Detector with cryocooler, kg	2.9
Compressor, kg	31.8
Maximal distance between detector and compressor, m	15
Consumed power, W	570
Voltage, V	220
Frequency, Hz	50

* HPGe Detectors are available with efficiency from 10% to 100%

No LN₂ needed

