



Gamma-ray HPGe Detector

(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

Accessories (optional)

- Multichannel Analyzer (Digital or Analog-Digital)
- Analytical Software packages:
 - quantitative and qualitative analysis
 - γ -spectra modeling & efficiency registration calculation for complex geometry objects
 - extended radionuclide library
- Cable set extension

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 or Planar detector can be used

Complete set (standard)

- HPGe coaxial detector with heat exchanger
- Preamplifier with cooled input stage
- 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
- Cable set
- Documentation

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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

