Gamma Ray Well Logging System

GEORADIS

RT-60 “The Mole”

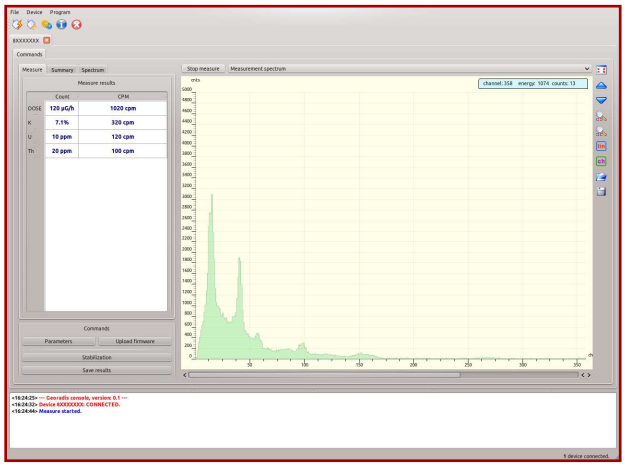


The RT-60 “The Mole” is the best solution for borehole gamma-ray measurements and natural radioisotopes assay. The instrument is optimised for fast borehole scanning thanks to its large size gamma detector.

The main application for the RT-60 is spectral gamma logging and assaying in blast holes, which in most cases are less then 25 m deep. Other applications include exploration boreholes and wells. The standard reel holds up to 50 m cable. The depth capacity can be extended on special request to 200 m by using a longer cable and a different winch.

Typical users are geologists and geophysicists at mining and exploration companies, universities and geological surveys. The RT-60 also attracts environmental and geotechnical consultants, active with radon risk assessments or classifying rocks used for building purposes. Furthermore, RT-60 can be used to check for radioactive contamination, often Ra-226, in petrochemical piping, in water wells or in sewage systems such as those used in chemical waste dumps.

RT-60 utilises a 1024 channel gamma-ray spectrometer with build in continuous analysis. It also uses an advanced method of automatic stabilisation on natural background radiation throughout its operation. This unique stabilisation method eliminates the need for an additional radioactive check source.



A user interface is provided through any suitable PC or Laptop using the software package as provided with the instrument. This software ensures the on-line communication with the spectrometer, logs the data into the PC and assists the user to set-up the operational parameters.

RT-60 has an integrated BGO (Bismuth Germanium Oxide) gamma-ray detector with a dimension of 30 x 30 mm. In addition to this detector, the unit houses a complete 1024 channel gamma-ray spectrometer with self contained power management. The detector and electronics are well protected by the RT-60 internal shielding and shock absorption. The rugged housing is made from 2,5 mm thick aluminium and allows the attachment of an extra hoist cable when required.



The built in electronics module is powered from a standard USB port. Data is transferred from the detector pod by a multi-core cable with stainless steel armoured mantle. The cable is wound on a special drum mounted on a robust tripod. With exception of the tripod, all components are delivered in a singe suitcase for easy transport and storage.

Technical data

Probe:

Detector	BGO, 30 x 30 mm
Cable and reel	Standard system has 25 m cable (Reel capacity = 50 m).
Sensitivity	80 cps/MBq at 1m for Cs-137
ADC	1024 channel, High Speed, Energy Linear
Energy Range	30 - 3 000 keV
Interface	RS-485, Half Duplex
Power	5 V / 100 mA, supplied from USB Port
Connection	4-wire cable, heavy stainless steel armoured
Dimensions	Diameter 60 mm, length 600 mm, weight 1.9 kg
Max. Temperature	60 °C
Max. Pressure	0.5 MPa

- **High sensitivity using a BGO Detector**
- **1024 Channel linear energy converter**
- **Automatic stabilization on natural background**
- **Standard 25 meter armoured cable**
- **USB connection to computer**

Converter:

Input	USB 2.0 Compatible
Output	RS-485, half duplex, up to 115k bps
Power	80 mA, powered from the USB Port
Dimension	90 x 55 x 25 mm, weight 90 grams

Standard Configuration:

- Probe with 25 m armoured cable (Other lengths on request, max length 200 m)
- Manual reel with rotary connector
- Converter
- 1.5 m USB Cable
- 0.3 m Interface Cable
- Software Package

Optional Accessory:

- Heavy duty tripod

Calibration:

All RT-60 units are shipped pre-calibrated for U, K and Th, following IAEA directives, at the DIAMO calibration site.



Specifications are subject to change without notice

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