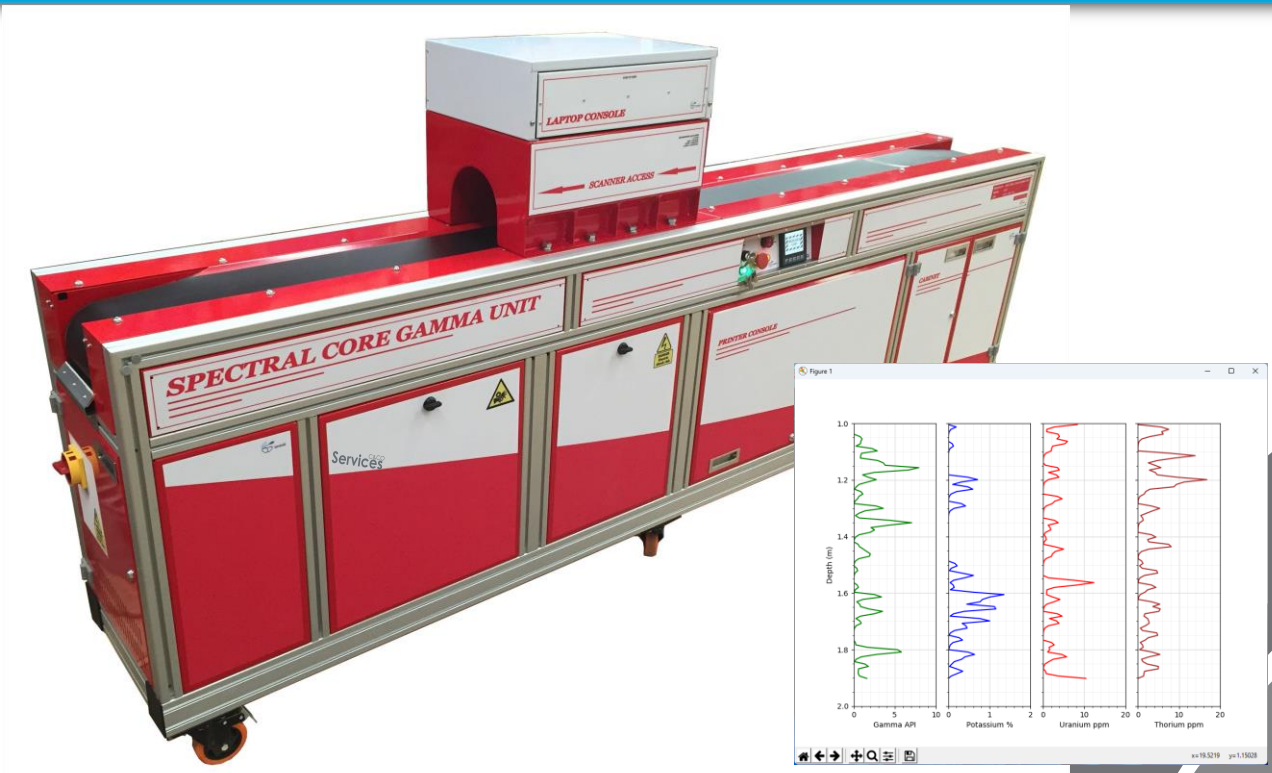
Spectral Core Gamma



The Spectral Core gamma is an instrument used to determine the quantity of various isotopes of radioactive elements in the core: Normally concentrations of Uranium, Thorium, Potassium and the total radiation is measured; the graphical output allows comparing and correlating the core with the well registrations identifying zones and clay zone distribution.

A conveyor carries the core through a lead tunnel to reduce the background radiation level, passing a NaI scintillation which produces an output when gamma rays are incident upon it. The amplified output is then fed into a single channel analyzer which filters out any pulse with specific energy limits; afterwards the output goes into a fully integrated multi-channel analyzer (BRIDGE PORT INSTRUMENTS) where the pulses of that energy are stored.

The C&CO Services Spectral Core Gamma unit uses Saint Gobain spectroscopy instrumentation and the Cyco Software (gamma calibration software) which combined with continuous feed plotter/printer and Plotting software, allows the user to quickly produce quality graphical reports.

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Spectral Core Gamma

The Spectral Core Gamma Logger is composed of:

Conveyor belt: Suitable for cores up to 6-7" diameter: A variable belt speed controlled with a microcontroller and a motor reducer. It includes an instrument consoles which houses the laptop. Conveyor belt system is equipped with an electronic eye/ limit switch sensor to stop the belt if a core reaches the end of the conveyor. The software will continue to collect data and correct for the elapsed time.

Detector Assembly: Consists of a 3" diameter by 3" (OR 4"X4") long Thallium activated Sodium Iodide (NaI) (Tl) Crystal, a photomultiplier tube, an internal magnetic/light shield, and an aluminum housing and a 14 pin connector. The NaI (Tl) crystal produces a pulse of light (photon) when a gamma ray falls into the photo-multiplier tube. T detector is stored inside a lead cylinder located underneath the conveyor belt and at the midpoint of th tunnel shield.

Software: The Core Gamma Unit is available with a sample fall off proximity sensor and alarm and NaI detector lead shielding. It also includes the presentation of the acquired data (Total gamma count, Thorium, Uranium and Potassium concentrations) vs depth in real time in the PC monitor plus a storage cabinet space, customized software for data acquisition and calculation of the K, Th and U concentrations and total gamma count.

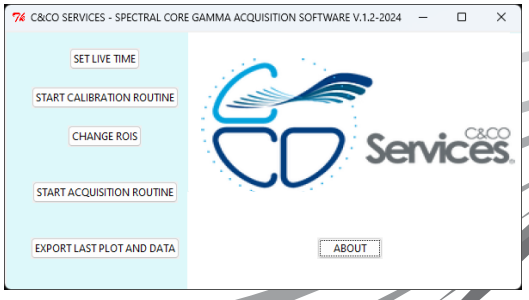
Technical Specifications

Dimensions: 2.8 meters length x 60 cm width x 100 cm height (to conveyor belt level)

Aprox. Weight: 600 kg

Power Source: 220/240V-50 Hz - 60Hz

Forward Control: Variable Speed drive with PLC.



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