

# Gamma Ray Tool

Enables calibrated cased-hole formation evaluation and correlation

## Applications

- Correlation to formation and wellbore tubulars
- Shaly formation evaluation

## Features and Benefits

- Combinable with
  - Cement bond logs to fully understand zonal isolation
  - CCL to provide baseline completion correlation

## Tool Description

The Weatherford gamma ray tool is compact, robust, and accurate. It precisely measures natural gamma-ray flux in a wellbore.

## Specifications

### Ratings and Dimensions

Maximum temperature	350°F (177°C)
Maximum pressure	15,000 psi (103.4 MPa)
Outside diameter	1.69 in. (43.3 mm)
Length	28.3 in. (719 mm)
Weight	12.7 lb (5.8 kg)
Min casing/tubing OD	2.38 in. (60.5 mm)
Max casing/tubing OD	7.0 in. (178 mm)
Tensile strength	Tension: 65,000 lb Compression: 130,000 lb Torque: 150 ft-lb
Measure point	6.4 in. (163 mm)

### Borehole Conditions

Logging speed	Recommended: 60 ft/min (18.2 m/min) Maximum: 100 ft/min (30.5 m/min) at 0.08 ft (.02 m) sample rate
Tool positioning	Centralized   eccentricized



# Gamma Ray Tool

## Specifications

### Hardware Characteristics

Sensor type	Thallium-activated sodium iodide crystal
Transmission type	Analog, pulse, or telemetry
Data rate	20 frames/sec at 20 kHz
Combinability	Radial bond tool, cement-bond log, temperature
Connections	GO top /GO pin bottom

### Electrical

Voltage	100 V DC
---------	----------

### Measurements

Principle	Natural gamma radiation
Range	0 to 10,000 counts per s
Resolution	6.0 in. (152.5 mm)
Accuracy (1SD)	± 5%
Sensitivity	Approximately 0.998 counts/s per API unit
Primary curves	GR (API)
Secondary curves	Head voltage, internal temperature (telemetry only)

### Calibration

Primary	Houston API pits
Wellsite verifier	Thorium blanket

