

Gamma Gun – Geiger Muller Tool

Delivers accurate correlation of ballistic services

Applications

- Cased-hole
- Perforating formation correlation

Features and Benefits

- Highly robust Geiger Muller detector
- Compact gamma ray and casing collar locator (CCL)

Tool Description

The Weatherford gamma gun – Geiger Muller tool is a ruggedized tool fitted with a Geiger Muller detector on the lower section of the tool and a passive CCL at the top. The tool is designed to be run with a shooting adapter at the bottom to suit the customer's choice of gun system. The rugged design enables the tool to operate reliably in the most extreme environments.



Gamma Gun – Geiger Muller Tool

Specifications

Ratings and dimensions

	1-11/16 in. Single Fire	1-11/16 in. Dual Fire	2-3/4 in. Single Fire Positive	2-3/4 in. Single Fire Negative	2-3/4 in. Dual Fire	3-1/8 in. Dual Fire
Maximum temperature	350°F (177°C) for 4 hours					
Maximum pressure	20,000 psi (138 MPa)					18,000 psi (124 MPa)
Outer diameter	1.69 in. (42.9 mm)	2.75 in. (69.85 mm)			3.125 in. (79.375 mm)	
Length	60.3 in. (1531.62 mm)		73.2 in. (1859.28 mm)			55.68 in. (1414.272 mm)
Weight	21.0 lb (9.5 kg)		50.0 lb (23.0 kg)			66.0 lb (29.94 kg)
Minimum casing/tubing OD	2.38 in. (60.5 mm)		4.5 in. (114.3 mm)			
Maximum casing/tubing OD	7.0 in. (178.0 mm)					11.75 in. (298.45 mm)
Sensor depth offset	Gamma Ray: 12.5 in. (317.5 mm) CCL: 53.9 in. (1369.06 mm)		Gamma Ray: 20.8 in. (528.32 mm) CCL: 62.7 in. (1592.58 mm)			Gamma Ray: 21.0 in. (533.4 mm) CCL: 63.0 in. (1600.2 mm)

Borehole conditions

	1-11/16 in. Single Fire	1-11/16 in. Dual Fire	2-3/4 in. Single Fire Positive	2-3/4 in. Single Fire Negative	2-3/4 in. Dual Fire	3-1/8 in. Dual Fire
Borehole fluids	No restrictions					
Tool positioning	Centralized Eccentrized					
Logging speed	Maximum: About 30 to 45 ft/min (9 to 14 m/min)					



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Measurements (all configurations except where noted)

	Gamma Ray	Casing Collar Locator
Sensor type	Geiger-Muller detector	Dual Magnet, Center Coil
Detection type	Gamma Radiation	Magnetic
Principle	Naturally Occurring Gamma	Magnetic Flux Variation
Range	0 to 5,000 cps	0 to 5,000 cps
Data transmission	Analog, Pulse, + Polarity	Analog, Line Wobble, mV
Calibration (1-11/16 in. single and dual fire)	Approx. 1.0 cps /GAPI unit ¹	N/A
Calibration (all other configurations)	Approx. 1.6 cps /GAPI unit	N/A

Electrical specifications (1 11/16 in. single and dual fire)

Cablehead voltage	60 V Positive DC
Instrument current	60 mA
Shooting polarity	Negative

Electrical specifications (All other configurations)

Operating voltage	60V DC internally regulated
Operating current	60 mA
Shooting power	300V DC maximum, using only rollup method,

Calibrations

	1-11/16 in. Single Fire	1-11/16 in. Dual Fire	2-3/4 in. Single Fire Positive	2-3/4 in. Single Fire Negative	2-3/4 in. Dual Fire	3-1/8 in. Dual Fire
Wellsite verifier	—	—	Thorium sleeve	Thorium sleeve	Thorium sleeve	Thorium sleeve, API calibrated
Primary	—	—	—	—	Approx. 1.6 cps/GAPI unit	—
Secondary	—	—	—	—	Thorium sleeve, API calibrated	—

