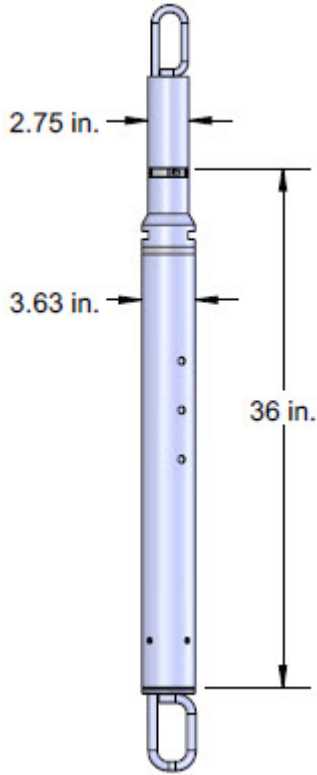


PICO TELEMETRY NATURAL GAMMA (PTNG)



DIMENSIONS AND RATINGS

Max Temp:	350°F (175°C)	Max Press:	20,000 psi
Max OD:	3.625 in. (9.2 cm)	Min Hole:	4 in. (10.16 cm)
Length*:	3 ft (.91 m)	Max Hole:	24 in. (60.96)
Weight:	68 lb		

BOREHOLE CONDITIONS

Borehole Fluids:	Salt ■	Fresh ■	Oil ■	Air ■
Recommended Maximum Logging Speed:	60 ft/min			
Tool Positioning:	Centralized ■	Eccentralized ■		

HARDWARE CHARACTERISTICS

Sensor Type:	NaI
Sample Rate:	4 or 10 samples/ft

MEASUREMENT

Principle	Gamma-ray spectroscopy
Range	3 MeV
Vertical Resolution (90%)	18 – 36 in. (standard)
Depth of Investigation (50%)	4 in. (90%: 11 in.)
Precision (1SD):	At 60 ft/min ±7% or ± 5 API, whichever is greater At 30 ft/min ±5% or ± 5 API, whichever is greater
Primary Curves	GR
Secondary Curves	none

CALIBRATION

Primary:	API gamma ray pit, K, U, Th, Test Tanks, Univ. of Houston
Secondary:	Thorium verifier
Wellsite Verifier:	Thorium verifier

PHYSICAL STRENGTHS*

Hardware	Tension	Compression	Torque
Tool Joints	130,000 lb (59,000 Kg)	130,000 lb (59,000 Kg)	600 ft-lbs (850 n-m)
Other	75,000 lb (34,020 Kg)	75,000 lb (34,020 Kg)	na

* Strengths apply to new tools at 70°F (21°C)