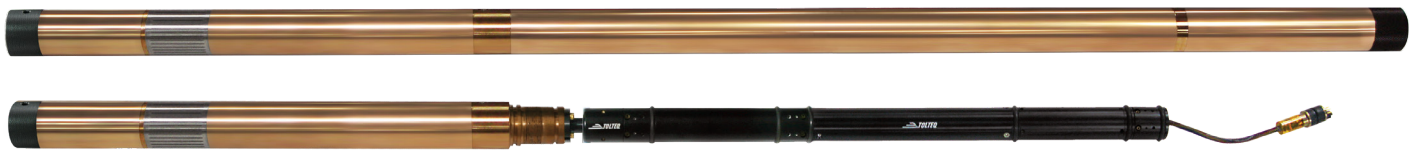


Tolteq iSeries Pulser Ruggedized Gamma Module (iPRGM)

The Tolteq™ iSeries pulser ruggedized gamma module (iPRGM) combines a pulser with an intelligent gamma sensor to deliver a powerful two-in-one tool that puts gamma close to the drill bit. The module is configurable to suit individual customer needs, working as a traditional pulser or in a variety of other capacities with the addition of tailored components. Constructed from high-grade materials such as aluminum and beryllium copper, the module is outfitted with electronics that drive the solenoid, communicate with the controller, and log environmental data. Extensive battery life, high-temperature reliability, and simple maintenance further drive the module’s wide applicability in the field, where the data it logs is transformed into a powerful analytical device by the Tool Tracker™ system.



Features and Benefits

- Acquires gamma 5.5 ft closer to the bit
- Less time to assemble
- More logging features
- Enhanced circuit protection features
- Add or remove gamma as needed
- No capacitor bank
- Eliminate noise in downhole electrical tool system
- Incredible reliability, even in the toughest LCM environments
- Interfaces with legacy MWD system
- Internal current consumption logged to memory
- Quality Tolteq wiring inside with strain-relief connectors and high-temperature mesh covering for wires
- Simplified single-coil design
- Operational time and environment history recorded in internal memory*
- Integrated three-axis digital flow switch
- Shock and vibration monitoring and logging*
- Flow switch values and performance logging*
- Up to 1.5 bps data transmission rates under ideal conditions

*Requires Tool Tracker to download

Physical Specifications

Length (w/end caps).....69 in. (1.75 m)
 Diameter.....1.875 in. (47.6 mm)

Electrical Specifications

Battery life.....up to 400 operational hours
 Operating voltage range:.....20 to 30 V
 Current usage:.....15 mA idle

Environmental Specifications

Operating temperature.....32 to 347°F (0 to 175°C)
 Survival temperature.....-40 to 365°F (-40 to 185°C)
 Vibration, random.....20 g RMS, 15 to 500 Hz
 Shock.....1,000 g, 0.5 mSec., half-sine