

# GYRO SHOT® (6-Axis Rate Gyroscope)

**The most rugged rate gyro technology on the market.** The Gyro Shot® uses the latest in MEMS nanotechnology for impressive drilling accuracy in the most diverse conditions— quickly, easily and reliably. Our customers buy the Gyro Shot for an extremely durable and cost effective solution. With an MI-5 Multishot built into the tool, users can compare the azimuth readings of both magnetic and gyro sensors for unparalleled understanding of their drilling conditions.

The Gyro Shot uses a multi-gyroscope module to monitor the rotation of the instrument through time. Continuous recording and self-calibration permits long-term operation while maintaining accuracy.



## OPERATES LIKE A MULTISHOT

The Gyro Shot operates much like a multishot. The tool is run through the hole and is halted at intervals to take static measurements.

## INSTANT RESULTS

Gyro Shot tools are completely digital, survey results are available immediately upon recovery. Digital data also means no more date entry errors. Menu-driven software provided with Gyro Shot® tools produces data files suitable for loading into spreadsheets and popular datavisualization softwares.

## ANY DIRECTION

Gyro Shot tools can operate in any orientation. Horizontal or vertical holes present no difficulties.

## TROUBLE FREE

Designed for trouble-free operation. Unlike our competitors, batteries are field-replaceable. No special tools are required to operate our equipment and we avoid proprietary "Black box" radio communications interfaces that are banned from some work sites. At last - A true slimline gyroscopic tool! Gyro Shot tools use a hexaxial gyroscope module to monitor the rotation of the instrument through time. Continuous recording and selfcalibration permits long-term operation while maintaining accuracy. Gyro Shot tools also contain a magnetometer that can be used to record the magnetic profile of the hole or, in the absence of external fields, as a second

## THROUGH-THE-BIT SURVEYS ARE A THING OF THE PAST

Unless magnetic measurements of the rock are important to the user, the Gyro Shot is run inside the rods, thereby eliminating the risk of through-the-bit surveys. If magnetic data is desired, the user must run through-the-bit or inside a non mag collar. The Gyro Shot is slim enough to do this even in AQ® rods!

## FEATURES

- ▶ 6-axis rate gyroscope that offers greater accuracy in vertical or horizontal boreholes.
- ▶ Rugged - can be used as a memory drop gyro - no pumping or parachute required
- ▶ Low power consumption - 22 hr run time with no connection to the surface required
- ▶ Low 0.4W power dissipation gives a long run time in a heat shield (typically 6 hrs at 350°F)
- ▶ Operates in all orientations, even horizontal and inverted -no latitude or azimuth limitations!
- ▶ On-board magnetometer provides a fully independent azimuth record - essentially it is two instruments in one
- ▶ The Gyro Shot is fast - each static reading takes only 15 seconds - saving you time and money
- ▶ Use as a drop gyro or on slickline/wireline in casing, drill pipe, or open hole
- ▶ No export restrictions



# BORE PATH TECHNOLOGIES

THE PATH TO PRECISE BOREHOLE SURVEY SOLUTIONS

## TECHNICAL SPECIFICATIONS:

### SENSOR TYPE: INCLINATION

TYPE:	Triaxial
RANGE:	360° (any orientation)
ACCURACY:	± 0.1°
SHOCK:	6000G

### SENSOR TYPE: MAGNETOMETER

TYPE:	Triaxial
RANGE:	100 000 nT
ACCURACY:	± 0.5°C
SHOCK:	N/A

### SENSOR TYPE: TEMPERATURE

TYPE:	SOLID STATE
RANGE:	- 30°C TO + 85°C / -22°F + 185°F
ACCURACY:	± 1°C
SHOCK:	N/A

### GYRO SHOT® - DIMENSIONS

BARE INSTRUMENT	
DIAMETER:	25.4 mm (1.00")
LENGTH:	1.14 m (45.6")
WEIGHT:	1.9 kg (4.2 lbs)
PRESSURE RATING:	300 m (H20)
TEMPERATURE LIMIT:	+85°C (+185°F)*
IN PRESSURE BARREL	
DIAMETER:	33.4 mm (1.315")
LENGTH:	1.88 m (73.8")
WEIGHT:	8.6 kg (19 lbs)
PRESSURE RATING:	3500 m (H20)
THERMAL PRESSURE HOUSING 1.75	
DIAMETER:	1.75"OD
PRESSURE RATING:	20,000psi
TEMPERATURE LIMIT:	±6hr at 350°F
THERMAL PRESSURE HOUSING 1.375	
DIAMETER:	1.375"OD
PRESSURE RATING:	20,000psi
TEMPERATURE LIMIT:	±6hr at 350°F
THERMAL PRESSURE HOUSING 1.875	
DIAMETER:	1.875"OD
PRESSURE RATING:	20,000psi
TEMPERATURE LIMIT:	±6hr at 350°F