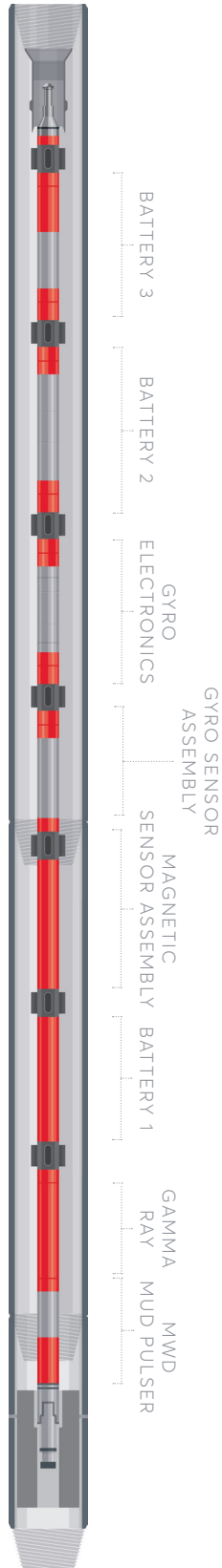


PRODUCT SPEC SHEET

# GYROGUIDE™ DUAL SENSOR

Retrievable Mud Pulse GWD+MWD



## MECHANICAL

Length*	43 ft	13.1 m
Tool OD	1 7/8 in	47.6 mm
Minimum Borehole Size	6 1/4 in	171.5 mm
Maximum Borehole Size	17 1/2 in	444.4 mm

### TOOL SIZES VS. FLOW RATES

Tool Sizes (inches)	Flow Rate (gallons/minute)	Dogleg Severity sliding / rotating
4 3/4	100 - 400	30° / 15°
6 1/2	200 - 700	20° / 10°
6 3/4	200 - 700	21° / 10°
8 1/2	400 - 800	14° / 8°

\*Length accounts for a 3-lithium battery configuration; for a 4-lithium battery configuration the total length is 48 ft/14.6 m.

## ENVIRONMENTAL

Pressure	20,000 psi	138,000 kPa
Maximum Temperature	302°F	150°C
Lost Circulation Material	Fine.....	15 lbs/bbl
	Medium.....	10 lbs/bbl
	Coarse.....	8 lbs/bbl
Vibration Maximum Operating	sine vibration 8g peak 50 - 800 hz	
Maximum Survival	sine vibration 15g peak 50 - 800 hz	
Operating Time	180 hrs utilizing 3-4 lithium batteries (GWD dependent)	

## SENSOR & SYSTEM

Sensor Type	3-axis rate-gyro 3-axis accelerometer 3-axis magnetometer
Telemetry	Mud Pulse
Total Survey Time <sup>1</sup> (including transmission)	4.5 - 10 minutes
Frequency Range	0.33 - 1.33 Hz Field Programmable
Data Rates	0.5 - 1.3 bps

### INSTRUMENT ACCURACY

Measurement	Range	Resolution	Accuracy
Gyro Inclination <sup>2</sup>	0 - 180°	0.0269°	± 0.05°
Gyro Azimuth	0 - 360°	0.0879°	± 0.1°
Gyro Tool Face	0 - 360°	0.0879°	± 0.1°
Inclination		0.04395°	± 0.1°
Azimuth		0.0879°	± 0.5°
Magnetic/Gravity Tool Face		1.42°	± 1.0°
Dip Angle		0.04°	± 0.2°
Magnetic Field (gauss)		0.0003	± 0.003
Gravity Total (G)		0.0015	± 0.003
Gamma		0.25 CPS	± 5%

<sup>1</sup> Total Survey Time is dependent on accuracy requirements.

<sup>2</sup> Maximum GWD inclination is dependent on GWD gyro version and availability.

<sup>3</sup> The MWD/GWD probe can be retrieved in the event pipe becomes stuck, but will not be re-seated. When retrieved, the rubber centralizing fins are cut using a fin cutter placed in the connection above the MWD collar.

Specifications are subject to change based on wellbore conditions and drilling, surveying, and/or steering operations. Contact your Gyrodata representative for details. Updated December 2019. Copyright ©2019 Gyrodata, Inc. www.gyrodata.com/patents

