



GYRO TECHNOLOGIES LTD

**Product Data Sheet**

### **Fusion HDD™**

The Fusion Gyro survey system is a high-accuracy, all-angle borehole survey instrument in a slimhole configuration. It combines solid-state sensors with advanced signal processing for superior HDD performance. Features include magnetic tracking, real-time and memory modes, continuous vertical to horizontal operation, and integrated QA checks.

#### **Capabilities:**

- ✓ All-angle northseek capability
- ✓ Magnetic Steering Tool compatible
- ✓ Measures annulus and drillpipe pressure
- ✓ Seated Gyro Steering Service
- ✓ Continuous survey capability
- ✓ Independent QA with gyro/accelerometer
- ✓ Real-time pressure measurement
- ✓ Integrates with Trutrack systems

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## Fusion HDD™ PRODUCT OVERVIEW

Using oil and gas expertise, we've developed the Fusion™ system for Horizontal Directional Drilling (HDD). It integrates an all-angle northseeking solid-state gyro with onboard magnetics, providing steering tool support and magnetic tracking. It also reads drillpipe and annulus pressure for hole monitoring. The system withstands drilling shock and vibration, replacing traditional tools without special subs and is compatible with 'Tensor' style tools. It uses MEMS gyro and accelerometer technologies for high accuracy. The Fusion™ runs in real-time and memory modes, powered by electric wireline or rechargeable battery. It offers multi-mode capabilities, field-proven reliability, pressure monitoring, and an easy software interface.

## SYSTEM CONFIGURATION

|               |                         |              |   |
|---------------|-------------------------|--------------|---|
| GYRO SENSOR   | Multi-Axial Solid-State | DEPTH SYSTEM | Wireline/Slickline  |
| GYRO TECH     | North Seeking           | MODE         | Electric and Battery  |
| ACCELEROMETER | Multi-Axial Solid-State | DEPLOYMENT   | Wireline/Slickline  |
| MAGNETOMETER  | State                   |              |   |
| ANGLE         | All-Angle               | SURVEY       | HDD, Tool-face guidance while drilling, Multi-Shot, Single-Shot, Orientation, and High-Speed Continues. |
| CALIBRATION   | Automation System       |              |   |

## SPECIFICATIONS

| DIMENSION                 |                  |
|---------------------------|------------------|
| Tool OD                   | 2 in             |
| Min Tool Length           | 60 in            |
| ENVIRONMENT               |                  |
| Pressure Rating           | 5k psi           |
| Max Temperature           | 150°F            |
| STRESS                    |                  |
| Shock intensity           | 1000g            |
| Shock Pulse Profile       | 1/2 sine, 3mS    |
| Vibration Intensity       | 10g rms          |
| Vibration Frequency Range | 20-1000Hz Random |

| ACCURACY          |                                 |
|-------------------|---------------------------------|
| OWSG              | 1'/1000'                        |
| Azimuth           | 0.5° +/- 60° Lat, 1 sigma meas. |
| Inclination       | +/- 0.1°                        |
| Pressure          | 1 psi                           |
| MEASUREMENTS      |                                 |
| Stationary Survey | 45 second                       |
| Continues Survey  | 1 second                        |
| Pressure Range    | 3000 psi                        |
| ELECTRICAL SPECS  |                                 |
| Power Supply      | 110 / 240 v AC in, 200ma Out    |
| Consumption       | 5 Watts                         |
| Wireline Cable    | Mono/Multi                      |
| Battery life      | Rechargeable                    |
| Memory capacity   | 10 Hours Continuous             |



Fusion HDD Module