Gyrodata’s MagGuide Pro MWD is a ruggedized mud pulse MWD system designed to deliver superior performance and reliability for the most complex drilling operations. Combined with our proprietary sensor calibration techniques, advanced multi-station analysis, and short collar correction, the MagGuide Pro MWD system provides greater survey accuracy - ensuring a high accuracy wellbore placement the first time, every time.

**DESIGN + PERFORMANCE**

- Live inclination and azimuth, and MicroGuide survey logging in memory, enabling both real-time and post-run analysis
- Robust survey quality management system with dynamic survey quality control, ensuring sensor and survey accuracy to error model
- Extensive sensor testing in a dedicated non-magnetic roll test and calibration facility, ensuring consistent quality of each and every sensor of our MWD fleet
- Operates utilizing Gyrodata’s proprietary state of the art MWD/DD software, delivering highly efficient and accurate reporting
- Enhanced configuration and programming flexibility, supporting a wider range of drilling applications and environments
- Seamlessly integrates with Gyrodata’s GWD and RSS systems, reducing disruptions to ongoing operations and eliminating unnecessary associated equipment and personnel costs
- Combines with Gyrodata’s MicroGuide service to deliver greater insight of the wellbore prior to casing, cementing and completions operations

**MARKET + APPLICATIONS**

- Horizontal and Directional Drilling
- Performance Drilling
- High DLS Curves
- Offshore / Onshore
- Precision Wellbore Placement
- Risk Mitigation / Collision Avoidance

**GENERAL SPECS**

<table>
<thead>
<tr>
<th>BHA Sizes (inches)</th>
<th>Flow Rate (gallons/minute)</th>
<th>Dogleg Severity</th>
<th>Sliding / Rotating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 1/4</td>
<td>100 - 400</td>
<td>30° / 15°</td>
<td></td>
</tr>
<tr>
<td>6 1/2</td>
<td>120 - 475</td>
<td>20° / 10°</td>
<td></td>
</tr>
<tr>
<td>6 1/4</td>
<td>120 - 701</td>
<td>21° / 10°</td>
<td></td>
</tr>
<tr>
<td>8 1/2</td>
<td>400 - 800</td>
<td>14° / 8°</td>
<td></td>
</tr>
</tbody>
</table>

- Pressure Rating: 20,000 psi
- Maximum Temperature:
  - 270°F Operating
  - 302°F Survival
- Higher temperature option available upon request
- Lost Circulation Material:
  - Fine........................: 15 lbs/bbl
  - Medium.............: 10 lbs/bbl
  - Course...............: 8 lbs/bbl
- Operating Time: 200 - 300 hours
- Tool Length: 23.26 ft

**SENSOR SPECS**

- Sensor Type: 3-axis magnetometer
- Telemetry: Mud Pulse
- Frequency Range: 0.33 - 130 Hz
- Data Rates: 0.5 - 1.10 bps

**INSTRUMENT ACCURACY**

<table>
<thead>
<tr>
<th>Range Res.</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inclination 0° - 90°</td>
<td>0.04395° ± 0.1°</td>
</tr>
<tr>
<td>Azimuth 0° - 360°</td>
<td>0.0879° ± 0.5°</td>
</tr>
<tr>
<td>Raw Accelerometer -101° - 101°</td>
<td>0.00049 ± 0.0015</td>
</tr>
<tr>
<td>Raw Magnetometer -10° - 1°</td>
<td>0.00049 ± 0.00075</td>
</tr>
<tr>
<td>Magnetic Tool Face 0° - 360°</td>
<td>1.42° ± 1.0°</td>
</tr>
<tr>
<td>Gravity Tool Face -180° - 180°</td>
<td>1.42° ± 1.0°</td>
</tr>
<tr>
<td>Dip Angle -90° - 90°</td>
<td>0.04° ± 0.2°</td>
</tr>
<tr>
<td>Magnetic Field (gauss) 0° - 1.2</td>
<td>0.00476 ± 0.0003</td>
</tr>
<tr>
<td>Gravity Total (G) -101° - +101°</td>
<td>0.00476 ± 0.0003</td>
</tr>
</tbody>
</table>

- Gamma 0° - 255.5 CPS | 0.25 |
  - ± 5% to 302°F
  - ± 10% to 347°F
- Shock / Vibration | Transmits Risk Level |
- Stick Slip | Transmits Risk Level |

The MWD 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.

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