

SWD
(Survey-While-Drilling System)

Gyrodata's SWD is an economical magnetic directional measurement system for tracking deviation while drilling. Run by the rig crew, Gyrodata's SWD obtains and transmits accurate, real-time inclination, azimuth and tool face measurements to surface via mud-pulse telemetry.

Gyrodata's SWD consists of a shock-isolated directional sensor package and electronics section housed in a beryllium copper pressure barrel with a battery powered rotary pulser unit. Survey information is displayed on a simple LED screen and all user controlled adjustments are made with the use of a single turn-and-click knob.

MWD
(Measurement-While-Drilling System)

Gyrodata's MWD integrates all of Gyrodata's sensors and services, from our industry leading Gyro sensors to state-of-the-art Rotary Steerable systems. The system promotes drilling efficiency through the rapid and reliable provision of accurate real-time survey and steering data with optional real-time data transmission to a customer's office. Controlled by our highly trained MWD operators, this highly cost-effective MWD system will provide the customer with accurate and reliable downhole surveys.

Gyrodata's MWD features include:

- » A rugged, cost-effective directional sensor package, magnetic or gyro based.
- » A reliable, field-proven, battery powered pulser.
- » Internet based real-time data transmission service.
- » Fully integrates with Gyrodata's Well-Guide Rotary Steerable services.
- » Component based, collar mounted for reliability with field serviceability.
- » Maximize update rates with Automatic Rotation Detection.
- » Optional Gamma Ray with MWD



Specifications

Directional Performance: $\pm 0.25^\circ$ Inclination
 $\pm 2^\circ$ Azimuth (0 – 360°)
 $\pm 1^\circ$ Tool Face

Data Transmission: Positive Mud Pulse

Probe Size: 44 mm (1.75")

Collar Sizes:
 203mm (8")
 165mm (6 1/2")
 121mm (4 3/4")

Flow Rate:
 2600–4100 lpm (700–1100 gpm)
 850–2800 lpm (225–750 gpm)
 570–1300 lpm

Operating Temperature: 150°C max. (300°F)
Operating Pressure: 172 Mpa max. (25,000 psi)
LCM Tolerance: 85 kg/m³ (30 lb/bbl)