

## Pilot MWD Tool

The Pilot MWD is a Positive Pulse Measurement-While-Drilling tool. Its modular design and configuration provide optimum performance in a wide range of Collar diameters and flow rates. Pilot is fully Retrievable and Reseatable allowing extraction and replacement of the tool without tripping. Valuable rig time can be saved in the event of downhole complications and LIH liability is minimized in difficult drilling environments.

### Description

The Pilot MWD system uses a bottom mounted, retrievable/reseatable pulser to transmit survey data to surface by actuating a pilot valve which momentarily restricts mud flow through the drill string interior creating a positive pressure pulse. The pilot valve is actuated by a motor working in conjunction with a gear and leadscrew arrangement which exerts 100 lbs seating force providing exceptional tolerance to LCM. The Pilot Orientation Module combines tri-axial Flux Gate Magnetometers with Q-Flex type accelerometers to offer high accuracy and reliability.

### Features

- Full Retrievability and Reseatability minimize LIH liability.
- Highly efficient gear-leadscrew configuration provides battery life of in excess of 400 hrs (depending on tool/battery configuration).
- The servo motor assembly exerts up to 100 lbs-force to minimize plugging and increase tolerance to LCM.
- Single tool configurable for 3 1/2 in to 12 in O.D. Collars and a range of flow rates.

### Specification

MEASUREMENT	Range	Accuracy
<b>Azimuth</b>	0-360°	+/- 0.5°
<b>Inclination (up to 80° Inc)</b>	0-180°	+/- 0.1°
<b>Toolface (up to 10° Inc only)</b>	0-360°	+/- 0.5°
MECHANICAL		
	Imperial Units	Metric Units
<b>UBHO Sub O.D.</b>	3.5 to 12in	89 to 305mm
<b>UBHO Sub Length</b>	36in (longer on request)	914mm
<b>Probe O.D.</b>	1 7/8in	47.625mm
<b>Tool Length</b>	17ft 11.3in / 23ft 3.5in (Single Battery / Dual Battery)	5469mm / 7099mm
<b>Minimum Flow Rate</b>	130 GPM in water	0.5 m <sup>3</sup> /min
<b>Maximum Flow Rate</b>	1060 GPM in water	4 m <sup>3</sup> /min
<b>Max Temperature</b>	150°C	302°F
<b>Operating Pressure</b>	20,000 psi	137.9Mpa
<b>Shock</b>	1000g/0.5 millisecond	
<b>Vibration</b>	25g RMS 30-500Hz Random, 30g 50-300Hz Sine	
<b>Mud Sand Content</b>	Less than 1% recommended	
<b>Lost-circulation Material</b>	Up to 50lb/bbl premixed Medium Nut Plug or Cedar Fiber	

