



Memory Keeper *Wellbore Orientation and Surveying*

Highly-Accurate Cost-Effective Gyro Surveys

Scientific Drilling's Memory Keeper is an extension of its proven Keeper Gyro Surveying System. Using state-of-the-art wireline surveyor sensors, the Memory Keeper uses either standard D-cell alkaline or lithium batteries, and can be used with an optional gamma/CCL. It produces highly accurate gyro surveys at locations where wireline is not available or where the reduced cost of slickline is a plus.

Stand-Alone Versatility

Memory Keeper eliminates the need for wireline and sets the standard for high-accuracy gyro survey applications. The Memory Keeper requires no onsite power for the downhole sensor or surface equipment. This battery powered system can be attached to virtually any string of sensors that require borehole attitude and position correlation.

Multi-Faceted Applications

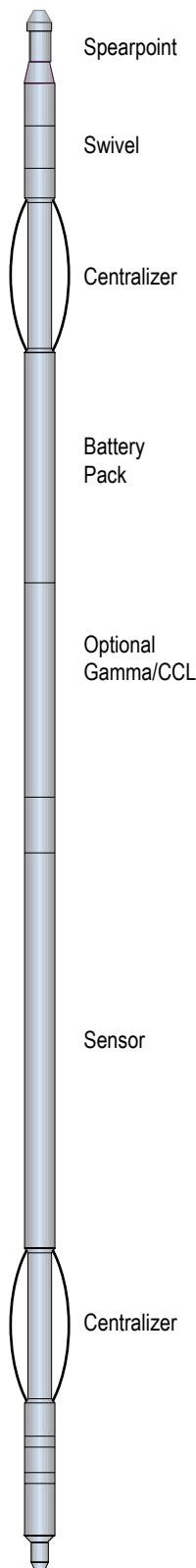
- High-accuracy casing surveys
- High-accuracy drillpipe surveys
- Slimhole surveying
- Orientations

Continuous, High-Speed Operations

The Memory Keeper operates in continuous high-speed mode from surface to bottom. Onboard memory stores data at a rate of six new surveys per second. Each measurement is time-stamped for synchronization with depth data collected by the parallel-running surface computer. The survey information is uploaded using a high-speed digital communications link and computed onsite.

Accuracy and Reliability Through Engineering Excellence

Memory Keeper's on site pre- and post-diagnostics provide the ultimate in survey data reliability and accuracy. Proprietary quality assurance algorithms are embedded to verify all survey computations. Memory Keeper makes use of over 20 years of high-accuracy gyro survey engineering excellence.



TECHNICAL SPECIFICATIONS			
Accuracy*	Subject to well profile		
Pressure Rating	20,000 psi (137,900 kPa)		
Survey Speed	400 ft/min (122 m/min)		
Diameter	1.75 in (4.5 cm)	1.85 in (4.7 cm)	2.125 in (5.4 cm)
Length	18 ft (5.5 m)	19 ft (5.8 m)	19 ft (5.8 m)
Weight	110 lbs (50 kg)	120 lbs (54 kg)	140 lbs (63 kg)
Temperature Rating	300°F (149°C)	400°F (204°C)	400°F (204°C)
Battery Power	Alkaline = 12 hours Lithium = 30 hours		

**SPE WPTS compliant error ellipse calculations available upon request for individual well profiles.*