



**Scientific Drilling's Lodestone active ranging system is an innovative long-distance at-bit ranging solution that is ideal for precision wellbore placement and intentional wellbore intersections.**

This industry-leading magnetic ranging tool is compatible with any directional drilling configuration and operates independently from the MWD system in the bottom hole assembly.

For more information on improving your drilling efficiency [while staying on target] contact your Scientific Drilling sales representative or visit:  
<http://scientificdrilling.com/magnetic-ranging>

### APPLICATIONS

- + Redrill and mature well replacement
- + Wellbore twinning
- + Coal bed methane
- + Geothermal
- + Horizontal directional drilling for trenchless pipeline installation
- + Observation well avoidance and relative placement
- + Horizontal well to vertical well intersection, vertical well to horizontal well intersection, horizontal well to horizontal well intersection
- + Lateral to lateral horizontal well placement
- + Collision avoidance

### BENEFITS

- + Integrates with SDI Keeper Gyro in one tool string
- + Provides relative ranging measurements at the bit, so steering decisions can be made with greater confidence sooner
- + Proven to generate accurate and consistent ranging results in cased or open hole wells, eliminating the need to compromise completions with non-magnetic or fiberglass casing joints
- + Ranging data allows for the deviation of the drilling well in order to intersect (or avoid collision with) a cased well
- + Compact bit sub design (16-20") reduces wear and tear on mud motor/rotary steerable drive shafts and minimizes negative build up rate effects. Custom sizes available
- + Proven to provide the greatest detection range on the market at 420'/128m

GENERAL SPECIFICATIONS		
MAX OD	2.125 in. (54.0 mm)	2.325 in. (59.0 mm)
MAX TEMPERATURE	212°F (100°C)	302°F (150°C)
MAX PRESSURE	9,000 psi	20,000 psi
LENGTH	116.0 in (294.5 cm) 257.5 in (654 cm) with integrated Keeper Gyro assembly	
DETECTION RANGE	Up to 420 ft (128 m)	
DISTANCE ACCURACY (0-200 ft/60 m)	3%	
ΔNORTHING, ΔEASTING, ΔTVD ACCURACY (0-200 ft/60 m)	5%	
DIRECTION ACCURACY (0-200 ft/60 m)	3°	
WIRELINE	Monoconductor; Multiconductor with integrated Keeper Gyro assembly	
CONNECTION	Compatible with all industry standard wireline	
SOFTWARE	Proprietary real-time data collection, processing and visualization software	
MAGNET SUB SIZES	8 in, 6 1/2 in, 4 3/4 in (custom sizes available)	

\*Specifications are subject to change without notice



Sensor Point

