

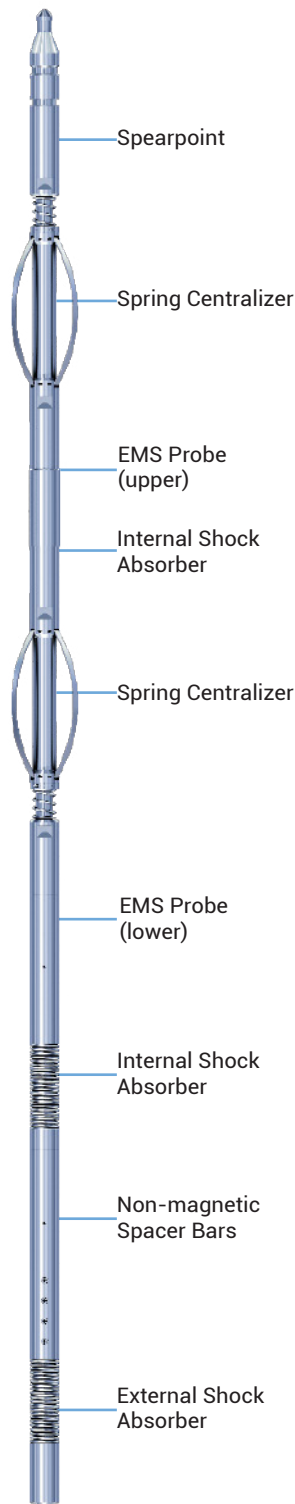
PRODUCT SPEC SHEET

EMS (ELECTRONIC MULTI-SHOT SYSTEM)

Scientific Drilling's Electronic Multishot System (EMS) is a slim, magnetic surveying tool that fits inside a dual flanked configuration for increased durability, allowing it to perform in extreme environments, with temperature up to 600°F. The EMS delivers a cost-effective solution for running continuous surveys at any inclination, providing ultimate reliability.

DELIVERING THE ULTIMATE VALUE

- Large data file capabilities enabling tool to be run for extended times in harsh environments
- Comprehensive pre/post QA, calibration checks and field verification data, ensuring optimal tool performance
- Extensive survey corrections available, reducing EOU's when necessary
- Versatility and innovative design allowing tool to be run in tandem multishot or singleshot modes
- Variable delay mode and shot intervals, every 3 seconds, enabling data acquisition every .1 - .5 ft



TARGET APPLICATIONS

- Geothermal and HPHT environments
- Core Orientation
- Survey Redundancy
- Survey Validation
- Wireline and Drop Operations
- Drilling Rod Operations

SYSTEM SPECIFICATIONS	
Tool OD	1.75 in
Tool Length	17.83 ft
Pressure Rating	33,000 psi (227,527 kPa)
Temperature Rating	257°F (125°C) without heatshield 600°F (315°C) with heatshield
Inclination Ranges	No Limit
Sensor Specifications	3 Accelerometers & 3 Magnetometers
Battery Support	Alkaline (up to 3 ½ days of battery life). Extended options available. Ask for details.

MULTISHOT SENSOR ACCURACY	
Storage	7,707 Individual Survey Records
Sensor Accuracy	Inclination ± 0.1° at all angles Azimuth ± 0.1° >3° inclination Tool Face ± 0.1° >3° inclination
System Accuracy	SPE WPTS compliant error ellipse calculations available upon request.