



4-3/4 inch Smart Motor

Enhanced Navigation

Scientific Drilling's Smart Motor II (SM II) is configured to facilitate enhanced navigation in horizontal and directional wellbores.

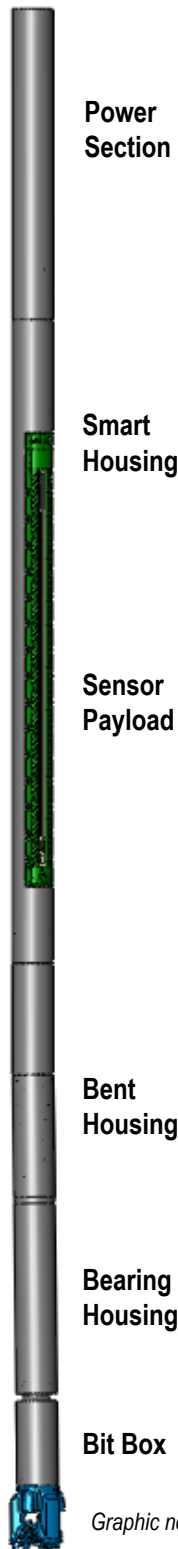
The SM II contains a power section, a smart housing containing the sensors, a bent housing and a bearing section.

The sensor section contains accelerometers and a directional focused gamma sensor, which are housed in the payload attached to the motor housing.

The placement of the sensors on the motor just above the bend allows more accurate inclination readings and protects the sensors from extreme downhole conditions.

The SM II uses Scientific Drilling's proprietary Wi-Sci communication link to achieve real-time, bi-directional communication between the MWD and Smart Motor.

The SM II is now available in 3-3/4", 4-3/4" and 6-1/2" configurations.



Power Section

Smart Housing

Sensor Payload

Bent Housing

Bearing Housing

Bit Box

Graphic not to scale

TECHNICAL SPECIFICATIONS

Motor Size	4.75 in; 7:8, 2.0; 219.25 in. Total Length 4.75 in; 7:8, 2.2; 270.75 in. Total Length
Dimensions	Smart Housing: 74.5 in Bit Box to Bend: 47.75 in
Maximum Temperature	302° F (150°C)
Sensors	Tri-axis Accelerometers 5/8 in. Gamma Crystal
Effective Rotational O.D.	5.0 in
Inclination Sensor Accuracy	±0.15° all angles
Sensor Update Rate	8 - 14 seconds
Bit Box to Sensor	76.75 in

Advantages

- Focused Gamma for Geo steering
- Gamma and Inclination sensors closer to the bit
- Smart Motor sensors work in conjunction with existing MWD sensors, both EM and Mud Pulse
- Shorter spacing allows earlier detection of formation boundaries
- On-Motor Inclination gives true measurement of inclination without correction for motor bend.