

# *Revolution<sup>®</sup> Rotary-Steerable Service*

## *8 1/4-in. System*

The *Revolution* service now offers a new 8 1/4-in. rotary-steerable system (RSS) with point-the-bit drilling technology for improved borehole quality and bit life. The *Revolution* system's short, compact design reduces the complexity of rotary-steerable drilling technology while placing critical LWD measurements close to the bit.

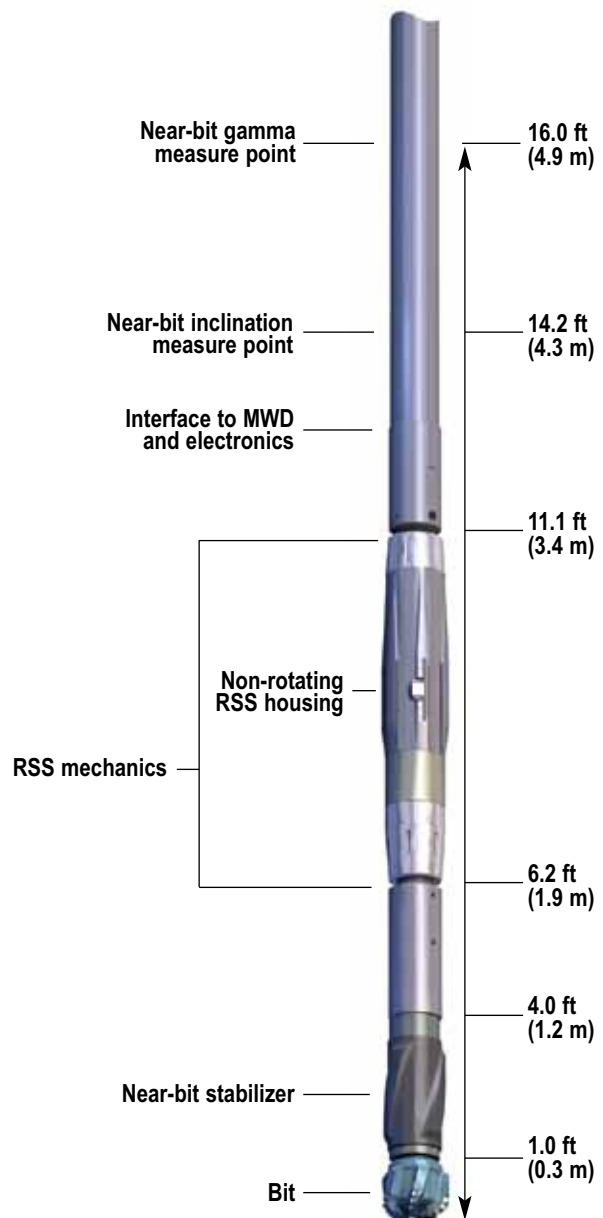
The *Revolution* system's point-the-bit technology uses a pivot stabilizer to orient the drill bit axis with the axis of the desired well path, optimizing the directional drilling process and maximizing drilling efficiency. Relative rotation between the center shaft, which carries torque to the bit, and a non-rotating outer housing drives a hydraulic pump. This pump generates enough motive force to deflect the drill stem as programmed in the well's steering plan.

### *Applications*

- Extended-reach 12 1/4-in. wellbores

### *Features, Advantages and Benefits*

- Point-the-bit design for improved hole quality and bit life.
- Simple functionality ensures high reliability.
- Deviation rates set from surface for improved directional control.
- Build rates of up to 7.5°/100 ft depending on formation type.
- Compact system.
- Fully integrated with PrecisionLWD™ system.
- Measure point on inclination is 14 ft from bit.





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### *Specifications*

Nominal tool OD .....	8-1/4 in. (210 mm)
Maximum OD.....	12-1/4 in. (311 mm)
Length (RSS mechanics).....	4.9 ft (1.5 m)
Length (RSS assembly).....	17.8 ft (5.4 m)
Top connection .....	5 1/2-in. API IF (box)
Bottom connection.....	6 5/8-in. API Reg (pin)
Make-up torque, top connection .....	40,000 ft-lb (54,233 N•m)
Make-up torque, bottom connection .....	53,000 ft-lb (71,858 N•m)
Maximum torque.....	40,000 ft-lb (54,233 N•m)
Maximum tension .....	700,000 lb (317,514 kg) survival
.....	250,000 lb (112,500 kg) reusable
Maximum weight-on-bit .....	90,000 lb (40,823 kg)
Maximum build rate .....	7.5°/100 ft
Minimum kickoff angle – vertical kickoff .....	0°
Maximum operating temperature.....	329°F (165°C)
Maximum operating pressure.....	25,000 psi (172 MPa)
Maximum flow rate .....	1,500 gal/min (5,678 L/min)
Maximum sand content .....	2%
Distance from bit, near-bit inclination .....	14 ft (4.3 m)