The Falcon MP is Scientific Drilling’s high-speed Mud Pulse MWD system, ensuring safer operations, maximum reliability, precision wellbore placement and deeper reach.

- Utilizes Proprietary TUF™ Preventative Maintenance System
- Includes Full Accelerometer and Drilling Dynamics Package
- Capable of 50 - 1500 GPM Flow Rates
- Supports BHA Sizes 3.125” to 9.5”
- Positive Displacement up to 5 bps
The Falcon MP MWD is the next generation mud pulse MWD system from Scientific Drilling, delivering maximum reliability, faster drilling, precision wellbore placement, deeper reach, and safer operations. The system parameters are fully field-programmable, yielding predictable performance in the world's harshest drilling environments, including extreme LCM conditions.

**REAL-TIME BOREHOLE MEASUREMENTS OF:**
- Survey Inclination & Azimuth
- Tool Face
- API Calibrated Gamma Ray
- Drilling Dynamics: Axial and Lateral Vibration, Stick slip, Temperature
- Continuous Inclination
- Annulus and Pipe Pressure
- Gamma, Inclination, and Resistivity

**DELIVERING THE ULTIMATE VALUE**
- Pressure-compensated pulser design, enabling use in a wide range of bottom hole pressure operations
- Bi-directional communication for customization of MWD tool parameters while downhole
- Field-configurable system, enabling flexibility for changing well conditions
- Proven electronics and mechanical design providing superior reliability

**TARGET APPLICATIONS**
- Unconventional Resource Plays
- Directional/Horizontal Drilling
- Relief well and Re-Entry
- Magnetic Ranging (Passive and Active)
- Steam Assisted Gravity Drainage (SAGD)

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**PRODUCT SPECS**

<table>
<thead>
<tr>
<th>TOOL OD</th>
<th>DOG LEG SEVERITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.125 in</td>
<td>Sliding</td>
</tr>
<tr>
<td>3.500 in</td>
<td>Sliding</td>
</tr>
<tr>
<td>4.750 in</td>
<td>Sliding</td>
</tr>
<tr>
<td>6.250 in</td>
<td>Sliding</td>
</tr>
<tr>
<td>6.500 in</td>
<td>Sliding</td>
</tr>
<tr>
<td>6.750 in</td>
<td>Sliding</td>
</tr>
<tr>
<td>8.000 in</td>
<td>Sliding</td>
</tr>
<tr>
<td>9.500 in</td>
<td>Sliding</td>
</tr>
<tr>
<td>3.500 in</td>
<td>Rotating</td>
</tr>
<tr>
<td>4.750 in</td>
<td>Rotating</td>
</tr>
<tr>
<td>6.250 in</td>
<td>Rotating</td>
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<tr>
<td>8.000 in</td>
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</tr>
<tr>
<td>9.500 in</td>
<td>Rotating</td>
</tr>
</tbody>
</table>

**PRESSURE RATING**
- 20,000 psi @ 300°F (30,000 psi available)
- 137,900 kPa @ 150°C (206,842 kPa available)

**TEMPERATURE RATING**
- 302°F (150°C)

**LOST CIRCULATION MATERIAL**
- Medium Nut Plug
- 40 lbs/bbl (18Kg/bbl)

**TELEMETRY**
- Positive Displacement, up to 5bps
- Tool Face ±0.15° > 3
- Azimuth ±0.25° > 3
- Inclination ±0.15° > at all angles
- No Limit

**SENSOR ACCURACY**
- No Limit

**MAXIMUM BIT PRESSURE**
- Tool OD | Gallons / Minute
- 3.125 - 3.5 in | 50 - 200
- 4.750 - 6.5 in | 100 - 400
- 6.250 - 6.5 in | 200 - 600
- 6.750 - 8.0 in | 250 - 1,000
- 9.5 in | 400 - 1,500

**OPERATING TIME**
- 300+ Hours

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**DIRECTIONAL SPECS**

<table>
<thead>
<tr>
<th>LENGTH</th>
<th>Directional Only</th>
<th>Directional &amp; Gamma ray</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.8 ft (5.12 m)</td>
<td>(16 ft pulser sub)</td>
<td>20 ft (6.1 m)</td>
</tr>
<tr>
<td>16.5 ft (5.02 m)</td>
<td>(16 ft pulser sub)</td>
<td>20 ft (6.1 m)</td>
</tr>
</tbody>
</table>

**DATA UPDATE PERIOD**
- Minimum 1.4 sec @ 0.1 sec pulse width
- Maximum 14 sec @ 1 sec pulse width

**CALCULATED SURVEY TIME**
- 7 Seconds

**RAW SURVEY TIME**
- 18.2 Seconds

**CONTINUOUS INCLINATION**
- Sliding: Yes
- Rotating: Yes

**VIBRATIONAL SPECS**

| AXIAL | 4 g<sub>PEAK</sub> for 3 hr, 6 g<sub>PEAK</sub> for 30 min |
| LATERAL | 5 g<sub>PEAK</sub> for 3 hr, 7.5 g<sub>PEAK</sub> for 30 min |
| STICK SLIP | 150% for 3 hr, 200% or neg rpm detected for 30 min |