

PRODUCT SPEC SHEET

FALCON FIRE MP MWD

The Falcon Fire MP MWD is SDI's high temperature mud pulse MWD system that delivers maximum reliability, 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.

Falcon Fire MP MWD provides the following borehole measurements in real-time:

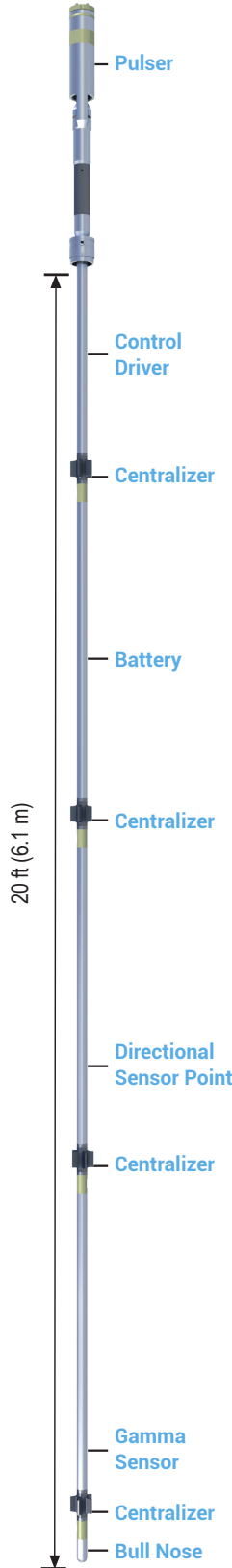
- Survey Inclination & Azimuth
- Tool Face
- API Calibrated Gamma Ray
- Drilling Dynamics: Axial and Lateral Vibration, Stick slip, Temperature
- Continuous Inclination

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 enables flexibility for changing well conditions
- Innovative electronics and mechanical design delivering optimal performance in elevated temperature operations

TARGET APPLICATIONS

- High Temperature Environments
- Geothermal
- Unconventional Resource Plays
- Directional/Horizontal Drilling
- Relief Well and Re-Entry
- Magnetic Ranging (Passive and Active)
- Steam Assisted Gravity Drainage (SAGD)



TECHNICAL SPECIFICATIONS

Tool Collar Sizes (OD)	Dog Leg Severity	
	Sliding	Rotating
3.125 in (79.4 mm)	40°	17°
3.500 in (88.9 mm)	37°	15°
4.750 in (120.7 mm)	28°	12°
6.250 in (158.8 mm)	20°	10°
6.500 in (165.1 mm)	20°	10°
6.750 in (171.5 mm)	19°	8°
8.000 in (203.2 mm)	12°	7°
9.500 in (241.3 mm)	12°	6°
Pressure Rating	20,000 psi @ 300° F (30,000 psi available) 137,900 kPa @ 150° C (206,842 kPa available)	
Temperature Rating	350° F (177° C)	
Lost Circulation Material (LCM)	Medium nut plug, 40 lbs/bbl (18 kg/bbl)	
Telemetry	Positive Displacement, up to 5 bps	
Sensor Accuracy	Tool face	±0.15° > 3°
	Azimuth	±0.25° > 3°
	Inclination	±0.15° at all angles
Maximum Bit Pressure	No Limit	
Range of Flow Rates per Tool Size	Tool OD	Gallons/Minute
	3.125 - 3.875 in	50 - 200
	4.75 - 6.5 in	100 - 400
	6.25 - 6.5 in	200 - 600
	6.75 - 8 in	250 - 1,000
	9.5 in	400 - 1,500
Operating Time	300+ hours	
DIRECTIONAL SPECIFICATIONS		
Length	Directional Only 16.8 ft (5.12 m) (+ 6 ft pulser sub)	Directional+Gamma Ray 20 ft (6.1 m) (+ 6 ft pulser sub)
	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
VIBRATION SPECIFICATIONS		
Axial	4 g _{RMS} for 3 hr, 6 g _{RMS} for 30 min	
Lateral	5 g _{RMS} for 3 hr, 7.5 g _{RMS} for 30 min	
Stick Slip	150% for 3 hr, 200% or neg. RPM detected for 30 min	

Specifications are subject to change without notice.

Updated May 2016

Copyright © 2016 Scientific Drilling International