## **FALCON MP**



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

The system parameters are fully field-programmable, yielding predictable performance in the world's harshest drilling environments, including extreme LCM conditions.

Falcon 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
- · Annulus and pipe pressure
- · Gamma, inclination, and resistivity

For more information on improving your drilling efficiency [while staying on target] contact your Scientific Drilling sales representative or visit: http://scientificdrilling.com/mwd

## **APPLICATIONS**

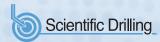
- Unconventional resource plays
- Directional/horizontal drilling
- Relief well and re-entry
- Magnetic ranging (passive and Active)
- Steam assisted gravity drainage (SAGD)

## **BENEFITS**

- Pressure-compensated pulser design offers compatibility in a wide range of bottom hole pressure operations
- Bi-directional communication for MWD tool parameter customization while downhole
- Field-configurable system enables flexibility for changing well conditions
- Proven electronics and mechanical design provide superior reliability

## **FEATURES**

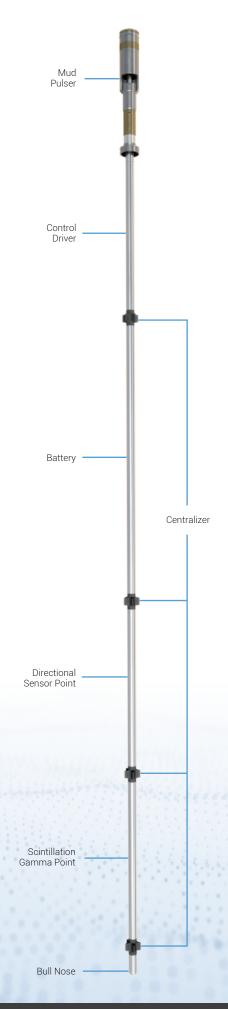
- Utilizes proprietary TUF™ preventative maintenance system
- Includes full accelerometer and drilling dynamics package
- Capable of 50-1500 GPM flow rates
- Supports BHA sizes 3.125" to 9.5"
- Positive displacement up to 5 bps

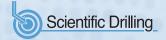


GENERAL SPECIFICATIONS			
TOOL OD		DOG LEG SEVERITY	
	Sliding 1	Rotating	
3.125 in (79.4 mm)		17°	
3.500 in (89.9 mm)		15°	
4.750 in (120.7 mm)		12°	
6.250 in (158.8 mm)		10°	
6.500 in (165.1 mm)		10°	
6.750 in (171.5 mm)		3°	
8.000 in (203.2 mm)	. —	7°	
9.500 in (241.3 mm)	12° 6	ō°	
PRESSURE RATING	20,000 psi @ 300°F (30,000 psi available) 137,900 kPa @ 150°C (206,842 kPa available)		
	131,300 Ki a (@ 130 C (200,042 Ki a available)		
TEMPERATURE RATING	302°F (150°C)		
LOST CIRCULATION MATERIAL	Medium nut plug, 40 lbs/bbl (18Kg/bbl)		
TELEMETRY	Positive Displacement, up to 5bps		
SENSOR ACCURACY	Tool Face ±0.15° > 3 Azimuth ±0.25° > 3 Inclination ±0.15° at all angles		
MAX BIT PRESSURE	No limit		
RANGE OF FLOW RATES	<b>TOOL OD</b> 3.125 - 3.5 in 4.750 - 6.5 in 6.250 - 6.5 in 6.750 - 8.0 in 9.5 in	<b>GALLONS/MINUTE</b> 50 - 200 100 - 400 200 - 600 250 - 1,000 400 - 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	<b>SLIDING</b> Yes	ROTATING Yes
VIBRATION THRESHOLDS		
AXIAL	4 g <sub>RMS</sub> for 3hr; 6 g <sub>RMS</sub> for 0.5hr	
LATERAL	5 g <sub>BMS</sub> for 3hr; 7.5 g <sub>BMS</sub> for 0.5hr	

STICK-SLIP DETECTED (0.5HR)





150% for 3hr, 200% or neg. rpm detected for 0.5hr

 $<sup>\</sup>star \mbox{Specifications}$  are subject to change without notice