FALCON X MP



Falcon X is Scientific Drilling's fastest, most robust MWD system, designed to deliver maximum reliability in the harshest drilling environments.

As the next evolution of the Falcon platform, Falcon X features faster data speeds, dual-transducers, and advanced solid-state sensors; ensuring un-matched dependability, faster surveys, safer operations, precision wellbore placement, and deeper reach.

Falcon X high-speed toolface parameters are fully field-programmable, yielding predictable performance in the world's harshest drilling environments, including extreme LCM conditions.

Falcon X 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
- Azimuthal gamma, near-motor 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

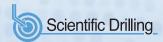
- * | Severe drilling environments
- Geothermal drilling
- Directional/horizontal drilling
- Magnetic ranging (passive and Active)
- † | Orbit Connect™
- Enhanced gyroMWD drilling

FEATURES

- Dual-transducer configuration
- + Advanced solid-state sensor
- Capable of achieving data rates up to 5 bps (compare to legacy MWD @ 3 bps peak)
- 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"

BENEFITS

- Superior reliability
- Wireless surface equipment
- Optimized decoding and faster survey time
- Pressure-compensated pulser design offers compatibility in a wide range of bottom hole pressure operations
- Field-configurable system enables flexibility for changing well conditions



GENERAL SPECIFICATIONS			
TOOL OD	DOG LEG SEVERITY		
	Sliding	Rotating	
3.125 in (79.4 mm)	40°	17°	
3.500 in (89.9 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	Medium nut plug, 50 lbs/bbl (23Kg/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	TOOL OD 3.125 - 3.5 in 4.750 - 6.5 in 6.250 - 6.5 in 6.750 - 8.0 in 9.5 in	100 - 400 200 - 600	
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)	
TOOLFACE UPDATE FREQUENCY	100ms pulse width yields 1.4 sec. update 760ms pulse width yields 10.64 sec. update		
CALCULATED SURVEY TIME	7 Seconds		
RAW SURVEY TIME	18.2 Seconds		
CONTINUOUS INCLINATION	SLIDING Yes	ROTATING Yes	
VIBRATION THRESHOLDS			

	162	103
VIBRATION THRESHOLDS		
AXIAL	4 g _{RMS} for 3hr; 6	g _{RMS} for 0.5hr
LATERAL	5 g _{RMS} for 3hr; 7	.5 g _{RMS} for 0.5hr
STICK-SLIP DETECTED (0.5HR)	150% for 3hr. 20	0% or nea. rpm detected for 0.5hr

^{*}Specifications are subject to change without notice

