

# 6.75 in. BlackStream MWD Tool

Through connection of the BlackStream MWD measurement tool to the IntelliServ™ wired drillstring, this high-frequency downhole data is available in real-time at rates exceeding 80 Hz. Surface data acquisition, visualization, and software analysis capabilities provide well construction teams with the information to optimize performance.

## Dynamic Measurements

Tool	Specifications	Dynamic Sensors	Specifications
OD	6.75 in.	Lateral Vibration (X, Y-axis)	-120 g to +120 g
ID	2 in.	Axial Vibration (Z-axis)	-35 g to +35 g
Length	97.4 in. shoulder to shoulder	Torsional Vibration	-5000 rad/s <sup>2</sup> to + 5000 rad/s <sup>2</sup>
Pressure Rating	20,000 psi	RPM	+/- 1200 RPM
Bending Rating	10/20 rotating/sliding	Weight	-120 klb to +240 klbs
Tension Capacity	900,000 lbf	Torque	-40 kft-lb to +40 kft-lb
Torque Capacity	32,000 ft-lb	Bending	-60 kft-lb to +60 kft-lb
Material	Non-magnetic P550	Annular Pressure	0 to + 20,000 psi
Connection Type	GPDS50 box / NC50 pin	Internal Pressure	0 to + 20,000 psi
Rated Temperature	150°C	Temperature	-40° to 150°C
Battery Life	Up to 350 hr	Data Acquisition	800 Hz sampling, 0.4 Hz

## Directional Measurements

Tools	Specifications	Directional Sensors	Specifications
OD	6.5 in.	Instrument Designation	3σ
ID	3.25 in.	Inclination – Range	0 -180°
Length	216 in. shoulder to shoulder	Inclination – Accuracy - Absolute	±0.1°
Tension Capacity	400,000 lbf	Inclination Roll Spread	±0.1°
Torque Capacity	26,000 ft-lb	Azimuth - Range	0 - 360°
Material	Non-magnetic P530	Azimuth - Accuracy Absolute*	±1.0° -(Inc>10°, Dip<70°)
Connection Type	NC50 box / NC50 pin	Azimuth Roll Spread	±0.75°
		Gravity Toolface (GTF) Abs	±1.0° -(Inc>5°, Dip<70°)
		Magnetic Toolface (MTF) Abs	±1.0° -(Inc<7°, Dip<70°)
		Magnetic Steering Abs	±1.0°
<b>Sensor Placement</b>	<b>Distance from Bottom of Collar</b>	Dip Abs	±0.3°
D&I Sensor	6.7 ft	Dip Roll Spread	±0.2°
Gamma Ray Sensor	3.62 ft	Gtot Abs	±0.003
		Gtot Roll Spread	±0.0015
		Btot Abs	±0.3μT
		Btot Roll Spread	±0.15μT
		<b>Gamma Ray Sensors</b>	<b>Specifications</b>
		Maximum API Range at 5% Error	2,500 API
		Accuracy	±2% to 150°C
		Sensitivity (Typical)	3.9 cps/API unit
		Vertical Resolution	10.3 in.

