

DDS-250 Downhole Shuttle



Mechanical-Clamped Digital Downhole Shuttle

- 24-bit x 4-channel Digitizer in each shuttle
- Ultra-low noise digitizer enables recording of ultra-low amplitude microseismic events
- Slim-hole shuttle 2.50 inch OD (63mm)
- 3C sensor package — 3C is tri-axis orthogonal geophone
- Dual-element OMNI 2400 high-output geophone sensor
- Solid machined titanium shuttle body minimizes mechanical resonance for high-resolution, high-frequency recording
- Selectable Open-Close motor control for each shuttle with special “Power Boost” operator control
- Armored Wireline or Rigid Interconnects available
- Flexible or Rigid interconnects may be connected “back-to-back” to form longer intervals
- Maximum distance between DDS-250 is 50 meters
- Up to thirty-two (32) 3-component levels per well deployment

MECHANICAL SPECIFICATIONS

Outside Diameter	63 mm (2.50 in.)
Length	157 cm (62 in.)
Tool Weight	18 kg (40 lbs.)
Anchoring System	Electromechanical in each Shuttle
Anchoring-to-Weight Ratio	10:1 @ 45° angle
Anchoring Motor Power	24 VDC per Shuttle constant 0.5 Amp
Time-to-Anchor	~30 seconds per shuttle @ 6"
Tool Anchoring Range	102–305 mm (4-12 inch)
Points of Contact	3 points, plus Anchor Arm
First Mechanical Tool Resonance	> 650 Hz
Sensor Package	3C with dual-element OMNI-2400
Interconnect Options	Rigid Tubing (stainless steel) 3m, 6m, 9m Flexible Armored Wireline Cable 9m, 12m, 15m, 20m
Maximum Temperature Rating	150°C
Maximum Pressure Rating	20,000 psi

DDS-250 4-CH X 24-BIT DIGITIZER SPECIFICATIONS

Sampling Rates	¼, ½, 1, 2, and 4 ms			
Pre-Amplifier Gains	0 dB	8 dB	19 dB	31 dB
Equivalent Noise @ 2 ms	1.590 µvolts rms	0.674 µvolts rms	0.264 µvolts rms	0.176 µvolts rms
Maximum Input Signal	1.590 vrms	0.635 vrms	0.187 vrms	0.045 vrms
Gain Accuracy	< 1%			
Frequency Response	3 to 1.6 KHz			
Anti-Alias Filter	80% Nyquist			
Instantaneous Dynamic Range	120 dB			
Cross-Feed Isolation	> 100 dB			
THD	0.0018%			
System Timing Accuracy	Better than 1 PPM			



DDS-250 3-Component Sensor

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