

Technical Information & Data Reference

SLICK HD

Compensated Servo Pulsar Module

SLICK HD (Heavy Duty) is a drop in replacement Servo Pulsar Module that is fully compatible with the QDT-Tensor MWD system. It incorporates cutting edge technologies to achieve significant improvements in performance.

SLICK HD features a rotary shear valve that provides exceptional performance in high solids and high LCM environments while simultaneously minimizing the pressure loss through the servo module, thus allowing greater forces to be imparted to the main valve assembly. The wiping action of the rotary shear valve clears away any compacted debris and ensures unobstructed flow through the system.

SLICK HD decouples the hydrostatically compensated section of the Servo Pulsar from the pulser driver module with a high torque magnetic coupling assembly. This eliminates failures of the driver module caused by corrosion, fluid invasion and gas invasion while simultaneously reducing frictional losses and increasing system robustness. The pulser driver module features a compact, modular and rugged and features built in event logging and performance tracking capabilities.

SLICK HD has low power consumption and significantly increases the battery life of the QDT-Tensor MWD system. Nominal power consumption of the SLICK HD Servo Pulsar system is approximately one third of the original QDT-Tensor Servo Pulsar.

The combination of the rotary shear valve, magnetic coupling drive mechanism and robust control electronics enables SLICK HD to have exceptional performance in the deep, hot and hostile environments encountered in today's challenging drilling programs.

Feature & Benefits

- High Wear Rotary Shear Servo Valve
- Decoupled Compensation with Magnetic Coupling
- Exceptional performance in LCM and High Solids
- Energy efficient, ~5 Joules per pulse (~180mA*sec per pulse)
- 50-150% Increase in Battery Life vs. original QDT-Tensor pulser
- Extensive Memory Logging with Event Level Resolution
- Integrated configurable Flow Switch
- Greatly reduces maintenance times
- Compact, approximately 33 inches long
- Fully QDT-Tensor Compatible
- 175° C, 20,000 psi rated



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Compensated Servo Pulser Module

SLICK HD – Compensated Servo Pulser Module

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Nominal Length	114.3cms (~45in)
Housing O.D.	47.625mm (1.875in)
Power Supply	20-30VDC
Power Consumption	4mA Standby, 180mAmp*sec/Pulse@25V
Shock Limit	1000g, 0.5msec, ½ sine all axes
Vibration Limit	5-30Hz@1in double amplitude, 30-500Hz 20g all axes
Operating Temperature	0° to 175°C (32° to 347°F)
Survival Temperature	-40° to 185°C (-40° to 365°F)
Hydrostatic Pressure (max)	137,895kPa (20,000psi)
Operating Pulse Width	0.600-2.00sec (controlled by QDT Compatible SEA)
Flow Switch	Axial and Lateral, axes used, threshold and delays configurable
Total Memory	8MB, ~500 hours circulating data

Data Stored in Memory	
Lifetime Power On Time	Power Cycles
Lifetime Circulating Time	Power Cycle Length
Job Power On Time	Pulse Event
Job Circulating Time	Pulse Energy
Job Energy Consumption	Pulse Opening Time/Closing Time
Temperature	Pulse Width
Lifetime Highest Temperature	Pulse Errors
Average Flow Switch Values	Manufacturing and Tracking Variables
Flow State (ON/OFF)	Flow Switch and Pulser Configuration Variables

