



CASED HOLE LOGGING Production Logging Instrumentation

Spartek Systems specializes in providing the oil and gas industry with high quality data to monitor well performance and diagnose potential problems. Founded in 1994, Spartek Systems leads the industry in providing cost effective solutions for acquiring reliable production data.

Product Overview

The SS8000 Production Logging System has a proven history of providing the oil and gas industry with reliable high quality data to monitor well performance. All of the sensors operates on Spartek's "Open Architecture Tool Bus". This communication bus allows the "same" tools to operate in both SRO and Memory logging operations. It also allows other third party tools to run in combination with the sensors provided by Spartek.

This easy to operate, portable logging system is offered in a 1", 1 3/8" and 1 11/16" diameters. All tools are sour rated. The high-speed, 4-wire instrument bus and smart sensor based tools allow the operator to interchange and configure the tool string to suit well conditions. In SRO or Memory mode, the operator can quickly confirm the tools in the string, as well as automatically identify and load the appropriate calibration files. Prior to running the tool in Memory mode, the operator can communicate with the tool string in real time via a USB interface to a Windows compatible PC.

Applications

- ▶ Monitor well efficiency
- ▶ Production Diagnostics
- ▶ Analyze injection or production profile by zone
- ▶ Monitor well stimulations
- ▶ Well mechanical integrity analysis
- ▶ Time lapse logging
- ▶ Well treatment verification

Primary Features

- ▶ Portable Operations
- ▶ 177°C / 15Kpsi / Sour Rated
- ▶ Surface Readout (SRO) or Memory operation
- ▶ Non-Radioactive High Resolution Density
- ▶ Multiphase Array PLT for Horizontal Wells
- ▶ Scalable Economic Solution to Market Needs
- ▶ Compatible with the "Warrior" logging system built by Scientific Data Systems
- ▶ Compatible with Windows 10/8/7/Vista/XP



Available Sensors and Accessories

- ▶ Depth Correlation
 - Accelerometer
 - Gamma Ray
 - Casing Collar Locator
- ▶ Well Performance
 - Quartz and Sapphire Pressure
 - Fast Response Temperature
 - Fullbore Folding Flowmeter
 - Continuous Flowmeter (3 sizes)
 - Inline Flowmeter (2 sizes)
- ▶ Fluid Identification
 - Fluid Dielectric (Capacitance)
 - Four Electrode Resistivity (Array)
 - Acoustic Densitometer
- ▶ Multi-Phase Flow Analysis (5 and 6 Arm Array)
 - Water Holdup: Capacitance, Resistivity
 - Gas Holdup: Acoustic Densitometer
 - Flow: Spinner, Fast Response Temperature
- ▶ 4 - Arm Centralizer (Roller and Bow Spring)
- ▶ X-Y caliper (Roller and Bow Spring)
- ▶ Spectral Gamma Ray

SPARTEK SYSTEMS

Providing Our Customers With "Best In Class" Technology

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Specifications:

Operating Specifications					
Pressure Rating	15,000 psi (max)	Temperature Range	-40° F to 350° F [-40° C to 177° C]		
Housing Material	Inconel 718* (sour)	Dimensions	1.0" OD	1.375" OD	1.688" OD
Master Controllers	Power Requirements	<u>Master Controllers</u>			
Memory	12.0 - 15.6 V (4 cell pack)	Memory / Battery Housing	N/A	2.50 ft	2.50 ft
Voltage	200 mA	SRO Controller (Telemetry)	2.11 ft	2.11 ft	2.11 ft
Current (max)		<u>Sensors</u>			
Surface Read Out	125 V - 175V @ Cable head	Casing Collar Locator	N/A	1.41 ft	N/A
Voltage	100 mA	Gamma Ray / CCL	3.23 ft	2.91 ft	2.91 ft
Current (max)		Gamma Ray	N/A	2.20 ft	N/A
Communications	RS232 / USB	Pressure (Sapphire)	1.09 ft	N/A	N/A
Data Acquisition		Press / Temp (Sapphire)	N/A	1.00 ft	1.07 ft
<u>Memory PLT</u>	128 Mb	Press / Temp (Quartz)	N/A	1.50 ft	N/A
Memory Size	1, 2, 5, or 10 samples/sec	Temperature	1.11 ft	N/A	N/A
Sample Rate	Standard PLT (8 sensors) at 1 sec sample for 135 hours	Capacitance	1.25 ft	1.39 ft	N/A
Logging Time		Acoustic Density	N/A	1.39 ft	N/A
<u>SRO PLT</u>	10 samples/sec	Continuous Flowmeter	N/A	1.32 ft	N/A
Sample Rate		Full Bore Flowmeter	2.60 ft	2.25 ft	N/A
		In Line Flowmeter	N/A	1.21 ft	N/A
		X-Y Caliper	N/A	3.32 ft	N/A
		Roller Centralizer	N/A	2.58 ft	2.70 ft
Performance Specifications					
Spinner		Pressure	<u>Sapphire</u>	<u>Quartz</u>	
Range	+/- 200 rps	Range	15,000 psi	15,000 psi	
Operating Diameter	1.81" minimum Caged Spinner	Resolution	0.003% F.S.	0.00006%	
Resolution	0.1 rps	Accuracy	± 0.05% F.S.	± 0.03% F.S.	
Accuracy	+/- 2%	Acoustic Density			
Threshold		Sensor	Vibrating Element		
In Line	8 ft/min (oil flow)	Range	0 - 2 g/cc		
Caged	4 ft/min (oil flow)	Resolution	0.001 g/cc		
Fullbore	2 ft/min (oil flow)	Accuracy	± 0.03 g/cc		
Temperature		Fluid Capacitance			
Range	-40° C to 177° C	Resolution	0.1%		
Resolution	0.005° C	WHI Accuracy	2% (range 0% - 30%)		
Accuracy	±0.5° C		5% (range 30% - 60%)		
Gamma Ray		Casing Collar Locator			
Detector Type	Scintillation	Detector Type	Electromagnetic		
Resolution	> 1.1 counts/API				
Range	0 - 10,000 API	X-Y Caliper			
Accelerometer		Range	2.0 to 9.0 inches		
Range	± 5 g	Resolution	± 0.02 inches		
Resolution	0.01 g	Accuracy	± 0.1 inches		
Accuracy	± 0.1 g	Pressure Bulkhead			
Roller Centralizer		Range	15,000 psi		
Range	1.4 to 8.2 inches				

Specifications subject to change without notice

For More Information, Pricing, and Technical Support Contact:


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