



CASED HOLE LOGGING

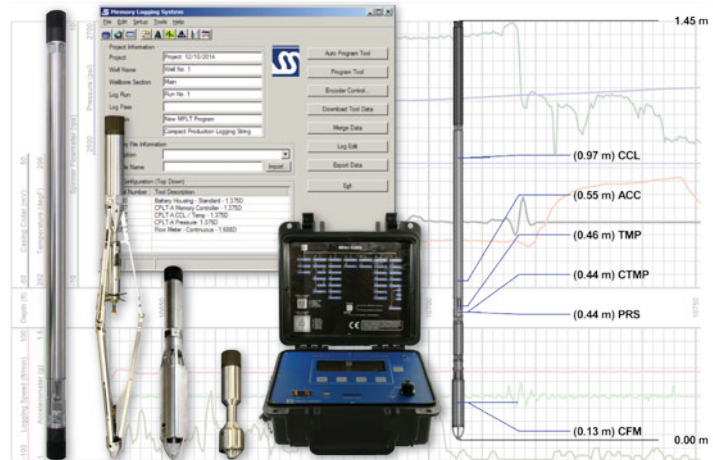
Compact Production Logging Tool (CPLT)

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 SS8335 Compact Production Logging Tool (CPLT) provides the most common measurements for basic problem diagnostic production logging applications. The tool is readily equipped for tubing leak detection, or determining the efficiency of gas lift valve operations. While the basic CPLT package consists of a memory controller, casing collar locator, sapphire pressure transducer, and temperature probe; any flowmeter (fullbore, inline or continuous) can be easily attached to provide the best fluid velocity measurement in a particular well completion. The CPLT is scalable,

meaning that other production logging sensors can be connected onto the basic instrument as the applications dictate. For example, if a multiphase production profile is required fluid composition sensors can be attached to the CPLT without any changes to the technology. Once any instrument is attached to the CPLT, the bi-directional communications link allows the operator to query each sensor at any time, for key configuration parameters such as its serial number and position in the tool string. This feature combined with the SparWorks software database architecture greatly automates the setup and calibration procedures prior to each survey.



Integrated Sensors

- ▶ Accelerometer
- ▶ Casing Collar Locator
- ▶ Pressure Sensor
- ▶ Fast Response Temperature
- ▶ External Tool Bus for Compatible Sensors
 - ◆ Gamma Ray
 - ◆ Fluid Type (Density, Capacitance)
 - ◆ X-Y Caliper
 - ◆ Flow meters (Continuous, Fullbore)

Applications

- ▶ Tubing Leak Detection
- ▶ Gas Lift Valve Efficiency Surveys
- ▶ Monitor Well Efficiency
- ▶ General Production Diagnostics
- ▶ Analyze Production Profile by Zone
- ▶ Monitor Well Stimulations
- ▶ Well Mechanical Integrity Surveys
- ▶ Injection Profiles
- ▶ After Fracture Surveys
- ▶ Analyze injection profile by zone

Primary Features

- ▶ 350°F (177°C) operating temperature
- ▶ 15,000 psi operating pressure
- ▶ Sour service rated (NACE MR0175)
- ▶ Complete hardware and software solution for acquiring surface and downhole production data
- ▶ Memory mode operation
- ▶ “Smart Sensor” technology allows each sensor to identify itself when queried
- ▶ Dynamic instrument addressing removes tool string configuration errors
- ▶ Built in Accelerometer sensor measures tool movement and inclination
- ▶ Compatible with Windows® 8/7/Vista/XP

SPARTEK SYSTEMS

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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	Length	Diameter
Master Controllers	Power Requirements	<u>Compact PLT</u> Battery Housing Electronics	1.17 ft 2.26 ft	1.375 inches 1.375 inches
Memory Voltage Current (max)	12.0 - 15.6 V (4 cell pack) Depends on configuration	<u>Compatible Sensors</u> Casing Collar Locator Gamma Ray / CCL Gamma Ray Press / Temp (Sapphire) Press / Temp (Quartz) Capacitance Acoustic Density Continuous Flowmeter Full Bore Flowmeter In Line Flowmeter X-Y Caliper Roller Centralizer Pressure Bulkhead	1.41 ft 2.91 ft 2.20 ft 1.00 ft 1.50 ft 1.39 ft 1.39 ft 1.32 ft 2.25 ft 1.21 ft 3.32 ft 2.58 ft 0.32 ft	1.375 inches 1.375 inches 1.375 inches 1.375 inches 1.375 inches 1.375 inches 1.680 inches 1.375 inches 1.680 inches 1.375 inches 1.375 inches 1.375 inches
Communications	USB			
Data Acquisition Memory Sample Rate Logging Time	128 Mb 1, 2, 5, or 10 samples/sec Standard CPLT (4 sensors) at 1 sec sample for 258 hours			
Performance Specifications				
Spinner Range Operating Diameter Resolution Accuracy Threshold In Line Caged Fullbore	± 200 rps 1.81" minimum Caged Spinner 0.125 rps ± 2% 8 ft/min (oil flow) 4 ft/min (oil flow) 2 ft/min (oil flow)	Pressure Range Resolution Accuracy	<u>Sapphire</u> 15,000 psi 0.003% F.S. 0.05% F.S	<u>Quartz</u> 15,000 psi 0.00006% F.S. 0.024% F.S
		Acoustic Density Sensor Range Resolution Accuracy	Vibrating Element 0 - 2 g/cc 0.001 g/cc ± 0.03 g/cc	
Temperature Range Resolution Accuracy	-40° C to 177° C 0.01° C ±1° C	Fluid Capacitance Resolution WHI Accuracy	0.1% 2% (range 0% - 30%) 5% (range 30% - 60%)	
Gamma Ray Detector Type Range	Scintillation 0 - 10,000 API	Casing Collar Locator Detector Type	Electromagnetic	
Accelerometer Range Resolution Accuracy	± 5 g 0.01 g ± 0.1 g	X-Y Caliper Range Resolution Accuracy	2.0 to 9.0 inches ± 0.02 inches ± 0.1 inches	
Roller Centralizer Range	1.4 to 8.2 inches	Pressure Bulkhead Range	15,000 psi	

Specifications subject to change without notice

For More Information, Pricing, and Technical Support Contact:


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