

Cased Hole Services

Sapphire Pressure Gauge

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 well information.

Product Overview

Spartek Systems once again demonstrates superior technological innovation with its latest series of Sapphire pressure recorders. Working closely with our customers, our engineering team has developed a multi-purpose gauge that significantly improves overall job performance. This new series of gauge incorporates the latest low-power three volt technology to minimize power consumption. Depending on the sampling rate, a pressure recorder could run up to one year on a single AA cell. Our engineers did not sacrifice signal resolution or sampling speed in order to reduce power consumption. The recorders utilize a proprietary parallel dual digital (PDD) signal processing technique to maximize signal to noise and improve resolution. The packaging of the sensor, electronics, and battery have all been upgraded; incorporating metal to metal seals, locking connectors, new corrosive resistant high pressure housings, and a pressure bellows system to protect the pressure sensor from extreme shock. The software tools supporting the new Sapphire series have been enhanced to provide programming features such as pressure triggers, multi-job programming, detailed job logging, high sample rates (up to 1 sample per second), enhanced user diagnostics, and USB interface support. To learn more about these exciting new products, contact a Spartek Systems sales representative for more information.

Primary Features

- Long battery life
- 3 V, single cell operation 1sample/s sampling rate
- Pressure trigger
- Sour service operation
- Designed for USB with retrieval rates up to 50,000 samples/min
- Data separation for multiple jobs
- Advanced diagnostics
- Surface readout
- Large Memory
- Software support for Win 98/NT/2000/XP
- Bellows for increased durability and accuracy

Applications

- Well Testing
- Monitor Well Performance
- Permanent Sensors (Monitoring)
- Completion Diagnostics
- Well Stimulation
- Reservoir Characterization
- Gradient Surveys



Superior Completions

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Sapphire Pressure Gauge - Continued

MODEL	SS2300 Series	SS2500 Series	SS2700 Series
Pressure Sensor Type Range(s) (psi) Accuracy Resolution Drift	Sapphire 750, 1500, 3k, 6k, 10k, 15k, or (20k available in 1.25" O.D.) 0.022% Full-Scale 0.1 psi < 3 psi / year	Sapphire 750, 1500, 3k, 6k, 10k, 15k, or (20k available in 1.0" O.D.) 0.022% Full-Scale 0.0003% Full-Scale < 3 psi / year	Sapphire 750, 1500, 3k, 6k, 10k, 15k or (20k available in 1.0" O.D.) 0.022% Full-Scale 0.0003% Full-Scale < 3 psi / year
Temperature	150 °C 302 °F	150 °C 302 °F	165 °C 329 °F
Power Requirements Voltage (min) Current (Sleep) Current (Sample)	3 V 0.10 mA 4.50 mA	3 V 0.10 mA 4.50 mA	3 V 0.20 mA 4.80 mA
Data Acquisition Channels Fastest sample rate Memory Capacity Options Pressure Trigger	Pressure Temperature Time 30 sec/sample 30,000 samples Yes	Pressure Temperature Time 1 sec/sample 1,000,000 samples (optional) 2,000,000 or 4,000,000 Yes	Pressure Temperature Time 1 sec/sample 1,000,000 samples (optional) 2,000,000 or 4,000,000 Yes
Housing Material Options Diameter Length	17-4 PH Inconel 718-NACE (0.75", or 1.25") (Varies with configuration) Contact your Spartek Representative with your requirements.	17-4 PH Inconel 718-NACE (0.75", 1.00", or 1.25") (Varies with configuration) Contact your Spartek Representative with your requirements.	17-4 PH Inconel 718-NACE (0.75", 1.00", or 1.25") (Varies with configuration) Contact your Spartek Representative with your requirements.
Communications	RS 232 / USB	RS 232 / USB	RS 232 / USB
Software Compatibility	Windows 98/ME/NT/2000/XP	Windows 98/ME/NT/2000/XP	Windows 98/ME/NT/2000/XP
Surface Readout	No	Yes	Yes



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