



CALSCAN

precision
temperature pressure
& flow measurement

HYBRID WOLVERINE

200°C HYBRID QUARTZ DOWNHOLE TOOL

The most expensive tool is the tool that fails on a test. With the Hybrid Wolverine Calscan has incorporated its many years of experience to help address the main failure modes in downhole pressure loggers.

Hybrid Electronics: The Wolverines uses a custom high temperature package and electronic components that works up to 200°C. As a result the logging assembly does not need to be replaced after every run.

Fault Tolerant Memory Design: The failure of one memory chip or block of memory will not result in the complete loss of a section of data.

Seals: All welded construction except the battery barrel connection. The battery barrel uses a triple seal: Two O-rings and an interference thread. The interference thread uses a pipe sealant/lubricant that protects the o-ring against chemical attack as well as reduces the pressure to the o-ring.

Shock Resistant Design: Hot deep wells are a difficult environment for a wireline operator to work on. Mistakes happen and the Wolverine is designed to maximize the chance of its chance survival.

Memory Size: There are 996200 samples available for temperatures below 180 °C. For temperatures above 180 °C there are 111400 samples available.

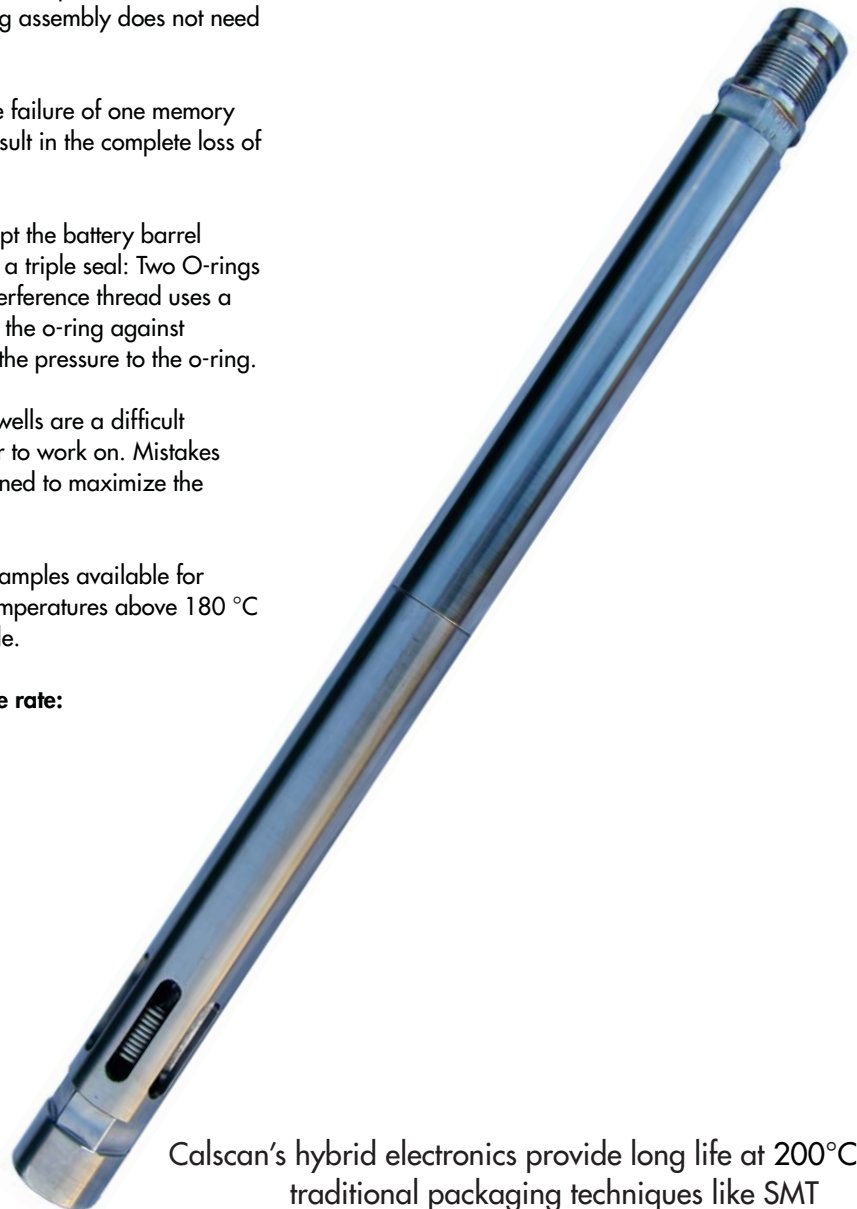
Battery Life with 30 second sample rate:

200 °C 7 days

190 °C 21 days

180 °C 60 days *estimated*

Field Reporting: Calvin our windows interface software allows the operator to make quick field gradients and custom graphing with annotation. Graphs can be saved for later editing and exported to PDF.



Calscan's hybrid electronics provide long life at 200°C unlike traditional packaging techniques like SMT

Specifications

Battery

Lithium Sub-CC 200°C

Lithium Sub-CC 180°C

Environmental

Operating Temperature: 0°C to 200°C

Sensor

Quartzdyne DXB012 Series Quartz Sensor

Pressure Range: 10000,16000,20000,25000,30000 psia

Accuracy

Pressure: $\pm 0.02\%$ Full Scale ($\pm 0.015\%$ FS Typical)

Pressure Resolution: $\pm 0.0002\%$ Full Scale

Temperature: ± 0.5 °C (± 0.15 °C typical)

Housing

Housing Material: 718 Inconel™ (UNS N07718)

Housing Diameter: 1.25 inches (31.75mm)

Housing Length: 24 inches (609.6mm)

Sample Rate

Minimum Rate: 1 sample/second

Memory

Temperatures 0°C to 180°C: 996200 samples

Temperatures 180°C to 200: 111400 samples

Communication:

USB or serial via Interface Box

Programming and Reporting

Calwin for Windows XP/Vista/Win7



For warranty, calibration, replacement battery, and local distributor information contact:

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