

IntelleX™ Ultra-Fast Gauge Tool

Monitors rapid pressure changes during downhole explosive operations

Applications

- Well stimulation
- Perforating (dynamic/static underbalance monitoring or perforation efficiency)

Features and Benefits

- Ultra-Fast Sampling: Able to switch to high-speed sampling within 100 microseconds, enabling precise capture of rapid pressure transients, crucial for analyzing explosive operations
- Flexibility: Programmable with various trigger events, enabling customization for different applications and optimizing data collection
- Versatility: Combines slow- and high-speed sampling capabilities, making it suitable for a wide range of downhole applications, including well stimulation and perforation monitoring

Tool Description

The Weatherford IntelleX ultra-fast gauge tool is a battery-powered instrument designed to record pressure, temperature, and acceleration data at extremely high sampling rates in order to capture pressure transient events typical of downhole perforating operations.



Intellex™ Ultra-Fast Gauge Tool

Specifications

Ratings and dimensions

Outer diameter	1.0 in. (25.4 mm)	1.29 in. (32.7 mm)	
Length	21.0 in. (533.0 mm)	21.6 in. (548.6 mm)	
Maximum temperature	347°F (175°C)		
Maximum pressure	15,000 psi (103.4 MPa)	20,000 psi (137.9 MPa)	25,000 psi (172.0 MPa)
Materials	Corrosion resistant materials used throughout		
Connection	3/4 in. UNF (1/2 in. sucker rod)		

Sampling

Slow	All Channels - 8 samples/sec to 30 min/sample
Intermediate	10 samples/sec to 1,250 samples/sec
Ultra-Fast	Pressure - 40,000 samples/sec Temperature & Acceleration - 2,500 samples/sec
Acquisition mode	Memory
Memory Capacity	8 MB standard (1.4 million data points)

Pressure measurements

Stability	± 0.3% FS per 3 months
Accuracy	± 0.15% < 175°C
Resolution	0.01 psi @ 10,000 and 1 sample/sec 0.15 psi @ 10,000 psi and 40,000 samples/sec

Temperature measurements

Stability	347°F (175°C) for 500 hours
Accuracy	± 0.5°C
Resolution	0.01°C at 302°F (150°C), 1 sps or 0.15°C at 302°F (150°C), 2,500 sps

Acceleration measurements

Accuracy	± 250g
Resolution	< 0.2g

Electrical specifications

Power	2 X 'AA' Lithium Batteries, 1.6 Ahr, 6-8 Vdc 150C & 180C (+ optional 200C battery available, 1.1 Ahr)
Battery life	Up to 20 days at 1 sample/sec Up to 2 days at 40,000 samples/sec



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Specifications, continued

Gauge carrier options

- Single Gauge Carrier 1-11/16 in. Stub Acme Pin up
- Dual Gauge Carrier 2-3/8 in. Acme Pin up
- Dual Gauge Carrier 2-3/8 in. EUE Box up

