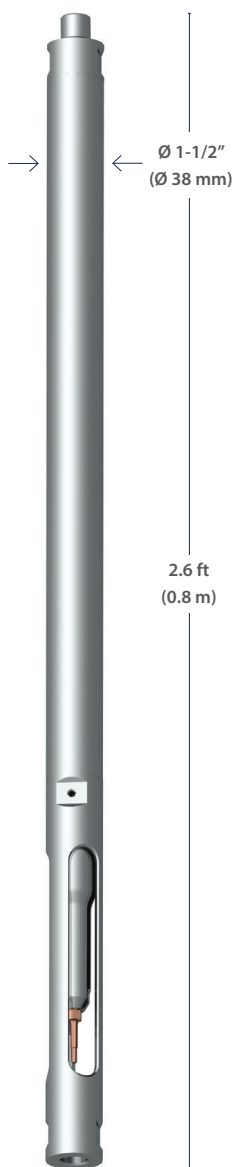




# ACOUSTIC LEAK FLOW ANALYSER (ALFA4)

GOWell's **Acoustic Leak Flow Analyser (ALFA4)** is a memory tool used to carry out various well diagnostic studies including Well Integrity Evaluation, Production Performance and Reservoir Monitoring. This device measures Acoustic Spectrum within the range of 8 Hz to 60,000 kHz with very high frequency resolution. The tool consists of Spectral Noise, Pressure, High Resolution Temperature and Casing Collar Locator sensors.

The tool uses very sensitive acoustic sensor to be able to measure sound produced downhole by either gas or liquid flow. Measurements are taken over a wide frequency range, enabling a very effective way of leak detection as well as detection of various kinds of gas, water, or oil flow, including flow behind the pipe.



ALFA4

## FEATURES

- Ability to detect flows through multiple tubulars
- Ability to distinguish flow behind pipe from flow inside pipe
- Combinability with other logging tools to provide a complete well evaluation in a single run
- Slim tool design allowing safe and easy deployment through the smallest completion tubing and restrictions

## APPLICATIONS

- Leak Detection (tubing/casing/packer leaks)
- Diagnosis of Sustained Casing Pressure
- Reservoir Characterization and Formation Evaluation
- Borehole and Reservoir Performance
- Location of open perforations
- Identification of flow zones behind pipe
- Identification of channeling behind pipe

## SPECIFICATIONS

	ALFA4
<b>GENERAL SPECS</b>	
Maximum Operating Pressure	15,000PSI (103MPa)
Maximum Operating Temperature	302°F (150°C)
Diameter	1-1/2" (38 mm)
Length	2.6 ft. (0.8 m)
Weight	8.8 lbs (4.0 kg)
Housing Material	Titanium
<b>ACOUSTIC SENSOR</b>	
Dynamic Range	90 dB
Operating Frequency Range	8 Hz to 60,000 Hz
Operation Mode	Stationary
Number of Spectral Channels	1024 (512 + 512)
<b>PRESSURE SENSOR</b>	
Accuracy	0.02% FS
Resolution	0.0001% FS
<b>TEMPERATURE SENSOR</b>	
Accuracy	0.2°C
Resolution	0.001°C
Response Time	0.4 sec
<b>MEMORY</b>	
Capacity	2 GB
Sampling	.5 to 255 sec

## ALFA4 LOG EXAMPLE

BEHIND CASING COMMUNICATION

