Fluid Density Differential Pressure (FDD)

The FDD has two measuring ports two feet apart. There is a hydraulic connection line between the two ports filled with silicone oil and containing the differential pressure gauge. The gauge measures the difference in pressure between the two ports. The effects of the silicone oil and the measurement of the on-board accelerometer are taken into account to compute the well fluid density. To prevent damage to the pressure gauge during logging the tool has built-in relief valves and a fast-acting overload damper, and during transportation it is protected by a manually operated bypass valve. There is a sealing valve at each port to stop leakage of silicone oil during transportation. The tool is supplied with a carrying tube which is used to calibrate it in air and water before logging.

Description

The FDD uses a differential pressure gauge and an accelerometer to accurately measure the pressure gradient and well angle along the axis of the wellbore in order to compute downhole fluid density.

Features

- Fluid identification in vertical or deviated wells.
- Multiphase flow profiling and fluid interface detection.
- Fully combinable with UltraWire™ PL tools. Memory or SRO.
- 1 3/16 UN 12 tpi Sondex GO or other Heads.

Specification

Model	FDD003	FDD004
Operating mode	UltraWire™	Memory
Temperature rating	350°F (177°C)	
Pressure rating	15000psi (103.4MPa)	
Tool OD	1 11/16 in (43mm)	
Tool length	51.9in (1.32m)	
Tool weight	22lbs (10kg)	
Sensor Measure point (from the bottom of the tool)	35.9in (0.91m)	
Materials	Corrosion resistant throughout	
Supply voltage	+18VDC, 50mA	+12VDC, 50mA
Range	0 - 1.5g/cc	
Accuracy	+/- 0.03g/cc	
Resolution	0.001g/cc	
Max deviation	maximum well deviation 70°	
Inclinometer resolution	+/- 2° above minimum well deviation of 10°	