

Fluid Density Inertial (FDI)

Using inertial response characteristics to determine the density of the wellbore fluid mixture

Application

- Production profiling
- Identify borehole levels in static and flowing conditions
- Locate product levels in storage wells

Features

- Fluid identification
- Work in horizontal and highly deviated wells
- Suitable for wells with high flow rates
- Fully compatible with all Sondex **Ultrawire™ production logging tools**
- Surface readout or memory operation
- Non-radioactive
- Shorter length ideal for offshore operations

The Sondex **Fluid Density Inertial (FDI001) tool** uses the inertial response characteristics of a vibrating tuning fork to determine the density of the wellbore fluid mixture.

The FDI tool is a non-radioactive method of determining density that is unaffected by well deviation. The sensor comprises a stainless steel tuning fork that

is vibrated near its natural frequency of operation by a piezoceramic stack and control electronics in the upper section of the tool. The frequency and amplitude of vibration are used to determine the actual density of the fluid surrounding the fork. Optimum quantitative results will be achieved in liquid- liquid mixtures or in pure gas.



Specifications

	FDI001
Temperature rating	350°F (177°C)
Pressure rating	15,000 psi (103.4 MPa)
Tool diameter	1 ¹¹ / ₁₆ in. (43 mm)
Tool length	20.55 in. (522 mm)
Tool weight	7.94 lb (3.6 kg)
Toolbus	Ultrawire production logging tool
Current consumption	@18 V dc = 35 mA
Max. current consumption	50 mA
Resolution	0.01 g/cc
Accuracy	0.03 g/cc
Measurement range	0 to 1.25 g/cc
Fluid viscosity range	1 to 50 cS
Materials	Corrosion resistant throughout