

Diverter Basket Flowmeter (DBT)

The Diverter Basket Flowmeter Tool (DBT) is designed to provide accurate measurements of total flow rate in low multiphase flows in vertical or deviated wells at stations along the borehole.

Description

The DBT operates as part of an Ultrawire™ toolstring and has a motor-controlled, patented fabric basket to divert well bore flow through a modified in-line spinner, which allows for accurate measurement of the flow rate of all the fluids flowing along the well bore at the position of the skirt.

The basket effectively reduces the flow cross-sectional area, allowing measurements in very low fluid velocities. In multi-phase fluids, the tool minimises the segregation effects. For more accurate hold-up measurements, a shroud may be fitted to the exit of the in-line spinner housing to redirect flow through a radioactive Density tool.

The basket is opened and closed by a motor section at the lower end of the tool, powered by a high current lithium battery. The DBT is run in hole closed and opened at stationary positions after exiting the tubing; before repositioning or re-entering the tubing the basket must be closed.

Features

- Flow measurements whilst stationary and in low or medium flow rate wells.
- Multiphase (especially inclined) segregated flow.
- Used in vertical or deviated pipe up to 9⁵/₈in diameter. All deviations are subject to controllable up-thrust.
- An extender flow tube can be attached for use with an FDR.
- Can be run inverted in injection wells.
- Used in combination with a Memory Battery Holder (MBH018) for provision of power to the diverter motor and motor control circuitry.
- Simultaneous operation with other Ultrawire™ tools.
- Also available with outside diameter of 2¹/₈in.
- Baskets for casing sizes 3in to 9⁵/₈in.

Specification

Temperature Rating	350°F (177°C)
Pressure Rating	15000psi (103.4 MPa)
Tool diameter	1 ¹¹ / ₁₆ in (43mm)
Tool length*	53.75in (1365mm)
Tool weight*	19lb (8.6kg)
Toolbus	Ultrawire™
Consumption	10mA
Spinner output	10 pulses/revolution
Flowrate range	7 to 1000bpd
Up-thrust (pressure differential)	ΔP~1psi @ 1100bpd (111/16in tool in 7in csg)
Max pipe size	9 ⁵ / ₈ in casing
Materials	Corrosion resistant throughout

*without battery pack

Diverter Basket Flowmeter (DBT)

