



## Caged Fullbore Flowmeter (6arm CFBM)

The tool has a six arm, spring-loaded cage that centres the spinner in the middle of the flow and supports tool weight in deviated wells. A large diameter impeller measures flow rates with coverage over a large cross section of the casing. The spinner runs on precision bearings and its rotation is sensed by zero drag Hall effect detectors, the signal from the sensors is converted into a flow rate measurement. The low mechanical threshold of the tool enables it to be used in low flow rates; normal output is 10 pulses per revolution with directional indication.

### Description

The Caged Fullbore Flow Meter is run at the bottom of a production logging tool string. The spinner blades and cage assembly collapse down to tool diameter, enabling it to pass through tubing restrictions without damage.

### Features

- High deviation and horizontal well logging.
- Full bore injection and production flow profiling.
- Measurement of low flow rates.
- Leak and cross-flow detection.
- Interchangeable mechanical sections to match casing sizes from 4½ - 9½in.
- Combinable with other UltraWire™ & Mbus PL Tools.
- Connects to either a Spinner Electronics (CFBE) or a Capacitance/Temperature/Flow Tool (CTF).



### Specification

|   |   |                       |
|---|---|-----------------------|
| Temperature rating                                | 350°F (177°C)                                     |                       |
| Pressure rating                                   | 15,000psi<br>(12,000psi for 1½in tool)            | 103.4MPa<br>(82.7MPa) |
| Tool OD   | 1 11/16in (43mm), 1 1/2in (38mm)                  |                       |
| Tool length                                       | 2.91ft (0.889m)                                   |                       |
| Tool weight (dependant on spinner and cage sizes) | 10lbs (4.5kg)<br>for 1 11/16in tool with 7in cage |                       |
| Sensor measure point (from bottom of the tool)    | 13.5in  | 349mm                 |
| Materials   | Corrosion resistant throughout                    |                       |
| Output  | 10 pulses/rev (bi-directional)                    |                       |
| Spinner threshold                                 | 1.7ft/min (approx), 100bpd in 7in casing          |                       |
| Max fluid velocity                                | 500ft/min, 28250 bpd in 7in casing                |                       |
| Casing range                                      | 4½in to 9½in                                      |                       |