



TECHNICAL DATA SHEET

FAST

Flow Array Sensing Tool

The Flow Array Sensing Tool (FAST) enables comprehensive and accurate evaluation of multiphase flows in deviated and horizontal wells, unlocking surveillance opportunities previously unachievable with conventional technology.

Eight robust and interchangeable probes, mounted either side of 4 centralising arms, enable a wide range of complex flow regimes to be accurately quantified. High resolution temperature, MEMS pressure and Doppler flow imaging are also incorporated into the ultra-compact design.

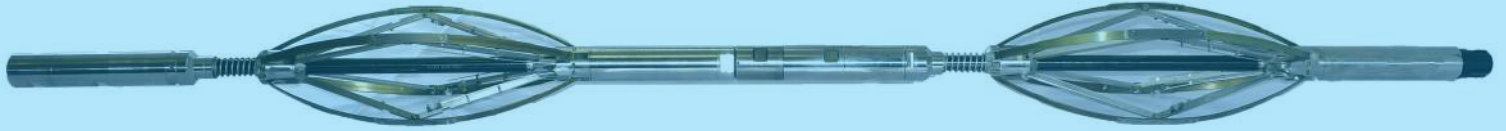
Oil, water and gas phase identification is achieved by combining miniaturised and highly responsive optical, electrical and flow-meter sensors. These are positioned cross-sectionally across the well-bore at 90 degree intervals, with multiple tool sections combined to increase the spatial resolution as required.

APPLICATIONS:

- Highly accurate cross sectional profiling of three phase hold-up at a single measurement point
- Quantitative assessment of mixed and segregated flow regimes
- Productivity assessment of selected reservoir zones
- In-depth phase analysis
- Determination of gas, oil and water hold-ups in casing and tubing
- Qualitative sand and solids detection

BENEFITS

- Reduced deployment risk with simplified, faster rig-up due to the ultra compact and lightweight design (3ft, 12lbs)
- Resolve true three-phase hold up fractions in segregated flow conditions
- Improved accuracy of production evaluation for highly deviated wells
- Ultra low flow rate measurement with Doppler flow imaging
- Deployable on slickline, electric line, coil tubing or tractor



Specifications

Temperature rating	302° F (150°C)	
Pressure rating	15,000 psi (103.4 MPa)	
Tool diameter	1.689 in (42.9 mm)	
Tool length	34.0 in (863.6 mm)	
Tool weight	11.0 lbs (5.0 kg)	
Range of operation	Up to 7 in (177.8 mm)	
Acquisition mode	Memory/Surface Read Out	
Memory/Battery duration	Up to 150 hours continuous recording	
Temperature Accuracy / Resolution	± 0.18°F (0.1°C)	0.0018°F (0.01°C)
Pressure Accuracy / Resolution	±1.0 psi	0.01 psi
CCL	Differential Magnetometer	
Relative bearing range/accuracy	0-360° ± 3°	
Inclination range/accuracy	0-90° ± 1°	
Shock	250 G, 2 ms	
Materials	NACE compliant - Stainless steel 316L, Inconel, Nickel, Sapphire	