

# In-line Spinner Flowmeter (ILS)

The Sondex In-Line Spinner Flowmeter is a compact flowmeter which can be run in combination with other PL tools. The tool may be used in areas where fullbore spinners may be closed due to restricted diameters.

## Description

The ILS allows for production profiling in tubing and casing within one logging run and is less susceptible to the effects of jetting (high velocity fluid entry from perforations) than a fullbore spinner. The ILS has a shroud that protects the spinner blade as the tool moves through well restrictions. A combination of ILS & CFB provides a continuous optimised flow profile.

Precision roller bearings allow the spinner to rotate with minimal friction. As fluid moves past the spinner rotation is detected by zero drag Hall-effect sensors. The spinner blade has been optimized to have a very low mechanical threshold and is ideal for low flow rates. The signal from the Hall-effect sensors is converted into a flow rate measurement with direction indication (up or down flow).

## Features

- Production flow profiling.
- Leak detection.
- Additional spinner measurement in high deviation/horizontal wells.
- Flow measurement inside sand screens/slotted liners.
- Combinable with other Ultrawire™ tools.
- Surface read-out or memory operation.
- High temperature polymer spinner blade.
- 1<sup>11</sup>/<sub>16</sub>in tool body available with 1<sup>11</sup>/<sub>16</sub>in or 2<sup>1</sup>/<sub>8</sub>in spinner shroud.

## Specification

Model	ILS021	ILS022
Temperature rating	350°F (177°C)	
Pressure rating	15,000 psi (103.4MPa)	
Tool diameter	1 <sup>11</sup> / <sub>16</sub> in (43mm)	2 <sup>1</sup> / <sub>8</sub> in (54mm)
Tool length	17.3in (439mm)	
Tool weight	6.5lbs (3kg)	6.8lbs (3.1kg)
Toolbus	Ultrawire™	
Current consumption	10mA	
Sensor measure point	4.3in (110mm)	
Maximum fluid velocity	3000ft/min (15m/s)	
Spinner threshold	12ft/min (0.06m/s)	
Minimum restriction	1 <sup>13</sup> / <sub>16</sub> in (46mm)	2 <sup>1</sup> / <sub>4</sub> in (57mm)
Output	10 pulses/rev	
Materials	Corrosion resistant throughout	

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