

## In-Line Spinner Flowmeter (ILS)

Halliburton's In-Line Spinner Flowmeter (ILS) is a compact flowmeter that can be run in combination with other production-logging tools. With its compact design, the ILS is an easy way to measure fluid velocity in well environments too small for full-bore spinners. It is also an ideal backup for other spinners that might be damaged due to the wellbore environment. The ILS spinner can rotate with very little friction, which makes it an ideal candidate for low-flow wellbores. Additionally, as part of the Ultrawire™ family of products, the ILS works in tandem with any other Ultrawire tool the operator chooses to employ.

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 full-bore spinner. The ILS has a shroud that protects the spinner blade as the tool moves through well restrictions. A combination of the ILS and the Caged Full-Bore Spinner tools provides a continuous optimized 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 is optimized to have a very low mechanical threshold, and thus is ideal for low flow-rate wells. The signal from the Hall-effect sensors is converted into a spinner-rate measurement with direction indication (up or down flow).

### Benefits

- Enables fluid velocity measurements in both flowing and injection wells
- Provides an additional velocity measurement in case the other spinners are damaged
- Velocity measurement independent of casing and tubing size

### Features

- Fully combinable with all Ultrawire production-logging tools
- High-temperature polymer spinner blade
- Surface readout or memory-logging operations



HAL24672

<b>In-Line Spinner Flowmeter (ILS)</b>		
<b>ILS Model</b>	<b>ILS021</b>	<b>ILS022</b>
<b>Temperature Rating</b>	350°F (177°C)	
<b>Pressure Rating</b>	15,000 psi (103.4 MPa)	
<b>Tool Diameter</b>	1-11/16 in. (43 mm)	2-1/8 in. (54 mm)
<b>Tool Length</b>	17.3 in. (439 mm)	
<b>Tool Weight</b>	6.5 lb (2.95 kg)	6.8 lb (3.08 kg)
<b>Toolbus</b>	Ultrawire™	
<b>Current Consumption</b>	10 mA	
<b>Sensor Measure Point</b>	4.3 in. (109 mm)	
<b>Maximum Fluid Velocity</b>	3,000 ft/min (15 m/s)	
<b>Spinner Threshold</b>	12 ft/min (0.06 m/s)	
<b>Minimum Restriction</b>	OD + 0.125 in (+3.175 mm)	
<b>Output</b>	10 pulses/rev	
<b>Materials</b>	Corrosion resistant throughout	

Ultrawire is a trademark of Sondex.  
Developed in part through cooperation with Sondex.

**For more information, contact your local Halliburton representative.**

© 2014 Halliburton. All rights reserved. Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale. H06287 1/14

[www.halliburton.com](http://www.halliburton.com)

**HALLIBURTON**  
Wireline & Perforating