

# Motorized Free Point Indicator (FPI)



The Motorized Free Point Indicator measures torque and stretch to locate where drill pipe, tubing or casing is stuck, or partially stuck without the need for additional equipment of a classic Free Point tool.

The Motorized Free Point indicator is an electromechanical assembly designed to measure torque or stretch in harsh conditions. The basic Motorized Free Point Indicator assembly consists of a non-grounded collar locator (AS40092), upper motorized anchor (FUA), sensor section (AS40018), and lower motorized anchor (FLA) to determine stuck point. A classic Free Point tool assembly typically consists of sinker bars to overcome the holding ability of the pre-set anchors and a slack joint to relieve weight above the tool assembly when at the correct depth for making a measurement. By replacing the bow spring or magnetic anchors with motorized anchors, the Motorized Free Point Indicator in many cases eliminates the need for sinker bars and a slack joint.

### Features

- Less friction/drag, easier to maneuver into high angle and horizontal wells
- Controllable anchoring force downhole instead of setting constant force before the run, as with springs
- Faster setup time, shorter tool string
- Simple maintenance, can be redressed at wellsite
- Crossovers to various service company connections available
- Does not require extra force to pass restrictions
- In many cases, eliminates the need for a slack joint or sinker bars
- Four arm system provides optimal deployment in horizontal wells
- Shear pins allow for retrieval if communication to deployed tool is lost



Options			
Motorized Anchor Dogs			
Set	Length	I.D. Range	Typical Application
413504-2	1.6 in. 40.64 mm	1.6-4.0 in. 40.64-101.6 mm	<ul style="list-style-type: none"> <li>• 2 3/8", 2 7/8", 3 1/2" 4", 4 1/2" drill pipe</li> <li>• 3 1/2", 4", 4 1/2", 5", 5 1/2" heavy weight drill pipe</li> <li>• 4 1/2" casing</li> </ul>
413504-1	2.20 in. 55.88 mm	3.9-5.1 in. 99.06-129.54 mm	<ul style="list-style-type: none"> <li>• 5", 5 1/2" drill pipe</li> <li>• 5", 5 1/2" casing</li> </ul>
Slack Joints			
Set	Stroke	Makeup Length	Shipping Length
AS40016	16 in. 406.4 mm	39.125 in. 993.78 mm	43.625 in. 1,108.08 mm
AS40016-24	24 in. 609.6 mm	50.125 in. 1,273.18 mm	54.625 in. 1,387.47 mm
AS40016-36	36 in. 914.4 mm	63.25 in. 1,606.55 mm	67.75 in. 1,720.85 mm



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Specifications		
Temperature rating**	350°F	177°C
Pressure rating	20,000 psi	137.9 MPa
Voltage supply	115V AC 3A	
Max. operating current	260 mA	
Operating current range	100 mA - 260 mA	
Tool O.D.	1 <sup>3</sup> / <sub>8</sub> in.	34.92 mm
Top connection	GO Type Box (Female)	
Makeup length	9.27 ft	2.83 m
Makeup weight	≈ 35 lbs	≈ 16 kg
Collar Locator (AS40092)		
• Makeup length	14.125 in.	358.8 mm
• Shipping length	17.125 in.	434.98 mm
• Weight	4.10 lbs	1.86 kg
Upper Anchor Section (FUA)		
• Makeup length	33.1 in.	840 mm
• Shipping length	37.6 in.	954 mm
• Weight	11 lb	5.0 kg
Sensor Section (AS40018)		
• Makeup length	26.375 in.	669.9 mm
• Shipping length	30.625 in.	777.88 mm
• Weight	8.75 lb	3.97 kg
Lower Anchor Section (FLA)		
• Makeup length	34.9 in.	810 mm
• Shipping length	37.6 in.	886 mm
• Weight	11 lb	5.0 kg
Anchoring range	1.6 - 5.1 in.	39.4 - 128.2 mm
Opening time	20-60s	

\*\* Sensor Section and Collar Locator rated to 500°F (260°C)



imagination at work

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