

Hydrostatic Active GS (HAGS)



Description

The HAGS is a pulling tool designed for retrieving Bridge Plugs, Packers and Straddles. Its stretching capability proved successful and is especially valuable during retrieval of the High Expansion (HEX) Plug, preferably with element lock functionality. The HAGS aims to stretch out the plug's packer element during retrieval in order to reduce its OD. It has been used successfully in retrieving several HEX plugs, mainly in wells with severe debris and tight restrictions where conventional GS pulling operations have proved problematic.

Application

The top part of the HAGS consists of a GS fish neck connected to the running tool; a GS with DU functionality - recommended. At the bottom of the tool, a modified GS pulling tool is installed. The modified GS allows the Push Rod to extend outside the nose to engage the plug mandrel and stretch out the plug.

The tool is activated via the Timer Head that serves as a timer activated (1-9 hours) inlet valve. Well pressure enters the hydraulic piston section of the HAGS when the timer lapses, producing a force that extends the Push Rod.

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Benefits

- Simple and field proven design
- Increased pulling force in overbalance
- Customisable to your needs and requirements
- Applies stretching forces on the packer element reducing the plug's OD to ease retrieval through tight restrictions

Technical Specifications

	3.5"	5"	6"
OD Push Rod	1.181" (29 mm)	1.575" (40 mm)	1.575" (40 mm)
Make Up Length	75.10" (1907 mm)	85.39" (2168 mm)	87" (2209 mm)
Recommended Working Pressure	Configurable	Configurable	90-130 bar
Maximum Working Temperature	150 °C (302 °F)	150 °C (302 °F)	150°C (302 °F)
Extension Force	Configurable	Configurable	3.9 lbf / psi (26kgf/bar)
Effective Extending Stroke Capability ⁽¹⁾	15.7" (398 mm)	22.7" (576 mm)	31" (789 mm)
Full Extending Stroke Capability ⁽¹⁾			38" (958 mm)
Upper Connection	3.5" Fish Neck	5" GS Fish Neck	6" GS Fish Neck
Lower Connection	3.5" GS Pulling Tool	5" GS Pulling Tool	6" GS Pulling Tool
Will Retrieve			650-1175 HEX
Materials	AISI 4140/45 30-36HRC, 17-4 PH , 165M QT 900		
Weak Point	279/40 [11/16] 10UN connection (SWL 25,000 kgf / 55,000 lbf)		
Fish Neck Below Weak Point	1.75" External Fish Neck		

⁽¹⁾ The Effective Extending Stroke Capability refers to the extending stroke limit, where internal pressure in the atmosphere chamber remains below 5 bar. Further extension will rapidly decrease extension force, and is therefore considered not be applicable.