

Hydrostatic Setting Unit (HSU)



Description

The Hydrostatic Setting Unit (HSU) is designed with a focus on simplicity, consistency and effectiveness. It provides the industry with a highly reliable, debris tolerant, non-pre-pressurized and non-pyrotechnic setting device used for the installation of downhole tools such as Bridge Plugs, High Expansion Gauge Hangers, and Straddles.

Application

Run on slickline the HSU has a Trigger Mechanism that prevents well fluid and pressure from entering the tool until it's activated. It can be activated by a manual plunger system that triggers a timer sequence in the Electronics Cartridge, or by electric current on E-Line, by replacing just two components at the top of the tool. Once activated, an electric motor serves as an actuator for the Trigger Mechanism. In turn, a barrier valve pin is retracted, allowing well fluid (pressure) to access the tool.

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Benefits

- Debris tolerant.
- Non-pyrotechnic.
- Non-pre-pressurized.
- Setting force is applied in a controlled manner.
- Large output forces generated.
- Accurate time delay mechanism.
- Reduced risks associated with wireline mechanical manipulation.
- Designed for Slickline and E-Line use.

Technical Specifications

Tool Size (OD)	2.13" HSU	2.13" HP HSU	2.70" HSU	2.70" HP HSU	3.50" HSU	3.75" HSU	5.50" HP HSU
Stroke	6.00"	10.00"	6.00/ 10.00" ⁽¹⁾	12.00"	13.00"	6.00"	12.00"
Upper Connection Slickline	15/16 UNS	1/16-10 UNS	1 1/16-10 UNS	1 1/16-10 UNS	1 1/16-10 UNS	1 1/16-10 UNS	1 9/16-10 UNS
Upper Connection E-Line	1 3/8" GO Box	1 3/8 GO Box	1 3/8" GO Box	1 3/8" GO Box	1 3/8" GO Box	1 3/8" GO Box	1 3/8" GO Box
Lower Connection	IW #5	IW #5	E4 #10	E4 #10	E4 #10 / #20 ⁽¹⁾	E4 #20	IW #40
MUL (Shortest available) ⁽²⁾	98.0" (2,490mm)	95.09" (2,415.3mm)	89.11" (2,263mm)	104.8" (2,662mm)	149.4" (3,794mm)	105.66" (2,684mm)	68.30" (1,735mm)
Max Working Temperature ⁽³⁾	200 °C	200 °C	200 °C	200 °C	200 °C	150 °C	150 °C
Max Working Pressure ⁽²⁾	10,000 psi	20,000 psi	10,000 psi	20,000 psi	10,000 psi	10,000 psi	20,000 psi
Max Output Force	24,500 lbf	24,000 lbf	37,000 lbf	37,000 lbf	49,000 lbf	49,000 lbf	77,000 lbf

⁽¹⁾ Tool dependant

⁽²⁾ Configuration dependant

⁽³⁾ 200 °C electronic upgrade under development