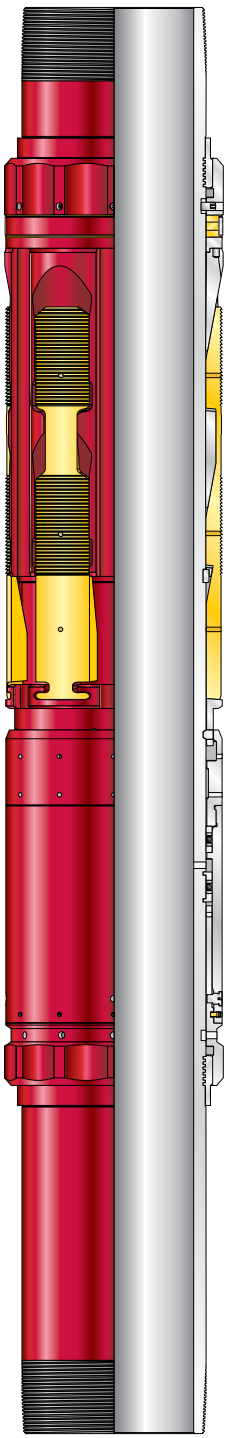
Weatherford Premium Hydraulic-Rotating (WPHR) Liner Hanger



Weatherford's premium hydraulic-set, rotating liner hanger is ideally suited for use in deep, highly deviated wells. The cone and slips section are designed to optimize bypass and, in addition to the protected slips, make the WPHR hanger an ideal choice for drilldown and reaming-liner applications. The WPHR hangers are available in the following sizes: 5 × 7 in., 7 × 9-5/8 in., and 9-5/8 × 13-3/8 in.

Differential hydraulic pressure across the hydraulic cylinder activates the WPHR hanger. Setting weight on the WPHR hanger sets it, forcing the slips to bite into the host casing. A bearing on the WPHR hanger allows rotation after the hanger is set.

Applications

- Liners in deep and/or highly deviated wells
- Extended-reach liners
- Liners at any necessary depth
- Drilldown liners
- Liners that must be reamed down

Features, Advantages and Benefits

- Hydraulic activation removes the need for drillstring manipulation, making it possible to set the WPHR liner hanger in deep and/or highly deviated wells.
- Large, slip-contact area minimizes stress in the host casing, enabling the WPHR hanger to support extreme loads.
- One WPHR can be set inside host casings of the same size, but with various weights. This design provides operational flexibility.
- High-torque, one-piece mandrel is equipped with premium connections that meet or exceed the torque of liner connections.

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Features, Advantages and Benefits *(continued)*

- Heavy-duty bearing allows rotation of the liner after the hanger has been set and during cementing operations, improving the quality of the cement bond.
- Mechanical-locking mechanism minimizes the risk of prematurely setting the hanger until it is hydraulically activated, thus reducing the potential for nonproductive time.
- Key screws rotationally lock the hydraulic cylinder to the mandrel. This feature prevents seal damage during rotation and ensures that the hanger cylinder does not become a possible leak path later in the life of the well.
- Nitrided slips ensure that the liner hanger can be set even in the hardest grades of host casing, contributing further to its reliability.
- Nontortuous bypass channels allow for high-circulation rates past the hanger assembly to aid in the removal of debris during well-cleaning and improve the quality of cement displacement.
- Premium-designed aluminum-shear screws ensure accurate, predetermined setting of pressures. With this advantage, hydraulic events can be planned accurately and with a high degree of safety.

Specifications

Size (in./*mm*)		Weight (lb/ft, *kg/m*)		Bottom Connection*	Standard Metallurgy*	Part Number
Liner	Casing	Liner	Casing			
5 *127*	7 *178*	15.00 to 18.00 *22.32 to 26.79*	23.00 to 32.00 *43.25 to 47.72*	VAM® TOP HT	L80	952380
					P110 125KSI	951991
7 *178*	9-5/8 *244*	26.00 *38.69*	40.00 to 53.50 *59.53 to 79.62*	VAM TOP HT	L80	958181
					P110 125KSI	958180
		29.00 to 38.00 *43.25 to 56.55*	40.00 to 53.50 *59.53 to 79.62*	VAM TOP HT-NA	L80	952379
					P110 125KSI	952378
9-5/8 *244*	13-3/8 *340*	43.50 to 58.40 *64.74 to 86.91*	48.00 to 77.00 *71.43 to 114.59*	VAM TOP	L80	1388471
					P110 125KSI	1200572

* Other metallurgies and connections are available upon request.

Options

The standard WPHR liner hanger can be converted to a static model by replacing the roller bearing with a spacer ring.

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