



Weatherford®

Swage Series Liner-Top Packers

Permanent, gas tight, anti-extrusion barriers for challenging wells



A TRUSTED LEGACY IN LINER-HANGER TECHNOLOGY



Weatherford is one of the largest global providers of liner-hanger systems and associated accessories. Originally developed for the hostile downhole conditions of North Sea wells, our liner-system products have set multiple records and are trusted in quality-critical applications throughout the world—including ultradeep, high-angle, and extended-reach wells.

Weatherford designs and manufactures virtually every component of its liner systems to ensure total system quality and compatibility. Weatherford also offers an extensive range of compatible products for use with the Swage Series liner-top packers, including a comprehensive range of liner hangers, float equipment, centralizers, surge-reduction systems, and accessories.

High Pressure, High Temperature—Total Control

When it comes to high-pressure and high-temperature applications in high-angle, horizontal, and extended-reach wells onshore or offshore, Weatherford SwageSet and SwageSeal HPHT liner-top packers provide maximum reliability. The packers can be used to prevent gas migration or contain treating pressure below a liner top during hydraulic fracturing and acid stimulation operations.

Tested for Integrity

The Swage Series of liner-top packers are run as an integral part of the liner-hanger assembly to provide a high-integrity seal that isolates the annulus between the liner OD and the host casing ID. Engineered to meet the strictest sealing requirements and tested to ISO 14310 V0 criteria, the Weatherford SwageSeal and SwageSet packers are validated for safe operation at 400°F (204°C) and 12,500 psi (86.2 MPa) for standard service. Certain sizes of SwageSet packers are validated for extended service up to 15,000 psi (103 MPa).

Exclusive Designs

Each Swage Series liner-top packer features a proprietary SwageSet element consisting of ridge-shaped Aflas® elastomers bonded to an expandable metal ring. The one-piece mandrel is equipped with a premium connection and includes a sealbore profile for the Weatherford WRSM cementing packoff and a profile for the appropriate running tool. When running in the hole or circulating at high flow rates during well cleanup or cementing, Swage Series liner-top packers are significantly less susceptible to swabbing than conventional, all-elastomer seals.

Weatherford has drawn on its extensive experience to bring you a liner-top packer designed for reliable service in challenging environments.



Key Features

- Packing elements bonded to an expandable steel ring create reliable gas-migration seals.
- Patented SwageSet element technology forms an extrusion-resistant barrier between the packer body OD and the host casing ID.
- Aflas® elastomers enable high circulation rates past the liner-top packer assembly, which aids in the removal of debris during well cleaning and improves cement integrity.
- High-torque, one-piece mandrels provide superior hydraulic sealing and improved tensile capacity.
- Integral body-lock rings capture the applied setting force into the element, which ensures that the packers remain set.



SwageSet Liner-Top Packer

High-performance value in cemented and uncemented liners

The SwageSet packer includes design features that make it especially effective for drill-down applications. A high-torque connection with seals between the SwageSet polished-bore receptacle (WPBR) and the packer prevents PBR backoff while rotating. The packer also includes a castellation profile that's compatible with high-torque running tools designed for reaming or drilling the liner to depth.

The packer is activated by applying weight to the SwageSet WPBR. Once the set-down weight is transferred through the WPBR to the packer, the hold-down slips and the element are set. This unique design assures all the available setting force is directed to the element after the hold-down slips are set, thereby retaining the setting force within the element and body-lock rings.

Applications

- Cemented and uncemented liners that need a seal between the liner OD and the host casing ID.
- High-pressure, high-temperature applications.
- High-angle, horizontal, or extended-reach wells.
- Tieback packers.

SwageSet Specifications

ISO 14310 / API 11 D1 V0 validated	Yes
Max Pressure rating	15,000 psi @ 400° F
Hold-down slip	Yes
Cemented liner applications	Yes
Uncemented liner applications	Yes
Integral cementing packoff profile	Yes
Bottom connection type	Pin
Standard elastomer package	Atlas
Typical body length	72 in.
Number of machine parts	10



SwageSeal Liner-Top Packer

Cost-effective reliability in cemented liners

The SwageSeal liner-top packer is based on the field-proven SwageSet packer, and its streamlined design eliminates hold-down slips and associated components. The SwageSeal liner-top packer incorporates the profile and sealbore for the Weatherford WRSM retrievable cement packoff, as well as profiles for R, S, or HNG running tools. The polished bore receptacle seals directly to the packer body with a gas-tight, high-performance, extrusion-resistant seal that eliminates the need for a high-pressure connection seal.

Applications

- Cemented liners requiring a seal between the liner OD and the host casing ID.
- High-pressure, high-temperature applications.
- High-angle, horizontal, or extended-reach wells.

SwageSeal Specifications

ISO 14310 / API 11 D1 V0 validated	Yes
Max Pressure rating	12,500 psi @ 400° F
Hold-down slip	No
Cemented liner applications	Yes
Uncemented liner applications	Limited
Integral cementing packoff profile	Yes
Bottom connection type	Box
Standard elastomer package	Atlas
Typical body length	48 in.
Number of machine parts	4



Swage Series Liner-Top Packers

To learn more about how our high-pressure, high-temperature liner-top packers maximize reliability and can help solve your toughest well challenges, contact your Weatherford representative today at liner.systems@weatherford.com.



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