

Obex GasLock® Casing Annulus Packer

V0-RATED MECHANICAL BARRIER SUPPORT TO MITIGATE GAS MIGRATION

OVERVIEW

Reliable and effective annular barriers are critical to well management for safety and performance. When sustained casing pressure (SCP) occurs, it is an indication that well integrity has been compromised, often resulting from a failed barrier. SCP can lead to a loss of production and costly remediation.

Achieving proper isolation in high-pressure, high-temperature (HPHT) oil and gas wells continues to be a challenge for many operators. As a result, mechanical barriers are often incorporated into the well construction process to ensure effective zonal isolation is achieved. In addition to preserving wellbore integrity, this sustainable cementing technology helps to reduce emissions and reduce the carbon footprint of oil and gas well construction.

The Obex GasLock® casing annulus packer, which is part of the Halliburton Obex® family of compression-set packers, is a mechanical barrier that provides a high-pressure, gas-tight, casing-to-casing seal. Qualified at the industry's strongest ISO 14310 V0-rating, the Obex GasLock casing annulus packer provides a superior seal to mitigate annular gas migration and support the hydrostatic weight of annular well fluids above the casing packer in wells with weak formation zones. The Obex GasLock casing annulus packer can be used as a standalone packer or coupled with the V0-rated ES-II™ HD stage cementer for multiple-stage cementing operations.

EXCEPTIONAL RELIABILITY TO PREVENT SUSTAINED CASING PRESSURE

- » **Superior Sealing** – The Obex GasLock casing annulus packer is designed for casing-to-casing applications to provide V0-rated isolation assurance. The tool operates by setting the packer elements with a seated plug and applied internal casing pressure. An internal continuous ratchet mechanism keeps the packer compressed from the initiation of the setting until it is fully set. External high strength slips provide a bidirectional anchoring hold that will confirm setting during an over pull test and prevent casing movement in non-cemented applications.

FEATURES

- » Mechanically set
- » Field-proven packer element and internal ratchet mechanism
- » Bidirectional packer element ratings up to 10,000 psi at 300°F
- » ISO14310 V0-rated

BENEFITS

- » Promotes well integrity in deep, hot wells with high differential pressures
- » Can support multiple-stage cementing when run in conjunction with the V0-rated ES-II™ HD stage cementer
- » High strength barrel slips provide bidirectional anchoring up to 425,000 lbf



*Isolation Assurance >
The Obex GasLock®
casing annulus packer
provides V0-rated mechanical
barrier support to prevent
gas migration.*

- » **Engineered for Performance** – The Obex GasLock casing annulus packer design utilizes an independent setting sleeve system that eliminates potential leak paths from the setting operation. This feature removes the risk of premature rupture disc failure, often affected by losses in the well, which would traditionally prevent the packer from fully setting.
- » **Hydromechanical Setting Method** – Like all the packers in the Obex family, the Obex GasLock casing annulus packer is mechanically set and not inflated. The setting process does not rely on narrow channels that can pack off to operate. Using an internal ratchet mechanism to lock the compression element after it is set results in zero weak points in the packoff, which can thereby mitigate sustained casing pressure. Because the casing annulus packer is mechanically set and not inflated, it can exceed casing burst and collapse ratings, to offer further increased dependability.
- » **Operated with Displacement or Freefall Plugs** – This casing annulus packer can be operated with either displacement or freefall plugs, allowing for the tool's use in high inclinations up to 90° or in long wells where plugs can take a long time to drop.

MECHANICAL BARRIER SUPPORT

The Halliburton Obex family of compression-set packers provides a range of reliable mechanical barrier support. All of the tools in the Obex packer family use an internal ratchet mechanism to lock the compression element after it is set, which provides superior sealing and zero weak points in the packoff, to thereby mitigate sustained casing pressure.

The bidirectional pressure ratings of the Obex GasLock packer allow this tool to be set deeper in the well and lift cement to surface, especially in wells with expected fluid losses below the packer. The Obex GasLock casing annulus packer is ISO 14310 V0-rated, and can prevent well integrity issues by serving as an effective barrier to mitigate high-pressure gas migration that can lead to fugitive emissions.



Reliable by Design >
The Obex GasLock® casing annulus packer utilizes an independent setting sleeve system and is operated with displacement or freefall plugs.



Isolation Assurance > The Obex GasLock® casing annulus packer (top) provides V0-rated mechanical barrier support to prevent gas migration and can support multiple-stage cementing when run in conjunction with the V0-rated ES-II HD cementer (bottom).



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