

Packers Accessories

Seal Bore Tubing Accessories

J-Latch Anchor Assembly

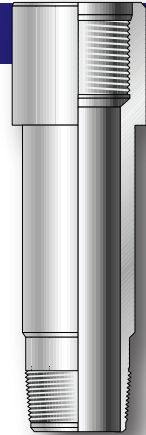
The J-Latch is used with a seal assembly to hold tubing anchored in the packer. The J-Latch will automatically latch into the packer upon set down. To release the J-Latch from the packer, set down, rotate tubing 1/4 turn to the right at the packer and pick up. J-Latch Anchor Assemblies are available for most seal bore sizes. Double seal units are recommended when using a J-Latch Anchor Assembly

Threaded Latch Anchor or Snap Latch Seal Assembly

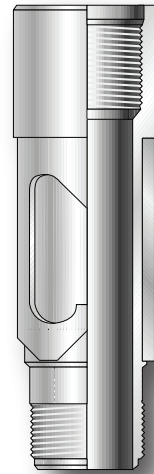
The Threaded Latch is used with a seal assembly to hold tubing anchored in the packer. The Threaded Latch will automatically latch into the packer upon set down. To release the Threaded Latch from the packer, apply slight tension on the tubing and rotate 8 - 10 turns to the right to release from the Packer. The Threaded Latch Anchor Seal Assembly includes a seal stack as required for the downhole environment and application. The snap latch is used for sump packers.

Locator Sub

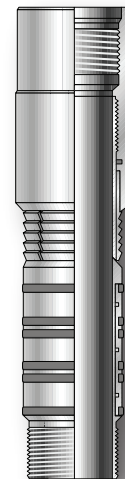
The Locator is used with a seal assembly to stop downward tubing movement but allows the seals to move freely with tubing contraction. Locators are available for most seal bore sizes. Double seal units are recommended when using a Locator Assembly.



Locator Sub



J-Latch Sub



Thread Latch Anchor Seal Assembly



Seal Bore Tubing Accessories-Continued

MOLDED SEALS

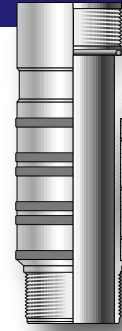
Recommended in applications where seal movement or dirty fluids are anticipated. Seals are bonded to a metal sleeve with an internal O-ring to allow a positive seal. Molded seals are available in Nitrile, HSN, Viton, Flourel, EPOM & ECO.

CHEVRON SEALS

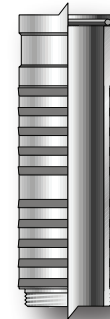
Stack consists of Chevron Seal Rings with steel spacers. Chevron Seals are available in Nitrile, Viton, Flourel, Teflon, Aflas, Ryton, and Kalrez materials. **Note:** Chevron seals are not recommended for movement outside the seal bore.

VTM PREMIUM SEAL

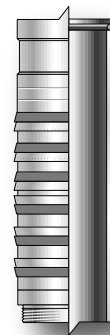
VTM Premium Seal Stack consists of Viton seals, Teflon back-up, knitted wire mesh back-up, male adapter, metal spacer and retaining rings. VTM stacks are recommended for installations similar to VTR stacks but where movement or dirty fluids are anticipated.



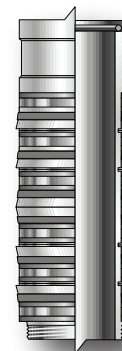
Locator Sub



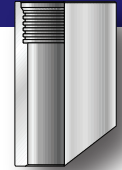
Chevron Seal



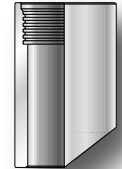
VTR Premium Seal



AKTM Premium Seal



Half Mule Shoe Guide



Screw Out Shoe Guide



Seal Wireline Re-entry Guide

Packers Accessories

Seal Bore Tubing Accessories-Continued

Available in a variety of Seal Systems and alloy materials to accommodate various well conditions. It is important to know the well conditions and work to be performed in order to choose the proper seal system. Consideration should be given to temperature (minimum and maximum), concentration of hostile elements (H₂S, CO₂, etc.), seal movement and maximum pressure differential. These factors will determine the seal type, metal material and accessories to be utilized. For all seal bore tubing accessories, standardization of threads, seal diameters and seal lengths have been carefully considered in the design to maximize interchangeability with competitive seal bore equipment.

All steel components for the seal bore tubing accessories are manufactured to meet N.A.C.E. specifications MR-O1 75 for H₂S service. The accessories are also available in several types of material with the following three as an example:

- High strength alloy steel - High pressure applications
- 9CR-1 MO or 13CR-1 MO alloy steel - H₂S and CO₂ applications
- Incoloy 925 alloy steel - Severe corrosion applications

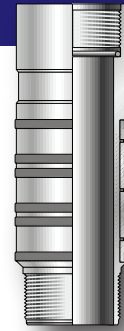
Two basic seal types are currently available:

- Elastomer bonded to metal commonly known as molded seals and available in Nitrile, Viton, Flourel, EPDM, ECO and HSN materials.
- Chevron type seals commonly known as V-rings (not recommended to move out of seal bore) and available in Nitrile, Viton, Flourel, Teflon, Aflas, Ryton and Kalrez materials.

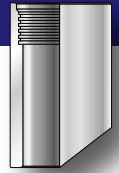
Temperature, hostile elements, seal movement and pressure differential are parameters to consider when selecting seal types.

Trademarks

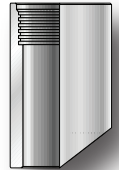
Aflas	Trademark of Ashi Glass
Flourel	Trademark of 3M
Kalrez	Trademark of Dupont
Ryton	Trademark of Phillips Petroleum Co.
Teflon	Trademark of Dupont
Viton	Trademark of Dupont



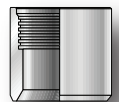
Locator Sub



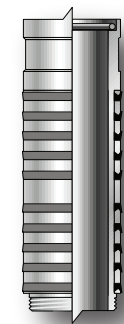
Half Mule Shoe Guide



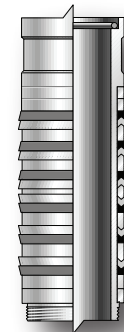
Screw Out Shoe Guide



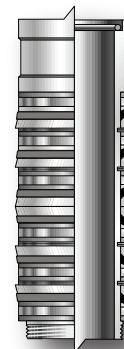
Seal Wireline Re-entry Guide



Chevron Seal



VTR Premium Seal



AKTM Premium Seal