



**CHANCELLOR**  
A TEAM OIL TOOLS COMPANY

# SETTING TOOLS

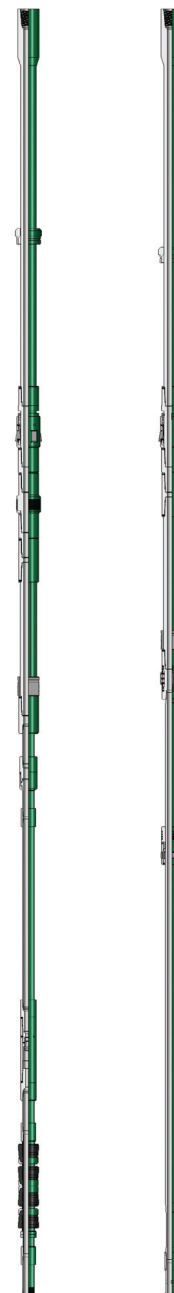
## SLOTTED LINER SETTING TOOLS

The Chancellor Slotted Liner Setting Tools are designed for running and setting uncemented (slotted or blank) liners with Chancellor Hydraulic Set Liner Hangers with a Liner Top Packer. A floating nut on a two sided Kelly is provided on all slotted liner setting tools. A lifter and junk screen is standard when running a Liner Top Tie Back Receptacle (TBR). After setting the hanger, or setting the liner on bottom, the setting tool is put in the neutral position and rotated right to release the running nut from the setting collar. The tool is then picked up and pulled out of the hole. A tubing swivel is included when running a tubing tail in slotted liner to eliminate tubing rotation during release. The Slotted Liner Setting Tools are pressure tested before each run.

A packer setting dog sub (PSDS) is used to set liner top packers after displacing cement. The PSDS consists of spring loaded dog segments that collapse and reside in the TBR while running the liner in the hole. In this run position there is virtually no way to accidentally set the packer. After setting the hanger, and releasing, the setting tool is picked up so that the PSDS clears the top of the TBR. The dog segments are now expanded and can be used to apply weight to set the liner top packer. A Rotating Packer Dog Sub (RPDS) has a journal bearing that allows the packer weight to be rotated in. This is especially beneficial in highly deviated or horizontal applications. A 40,000 lb shear indicator is provided to verify that weight was applied to the packer.

The Type BSL Setting Tool features a 2S ball seat located between a PCPA double opposing cup mandrel and a TBR Packoff. The 2S set port is covered by a port piston during run in to prevent inadvertent hanger setting due to high circulating pressures or surges. The setting ball lands on the piston to shear out at approximately 1000psi to expose the hanger set ports. The ball seat piston shears out at 2500 psi to allow for full fluid bypass to circulate a change over after set and prevents hydraulic lock when pulling out of the Packer. There is no rotating allowed while running in the hole with the BSL. The Type BSL setting tool is pressure tested before each run.

The Type ESL Setting Tool features a setting port located between a PCPA double opposing cup mandrel and a retrievable packoff bushing (RPB) in combination with a slick joint. The 2S ball seat is also an option for setting the hanger. The Type ESL Setting Tool also provides a spring loaded rotating dog sub that mates with splines located in the setting collar. This dog sub transfers torque from the drill string, to the liner, while in tension or compression for the purpose of setting mechanical hangers, rotating liners during the cement operation, or insuring setting tool engagement during run-in.



TYPE BSL

TYPE ESL