



TPXR™

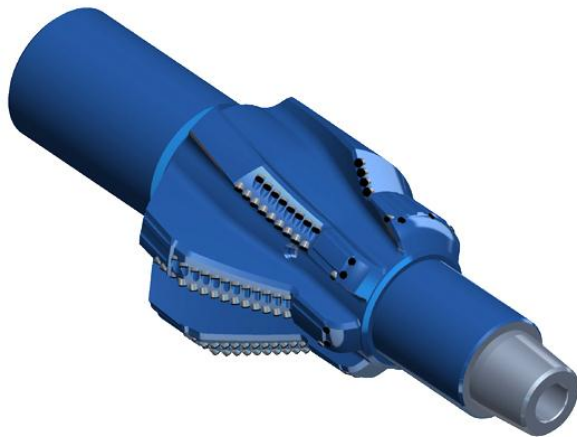
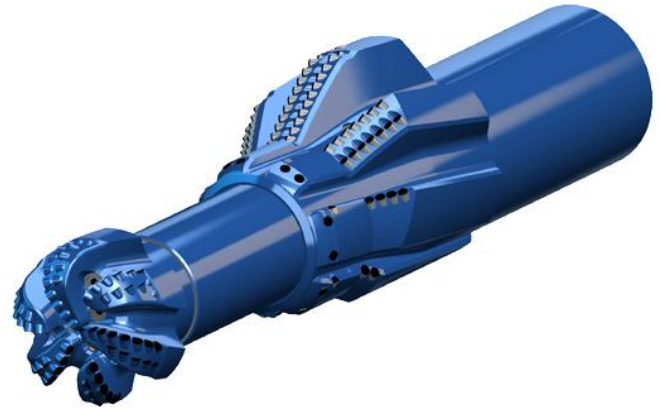
Eccentric Tool for Underreaming Operations



The OTS TPXR™ (Tapered Profile eXcentric Reamer) is designed to function as a fixed blade underreaming tool. With no moving parts, the TPXR™ eliminates mechanical failure and is field friendly – no operator is required to support the TPXR™.

Complete Reliability - there are no multiple ball drops or RFID chips to activate or deactivate the tool – it works when the drillstring is rotated and there is a pilot hole available to centralize. There are zero moving parts in the TPXR™, precluding partial opening or closing, mechanical failures or junk left in the hole.

Improved Tool Stability – the TPXR™ is a single-point tool, imparting a defined vibration mode to the BHA. The single point contact zone produces a single harmonic, rather than three-point harmonics produced by typical expandable tools. The mass imbalance, directed into the cutting structure and reinforced by the BHA, pushes the cutting structure to maximum diameter during each rotation. The Tapered Profile of the TPXR™ defines a sidewall pattern, decreasing inward displacement when formation changes or irregular formation is encountered.



Maximum Durability – TPXR™ tools have more working area available for PDC cutters and cutting patterns than conventional expandable tools, equating to more cutting options, cutter density and better load distribution in the cutting structure. The result is a stronger tool, smoother torque and a reduction in erratic torque events over conventional three-point expandable tools.

Maximum Flexibility – the TPXR™ can be used directly behind the drill bit, similar to our DuoForce™ bi-center bits. Alternatively, the TPXR™ can be placed behind a RSS or conventional steerable motor system, to enlarge hole concurrent with directional work. This allows standard 12-1/4" RSS tools to drill 14-3/4", 17-1/2" or even 20" diameter hole while steering very effectively – eliminating separate hole-opener or underreaming operations.



NEXT GENERATION INNOVATION



TPXR™

Underreaming Tool