

RIPSAW™

Active Torque Technology™



ULTERRA®

THINKING FORWARD. CHALLENGING LIMITS.

A NEW SOLUTION TO ACTIVE TORQUE

RipSaw™ is the ultimate solution for smooth torque through transitional formations and unconventional laterals. RipSaw's Active Torque Technology™ controls depth of cut and torque fluctuations without limiting ROP.

UN-LIMITING PERFORMANCE

Drilling with a PDC bit requires smooth and consistent engagement to maximize efficiency, reduce dysfunction, and improve performance. In real drilling environments, where down hole conditions are constantly changing, this balance is very hard to achieve.

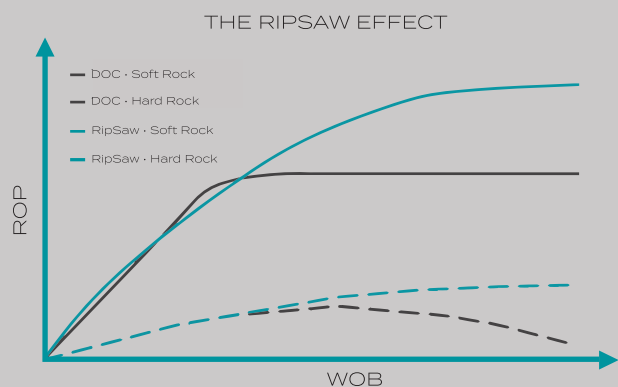
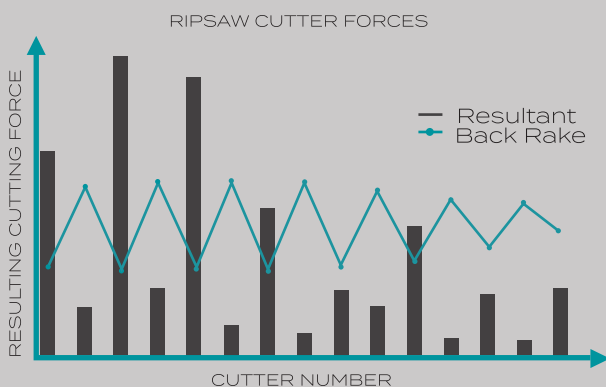
Rather than simply limiting bit performance with secondary features, Ulterra engineers devised a better way. RipSaw engages changing rock properties and drilling parameters using Active Torque Technology that smooths torque oscillations with the active cutting structure.

WHAT IS ACTIVE TORQUE TECHNOLOGY?

Active Torque means that the solution is both active across the drill bit's entire range of depth of cut and is also part of the active cutting structure. Rather than using passive, secondary elements, RipSaw uses active cutting elements incorporated into the primary cutting structure to deliver a manageable torque response across the entire operating range of the bit.

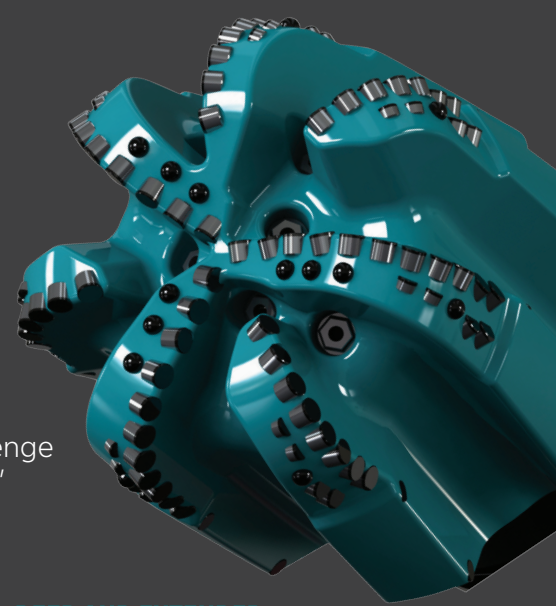
THE TORQUE ADVANTAGE

- Instantaneous, active damping of drilling forces
- Active DOC control across the bit's entire operating range
- No hard stop fixed elements which limit ROP
- No moving parts, no additional risk



TECHNOLOGY IS ONLY AS IMPORTANT AS THE PROBLEM IT SOLVES

At Ulterra, we know that just because something is deemed "new technology" doesn't mean it's useful. That is why we always challenge ourselves with, "What problem are our customers trying to solve?"



TRANSITIONAL DRILLING

Many well sections pass through layers of soft-hard-soft transitions, and constantly changing rock properties cause severe torque and DOC issues. These intervals of high interfacial severity can result in damage to bits and downhole tools.

CURVES AND COMPLEX DIRECTIONAL SECTIONS

Where precise directional work is necessary, managing torque is critical to controlling tool face. Failure to do so can lead to missed targets and zones.

DEEP AND EXTENDED REACH WELL PROFILES

In deep wells and long laterals, weight transfer issues lead to inconsistent DOC, making it difficult to drill ahead.

In each case, a consistent solution to smoothing torque response across a wide range of parameters is worth hundreds of thousands of dollars in cost savings.

A NEW APPROACH TO AN OLD PROBLEM

BLADE TECHNOLOGY

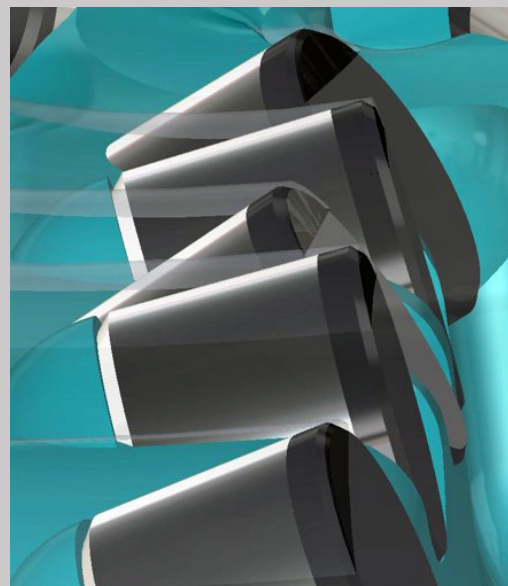
When blade geometry is used to limit depth of cut the material can wear down, meaning that the intended depth of cut is only good for a short time.

REPLACEABLE FEATURES

Many DOC features are replaced between runs. This adds manufacturing tolerance and requires wider blades, which can limit hydraulics and bit cleaning.

MOVING PARTS

More recent attempts to solve this problem have added the significant complexity of moving parts that can fail and cause junk in hole risk.



ADVANCING TECHNOLOGY

Ultrerra is constantly developing innovative bit technologies to better adapt to changing operating conditions and specific application requirements.

COUNTERFORCE®

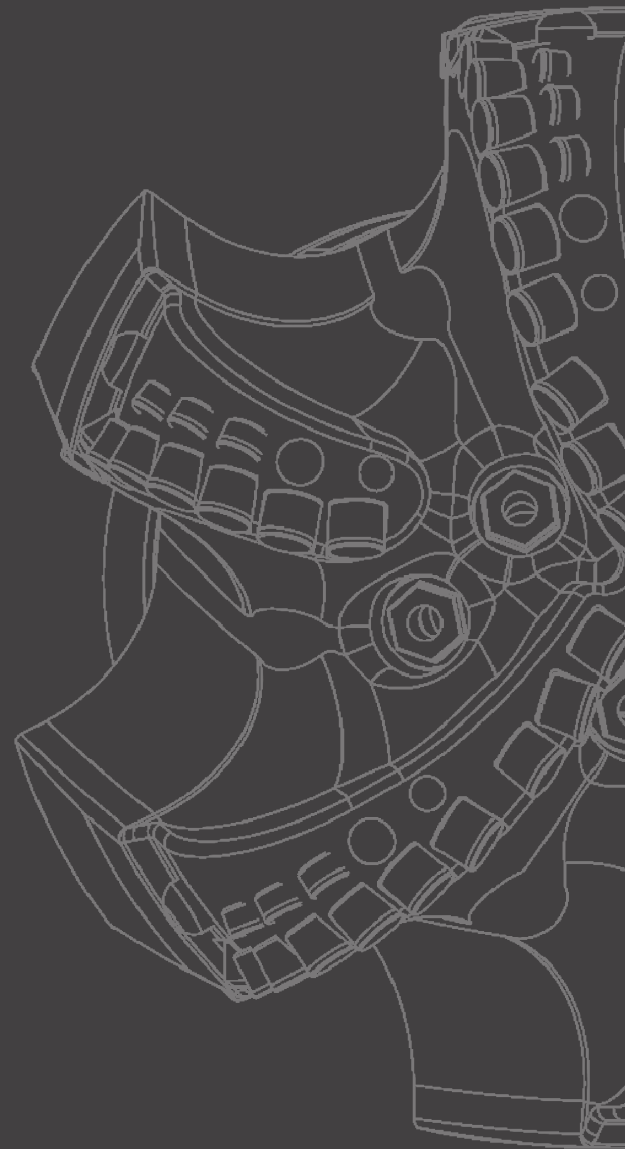
The unique cutter configuration minimizes bit-reactive torque and vibration, providing more lateral stability and improving drilling efficiency.

SPLITBLADE™

The unique blade design and superior hydraulics significantly improves cuttings evacuation and prevents recirculation for better cutter performance and ROP.

ULTERRA IS DEDICATED TO MAXIMIZING THE EFFICIENCY OF OIL AND GAS DRILLING OPERATIONS THROUGH THE USE OF GROUNDBREAKING DRILL BITS AND APPLICATION SPECIFIC TECHNOLOGIES. THROUGHOUT THE WORLD'S DRILLING BASINS, WE ARE BUILDING OUR REPUTATION ON PERFORMANCE.

LET ULTERRA SHOW YOU HOW WE CAN IMPROVE YOUR DRILLING EFFICIENCIES AND LOWER YOUR COSTS. VISIT [ULTERRA.COM/RIPSAW](https://www.ulterra.com/ripsaw) OR CALL 1-844-ULTERRA.



201 Main Street, Ste 1660
Ft. Worth, TX 76102
1-844-ULTERRA

[Ultrerra.com/RipSaw](https://www.ulterra.com/RipSaw)