

StingBlock 16000, CZ1516

Advanced stabilization conical element cutter block

APPLICATIONS

- Challenging drilling applications
- Medium- to high-strength formations
- Conditions with high risk of shock and vibration causing damage to the cutter block

BENEFITS

- Improved footage and ROP for increased drilling efficiency
- Enhanced stability for improved BHA durability
- Increased point loading to better fracture hard-to-drill formations

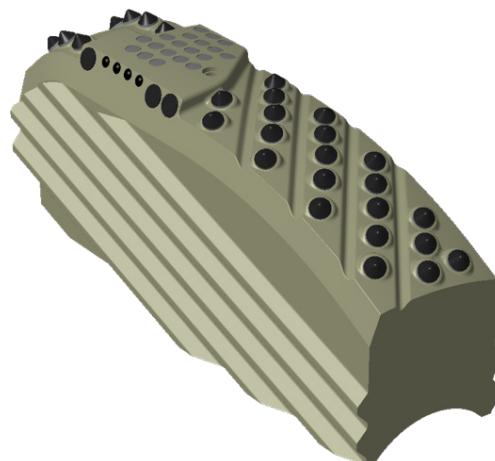
FEATURES

- Enlarged-gauge pad reduces lateral displacement for better stability
- Unique geometry of Stinger* conical diamond elements provides increased impact resistance
- Nonlinear cutter alignment disrupts drilling harmonics and increases efficiency
- Compatibility with all Rhino* integrated borehole enlargement systems improve operational flexibility
- Diamond semiround top (SRT) inserts along leading edge of the gauge pad better resist abrasive formations

The series 16000 StingBlock* advanced stabilization conical element cutter block improves footage and ROP in challenging drilling applications that pose a high risk of vibration to the BHA and impact damage to conventional cutter blocks. This unique-geometry cutter block features an enlarged-gauge pad for increased stability and Stinger conical diamond elements for enhanced impact resistance. Field tests have demonstrated up to a 29% increase in ROP and a 56% increase in footage compared with benchmark results in the Gulf of Mexico.

Enhanced stability for shock and vibration mitigation

In high-impact and challenging applications, cutter blocks with a standard-gauge pad lack the necessary stabilization when encountering hard and interbedded formations. The increased area of the main gauge pad uniformly distributes the cutter block forces, enabling significantly enhanced stability with lower lateral displacement. During testing of multiple cutter block sizes in different formations, finite element analysis (FEA) simulation studies show an average of 65% less lateral vibration compared with standard blocks. Full-scale drilling tests demonstrated an average reduction of 83% in lateral vibration.



The StingBlock cutter block shown is for an operational range of 18½ to 22 in.

Specifications

Total cutters	93
Reaming cutters	63 Stinger elements, 14 mm 6 PDCs, 16 mm
Backreaming cutters	21 Stinger elements, 14 mm 3 PDCs, 16 mm
Blocks	3
Rows	15 (5 per block)
Opening range	18½ in–22 in

Operating parameters are typical ranges. Contact your Schlumberger representative for individual well recommendations.

Cutter block nomenclature

C Z 1 5 1 6



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