

StingBlock 10000, CZ913

Advanced stabilization conical element cutter block

APPLICATIONS

- Challenging drilling applications
- Medium- to high-strength formations
- Conditions with high risk of vibration and excessive 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

- Staged-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 improves operational flexibility
- Diamond semiround top (SRT) inserts along leading edge of the gauge pad better resists abrasive formations

The series 10000 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 11 to 12¼ in.

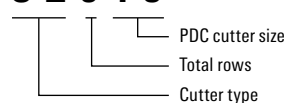
Specifications

Total cutters	92
Reaming cutters	38 Stinger elements, 14 mm 35 PDCs, 13 mm
Backreaming cutters	8 Stinger elements, 14 mm 11 PDCs, 13 mm
Blocks	3
Rows	9 (3 per block)
Opening range	11 in–12¼ in

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

Cutter block nomenclature

CZ913



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