

SMITH BITS

A Schlumberger Company



Kinetic

Diamond-impregnated drill bits



For tough, abrasive formations, Kinetic diamond-impregnated drill bits improve durability and ROP in the most rigorous drilling conditions. These bits are capable of drilling out float equipment and are also effective where softer formation is encountered or in overbalanced formations where drilling with conventional bits yields low ROP and footage.

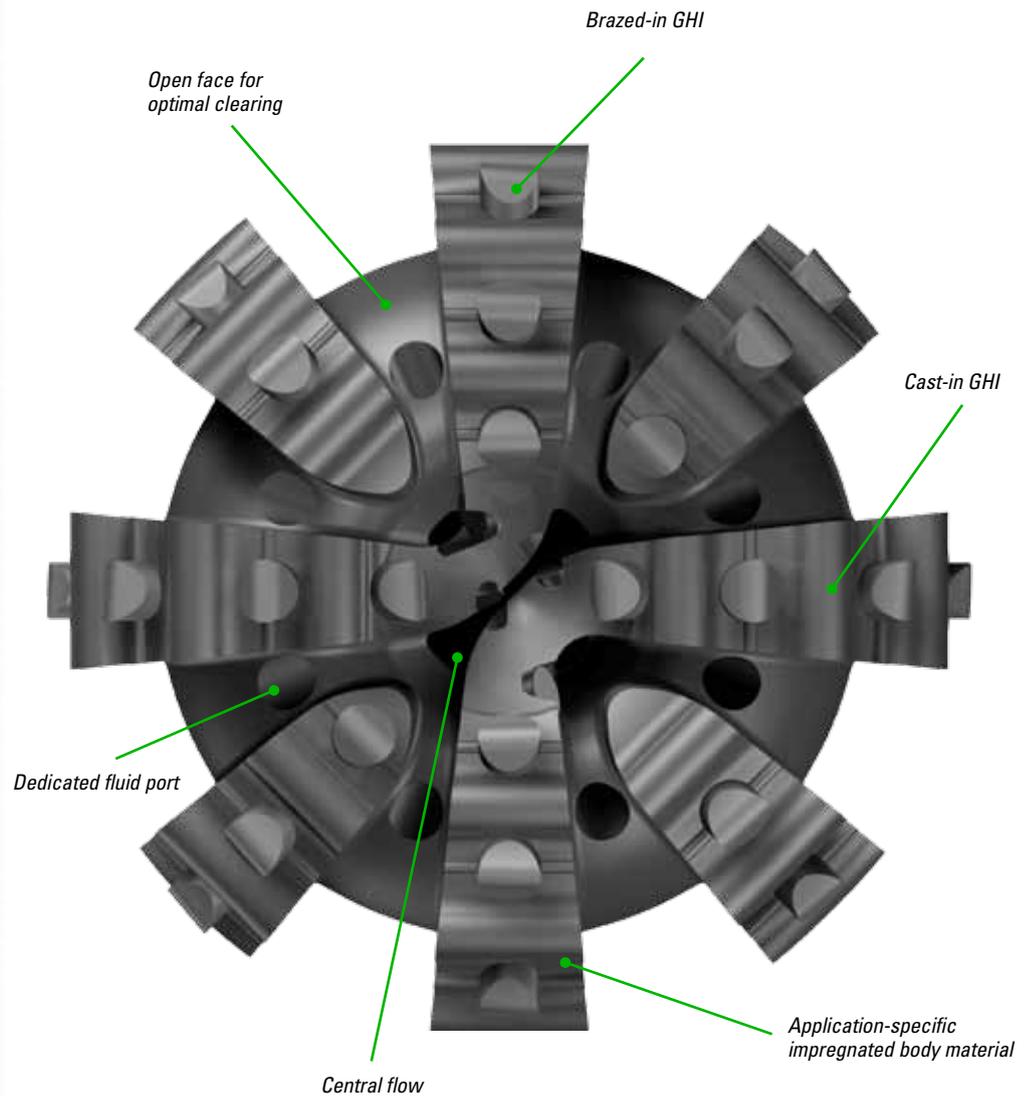
Kinetic drill bits are extremely effective when run on turbodrills and high-speed positive displacement motors (PDMs). The higher rotation velocity possible with these tools exploits the Kinetic performance potential.



Application-specific materials

Kinetic* drill bits use materials specifically chosen to optimize durability and performance in tough formations. Critical to achieving this performance are GHIs. These inserts comprise a proprietary combination of diamond crystals and tungsten carbide matrix powder that is tailored to the material properties of the drilling application. Kinetic GHIs use a granulation process that ensures a uniform diamond distribution unattainable with conventional inserts. This process makes Kinetic GHIs more durable and able to drill faster for a longer period of time.

In addition to these superior GHIs, Kinetic bits have specially engineered matrix-impregnated body material with improved diamond quality and retention, along with TSP diamond inserts on the gauge. The TSP diamond inserts are positioned to maximize gauge retention by the bit, and in extremely abrasive conditions, they are placed on the bit shoulder for more durability and wear resistance.



Hydraulics

As an engineering focal point of Kinetic bits, Kinetic hydraulics make effective drilling of mixed lithologies possible at high ROPs and reduce the need for tripping to change bit types. Using a combination of central flow fluid distribution and precisely placed ports, Kinetic hydraulics enhance bit cooling and cleaning, which is especially important when running Kinetic bits in softer formations.

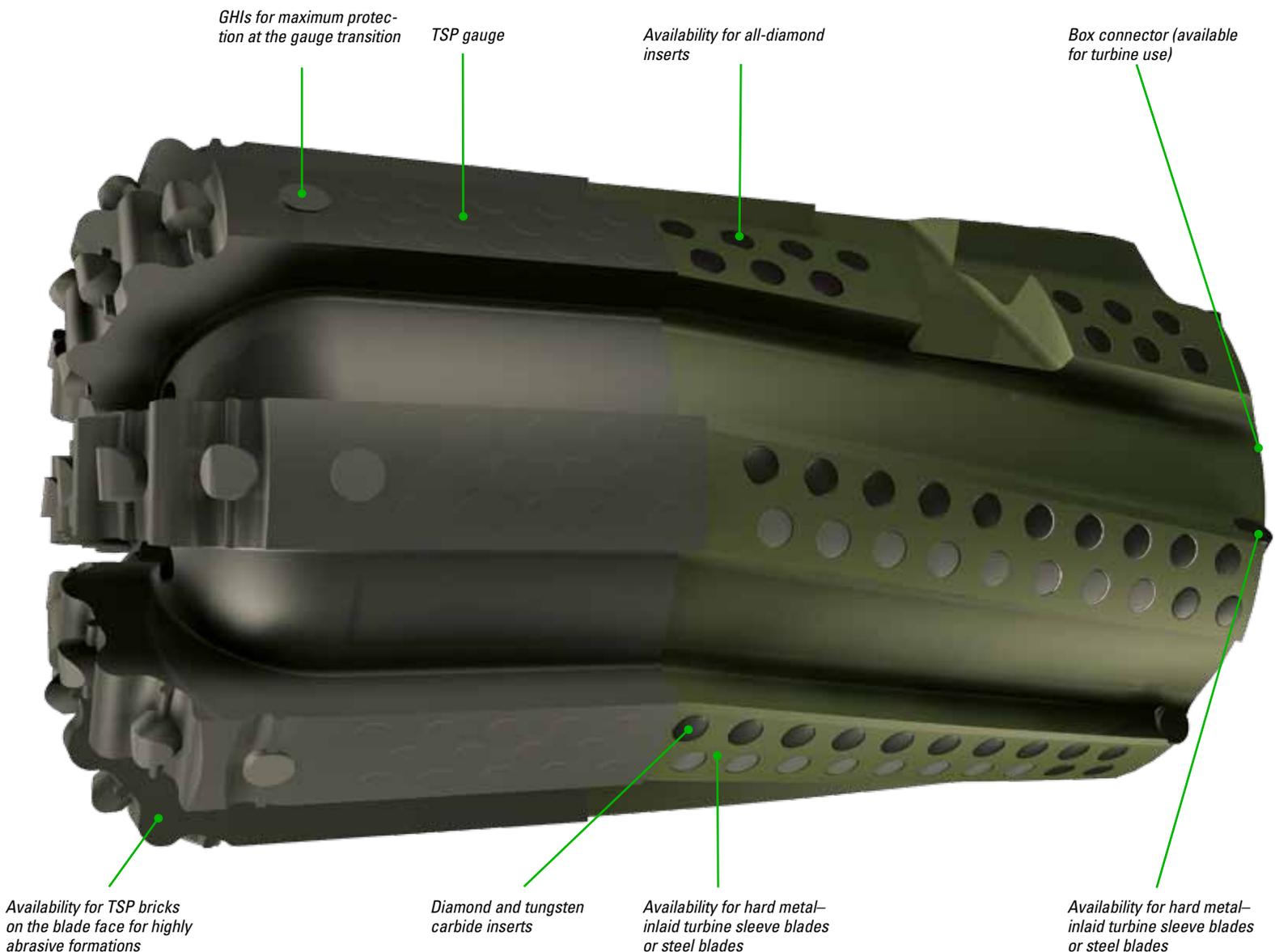
Cutting structure and bit profile

The cutting structure of Kinetic bits improves drillout capability and ROP. Premium PDC cutters are strategically placed in the cone area and are backed up by impregnated material to ensure durability. Cutting structure design also features increased blade height that makes placing large volumes of diamond material possible, resulting in increased nose and shoulder durability while retaining solid gauge protection. Extra blade height also translates to more footage drilled over conventional impregnated bits.

The unique profile design of Kinetic drill bits is specific to the application and the drive system being used. The profile is tailored to optimize performance whether the Kinetic bit is run with a PDM or on turbodrill.



Open face for optimal clearing



Kinetic

Superior energy for drilling



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