VENOM™ Cutter Technology

The VENOM™ Cutter methodology identifies the right PDC cutter to solve the key challenges within the application. Using the right diamond and diamond shape helps eliminate risk and maximizes value. Ensuring the correct diamond attributes are emphasized is the key to delivering consistent and reliable performance while keeping the cutters sharp and engaged. Sharp cutters drill faster – ALWAYS!

Cutter Attributes:

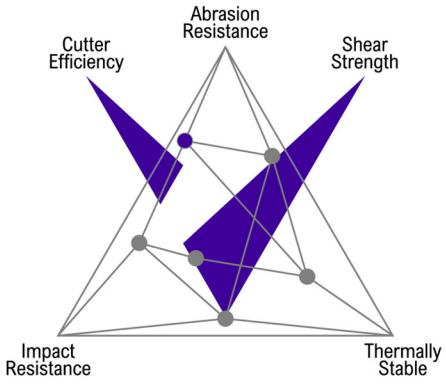
The VENOM™ Cutter methodology identifies the right PDC cutter to solve the key challenges for the application. Key diamond attributes can be enhanced to better match the demanding need. By selecting the diamond blend that best suits the need, the cutter will stay sharper, longer.

Abrasion: Enhancing the abrasion attribute will target the hard sandstone and siltstone drilling environments. Higher diamond density Venom product keeps cutters sharp.

Impact: Impact damage can abruptly stop a successful run. Diamond that does not crack and, if it does crack, it does not expand helps keep the bit in the ground.

Thermally Stable: Focus on the thermal attribute allows cutters to endure higher temperatures for longer. This is a key for long runs with high friction heat generation due to the rock and parameters.

Cutting Efficiency: Modification of the physical shape of the cutter can enhance the cutting efficiency. This upgrade can allow for improved ROP and/or durability.



and application, the bit will fail quickly and premature trips happen. Matching this attribute to the need makes for consistent bit runs.

Five proprietary cutter technologies born from precision manufacturing processes – delivering robust, abrasion-resistant, and thermal cutting solutions:

Venom cutting efficiency is maximized by enhancing the base diamond material with specifically engineered shapes. These shapes are focused on improving drilling speed and/or durability.

ARTIMIS: Leading edge geometry creates a stress point in the formation to pre-fracture the rock. Application is hard formation with heavy transitions. Can be setup to attack chert.

FANG: . A sharp-edged cutter to be active and pre-fracture the rock as a backup or secondary cutter. Used to get higher ROP's with lower energy requirements.

COBRA: A combination of the Fang shape blended with Artimis ridge. This layout is useful in lateral runs to increase both speed and durability.

HYDRA

An applications-driven program that combines the technologies of CFD and cutting structure design which led to a breakthrough in designs for the industry that are original. Unique features are apparent with webbed blades, curved nozzles, and engineered junk slot designs.

Features / Benefits:

Curved nozzles reduce the stream impact to the

NEW

Drilling Solutions

HAVOX™

HAVOX PDC Lateral "Hold" Drill Bit series has been developed specifically for drilling applications where holding direction with speed and reliability is essential. HAVOX delivers smooth torque, advanced directional control, excellent well bore quality, and dynamic stability to meet your challenge for any directional or lateral wellbore application.

Designed as a Solution Drill Bit:

- Horizontal and any combination of applications where holding trajectory is key.
- For soft to hard formations.
- For any motor, rotary steerable, and high-speed motor application.

Features/Benefits

Engineered and tested gage configurations to match any directional systems requirements to maintain trajectory.

VAREL VENOM cutter technology provides data that allows designers to compare an array of PDC cutters for a specific solution to your drilling needs. As a result you get a bit that is designed for maximum performance for your unique application and ultimate value for your bottom line.

Download Product Info

For specs, applications, availability, costs and shipping please contact your local Varel Rep today.

Call: 1(281) 272-6000
Email: info@varel.com

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WELL CONSTRUCTION

COMPLETION SOLUTIONS

HAVOX™

PDC Directional "Hold" Drill Bits

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Application

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VAREL ENERGY SOLUTIONS

VAREL DRILL BITS
A VAREL ELITE BRAND