



High performance FUSION bits are the latest in design, materials, and manufacturing science for diamond impregnated drill bits. The FUSION product is a highly flexible series that allow materials and designs to be quickly adjusted to the requirements of a specific application. The result is optimal drilling performance in very challenging formations.

### Application

- Vertical, Directional, Horizontal, and Tangent wells.
- For medium hard to extremely hard formations with high abrasive content and/or hard carbonate drilling.
- For all high speed motor and turbine applications.

### Features / Benefits

- Controlled Atmosphere Infiltration reduces oxidation and graphitization to improve bit wear characteristics and durability.
- Pelletization prevents diamond aggregate and reduces areas of low diamond concentration to a more uniform stone distribution within the matrix material.
- Diamond Impregnated HIP Segments undergo a sintering process to achieve reduced porosity and are then placed in the face of the bit in specific patterns determined by SPOT-DN, Varel's proprietary design software.
- Optimum Hydraulics are utilized as each design undergoes extensive computational fluid dynamics evaluation to ensure regrinding and recirculation of cuttings is eliminated.