

Perfect Point Announces Release of the “CARBONITE”



The Future of PCB Drilling

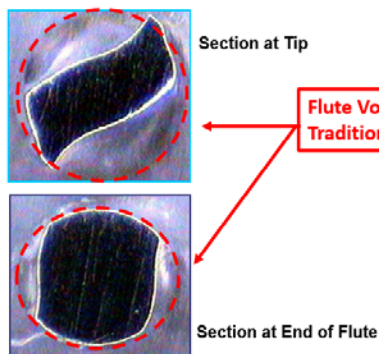
Perfect Point is proud to announce the release of the Patented “CARBONITE” Carbide Tool. The “CARBONITE” is an enhanced hybrid- single- flute geometry with a proprietary coating. The “CARBONITE” is designed for ultra-high technology, extremely high-aspect-ratio builds, and HSSL substrates.

The “CARBONITE” offers excellent accuracy due to a significantly thicker web design. The Single-Flute geometry offers a much greater flute volume allowing for better debris evacuation as compared to traditional two-flute designs.

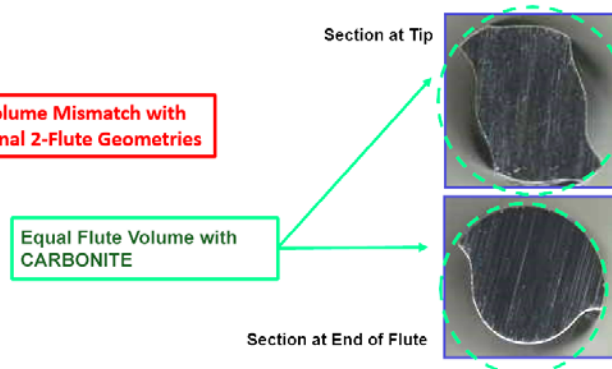
In addition to these design attributes, the “CARBONITE” has a proprietary coating allowing for improved wear resistance and better debris evacuation. The lubricious finish of the tool results in a cooler drilling process. This coating is only a fraction of the cost of Diamond-like coatings and results in cleaner holes and dramatically improved HWQ.

Shane Stewart, VP Perfect Point, commented: ***“We are delighted to introduce our New CARBONITE tools to North America. This revolutionary design will allow PCB manufacturers to eliminate the need for premium backup and entry materials. Our “CARBONITE” tools perform better than Diamond-coated tools at a much lower cost.”***

Traditional 2-Flute Design



Perfect Point CARBONITE



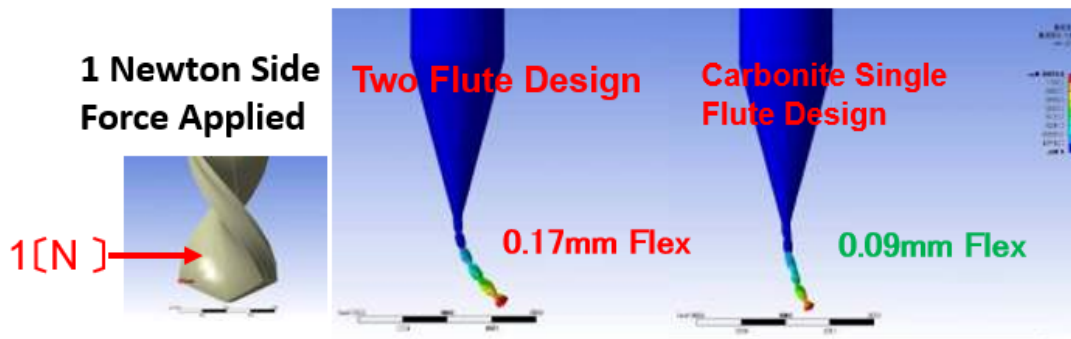
The Science behind the CARBONITE:

Standard two-flute designs have more flute volume near the point, and less near the shoulder. This flute volume “mismatch” causes debris pressure within the flutes and creates greater frictional contact against the hole wall. This frictional contact generates heat and causes wear. Hybrid single-flute tools have an equal flute volume at tip and shoulder for a more consistent debris evacuation, minimalizing heat and wear during the drilling process.

The Thicker web of the tool provides excellent rigidity, therefore this tool is offered in Extended Flute Lengths allowing for Aspect Ratios exceeding 30:1.

As can be seen below the CARBONITE is a much stronger and more rigid tool design that is far less prone to deflection.

Core Rigidity / Side Force Test



The proprietary coating used on the “CARBONITE” has a hardness rating of Hv3500~7000 and friction coefficient of ≤ 0.1 . The coating provides a significant reduction to *Carbide Surface Abrasion* which helps maintain sharp cutting surfaces for prolonged tool life. The cost of the coating is only a fraction of the cost of ownership for diamond-like coatings.

Please contact Perfect Point for more information on the “CARBONITE”:

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