



FOR IMMEDIATE RELEASE

August 26, 2008

For more information, contact:

Nick Ciavarella, Manager of Marketing & e-business

Phone: (330) 686-5700

webmaster@sgstool.com

**PATENTED Z-CARB-AP™ ADVANCED PERFORMANCE
VARIABLE RAKE END MILLS FROM SGS TOOL COMPANY**

SGS Tool Company, the leader in high performance tool design, offers the Patented Z-Carb-AP Variable Rake End Mill designed specifically for superior chatter suppression. With most end mills, the cutting teeth enter and exit the material creating a natural rhythm that results in damaging harmonics. The harmonics produce a frequency that resonates through the entire tool, resulting in one of the most damaging forms of cutter wear known as chatter. The Z-Carb-AP, with its patented, one-of-a-kind geometry, offers **three stages of chatter suppression** resulting in the quietest, most stable milling experience available.

In Stage One, unequal flute spacing helps to disrupt the rhythmic pattern created by the cutting edge of typical end mills, which helps to suppress the development of damaging harmonics.

In Stage Two, the patented unequal helix design aids in eliminating the damaging harmonics that occur during typical machining by changing the angle at which each cutting edge enters and exits the material during the milling process.

In Stage Three, the rake angle determines the size and shape of the chip, as well as the pressure and temperature of the cutting zone. By incorporating the SGS Patented Variable Rake Geometry, the Z-Carb-AP can alter and control the cutting dynamic like no other tool available, which takes chatter suppression to a whole new level of advanced productivity.



Testing has shown that the three stages of chatter suppression result in a tool that produces up to 75% less sound and a surface finish that is up to 321% smoother than competitive products. The new Z-Carb-AP also offers enhanced corner geometry with a tighter tolerance corner radius for more accurate machining and geometry that offers improved shearing capabilities while producing less tool pressure. Lower cutting forces promote longer tool life, and testing has shown that after 500 inches of use, the Z-Carb-AP showed 43% less edge wear over the nearest competitive product.

Patented, advanced performance Z-Carb-AP end mills are coated with SGS' exclusive Ti-NAMITE-A® (AlTiN) coating for increased tool life.

Headquartered in Munroe Falls, OH, SGS Tool Company's single focus is on solid carbide rotary cutting tools which are all manufactured with pride in the USA. With over 13,000 fractional and metric tools, worldwide sales offices and unparalleled technical support, SGS is committed to providing its customers with revolutionary product designs that increase productivity and reduce costs. From patented tool designs to ISO 9001 quality control, SGS is the wise choice for solid carbide rotary cutting tools. Visit our website at www.sgstool.com.

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