

Optimized Machining, Higher Productivity, Longer Tool Life with Insert Grades Designed for Various Workpiece Materials



fore heat generation. Its inherent hardness helps to reduce tool wear, and any wear that does occur is easily identifiable. Consequently, inserts require changing less frequently.

WNT also offers an associated document to give engineers practical selection advice. It links

the machining disciplines of turning, milling, and grooving with the five main material groups—steels, stainless steels, cast irons, nonferrous materials, and heat-resistant alloys—such that users can quickly identify the best insert grade for a particular application and then select a specific insert and cutting data.

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WNT has introduced five Mastertool Dragonskin families of coated insert grades to provide a high-performance system for machining the most commonly encountered material groups. Coated via physical (PVD) or chemical vapour deposition (CVD), these grades are designed to optimize machining, extend tool life, and increase productivity, while making tool selection simpler. They feature a characteristic series coating structure and surface treatment that was developed through a new coating technology.

With respect to PVD coating, Mastertool Dragonskin effectively redefines the technology. The series overcomes past limitations due to low heat resistance, an improvement made possible by a newly developed nanostructured PVD coating, new substrates, and positive geometries. This combination keeps cutting speeds high when machining steel, stainless steel, or difficult-to-machine materials such as heat-resistant superalloys.

With the CVD-coated inserts, Mastertool Dragonskin integrates elements such as boron to enhance the coating's tribological effects. This, along with a new ability to apply single- and multi-layer coatings in extremely precise thicknesses, has resulted in significant improvements in cutting performance.

The surface of an insert coated using the Mastertool Dragonskin technique minimizes friction, and there-