

BC8220 COATED PCBN GRADE – NEXT GENERATION TECHNOLOGY

Hardened Steel Turning

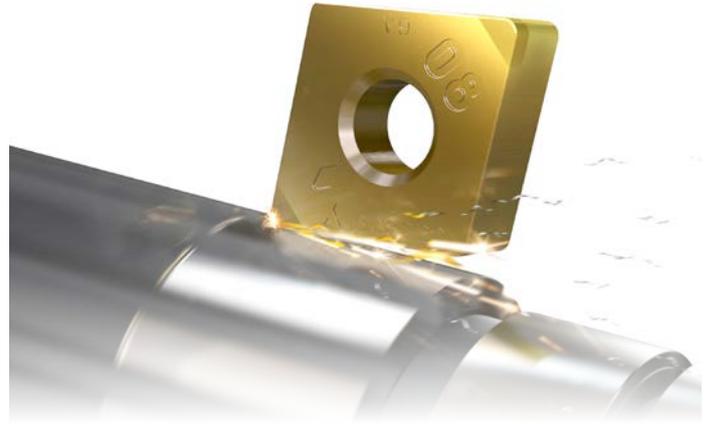
For the effective light to medium continuous and interrupted turning of high hardened steels, Mitsubishi Materials has developed a new and innovative coated PCBN insert grade, BC8220. In doing so it has extended its comprehensive range of turning inserts. The grade incorporates the company's state of the art coating technology that provides outstanding wear resistance, as well as providing a product that improves productivity and usability.

At depths of cut up to 0.8mm and at cutting speeds up to 250m/min means a market leading range of applications can be covered by a single grade. This brings a simplification of choice for the production programming and reduces inventory costs.

High Technology Substrate and Coating

The new line of inserts delivers a variety of performance and benefits through constant refinement and R&D work. This has created a new sintered substrate containing both micro and medium grain CBN particles, but with an ultra micro-particle binder. This new binding technology in the substrate provides ultra heat resistant and prevents sudden fracture by eliminating the potential for linear crack development. With the cutting forces being dispersed radially by this new binder formula, BC8220 excels when machining extremely hard steels. Additionally, this new substrate enables a wider range of applications, provides greater chipping resistance and wears less.

The latest technology has also been applied to a specially developed, multi-layer PVD coating that the BC8220 grade utilises. This all new multi-layer coating includes a TiAlN bottom layer that greatly improves adhesion between the base layer and the CBN surface and provides exceptional peeling resistance. Above this layer is an additional TiAlN layer that provides outstanding chipping and crater wear resistance. Together with a gold coloured, TiN top layer for



easy identification of used edges, BC8220 achieves high performance and reliability over a wider range of hardened steel machining applications than other grades.

Choice of Edge Honing and Chipbreakers

A brand new edge honing, named VA, has been included in the choice of BC8220 inserts. It is an ideal all-round honing for light to medium machining and complements the existing GA, GH, TA and TH types.

Two chipbreakers, BF and BM complete the series. The BM type is designed for easy and effective removal of carburised layers at depths of cut up to 0.8mm. The BF type is now available as a standard item and can be combined with a wiper geometry for producing outstanding surface finishes.

Availability

The initial launch of BC8220 will include an extensive range of negative geometries with multiple cutting edges in CNGA, CNGM, DNGA, DNGM, SNGA, TNGA, VNGA and WNGA types, plus positive CCGT, CCGW DCGT DCGW TPGB CPGB VBGW VCGW geometries.

Newly developed PVD coating for BC8220

