

Press release

GARANT HB 7010-1 turning grade: the highest cutting speed for maximum productivity

The Hoffmann Group is expanding its product family and taking inspiration from nature

Munich, 20 June 2016 – The Hoffmann Group, Europe's leading system partner for quality tools, is introducing a new turning grade for steel machining to the market. The new GARANT HB 7010-1 turning grade was developed to achieve wear resistance at the highest cutting speeds. For this purpose, the Hoffmann Group has reconstructed the innovative coating of the GARANT HB 7020 that was introduced in summer 2015 so that it now features a P10 gradient carbide that is optimised for continuous high-performance cutting. The new GARANT HB 7010-1 is therefore the ideal tool material for continuous cutting, while the GARANT HB 7020 is suitable for lightly interrupted cutting and difficult operating conditions. The GARANT HB 7010-1 can be ordered now from the Hoffmann Group e-shop at www.hoffmann-group.com and from the new 2016/2017 catalogue which will be published in August.

A shark's tooth was the inspiration for the Hoffmann Group when developing the GARANT HB70xx product family: a hard and extremely smooth exterior and a ductile interior – these are the features that set the new indexable insert apart. The GARANT HB 7010-1 has an extremely hard, wear-resistant and thermo-resistant CVD coating made of aluminium oxide Al_2O_3 and titanium carbonitride $Ti(C,N)$, which protects the carbide substrate, even at high cutting speeds and process temperatures. The carbide substrate is particularly resistant to plastic deformation, splintering and brittle fracturing as it is extremely ductile. This turning grade therefore reaches a significantly longer tool life with continuous cutting and at high cutting speeds.

The coating is particularly resistant thanks to straightened crystal structures. Its extremely smooth surface enables optimum chip evacuation via the insert surface and

reduces the friction between the component and the tool material – this lowers the process temperatures.

In contrast to the casing, the core of the indexable insert is ductile. The carbide substrate is graded, which means that it has an increased proportion of titanium nitride (TiN) in the outer layer in order to adapt the thermal expansion coefficient to the coating. As a result, the coating optimally adheres to the substrate and because of the similar thermal expansion coefficient, the coating cannot shear away, even at high process temperatures.

With the new GARANT HB 7010-1 for continuous cutting and the GARANT HB 7020 for lightly interrupted cutting, the GARANT HB 70xx product family from the Hoffmann Group offers a suitable tool material for every application.

Find more information online using the following links:

- Brochure: Powerful! Unique cutting tool material inspired by nature:
https://www.hoffmann-group.com/medias/sys_master/images/images/h1d/hc6/8976143089694/05018-en-screen-Homepage.pdf?attachment=true
- Video: "A unique cutting tool material inspired by nature":
<https://www.hoffmann-group.com/GB/en/houk/company/garant/garant-innovationen/hb-7020>

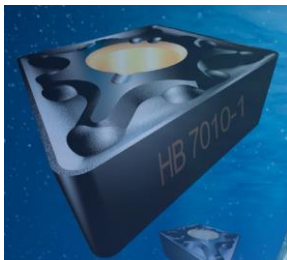


Photo caption: GARANT HB 7010-1 is the ideal tool material for continuous cutting. The indexable insert is visually the same as the GARANT HB 7020, which is suitable for lightly interrupted cutting and difficult operating conditions.

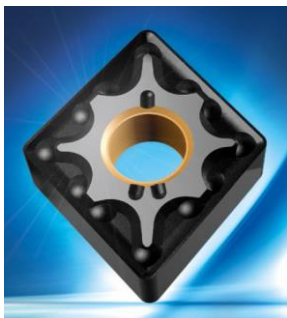
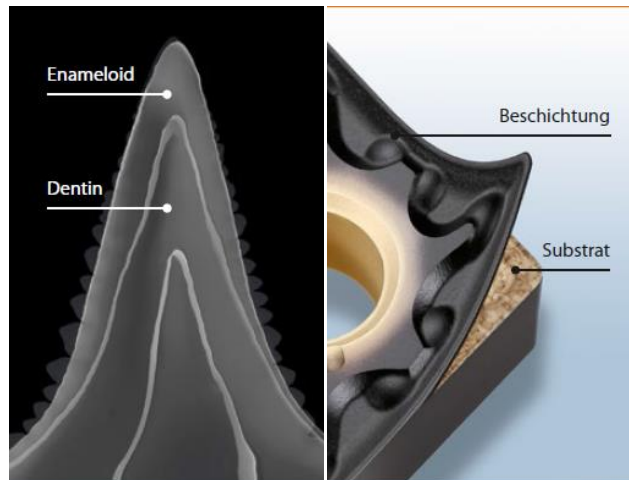


Photo caption: Thanks to a new multi-layer coating system and a gradient carbide substrate, GARANT HB 7010-1 achieves the best cutting data, maximum reliability and a significantly longer service life.

Photo caption: Hard and extremely smooth exterior, ductile interior: Taking its inspiration from a shark's tooth, the GARANT HB 7010-1 achieves optimum hardness and ductility. This is thanks to a CVD coating and a carbide substrate with a graded proportion of titanium nitride (TiN).



The Hoffmann Group

The Hoffmann Group, as Europe's leading system partner for quality tools, combines trading competence with both manufacturing and service competence. This combination guarantees reliability in supply, quality and productivity in the tooling sector to more than 135,000 customers, together with workstations and storage and optimum advice – from individual needs analysis through to efficient use of products. Alongside tools for machining, clamping, measuring, grinding and cutting, the portfolio also comprises hand tools, occupational safety, workstations and storage and workshop accessories. Customers include major listed companies as well as medium-sized and small companies in more than 50 countries. In 2015, the Hoffmann Group generated a worldwide turnover of more than 1.1 billion euros. Including GARANT, its own premium brand, the Hoffmann Group offers 70,000 quality tools from the world's leading manufacturers. With comprehensive customer service and 99 percent delivery quality certified by the TÜV, the tooling expert with their head office in Munich is a reliable and efficient partner for its customers.

See www.hoffmann-group.com for further information

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