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## Press Information

LKT100 – tough inside, hard outside

### **New silicon nitride ceramic for turning cast iron materials**

*Plochingen, 22. March 2022.* The ceramics specialist CeramTec is expanding its portfolio of high-tech cutting materials with the silicon nitride ceramic LKT 100 for the highly efficient turning of cast iron materials. The new cutting material combines the toughness typical of silicon nitride ceramics with increased wear resistance. This increased performance behaviour is achieved through an innovative manufacturing process which allowed CeramTec to influence the composition of the cutting material in the outer functional zone.

"The new cutting material LKT100 offers very good tenacity with excellent wear resistance and particularly high notch sensitivity. It allows large metal removal rates and thus enables advantageous cost-per-part machining results. We have developed the new cutting material for turning and drilling GJL-materials in smooth to heavily interrupted cuts," explains Johannes Schneider, Senior Product Manager Cutting Tools at CeramTec. "Typical workpieces are, for example, brake discs, brake drums and other mass-produced components made of cast iron or also E-motor shells made of GJL that have to be drilled out. The LKT100 is suitable for roughing and rough-finishing with non-uniform and fluctuating allowances and furthermore creates high chip cross-sections."

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### **Newly developed machining step enables wide range of applications**

The indexable inserts made of the new cutting material have a very distinct look. Fine colour nuances of the surface indicate the newly developed machining step by CeramTec for increased wear resistance. At the same time, there is no loss of toughness. This ensures a wide range of applications from smooth, continuous cuts to interrupted cuts and large chip cross-sections. The colour shades do not reduce the cutting performance.

### **Cutting speeds from 400 to 1,000 metres per minute**

The LKT 100 cutting material is designed for cutting speeds of 400 to 1,000 metres per minute, with a cutting depth of up to four millimetres and feed rates of 0.15 to 0.5 millimetres. The optimal data depends on the actual application.

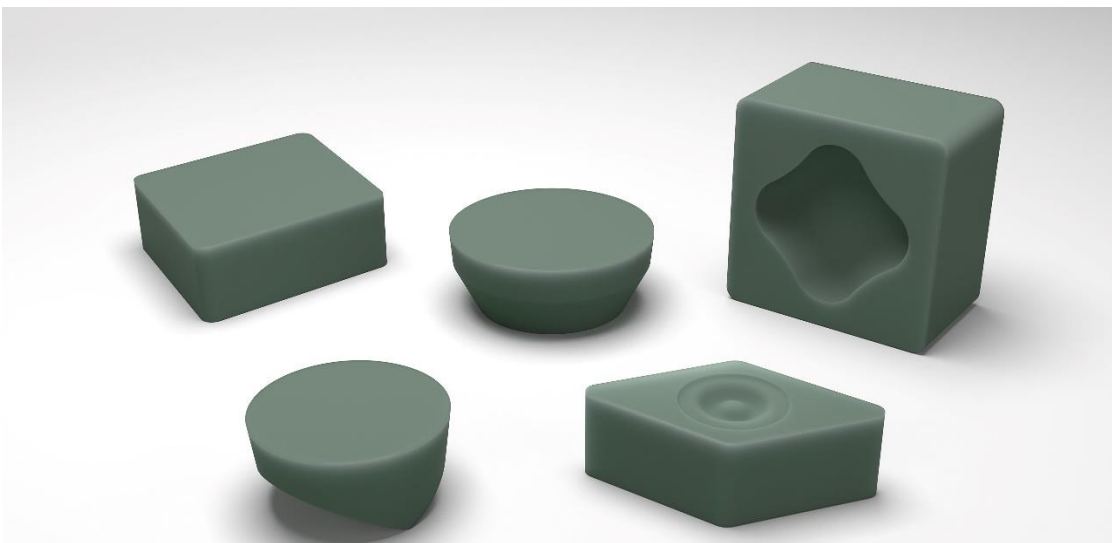
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Notes to the editor



Caption: Silicon nitride ceramics LKT 100 for the turning of cast iron materials

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### About CeramTec GmbH

CeramTec is a world-leading manufacturer of technical ceramics and is specialised in the development, manufacturing and sale of parts, components and products made from ceramic materials. With over a century of developmental and production experience, CeramTec is a global leader in the manufacturing of advanced ceramics and engineers these materials for use in a wide variety of applications. Advanced ceramics from CeramTec are used in a range of industries, including medical engineering, the automotive industry, electronics, energy and environmental engineering, as well as equipment and mechanical engineering. The current portfolio comprises well over 10,000 products, components and parts made from technical ceramics, along with a wide variety of ceramic materials.

With production sites and subsidiaries in Europe, the UK, America and Asia, CeramTec maintains its presence around the globe as a manufacturer and supplier. The company is headquartered in Plochingen, near Stuttgart. In 2019, CeramTec generated over €620 million in revenues. CeramTec employs more than 3,500 staff worldwide, around 2,000 of which are in Germany.

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