



C U T T I N G T O O L S

New PcBN Cutting Material for
Turning Sintered Metals

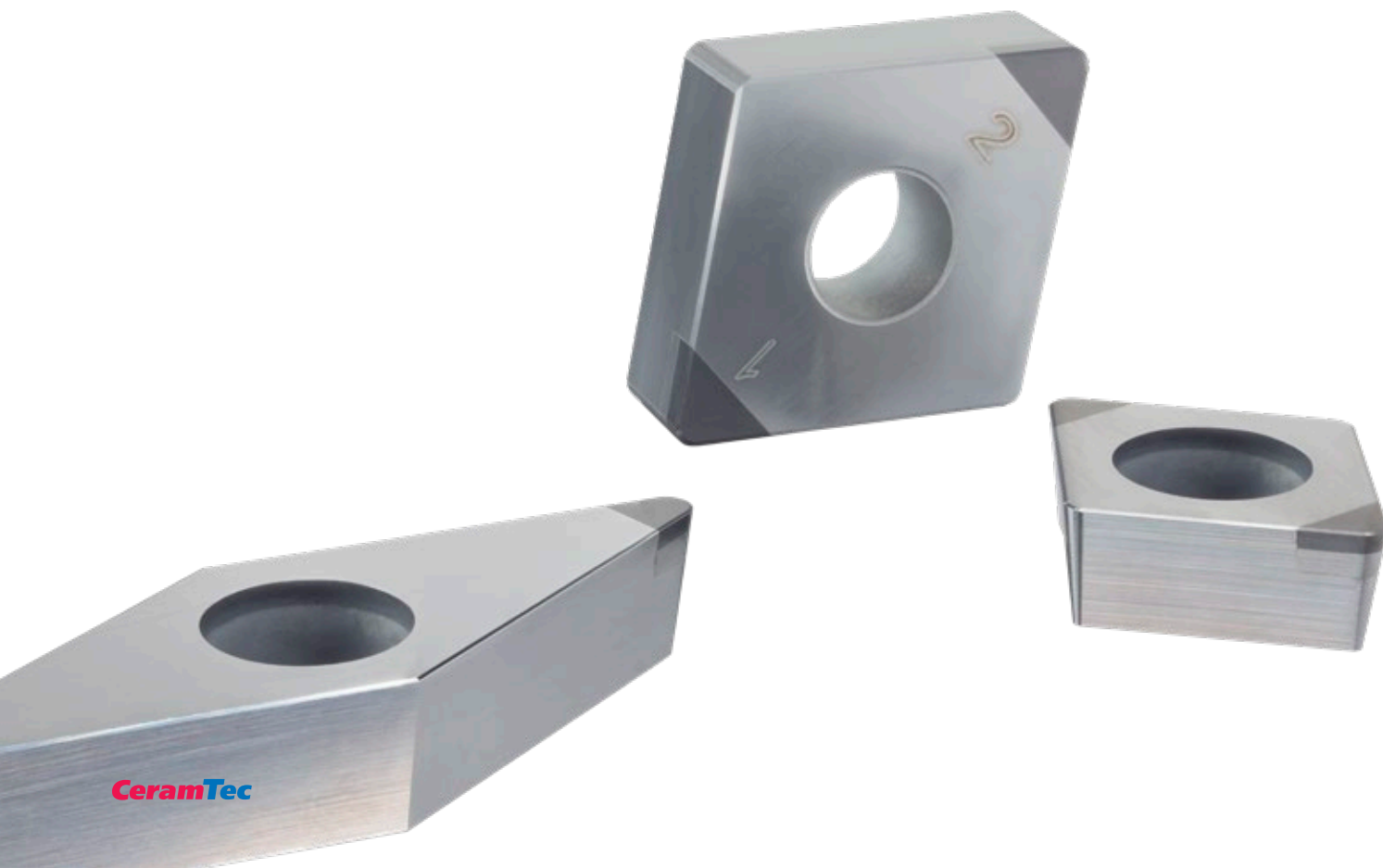
BHT 430

Really the hardness, really great!

Cubic boron nitride is considered the second hardest material in the world - after the diamond. For our new PcBN cutting material BHT 430, we have taken this property to the extreme: With a particularly fine cBN grain and a binder phase optimized for it, we achieve outstanding wear resistance with very good toughness. This makes BHT 430 suitable for turning hardened steels and sintered metals.

Sintered metals in particular are considered to be materials with a great future: They enable new, high-strength material combinations that can be used in press or additive manufacturing processes to form weight-optimized components. Resource-saving thanks to near-net-shape geometries. However, the machining of sintered metals is more difficult due to the reduced thermal conductivity of such materials.

The cutting material BHT 430 solves this challenge and cushions the heat generated temperature peaks at the cutting edge, which is typical in the precision machining of sintered metals.



„Turned, not ground!“



„Anyone involved in the machining of sintered metals has often had to reckon with high tool wear and relatively short tool life. Many of these materials were therefore often only ground in precision machining, which had a negative impact on cost efficiency. With our new cutting material BHT430, we now enable reliable turning of hardened sintered metals.“

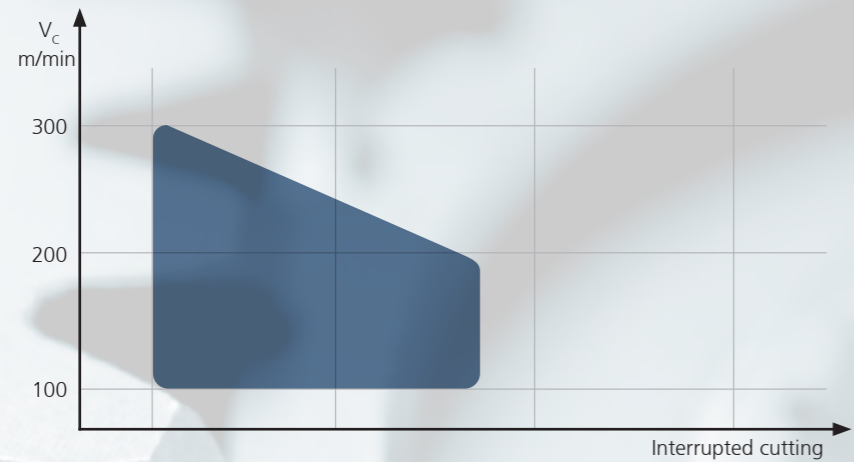
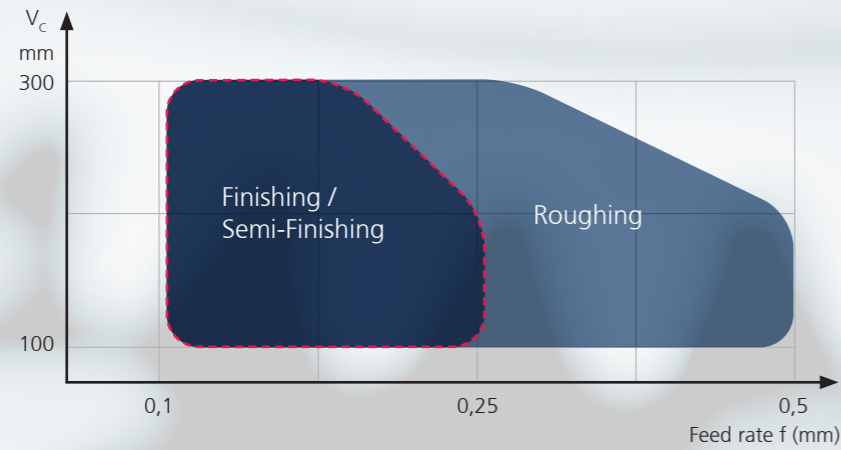
*Dipl.-Ing. Johannes Schneider,
Senior Product Manager Cutting Tools at CeramTec*

Three questions & answers about the PcBN cutting material BHT430:

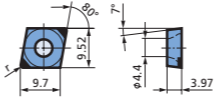
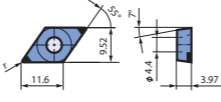
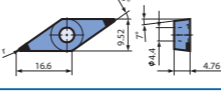
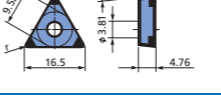
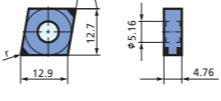
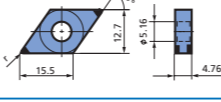
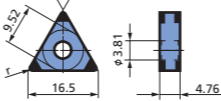
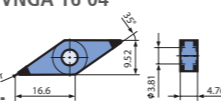
- 1 What cutting data can I run?**
 - $v_c = 100$ to 300 m/min
 - $a_p = 0,1$ to $0,3$ mm
 - $f = 0,05$ to $0,25$ mm
- 2 What can I machine and how?**
 - High speed turning of sintered metals in non interrupted and slightly interrupted cutting.
 - Finishing and semi-finishing, also roughing with doc up to $a_p = 1,5$ mm
 - Main applications in precision machining of components in gear, motor and drive technologies.
- 3 What does it stand for ?**
 - high wear resistance together with good toughness
 - reduced machining times for higher economical efficiency
 - process reliable tool life
 - best cost per part results

Application recommendation

when turning hardened sintered metal



PcBN cutting material BHT 430

INSERT	ISO	GRADE	K													H	S	P	SPK-REF. NO.											
			GJL			GJS			ADI			SI GJS			GJV															
			EN-GJL 150	EN-GJL 200	EN-GJL 250	EN-GJL 300	EN-GJL 350	EN-GJS 400-15	EN-GJS 500-7	EN-GJS 600-3	EN-GJS 700-2	EN-GJS 800-2	EN-GJS 800-8	EN-GJS 1000-5	EN-GJS 1200-2	EN-GJS 1400-0	EN-GJS 450-18	EN-GJS 500-14	EN-GJS 600-10	EN-GJV 300	EN-GJV 350	EN-GJV 400	EN-GJV 450	EN-GJV 500	HARD STEEL	CHILLED CAST IRON	DIE CASTING	HRSA	STEEL	
CCGW 09 T3.. 	CCGW 09 T3 04	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.57.401.37.1
	CCGW 09 T3 08	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.57.402.37.1
DCGW 11 T3.. 	DCGW 11 T3 04	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.57.408.37.1
	DCGW 11 T3 08	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.57.409.37.1
VCGW 16 04 .. 	VCGW 16 04 04	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.57.462.37.1
	VCGW 16 04 08	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.57.463.37.1
TPGW 16 04 .. 	TPGW 16 04 04	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.37.416.37.1
	TPGW 16 04 08	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.37.417.37.1
CNGA 12 04 .. 	CNGA 12 04 04	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.56.406.37.1
	CNGA 12 04 08	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.56.407.37.1
DNGA 15 04 .. 	DNGA 15 04 04	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.56.401.37.1
	DNGA 15 04 08	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.56.402.37.1
TNGA 16 04 .. 	TNGA 16 04 04	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.36.401.37.1
	TNGA 16 04 08	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.36.402.37.1
VNGA 16 04 	VNGA 16 04 04	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.56.409.37.1
	VNGA 16 04 08	BHT 430	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇					◇	◇	◇							◇	◇	◇	◇	48.56.410.37.1

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