

New Cubic Boron Nitride grade CB7025 improves performance



For demanding cuts of case hardened steels



CB7025

New CB7025 – excels in demanding cuts of case hardened steels

A unique application for interrupted cuts and ability to retain high quality surfaces in the machining of case hardened steels signifies the next stage in the Sandvik Coromant hard part turning offer.

CB7025 offers unbeatable performance in unstable conditions and an optimized solution for improved security and reliability. Thanks to dedicated grade properties and the strong

Safe-Lok insert design; this new CBN insert range extends productivity boundaries within the mass production industry by increasing quality and reducing cycle times.



Edge identification system

Each insert edge is permanently marked to give quick and easy reference for order of use.



Increased speed (v_c) capability
CB7025 is a polycrystalline CBN grade of fine grain size with a unique ceramic binder. In continuous to heavy interrupted cuts, this grade can run at high speeds and temperatures and still develop wear in a controlled way.

Increased feed (f_n) with Sandvik Coromant wiper technology
Machine at higher feed rates and still obtain process reliability. This is possible through a patented radius configuration that is less sensitive to misalignment than conventional wipers.

Increased cutting depth (a_p) with large, solid CBN corners
Larger cutting depths become possible when machining up to shoulders, undercuts and in other profiling operations.



Safe-Lok multi-corner technology
Mechanically interlocked CBN corners brazed far from the hot cutting zone provide strength and security superior to conventional tip designs.

Success stories

Component:

Synchromesh ring, gear
59 HRC

Operation:

Internal diameter, facing of inner ring

Cut:

Roughing

Coolant:

No

Depth of cut (a_p) mm:

0.6

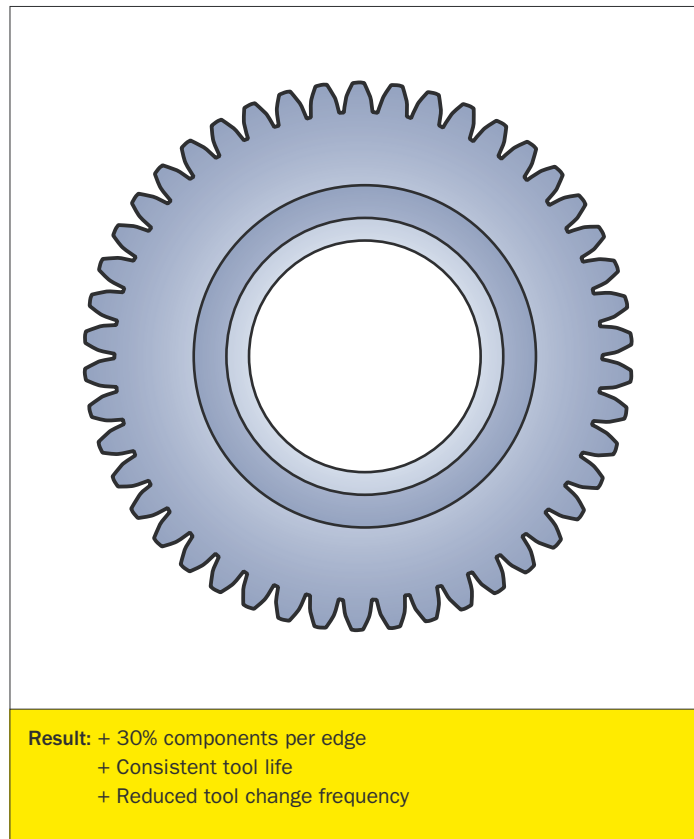
Feed (f_n) mm/r:

0.11

Speed (v_c) m/min:

160

CB7025 was tested against a competitor grade in dry conditions. The grade properties and cutting edge length provided by CB7025 gives better results when machining forged components with varying depth of cut.



Optimized for reliability

Maintaining a good surface finish throughout the tool life is a key factor in HPT success. To preserve edge strength and reliability, crater wear develops at a point further away from the edge line for a unique benefit, especially in demanding operations.

Component:

Camshaft gear

Operation:

Internal and external facing, bore

Cut:

Finishing

Coolant:

Yes

Depth of cut (a_p) mm:

0.1 - 0.2

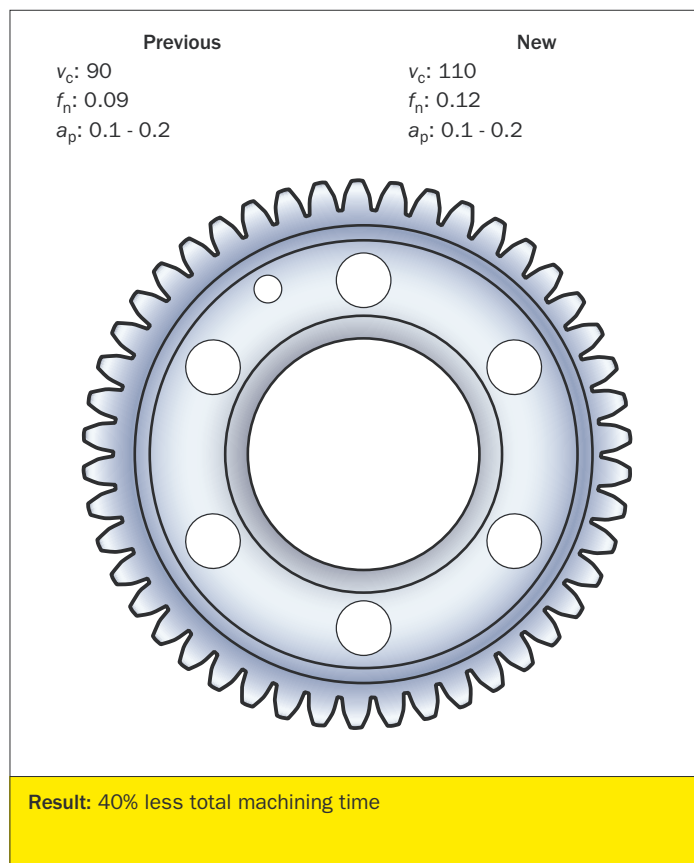
Feed (f_n) mm/r:

0.12

Speed (v_c) m/min:

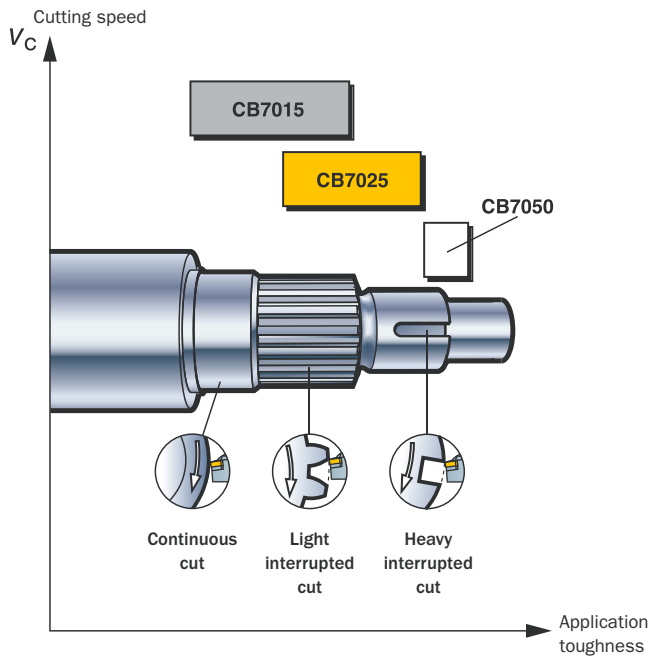
110

CB7025 was tested against an established solution in unstable conditions and showed an increase in the number of components produced per insert. The ability of CB7025 to maintain edge line properties under difficult conditions allows for a significant productivity increase.

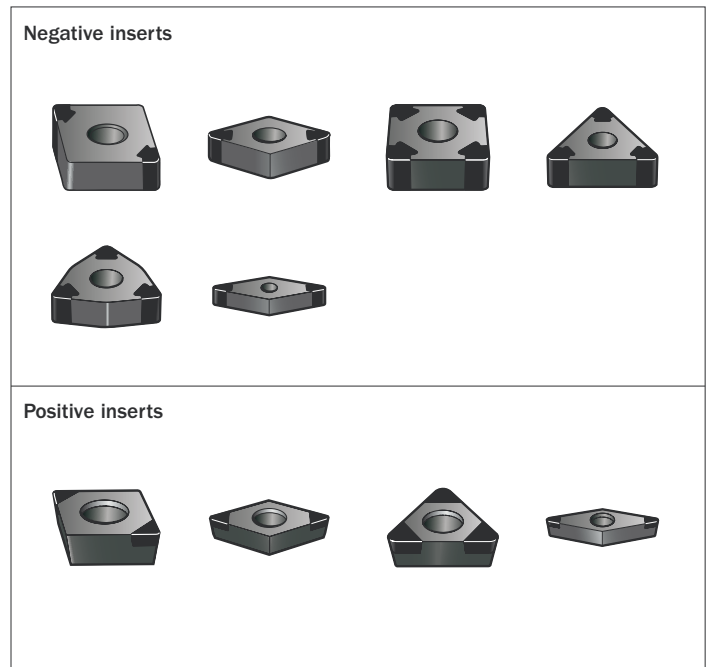


Application area

First choice when turning high quality surfaces of case hardened steels (58-65 HRC). The new CB7025 inserts combine high performance and reliability for materials of high hardness and interrupted cuts.



Insert programme - grade CB7025



For ordering information about the complete insert programme, please refer to the catalogue supplement or main catalogue.

Cutting data recommendations

ISO H CMC No.	Cutting tool material	Operation	Cutting speed, v_c m/min					Feed, f_n mm/r				Depth of cut, a_p mm			
			50	100	150	200	250	0.1	0.2	0.3	0.4	0.2	0.5	1.0	1.5
HARDENED STEEL	CB7025 Cubic boron nitride	Light to heavy interrupted cuts	[Bar chart showing recommended cutting speed range from approx. 100 to 200 m/min]					[Bar chart showing recommended feed range from approx. 0.15 to 0.3 mm/r]				[Bar chart showing recommended depth of cut range from approx. 0.2 to 0.5 mm]			

Head office:
AB Sandvik Coromant
SE-811 81 Sandviken, Sweden
www.coromant.sandvik.com
E-mail: info.coromant@sandvik.com

