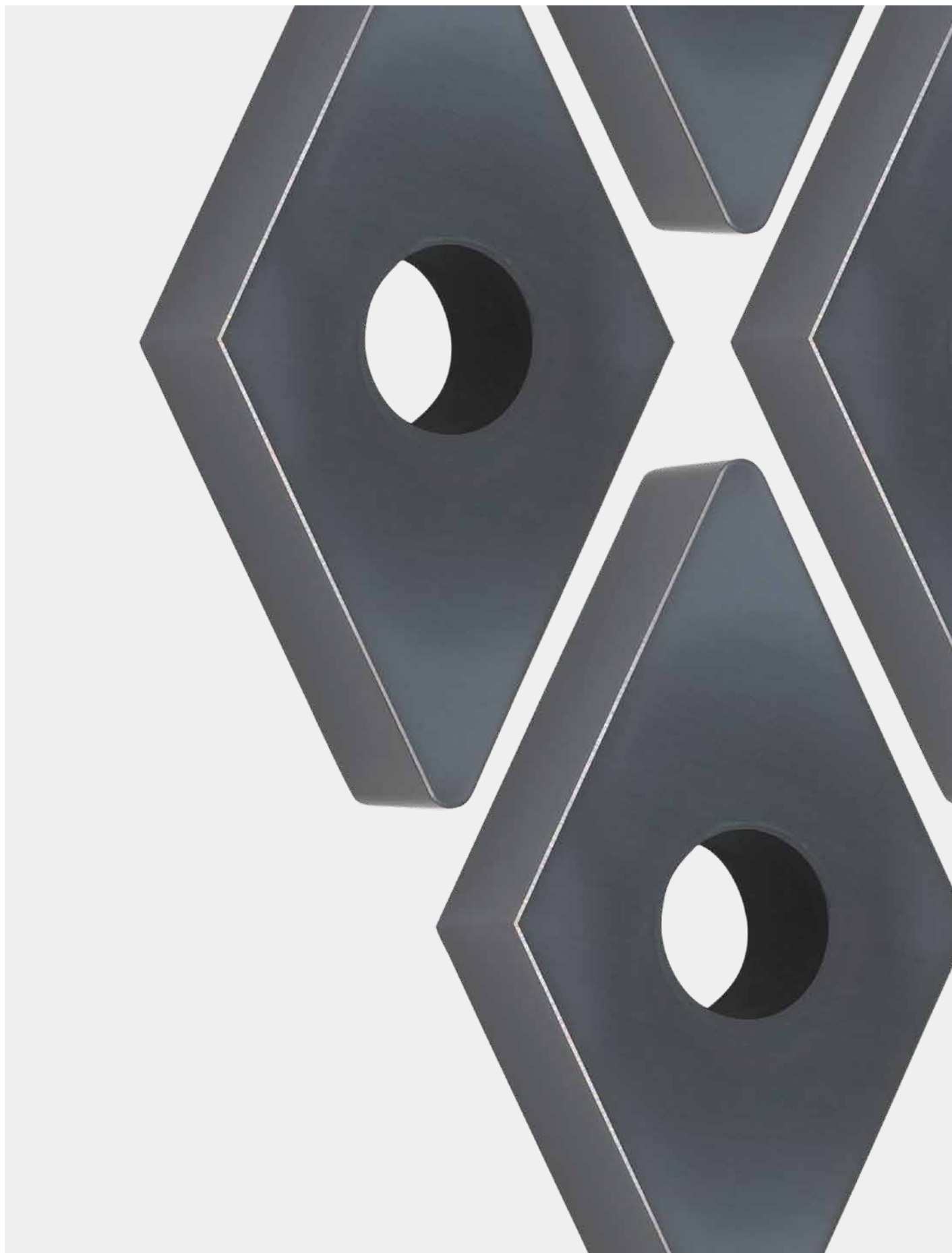



HX5

For Hard Turning in continuous cuts | NTK CeramiX

NTK
CUTTING TOOLS





The ultimate ceramic grade for finishing hardened materials - "NTK CeramiX"

NTK developed this latest game changing ceramic material "NTK CeramiX" to replace CBN.

As a ceramic cutting tool specialist, NTK researches new advancements for ceramics in the industry. We are excited to introduce a new grade that matches CBN on performance.

NTK's CeramiX "HX5" grade provides a cost saving solution for hard turning applications.

HX5

For Hard Turning in continuous cuts | NTK CeramiX

NTK CeramiX HX5

- Wins against CBN with the combination of performance and price.

Matches the excellent wear resistant characteristics of CBN
Significant cost savings compared to CBN

Key points

- NTK CeramiX is an advanced ceramic material achieving the performance to compete with CBN.
- New TiAlN coating offers excellent wear resistance for hard turning.
- In continuous machining materials with a hardness of 55 to 65 HRC, HX5 matches the performance of CBN with the benefit of cost reductions.

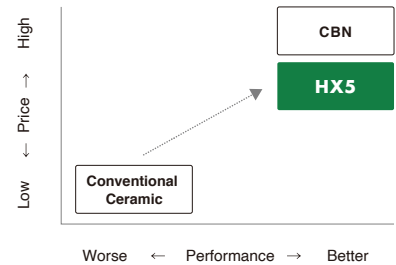
Application area

Hard Turning with continuous cut Hardness range : HRC 55 to 66

Recommended Cutting conditions

Grade	Material	Application	Process	Cutting speed (m/min)	Feed (mm/rev)	DOC (mm)	Without coolant	With coolant
HX5	Hardened materials (HRC55 to 65)	Turning	Finishing	100-200	0.08-0.15	0.1-0.5	●	●
				The same conditions as current CBN				

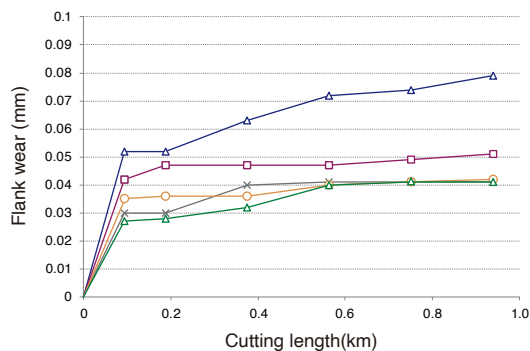
Price and Performance comparison



Material characteristic

Grade	Coating	Density (g/cm ³)	Bending Strength (MPa)	Hardness (Hv)	Fracture Toughness (Mpa · √m)	Structure
HX5	TiAlN Specialized for HX5	7.5	1200	2290	5.7	
Conventional Ceramic	TiN	4.6	1100	2060	4.3	

Wear comparison vs. CBN



Insert Item List

Geometry	Unit : 1pc/case *				Unit : 10pcs/case *				Corner R (mm)	Grade	Dimensions (mm)			
	EDP		Item number		EDP		Item number				HX5	IC	Thickness (mm)	Edge preparation
	5106125	CNGA	120404	X03	5109186	CNGA	120404	X03-10	0.4	●	12.7	4.76	0.1×15° + Honed edge	
	5106117		120408	X03	5109194		120408	X03-10	0.8	●				
	5106091		120412	X03	5109202		120412	X03-10	1.2	●				
	5106083	DNGA	150404	X03	5109236	DNGA	150404	X03-10	0.4	●	9.525	4.76	0.1×15° + Honed edge	
	5106075		150408	X03	5109301		150408	X03-10	0.8	●				
	5106042		150412	X03	5109327		150412	X03-10	1.2	●				
	5106034	TNGA	160404	X03	5109343	TNGA	160404	X03-10	0.4	●	9.525	4.76	0.1×15° + Honed edge	
	5106026		160408	X03	5109392		160408	X03-10	0.8	●				
	5106018		160412	X03	5109418		160412	X03-10	1.2	●				
	5106000	VNGA	160404	X03	5109426	VNGA	160404	X03-10	0.4	●	9.525	4.76	0.1×15° + Honed edge	
	5105994		160408	X03	5109434		160408	X03-10	0.8	●				
	5105986		160412	X03	5109442		160412	X03-10	1.2	●				

* Please order Qty. you need in either item number. Insert case is the only difference.



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