

KBN05M



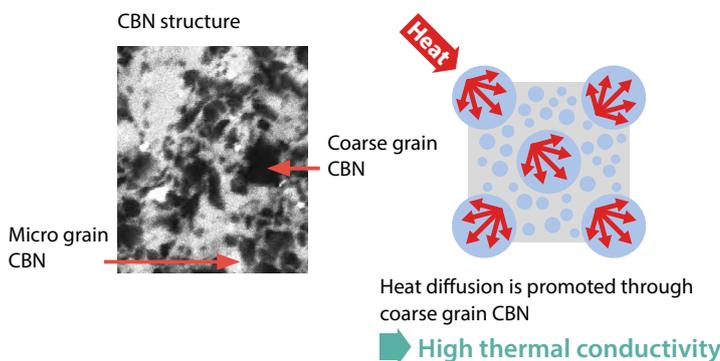
Economical double-sided insert now added to KBN05M lineup

KBN05M is used in a wide range of applications from continuous (high-speed finishing) to interrupted machining.

Save on insert costs with economical double-sided multi-edge inserts.

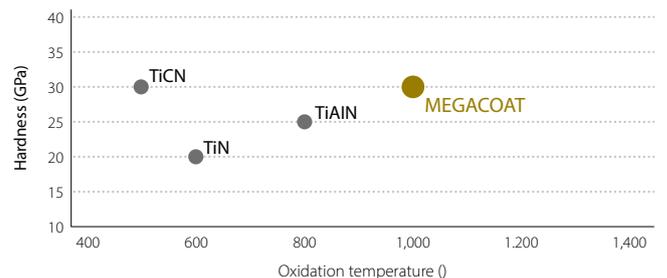
- Hybrid Grain Structure (KBN05M)
- Mixed structure of micro grain CBN and coarse grain CBN

► BN possesses high hardness, toughness and thermal resistance characteristics



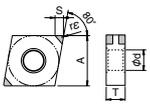
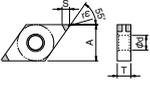
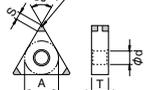
Superior wear and Oxidation Resistance with MEGACOAT

Coating properties



Low Oxidation resistance High

Negative type inserts

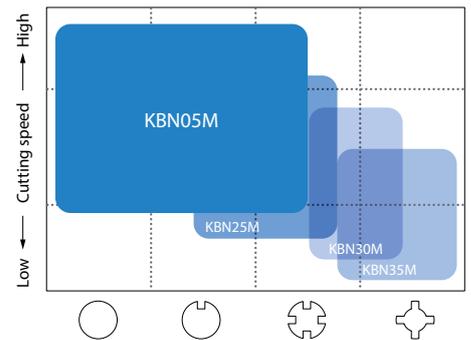
Shape	Description	Edge specification	Dimensions (mm)					No. of edges	KBN05M	
			I.C.	Thickness	Hole	Corner-R (rε)	S			
 	CNGA 120404ME4	S01225	12.70	4.76	5.16	0.4	2.6	4	●	
	CNGA 120408ME4					0.8	2.6		●	
	CNGA 120412ME4					1.2	2.5		●	
 	DNGA 150404ME4					0.4	2.6		●	
	DNGA 150408ME4					0.8	2.2		●	
	DNGA 150412ME4					1.2	1.9		●	
 	TNGA 160404ME6		9.525	4.76	3.81	0.4	2.7	6	●	
	TNGA 160408ME6					0.8	2.4		●	
	TNGA 160412ME6					1.2	2.1		●	
 	VNGA 160404ME4					0.4	2.0		4	●
	VNGA 160408ME4					0.8	1.8			●

S01225: 0.12 mm X 25° Chamfered + honed cutting edge

● Available

Recommended cutting conditions

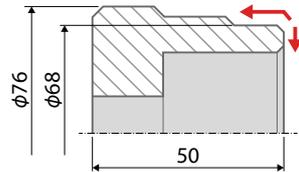
Workpiece	Hardness	Application		Cutting conditions		
				Vc (m/min)	ap (mm)	(mm/rev)
Hardened material	> 55 HRC	General finishing	Continuous to interrupted	100 – 150 – 200	0.05 – 0.3 – 0.5	0.05 – 0.08 – 0.1



Case studies (KBN05M single-sided)

Gear 20Cr4 (58HRC)

External facing and chamfering
 Vc = 130 m/min
 ap = 0.6 mm
 f = 0.12 mm/rev
 Wet
 CNGA120408S01225ME
 KBN05M



Tool Life

KBN05M 300 pcs/edge ↑ x1.5 Tool Life

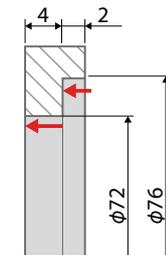
Competitor A 200 pcs/edge

KBN05M achieved 1.5 times longer tool life than Competitor A

(User evaluation)

Stator 15CrMo5 (55HRC)

Internal machining
 Vc = 170 m/min
 ap = 0.4 mm
 f = 0.1 mm/rev
 Wet
 CNGA120408S01225ME
 KBN05M



Tool Life

KBN05M 600 pcs/edge ↑ x2 Tool Life

Competitor B 300 pcs/edge

KBN05M tool life was twice that of Competitor B

(User evaluation)