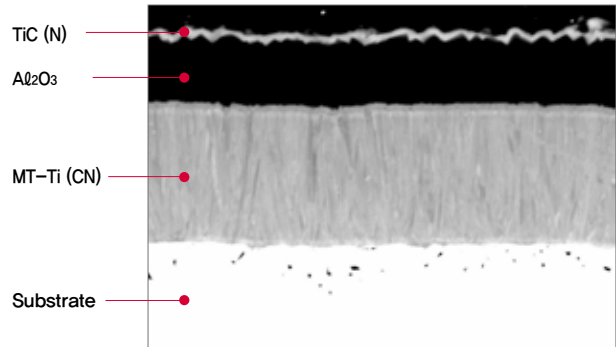


CVD Coated Grades

Features

- The special crystalline structure of the new coating technology achieves superior toughness
- A multi-layer coating with strong bonding strength provides superior wear resistance



Cross-sectional view of CVD coating

Grade Selection Guide

▶ Turning

Workpiece		Machining types	Recommended grade	Recommended cutting speed(m/min)	ISO	Application range
P	Steel	Continuous cutting	NC3010	295 (170 ~ 420)	P05	NC3010
			NC3215 <i>New</i>	295 (170 ~ 420)	P10	NC3215 <i>New</i>
		Interrupted cutting	NC3225 <i>New</i>	260 (150 ~ 370)	P15	NC3225 <i>New</i>
			NC3120	260 (120 ~ 370)	P20	NC3120
			NC3030	205 (120 ~ 290)	P25	NC3030
			NC5330	205 (120 ~ 290)	P30	NC5330
			NC500H	205 (120 ~ 290)	P35	NC500H
M	Stainless steel	Continuous cutting	NC9115 <i>New</i>	240 (220 ~ 260)	M10	NC9115 <i>New</i>
			NC9125 <i>New</i>	210 (190 ~ 230)	M20	NC9125 <i>New</i>
		Interrupted cutting	NC9135 <i>New</i>	180 (160 ~ 200)	M30	NC9135 <i>New</i>
			NC5330	180 (160 ~ 200)	M40	NC5330
K	Cast iron	Continuous cutting	NC6205	315(180 ~ 450)	K01	NC6205
			NC6210	250 (130 ~ 370)	K10	NC6210
		Interrupted cutting	NC6215 <i>New</i>	220 (130 ~ 310)	K20	NC6215 <i>New</i>
			NC5330	190 (110 ~ 270)	K30	NC5330
S	HRSA	Continuous cutting	NC5330	40 (20 ~ 60)	S10	NC5330
		Interrupted cutting		S20		

▶ Milling

Workpiece		Machining types	Recommended grade	Recommended cutting speed(m/min)	ISO	Application range			
P	Steel	Continuous cutting	NC5330	205 (120 ~ 290)	P20	NC5330			
			NC5340 <i>New</i>	230 (130 ~ 330)	P25				
		Interrupted cutting	NC5350 <i>New</i>	205 (120 ~ 290)	P30	NC5340 <i>New</i>	NCM325		
			NCM335	205 (120 ~ 290)	P35	NCM325	NC5350 <i>New</i>	NCM335	
			NC5350 <i>New</i>	205 (120 ~ 290)	P40	NC5350 <i>New</i>	NCM335		
M	Stainless steel	Continuous cutting	NC5330	140 (80 ~ 200)	M10	NC5330			
			NC5340 <i>New</i>	155 (90 ~ 220)	M20				
		Interrupted cutting	NC5350 <i>New</i>	140 (80 ~ 200)	M25	NC5340 <i>New</i>	NCM325	NC5350 <i>New</i>	NCM335
			NCM335	140 (80 ~ 200)	M30	NCM325	NC5350 <i>New</i>	NCM335	
K	Cast iron	Continuous cutting	NC5330	190 (110 ~ 270)	K10	NC5330			
			NC5340 <i>New</i>	150 (80 ~ 250)	K20				
			NC5340 <i>New</i>	150 (80 ~ 250)	K30				






cBN Grades

Features

- cBN is a cutting tool material made under ultra high pressure and temperature sintering of a mixture of cubic boron nitride and a special ceramic binder material.
- cBN tools are suitable for high speed precise machining in hardened steels and cast irons. Machining with cBN can effectively replace the conventional grinding process.



▶ Cutting Conditions of cBN Grades

ISO	Grades	Insert color	Application	Cutting Speed, vc (m/min)						feed, fn	Depth of cut, ap	
				50	100	150	200	250	300			
H Heat-treated steel	Coated	 DNC100 ^{New}	Continuous cutting at high speed	180 ————— 300						0.03~0.3	0.03~0.3	
		 DNC250	Continuous and low interrupted cutting at high speed	120 ————— 220						0.05~0.3	0.05~0.3	
		 DNC350	Medium and high interrupted cutting	90 ————— 150						0.05~0.3	0.05~0.3	
		 DNC400 ^{New}	Continuous and medium interrupted cutting	90 ————— 220						0.05~0.3	0.05~0.5	
	Non-coated		KB410	Continuous cutting at high speed	150 ————— 200						0.03~0.13	0.03~0.2
			KB1000	Continuous cutting at high speed	130 ————— 250						0.03~0.15	0.03~0.2
			KB420	Highly efficient cutting	120 ————— 150						0.03~0.3	0.03~0.5
			KB425	Interrupted cutting at high speed	150 ————— 200						0.03~0.3	0.03~0.5
			KB320	Medium and low interrupted cutting	80 ————— 120						0.03~0.2	0.03~0.3
			KB2000	Medium and low interrupted cutting	80 ————— 200						0.03~0.2	0.03~0.3
			KB335	High interrupted cutting	80 ————— 110						0.03~0.2	0.03~0.3
			KB400	High speed and high depth of cut	120 ————— 220						0.10~0.3	0.5