

	MATERIAL	OPERATION	CONDITION	EDGE PREP.	GRADE	Vc (m/min)	fn (mm/rev)	COOLANT
TURNING	Hardened steel	finishing ap < 0.5 mm		SE	NBL050C	140 <b>190</b> 240	0.06 <b>0.14</b> 0.22	
				UE	NBL150C tool life	120 <b>170</b> 220	0.06 <b>0.15</b> 0.24	
					NBL250C reliability	100 <b>150</b> 200		
THREADING	Bearing steel	finishing ap < 0.5 mm		SE	NBL050C	120 <b>170</b> 220	0.05 <b>0.10</b> 0.15	
				UE	NBL150C tool life	100 <b>150</b> 200	0.06 <b>0.13</b> 0.20	
					NBL250C reliability	80 <b>130</b> 180		
			RE	NBL350C	80 <b>120</b> 160	0.06 <b>0.16</b> 0.26		
		roughing ap > 0.5 mm <b>SOLID PCBN</b>		UE	NBH900U	100 <b>140</b> 180	0.15 <b>0.30</b> 0.45	
	UE		NBH950U	80 <b>120</b> 160	0.10 <b>0.25</b> 0.40			
H	Tool steel	finishing ap < 0.5 mm		SE	NBL150C	100 <b>140</b> 180	0.04 <b>0.09</b> 0.14	
				UE	NBL250C	80 <b>120</b> 160	0.05 <b>0.12</b> 0.19	
				RE	NBL350C	60 <b>100</b> 140	0.06 <b>0.13</b> 0.20	
		roughing ap > 0.5 mm <b>SOLID PCBN</b>		UE	NBH900U	60 <b>100</b> 140	0.10 <b>0.30</b> 0.50	
			UE	NBH950U	40 <b>80</b> 120	0.10 <b>0.25</b> 0.40		
	High speed steel	finishing ap < 0.5 mm		UE	NBL150C	100 <b>120</b> 140	0.05 <b>0.08</b> 0.11	
				UE	NBH500C	60 <b>120</b> 180	0.10 <b>0.30</b> 0.50	
MILLING	White cast iron	finishing ap < 0.5 mm		UE	NBH900U	40 <b>80</b> 120	0.10 <b>0.25</b> 0.40	
				UE	NBH500C	60 <b>90</b> 120	0.20 <b>0.40</b> 0.60	
		roughing ap > 0.5 mm <b>SOLID PCBN</b>		UE	NBH950U	40 <b>60</b> 80	0.20 <b>0.35</b> 0.50	
				UE	NBH450C	400 <b>800</b> 1200	0.10 <b>0.25</b> 0.40	
K	Gray cast iron	finishing ap < 0.5 mm		UE	NBH500C	600 <b>1000</b> 1400	0.10 <b>0.20</b> 0.30	
				UE	NBH500C	600 <b>1000</b> 1400	0.20 <b>0.40</b> 0.60	
		roughing ap > 0.5 mm <b>SOLID PCBN</b>		UE	NBH900U tool life	400 <b>800</b> 1200	0.20 <b>0.35</b> 0.50	
			UE	NBH950U reliability	400 <b>700</b> 1000			
	ADI cast iron	finishing ap < 0.5 mm		UE	NBL150C	500 <b>600</b> 700	0.05 <b>0.15</b> 0.25	
			UE	NBL250C	400 <b>500</b> 600	0.05 <b>0.15</b> 0.25		
roughing ap > 0.5 mm <b>SOLID PCBN</b>			UE	NBH500C	300 <b>400</b> 500	0.10 <b>0.25</b> 0.40		
		UE	NBH900U tool life	200 <b>250</b> 300	0.10 <b>0.25</b> 0.40			
	UE	NBH950U reliability	180 <b>230</b> 280					
P	Sintered powder metal, high alloyed	finishing ap < 0.5 mm		UE	NBL150C	80 <b>160</b> 240	0.05 <b>0.10</b> 0.15	
	Sintered powder metal, low alloyed	finishing ap < 0.5 mm		UE	NBH450C	140 <b>220</b> 300	0.10 <b>0.20</b> 0.30	

Stable machining, continuous cut  
 General machining, light interruption  
 Unstable machining, interrupted cut

