

# NTK120

Finishing for HRSA Materials | BIDE MICS

**NTK**  
CUTTING TOOLS





## Machine HRSA materials at speeds of 1600 SFM with **BIDEMICS**

BIDEMICS is a revolutionary material, released in 2014, which has greatly improved productivity for manufacturers machining HRSA materials; predominantly in the Aerospace industry. Now, we are releasing the newest evolution of this material with improved wear resistance.

# NTK120

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# BIDEMICS NTK120

## Industry changing - Super high speed finishing of HRSA materials.

Up to 15 times faster speeds vs. carbide and CBN

### Key Points

- Wear resistance provides performance and consistency of machined part straightness
- Offers finishing speeds of 1600 SFM

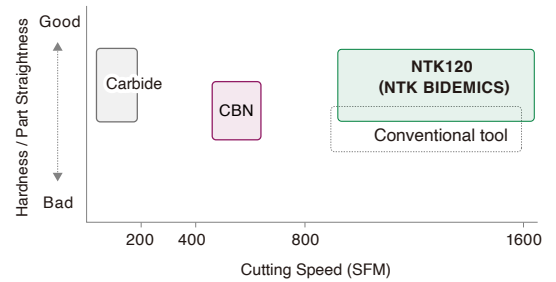
### Application Area

Continuous cuts when finishing HRSA materials

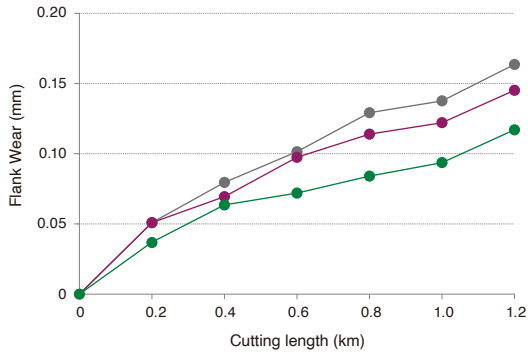
### Recommended Cutting Conditions

Grade	Material	Application	Process	Cutting Speed (SFM)	Feed (IPR)	DOC (inch)	With coolant
NTK120	Heat Resistant Super Alloys	Turning	Finishing	700 - 1200	.004 - .008	.010 - .015	●

### Cutting Speed and Wear Resistance Comparison



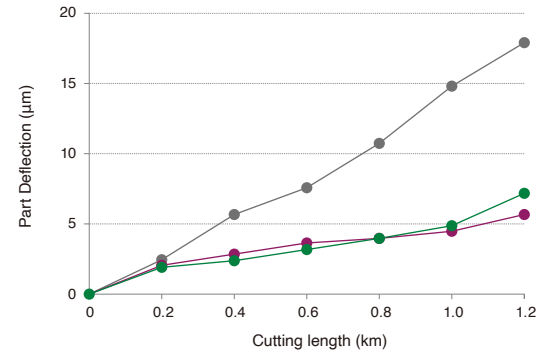
### Wear Resistance



Speed=1050 SFM  
(Carbide vc=160 SFM)  
Feed=.008 IPR  
DOC=.004"  
With coolant  
Material: Inco 718

Cutting conditions used for data in both charts

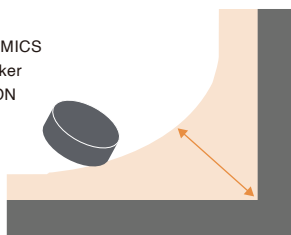
### Part Straightness vs. Cut Length



### Recommended Machining Passes at a Corner

#### 1. Roughing pass

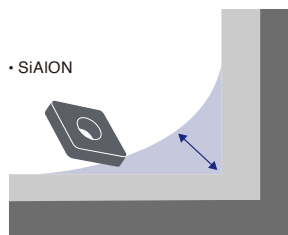
- BIDEMICS
- Whisker
- SiAlON



Use a strong geometry insert like a round, RNG45, for heavy material removal

#### 2. Semi-finishing pass

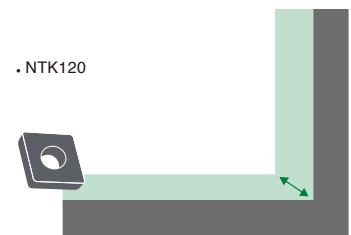
- SiAlON



SiAlON grades are best to remove extra material at the corner

#### 3. Finishing pass

- NTK120

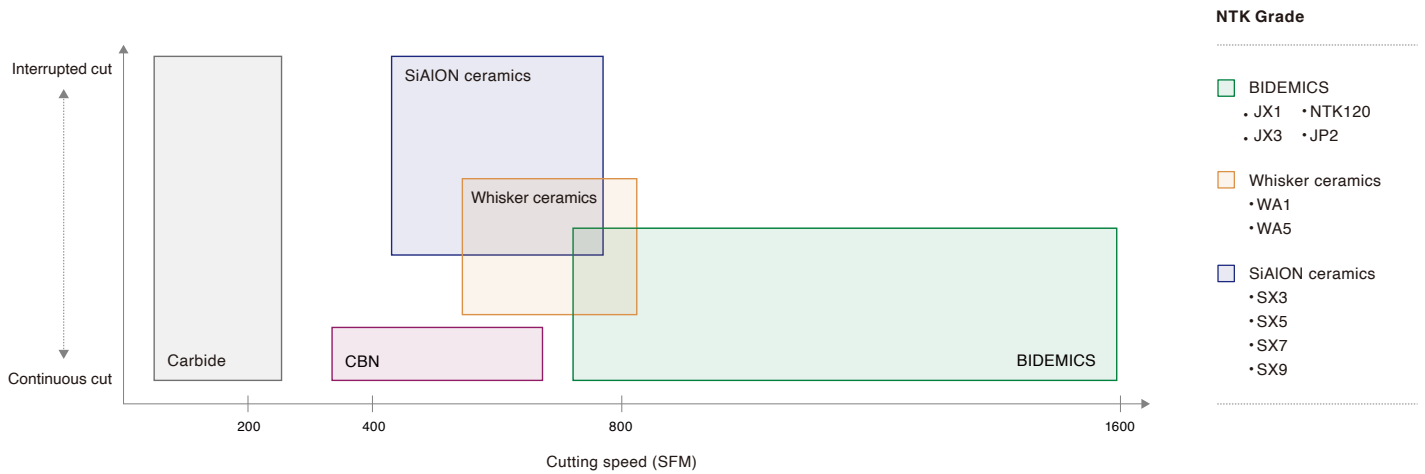


NTK120 - Machine with a consistent DOC to provide stable tool life

### Insert Item List












Geometry	EDP	Item number	Corner R	Grade	Dimensions (inch)		
				NTK120	IC	Thickness	Edge preparation
	5106604	CNGA 431BQE02	.016	●	1/2	3/16	Honed edge .0016
	5106620	432BQE02	.031	●			
	5106612	433BQE02	.047	●			
	5106646	DNKA 431BQE02	.016	●	3/8	3/16	Honed edge .0016
	5106653	432BQE02	.031	●			
	5106661	433BQE02	.047	●			
	5106679	VNGA 331BQE02	.016	●	3/8	3/16	Honed edge .0016
	5106687	332BQE02	.031	●			

## NTK Turning Solutions for HRSA Materials



### NTK Cutting Tools USA

46929 Magellan Dr., Wixom, MI 48393 U.S.A.

	Official Website	<a href="http://www.ntkcuttingtools.com">www.ntkcuttingtools.com</a>	
	YouTube Channel	<a href="http://www.youtube.com/NTKCUTTINGTOOLS">www.youtube.com/NTKCUTTINGTOOLS</a>	
	LinkedIn	<a href="http://www.linkedin.com/company/ntk-cutting-tools">www.linkedin.com/company/ntk-cutting-tools</a>	
	Facebook	<a href="http://www.facebook.com/NTKUS">www.facebook.com/NTKUS</a>	
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