

# NTK120

Finishing for HRSA Materials | BIDE MICS

**NTK**  
CUTTING TOOLS





## Machine HRSA materials at speeds of 480 m/min 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

Finishing for HRSA Materials | **BIDEMICS**

# 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 500 m/min

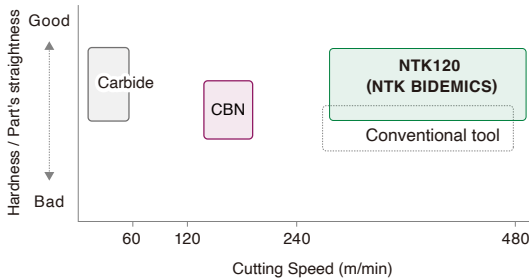
### Application Area

Continuous cuts when finishing HRSA materials

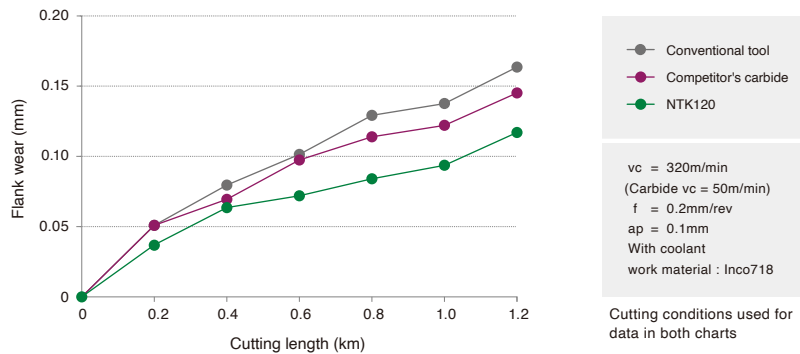
### Recommended Cutting Conditions

| Grade  | Material                    | Application | Process   | Cutting speed (m/min) | Feed (mm/rev) | DOC (mm) | With coolant |
|--------|-----------------------------|-------------|-----------|-----------------------|---------------|----------|--------------|
| NTK120 | Heat Resistant Super Alloys | Turning     | Finishing | 180-500               | 0.05-0.20     | 0.1-0.7  | ●            |

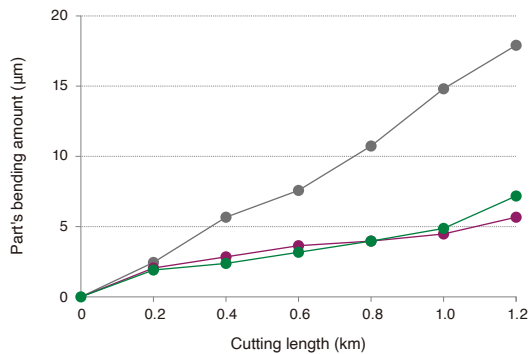
### Cutting Speed and Wear Resistance Comparison



### Wear Resistance



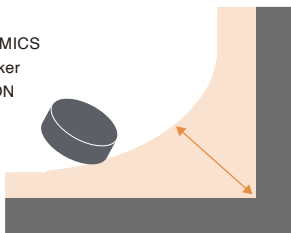
### Part's Straightness Performance



### Recommended Machining Passes at a Corner

#### 1. Roughing pass

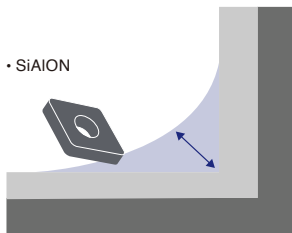
- BIDEMICS
- Whisker
- SiAlON



Use a strong geometry insert like a round, RNGN120700, for heavy material removal

#### 2. Semi-finishing pass

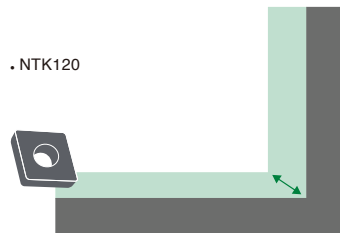
- SiAlON



SiAlON grades are best to remove extra material at the corner

#### 3. Finishing pass

- NTK120

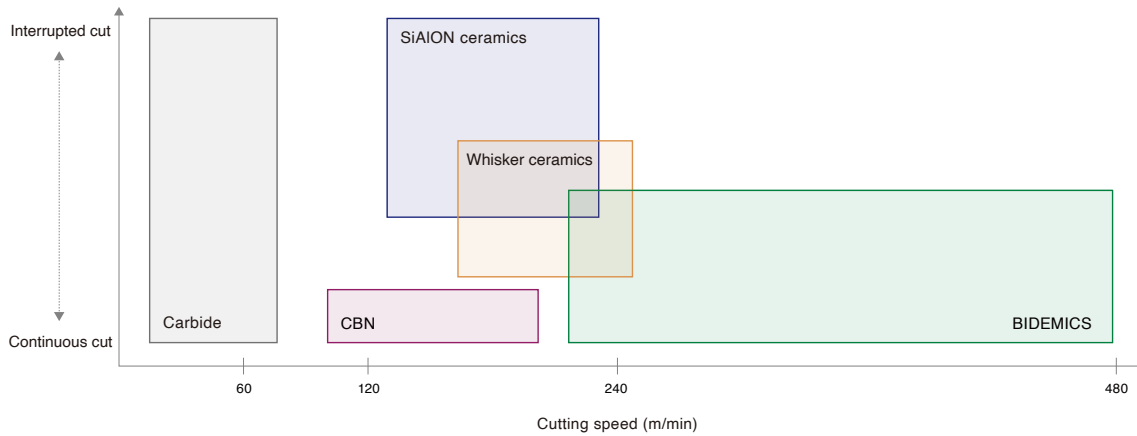


NTK120 - Machine with a consistent DOC to provide stable tool life

### Insert Item List

| Geometry | EDP     | Item number       | Corner R | Grade  | Dimensions (mm) |           |                  |
|----------|---------|-------------------|----------|--------|-----------------|-----------|------------------|
|          |         |                   |          | NTK120 | IC              | Thickness | Edge preparation |
|          | 5106604 | CNGA 120404 BQENB | 0.4      | ●      | 12.7            | 4.76      | Honed edge 0.04  |
|          | 5106620 | 120408 BQENB      | 0.8      | ●      |                 |           |                  |
|          | 5106612 | 120412 BQENB      | 1.2      | ●      |                 |           |                  |
|          | 5106646 | DNGA 150404 BQENB | 0.4      | ●      | 12.7            | 4.76      | Honed edge 0.04  |
|          | 5106653 | 150408 BQENB      | 0.8      | ●      |                 |           |                  |
|          | 5106661 | 150412 BQENB      | 1.2      | ●      |                 |           |                  |
|          | 5106679 | VNGA 160404 BQENB | 0.4      | ●      | 9.525           | 4.76      | Honed edge 0.04  |
|          | 5106687 | 160408 BQENB      | 0.8      | ●      |                 |           |                  |

## NTK turning solutions for HRSA materials











### NTK Grade

- BIDE MICS
  - JX1   • NTK120
  - JX3   • JP2
- Whisker ceramics
  - WA1
  - WA5
- SiAlON ceramics
  - SX3
  - SX5
  - SX7
  - SX9










### NTK CUTTING TOOLS EUROPE

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|  |                  |  |   |
|--|------------------|--|---|
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|  | YouTube Channel  | <a href="http://www.youtube.com/NTKCUTTINGTOOLS">www.youtube.com/NTKCUTTINGTOOLS</a>                                       |  |
|  | LinkedIn         | <a href="http://www.linkedin.com/showcase/ntk-cutting-tools-europe">www.linkedin.com/showcase/ntk-cutting-tools-europe</a> |  |
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