



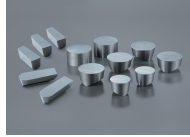
Machining High Temp Alloys with BIDE MICS and Ceramics

BIDEMIC

Patented

JX1 / JX3

Features

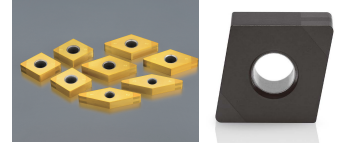


- Significantly extended tool life compared to whisker ceramics
- Double cutting speed potential compared to whisker ceramics
- Superior surface finish compared to whisker ceramics
- Applicable to powder-metallurgical heat resistant alloys
- Newly added JX3 provides toughness to BIDE MICS family

JP2 / 120

NEW

Features



- High speed finish turning can be performed at 800SFM or higher
- Superior wear resistance compared to CBN's
- Superior notching resistance vs CBN or carbides
- Superior surface finishes vs CBNs and coated carbides
- New Release for 2022 - NTK120 provides added wear resistance characteristics

SiAlON Ceramics

SX3

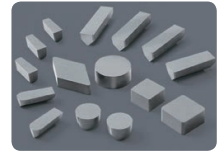
Features



- Excellent wear resistance and toughness. Rough turning with scale ~ semi-finish turning
- Able to machine even the newest generation of HRSA work materials (like Rene) as well as Inconel 718.
- Able to mill with high efficiency.

SX7

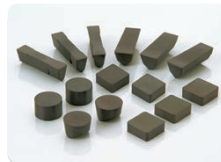
Features



- Better notching resistance compared to Whisker ceramics. No need to program ramping
- Better flank wear resistance compared to other SiAlON ceramics. Superior performance vs. whisker ceramics under same conditions - even higher productivity at higher feed rates
- Excellent thermal shock resistance
High speed milling can be performed at 3000SFM or higher

SX5

Features



- Excellent notch wear resistance
- Toughest SiAlON grade on the market
- Better thermal shock resistance compared to Whisker-reinforced ceramics
- Use SX5 where heavy scale or interruptions exist

SX9

Features



- Excellent notch wear resistance
- Better flank wear resistance compared to competitor's Silicon nitride ceramics
- Superior toughness compared to Whisker-reinforced ceramics
- Best thermal shock resistance
- Best grade for roughing Inconel 718 with scale



Tungaloy-NTK USA

3726 N. Ventura Dr., Arlington Heights, IL 60004
www.ntkcuttingtools.com/us
youtube.com/NTKCUTTINGTOOLS

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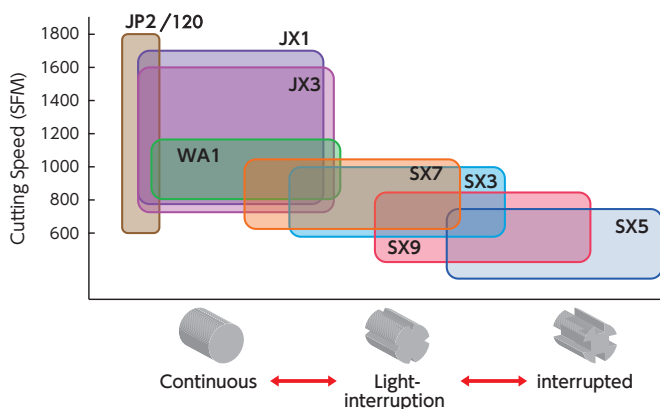


Insert Grade - Application Chart

Category	Grade	Attributes	Applications						
			Scale	No scale	Profiling	Finishing	Grooving	Milling	End milling
BIDEMICS	JX1	Special grade with higher speed and longer tool life potential		●	●	●	●		
	JP2/120	Special grade for finish turning				●			
	JX3	Added toughness in BIDEMICS		●	●	●	●		
Whisker	WA1	General versatile grade for turning		●	●		●		
SIALON	SX3	Best balance of toughness and hardness	●	●	●		●	●	
	SX5	Best grade for Waspaloy with scale	●				●		
	SX7	Versatile grade for turning and milling	●	●	●		●	●	
	SX9	Best grade for scale of Inco718	●	●	●			●	●

● 1st Choice ● 2nd Choice

Grade Map



	Grade	Roughing with Scale	Roughing	Semi-Finishing	Finishing
BIDEMICS	JP2/120			■	■
	JX1		■	■	■
	JX3		■	■	■
Whisker	WA1		■	■	■
SIALON	SX7		■	■	■
	SX3		■	■	■
	SX9		■	■	■
	SX5		■	■	■