



NTK Cutting Tools USA

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About NTK Cutting Tools:

NTK Cutting Tools USA, a division of NGK Spark Plugs Co., is a global supplier that develops and manufactures the industry's highest quality of advanced tooling featuring Ceramics, BIDE MICS, Carbide, CBN, and PCD insert grades. The company is dedicated to product innovations that enable part manufacturers to achieve success. Our



company provides engineering and technical support to assist in the selection and development of the best tooling combination for each application. Our customer base manufactures parts for industries which include: Aerospace, Agriculture, Electronics, Hydraulics, Medical, Oil and Gas, Power Generation, and Transportation.

Industry Contributions:

NTK delivers the best grades to successfully complete Heat Resistant Super Alloy machining applications. BIDE MICS - an industry changing composite insert material (patented by NTK) performs operations on Cases and Shafts machining at accelerated speeds even reaching 1600SFM on Inconel and Rene 65. JX1 runs at 1300 SFM machining turbine disks from Inconel 718. BIDE MICS physical properties allows them to achieve much higher speeds than the competition.



NTK's SiAlON's SX3, SX5, SX7, and SX9 are the "work-horse" ceramic grades with specific material characteristic combinations achieving toughness and wear resistance. Encompassing a wide range of HRSA applications, NTK grades are durable enough for roughing through scale to semi-finishing with interruptions or machining continuous cuts. SX9 grade in RNG45 geometry easily machines Inconel 718 generating part features for a manifold injector housing at high speeds and feeds (850SFM and 0.120 IPR). Reliable performance that increases machining efficiency without affecting or influencing the quality of the part.



Applications from heat exchangers in Inco 625, shafts and cases in Inco 718 and Renes, turbine parts from Inconel 792, and Waspaloy and Inco 783 rings.

Look for the upcoming NTK technical guide to machining HRSA materials providing guidance on insert geometries, grades, and machining tips.

www.ntkcuttingtools.com

NTK's Winning Hand!



NTK can handle all your Heat Resistant Super Alloy machining needs using our winning hand of cutting tool grades

SiAlON Ceramic

For a variety of HRSA applications

- NEW SX3** Roughing / Semi-finishing
 - Best Grade for Turning and Milling even newest HRSA Materials
- SX5** Roughing / Interrupted cut
 - Best Grade for Roughing Waspaloy Scale
- SX9** Roughing / Semi-finishing
 - Best Grade for Roughing Inco 718 Scale
- SX7** Semi-finishing
 - Best Grade for Milling Inco 718

BiDemiCS

World's new grade for HRSA materials

- NEW JX1 / JX3** Semi-finishing / Finishing
 - Cut HRSA @ 1600 SFM
 - Longer tool life vs. whisker
 - Produces mirror surface finish
- JP2** Finishing
 - Cut HRSA @ 1700 SFM
 - 10-15 x speed vs. carbides
 - Produces mirror surface finish

Whisker Ceramic

Versatile grade for HRSA materials

- WA1** Semi-finishing / Finishing
 - General Purpose Grade

NTK
CUTTING TOOLS



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