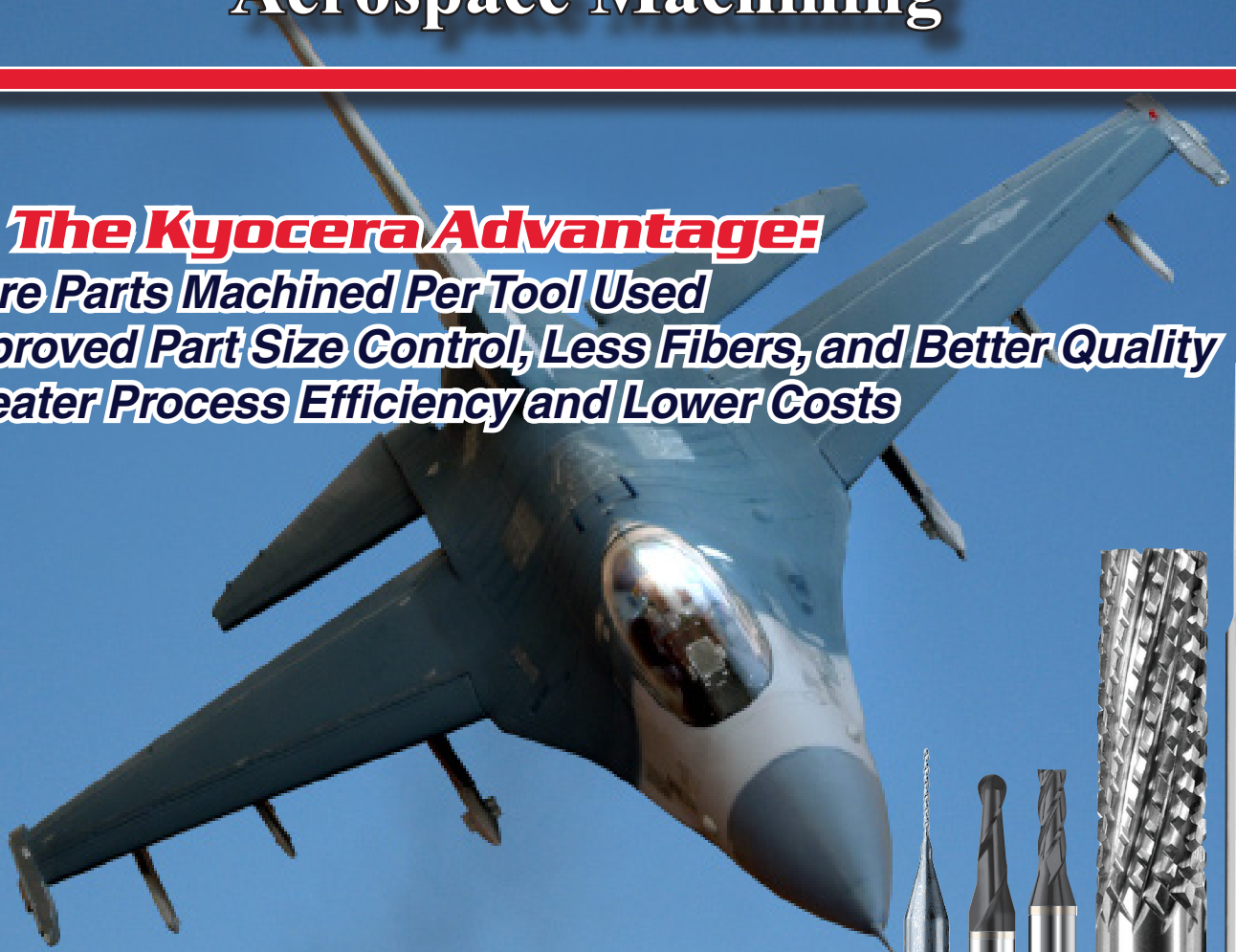


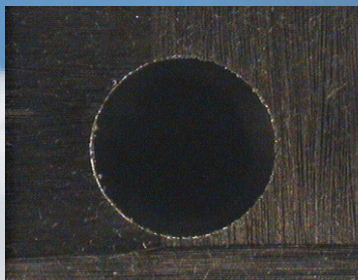
# Precision Cutting Tools For Aerospace Machining

## ***The Kyocera Advantage:***

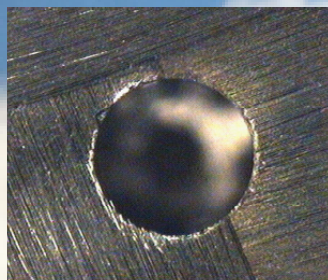
- ***More Parts Machined Per Tool Used***
- ***Improved Part Size Control, Less Fibers, and Better Quality***
- ***Greater Process Efficiency and Lower Costs***



***1.00mm Diameter Kyocera Composites Cutting Tool***



***First Hole***



***1200th Hole***

***We put the micro into your machining!™***

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Kyocera is pleased to introduce a line of precision cutting tools optimized for Aerospace manufacturers that machine composite materials, fiberglass, ceramics, and high technology alloys.

Using our 20 year heritage of helping customers overcome manufacturing challenges, we have developed cutting tool designs that greatly reduce the number of fibers during hole formation in carbon fiber. We also have designs that produce superior finishes in Fiberglass, Aluminum and Titanium.

Whether you are struggling with burrs, parts falling out of tolerance, or inadequate cutting tool life, we have cutting tool designs that will meet your needs.

**ROUTERS**

- DIA. 1/32" - 3/8"
- FISH TAIL, DRILL PT ENDS
- SHANKS 1/8" - 3/8"
- DIAMOND, DLC, AlTiN
- SINGLE TO MULTIFLUTES

**MATERIALS**

COMPOSITES	CERAMICS
FIBERGLASS	ALUMINUM

**DRILLS**

- DIA. 0.0015" - 1/4"
- L.O.C. 0.040" - 1/2"
- FLUTES 1,2,3
- COATED/UNCOATED
- 90,118,130 D.P. - W PT.

**MATERIALS**

ALUMINUM	TITANIUM
CERAMICS	STAINLESS STEEL

**END MILLS**

- DIA. 0.005" - 1/4"
- L.O.C. 3XD, 1.5XD, CUSTOM
- FLUTES 1 - 5
- CLEARANCE/REACH
- BALL/SQUARE ENDS

**MATERIALS**

PLASTICS	TITANIUM
G.S. CERAMICS	ZIRCONIA
STAINLESS STEEL	INCONEL

**ROUTERS**

Kyocera offers many sizes and styles of routers made with premium sub-micron grade carbide. Sizes range from 1/32" to 3/8" Diameter. Drill point and fish tail end styles appear on standard products. Multiple flute configurations are offered. Coatings are available upon request.

**DRILLS**

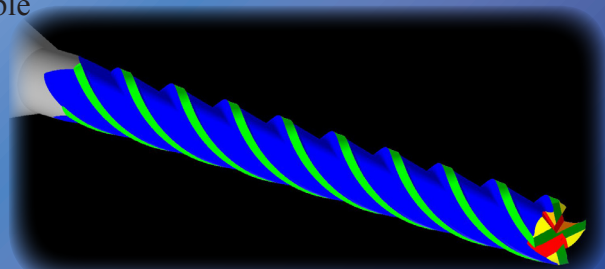
Kyocera offers many sizes and styles of drills made with premium sub-micron grade carbide. Sizes range from 0.0015" to 1/4" Diameter. Multiple flute configurations are offered. Multiple drill points including W-points are offered. Diameter tolerances as tight as +/- 25 Millionths of an inch and Coatings are available upon request.

**END MILLS**

Kyocera's end mills for Aluminum machining are made of premium sub-micron grade carbide. Sizes range from 0.005" to 1/4" Diameter. Coatings are available for Titanium milling.

***Kyocera Users Report:***

- Increased Tool Life • Reduced Burrs
- Improved Part Surface Finish • Technical Support
- Better Overall Efficiency



**Kyocera End Mill For Green State Ceramics Milling (1/16" Dia. X 3/4" Length of Cut)**