TAKING SUPERABRASIVES TO NEW HEIGHTS

AEROSPACE CAPABILITIES

abrasive technology
www.abrasive-tech.com
Abrasive Technology manufactures high-precision superabrasive products for aircraft and airframe manufacturers. Our wide range of diamond and cBN wheels, tools and coatings are designed, bonded and produced with your specific applications in mind.

We understand aerospace manufacturers and the challenges faced in today’s hyper-competitive environment. Our dedicated aerospace lab will meet your build schedule and production demands.
From grinding, drilling, edging, roughing and polishing, our superabrasive cutting and grinding tools offer superior rough to finish solutions.

SUPERABRASIVES IN AEROSPACE

CERTIFICATIONS
- AS9100:2016
- NADCAP FOR CHEMICAL PROCESSING
- ISO 9001:2015 CERTIFIED AT U.S., CANADA & ALL UK MANUFACTURING FACILITIES
SUGGESTED TOOLING:

**AIRFRAME & INTERIOR**
Materials for AT tooling:
- Aluminum Alloys
- Brass and Bronze Alloys
- Carbon Fiber Reinforced Polymers (CFRP)
- CFRP/AL stacks
- Fiberglass Reinforced Polymers (FRP)
- Fiberglass/Aluminum Laminates
- Kevlar®
- Honeycomb Core
- Honeycomb Core/CFRP Laminates
- Phenolic Resins

**SKELETON**
Materials for AT tooling:
- Aluminum Alloys
- Carbon Fiber Reinforced Polymers (CFRP)
- CFRP/AL stacks
- Fiberglass Reinforced Polymers (FRP)
SUGGESTED TOOLING:

WINDOWS, WINDOW FRAMES & WINDSHIELD

Materials for AT tooling:
- Carbon Fiber Reinforced Polymers (CFRP)
- CFRP/AL stacks
- Fiberglass Reinforced Polymers (FRP)
- Phenolic Resins

BRAKES

Materials for AT tooling:
- Aluminum Alloys
- Friction Material
- Ceramic Material
- Carbon Fiber Reinforced Polymers (CFRP)

CONE

Materials for AT tooling:
- Carbon Fiber Reinforced Polymers (CFRP)
- CFRP/AL stacks
- Ceramic Material
- Fiberglass Reinforced Polymers (FRP)
- Honeycomb Core
- Honeycomb Core/CFRP Laminates
TURBINE ENGINE

GRINDING
- CERAMIC MATRIX COMPOSITES
- COMPOSITE FAN BLADES
- NICKEL ALLOY COMPONENTS

CLEARANCE CONTROL COATINGS
- NICKEL & TITANIUM ALLOY ENGINE COMPONENTS: Blades • Seals • Blisks/IBR’s • Disks • Drums
Electroplated bond mechanically entraps diamond/cBN particles on substrate.

- Ideal for manufacturing tight tolerance forms.
- Free cutting resulting in high material removal rates, less power required and reduced thermal damage to the work piece.
- Holds form or profile from first to last cut.
- Eliminates dressing time.
- Strip and replate the core.
- Ideal for short runs.
- One piece flow.
- Easy to attach to machine and run.

First patented by AT in 1975, the original brazed bond process uses a nickel chrome alloy to chemically bond superabrasive crystals to the substrate.

- Ideal for machining tough-to-cut materials where fast stock removal and deep cuts are required.
- High diamond exposure with no stripping or peeling.
- Fast stock removal rate due to maximum exposure of diamond crystals.
- Aggressive tools that last longer, cut faster, run cooler, load less.
- Minimizes uncut fibers, fiber tear out and delamination.

PCD tooling is abrasion resistant with the capacity to out-produce carbide tooling up to 100 times.

- Random orientation of diamond crystals means uniform hardness and abrasion resistance.
- Reduced cycle time due to PCD’s thermal conductivity and heat resistance.
- Controlled PCD manufacturing process provides consistent physical properties.
- Does not bond with work piece materials so edge build up is minimal for improved surface finish.
- Minimizes fiber tear out and delamination.

Designed for contouring, shaping, and feathering operations and making delicate adjustments to a formed surface.

- Increased productivity and reduced costs.
- Reduces dig outs and scallops.
- Little heat build-up and very little pressure is required.
- Reduces rework.