

TAKING SUPERABRASIVES TO NEW HEIGHTS



AEROSPACE CAPABILITIES



THE DIAMOND STANDARD FOR



INDUSTRY EXPERTISE



INDUSTRY CERTIFICATIONS



PATENTED TECHNOLOGY

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.





SUPERABRASIVES IN AEROSPACE

From grinding, drilling, edging, roughing and polishing, our superabrasive cutting and grinding tools offer superior rough to finish solutions.

ELECTRO
PLATED

P.B.S.[®]
BRAZE

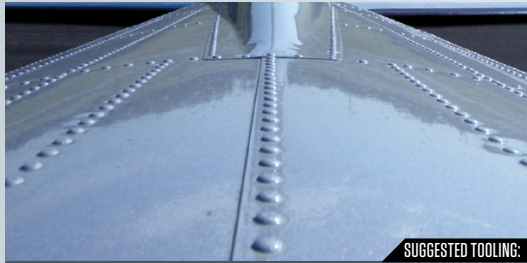
PCD

FLEXIBLE
DIAMOND

CERTIFICATIONS

- ▶ AS 9100 D / ISO 9001:2015
CERTIFIED AT U.S. & COLWYN BAY, UK FACILITIES
- ▶ NADCAP FOR CHEMICAL PROCESSING





SUGGESTED TOOLING:

AIRFRAME & INTERIOR

Materials for AT tooling:

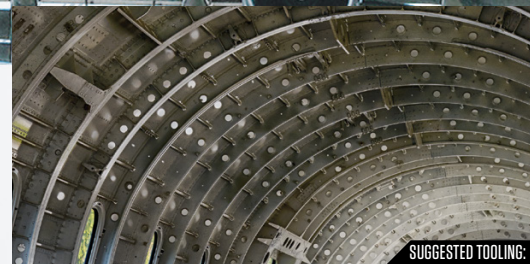
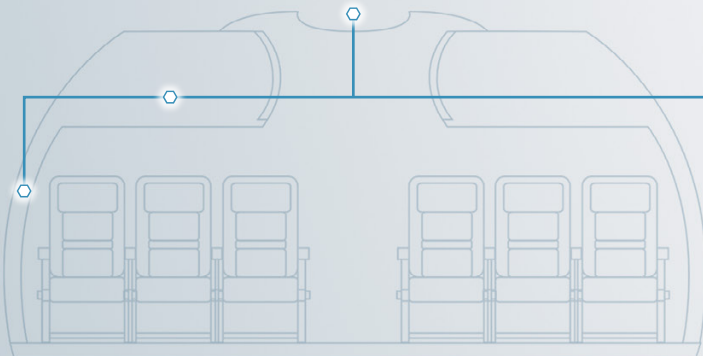
Aluminum Alloys • Brass and Bronze Alloys
Carbon Fiber Reinforced Polymers (CFRP)
CFRP/AL stacks • Fiberglass Reinforced
Polymers (FRP) • Fiberglass/Aluminum
Laminates • Kevlar® • Honeycomb Core
Honeycomb Core/CFRP Laminates
Phenolic Resins

P.B.S.[®]
BRAZE

PCD

FLEXIBLE
DIAMOND

AIRCRAFT STRUCTURE & COMPONENTS



SUGGESTED TOOLING:

SKELETON

Materials for AT tooling:

Aluminum Alloys • Carbon Fiber Reinforced
Polymers (CFRP) • CFRP/AL stacks
Fiberglass Reinforced Polymers (FRP)

P.B.S.[®]
BRAZE

PCD

FLEXIBLE
DIAMOND



SUGGESTED TOOLING:

WINDOWS, WINDOW FRAMES & WINDSHIELD

PCD

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BRAZE

Materials for AT tooling:

Carbon Fiber Reinforced Polymers (CFRP)
CFRP/AL stacks • Fiberglass Reinforced
Polymers (FRP) • Phenolic Resins



SUGGESTED TOOLING:

CONE

ELECTRO
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Materials for AT tooling:

Carbon Fiber Reinforced Polymers (CFRP)
CFRP/AL stacks • Ceramic Material
Fiberglass Reinforced Polymers (FRP)
Honeycomb Core • Honeycomb Core/
CFRP Laminates



SUGGESTED TOOLING:

BRAKES

ELECTRO
PLATED

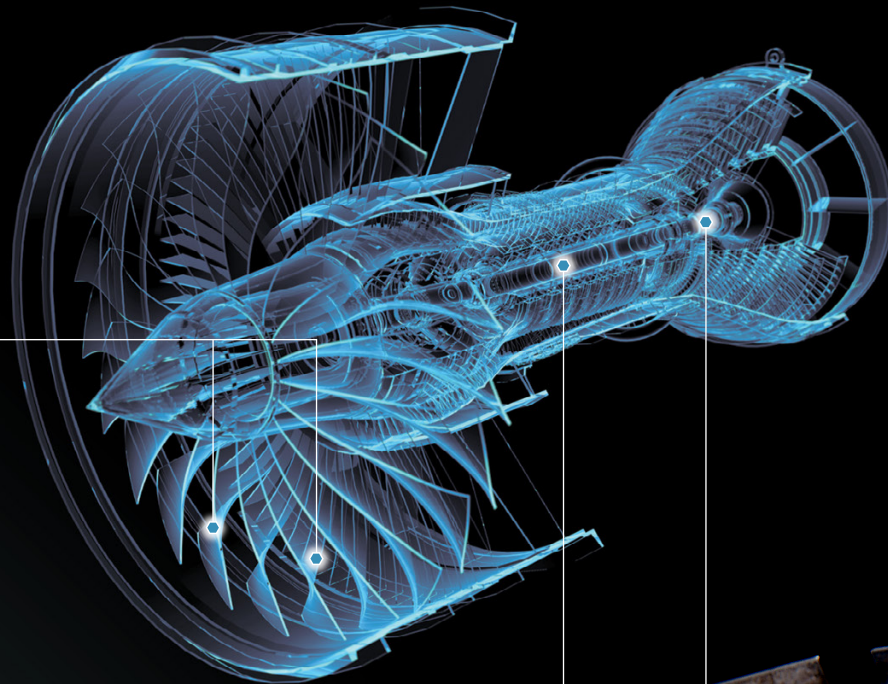
P.B.S.[®]
BRAZE

PCD

Materials for AT tooling:

Aluminum Alloys
Friction Material
Ceramic Material
Carbon Fiber Reinforced Polymers
(CFRP)

TURBINE ENGINE



► GRINDING

CERAMIC MATRIX COMPOSITES

P.B.S.[®]
BRAZE

ELECTRO
PLATED

COMPOSITE FAN BLADES

P.B.S.[®]
BRAZE

ELECTRO
PLATED

NICKEL ALLOY COMPONENTS

ELECTRO
PLATED

► CLEARANCE CONTROL COATINGS

NICKEL & TITANIUM ALLOY ENGINE COMPONENTS:
Blades • Seals • Blisks/IBR's • Disks • Drums

ELECTRO
PLATED



Dragon Shield™ (ATA6C) is an electroplated chromium carbide wear coating that forms a self-lubricating oxide glaze (naturally or via pre-treatment) for wear protection.

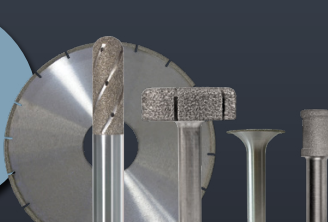
ATA3C is an electroplated nickel coating that co-deposits abrasive particles, serving as a precision cutting surface in abradable seal systems to improve gas turbine engine efficiency and safety.



ELECTRO PLATED

Electroplated bond mechanically entraps diamond/cBN particles on substrate.

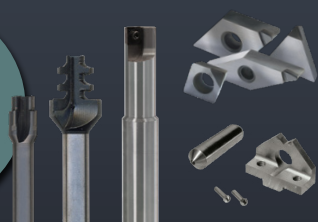
- Ideal for manufacturing tight tolerance forms.
- Free cutting resulting in high material removal rates, less power required and reduced thermal damage to the work piece.
- Holds form or profile from first to last cut.
- Eliminates dressing time.
- Strip and replat the core.
- Ideal for short runs.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



P.B.S.[®] BRAZE

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

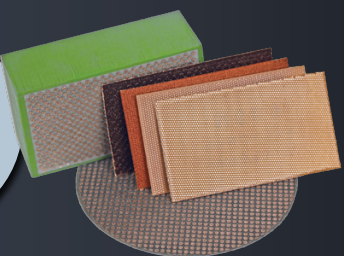
- Ideal for machining tough-to-cut materials where fast stock removal and deep cuts are required.
- High diamond exposure with no stripping or peeling.
- Fast stock removal rate due to maximum exposure of diamond crystals.
- Aggressive tools that last longer, cut faster, run cooler, load less.
- Minimizes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



PCD

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.



FLEXIBLE DIAMOND

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.

