HARD CARBON COATING
An addition to the Garr Tool lineup of quality coating options

Recommended applications:
Aluminum and aluminum alloys with up to 12% silicon
Non-ferrous metals such as copper, bronze, and platinum
Composites such as GRP, CFK, CFRP, and PEEK
Applications involving combined abrasion and adhesion

Advantages of using Hard Carbon:
Excellent wear resistance due to high hardness
Sharp cutting edges in comparison with diamond coatings
Very good adhesion
Thin, smooth, high density
Can be used on end mills and drills
Most standard products in our catalog can have Hard Carbon added in 2 weeks

* Sample Pricing:

50-100 pc. pricing column
<13157> 230MA 1/4" TiAlN Coated - $16.63 each
<13150> 230M 1/4" Hard Carbon Coated - $23.63 each
<10158> 210D 1/4" Diamond Coated - $98.47 each

* Pricing listed as of 8/1/2015, and is meant for comparison only.
For specific and current pricing, please contact our sales office to request a quote.
Solid micrograin carbide tested for drilling of carbon fiber and glass-filled composites
Having a quality dust collection system helps prolong tool life and quality of parts
'Clamping' of part to table can cause stress fractures in material

SERIES 740 - DAGGER
For enlarging existing holes in skin panels, but can drill from solid
For near reamer finishes in carbon and glass fiber materials
Coatings of choice for this drill are Polycrystalline Diamond or Amorphous Diamond / Hard Carbon (DLC, TAC)

SERIES 780 - 8-FACET POINT
Double angle drill point geometry reduces cutting forces to eliminate exit burrs
Works well in carbon fiber especially when the honeycomb core is either titanium or aluminum
Works in glass-filled epoxy, harder plastics, softer steels, CFRP (Carbon Fiber Reinforced Plastic), and aluminum
Can be coated with a variety of coatings depending on your application

SERIES 790 - MODIFIED BRAD POINT
Designed for drilling CFRP
Excellent entry and exit hole quality
Designed to prevent delamination
Good for drilling panels and paper honeycomb core
Coatings of choice for this drill are Polycrystalline Diamond, Amorphous Diamond / Hard Carbon (DLC, TAC), or TiAlN-based for extra tool life

SERIES 805 - CARBON FIBER
Designed for drilling CFRP and plastics
Good in both multidirectional fibers and unidirectional fibers
90° center cutting point for better entry and exit hole with little to no delamination
Parabolic flute shape for less tool pressure on the material, and also for better chip flow in soft plastics
Add Hard Carbon coating for longer tool life than uncoated tools, and shorter lead times than Diamond coating
Solid micrograin carbide tested for milling of carbon fiber and glass-filled composites.

There are many challenges to machining composite materials. Keeping the material from delaminating is key. Our tools have higher rake angles and combinations of left hand and/or right hand spirals to help eliminate ‘fraying’ of the laminate.

Please specify what type of end cut your job requires (i.e. - no end cut, burr type, end mill type, or drill point).

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Please specify what coating, if any, your job requires:

- Polycrystalline Diamond
- Amorphous Diamond / Hard Carbon
- AlCrN Coated

**SERIES 700 - FIBERGLASS ROUTER**
For cutting glass-filled epoxies

**SERIES 701 - KEVLAR ROUTER**
Gives a clean edge when trimming Aramid Fibers (Kevlar)

**SERIES 702 - CARBON FIBER ROUTER**
For trim milling of single-layer panels

**SERIES 703 - CARBON FIBER ROUTER**
For rough cutting of stacked panels with or without honeycomb cores

These are non-stock specials - built to order uncoated in two weeks.
Solid micrograin carbide tested for milling of carbon fiber and glass-filled composites

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- Amorphous Diamond / Hard Carbon
- AlCrN Coated

SERIES 704 - COMPRESSION ROUTER - 4 FLUTE
For profile milling of carbon fiber

SERIES 705 - COMPRESSION ROUTER - 2 FLUTE
For slotting of carbon fiber

SERIES 706 - SINGLE FLUTE ROUTER
For aluminum and soft plastics