

# LOMAS

[www.lomas.co.uk](http://www.lomas.co.uk)



Tools can be manufactured in 3 material choices for use on composites:

- Solid Tungsten Carbide Tooling
- CVD Diamond Coated Solid Tungsten Carbide
- Polycrystalline Diamond (PCD)

## COMPOSITE TOOLS

**LOMAS** design and manufacture a wide range of Special Solid Carbide and PCD tooling for various composite and exotic aerospace materials at our manufacturing facility in Sheffield, England.

All LOMAS tooling is fully CNC ground and custom built to our customers' own specifications / prints. All tools can be manufactured to include any of the following:

- Special Cutting and/or Shank Diameters
- Custom Shanks (Flatted / Threaded / Precision / Heat Shrink)
- Special Cutting Length and/or Overall Lengths
- Corner Radius or Corner Chamfer Configurations
- Special Tight Tolerances
- Internal Coolant Feed
- Special Tool - CVD Coatings

LOMAS provide Special Grades of carbides, offering better abrasion resistance and increased tool hardness to withstand high temperatures when cutting. CVD (Chemical Vapour Desposition) Diamond coatings are also available which reduce heat and friction at the cutting edge, produce higher quality surface finish and can increase tool life by as much as ten times.

We also offer our own Special Drills designed for hand drilling, with specific cutting tool geometries for CFRP, both with excellent entrance and exit hole quality and increased tool life and feed rates.

Listed below are some of our most common drill designs used in many various aerospace applications:

**Dagger Drills** - designed to produce delamination free holes in graphite materials and/or graphite / aluminium material stacks. These drills can be re-ground repeatedly without thinning the point.

**Tapered "One-Shot" Drill Reamers** - with straight or spiral flutes for hand-held drilling applications (through bushings) or with controlled feed / speed drill motors. Developed for drilling fibreglass and excellent for drilling graphite / composites etc with a self-centering point design.

**Radius Point Drills** - produce very accurate holes in composite materials without delamination.

**Parabolic Flute Drills** - recommended for "deep hole" drilling in non-ferrous materials such as aluminium, fibreglass, graphite, plastics.

**8 Facet Point** - this geometry is designed for high production delamination-free holes in graphite and fibreglass materials.

**Kevlar "Brad-Point"** - manufactured with a unique drill geometry designed to produce "Fuzz-free" holes in Kevlar (Aramid fibre) materials.

**Double Margin** - with special composite drill points these work extremely well on composite / metal "stacks".

**Routers** - solid carbide and PCD materials supplied in any format from single flute up to ten different flute variants.

