BRITISH MADE. WORLD CLASS.

Tooling that
makes it all better

INFINITE POSSIBILITIES.®

QUICKGRIND® carbide tooling

Why **Quickgrind?**

We have been at the forefront of solid carbide tool design and manufacture for more than fifty years. Always at the cutting edge of innovation, our Infinite Possibilities® programme sets new standards to deliver the optimum tooling for your project.

Infinite Possibilities® encourages our clients to look beyond standard catalogue cutting tools and to work with us to develop solution-specific tooling which is ideally matched to their manufacturing and production requirements. Just as no two knees are the same, no manufacturing processes are the same. That's why we say don't compromise, customise.

This philosophy pays dividends in the field of medical implants, where demand is growing as life expectancies continue to lengthen. Arthritis, osteoporosis and obesity all result in an increasing need for prosthetics, particularly total knee and hip replacement (TKR/THR) components.

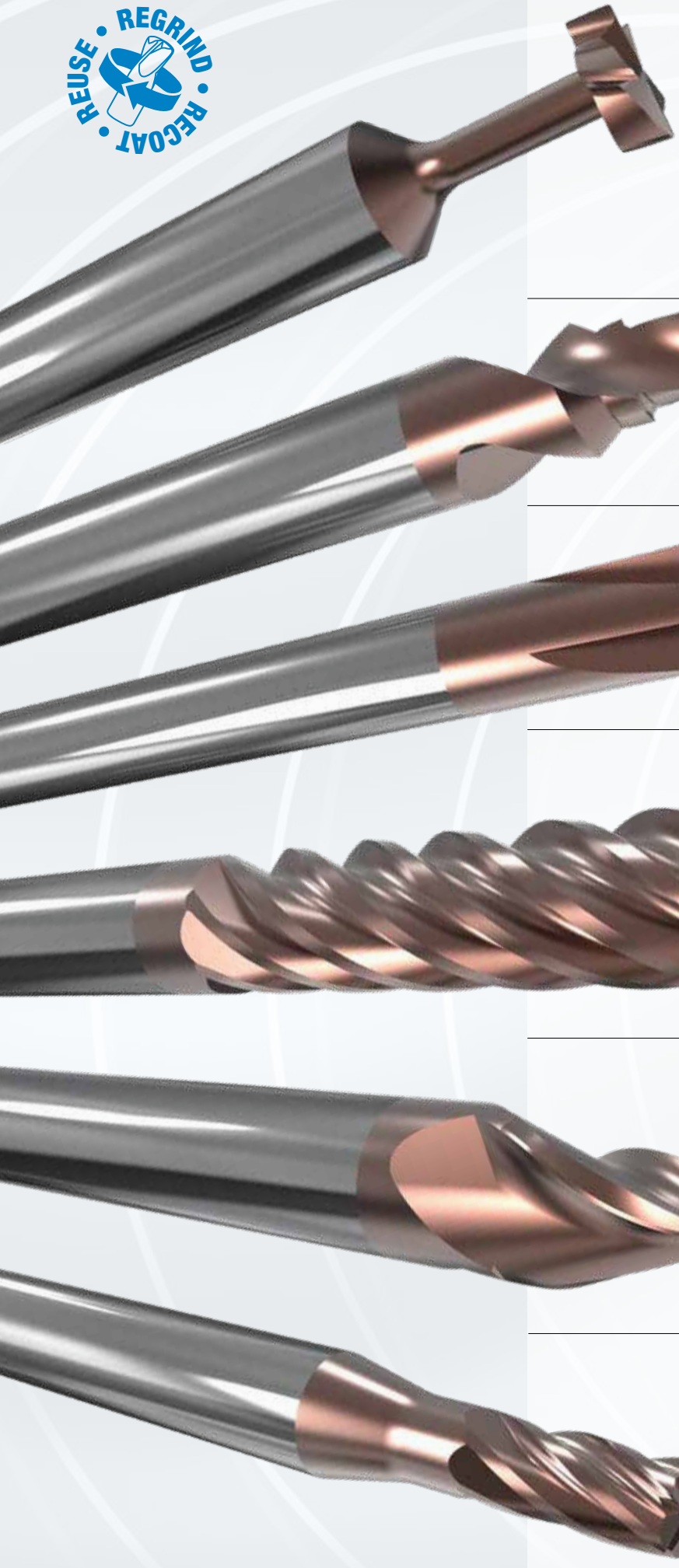
Manufacturers are under pressure to scale-up production without over-increasing the price per part. And not only are production speeds and costs an issue, manufacturers also need to be at the forefront when it comes to understanding the latest materials.

Biocompatible metallic materials need to be hard wearing and require high levels of surface finish to enable the plastic parts (typically ultra-high molecular weight polyethylene) to achieve their expected lifetime of 20 years or more. Absolute smoothness is a must to protect against wear and early failure.

In this introductory brochure we focus on the femoral component and the cutting tools required to machine materials such as medical-grade titanium and cobalt chrome. These materials are used due to their ability not to react with body tissues and for their low weight.

Remember, when it comes to your medical machining don't compromise, customise. Contact us today to discuss your medical applications, aims and requirements.

Call +44 (0) 1684 294090
or visit quickgrind.com



14.00mm 5-flute Undercut tool

We design the number of flutes, flute geometry and coating to provide you with the optimised tool. We will provide top and bottom radii if required plus the right number of teeth to allow for efficient cutting data to be used.

6.50mm x 12.00mm 2-flute Panther femoral step drill

Our Panther multi-diameter drills are designed to create multiple bores in one pass whilst reducing cycle times and machining costs, all with highly accurate bore alignment.

6.00mm 45º 4-flute Chamfer tool

Our versatile chamfer cutters can be used for several machining operations. In addition to chamfering they can also be used for bevelling, deburring, spotting and countersinking. We will design the tool to suit your operation.

12.00mm R1.50mm x 44.00mm 6-flute Mirage Super

Through clever design, experience and by using the latest grade of carbide and coating this tool takes our Mirage to new heights of performance, helping you to achieve your aims for critical parts in super alloys. We have used the toughest substrate with a high wear resistant coating and polished flutes, together with a balancing option.

6.00mm R3.00mm x R250.00mm 3-flute Eliminator conical barrel tool

A large radius of curvature (R_W) gives an increased contact area for larger step down distances without any detrimental impact on the theoretical scallop height. The result is highly accurate surfaces with excellent characteristics and finishes that can eliminate the need for polishing and other finishing processes.

4.00mm x 8.00mm x 12.00mm 5-flute Mirage

Non-standard features are sometimes needed, such as a greater overall length, an extended neck or a smaller diameter. Rather than reverting to modular tool holding or even special tool holders, talk to us and together we will design the optimal tool.

Transforming
medical machining strategies

To machine the femoral component we use a range of solid carbide tooling with specific recipes of material, geometry and coating to ensure trouble-free machining and long tool life, whether it's a new tool or a remanufactured tool.

The machining process for the femoral component requires CNC machines typically with 3+4 or 5 axis capability to rough, semi-finish and finish the part ready for polishing.

The polishing process is time consuming and removes the machining marks. Ideally, therefore, the machining process should provide a high level of surface finish leaving less material to be removed during polishing. This greatly influences the overall production cycle time and therefore manufacturing costs.

Working with manufacturers, universities and CAM software specialists at our Technical Centre in Tewkesbury, England, our team has spent many hours of research and development across all machining operations, our aim being to develop the most cost-effective tooling and strategies.

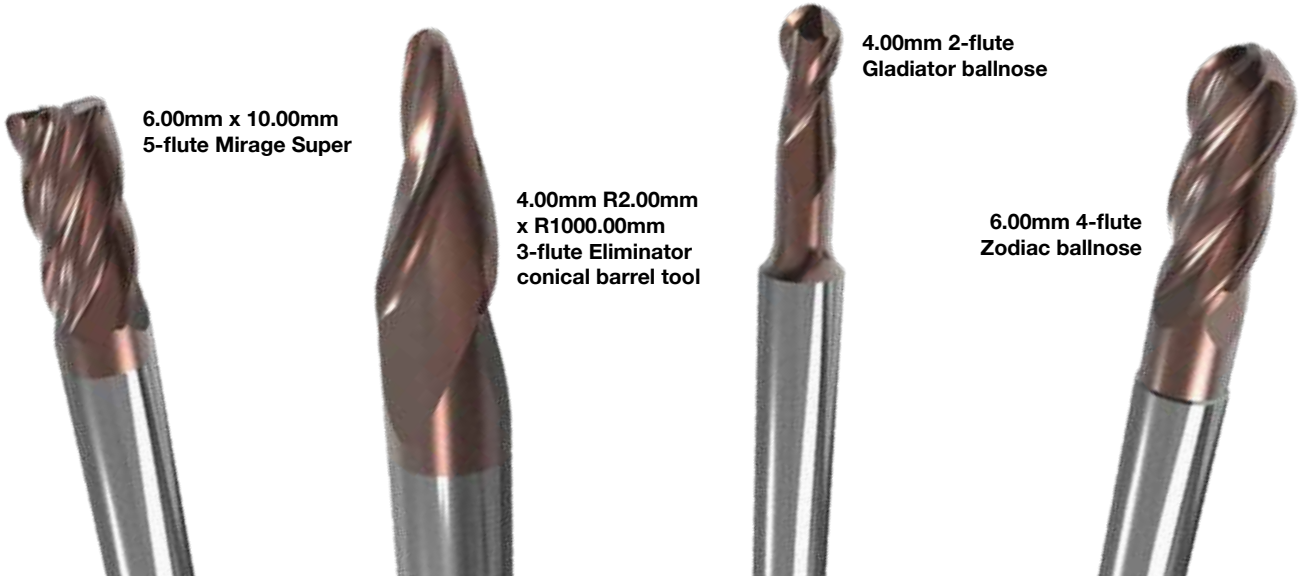
A selection of the tools we now offer can be seen to the left.

Femoral knee parts sometimes have a section known as the 'box area' which required some additional tools (see below).

Roughing the tops and sides of the box area we use our 6.00mm x 10.00mm 5-flute Mirage Super. For finishing the sides we have our 4.00mm R2.00mm x R1000.00mm 3-flute Eliminator conical barrel tool. And for the pocket radius to floor blend and the floor the 4.00mm and 3.00mm Gladiator ballnoses, with a 6.00mm Zodiac ballnose for finishing the top radius.

CRUCIATE RETAINING PROSTHESIS

POSTERIOR STABILISED PROSTHESIS



INFINITE POSSIBILITIES.®

What if you could have the optimum tool, with the marginal cost increase more than covered by improved accuracy, production throughput and efficiency? With Quickgrind, you can. Welcome to a world of Infinite Possibilities.®

At Quickgrind we do not limit ourselves to standard ranges, and we do not limit you to tools we happen to have in stock and want to sell you. Instead, our mission is to provide you with solution-based tooling, to give you the right tool, for the right job, at the right price.

Tools can be designed specifically for your application and are available in virtually any size, diameter, radius, neck relief, coating or reach. Through-coolant and other options are also available.

End the compromise of standard tooling. Contact our team today to discuss your applications, aims and requirements. There are no limits, only Infinite Possibilities.®

Call +44 (0) 1684 294090
or visit quickgrind.com

Ordering is as easy as **one, two, three**

1. Choose your shank spec

- Length • Diameter • Tolerance
- DIN or other shank standards

2. Choose your neck spec

- Length • Diameter

3. Choose your head spec

- Full selection process assistance • Diameter
- Tolerance • Flute radius/length
- Ballnose diameter • Conical, tangential, form F flat form and lens types • Number of flutes
- Helix angle • Radial/axial through-coolant • MX, XRed or TX coating • Chip breakers

That's it. No catalogues to trawl though, no complicated product codes, no lengthy tables, just tell us what you need for your job and we will make it for you. Even specials can be designed, proved and delivered in days, at a cost you could recoup on your first job. That's Infinite Possibilities.®

Remember, just ask
we will make it for you

QUICKGRIND® Technical Centre

Improving
your machining performance

Quickgrind's state-of-the-art Technical Centre offers a comfortable and technologically advanced environment to discuss all of your cutting tool requirements, challenges and ambitions.

Our experts will work with you to conduct trials whilst generating and running tool paths and machining strategies. Our investment in the centre enables us to demonstrate what is possible with our ground-breaking tooling and tool management solutions.

The centre is fully equipped with a seminar theatre and training room, meeting rooms and machining centres. Visitors can take a guided tour of our production facility, undergo technical training and discuss their specific requirements.

Call us today to arrange your visit

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