



High Technology Lollipop Cutters

The all round  
**specialist**



INFINITE POSSIBILITIES.®

**QUICKGRIND**®  
carbide tooling



## INFINITE POSSIBILITIES.®

What if you could have the optimum tool, with the marginal cost increase more than covered by improved 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.

Orbis lollipop cutters can be designed specifically for your application and are available in virtually any size, diameter, radius, neck diameter and reach, coating or overall length.

Various other options are available and we are happy to talk with you about your ideas and requirements.

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](http://quickgrind.com)

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

### 1. Choose your shank spec

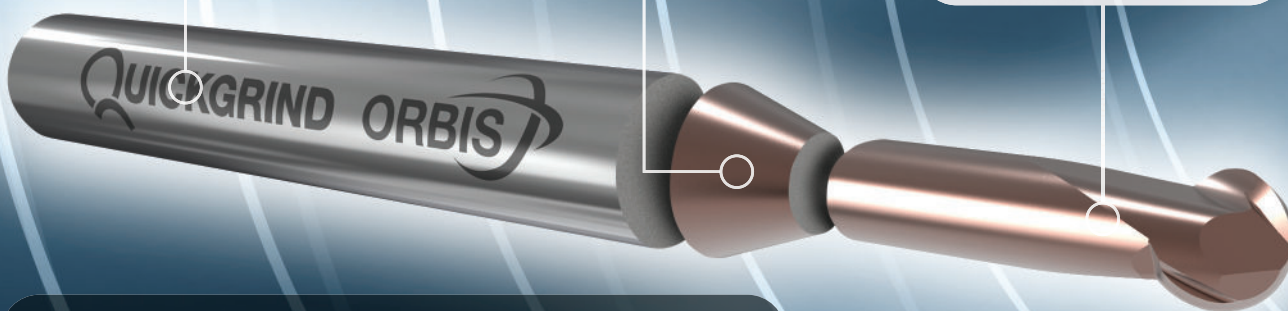
- Length • Diameter • Tolerance
- DIN or other shank standards

### 2. Choose your neck spec

- Length • Diameter

### 3. Choose your head spec

- Length • Diameter
- Tolerance • Number of flutes
- Helix angle • Anti-vibration
- Sphere cutting circumference
- Coating



That's it. No catalogues to trawl through, 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**





High Technology Lollipop Cutters



**TAKUMI**  
PRECISION  
ENGINEERING

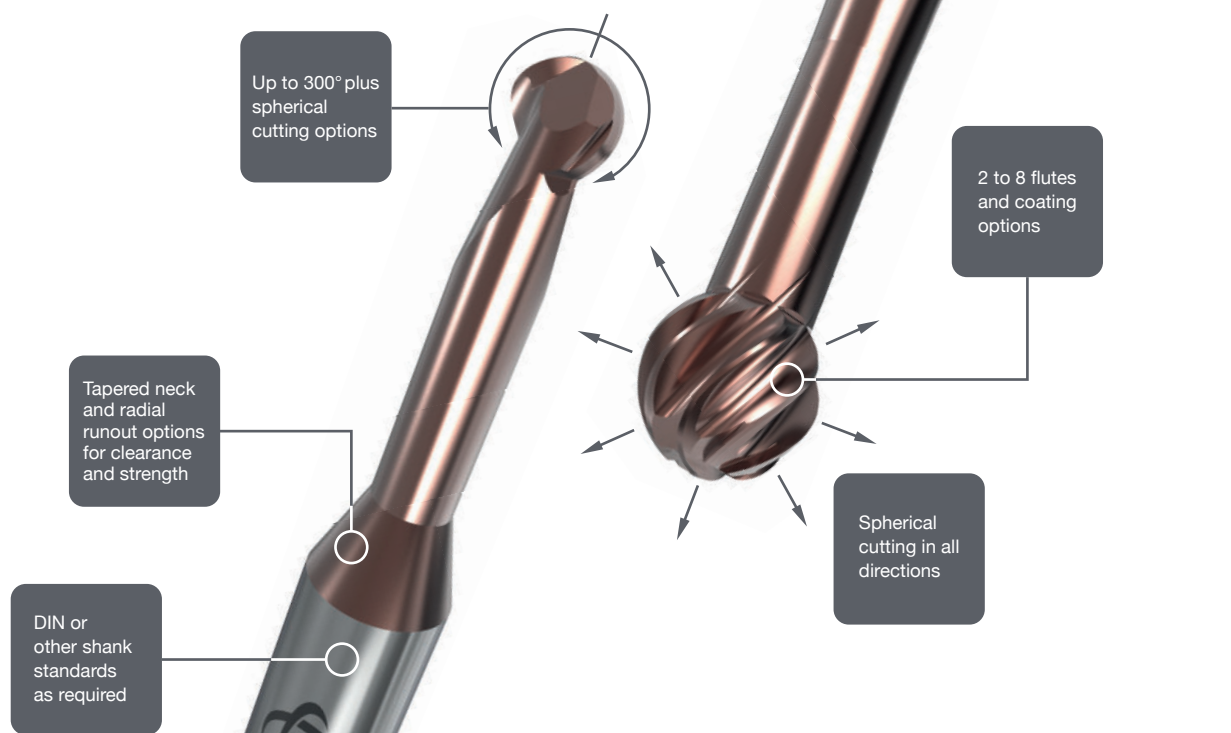
Orbis lollipops work extremely well and Quickgrind's service is second to none. The fact that they will make the tools to any design is a great help when programming parts. The flexibility in Quickgrind's manufacture process enabled us to create the exact lollipop cutter for our medical application.

*Mihail Seckie, Takumi Precision Engineering*

# A new standard for complex components

Quickgrind's Orbis high technology lollipop cutters are designed for multiple applications in virtually all materials from aluminium to peek, stainless steel to titanium and others.

Lollipop tools are often only used for undercuts and de-burring. Orbis is setting new standards of unrivalled high performance and surface finish in applications and component features that have previously caused many issues.



## Applications and benefits

- Spherical cutting in all directions
- Sphere angle only limited by neck diameter
- Huge options of neck reach and diameter
- Multiple flute numbers
- Uncoated and coated
- High speed cutting HSC
- Machine manifolds and ports
- Helical interpolation
- Milling of complex thin walled components
- Machining contour shapes

Stainless M		Steels P	
Precipitation 13-8/15-5 17-4PH	Austenitic 303/304/316L	Low alloy 1000/1100/1300	Medium alloy 200/252/300
Martensitic 403/410/416		Tool steels H13/P20/D2	High strength 420/5120
High temp alloys S		Cast iron K	
Inconel Hastelloy Incoloy	Titanium alloys Ti6AL4V Ti5Al-5V-5Mo	Grey cast iron	SG iron
Non-ferrous N		Hardened materials H	
Aluminium 6061/6082	Die-cast aluminium 10% Si	Hardened steels 45-55 Hrc	



High Technology Lollipop Cutters



5XTechnologies

Quickgrind work miracles. Our tools arrived in less than a week... excellent service. We inspected the tools with a microscope and were honestly speechless. Many thanks for the outstanding service and attention to detail – that is what counts and it sets you apart from everyone else.

*Ryan McClure, 5X Technologies*

# Any geometry for maximum flexibility

Here at Quickgrind we will always offer you the optimum tool solution for your application. The geometries offered by the Orbis range allow us to optimise to the max.



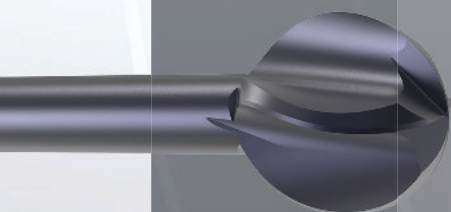
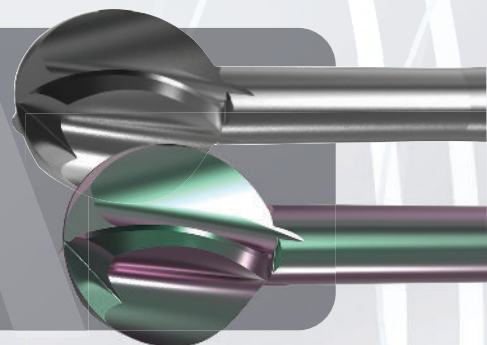
## Orbis-O (Optimal)

'O' is for Optimal. With Orbis-O we will design the geometry and coating you need for your application. Although we have three main geometries it is imperative to us that we work with you to produce the very best tool for your work. Contact us and we will be happy to produce the optimal tool for your needs.

## Orbis-A

Uncoated and TX-G coated for aluminium/TX-R coated for plastics

This geometry is ideally suited for the machining of aluminium and aluminium alloys. Available in uncoated and TX-G coated versions as well as our TX-R coating which is especially suited for plastics. Often three flutes are sufficient but where needed we will suggest multi-flute variants. Orbis-A was developed for aerospace applications which demand the highest quality and tightest tolerances.



## Orbis-D

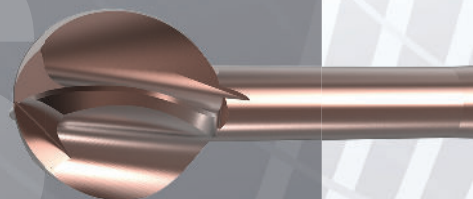
MX coated for steels

This geometry with its MX coating is designed for the efficient machining of all types of steel. Multi-flute options from 4 to 20 can be produced where required. Orbis-D is a firm favourite with many of our mould and die clients around the world.

## Orbis-S

XRed coated for stainless steels and exotics

The ideal geometry for the high speed cutting of stainless steels and exotics, and evolved as a direct result of our involvement in the motorsport industry, this tool excels in difficult applications. Orbis-S is often used in tube machining where the component requires the smallest neck diameter and longest reach to efficiently produce the feature with one tool.





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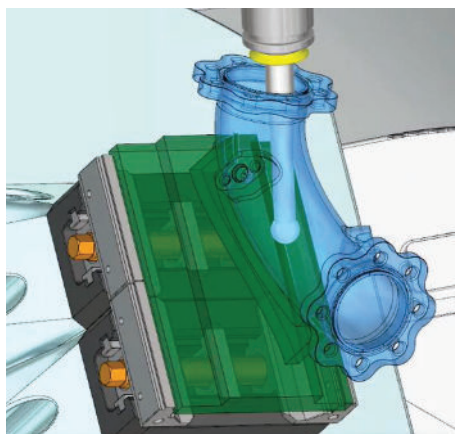
# Innovation with precision

Available with 2 to 20 flutes and in a choice of diameter, reach and overall length Orbis lollipop cutters are ideal for 5-axis tube milling and machining contour shapes.

The tools featured have been designed with a reduced neck to give full access. They are suitable for fine finishing of irregular, uneven surfaces and can be specified with material-specific geometries and coatings (see previous page) for aluminium, titanium/high temperature alloys, steels, stainless steels and plastic for example.

The Orbis range is available to you now, with custom-made tools on a short delivery.

Call +44 (0) 1684 294090 or visit [quickgrind.com](http://quickgrind.com)



*In partnership with 5X Technologies*



Scan the QR code to see how we achieved an 80% cycle time saving on this part



The quality of Quickgrind's tools and their speed of delivery is truly world class. We specify tolerances such as  $\pm 10\mu\text{m}$  on diameter and form and other suppliers are not able to compete. We are able to spend less time chasing tooling suppliers and worrying about accuracy issues, and more time focussing on what we do best.



## Automotive manifold

### Component information

- Material: T6511 tempered aluminium alloy
- Tool: 16mm 3 flute Orbis lollipop cutter
- Speed: 12,870rpm
- Feed rate: 4,280mm/min
- Depth of cut: 3.00mm
- Total cycle time: 2 hours 13 minutes

### Key benefits

- One operation machining from both sides
- Simplify machining of complex, hard to reach features
- Unlock pioneering tube milling strategies
- Dramatically reduce cycle times



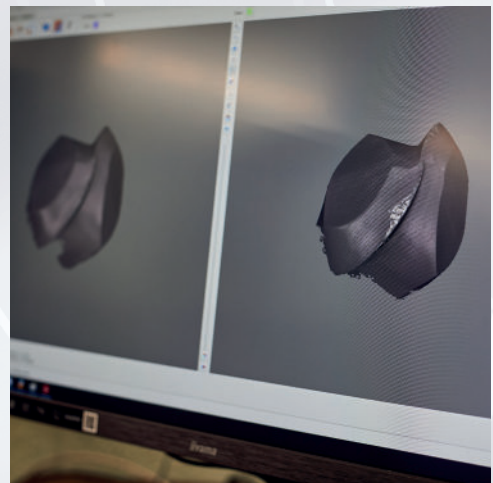
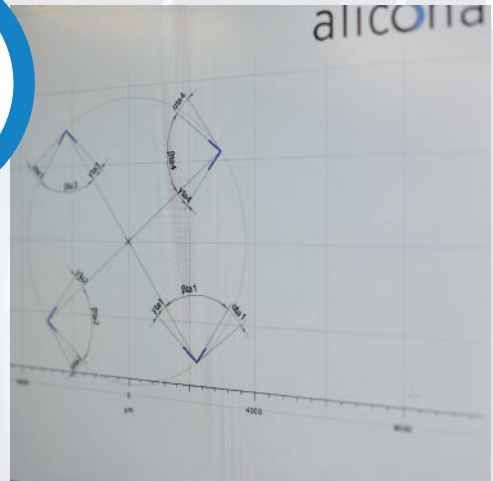
# Adding value to your tooling investment

Orbis lollipop cutters are suitable for remanufacture. Our unique QuickEdge process can give you up to nine times extra usage out of your tooling, and with material (and environmental) costs increasing, the benefits of remanufacture are clear.

- Tools controlled by size, number of reissues and remanufactures
- Extremely attractive price and performance over the life of the tool
- Reduces the need for virgin raw material, a limited resource

Remanufacture doesn't mean compromising on quality. It has always been our policy to produce tools of such high quality that they can be used more than once. Which means that even after nine remanufactures you will continue to enjoy new tool performance, and a clear conscience.

Ask  
about our  
introductory  
offer today



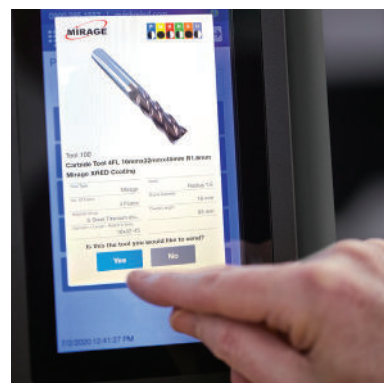
# 24/7 control of your tooling inventory

Is your tooling inventory reduced to a minimum? Is it secure?  
Are your re-stocking orders generated automatically and on time?  
Do you want to reduce your tool purchase administration costs?

Quickgrind's robust, proven tool vending solutions are the answer to all these issues and more. Once we have audited your tooling requirements and consumption levels, we will supply you with a fully stocked machine (our machines can hold from 528 to 1,680+ individual tools). Usage and stock levels are then automatically monitored and replacement tools sent before your stock runs out.

And because your tooling inventory and usage levels are pre-determined, you regain complete control of your purchase administration time and costs, to as little as one purchase order and one invoice per month.

Save time and money. Take control of your tooling with a vending solution from Quickgrind.



## Benefits

- 24/7 secure access
- Allows minimum stock holding
- Automatic re-ordering
- User-friendly operation
- Tailor access to specific users and times
- Easy access to stock information and statistics
- Audit your tooling stock at the push of a button
- Suitable for new and remanufactured tools
- Stocks a wide range of tools types and sizes, and for high or low stock turnover
- Reduces purchase administration costs



# 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

