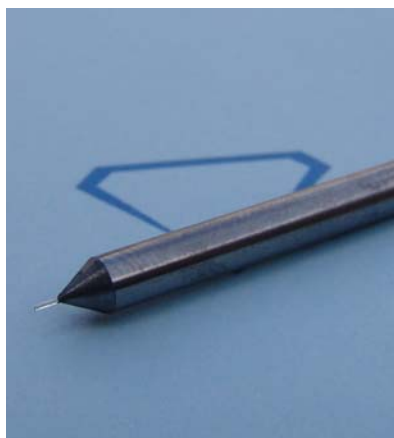




Manual IOL Milling Tools

When using IOL milling tools, some important notes have to be taken in account.



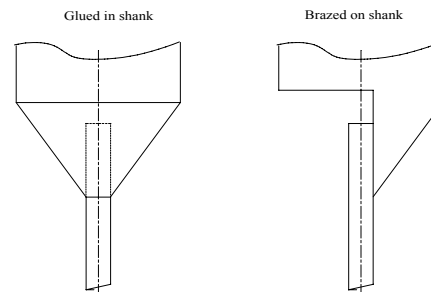
Notes for usage

- Contour IOL diamond milling tools can be used on PMMA and foldable materials, fixed with wax, vacuum or ice.
- Only to use on air bearing machine with a spindle which is perfectly balanced.
- Not recommended for drilling. Theoretically it is possible, but because of possible problems with chip-congestion the tool can break. So therefore always ramp down in material under an angle.
- It's recommended to use air coolant to blow the chips away.
- Generally: the higher the Spindle Speed (RPM), the better.
- Milling at normal temperature: The Feed (mm/min) should not exceed the Spindle Speed (RPM) divided by 1000. (example : RPM 40,000 than Feed maximum 40mm/min)
- Milling in freezing device: The Feed (mm/min) should not exceed the Spindle Speed (RPM) divided by 300. (example : RPM 40,000 than speed maximum 130mm/min)

Technical Features

Contour diamonds are glued in the shank, where most others braze the diamond on the shank. Brazed tools have a step in the shank which results in unbalance. Glued tools have a completely symmetrical shank, so no unbalance in the tool.

Size of cutting radius is guaranteed within a tolerance of $\pm 0,01$. Normally a much larger tolerance is stated on cutting radius. This size is important for customers who use two (or more) tools together on one machine. Furthermore the parallelism of the cutting edge to the shank is within 0,01mm. Other suppliers guarantee 0,04mm, which impacts the unbalance as well. Contour's more accurate tools with no unbalance result in better tool life and better surface finish. Tool life of milling 10,000 to 15,000 IOL-lenses is no exception. It is important, however, to have a stable machine and optimal parameters to reach these results.



Most IOL manufacturers have tried single crystal milling cutters, but because of the unbalance of the tool it was not uncommon for 2 out of 5 tools to break immediately as they touched the material. By trying the Contour diamond milling tool which is perfectly balanced, the user will appreciate the difference and not experience the same breakage problem.

Compared to tungsten carbide milling cutters (max. tool life ± 100 lenses), the Contour diamond milling tool offers more advantages. Beside the much longer tool life (at least 150 times longer) it will give higher surface finish and a dramatic reduction of machine downtime.

Handling & Cleaning

Never touch the diamond when removing from the packaging or mounting the tool in the mill. Even the slightest touch can damage the diamond. Ensure that the diamond tool only comes into contact with the material that will be cut.

If the tool requires cleaning, never use any instrument such as a brush, as this will, almost certainly, damage the diamond. With a soft tissue soaked with a solvent such as acetone, gently hold it against the cutting tip, allowing the acetone to dissolve the debris. Then gently wipe downwards towards the tip. Repeat the process if necessary using a fresh, clean soft tissue.

United Kingdom
Tel : +44-1438-720044
Fax : +44-1438-740502
info@contour-diamonds.com

USA
Tel : +1-603-8764908
Fax : +1-603-8764911
contour@ne.rr.com

Japan
Tel : +81-42-378-5072
Fax : +81-42-379-7505
kenji@contour-diamonds.jp

The Netherlands
Tel : +31-40-2082363
Fax : +31-40-2082313
info@contour-diamonds.nl