Tradition and modern combined

The Meyco Diamantwerkzeug Group enjoys long-standing experience in the manufacture of a wide range of different diamond tools and other diamond products.

DiaTec GmbH in Pforzheim, Germany is part of the Meyco Diamantwerkzeug Group and was founded in September 2008. Together with trained specialist personnel, two new manufacturing facilities have been constructed in Pforzheim and Idar Oberstein for the production of diamond, PCD, CBN, CVD and carbide tools. Today, the latest erosion, laser, measurement and grinding technologies facilitate the production of chip removal tools of the highest quality.

Customers have a single point of contact but can access the special skills and know-how of many companies.

The following branches of industry currently use DiaTec tools successfully:
- Aerospace
- Automotive industry
- Electrical industry
- Precision mechanical industry
- Plastics processing industry (acrylic, PMMA, PTEF, etc.)
- Medical engineering
- Optical industry (metallic lacquer finishes, laser optics, lighting technology, solar technology, spectacle lenses, intraocular lenses, contact lenses)
- Jewellery and watchmaking industry, as well as writing implements
Our products: individuality for perfect results

Only the highest-quality, selected cutting materials are used to manufacture our tools, which are tailored to customer requirements.

**Monocrystalline diamond (ND, MCD)**
Monocrystalline diamond is the hardest known mineral. On the one hand, it is mined from natural sources and, on the other, produced nowadays by machines. The homogeneity as well as the abrasive hardness enable the manufacture of sharp, notch-free microcutters - something that can only be achieved to a somewhat lesser extent using other cutting materials. This factor is used in particular for the high-polish turning and milling of non-ferrous metals and plastics. Yet another advantage of diamond cutting tools is their wear resistance which guarantees an unparalleled service life with microcutting quality. The materials marked with * can, on request, be processed with SANTRA, giving them a high-gloss surface finish of the finest quality and meaning they need no further work.

- Diamond tools from 0.10 – 18 mm.
- Guaranteed nick-free cutting edge even at 800x enlargement.
- We manufacture complex negative shapes of all types according to customer requirements.
- We supply tools with controlled undulation up to 0.05 μm with a measurement report.

**Polycrystalline diamond (PCD)**
Due to its polycrystalline structure (ultrafine to coarse grain) PCD has a high level of durability, but lower wear resistance and poorer microcutting quality than monocrystalline diamonds. The manner of reaction is identical to that of monocrystalline diamonds, but due to its higher durability, the possible areas of application of polycrystalline diamonds are significantly increased.

### Material and intended purpose

<table>
<thead>
<tr>
<th>Material</th>
<th>Machinable materials</th>
<th>Intended purpose</th>
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</thead>
<tbody>
<tr>
<td>![Natural diamond]</td>
<td>Non-ferrous metals / plastics</td>
<td>High-gloss finish, long service life</td>
</tr>
<tr>
<td>![Monocrystalline diamond (MCD)]</td>
<td>Non-ferrous metals / plastics</td>
<td>High-gloss finish, long service life</td>
</tr>
<tr>
<td>![Polycrystalline diamond (PCD)]</td>
<td>Non-ferrous metals, plastics, reinforced plastics</td>
<td>Normal finish, 10 to 20 times longer service life than tungsten carbide</td>
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</tbody>
</table>

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Milling tools

- Single-tooth cutters
- Milling heads equipped with indexable inserts (PCD or MCD)
- Diamond milling heads with MCD and PCD inserts
Turning tools

Holder and indexable insert system

High-gloss finishing

Turning diamonds in PCD, MCD and natural diamond
Dressing tools

Dressing wheels / profile dressing diamonds / dressing plates / single-grain and multigrain diamonds / single-use diamonds / fragmented diamonds various manual dressers
We offer a complete line of diamond tools for the processing of intraocular lenses and contact lenses.

- Indexable insert system/monoblock tools
- Natural diamond/synthetic diamond
- Controlled undulation/standard tool
- Cylindrical clearance angle/conical clearance angle
- Individual radius size
- Individual rake
- Holder: depending on machine type

Diamond material: synthetic or natural?
We distinguish between tools made of natural and synthetic diamonds. Depending on the particular application, both types offer specific advantages. The crucial factors when deciding which diamonds are right for the job are the lens material to be machined and the geometry of the tool.

Diamond inserts known by the Monodite or Sumitomo brands are produced artificially. This is a high-quality diamond material and is used for processing substances containing no metals.

We are only too happy to assist our customers in the evaluation of the best possible specifications.