

High-precision
diamond tools for
mirror finish surfaces

High-precision diamond special tools for turning and milling

DIATEC Diamanttechnik GmbH is a leading and recognized producer of high-precision diamond tools in the high-end sector. With the machines that we have developed and the most modern techniques, we mainly produce customized turning and milling tools with diamond (MCD), PCD and CBN edges.

As an experienced producer, we make diamond tools with tolerances in the μm range and roughnesses in the nanometre range. With the gap-free polished diamond edges, surface roughnesses of 3 – 6 nanometres can be reached. These tools guarantee perfect results with excellent tool life.

Cutting materials for DIATEC tools

For the production of our tools, we use selected cutting materials of the highest class, corresponding with the individual customer specifications.

Monocrystalline diamond (ND, MCD)

MCD is particularly used for the superfinish of non-ferrous metals and plastics. The extreme sharpness of edge only produces minimum cutting pressures with no heat development and therefore allows for maximum tool life and glassy surfaces without any further treatment.

Polycrystalline diamond (PCD)

Due to its polycrystalline granular structure, PCD is less wear-resistant, but offers a significantly greater toughness. Therefore it is perfectly suited for the chipping of abrasive materials with high feed rates.

Our customers

Among our customers are renowned companies from various industrial sectors, e. g.:

- » aviation and aerospace industry
- » automotive industry
- » electrical industry
- » precision mechanics industry
- » plastics processing industry
- » medical technology
- » optical industry
- » jewelry and watchmaking industry
- » production of writing utensils





Diamond milling tools for mirror finish surfaces without further treatment

You can rely on our long-time experience in the construction and application of diamond milling tools. Custom-made DIATEC milling tools are used where the highest demands are made regarding the surface finish. With DIATEC tools, perfect mirror, sealing and sliding surfaces can be produced without any further polishing – even in difficult applications.

Our tools

- » mini milling cutters from \varnothing 0.10 mm
- » engraving milling cutters from \varnothing 0.05 mm
- » radius milling cutters from \varnothing 0.10 mm
- » end milling cutters from \varnothing 0.10 mm
- » single tooth milling cutters from \varnothing 0.10 mm
- » face milling cutters from \varnothing 0.10 mm
- » milling heads up to \varnothing 200 mm

Fields of application

- » laser mirrors
- » automobile headlights
- » LED lamps
- » acrylics with distortion-free reflecting surfaces
- » mould making
- » micromechanics
- » jewelry and watches

Processible materials:

Non-ferrous metals: gold, silver, platinum, nickel, brass, germanium, silicon, aluminium, copper and bronze

Plastics: acrylics (PMMA), polycarbonate (PC), polyvinyl chloride (PVC), polyethylene (PE) and polyoxymethylene (POM)





Diamond turning tools for polish turning

DIATEC turning tools made of monocrystalline diamond are used for the ultra-precision machining of watches in the optical industry, in the jewellery production and in precision mechanics.

On vibration-free machines that are specifically produced for polish turning, surfaces with surface roughnesses in the nanometre range can be created that can be compared to a mirror. Finishing with sanding or polishing is no longer necessary. Compared to polishing, contours and measurements remain completely unchanged. Even in microscopic magnification, no tool marks are visible.

Our tools

- » turning tools for internal and external machining
- » profile turning tools

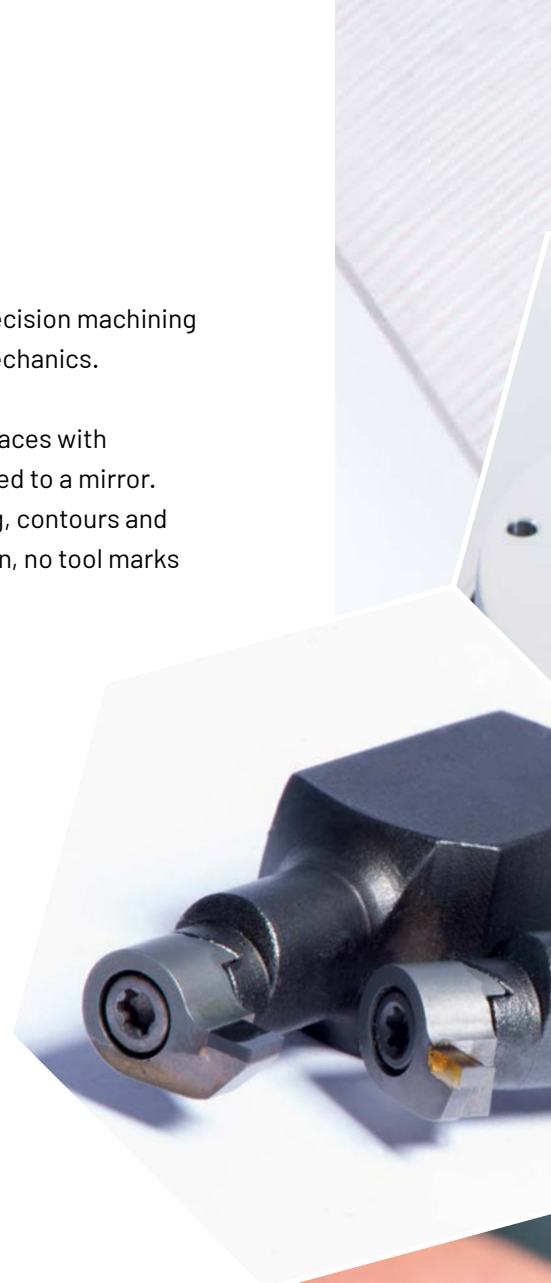
Fields of application

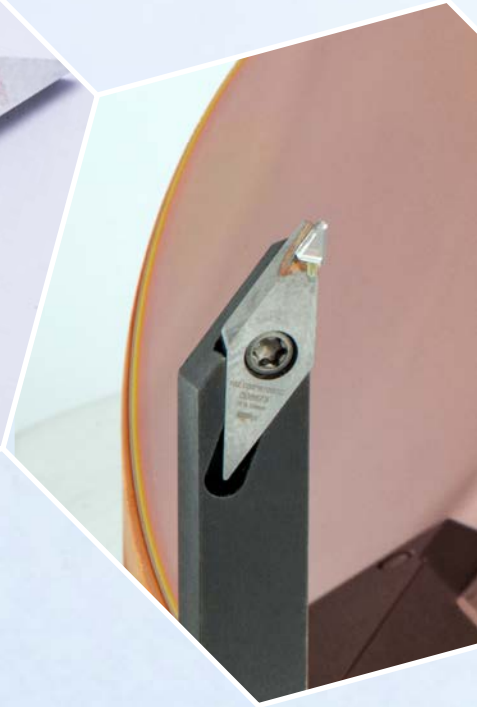
- » polish turning in the optical industry
- » polish turning in jewelry production
- » polish turning in precision mechanics

Processible materials

Non-ferrous metals: gold, silver, platinum, nickel, brass, germanium, silicon, aluminium, copper and bronze

Plastics: acrylics (PMMA), polycarbonate (PC), polyvinyl chloride (PVC), polyethylene (PE) and polyoxymethylene (POM)







Precision since 2008

DIATEC was founded in 2008 as part of the Swiss Meyco Diamantwerkzeug group and therefore has access to the long-time experience and knowledge of experts from various disciplines.

Our customers

Among our customers are renowned companies from various industrial sectors, e. g.:

- » aviation and aerospace industry
- » automotive industry
- » electrical industry
- » precision mechanics industry
- » plastics processing industry
- » medical technology
- » optical industry
- » jewelry and watchmaking industry
- » production of writing utensils