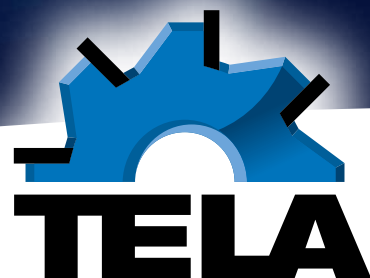




INNOVATIVE PRECISION TOOLS

| PCD | SOLID-CARBIDE | INSERT | CARBIDE | SPECIAL | MICRO · REAM |





HIGH-TECH BY TELA

Polycrystalline diamonds (PCD) are produced by sintering together selected diamond particles under extremely high pressure and temperatures. We equip our high-quality, high-tech PCD tools with this synthetically produced, extremely hard wear-resistant structure made out of diamond particles that have grown together. TELA tools are used in particular in the automobile industry, in the aviation and aerospace industry, in mould construction and in the energy sector as they are long-lasting, precise, universal, efficient and extremely versatile.



WE IMPROVE THE EFFICIENCY OF YOUR PRODUCTION PROCESSES

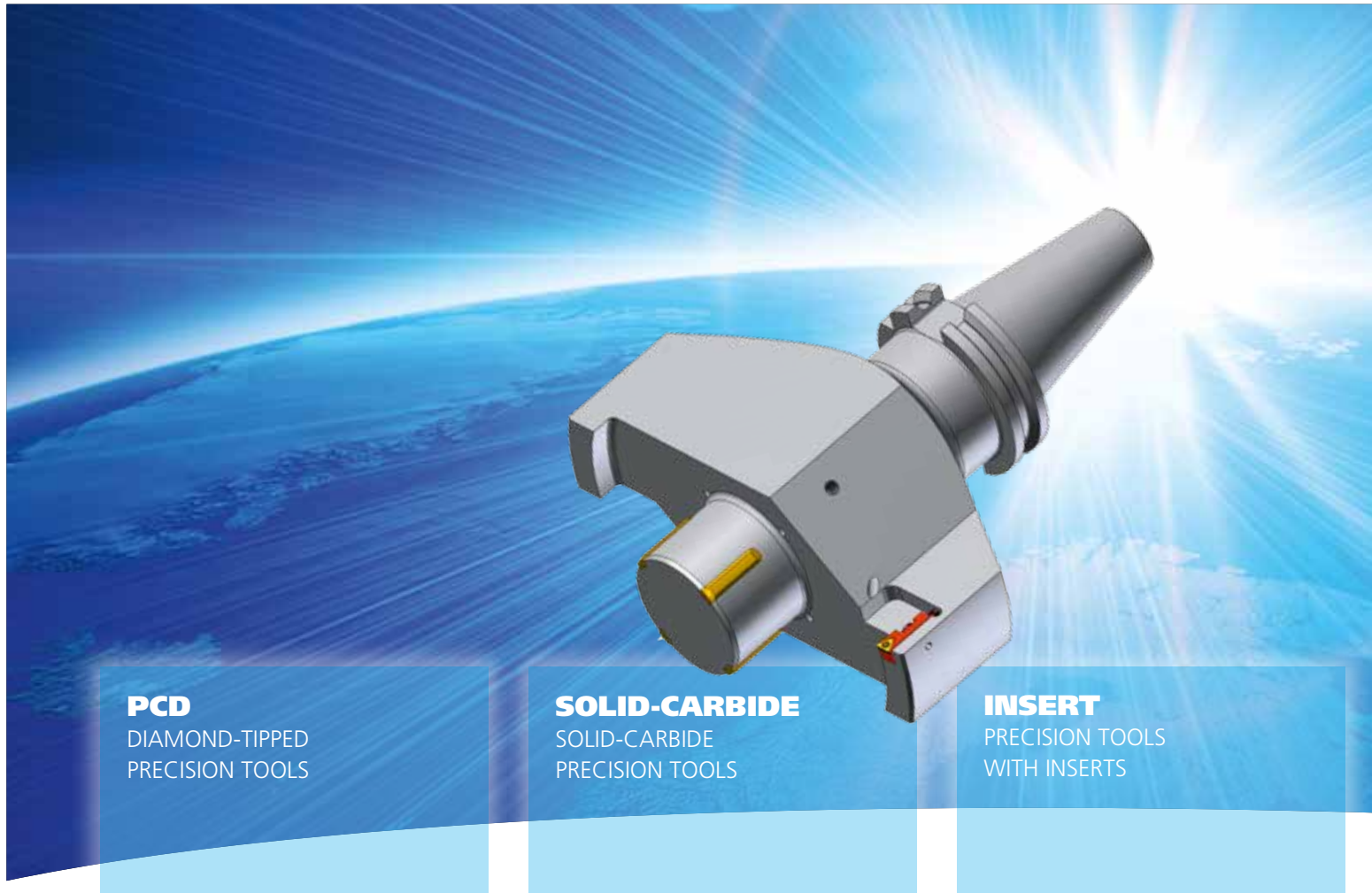
Precision, flexibility and speed – for over 40 years we have demanded this of ourselves and our product range for our customers who seek innovative solutions for cutting processes.

At the TELA head office in Horb am Neckar, only 60 km south of Stuttgart on the edge of the Black Forest, we provide not only innovative tools in a wide range of materials, but also complete solutions for drilling, countersinking, grinding, milling, counterboring and boring. State-of-the-art, networked CAD/CAM technologies support the production process for your tools.

With every development, our engineering team focuses on improving our customers' production processes. This is why major manufacturers from the aviation and aerospace, job-order production, prototype construction, die-and-mould and general machine engineering sectors trust products and solutions from TELA.

In our production we use state-of-the-art CNC lathes, milling machines and grinding machines. We can also meet your specific needs flexibly and very quickly with conventional machining.

TELA impresses with precision and high quality standards, with its materials, products, machinery and equipment being subject to constant, systematic controls.



PCD

DIAMOND-TIPPED
PRECISION TOOLS

SOLID-CARBIDE

SOLID-CARBIDE
PRECISION TOOLS

INSERT

PRECISION TOOLS
WITH INSERTS

Due to the absolute process reliability of the cutting material PCD and the continuous development of machine technology, more and more possible uses are being found for the **machining of non-ferrous metals and composite materials.**

The cutting material PCD is becoming increasingly important due to the continuous development of machine technology and peripheral equipment towards the highest speeds, feed rates and process reliability. Due to the precisely-machined cutting edges, outstanding cutting results can be achieved in external and internal machining. With extremely abrasive materials the use of PCD is essential. Due to the improved cutting data compared to SC and HSS, the shortest possible machining times and low downtimes are achieved with the highest process reliability and quality.

Precision-ground solid-carbide tools with a range of substrate options raise the productivity of your processes. They are mainly used in **drilling, countersinking, grinding and milling.**

We produce for you SC tools in standard and in particular in special designs with diameters from 2mm to 42mm. As a result you have many counterboring, countersinking and milling options with many types of shank – integrated in only one tool. You therefore save valuable tool-changing and machining time. We can also offer you a wide range of coatings tailored specifically to your application in PVD or CVD processes.

Tools with inserts from TELA are designed specifically for your very **special solutions.** The design is based on your company's existing disposable cutting inserts. We use is disposable cutting inserts, which achieve the best cutting results. We equip the tools in a manufacturer-independent manner with standard ISO inserts or special geometries. For special machining processes we also use TELA's own special inserts. For a fine adjustment of the cutting edge with narrow-tolerance drilling there is a wide range of options. Here too we produce standard ISO cartridges, modular mounting cassettes or existing manufacturer-specific holding systems.

With regard to modularity, we manufacture all common tool interfaces for your tool holders. Mono-designs and special flange solutions are also not a problem for us.

And if one of your tools is no longer working one hundred per cent, our experienced staff will be able to repair it very quickly to the highest quality or fit it with new insert seats.



TELA PRECISION TOOLS, AN INVESTMENT IN THE FUTURE

CARBIDE

SOLDERED-CARBIDE
PRECISION TOOLS

Soldered-carbide tools are mainly used in **finish machining in low-volume production for large tool diameters** for cost reasons, as they can be reground several times and re-fitted. Because it is possible to manufacture them in an almost unlimited variety of shapes, you have a continuous surface on your workpiece. The materials that can be cut include cast iron, aluminium and steel.

Carbide-tipped helix milling cutters are used in finishing dies and moulds and in general machine engineering. Carbide-tipped roughing cutters (porcupine cutters) rough machine with a very soft cut due to the very firmly soldered joints and an extremely positive geometry when grinding.

There are no exchange faults due to sinter and incircle intolerances, loosening of screws and breakdown with extreme machining. Due to the mono-design, stable ratios, in particular when deep cavities are required (e.g. in dies and moulds), are guaranteed. With a weak clamp, the soldered tool is the first choice.

SPECIAL

APPLICATION-SPECIFIC
PRECISION TOOLS

Special inserts from TELA are manufactured in a wide range of shapes and contours. When these tools are used there is no regrinding of contours and re-setting of worn-out tools.

The cutting material and cutting geometry are adjusted individually to meet your requirements. Standard inserts in carbide or PCD are available from stock or from serial production. For connections of hydraulic or pneumatic components, we supply you with combined drill, thread and chamfering tools, adjusted for the respective ISO connection dimensions.

Due to our decades of experience we know which tool is the right one for your needs and what the best cutting materials are. Please do not hesitate to ask us, we would be pleased to advise you.

MICRO-REAM

MODULAR FINE BORING
AND REAMING SYSTEMS

Our modular boring tools are characterised by a simple and precise adjustment mechanism. It enables a defined, faultless feed directly on the machine. The high precision and unique operation reduces downtime, improves quality and improves your productivity. Our boring systems lower your manufacturing error rate, minimise the stray field and ensure efficient production within the precision boring tolerances. The high-precision and yet robust precision bore heads have been tried and tested a thousand times.

Our product range includes basic precision boring cartridges, complete boring systems and modular counterboring systems.

Our standard reaming system consist of mono reamers, modular reaming heads, cutting ring systems and adjustable adapter systems. We have a big range of cutting materials, geometries and coating options for all application possibilities.



QUALITY, SPEED, FLEXIBILITY AND SERVICE ARE OUR TOP PRIORITIES



Regardless of whether they are soldered or screwed, we recondition the following types of cutting tools in guaranteed quality, even if the tools were produced by other manufacturers:

- All kinds of PCD cutting tools
- All kinds of carbide-tipped tools
- SC special tools, where applicable based on drawings
- Tools with inserts

SPEED PAYS OFF!

Speed is not only important for machine running times, but also very much so for service. Nowadays no company can afford to have machine downtimes. Please call us if you have any problems with your tools. Our competent service staff will help you on site and repair your tool quickly and unbureaucratically. TELA – your reliable partner, especially when it comes to perfect support.



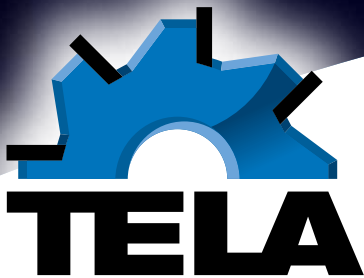


Tool reconditioning is profitable, because it is expensive to buy new ones.

Don't throw your worn-out tools on the scrapheap, let us recondition these valuable means of production in our highly qualified grinding and repair department. Often all that is needed is a new shank, a new bevel, a new cutting edge or a new seat in order for you to be able to use your tool again. Even if a carbide special tool is completely reconditioned, you will save up to 30% compared to buying a new one.

The specialists in our repair department will professionally recondition all kinds of worn-out, blunt or even deformed tools so that you can use them again. And in the shortest possible time! Our local service staff would be pleased to advise you without obligation.

If a repair should not be economically viable or no longer possible, we would be pleased to offer you an alternative. Due to the high flexibility of our production we are able to supply to you very quickly standard and special tools with a wide range of holders.



TELA GmbH
Precision Tools
Untere Gärten 13
72160 Horb/Ahldorf
Germany
Tel +49 (0) 7451 5393-0
Fax +49 (0) 7451 5393-99
www.tela-tools.de

