

IGUANA MILLING CHALLENGE

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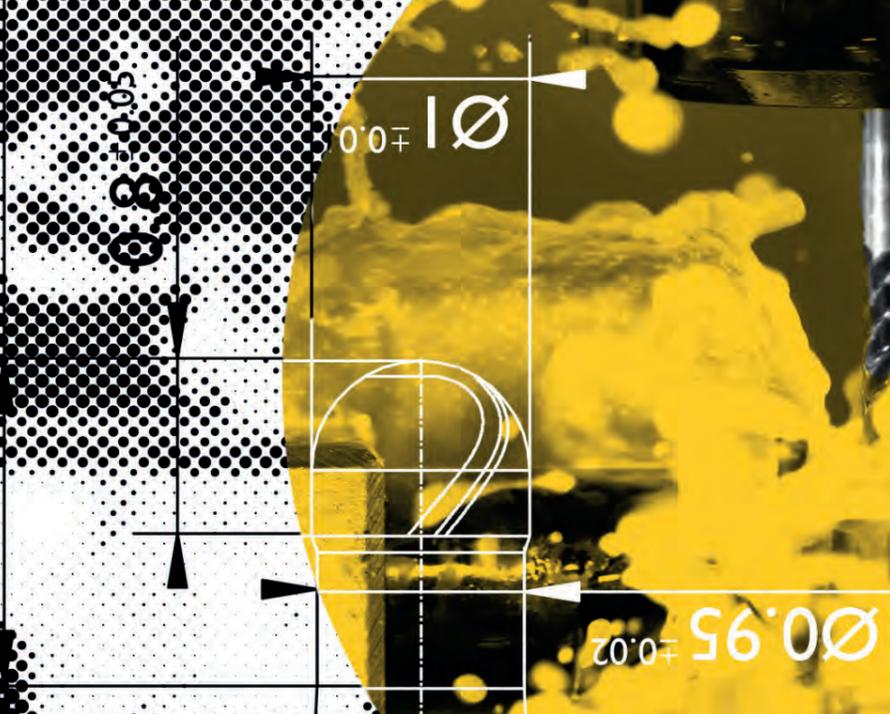
10.0 ±0.1

70

16.12.2021
??..??..20??

ONE TOOL, NON-STOP, LIVESTREAM EVENT ON TWITCH.TV





$\varnothing 10 \pm 0.00$

$\varnothing 0.95 \pm 0.02$

THE EVENT



**ONE TOOL,
NON-STOP,
LIVE...**



HOW LONG WILL IT RUN?

To celebrate the winning of the Baden-Württemberg Innovation Award, we decided the best way to show why this tool-line won is just to let one run...and for as long as it can.

Our team at ZECHA has spent years developing and perfecting a new kind of coating process, and what has come out of this project is something truly innovative. Using laser-technology to sharpen the cutting edges of a multi-layer real diamond coating results in a perfectly sharp and uniform edge, which greatly increases the lifespan of the tool.

How much longer does the tool last? This is the point: if we were to tell you you wouldn't believe us. Since we know that data we would tell you would be seen as impossible, we decided that we needed to show how it performs ourselves; and this is where the idea for a livestream milling event came from.

We will be loading our Kern milling machine with only 1 tool; a 1mm 2-flute ball (which only lasts about 8-10 hours by standard tools), load the machine with copper blanks, and let it machine commemorative coins until the tool dies. We wanted to eliminate any questions about switching tools, camera tricks, etc. so this is why we will only be using one tool, and this tool will have a dedicated live camera on it the entire time.

So how long will it last? Join us on our stream and let's find out together...



ABOUT THE TOOL

IGUANA - THE BRILLIANT

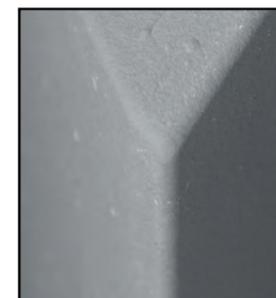


When machining highly abrasive materials, non-ferrous metals or copper in a wide variety of industries, many a tool reaches its limits. With the IGUANA tool family, ZECHA is revolutionizing the market for diamond tools in the micro range. The high-end tools are multi-flute-cutters in small diameters with sharp cutting edges and highly wear-resistant, closed diamond coating - an absolute novelty.

The targeted sharpening of the cutting edges uses laser technology ($R=1\mu\text{m}$) and the special cutting geometry significantly reduces the cutting forces in use. Optimal tool geometries in combination with the sharp and closed diamond coating lead to a significant increase in tool life. Another advantage of laser sharpening is it leaves the tool cutting edges without clusters, which results in a better surface quality compared to standard diamond-coated tools.

The new 935 series used was specially developed for producing the finest surfaces in non-ferrous materials. With their mold making dimensions, the two-flute ball end mills and two- and three-flute torus end mills are ideally suited for the production of copper electrodes.

Due to an extraordinary cutting edge setback, the tools are particularly low-vibration and minimize cutting pressure.



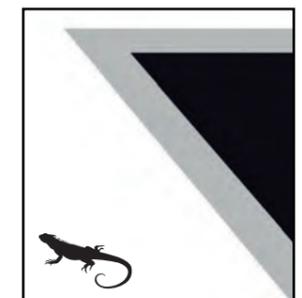
Normal Coating



Normal Coating



IGUANA Coating



IGUANA Coating



INNOVATION BW

Innovationspreis Baden-Württemberg
Dr.-Rudolf-Eberle-Preis



AWARD-WINNING TECHNOLOGY

Baden-Württemberg Innovation Prize Winner

Every year, the Ministry of Economics, Labor and Housing awards the Innovation Prize of the German State of Baden-Württemberg (Dr. Rudolf Eberle Prize) for special innovative achievements by medium-sized companies. Exemplary achievements in the development of new products, processes and technological services as well as in the application of modern technologies in products, production or services are honored.

This year, we applied for the Innovation Award BW for the first time with the development of the IGUANA technology and found out on November 16th 2021 that we had won the first place award.

A prize committee decided on the awarding of the prize, taking into account the criteria of technical progress, special entrepreneurial performance and sustainable economic success.

We are very proud of the entire ZECHA team, as it was only due to their commitment in the last few years that we were able to apply for such an award in the first place.



WHAT WILL BE MILLED

We will be loading the machine with copper blanks, and will be making commemorative coins of various designs.

You will see designs from ZECHA, AlienTools and all of the partners, and yes, the complete coin (including the engraved date of production on the back of the coin) will be done with a single 1mm tool...and we think you'll be surprised on how much detail you can get out of it.

1.5 ±0.1

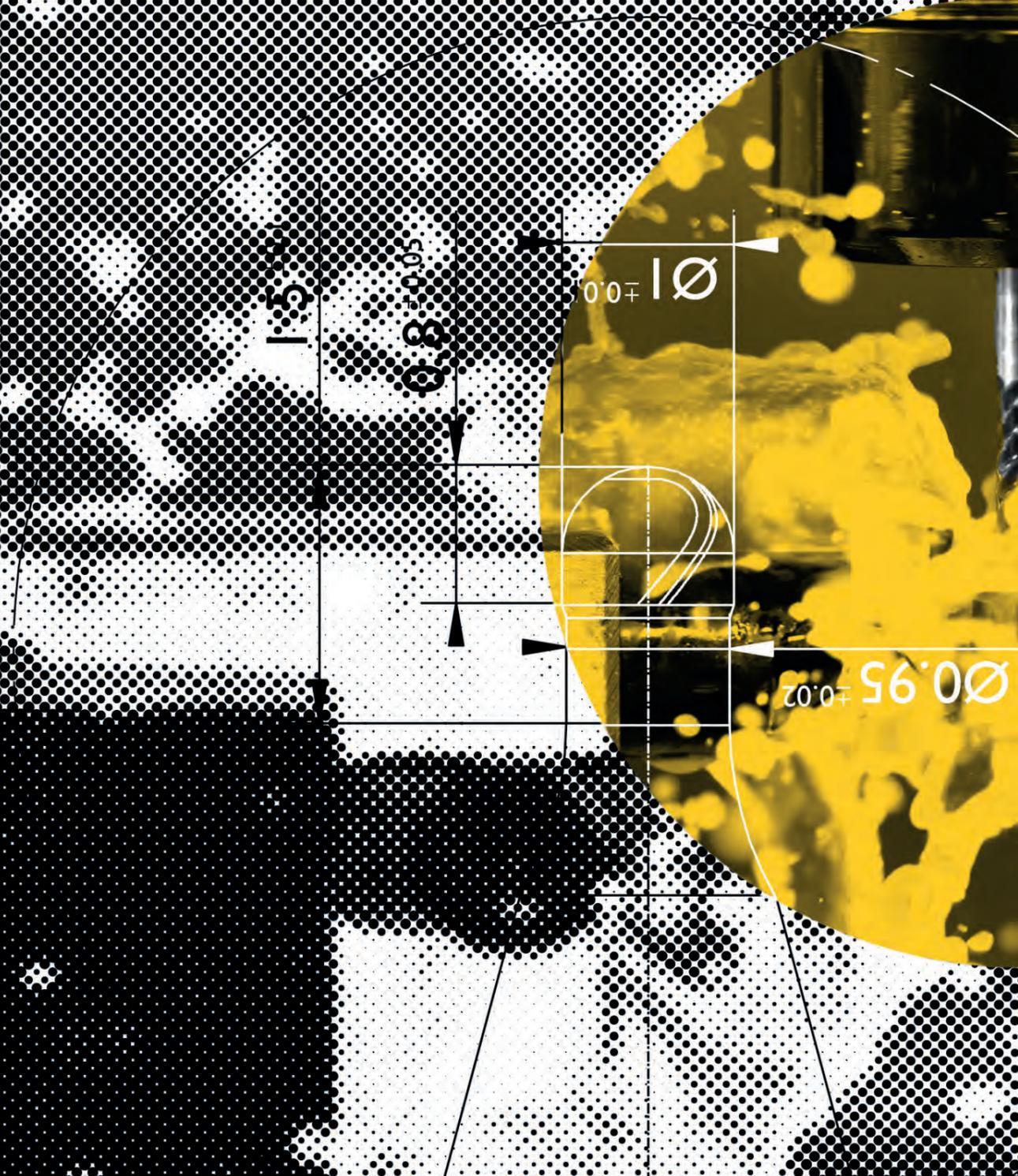
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∅0.95 ±0.02



THE STREAM





THE STREAM

WHERE IT IS STREAMING

The event will be live-streamed live.
Just visit the event website to watch the stream.

HOW TO WATCH

You can simply go to the site to watch the stream, however, if you want to participate in the chat you need to either create an account on the site or download the android or iphone app and create an account there.

WHAT WILL BE SHOWN

When the event starts we will be having a little launch party with more info about the tool, various interviews with the partners of the event etc. As the milling goes on we will have intermittent updates, our technicians will answer your questions, and various other surprises. Join us to find out!

OTHER CHANNELS

The stream will also be embedded on www.zecha.de/en and www.alien-tools.com

THE SCHEDULE

16.12.2021

13:00 - Stream Opening

14:00 - Live program with welcome, interviews, introduction of mold/parts/partners.

- Machine start with countdown

17.12.2021 - Kern Partner Day

Approx. 16:00 - Stream update, with partner interview

18.12.2021 - Cimtrode Partner Day

Approx. 16:00 - Stream update

20.12.2021 - oelheld Partner Day

Approx. 16:00 - Stream update, with partner interview

21.12.2021 - LANG Technik Partner Day

Approx. 16:00 - Stream update

22.12.2021 - REGO-FIX Partner Day

Approx. 16:00 - Stream update

23.12.2021 - OPEN MIND/HYPERMILL Partner Day

Approx. 16:00 - Stream-Update, with Partner Interview

26.12.2021 - AlienTools Partner Day

Approx. 16:00 - Stream-Update, with Partner Interview

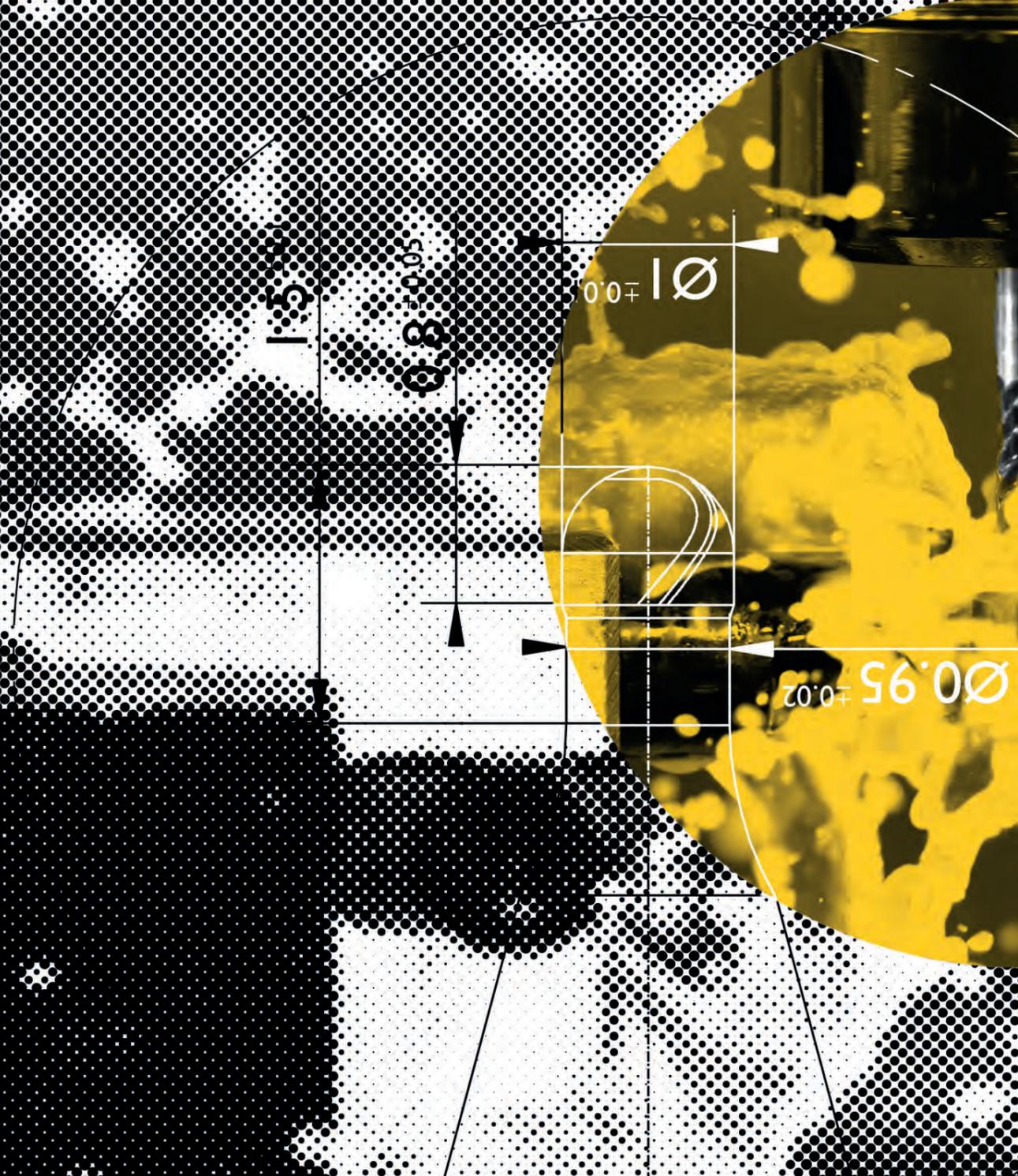
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14:00 - Stream closing

14:30 - Live program with interviews, certification, review



THE PARTNERS





ZECHA

LIVE PRECISION WITH US

ZECHA Hartmetall-Werkzeugfabrikation GmbH has been one of the pioneers and trendsetters in the field of micro cutting, punching and forming tools for almost 60 years. Originating from the watch industry, the uncompromising focus on miniature tools with highest precision is not only reflected in the extensive catalog, but also in the special tool solutions.

Precision and quality are decisive factors for international use in various industries, such as medical and dental technology, watchmaking, automotive or tool and mold making. Experts from the internal research and development department are constantly developing the latest geometries and tools for unusual applications and state-of-the-art materials.

In addition, the reproducibility of the tools is ensured via the life number at the end of the shaft of each tool, even after years.

Modern CNC machinery, high-end measuring and testing technologies and carefully selected carbides from leading manufacturers as well as intensive cooperation with our customers and partners guarantee the extraordinary perfection of our tools.

Website: www.zecha.de





**GERMAN
DESIGN
AWARD
GOLD
2021**

ALIEN TOOLS

FUTURISTIC MICRO-MILLING TECHNOLOGY

POWERED BY 

AlienTools was born as a joint-venture in order to bring Zecha quality tools into the dental industry with a fresh, new look.

Based in Berlin Germany, the team at AlienTools quickly built a well-known brand by taking the top-quality tools from the Zecha portfolio and focusing on the digital experience in order to maximize the ease of working directly with the manufacturer. This means not only having a webshop and being active on social media, but usings today's technology to maximize the enjoyment of working with AlienTools in the form of loyalty programs, affiliate programs, etc.

In the first 2 years of the project, AlienTools sold directly to customers in over 50 countries. With this project showing that customers were eager for next generation of partnerships, they have just recently expanded and launched their industrial line, bringing a fresh new face to the form and die industry.

Website: www.alien-tools.com





KERN Microtechnik GmbH, Eschenlohe, employs around 220 people and successfully operates in more than 30 countries. It focuses on two commercial fields: the development and manufacture of high precision machining centers and contract production of machined parts in the micro and nano domains.

Among others, KERN milling centers are used for in-house serial contract production. Therefore, the company's mechanical engineers are perfectly equipped not only to produce high precision machines, but also to accompany their users with the necessary process know-how. Customers become technology partners and thus part of the "KERN Family". This includes intensive consultation in terms of optimal operation and process integration from the idea to the finished part, enabling KERN users to increase their competitiveness step-by-step.

Kern contract production's product portfolio encompasses prototypes, single-item and serial production as well as unit assembly and design support. Parts are machined by milling, drilling, EDM and grinding.

Webseite: www.kern.de





oelheld®

innovative fluid technology

oelheld GmbH is a medium-sized business which can look back on 130 years of tradition and experience. Since its foundation in 1887 by Carl Christian Held, oelheld GmbH has established itself as a lubricant specialist. Partnership, research and Human Technology are our core values and are traditions that we are proud of.

We work closely with numerous machine manufacturers and universities to develop products that are designed to meet the specific requirements of their machines. This kind of cooperation allows us to meet the needs of our customers and adapt our fluids to the different applications. Our laboratories are equipped with state-of-the-art analysis and testing devices which meet the latest industry standards and help us to satisfy our customer's wishes.

Website: <https://www.oelheld.com/en/>





REGO-FIX

REGO-FIX unites four different toolholding systems: the ER system, nowadays established worldwide as an industry standard according to DIN 6499, is considered to be the original from the inventor. The micRun® MR system is a trend-setting further development of the successful ER system. Thanks to a guaranteed overall system concentricity of $\leq 3\mu\text{m}$ at $3 \times D1$, it is the perfect solution for all high-performance applications. The third system known as powRgrip® offers excellent concentricity, high vibration dampening and simple and safe handling. The Multiline identifies itself as reliable tooling solutions for traditional machining. The common goal of the four systems is to optimize the machining process and to tailor the specific strengths to the individual requirements of modern machining.

Website: <https://de.rego-fix.com/en>





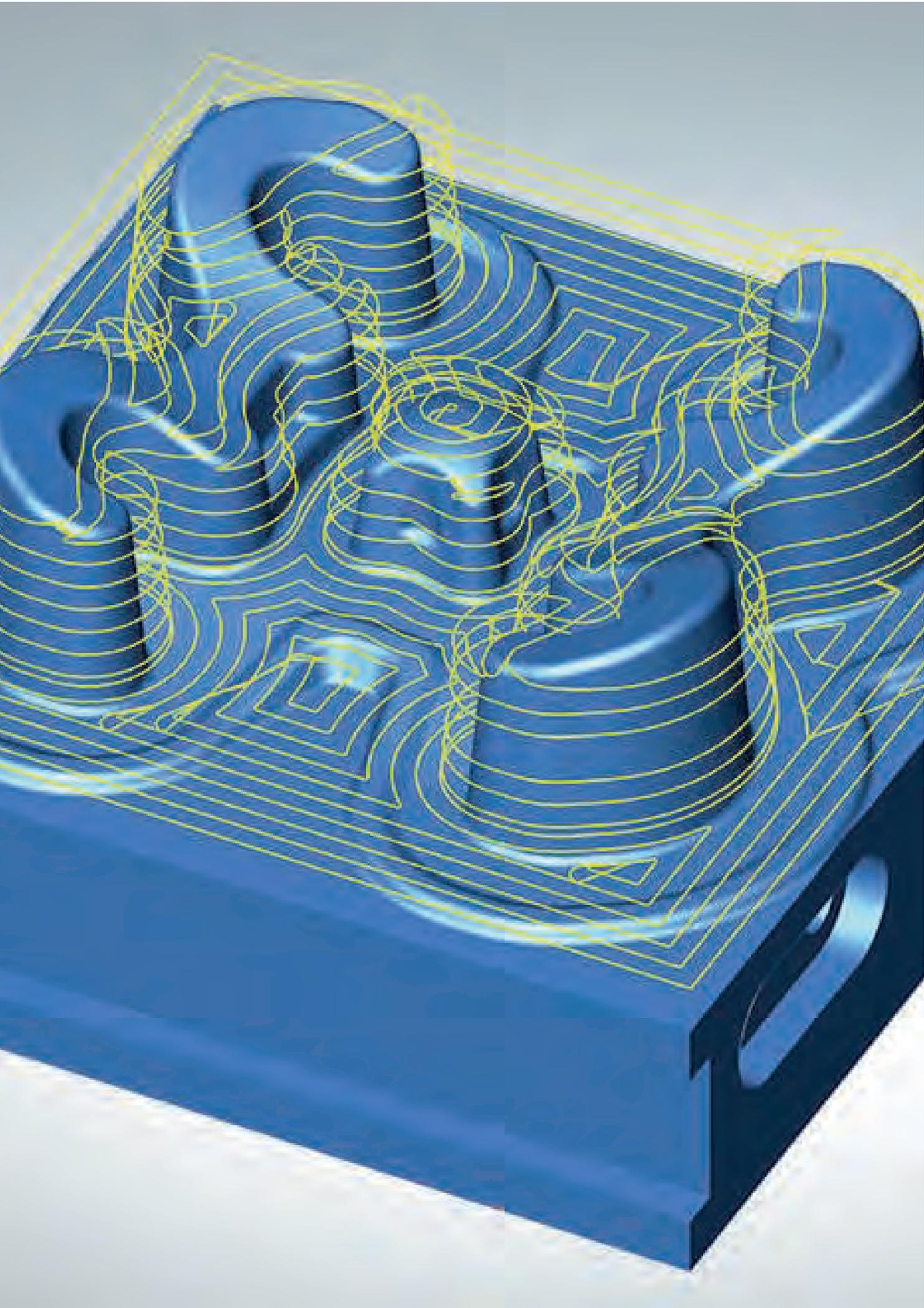
LANG Technik is one of the world's leading companies in the field of workholding and automation technology, which helps machining companies with future-oriented solutions to simplify production processes, to manufacture more efficiently and to ideally exploit production capacities.

As a pioneer in this industry, we develop and produce integrated solutions in the field of automation, zero-point clamping and workholding for both ourselves and for all machining industry sectors.

As a manufacturer of highly innovative products for the machining industry we are your partner, if you are looking for flexible and reliable workholding solutions for your milling operations. You want to reduce set-up times and increase machine utilization? Then you have come to the right place! Companies of all sizes, from I-man-operation to global players, from various industries, such as engineering, medical engineering, aerospace, automotive and racing, amongst others, trust our vast experience and innovative strength.

Website: www.lang-technik.de/en





hyperMILL®

OPEN MIND is one of the world's most sought-after developers of powerful CAM solutions for machine and controller-independent programming.

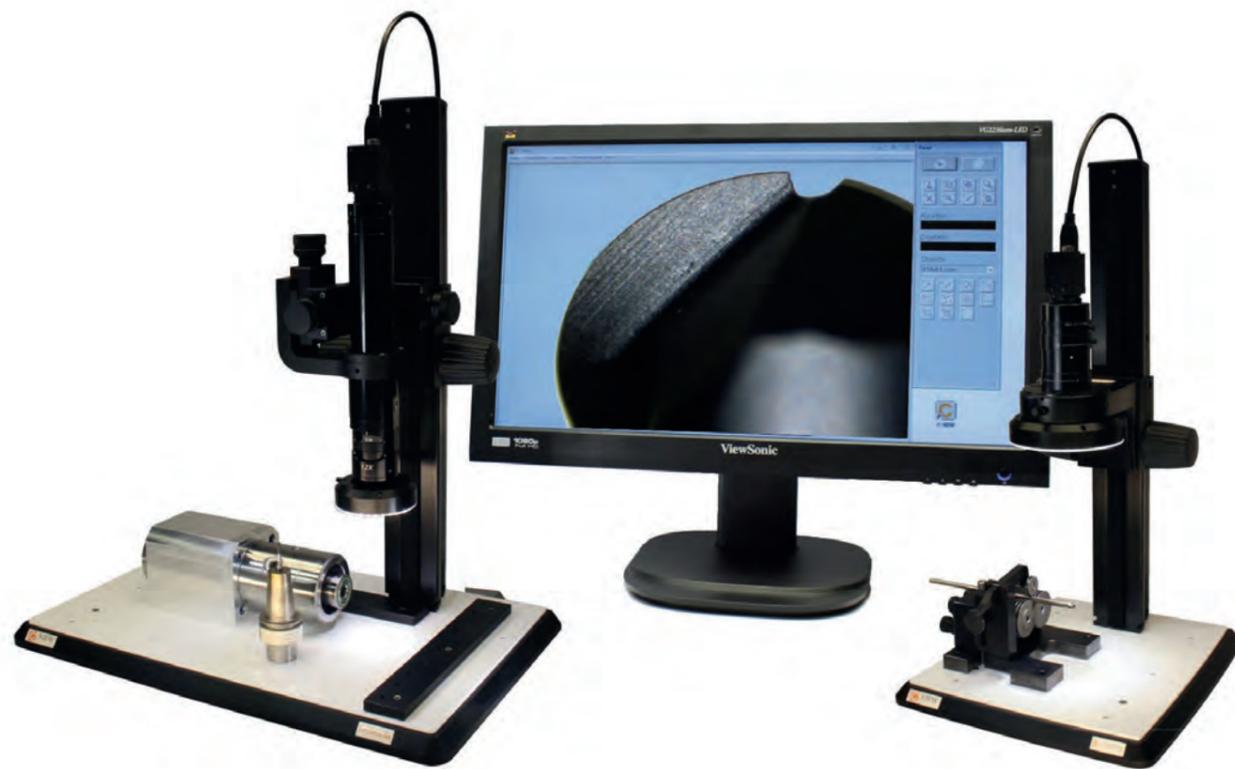
OPEN MIND develops optimized CAM solutions that include a high number of innovative features not available elsewhere to deliver significantly higher performance in both programming and machining. Strategies such as 2.5D, 3D as well as 5-axis milling/mill turning, and machining operations like HSC and HPC are efficiently built into the hyperMILL® CAM system. hyperMILL® provides the maximum possible benefits to customers thanks to its full compatibility with all current CAD solutions and extensive programming automation.

OPEN MIND strives to be the best and most innovative CAD/CAM manufacturer in the world, helping it become one of the top five in the CAM industry according to the "NC Market Analysis Report 2020" compiled by CIMdata. The CAD/ CAM solutions of OPEN MIND fulfil the highest demands in the automotive, tool and mold manufacturing, production machining, medical, job shops, energy and aerospace industries. OPEN MIND is represented in all key markets in Asia, Europe and America, and is a Mensch und Maschine company.

Website: <https://www.openmind-tech.com/en>

cim





CIMTRODE GmbH has been intensively involved in graphite machining since 1997. The company, originally active in mold and tool making, has developed over the years from a producer to a technological trendsetter. In order to keep the European tool and die making industry competitive under the conditions of globalization, trend-setting innovations for process optimization and quality assurance have been developed under the motto "From the user for the user".

These solutions also include C-View, a measuring and inspection system specially developed for the requirements of mold and tool making. The combination of a sophisticated camera system, specially designed adapters for holding a wide variety of components, and software tailored to the inspection requirements allows the quality status of both tools and workpieces to be precisely measured and documented.

In the current project, C-View is used for quality inspection of the milling cutter before and after the Iguana Milling Challenge.

Website: <https://www.cimtrode.com/en>



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