



Product and service overview

for EDM machines, automation, software
and service

ZK EDM

ZK AUTOMATION

ZK SOFTWARE

ZK SERVICE

Courage and ingenuity



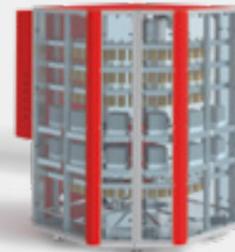
2004
genius 700
EDM machine



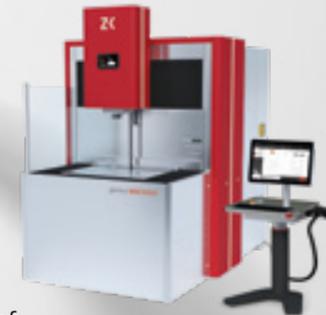
2008
Transclean – the automated
cleaning station



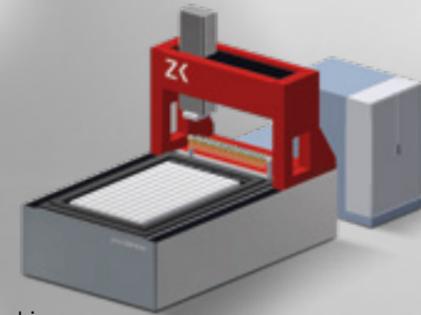
2015
Chameleon Quad
handling system



2015
Chameleon Mono
handling system



2018
EDM machines of
the genius NOVA series



2020
XXL in X,Y,Z:
genius NOVA portal machines



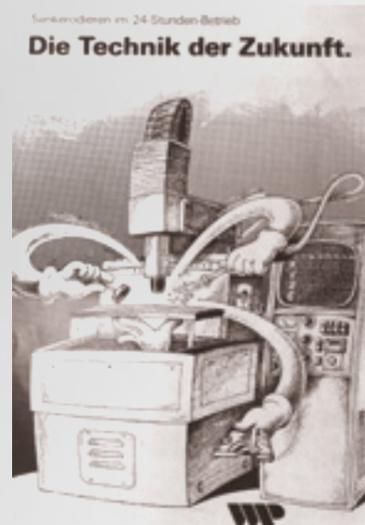
2004
Chameleon
handling system



1996
ZK 1200 EDM machine



1987
First palette exchanger
for PEC 600



Source: Werner Pfister 1985



1985
PEC 600 EDM machine

How do we achieve a safe result in the shortest possible time with minimum expense?

This is a question we have been asked almost every day for the last 37 years. Up to this day, we answer with solutions regarding erosion, handling and software-controlled process optimization in tool and mould making. Therefore, we combine innovative technologies with a great deal of experience, bringing hardware and software together into an unmatched efficiency. Our customer use this benefits for this challenges. We will support you on your way to state-of-the-art production with precision, quality and process transparency. It all started from

humble beginnings: Klaus Kreim and Alfred Zimmer built their first die-sinking electrical discharge machine (EDM) in 1985. It was supplied to LEGO in 1985. Six employees supported the company founders over the first few years.

What started as a small business has grown into a medium-sized machine manufacturing company, providing its technologically innovative products to an international clientele in the business areas of EDM machines, handling systems and software solutions. We have stayed true to our roots: The region in which we have grown will always be a special place for us.



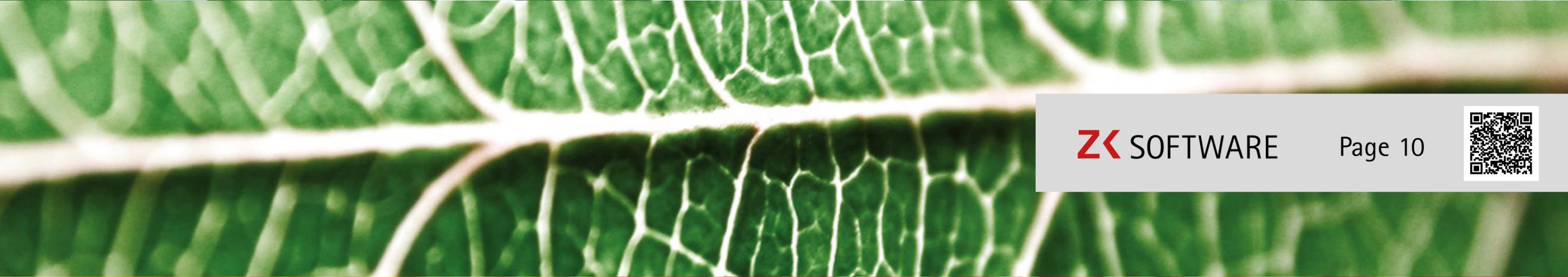
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Die-sinking with no limits

Precision and speed – these are the decisive qualities for the efficiency of your order processing when die-sinking. Precision and speed – these are synonymous with the name *genius* and NOVA.

All machines in this series have these characteristics and more: Stability in their basic set-up and energy efficiency. Our machine control system, developed in-house, this is key for the excellent performance of our *genius*/NOVA machines.

The intelligent control system in collaboration with the easy programming are the foundations for stable, precise and quick work processes. Our EDM sinking machines therefore fulfill the highest requirements.

Your benefits

- Simultaneous 8-axis operation
- Excellent removal rate and precision for all material pairings
- Low-wear fine tuning for graphite

NOVA control system



genius NOVA manual control unit



genius 602

Travel distance X–Y: 350 x 250 mm
Travel distance Z: 315 mm
Table: Length x width: 576 x 400 mm



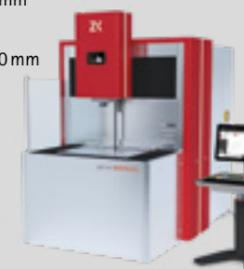
genius 750 NOVA

Travel distance X–Y: 420 x 420 mm
Travel distance Z: 400 mm
Table Length x width: 600 x 600 mm



genius 900 NOVA

Travel distance X–Y: 720 x 420 mm
Travel distance Z: 400 mm
Table: Length x width: 600 x 900 mm



genius 1000

Travel distance X–Y: 700 x 500 mm
Travel distance Z: 500 mm
Table: Length x width: 900 x 700 mm



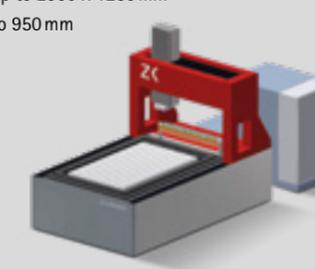
genius 1200

Travel distance X–Y: 900 x 680 mm
Travel distance Z: 405 mm
Table: Length x width: 1200 x 850 mm



genius NOVA portal machines

Travel distance X–Y: up to 2900 x 1250 mm
Travel distance Z: up to 950 mm



Technology-independent multi-machine automation

What could go wrong no longer goes wrong-

While our *Chameleon* handling system is no longer the only one on the market, it is, however, the most mature automation system. Our users confirm it: No errors – no unwanted stops. Automation is key to quality assurance and efficient order processing in tool and mould making. As higher the degree of automation in your company, as lower the errors are made, and the more consistent all your machines are during operation.

With *Chameleon*, we were the first manufacturer on the market as early as 2004 to develop a linear handling system for tool and mould making, which supports your entire manufacturing process from milling, measuring, laser machining, EDM to drying and cleaning in a fully automated way. Our *Chameleon* handling systems work independent of technology, for several machines at the same time and for all work cycles.

Our different models can be used in automation of individual machines, as well as in complex cell systems. Your productivity and quality are essential to us. Thanks to our in-house developed shopfloor software *Alphamoduli*, we can make necessary adjustments in your company to your particular processes or existing third-party machines.

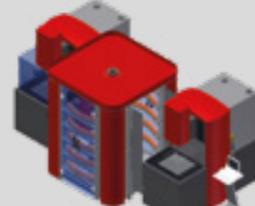
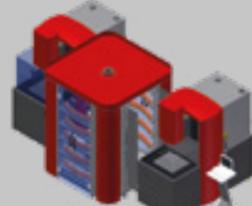
Your benefits

- Excellent ROI
- Transfer weights up to 250 kg
- Range up to 2700 mm
- Minimal space required
- Greatest level of flexibility thanks to saving of interruption points

Single automation

Multi-machine automation

Technology-independent multi-machine automation



Chameleon Linear
For multi-machine automation



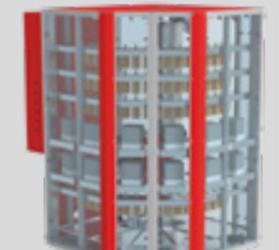
Chameleon Quad
Handling over 4m² – for getting started in automation



Chameleon rotary magazine
Manufacturer-independent provision of electrodes, workpieces and tools



Chameleon Mono
The 126-fold changer for electrodes, tools and workpieces



Chameleon Heavy
Handling for heavy loads



24-fold plate changer
Cost-effective, independent, efficient



Transclean
Washing and cleaning in stand-alone operation or automation



Shuttlestation
Linking of several automation lines



Alphamoduli

Alphamoduli – the shopfloor software for all technologies and processes for tool and mould making, as well as individual and small series production

The ZK software *Alphamoduli* is a flexible system for shopfloor control and process management for tool and mould makers and for small series production for batch sizes of one or more. With *Alphamoduli*, you can control and automate your shopfloor and systems easily and intuitively. You stay flexible, because the software adapts itself, for every company size and every process flow. It works with all manufacturers and technologies.

Alphamoduli: The software for improved transparency, efficiency and performance in your operations. Simple, fast and flexible.

Your benefits

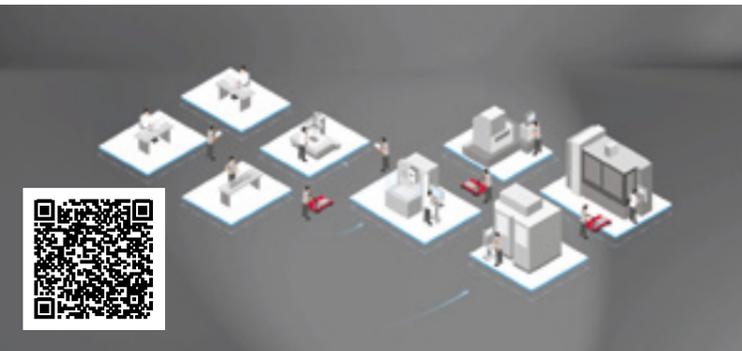
- Guarantee process reliability for your shopfloor
- Improve machine run times and efficiency
- 24/7 operation
- Easy and intuitive to use

The four levels of integration and automation with *Alphamoduli*:

1. Data automation

Data continuity across the entire shopfloor.

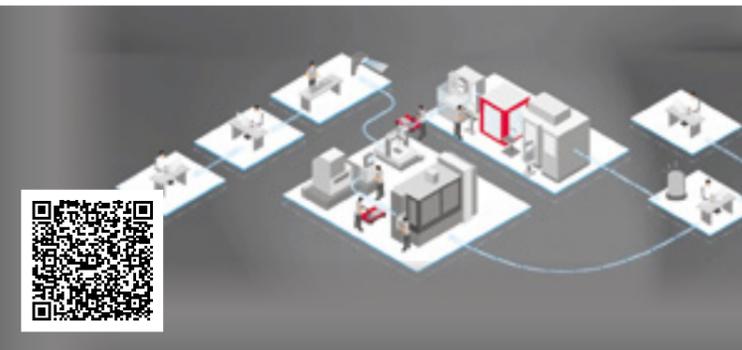
- Improve machine run times with external setup
- Central provision of job data for all machines
- External pre-setting of offset data
- No more errors due to manual data handling



2. Individual machine automation

Automatic flow of information and data through the entire shopfloor.

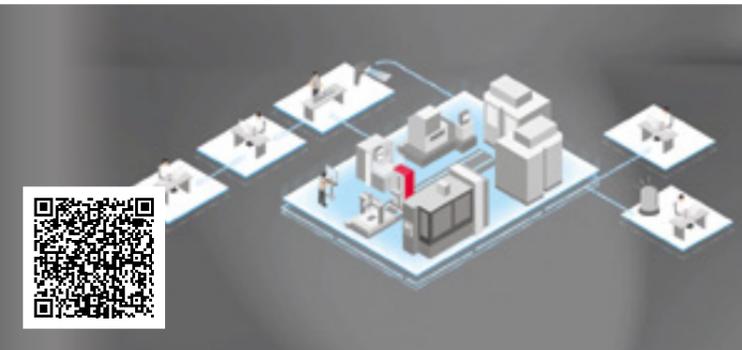
- Central, automatic job control and transfer
- Jobs start automatically on the machines
- All parts on the shopfloor are transparent and trackable
- Record process times, machine statuses, protocols and faults



3. Entire process automation

Automatic data flow and automatic parts flow with handling system.

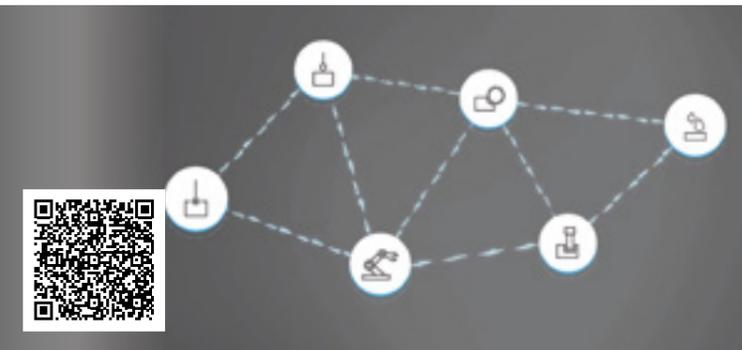
- 24/7 operation: Process multiple jobs by automatically handling all parts and tools
- Reduce lead times through parallel processing across technologies
- Automatic parts handling for multiple machine tools
- High flexibility and transparency



4. Maximum flexibility

Your unique solution

For us, maximum flexibility means that the manufacturer and technology makes no difference – it doesn't matter what you want to use to get started or push forward with your operation. The ZK software adapts to your operation – process, not reverse direction. We make this possible using our years of experience as a process and interface expert.



Service

We offer a diverse range of services for machines, handling systems and software to ensure maximum availability and performance of your systems. We follow the principle of providing assistance as soon as possible so that you can continue production without significant interruptions in the event of any faults.

The benefits of ZK service at a glance:

- On-site service: Wherever you are, we'll be with you in no time. Our on-site service ensures that your systems is running again as soon as possible.
 - Machine and software upgrades: Thanks to modular design, we adapt your machines and software to the requirements of the company at all times. This means that you are equipped for your customers' tasks as quickly as possible.
 - Spare part service: We keep large stocks of spare parts for you in our warehouse to facilitate rapid response times when it matters
 - Preventative maintenance: With preventative maintenance, we help you to improve the service life and quality of your machines.
- Help desk: The help desk is your first port of call, where we offer rapid assistance by telephone. We ensure that all of your requests are seen to, from the initial telephone contact to expert information from service specialists.
 - Tele-service: We log in to your systems via remote maintenance and correct faults online or perform updates and maintenance work.

Advice

Use our process related competencies

All of our programs are mature and have been tested over many machine hours – with our quality standard. We still provide you with tailored and experienced customer service for our software packages. Our customer service supports you and your employees in introducing and implementing software changes, this is very important to us.

What's more, even before you invest in software, it is worth having a needs assessment and process analysis by our process and software experts.

They have experience gained from countless customer projects with a wide variety of requirements.

Everything that you have checked beforehand may save you considerable investment costs afterwards.

Our offer for you

Process analysis

We evaluate your processes directly on your premises and document your procedures. Building on this, we develop and define targets for your initial or further automation steps.

Project planning

We take your work seriously. Your project will be supported in a clearly defined sequence and together with a fixed contact partner on our side. A specially trained project team supervises the process to be on time, ensuring the project progresses and coordinating communication with all those involved. The aim is to make sure of one thing by the end – that everything works.

Installation and Customizing

We won't let you down during on-site installation. Our service personnel stay until your machines are up and running. Any necessary on-site adjustments and configuration of systems are also performed and tested.

Training

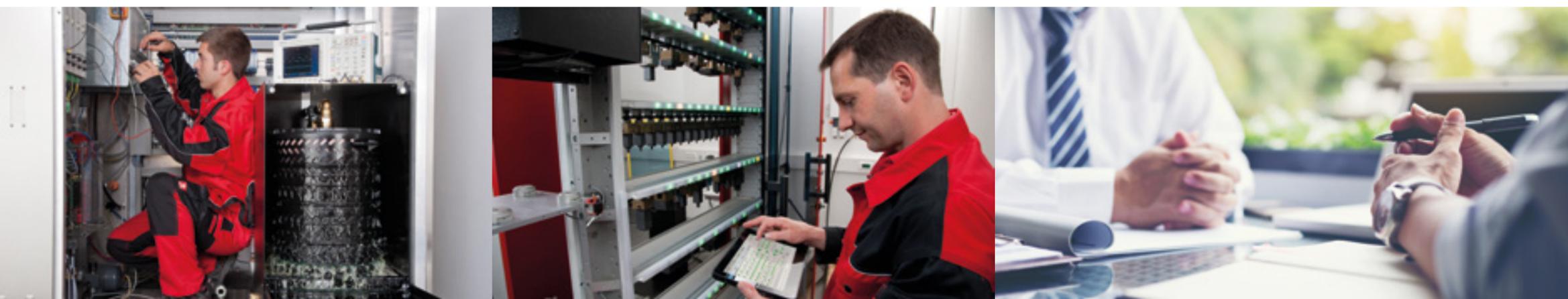
In order for you to fully achieve your potential, we train your personnel ourselves in-house or directly on site with your machines or systems. This is a key element that warrants as much attention as possible, since well-trained personnel are crucial for your success.

System support

Even if you're still unsure after the initial training, we're just a call away. Complex systems also require continuing support in the start-up phase. You can rely on the skills of our service personnel.

Technology training

Get more out of your machines. With the technology training, all standard technologies are adapted to your specific range of parts. Success in over 95% of all cases proves the value of this service. We'll keep you up to date with training sessions and webinars. Our specialists are happy to share their knowledge with you.





Sustainability and energy efficiency

Our approach

We use raw materials and energy as sparingly as possible, focusing on preventing waste and recycling. We educate our staff about these company goals in training and education measures. By maintaining a constant dialogue with our customers, we are able to provide advice on tasks and requirements. This is how we achieve the best possible result for our customers, from the perspective of sustainability too.

Sustainability

We are aiming for carbon-neutral production regarding our products. Continuous modernization measures are a particular focus for consistent sustainability and energy efficiency. Legal and regulatory requirements are consistently observed here. Our production site uses 100% green electricity.

Supply chains

Since our company was founded in 1985, we have relied on regional supply partnerships to reduce transport distance, environmental impact and costs. There are further strategic supplier partnerships within the EU. All parts for our production processes are manufactured by regional partners within a radius of around 100 km. We obtain important additional products, such as chips for the software and control system from Europe.

Our current measures for sustainability:

Retrofitting

Thanks to retrofitting, we bring existing machines up to the latest level of development. In this case, we can at least double the service life for machines. We have maintained the capability to update existing machines

for a period of more than 20 years (long-life strategy). We also have the ability to update competitor machines up to today's ZK standard. Machines conditioned like this can then re-enter the production cycle.

Pay-Per-Use

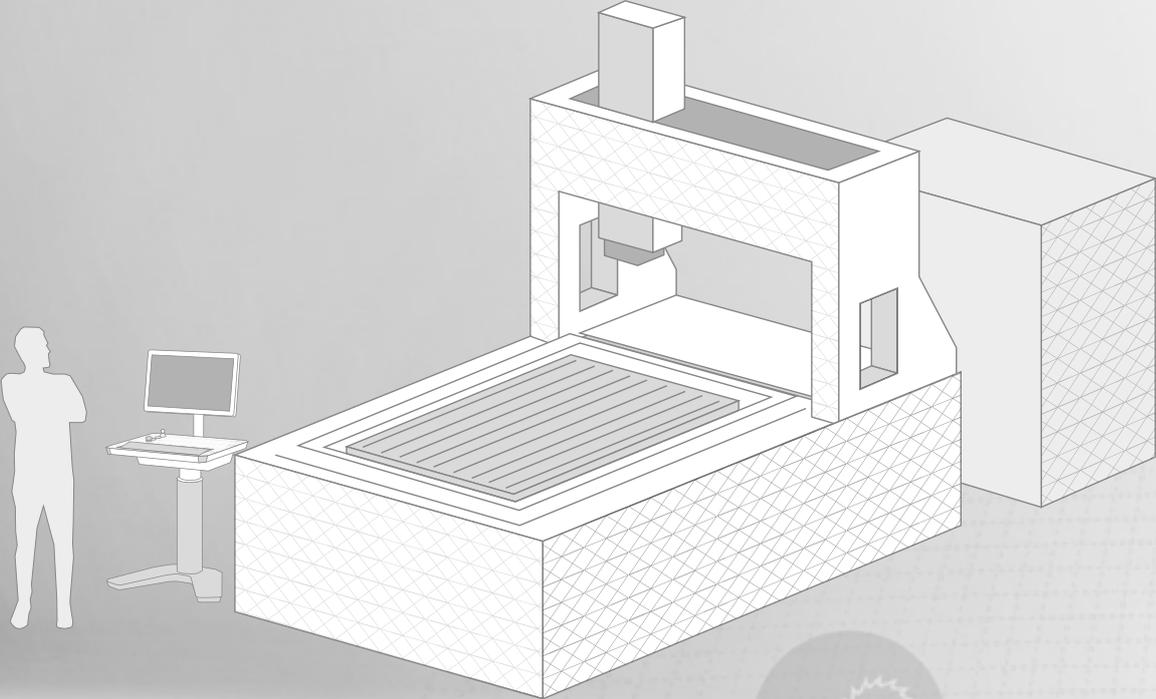
Our multi-use strategy. Here, users only pay for use of the machine, not for its purchase. The flexibility this creates allows users to react quickly to changing markets and give the machine back at any point. The machines can therefore be made available again for another user.

Energy efficiency

Our benchmark for quality is designed to fulfill the expectations and requirements of our customers. Saving energy has been an important consideration in development ever since the construction of our first EDM machines. These initial machines are still in use today.

Our machines in the genius series are significantly more energy-saving than comparable competitor machines. The savings potential is around 7800KW/h per year. This is approximately equivalent to driving around 52,000 km/year in an electric car, meaning this saving pays for the annual mileage of an electric company car, for example. Or alternatively, the savings are greater than the electrical power consumption of a four-person house over the course of one year. This is approximately 2800 to 5000KW/h on average.





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