1|2025

Precisely!

Makino Europe‘s Customer Magazine

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MAKINO

Promise of Performance

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Dear Readers,

Dr. P. Anders Ingemarsson
President & CEO, Makino Europe

It is with great pleasure that I extend to you a warm welcome to this issue of our customer magazine.

A series of disruptive events in recent years, including the global pandemic, ongoing geopolitical conflicts and the evolving fierce economic landscape, have left an indelible mark on all of us. As the world keeps changing faster than ever, and as we must simultaneously maintain the focus of our attention on the sustainability development goals, profound changes are required in the manufacturing industry to act effectively in a volatile, uncertain and complex market – our "new normal". In such a dynamic environment, extraordinary flexibility in all aspects becomes a crucial, even existential, business ingredient.

At Makino, we have intensified our efforts to meet the enhanced demands of our customers and partners in this "new normal" environment: short delivery times, additional 5-axis solutions, partly accommodating larger work pieces, partly with turning function, all to achieve higher flexibility and a higher return on investment.

Yet, amidst all these changes, the essence of Makino remains steadfast. Our unwavering commitment to our customers, our relentless pursuit of the highest standards of precision and our enduring "Promise of Performance" continue to define who we are. This commitment goes far beyond standard commercial agreements.

We believe that our identity is defined by the strong, trust-based partnerships we build with our customers. These relationships are not merely transactional; they are founded on a shared ambition to grow together and to push the boundaries of advanced manufacturing technologies.

Renowned customers trust our technology and expertise: Prodrive Technologies, a specialist in the semiconductor sector; Microlan, a valued partner in the aerospace supply industry; and SINCO, a specialist in the field of external fixator manufacturing, are just a few examples of our trusted partnerships.

We warmly invite you to explore this magazine and discover how Makino continues to innovate and support your success.

Welcome to Precisely!

Job Heijlighen in front of one of the 5-axis Makino D500 machining centres.

Prodrive Relies on Makino for Precision Semicon Work

The machining department of Prodrive Technologies in Eindhoven (NL) now operates nine Makino machining centres: three D500s, five a61nx and one a81nx. This gives this high-tech manufacturer a remarkably advanced machine park, fully equipped for the machining of ultra-precise components – primarily for the semiconductor industry, but also for the medical and automotive industries. According to Job Heijlighen, Manager Machining at Prodrive, choosing Makino was a logical step in meeting higher precision requirements and producing increasingly complex parts.

With sites in Japan, China, the United States and the Netherlands, Prodrive Technologies' mission focuses on creating solutions to real world challenges and unlocking new possibilities for their end-customers. Prodrive Technologies is a worldwide reference in the semiconductor and high-precision markets, especially in the Netherlands. From design to manufacturing and testing, the company offers their services to OEMs and end-users to reach for new limits and open capabilities.

"Many of our parts are becoming increasingly complex and must meet stricter dimensional and surface tolerances. To meet these demands, you need precise and stable machines. That's why we acquired our first Makino about seven years ago: a vertical 5-axis machine, the D500," says Heijlighen.

Machines that excel in precision and stability

The D500 was initially used for machining stainless steel, particularly for mould components. Thanks to its powerful direct-drive motors in the A and C axes and its rigid construction, the D500 allows Prodrive to perform heavy-duty machining while achieving high productivity. Heijlighen: "Our positive experience with stability and precision led us to gradually expand the machine park with additional horizontal and vertical machining centres from Makino."

Prodrive carefully selected specific models from the Makino portfolio to match its production needs. In addition to the D500s for mould production, Prodrive has also added several a61nx machines to its line-up. These 4-axis horizontal machining centres are the workhorses of production: extremely stable, ideally suited for medium-to-large production runs and known for their high reliability and precision. "The stability of the a61nx machines is impressive," says Heijlighen. "We work with tolerances in the range of 7 to 8 microns, but these machines are capable of much tighter tolerances. That brings a major advantage, especially for positional tolerances between different features on a single part."

Although the a61nx already offers a considerable working range of 730 × 650 × 800 mm (X×Y×Z), this proved insufficient for some applications. For that reason, Prodrive also commissioned an a81nx with an HSK-A100 spindle. With a range of 900 × 900 × 1,020 mm (X×Y×Z), this horizontal 4-axis machine is used for machining large cold plates for cooling systems.

PRODRIVE TECHNOLOGIES

PRODRIVE TECHNOLOGIES AT A GLANCE

Founded in 1993

Headquaters in Eindhoven, The Netherlands

Over 2,000 employees worldwide

Offices and production facilities in The Netherlands, United States, China and Israel

Core expertise: High-tech electronics, software and mechatronic systems

Key markets: Semiconductor, medical, automotive, energy and industrial automation

Vertical integration business model – from concept to production under one roof

Efficiency through smart functionalities

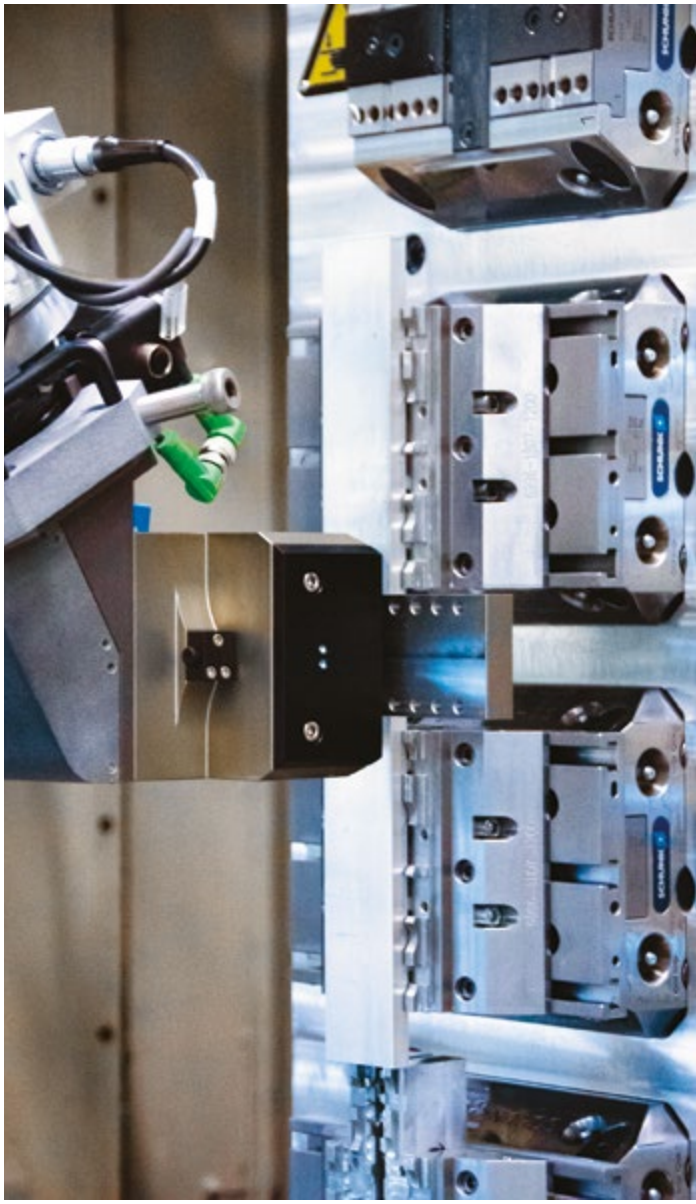
Prodrive especially valued what Makino machines stand for: not only accuracy and stability, but also intelligent features that translate directly into faster production. By minimising unnecessary movements – such as only opening the tool magazine door as much as needed depending on tool size – each tool change becomes noticeably quicker. The machines also optimise tool exchanges by adjusting speed based on tool weight, and dynamically adapt axis speeds to the workload on the rotary table. This smart adjustment allows lighter workpieces to be processed more rapidly, consistently shortening cycle times and boosting overall productivity. Prodrive's work with GI drilling further demonstrates the impact of these innovations: by fine-tuning acceleration and deceleration between holes, drilling cycles become significantly more efficient. "We made dozens of videos to analyse the cycle time differences," says Heijlighen. "In some cases, we saw up to 20% time savings."

The Makino D500 has a robust construction, making it suitable for heavy-duty 5-axis machining of stainless steel.

The a61nx machining centres are used by Prodrive as high-precision production machines.

Digitalisation as the foundation for traceability

What sets Prodrive apart is its in-depth integration of digitalisation into the production process. "Our strength lies not just in our high-tech machine park but in how we deploy it: standardised, connected, controllable and scalable," says Heijlighen. This is essential in sectors like semicon and medical, where reliability, quality, accuracy, speed and traceability are critical. For this reason, Prodrive has heavily digitised its production. With support from Makino, all machining centres are connected to Prodrive's proprietary software environment, allowing the entire process to be monitored in real time. Each product also receives a unique serial number in the form of a data matrix code, making it possible to trace exactly when a part was produced, on which machine, and under what conditions. The data generated during machining is also used for further process optimisation.



Prodrive has developed its own cell for automating a Makino a61nx.

Automation with robots and AGVs

In addition to digitalisation, Prodrive has also implemented advanced automation technology in its factory. One noteworthy development is a proprietary automation cell integrated with one of the a61nx machining centres. This solution consists of a robot, a storage system for raw materials and a vision system to detect material positioning. The robot autonomously loads and unloads the material into the machine. Notably, raw material and finished parts are autonomously transported between storage, machining, cleaning and inspection using AGVs. This way, Prodrive has also automated its internal logistics. “In projects like this, it’s crucial to have partners who think along with you. To make automation work seamlessly with the machine and our software, we needed access to the machine interface. Makino supported us perfectly in that,” Heijlighen adds.

Prodrive uses AGVs for internal logistics automation.

Ready for the future

With a solid machine park, advanced automation and a high level of digitalisation, Prodrive Technologies is well-positioned for the future, where the demand for high-tech components will only continue to grow.

Prodrive has standardised as much as possible. For example, all machine vices can be used across all machines.

“Makino machines are incredibly stable and precise. They are a perfect match for the high-tech components we produce.”

Job Heijlighen
Prodrive Technologies

f6 – Precision²

The growing need for precision for moulds in the European market is placing a burden on manufacturing companies. The f6 will support them by increasing the long-term accuracy and the Y axis stroke to fit squarish European moulds.

Enhanced long-hours machining capability

The f6 3-axis vertical machining centre has been built from the ground up for precision. Using an ideal configuration for die and mould, with two axes in the spindle and one in the table, this machine has been further improved to minimise spindle overhang compared to previous versions, making it a robust cutting platform. Adapted with fine-pitch ballscrews on all axes as standard, it delivers superior precision.

Both the bed and the column are designed to remain inert to temperature fluctuations, ensuring structural rigidity and consistent machining accuracy over time. In addition, an independent cooling system has been implemented to manage the temperatures of the spindle, feed axis and structure separately. The feed axis circuit ensures temperature-controlled core-cooled ball screws, nuts and bearings. This design minimises thermal growth in the X, Y and Z directions, maintaining precision even during prolonged operation.

To support long hours of continuous machining, the system has been upgraded with several key features aimed at enhancing performance and reliability. One major improvement is the increased coolant capacity, with the front tray coolant tank expanded from 160 litres to 300 litres. This allows for extended operation without the need for frequent maintenance interruptions and improves overall cooling efficiency.

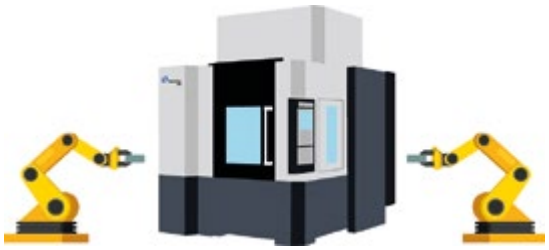
Together, these features reduce variability for long hours of continuous and tight tolerance machining.

Extended Y stroke

The f6 has been designed with a larger Y stroke to accommodate European moulds, which are increasingly squarish. Compared to the f5, the Y axis has been extended by 30% to 650 mm while maintaining the same X and Y axes.

Automation-ready

The machine is fully prepared for automation, offering several features that enhance operational efficiency. The standard 600 mm side door gives the operator easy access to the spindle, facilitating manual interventions when necessary. To further optimise the layout, the electrical cabinet has been relocated to the rear side as default, leaving one side completely free for automation systems (though the location can be changed depending on the automation system). In addition, the integration of an auto work changer (AWC) with the larger side auto door significantly boosts the potential for improved efficiency in mould machining, enabling extended periods of unattended, continuous operation.



Productivity boosted

Makino's Professional 6 control combined with FANUC hardware offers a touchscreen interface, on-screen assistance and enhanced features. This intuitive system speeds up set-up and boosts productivity for machine shops, toolmakers and mould manufacturers.

The f6 also features Makino's Super Geometric Intelligence (SGI.5) software for ultra-fast, high-precision machining of complex 3D geometries using large volumes of NC data.

This machine offers outstanding value for manufacturers seeking high-end machining performance at a practical cost, making it a smart investment for businesses targeting excellence in contour machining.

Multicavity mould:
±6µm pitch accuracy in 20 hours machining

Axis travels (X, Y, Z)	900 × 650 × 450 mm
Table	
Size	900 × 650 mm
Maximum workpiece size	1,000 × 650 × 450 mm
Spindle	
Speed	20,000 rpm
Interface	HSK-A63
Automatic tool changer	30 tools

Visit our website

At the AMB 2024 trade fair in Stuttgart, Germany.
From left to right: Peter Mišák (Makino s.r.o.), David Šinko (SINCO d.o.o.), Sabin Zukić (Zteh d.o.o.), Mark Šinko (SINCO d.o.o.)

SINCO: Die & Mould Precision for Clamping Solutions

SINCO has transformed themselves through innovation and customer advocacy from a Slovenian tool and mould maker into a world reference for clamping solutions. Their striving to offer high-accuracy solutions for their customers led them to the cooperation with Makino. The decisive factor in choosing the f5 for their machine park was the precision of Makino machines.

SINCO AT A GLANCE

SINCO® SPANNTECHNIK

50 years of industry experience

Founded in 1973 as a tool and mould maker, now manufacturing clamping solutions

Based in Jesenice na Dolenjskem, Slovenia

Represented throughout Europe, Asia, North America and Brazil

CUSTOMER: SINCO

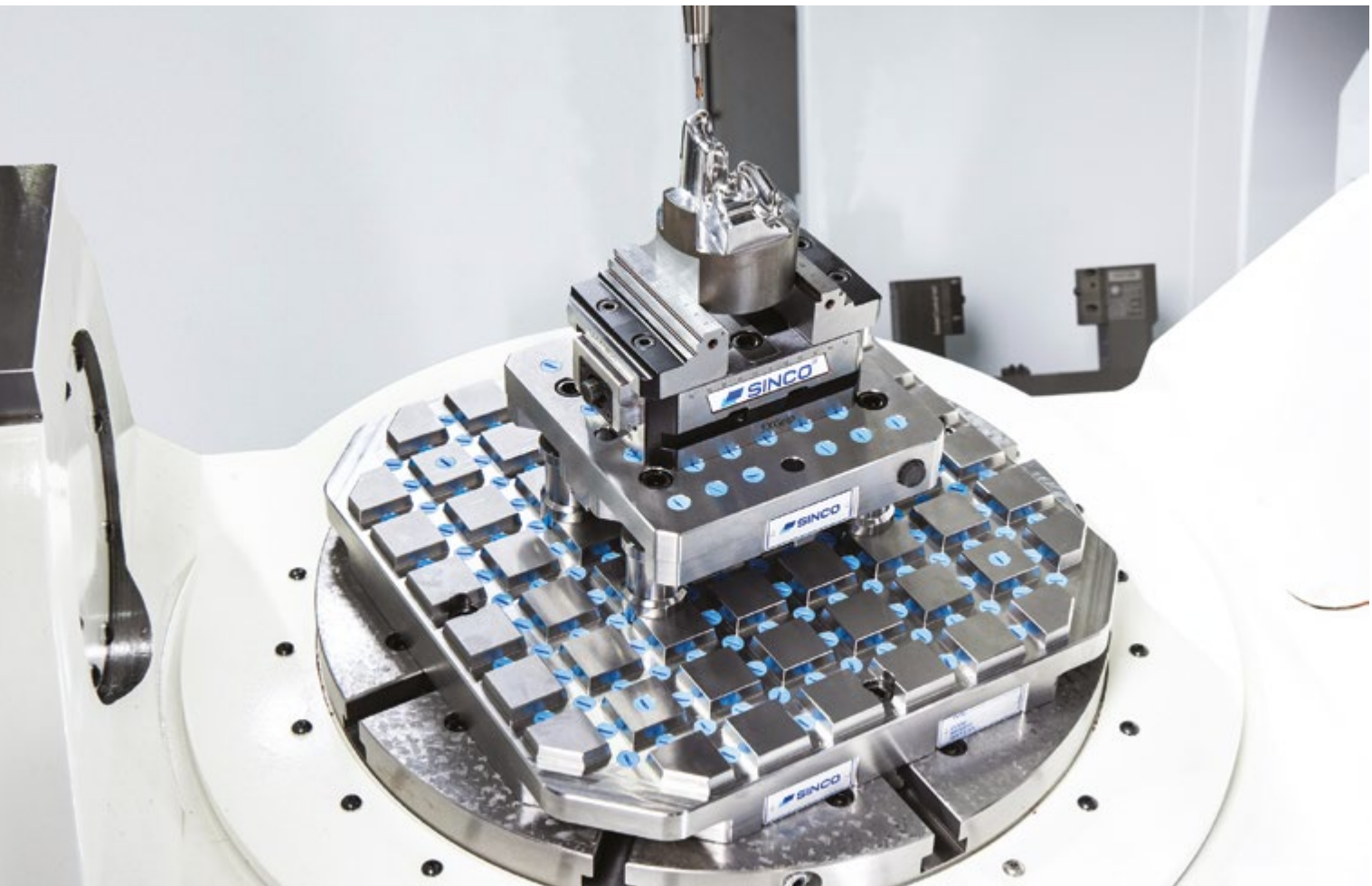
World-class clamping solutions

- **For mould and tool makers**
- **More than 1,000 products**
- **Solutions for milling, die-sinking and measuring machines**

From tool and mould making to clamping innovation

With over four decades of experience, SINCO's journey began in Slovenia's demanding tool and mould making industry. As a producer, they were facing limitations with existing clamping solutions for their high-precision applications themselves and therefore started developing their own fixtures. The objective was to develop solutions not only for automated production but also to ensure the reliability and repeatability that is essential for their operations. This success led to a pivotal shift: numerous mould makers began approaching SINCO not for moulds, but for their new clamping solutions.

This demand led SINCO to redefine its strategic direction, dedicating its expertise to advanced clamping technologies. What truly sets SINCO apart is its deep-understanding of customer challenges. Having originated from the die and mould market, they possess first-hand insight into the specific demands and complexities faced by tool makers. This unique perspective allows SINCO to develop solutions that precisely address real-world needs. Today, SINCO offers a comprehensive portfolio of over 1,000 products, from applications in milling and sinker EDM to 3D coordinate measuring machines.



Creating a new story – the path to the future

As the products were becoming more advanced, the need to improve the precision of SINCO's machinery increased and a fundamental change was necessary.

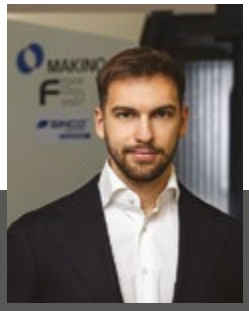
As David Šinko explains, "We are creating a new story. Whichever machine brand partner we choose now, we will work with in the future. We don't want to overload production with several machine brands. We want to have one partner for the future."

This pivotal point was when Sabin Zukić, a friend for over 20 years of the SINCO family and owner of Zteh d.o.o. (Makino representative in Slovenia) showed the advantages of the Makino f5.

Precision – why SINCO chose Makino

SINCO's direction was clear: become a premium clamping solution provider with superior technology for their customers. To ensure this, the partner needed to guarantee premium precision machining, a reliable and professional team and a wide portfolio for the future.

"Makino and its f5 was the starting point of the new chapter of our story. Even though we saw some obstacles at the beginning, and not everything was perfect, especially in finding the right balance between precision and performance, we were able to overcome these obstacles. Through the close cooperation between Makino and SINCO, especially the team work between SINCO's technologist and Peter Grof, Makino's Application Engineer, all the challenges were overcome quickly and in addition, the intuitive interface of Makino's Professional 6 Numeric Control helped to onboard operators quickly to the new machine," says David Šinko.



"We want to have one partner for the future."

David Šinko
SINCO d.o.o.

A story about cooperation, where as much as Makino supports SINCO in servicing their machine, SINCO also supports Makino even designing new balancing fixtures for turn-mill machines.

A true partnership forged in the mutual understanding of end-customer necessities.

INTRODUCING THE DA500

DA500: The Best of Both Worlds

Visit our website

The DA500 is a machining centre specifically designed to minimise set-up times while delivering maximum performance, thanks to its direct-drive motors on both the A and C axes. It features an optional turning table enabling users to carry out all operations on a single machine and significantly reducing the risk of operator error. This makes the DA500 ideal for a wide range of applications, including aerospace engine and semiconductor manufacturing.

Axis travels	
X, Y, Z	800 × 900 × 550 mm
A, C	150°, 360°
Table	
Max. workpiece size	800 × 500 mm (with limitation)
Maximum payload	350 kg
Spindle	
Speed	14,000 rpm and 20,000 rpm
Interface	HSK-A63
Automatic tool changer	60 / 118 tools

High accuracy and speed

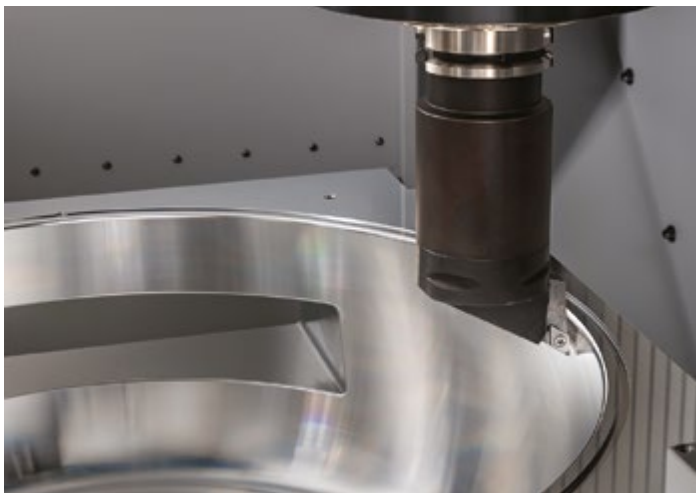
Following on from Makino's successful DA300, the DA500 has also been designed with a symmetric structure to minimise thermal influence on the machine and maximise rigidity. At the same time, elements taken from Makino's a1 series, like the slant column design, have reduced moving inertia and increased Z axis rigidity. The ring-type tool magazine with CAM ATC also enables the fastest possible tool changes, while Makino's own Vision technologies reduce the risk of operator set-up errors through visual checks on the tool and workpiece. 0.05 µm scales, a direct-drive motor and Makino's Super G.I. 5 control technology ensure the best possible pitch accuracy and repeatability.

Working in demanding production environments requires a robust spindle. To meet this need, Makino designed the DA500 with a new 20,000 rpm spindle, offering 50% more torque, double the power and one-third the acceleration time of conventional machines. Combined with an axis speed of 60,000 mm/min (similar to the DA300), it excels in fast milling with constant chip thickness, enabling rapid part production and minimal idle time. The DA500 also features a proven core cooling system for the main spindle, efficiently managing heat during high-speed table rotations. Unlike other machines limited to 30 minutes of use, this spindle has no time restrictions. All in all, the agility, performance and chip evacuation of this high-precision 5-axis vertical machine are among the best in the aerospace, high-precision and semiconductor markets.

Customisable automation

To meet manufacturers' unique requests, Makino has designed an automation set-up that can be customised at the customer's factory to different configurations ranging from four pallets with a maximum workpiece size of 800 mm to eight pallets with a maximum workpiece size of 550 mm – or combinations in between. What's more, the compact pallet magazine enables higher productivity from the same floor space.

Specifically designed for long-term use, this automation set-up comes with additional coolant nozzles to clean the storage area, which reduces the amount of maintenance work needed.



No-compromise turning

The secret of the DA500's dual capability is that it has been engineered so as not to lose milling performance even in the turning specification. The spindle bearings for turning tools have been uniquely placed to maintain the machine's rigidity. The table can rotate at up to 800 rpm so the DA500 can cut materials such as stainless steel for semiconductor applications or the nickel alloys needed in manufacturing aerospace engines.

Ricardo del Villar, Makino's Country Manager Spain & Portugal (left) and Javier Etxeberria, CEO and founder, Microlan Aerospace (right).

Makino & Microlan: Engineering Precision at Scale

What's the secret of Microlan's success? We met CEO and founder Javier Etxeberria and he revealed the crucial role of partnerships rooted in both deep technical understanding and genuine human empathy.

Can you tell us about the origins of Microlan and how the company has evolved over the years?

Javier Etxeberria: "Microlan is a company that after 20 years of experience in another industrial project, in 2004 we dedicated ourselves to what others did not want to do and, above all, to a sector that did not exist in our region, such as the aeronautical sector.

Microlan is more a partner than a supplier for our customers. And through these 20 years of history, despite going through many crises, we have never stopped believing in our goal of growing until we achieved a very competitive and technologically very advanced company. That is what puts us in the pole position compared to our competitors."

When and how did your relationship with Makino begin?

J.E.: "I remember, it was in 2014; we went to Germany for some aeronautical sector days and was there where we saw the excellence of the brand and had contacts with other people from other companies who were already users of Makino – everything was born there."

What motivated your company to invest in the new a800Z machine, and how will it impact your capabilities and market opportunities?

J.E.: "Our goal is to grow and up to 2024, we rejected all offers for five-axis parts over 700 millimetres because we did not have the right machine.

In 2024 we set ourselves the important challenge of acquiring that machine size and thus we have implemented the a800Z. With this new machine, we are able to tackle the machining of parts around 1,000 mm in diameter and around 1,000 mm in height as well, which I already consider a piece size that opens new markets for us in the aeronautical sector, in the railway sector and in higher value-added parts."

What has the transition been like working with the new machine and handling larger parts?

J.E.: "Working with this machine has meant starting to work with larger tools, larger fixtures, longer machining cycles. Very, very different from what we had before. But again, we have had very good technical support, and it is relatively easy for us to adapt to this new dimension of parts."

How can a supplier like Makino support you in realising your vision?

J.E.: "For us, a very remarkable thing with Makino is that they have not only tried to sell us machines, they have helped us, understood our challenges and advised us, sometimes even taking a machine out of our heads because it was not the right one.

We have found not only very good machines but an excellent human team that has helped us at all times and with whom we have felt very identified.

Microlan means "Micro" precision and "Lan", in Basque, work. Our philosophy day by day is the Passion for Precision. If we find that in Makino the philosophy is Quality First, it creates the perfect binomial to work as a team."

For an insight into the Microlan factory and production hall, please watch the video on our YouTube channel.

Microlan aerospace

MICROLAN AEROSPACE AT A GLANCE

49 employees

Based in Huarte (Navarra), Spain

Factory area of 2,900 m²

Exports to all of Europe, China, India, Japan, North America and South Africa

EDGE3i: Your First EDM

The success story of our EDGE3i sinker electrical discharge machine (EDM) started with selling thousands of machines to satisfied customers in Asia. For the European market, Makino has adapted this successful machine to comply with all local regulations – making it the perfect choice to be your first EDM.

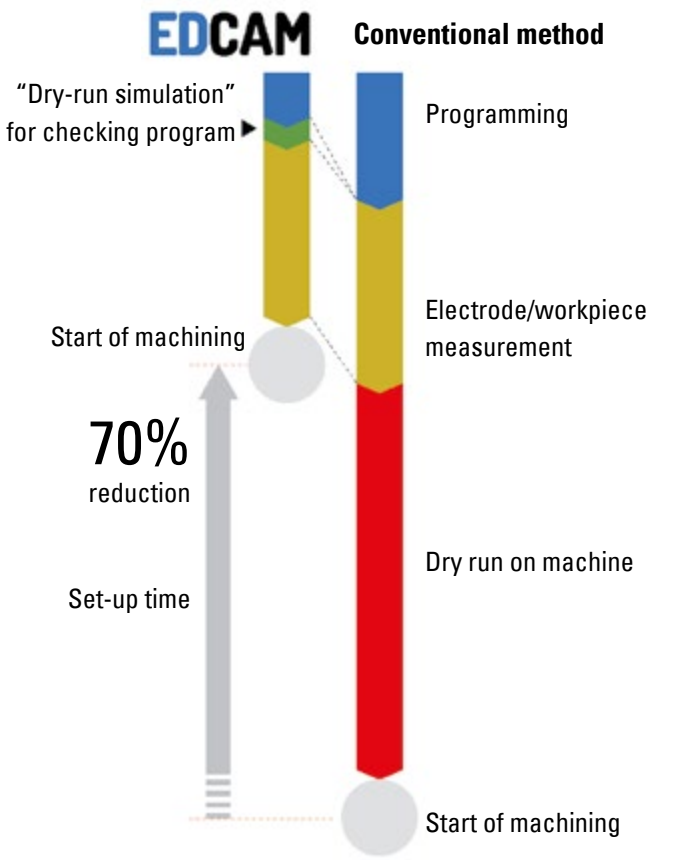
EDM technology is a cornerstone of production. The vast majority of components require electro-erosion in one way or another. Making the jump to this technology is often a tremendous step and producers tend to outsource the job.

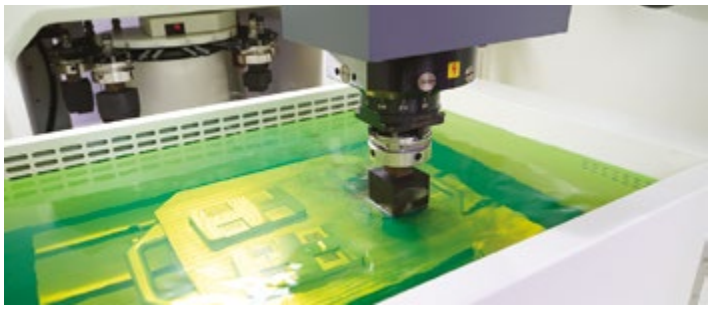
The EDGE3i is the machine designed to facilitate this step, delivering quality comparable to high-end machines, but featuring a highly intuitive and guided controller. The Hyper-i Controller will assist you in programming, debugging and scheduling your production jobs, making the integration of new technology a worry-free step. Should components increase in complexity, the EDCAM programming suite streamlines multi-electrode operations, significantly accelerating the design-to-production workflow.

Easy-to-use Hyper-i Controller interface

From an operator's perspective, the key advantage of the EDGE3i is its user-friendliness. The innovative Hyper-i Controller interface has a 24" HD touchscreen that offers an extensive overview of the machine's operations. The pioneering features include intuitive smartphone-like operability and an efficient design that helps to augment the capabilities and productivity potential of operators at any skill level.

The EDGE3i simplifies programming and set-up operations on the machine through the streamlined graphical layout of the Hyper-i Controller, while the "Project" function features a step-by-step tutorial mode that guides the operator through the entire process of creating a program.





Much shorter set-up times

The conventional set-up workflow involves programming followed by electrode and workpiece measurement and a dry run on the machine. Only then can the actual machining process start. The EDCAM system in the EDGE3i reduces this set-up time by up to 70% by eliminating manual input and the dry run. The latter is performed on a PC where settings such as the machining position, electrode shape and any interference between electrode and workpiece can all be checked. What's more, the data needed for machining can be read directly from a CAD program, which eliminates any errors caused by manual input. And as the user interface is the same as that of machine controller, EDCAM is easy to use.

Interactive E-Tech Doctor

In the current production landscape, machinists face a very fast changing environment with a lot of operator mobility. This results in the need to minimise the adaption time to each machine. The Hyper-i Controller is made not only to be easy to understand, but also to make the debugging process an easy task for anyone.

E-Tech Doctor helps the operator to optimise the machining process by suggesting ways to improve a variety of problems, e.g. unstable machining. For the most advanced specialists, E-Tech Doctor includes expert-level adjustment to the burn conditions and instructional videos that can be conveniently accessed at any time.

Uniform surface finish

The EDGE3i has a productive mix of advanced technologies to support a wide variety of applications and can archieve similar quality levels as the EDAF3 advanced sinker machine. Makino's exclusive Super Surface and Super Edge generator technology enables a uniform surface finish of excellent metallurgical quality that is free from surface defects such as pinholes or pitting.

Visit our website

Axis travels (X, Y, Z)	850 × 300 × 320 mm
Work tank (W x D x H)	800 × 550 × 350 mm
Table	
Size (W x D x H)	600 × 450 × 890 mm
Rapid traverse	5,000 mm/min
Dielectic fluid supply unit	
Type	Integrated with machine
Volume	380 l
Electrode	
Max. weight	8 kg
Mounting	∅ 125 mm

Our Atsugi Production Plant

In our category "Meet Makino" we would like to share glimpses and insights into the world of Makino with people, locations and projects from all over the world – from the past to the future. Welcome to Makino!

At Makino, tradition and innovation go hand in hand. With a legacy of precision engineering and a commitment to excellence, we take pride in the milestones that have shaped our identity. The Atsugi production plant stands as a testament to this heritage – an embodiment of our motto: "Quality first"

AT A GLANCE

Plant operation started in 1967

Today:

944 employees

120 MCs and EDMs per month

600 spindle units per month

The beginnings

Just 30 years after Makino was founded on May 1, 1937, the first step to expand operations was taken on the outskirts of Tokyo. In June 1967, Makino started operating in a newly established industrial area in Atsugi (Kanagawa Prefecture) about an hour's drive from the centre of Tokyo. In October 1983, a second Atsugi plant, an FMS factory, was added and is now operated by Makino Japan. The third Atsugi factory dedicated to spindle production was opened in 2013.

State-of-the-art production

Today, Atsugi is one of Makino's main production sites. The Atsugi machine shop has been recently renovated and equipped with the latest machinery and automation technology. From the latest PZ1, flexible manufacturing system, to our iAssist AGV, which assists all production needs, processes are automated to minimise mistakes. The state-of-the-art main factory focuses on the production of vertical machining centres, electrical discharge machines, table units and 5-axis units on a total area of 70,549 sqm.

The spindle factory has an output of 600 spindles per month on a total production area of 50,954 sqm. Each spindle goes through an inspection process with more than 500 testing points.

High precision ensuring "Promise of Performance"

The factory environment is designed for manufacturing high-precision machines, with key features such as firm undersoil and rigid foundations for machining and assembling large machines. The temperature inside the factory is carefully controlled as an essential prerequisite for precision machining, which is validated through regularly controlling the quality of each process. For producing high-precision parts Makino uses its own machines and employs automated processes to ensure stable part quality. These are the means by which our machines and production processes uphold Makino's "Promise of Performance".

Makino plant in Atsugi,Japan

Retrospective and Preview

In recent months, we have enjoyed attending events and meeting many of our customers in person. Here are some highlights:

10-14 September 2024

AMB, Stuttgart (Germany)

At one of our most important trade fairs in Germany, we proudly unveiled the a500iR, the DA500 and the EDGE3i, a powerful trio for the future of manufacturing.

13–14 November 2024

Makino Technology Days, Bratislava (Slovakia)

Two days of innovation: visitors enjoyed live demonstrations and inspiring customer success stories at our technology centre.

5–7 March 2025

MECSPE, Bologna (Italy)

At Italy's leading manufacturing exhibition, we welcomed visitors to our booth – a great opportunity to connect and showcase our latest innovations.

20 March 2025

Semiconductor Industry Visit, Eindhoven (Netherlands)

We visited some of the most innovative players in the semiconductor industry and gained valuable insights into current trends and technologies.

21–24 January 2025

Aerospace Customer Experience Tour, Toulouse (France)

Together with our valued customers, we explored the world of aerospace manufacturing, gaining exclusive insights and exchanging ideas.

7–12 April 2025

Aerospace & Production Machinery Technology Tour, Tokyo (Japan)

This year's customer trip to Japan focused on the new a500iR, our 5-axis horizontal machining centre with a dedicated spindle for aerospace applications.

Already planning your next visit?

We look forward to seeing you at one of our upcoming events and exhibitions!

March 2026

- **MESCPE in Bologna (Italy)**
- **BIEMH in Bilbao (Spain)**

April 2026

- **Aerospace and Production Machinery Technology Tour to Tokyo (Japan)**

Check out **www.makino.eu** for news and upcoming events & exhibitions.

We also look forward to welcoming you at one of our regional technology centres:

- **Kirchheim unter Teck (Germany)**
- **Cavenago Brianza (Italy)**
- **Bratislava (Slovakia)**

Contact us

If you would like to find out more about the Makino portfolio, a specific product or require information, please see **www.makino.eu**

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Imprint / Legal notice

Publisher
Makino Europe GmbH
Kruichling 18
73230 Kirchheim unter Teck
Germany
Phone | +49 (7021) 503 0
Email | info@makino.eu
Website | www.makino.eu

Editor
Dr. P. Anders Ingemarsson
Makino Europe GmbH

Editorial Team / Project Management
Urko Javier Ugalde, Nicole Englisch, Cornelia Daferner
Makino Europe GmbH

Andrew Craston
Andrew Craston Copy & Concept

Layout / Design
Nicole Englisch
Makino Europe GmbH

Printing
Stengel+Partner Druckerei
Rainlenstraße 41
72770 Reutlingen

Makino Europe

Makino Europe GmbH
Kruichling 18, 73230 Kirchheim unter Teck, Germany
Tel: +49 7021 503-0

Makino GmbH
Kruichling 18, 73230 Kirchheim unter Teck, Germany
Tel: +49 7021 503-0

Makino SAS
BAT Ronsard Hall A Paris Nord 2 22, Avenue de Nations
CS 45045 Villepinte, 95912 Roissy Charles De Gaulle Cedex, France
Tel.: +33 1 787843-20

Makino SAS Sucursal en España
Carretera de Barcelona, 34, Planta 1, Local 4, 08320 Mataro, Spain
Tel: +34 93 555 9515

Makino S.r.l.
Strada Privata delle Orobie 5, 20873 Cavenago di Brianza (MB), Italy
Tel: +39 02 9594 82-90

Makino s.r.o.
Tuhovská 31, 83106 Bratislava, Slovakia
Tel: +421 2 4961 2100

www.makino.eu

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