

# CYBER WORLD

2026  
No.75

**Taking on the challenge of next-generation manufacturing through process integration, automation and digitalization**

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## NEW YEAR'S GREETING

We would like to extend our best wishes for the New Year.

While the global economy maintained moderate growth last year, uncertainty over the trade environment surrounding tariff policies and export restrictions increased, making it difficult to predict the future. Even in this environment, strong investment continued in industries such as artificial intelligence, semiconductors, and aerospace.

Furthermore, labor shortages and a decline in skilled workers are becoming more serious issues at manufacturing production sites. As a response, there is a high need for capital investment in process integration to shorten production lead times and automation systems to save on labor, and demand for machine tools is expected to remain strong this year. In addition, the use of digital technology is steadily progressing as a means of supporting stable production that is not dependent on the experience or skills of workers.

At our company, we also view productivity improvement and labor saving as important themes. We are promoting the introduction of automation and digital technology into manufacturing processes that require skilled techniques, such as the machining of spindle unit parts and assembly.

As a machine tool manufacturer, we will innovate our own manufacturing sites and utilize the knowledge gained there in our engineering development, leading to the provision of solutions that are truly valuable to our customers.

Amid ongoing labor shortages, expectations for the next generation of robotics—particularly humanoid robots—are increasing. This advancement relies on exceptional precision and durability in every component. Beyond manufacturing expertise, a high level of proficiency in managing the entire production process is essential, including maintaining consistent product quality and efficiently handling mass production. Our company will support the development of next-generation industries through machine tools that enable the manufacture of complex, high-precision parts.

At EMO 2025, the international machine tool trade fair held in Germany, our company announced the INTEGREGX i NEO, a new multi-tasking machine in the INTEGREGX series. The cooling function of the turning spindle and milling spindle has been strengthened, achieving stable, high-accuracy machining even during long terms of continuous machining. By achieving both improved productivity and stable quality through process integration, it will contribute to improving our customers' competitiveness.



2D laser processing machine

OPTIPLEX HP series

Fiber laser oscillator

Mazak SmoothCUT



Simultaneous 5-axis multi-tasking machine

INTEGREGX i NEO series



Similarly, with laser processing machines, there is a growing interest not only in the improvement of machine performance, but also in automation solutions that affect the entire production process. The OPTIPLEX HP, equipped with the new fiber laser oscillator "Mazak SmoothCUT", enables high-speed, high-quality cutting of thick steel plates used in the shipbuilding and plant industries. Furthermore, when combined with the "MAZAK LASER FA SYSTEM", which automates manufacturing from material supply to tapping and product sorting, it reduces workload and achieves a stable production system. We will continue to promote the development of optimal automation solutions that meet our customers' needs.

Despite increasing uncertainty in global trade, we will leverage our production bases across six countries to build a system that responds swiftly and flexibly to regional demands. Our company will continue to work alongside our customers as their partner in opening up the future, striving to create value that exceeds their expectations.

We hope for your continued patronage this year, and we wish you good health and continued prosperity.



President of Yamazaki Mazak Corporation  
Takashi Yamazaki

# EVENT REPORT

Proposing solutions that contribute to labor savings and high productivity through process integration, automation, and digital utilization

In 2025, Mazak showcased its latest technologies and innovative solutions at major machine tool exhibitions held around the world. The exhibitions were held in four regions; the United States, Europe, Japan, and Southeast Asia. Mazak has succeeded in attracting the visitors' attention in all of them by making specific proposals that include process integration, automation, and digital utilization, which will help overcome the challenges that the manufacturing industry is facing. Mazak's dedication to meeting the needs of every market captivated visitors worldwide, filling each exhibition booth with excitement and anticipation. Believing in the possibilities that lie beyond innovation, Mazak will continue to lead the way in global manufacturing.



## 01. EMO 2025 To become “a manufacturing partner” with our customers

EMO Hannover 2025, Europe's largest machine tool trade fair, was held over five days from September 22nd to 26th, 2025. Over 1,600 exhibitors participated, and 80,000 people from over 45 countries visited the venue in search of the latest machining solutions.

Yamazaki Mazak U.K. Ltd., which oversees local subsidiaries in Europe, adopted the slogan “Experience innovation, Empower your future,” and aimed to have customers recognize Mazak not just as a “machine tool manufacturer,” but as “a partner that can solve challenges in manufacturing together with its expertise in machining technology.”

To achieve this goal, it was paramount that the booth be designed to be customer-oriented. This idea was most clearly reflected in the “Solutions Centre” located in the center of

the booth. This was a dedicated area where visitors could get advice on machining while actually operating Mazak's CNC system and production support software, and it was very well received. In addition, by exhibiting a wide range of machines - from entry-level to flagship machining technologies, Mazak was able to provide solutions to a variety of businesses. As a result, Mazak's solutions received high praise, particularly from small and medium-sized customers engaged in contract production, such as job shops. They have commented that “Mazak's solutions are highly reliable even at the entry level, which makes Mazak a trustworthy partner when embarking on new machining businesses.”

A total of seven world-premier products were unveiled at EMO 2025. Among the new products, the “INTEGREX i-350 NEO AG” multitasking

machine, which combines gear processing and measurement functions, and the “CV5-700,” the next generation of the CV5 series, an entry-level simultaneous 5-axis machining center that is popular in Europe attracted attention particularly.

The INTEGREX i-350 NEO AG's ability to perform turning, milling, grinding, and even gear processing in one setup drew significant attention at the venue for its ability to shorten production lead times and produce higher-precision parts. Its front magazine, which simplifies tool setup, along with its strong compatibility with CNC and automation systems, also proved highly appealing to customers in markets such as aerospace, energy, and medical, who want to achieve both high precision and improved productivity.

The CV5-700 has attracted a lot of attention,

especially from customers who are already using the CV5 series. Not only does it offer greater manufacturing flexibility with an expanded machining space, it also features a side-loading door, making it easier to integrate various automation systems and minimize manual operations. Existing customers were impressed, with the greater productivity of the latest models.

The company also focused on automation solutions, exhibiting a total of 12 types of automation systems. The “Ez LOADER 125i,” making its European debut, is a fully integrated automation cell with industrial robots, and the entire cell can be controlled from the machine's CNC system.

EMO 2025 was a great success overall, and Mr. Richard Smith, Managing Director of the European Market, said that a major factor in

the success of Mazak's booth this year was the first-ever installation of the “Solutions Centre.” He stated, “Not only was it a useful area for customers, it also provided a great opportunity for Mazak members to communicate with customers, and it helped Mazak grow into an even better manufacturing partner.”

Mr. Smith reflected, “EMO 2025 once again confirmed the need to provide customers with comprehensive solutions that improve productivity and profitability, making them more accessible to them.” Mazak will continue to provide solutions in the European market that increase productivity and flexibility, strengthening customers' market competitiveness.



Next-generation multi-tasking machine capable of consolidating gear machining

### INTEGREX i-350 NEO AG

This model is specialized for gear machining within the new “INTEGREX i NEO series” of multi-tasking machines, which are equipped with the latest machining technology and environmental load reduction technology. Its main feature is the front magazine, which provides greater operability and improved usability for a wide range of production formats. This machine further strengthens the “DONE IN ONE” concept that is the hallmark of Mazak's INTEGREX series, and in addition to turning, drilling, and milling, it can also handle grinding, gear machining, and measurement.



New lineup of UK-made simultaneous 5-axis machining centers

### CV5-700

This is the next generation model in our CV5 series of 5-axis machining centers, manufactured at our UK factory and developed independently. In response to customer requests, our company has not only expanded the machining space, but also improved rigidity and thermal stability to achieve higher precision. Our company has also added options for 60- and 90-tool magazines, which expands the scope of automation, making this a machine that is easy to use even for customers producing a wide variety of products in small quantities.



## 02. FABTECH 2025

### A next-generation laser processing machine that is “Built for What’s Next”

FABTECH 2025, held in Chicago, USA, was a symbolic venue for the latest trends in manufacturing. Chicago, Illinois, is experiencing increasing investment in advanced manufacturing and life sciences, while at the same time facing a shortage of skilled workers and an ageing workforce. This has led to a growing need for high-precision machining and automation. There is also a growing trend toward multi-functionality and the integration of processes such as tapping and drilling, placing increasingly sophisticated demands on laser processing machines.

Mazak Optonics Corporation of the United States presented forward-looking engineering proposals under the theme “Built for What’s Next” in response to these market changes. The exhibit focused on newly developed laser processing machines and automation systems, clearly demonstrating the value that Mazak will provide to future manufacturing sites.

The approximately 1,400 m<sup>2</sup> booth was laid out with an orange carpet to guide visitors naturally to the core of the exhibit. The centerpieces of the exhibit were the “OPTIPLEX 3015 HP” 2D laser processing machine, equipped with the 30 kW Mazak SmoothCUT laser oscillator, which enables stable high-precision machining of thick plates, and the “FT-250” 3D laser processing machine for structural steel and pipes, which can handle the entire process from material loading to product unloading on a single machine.

The OPTIPLEX 3015 HP’s unique engineering enables high-quality cutting over thicknesses of 25 mm (1”) drawing great expectations from customers specializing in the processing of thick plates. Meanwhile, the FT-250 was highly praised for its 6 kW output and its ability to handle a wide range of workpiece shapes, including H-, I-, and L-steel, thanks to its C-axis control.

The total number of visitors to FABTECH was approximately 42,000, with many coming from all over the United States, particularly Illinois, to visit the Mazak booth. There was a particularly strong interest in 2D and 3D laser processing machines, and there were more inquiries about automation than usual. Visitors were also drawn to the visual appeal of the large screens, the displayed vehicle sample, and the latest demo parts.

Several contracts were secured during the event, making it a showcase where Mazak’s engineering capabilities were closely aligned with market needs. Mazak Optonics Corporation will continue to provide next-generation machining engineering by capturing customer feedback and market changes under the philosophy of “Built for What’s Next.”

High-power fiber laser processing machine

### OPTIPLEX HP series

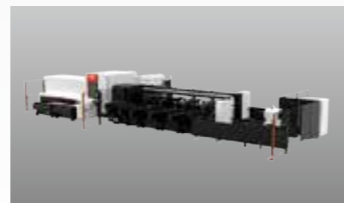
The OPTIPLEX HP series, specialized for thick plate processing, achieves high-speed, high-quality and stable thick plate processing. With a newly developed nozzle and Mazak’s unique processing technology, it can efficiently cut a variety of materials up to 50 mm (00”) thick.



3D laser processing machine specialized for processing long pipes and structural steel

### FT-250

The FT-250 completes all processes from loading of the material, drilling and tapping by the rotary tool unit, and the unloading of the product. The 3D laser head enables bevel cutting from various angles and the processing of structural steel in various shapes.



## 03. DISCOVER 2025

### A show where visitors witnessed how to “Drive Results with Innovation”

At DISCOVER 2025, Mazak’s private show held in Kentucky, USA, Mazak showcased its latest engineering and innovative solutions under the theme of “Drive Results with Innovation.” Demand for high-precision machining and automation is growing in the US manufacturing industry in fields such as aerospace, medical, and semiconductors. Mazak introduced a wide range of technologies to meet these market demands.

Thirty machines were in operation at the show, allowing visitors to experience the benefits of high-precision machining and multi-functionality through actual demonstration. The exhibit was divided into four areas: “Advanced Machining,” “High-volume production,” “Multi-Tasking Technology,” and “Shop Solutions” allowing customers to see and experience technology that are most directly related to their own production.

In the Advanced Machining area, a demonstration of high-quality finishing of complex-shaped workpieces was given, which was performed by the combination of the 5-axis machining center “VARIAXISI-700 NEO,” the horizontal machining center “HCN-5000NEO,” and the automation system “PALLETECH.”

In the High-Volume Production area, high-speed production was demonstrated using the Swiss-type lathe SYNCREX series. In the Multi-Tasking Technology, the INTEGREGX series were well-received for its high-precision multi-tasking, as well as additional functions such as grinding, which allow processes to be integrated into a single machine. In the Shop Solutions area, the Ez LOADER series, an easy-to-install automation system compatible with both turning centers and vertical machining centers, and compact machine tools, were mainly introduced.

The event also showcased an environment

where visitors could experience high-profile solutions and how to use them, such as SMARTBOX, a solution that supports cybersecurity, software that helps reduce setup time, and hybrid machining technology.

In addition, special seminars were held, including automation lectures by Mr. Eduardo Tovar of Modern Machine Shop México and Mr. Mike Cicco of FANUC America, an economic trend analysis by Mr. Taylor St. Germain of ITR Economics, and a panel discussion by job shop representatives. These events helped visitors discover solutions to problems at their manufacturing sites and come up with future strategies.

DISCOVER 2025 was a valuable opportunity to experience Mazak’s innovative technology firsthand, and was an event that widely promoted next-generation machining solutions that help customers achieve their goals.

Swiss-type lathe for machining small precision parts

### SYNCREX 12/8

The machine employs Mazak’s unique tool presetter and mineral-casted base with high vibration damping to achieve stable machining across the entire length of the bar. Furthermore, the detachable guide bush significantly reduces setup time.



Traveling column vertical machining center

### VTC-Ez 25

Designed and manufactured in Kentucky, USA, the VTC-Ez employs a fixed table and a traveling column, achieving both high operability and machining stability. With a wide table and X-axis stroke, it is a highly efficient product that enables long-length machining and simultaneous setup in a minimal floor space.





# 04. MECT2025

## Innovation in manufacturing through process integration, automation and digitalization

“MECT2025 (Mechatronics Technology Japan 2025)” was held at Port Messe Nagoya for four days from October 22nd to 25th, 2025, attracting approximately 78,000 visitors. At the Mazak booth, the company proposed “diverse solutions through process integration, automation, and digital utilization” to address issues that the manufacturing industry faces, such as labor and skill shortages, rising manufacturing costs, and delayed digitalization.

In addition to displaying a total of seven products, the booth also featured hybrid machining technology, the MAZATROL CNC system, and an area where visitors could experience “MAZATROL DX,” a software that enables digital setup. A large number of visitors were interested in resolving labor shortages through digital utilization and process integration. Among the seven displayed machines, there

were two new models. The new multi-tasking machine, “INTEGREX i-250 NEO,” performed high-precision curved surface machining using simultaneous 5-axis control, while the compact 2-turret 2-spindle CNC turning center, “QRX-50MSY SG,” demonstrated high-production machining of shaft parts using upper and lower tool posts. Both machines attracted a great deal of attention.

Furthermore, the combination of the “INTEGREX j-200 NEO” and the automation system “Ez LOADER 30” attracted a lot of attention and was highly praised as a robot cell that can be easily operated automatically without the need for teaching. A particularly large number of visitors gathered around this area, showing the high level of interest in automation and labor-saving that machine tools can enable.

MECT2025 was a forum for showcasing innovative technologies that look towards the future of manufacturing. Our company hopes that many visitors gained meaningful insights and discoveries. Our company will continue to take on the challenge of manufacturing products that meet our customers' expectations.



High-performance simultaneous 5-axis multi-tasking machine

### INTEGREX i NEO series



The INTEGREX series boasts a history of over 40 years and is a multi-tasking machine that can complete multi-faceted machining and simultaneous 5-axis machining of complex curved surfaces with a single setup. The INTEGREX i NEO series is the latest model that has evolved in pursuit of even higher productivity and capability to reduce environmental load.

Compact 2-turret CNC turning center with milling and Y-axis

### QRX series



The QRX series has a space-saving design with the smallest depth in its class, and two turrets allow for simultaneous upper and lower machining. This makes efficient machining of shaft parts and small diameter bar materials in limited spaces possible. A wide range of automation options are also available to increase productivity.

# 05. METALEX 2025

## Mazak's solutions provide opportunities for business expansion in volatile markets

“METALEX 2025”, Southeast Asia's largest machine tool trade fair, was held in Thailand from November 19th to 22nd, 2025. Over 100,000 visitors gathered during the four days of the event, symbolizing the high energy of Southeast Asia's manufacturing industry. Mazak's theme was “Sustainable Solutions Resilient to Change,” and the company presented proposals to support future production for customers that face the transformation of their industry.

While demand in the automotive industry continues to fluctuate, companies are turning their attention to new growth fields such as aircraft, semiconductors, medical care, and food. Capturing these market trends, Mazak exhibited five machines, including new models, showcasing total solutions that only Mazak can offer, combining machining technologies, automation, and digital utilization.

One of the most notable attractions was the CNC turning center “QRX-50MSY SG,” which was unveiled for the first time in the Southeast Asia

market. At a time when investment decisions must be made in line with changes in the market environment, this machine, which combines cost performance with high productivity, attracted many customers. Its demand is expected to continue to grow in the future.

There was also an experience area where visitors could actually operate “MAZATROL DX,” which went on sale in Southeast Asia in September 2025. In manufacturing sites in Southeast Asia, where labor shortages are a common issue, there are high hopes for reducing work hours and improving productivity through digitalization, and this area was crowded with many customers all day.

Although there have been concerns about the Thai market's economic trends, business is steadily expanding throughout Southeast Asia, with the expansion of Chinese companies and an increase in visitors from India. Mazak will continue to offer the latest technologies and sustainable solutions, leveraging its network and

engineering capabilities as a global company, while further strengthening partnerships with customers across borders.

High-performance compact vertical machining center

### VC-Ez series



The VC-Ez series is a compact vertical machining center made in India. It has the largest table size and machining area in its class, allowing it to accommodate large workpieces and fixtures. It also comes standard with a high-performance 12,000 min<sup>-1</sup> spindle, which enables not only heavy cutting but also high-speed machining using small-diameter tools, resulting in shorter machining times.





# Customer Report 01

## K.I SEIKI CO., LTD.

**“One-stop production system” that no other company can match**

How can companies respond to the urgent demands of customers for high-mix, low-volume, tight delivery date? The answer that K.I SEIKI CO., LTD. (Soka-shi, Saitama Prefecture, President Takao Kitabatake) came up with was to take back and control the various processes that have been outsourced internally. This is the company's proud “one-stop production system.”

K.I SEIKI has built a production system that can accommodate a wide variety of products and quantities by arranging machines for both high-mix production and mass production side by side.

#CNCLathe #Machiningcenter #Laserprocessingmachine #HighMixLowVolume #Japan



Compatibility of the programs for the INTEGREX j-400 (MAZATROL MATRIX NEXUS 2), prevents trouble between machines



Replacing a CO<sub>2</sub> laser processing machine with a fiber laser processing machine significantly improves productivity



The company handles everything from mechanical setup to fixture design, manufacturing, and production in-house, striving to get machines up and running as quickly as possible after delivery.

### The decision of the previous president that changed the company's future.

K.I SEIKI was founded in 1969 by Chairman Itsuo Kitabatake, the father of President Kitabatake. Initially, the company manufactured electrical and automotive components, but after the oil crisis, it expanded into the manufacturing of mold parts. Currently, mold parts and FA-related parts account for the majority of the company's total production. In addition to the head office factory in Saitama Prefecture, the company operates three factories in Kobe, Angyo, and Tochigi. The company has maintained steady growth over the past two fiscal years, with particularly strong performance in the previous fiscal year. President Kitabatake attributes this to “not just increased orders resulting in improved operating rates, but also the mutual cost reductions achieved through the introduction of the latest laser processing machine and the MULTIPLEX W-200.”

A total of 67 Mazak machines distributed across the company's factories support production to meet the robust demand. The first machine introduced was the CNC turning center QUICK TURN, which Chairman Itsuo, who was looking for a large turning center to process mold parts, was very satisfied with the performance of the MAZATROL NC system installed. “The MAZATROL is relatively easy to operate, so its greatest strength is that it allows new employees to become productive members of the workforce in a short period of time. By standardizing on Mazak machines, compatibility between programs, fixtures, and tools is achieved. I think it is also an advantage that workers can switch between different machines without any confusion,” said Managing Director Masanori Oki.

### Utilizing the proficient knowledge of the Mazak machines

K.I SEIKI's “one-stop production system” was devised to meet the strict delivery deadlines required by their major clients. In order to reduce the risk of process delays that occur when outsourcing to partner factories, they have increased the in-house production rate for all processes from blank input to delivery (cutting, sheet metal processing, welding, finishing, assembly, packaging, etc.), and have built a unique production

system that is unmatched by other companies. “By managing all processes in-house, we can significantly shorten production lead times and ensure consistent quality. We can quickly understand our production capacity which has dramatically improved the speed at which we can respond to quotes. I think these are the reasons why our business partners highly value us,” said President Kitabatake. For Mazak, President Kitabatake is not only a major customer, but also reliable alumnus. After working as a trainee at the Minokamo Plant, President Kitabatake worked as a service representative. His experience has led to the company's expertise in various machining methods and fixture designs. His familiarity with the machines has also contributed in building the flexible operation of the “one-stop production system.”

### Improving engineering skills through high-mix, low-volume production

“While the ‘one-stop production system’ contributes to improved business performance, it also carries the risk of causing employees to ‘stop thinking’ due to their work turning into routine work. To avoid this, it is essential to provide guidance that ensures employees do not miss opportunities to learn basic machining knowledge, such as the characteristics of tools,” said Tochigi Plant Manager Yoshihiro Tsukada. Based on this belief, the plant is actively utilizing the learning services of Mazak iCONNECT™, Mazak e-learning, and other services to strengthen its technical education process. In the fall of 2025, the plant will introduce the STX-2412 fiber laser processing machine to replace its previous CO<sub>2</sub> laser processing machine. The foundation that supports the “one-stop production system” is being strengthened, with significant reductions in running costs and a doubling of cutting speed. Regarding the outlook for the future, President Kitabatake stated, “While strengthening our mass production field, where competition with overseas companies is fierce, we would like to further hone our ‘high-mix, low-volume production’, which requires technological capabilities and speed.” He has set a policy of focusing on building a strong organization that can respond to new environmental changes and improving the engineering capabilities of the employees who will be responsible for that.



**K.I SEIKI CO., LTD.**  
 Executive President : Takao Kitabatake  
 Head office : 446 Naezuka-cho, Soka-shi, Saitama Prefecture, Japan  
 Number of employees : 64  
 www.ki-seiki.com/index.html



President Takao Kitabatake (right) and Managing Director Masanori Oki



Quality check is done after each machining process to provide high-accuracy products



President Kitabatake (third from the left in the front row), Managing Director Oki, and employees

### Workpieces processed by Mazak machine

Mold parts and fixtures machined with Mazak machines





# Customer Report 02

## Western Steel, Inc.

### Western Steel and Mazak Optonics Partner for Success

Western Steel, Inc. a family-owned business spanning across three generations, is based in Colorado Springs, CO. It originated as a scrap yard in 1904, the company has evolved into a one-stop service center within their 50,000 sqft (4,645 m<sup>2</sup>). facility. They offer raw material sales and a variety of services, including braking, shearing, plasma cutting, beveling, and laser cutting.

#### Western Steel, Inc.

CEO : Micah Olesky  
 Head office : 3350 Drennan Industrial Loop North Colorado Springs, CO 80910  
 Number of employees : 40  
 westernsteelcs.com

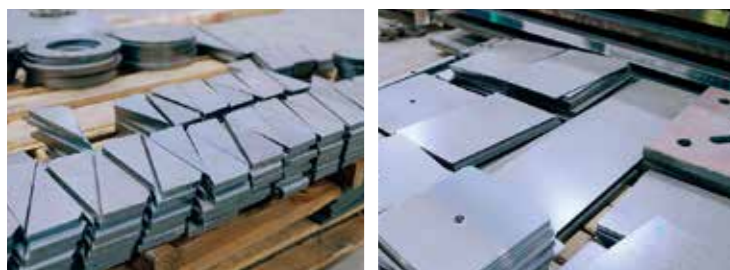
### Western Steel meets Mazak laser processing machines

Micah Olesky, CEO and Vice President of Western Steel, emphasizes their commitment to serving all customers, big or small, without minimum order requirements. Their clientele includes sectors from manufacturing, construction, military/government, ornamental, and infrastructure. "We regularly cut parts for OEM and after-market car and equipment companies, signs, construction-related parts, and equipment manufacturing," Olesky stated.

To meet customer needs, Western Steel has continually expanded its offerings and services by investing in technology. This strategic move has enabled them to provide high-quality parts more efficiently and cost-effectively, allowing their customers to focus on assembly and installation. "Our commitment to quality is demonstrated through our invest in technology for our customers, while providing on-time delivery and industry-leading customer service," said Olesky. He added that Western Steel values its employees and aims to extend a family-like environment to its customers as well.

One of the biggest challenges they have faced is the labor market. "As the older generation retires, finding skilled workers who know the ins and outs of things like bending material, plasma cutting, drilling etc., has been challenging," Olesky noted. "We have addressed this challenge with our new technology. While technology by no means replaces skilled labor, it is there to support them, make their jobs easier, and frankly, the new generation gets excited about fancy machinery."

When it came time to purchase laser equipment, their choice was clear, and they focused immediately on Mazak. "Over the years, we had visits from several companies wanting to show us their laser technology. However, I had heard much about Mazak, the reliability of their machines, the quality to which they are built, and their after-sales support," said Olesky. Due to Mazak's outstanding reputation, they purchased an OPTIPLEX 3015 NEO 15 kW in February of 2023, with the machine installed in September of that same year.



"The initial reaction to the new laser technology was great," Olesky reported. "Coming from a background of plasma machines, we were amazed at the simplicity and the speed at which we could cut parts. Furthermore, we loved the quality of the cut compared to a high-definition plasma. The ease and simplicity of the machine's operating system is a big plus for everyone. Other features that our operators appreciate are the ability to run the machine lights out, the nozzle check camera, and the flexibility of the machine to run 1/4" A36, followed by a sheet of 22GACR, followed by another sheet of 11ga stainless 304, all without having to intervene with the machine to change out consumables."

Unlike previous experiences with other manufacturing equipment, Mazak provided on-site training for the new laser machine, ensuring a seamless transition for Western Steel's team. "Mazak came to our facility and trained our employees on our actual machine at our request," Olesky shared. "After a few days of training, we had a great starting grasp on the system. After Mazak's trainers left, with the orange support system, our operators could get assistance within minutes of requesting it to fine-tune the machine," said Olesky.

"During initial startup and over the first few weeks of operations, we encountered some mechanical problems. While this is not surprising and typically expected of a new machine, Mazak was there with immediate support and almost always had a tech onsite within 24 hours of first reporting the problem. I couldn't speak more highly of how Mazak handled it," said Olesky.

### Improving production efficiency with OPTIPLEX 3015 NEO

The OPTIPLEX 3015 NEO 15 kW allowed Western Steel to retire an older high-definition plasma and a waterjet, enhancing their production efficiency. "Not only was the new laser capable of handling the combined workload of both those machines, it allowed us to bring our overall production back to a 3-5 day lead time. We currently run the machine with a 3-man crew on each shift. Not only does the machine produce a substantially larger amount in a given shift, it does so at a cheaper hourly rate than our plasmas," Olesky commented. He also added that their average plate utilization is nearly 20% higher than on the plasmas due to how tightly they can pack parts onto a sheet. Another area in which OPTIPLEX NEO is more efficient is the after-cutting cleanup. Olesky reported that 95% of parts have no edge cleanup after cutting, unlike plasma, where 100% of parts must be run through the surface finisher or hand-grinder to clean up dross-buildup.

"The quality has really exceeded our expectations, and the reliability has been excellent. Most importantly, we have been impressed with the support," Olesky stated. The orange support app provides quick service, whether for technical issues, software or programming help, or ordering parts. "It has been the most beneficial and seamless partnership we have experienced with a machine manufacturer," he added.

Western Steel purchased another OPTIPLEX 3015 NEO ten months after the initial purchase, and currently, both machines operate 24 hours a day, 7 days a week. Looking ahead, Western Steel plans to introduce new models to expand their business. "It truly has become a great partnership," Olesky concluded.



Laser Processing Machine

## OPTIPLEX 3015 NEO

2D fiber laser processing machine for thin material high-speed cutting and thick material high-quality cutting

- Beam Diameter Control function and Variable Beam Mode function for optimum cutting of various materials and thicknesses
- Design focused on accessibility and ease of operation
- Intelligent functions to automate the setup work
- MAZATROL SmoothLx CNC control



Micah Olesky

### Examples of processing time reduced by introducing OPTIPLEX 3015 NEO

Olesky highlighted some timing metrics that shows the success Western Steel has encountered:

Material / size	Conventional	OPTIPLEX 3015 NEO
1/2" A36 steel plate / 60" x 120"	150 min <sup>*1</sup>	30 min
1/4" A36 steel plate / 48" x 96"	240 min <sup>*1</sup>	25 min
1/4" Brass plate / 36" x 120"	360 min <sup>*2</sup>	20 min

\*1: Drilled and plasma cut

\*2: Cut on waterjet

# Mazak News & Topics

## ► Takehiko Ochiai of Minokamo Plant 1 awarded Yellow Ribbon Medal.



Takehiko Ochiai of the Minokamo Plant 1 was awarded the “Yellow Ribbon Medal” in the autumn 2025 Medals of Honor. The “Yellow Ribbon Medal” is awarded to individuals who have demonstrated exemplary skills and achievements in fields such as industry, commerce, and agriculture through their hard work. Since joining the company, Ochiai has worked for many years assembling laser processing machines, demonstrating exceptional skills in scraping the slide ways that determine machine accuracy. He was selected in recognition of his contributions to the manufacture of high-precision, high-quality laser processing machines. This latest award brings the total number of employees in the Yamazaki Mazak Group to receive the “Yellow Ribbon Medal” to 12. Our company will continue to strive to develop highly skilled personnel and contribute to the development of global manufacturing through the provision of high-quality products.



## ► Mazak UK’s engineer wins two golds in an archery competition



The European Field Championships is one of Europe’s leading traditional archery events, held since 1970. At the 2025 competition in Poland (Sept. 15-20), Emelia Hughes, an engineer at Yamazaki Mazak’s UK Worcester Plant, achieved an astonishing result of winning two gold medals, in the Individual Recurve Under 21 category and the Mixed Team event. This accomplishment marks a major milestone in her archery career, and she is already focused on the 2026 World Field Archery Championships in the USA.

Emelia’s ambitious spirit also shows in her work as an engineer, and she won Advanced Level Apprentice of the Year at the 2024 Worcestershire Apprenticeship Awards. Whether in her work or hobbies, her ambition promises continued growth and success.

Mazak remains committed to supporting employees both professionally and personally.



## ► Kids challenge scraping in the Monodzukuri Experience Stadium



On August 23rd and 24th, 2025, the Monodzukuri Nihon Conference hosted the “Monodzukuri Experience Stadium” at the Science Museum in Tokyo. The event aimed to let kids from preschool to junior high school experience the joys of manufacturing and science. The 23 varied workshops, including hands-on tool crafting, electrical mechanisms, programming, and environmental initiatives, have inspired children to become engineers of the future.

At the Yamazaki Mazak booth, a workshop was held where children could handcraft their paperweights. In this workshop, participants used tools that are actually used in factories to finish the surface of metal bars by filing and scraping, and then created handles by tapping and threading, completing the paperweights. It was inspiring to see the children working earnestly like skilled craftsmen, using specialized tools rarely seen in their everyday lives.

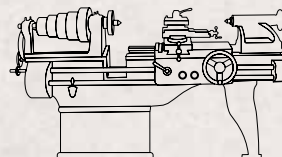
## ► Mazak Singapore welcomes students on overseas program

On August 12, Yamazaki Mazak Singapore Pte. Ltd. hosted an overseas program for Japanese students. A total of 16 students, ranging from second-year junior high school students to fourth-year university students residing in Oguchi Town, Aichi Prefecture (where the company’s headquarters is located), participated in this program. At the Singapore Technology Center, the students were introduced to the members of Mazak Singapore and learned about life in Singapore. They were then given a tour of the showroom and factory. The students showed great interest in working overseas, asking questions about how people from various countries communicate and work together, and were surprised to learn that products used in daily life are made by Mazak machines. Through this visit, the students gained valuable experience in manufacturing and exposure to international culture. Yamazaki Mazak is committed to nurturing the next generation of international talent and future engineers.



# Machine tools, past and present

THE COLLECTION OF THE YAMAZAKI MAZAK MUSEUM OF MACHINE TOOLS



Around 1797

## Maudslay lathe



Two parallel bars with triangular cross sections act as slide ways, and the carriage moves precisely with the drive of a lead screw synchronized with the revolution of the spindle. Above the carriage is a cross-feed table, and the screw that drives this is equipped with a graduated dial, allowing precise cutting. This structure can truly be called the "prototype of modern machine tools."

Henry Maudslay began working in factories at the age of 12, where he acquired excellent metal processing skills. From the age of 18, he demonstrated his talent in developing lock production equipment under

Joseph Bramah, before going independent at the age of 26. He later manufactured mass-production equipment for sailing ship pulleys and steam engines for ships.

During this time, he made great contributions to improving the accuracy of machine tools, such as inventing the carriage, improving the accuracy of screws, and developing the screw-cutting lathe. He also trained many excellent apprentices, and is therefore known as the "father of machine tools."

Photo: Henry Maudslay's (1771-1831) first screw-cutting lathe (c. 1797, replica)



**M THE YAMAZAKI MAZAK MUSEUM OF MACHINE TOOLS**

<https://machine-tools-museum.mazak.com>

YAMAZAKI MAZAK MUSEUM OF MACHINE TOOLS is a unique museum that specializes in machine tools. It is an interactive museum where visitors can see, touch, and enjoy all kinds of exhibits, which includes working historical machine tools and key industrial products made with the tools such as steam locomotives, automobiles, and aircraft.

