# EDM TODAY

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▶ Read more on PAGE 4

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## EDM TODAY'S 35TH ANNIVERSARY

▶ Page 12

By EDM'ers for EDM'ers

Seibu AMERICA

# INVESTING IN THE FUTURE

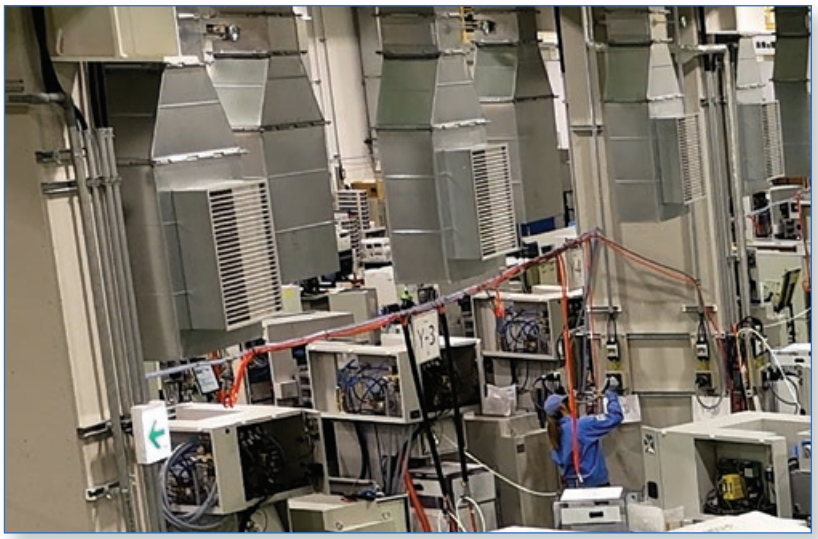
## SEIBU OPENS NEW FACILITY TO MEET CUSTOMER DEMAND

**On September 30th, 2024, Seibu's Precision Machine Division finished construction on a major facility expansion to meet the growing global demand for Seibu Wire EDM machines. In the 2010s, demand for Seibu machines began to push the production limit of 60 machines per month, and Seibu management began discussing the need for expanded manufacturing capabilities. By 2019, production had been running at maximum capacity, and a second factory was completed, which increased capacity to 80 machines per month. It, too, was quickly running at full capacity.**

In the fall of 2021, Seibu planned, and decided to invest in additional capacity to increase output capability to 120 machines per month. In December 2022, construction began on a new state-of-the-art facility that combines manufacturing space with quality control and a showroom for conducting test cuts. The new facility is three stories tall and has approximately 127,000 square feet of floor space.

The new facility has multiple assembly bays with overhead cranes to facilitate the movement of the machines through the production cycle. The building includes a sophisticated air management system with air intake grills and filters located at numerous positions around the bays. This system ensures that the air at all positions in the bay is at a constant controlled temperature and that it is clean of dust and particulates that could adversely affect the finished machine.

*One of Several Assembly Bays*



*Environmental Air Management System*

Seibu believes that these extra steps to create an ideal manufacturing environment are essential to achieving the extremely high precision for which Seibu equipment is known.

Careful climate control is only one element of what Seibu does to assure quality and keep production on schedule. Seibu has implemented an Enterprise-Wide Digital Transformation (DX) strategy. Essentially, DX strategy leverages technology to monitor all aspects of the machine build and quality assurance inspection. This includes real-time visualizations of checklists, the production bay, and the complete assembly process. The system will provide notifications of any delays that might impact the scheduled completion time – enabling management to take corrective action to get the project back on track. This could be anything from a vendor notification of a parts delay to a key employee calling in sick. The DX system also includes a Project Assembly System Component (PAS) that provides instant information on things such as what bolts are needed to install a component, where they are located in inventory, and even video of the assembly procedure.

*Seibu Assembly Person Accessing the DX System*

The DX system does far more than keep assembly on schedule; it also greatly minimizes the possibility of assembly errors.

While Seibu has implemented the newest technologies, it also continues to use some of the best old-world craftsmanship techniques, such as hand-scraping all machines.

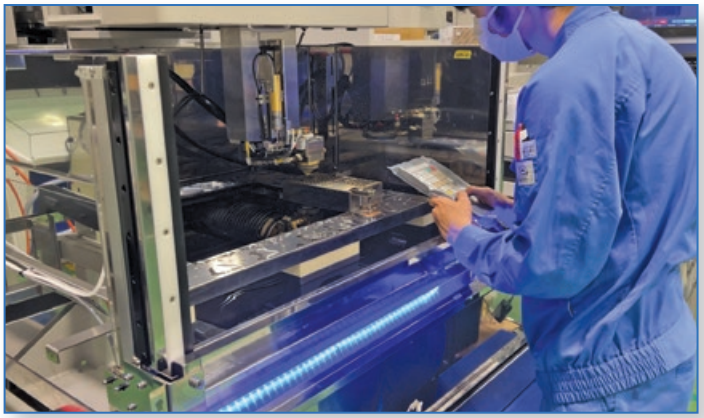
*Hand-Scraping (Kisage)*

There is no substitute for hand-scraping, the traditional measure of fine craftsmanship. Called Kisage in Japan, it achieves a flatness tolerance far better than if machined by a CNC grinder. In addition to providing better accuracy, the faces mate stress-free, which allows the machine to maintain accuracy and smoothness of motion over its long life. Kisage is also one of Seibu's secrets to delivering superior surface finishes.

*(Continued on next page)*

After assembly is completed, the machines move to an inspection bay. Here, highly skilled technicians perform numerous checks on the machine's accuracy and performance. All aspects of the machine are evaluated, including the auto-threading systems, motion smoothness, and precision. Before the machine moves on to packaging for transport, Seibu has verified that it meets all of its demanding inspection criteria, and they know the machine will meet or exceed customer expectations when installed.

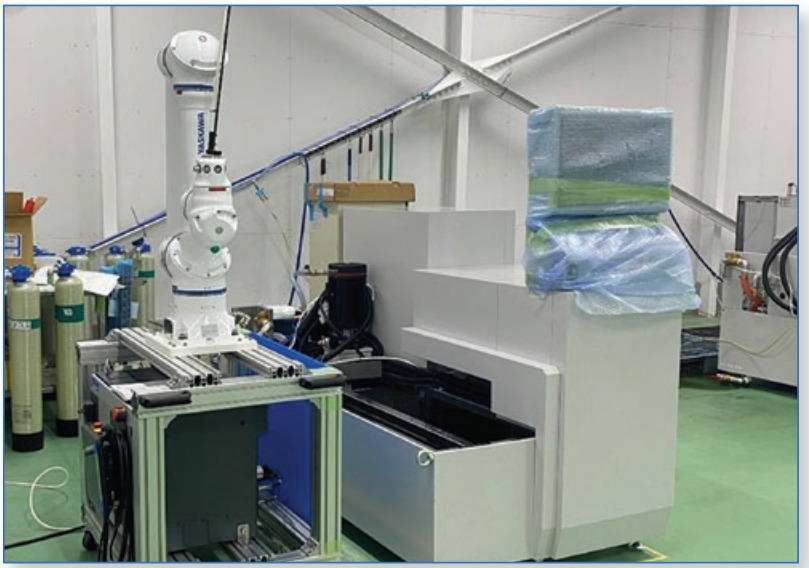
*Seibu Inspection Area*



*Seibu Technician Performing Inspection*

All inspection data is recorded into the Seibu DX system and becomes part of the permanent record for that specific machine based on its unique serial number. The data serves many purposes. The DX data is a complete record of the machine's build. It ties to purchasing records for materials used, the history of the employees who worked on the machine, and the time consumed for each task. This data is invaluable in helping Seibu further improve its internal processes and employee training.

As the machine moves to the shipping department, Seibu employs a collaborative robot (cobot) to work alongside technicians to drain and dry the filtration system prior to packaging. The cobot is also part of the DX system, and its use ensures that each machine is doing the task correctly and consistently.



*Cobot Used to Prepare Filter for Shipping*

EDM Today discussed Seibu's investment in the new facility and technologies with Mr. Kazuhiro Matsushita, Division Manager of the Precision Machine Division at Seibu. Mr. Matsushita explained that planning for the new facility was carefully considered. It is much more than a manufacturing facility. He added that consideration was given to the welfare of Seibu employees. The facility includes a fully equipped fitness center and a comfortable cafeteria where employees can relax and enjoy a nutritious meal.

Mr. Matsushita added that Seibu believes strongly in seeing to the needs of the employees, as they are what allows Seibu to produce its incredibly accurate and reliable machines. He further explained that it is not just comforts such as the fitness center, it is the training that gives employees the confidence and skills to perform their various tasks. It is also the management team that is there to support the employees. Seibu is proud that their efforts prove valuable in creating a very low turnover rate. The average turnover rate in Japan is 39.5% after 3 years. But Seibu sees a rate that's less than 6.3%.

The new facility is also carefully designed to be a showcase for visitors. Upon entering the building, visitors will see a display of the world's first CNC Wire EDM machine—Seibu's model EW-20. It was the first mass-produced CNC Wire EDM, manufactured in 1972. This display, while interesting, serves as a reminder to visitors of Seibu's rich history as innovators in EDM.

*Mr. Kazuhiro Matsushita*
*Division Manager, Precision Machine Division*

*Model EW-20 EDM Display at Entrance*

Mr. Matsushita explained that many people don't realize that Seibu engineers were responsible for developing many technologies that are now commonplace. For example, Seibu developed and patented the high-reliability auto-threading system that allows rethreading at the breaking point by annealing and stretching the wire. This development makes lights-out unattended operation both fast and highly reliable. This was patented in Japan in May 1995 and in the U.S. in February 1997. While that patent has expired, Seibu reminds customers that they were first and have 30 years of experience building high-reliability auto-threading systems.

EDM Today asked Mr. Matsushita what the future holds for Seibu. He indicated that Seibu will continue to invest in facilities and technologies that will allow them to continue to produce the finest Wire EDM machines. They have a global footprint, but see a particularly strong market in North America. Customers are demanding high-precision and better surface finishes.  Most importantly, the lack of skilled employees creates a demand for high-reliability, unattended operation, an area where Seibu excels.

Seibu's commitment to the North American market resulted in the investment in Seibu America, a joint venture between Seibu and Kanematsu KGK, the parent company of KGK International Corp. Seibu America Corporation is headquartered in Elk Grove Village, Illinois, centrally located to quickly serve their customer's needs. Seibu has several factory engineers stationed in the Seibu America facility. They provide installation, support, and training for the Seibu equipment entering North America. They also assist Seibu America salespeople by providing customer test cuts.

## About Seibu

Founded in 1927, Seibu Electric & Machinery Co., Ltd. is a Japanese manufacturer with multiple divisions serving a global marketplace. Headquartered in Koga City, in the Fukuoka Prefecture in Japan, they have multiple offices, branches, and service centers located throughout Japan. Seibu EDM machines are manufactured by Seibu's Precision Machine Division. Seibu Electric & Machinery Co., Ltd. has been listed on the Fukuoka Stock Exchange since 1986. They joined the Osaka Securities Exchange in 1991 and the Tokyo Stock Exchange in 2007.

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