

ORANGE NEWS

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Captivated by traditional crafts right in the
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[Cover photo]

Location: Ishikawa Prefectural Museum of History

This edition's cover photo was taken at the Ishikawa Prefectural Museum of History situated within the Hondanomori area, which is next to Kenrokuen Garden. Built as an armory, it has attractive brick-built architecture.

[Model] Anna Tauchi

TAKAMAZ

TAKAMATSU MACHINERY
PR Magazine Autumn 2024



Technical Development Department,
R&D Section, Section Head
Katsuhide Hashiba

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Control Development Section,
Section Head
Yoshiro Kitagawa

Hidden new challenges behind the XTL Series

The XTL Series is being developed to respond to the shift in market trends toward electric vehicles. The three models XTL-8, XTL-8MY and XTL-8MYS were developed simultaneously from the concept stage as a single series, a process that has never been applied at TAKAMAZ previously. This project is expected to give rise to TAKAMAZ machines that can serve customers even better. For this issue, we spoke to the two development personnel who are at the core of this project.

are for machining longer shafts that the XT machines cannot handle. The simplest and most basic model in the series is the XTL-8. When we add a power tool function for milling, giving multi-tasking capability, we have the XTL-8MY. The XTL-8MYS also features a milling function, but by equipping it with a sub-spindle for machining the back of the workpiece, it can complete finished products within a single machine.

To start with, please tell us briefly about the XTL Series.

Technical Development Department,
R&D Section, Section Head
Hashiba

From the time that the shift to electric vehicles became recognized there has been investment in equipment for machining shaft workpieces. TAKAMAZ offers the existing XT Series to handle shaftwork, but the XTL Series machines

What were the most significant characteristics of the development of the XTL Series?

Hashiba
The greatest characteristic of the XTL Series is that, right from the start, it was envisioned that these three models would be sold as a series. For this reason we formed one team of seven development staff to advance the development project. As for our roles, four people including myself were responsible for the development of

the machines, and three people including Mr. Kitagawa were responsible for development of the control. We used a modular design approach for the development of the machines, developing all three models at the same time, with the expectation that we would standardize parts, units, and so on. In contrast to our conventional approach at TAKAMAZ, we set modules in advance and designed the products by combining these modules. The process was that we started from the model with the most difficult, full-package specifications, the XTL-8MYS, then progressed in sequence to the simpler models. During this process, having decided to use common beds, which are the foundations of the machines, we racked our brains quite a bit at the design stage to determine how modular the machines should be, and in what way. This was quite difficult work, but it enabled us to achieve substantial improvements in productivity and shorten the development time in the commercialization of

the machines. With regard to productivity, the number of components has not changed, but the fact that we are able to reduce the number of types of components makes a big difference both in terms of time and cost.

Technical Development Department,
Control Development Section, Section Head
Kitagawa

With control development, on the other hand, design on a modular basis proved difficult, so we assigned a main person to be in charge for each of the models among the three control development personnel. I myself am in charge of the XTL-8, and basically the software and hardware of the XTL-8 served as the base for the development of the XTL-8MY and XTL-8MYS. As the series was designed by a team, we made efforts to expand information sharing beyond the individual people in charge in our collaboration with the machine development side.

Hashiba
The internal chat system was useful in this regard. I believe that sharing information and data, and raising questions about individual issues using the internal chat system, helped us to resolve issues.

The XTL Series seems to have attracted a high level of interest both inside and outside the company because you are following a different approach to development than previously. Please tell us about the functional and structural

characteristics of the XTL Series from your perspective on the development side.

Hashiba
Quite a lot of people told us that the workpiece length that our machines up until now could handle was insufficient. There is no doubt that the XTL will be a machine that can cover for this. In addition, a tailstock, which is necessary to machine the such long shaft work, is equipped as standard on the two models XTL-8 and XTL-8MY. Despite the ability to handle long shaft work, these models are also characterized by keeping the design of the machine itself very compact.

Kitagawa
As the latest series of products designed to be carbon-neutral and to improve machine utilization rates, this new series uses components that focus on energy-saving performance and improved maintenance functions. Several energy-saving functions are also provided as standard. For example, we have made specifications to satisfy our customers, such as a function to reduce power consumption by varying the spindle acceleration/deceleration and an idle stop function to stop the hydraulic pump. In terms of visualization, the quantity of products produced on a given day and the corresponding energy consumption can be monitored to determine the average power consumption per workpiece, and it is also possible to see how much energy has been saved by energy-saving functions such as

idle stop and power regeneration. These machines seem very attractive as the latest models from TAKAMAZ, but when will you be able to unveil the entire XTL Series to our customers?

Hashiba
The actual concept for the series started in the latter half of 2022. The basic XTL-8 was unveiled as a reference exhibit at Mechatronics Technology Japan in the fall of 2023, while the XTL-8MY was a reference exhibit at MEX Kanazawa 2024 staged in May this year. Currently we are progressing with development of the XTL-8MYS, which will complete the series, so that it can be exhibited at the 32nd Japan International Machine Tool Fair (JIMTOF 2024) to be held from November 5.



The XTL Series is not only the latest in TAKAMAZ's line of machines, but also uses a development process that is different to what we have used before, and will serve our customers even better. With the reference exhibit of the XTL-8MYS at JIMTOF 2024, all three models of the XTL Series will have been presented. Please take the opportunity to visit.

XTL Series

CNC1 Spindle1 Turret
Precision Lathe

NEW

energy saving

XTL-8
XTL-8MY
XTL-8MYS

※Photo shows the XTL-8MY

Machine Specifications					
Item	Unit	XTL-8 (8-station type)	XTL-8 (12-station type)	XTL-8MY	XTL-8MYS
Max. turning length	mm	593	598	508	404
Max. bar diameter	mm	Solid (Ø42, Ø51, Ø65)		Solid (Ø42, Ø51)	
Chuck size	inch	8 (10)		8	
Max. spindle speed	min ⁻¹	MAX.4,000 (5,000) (3,000)		MAX.4,000	
Type		8-station Turret	12-station Turret		
Tool shank	mm	□25			
Boring holder I.D.		Ø40			
Max. stroke	mm	X:190 Z:600		X:175 Y:±35.40 Z:550	
Rapid traverse rate	m/min	X:18 Z:24		X:18 Y:10 Z:24	
Spindle motor	kW	AC 15/11			
Power tools Tool storage capacity	pcs.	—		12	
Power tools Drill size	mm	—		Ø20	
Power tools Endmill size	mm	—		Ø20	
Power tools Tap size	mm	—		M16	
Chuck size (Sub-spindle)	inch	—			6
Max. bar diameter (Sub-spindle)	mm	—			Solid (Ø35)
Spindle motor (Sub-spindle)	kW	—			AC7.5/5.5

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HAMANO Co., Ltd.

Think about everyone

Caring about our employees,
our families and our communities.

Caring about our employees, our families and our communities.

What we value is “a safe and secure place to work”.

A management that continually listens to the opinions of
employees builds a highly productive organization.

WORK & SOUL

Member of the Board
Manufacturing Director
Hideo MiyaguchiManufacturing Department,
First Manufacturing Section
Production Engineering
Section Chief
Akihiko WatanukiManufacturing
Department
Executive Officer
Fukuo HorieBolt Manufacturer in Yoshikawa City, Saitama Prefecture.
Connecting people and society as a manufacturer rooted in the community.

HAMANO Corporation is a bolt manufacturer in Yoshikawa City, Saitama Prefecture, Japan. At the heart of the company's management is a corporate philosophy of caring for employees, their families, and the community. In this interview we home in on the WORK & SOUL of the company.

First of all, please tell us your company's history.

[Director Miyaguchi] HAMANO was founded in 1932, with its predecessor being Hamano Ironworks. In 2002, Meidoh Co., Ltd. took over the business through investment, and it has now been 20 years since the company was reborn as HAMANO Co., Ltd. in the Meidoh Group. The company mainly handles work for automobile and truck manufacturers, and is expanding its share and volume in that field.

I sense that your company has a philosophy of valuing people very highly, but how exactly are you implementing this philosophy?

[Director Miyaguchi] Our president's policy is to value the employees, along with their families and also the community. For example, we encourage male employees to take childcare

leave in the same way as female employees. There is a strong sense of mutual support among employees when someone needs to take sudden leave due to family illness or other emergencies. It is easy to take paid leave, and the acquisition rate is high.

[Executive Officer Horie] We don't just look after our employees, but their families too. For example, as child-rearing support, we provide 20 kg of rice per child as payment in kind. We also invested about 100 million yen in the work site and prepared equipment to ensure that the entire interior of the factory is air-conditioned.

[Director Miyaguchi] The president is always saying that he wants to create an environment in the factory where even his own children would not have an accident or get injured if they were to walk around in it.

[Executive Officer Horie] I think our attitude of valuing employees is also apparent in the fact that the oldest company employee is 79. The president's perspective is that people can keep going as long as they are still able to work.

[Director Miyaguchi] Interviews and conversations with all employees are used as opportunities to hear about things that you wouldn't talk about during daily work, or what they are thinking, and I think the fact that the president openly communicates the status and sales outlook to all employees once a month also creates an open corporate culture.

Is the president's style of engagement with employees the reason for manufacturing almost no defectives even in the production of 30 million bolts a year?

[Executive Officer Horie] I think this is the result of implementing robust countermeasures when defectives are found, and including checks even one or two years later in the management. Another factor is that there is a strong awareness of change-point management. We have a system to maintain robust management when there has been a change, such as a change in personnel or a change of machine. We have assigned staff to take charge of the operational tasks and are sharing a variety of knowledge.

[Director Miyaguchi] We are also carrying out

QC circle activities. Twice a year, in spring and fall, there is an initial competition based on the results of QC activities within the company, and those who excel are further evaluated within the group companies. Those who win first place there give a presentation at a convention held by the Meido Group in Nagoya. In addition, the Meido Group also has an improvement suggestion system whereby all employees make five suggestions for improvements every month.

I am convinced that the company's consideration for people and its efforts in quality control and other areas have helped it maintain a low defect rate and the No. 1 market share in the field of bolts used by major truck manufacturers.

[Executive Officer Horie] It has taken us 20 years to reach this point. At the same time, we have increased productivity and quadrupled sales while maintaining the same number of employees as we had 20 years ago. Meido Group's structure and many other factors have contributed to this achievement, but the focus on small-lot, high-mix, high-quality

production is a unique strength of HAMANO that is rare in the Meido Group. This is where people-oriented, town-factory-like values produce results.

[Supervisor Watanuki] Having replaced equipment with those that support automation, including TAKAMAZ machines, over the last 20 has also shown its effects.

How did your relationship with TAKAMAZ come about, and why do you continue to install our machines?

[Supervisor Watanuki] Our relationship with TAKAMAZ goes back more than 50 years, but it was when our company changed to HAMANO that we started full-scale introduction of your machinery. It all started when we received sincere responses to our questions like “Can you make something like this?” and “Can you make it more compact?”

[Executive Officer Horie] The reason that we decided to introduce TAKAMAZ machines was that they are easy to use, reasonably priced compared to their competitors, and

very well supported in terms of loaders.

[Supervisor Watanuki] In addition to good working convenience, we can also rely on fast and helpful responses whenever we have any questions or seek advice.

They have made so many initiatives to the benefit of their employees that it is impossible to cover them all here. We at TAKAMAZ too would like to provide machines and services that will help employees like these as much as possible.



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President: Takayoshi Hasegawa
Capital: 80 million yen
Employees: 100
Establishment:
April 2002 (Founded in 1932 as Hamano Iron Works)
Business activities:
Manufacture of precision bolts for automobiles

TOPIC1

XWG-3 receives a Japan Institute of Design Award!

The XWG-3 has received a Japan Institute of Design Award at the 54th Machinery Industrial Design Awards. This model achieves “short-time workpiece machining, improved productivity, and space savings”, which is required of machine tools against the backdrop of the recent demand to satisfy sustainable development goals and carbon neutrality. To improve productivity, a high-efficiency built-in motor is used for the spindle to achieve shorter non-cutting time and high-precision machining with responsive start-up.



XWG-3



Nikkan Kogyo Shimbum

TOPIC2

「EV」「INDUSTRIAL」 Completion of the Part Machining Solutions Catalogs

TAKAMAZ products are used to make a wide variety of components for various industries around the world. EV-related parts, infrastructure-related parts for building cities, parts for hand and power tools, and parts for construction and agricultural machinery. Catalogs summarizing the track records of the TAMAMAZ products that make these products are now available!

- You can request catalogs from our website. Please take a look.



EV Part Machining Solutions Catalogs



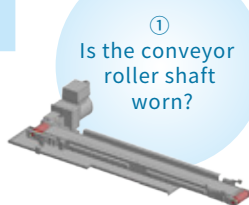
INDUSTRIAL Part Machining Solutions Catalogs

TOPIC3

Four Recommendations for Self-Maintenance of Consumable Parts!

Our website provides information on consumable-part-related maintenance that customers can check themselves.

Check out the information from this QR code!



① Is the conveyor roller shaft worn?



② Are the loader finger mounting adapters worn?



③ Is the operation of the loader pusher normal?



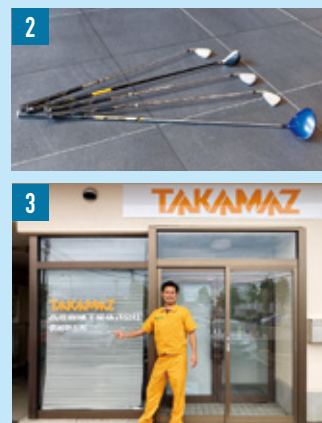
④ The spindle belt and timing belt are also consumable parts.

Strolling Through TAKAMAZ

Domestic Sales Department, Hokushinetsu Sales Office Kentaro Tanaka

In his fifth year at the company, aged 26. After working at the head office, he joined the Hokushinetsu Sales Office (Shinetsu) two years ago and undertakes machine repair and maintenance work, covering the Niigata and Nagano areas. He travels around the area he is in charge of every day, feeling joy on hearing the words “thank you” from customers after completing repairs.

- 1 My favorite work tool is a 1kg hammer that I found at a home improvement center. It is compact, has adequate weight, and is indispensable for work in restricted locations.
- 2 I have been addicted to golf for 2 years, having started at the invitation of an older colleague. I use the “Dainiigata Country Club Sanjo Course” as my home course to work on my game.
- 3 My place of work is the Hokushinetsu Office in front of the JRTsubame Sanjo Station. Using this office as a base, I go out to see customers in both Niigata and Nagano prefectures.

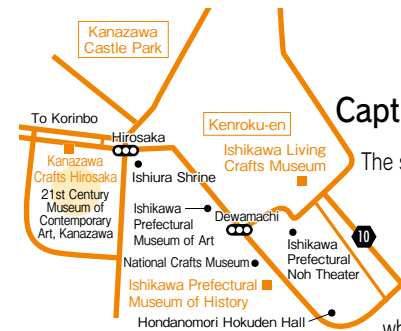


Traveling the Hokuriku Area to Experience Craftsmanship

— CRAFT CONSCIOUS —

Captivated by traditional crafts right in the middle of Kanazawa

The streets of Kanazawa are where the history and culture of Hyakumangoku are concentrated. The Ishikawa Prefectural Museum of History, the Ishikawa Prefectural Museum of Art, and the National Crafts Museum stand side by side, allowing you to enjoy a world of arts and crafts unique to Kanazawa. In this edition, we would like to invite you to a trip to Kanazawa, where you can experience the fascination of metal crafts, especially Kaga Zogan (inlaying).



Ishikawa Prefectural Museum of History

This red brick building used to be a military armory and after the war housed the Kanazawa College of Art. This museum introduces the history and culture of Ishikawa from ancient to modern times.



Kanazawa Crafts Hirosaka

Exhibits and sells rare traditional crafts from Kanazawa. Modern items that make use of traditional work are arrayed.



Ishikawa Living Crafts Museum

This is the only facility that exhibits all 36 traditional crafts from Ishikawa Prefecture.



During the Edo period, the Kaga Domain was highly powerful, only second to the shogunate, and was known as “Kaga Hyakumangoku”. Lords of the domain brought in master craftsmen from Kyoto and devoted themselves to the promotion of culture over many generations. Lacquerware and Kutani ware are widely known traditional Kaga crafts, and Kaga Zogan (inlaying), which is used to decorate metal ornaments for blade accessories and other items that are indispensable to samurai families, is another of these crafts. In particular, Kaga Zogan stirrups did not peel under any impact, and together with their elaborate and graceful design, this gained them fame throughout the country. Kaga Zogan is also highly regarded worldwide in arts and crafts terms, and excellent works are in the collections of museums in many countries.

You can find such masterpieces of Kaga Zogan at the museums and craft specialty stores located in the Hondanomori area, adjacent to Kenrokuen Garden. The Ishikawa Prefectural Museum of Art often holds special exhibitions, and the Ishikawa Prefectural Museum of History and the Nakamura Memorial Museum of Art in Kanazawa also have exhibits on display. If you visit the Ishikawa Museum of Arts and Crafts, in addition to the exhibited masterpieces, you will find an array of demonstrations and hands-on experiences provided by traditional craftspeople and others. Kaga Zogan can also be enjoyed as modern accessories, which can be found at Kanazawa Crafts Hirosaka.

TAKAMAZ

Scan this QR Code for more details.
<https://www.takamaz.co.jp>



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