

T-n e w s

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2022 Winter

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NITTO RASHI KOGYO Co., Ltd. (Tokyo)

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2021 Received the Invention Encouragement Prize
at the Chubu District Local Commendation
for Invention

◆ Employee Introduction





New Year's Greeting

Happy New Year! I would like to extend my best wishes for the year ahead. And I am very grateful to you all for your loyal patronage during the past year.

Last year was characterized by the strong impact of COVID-19 on society, but worldwide economic activity gradually picked up again, the machine tool industry is also on the path to recovery, and we now have a positive outlook for future business performance.

What I have realized through doing business in the context of COVID-19 during the past year is the value of the opportunities for direct exchanges with customers that we had taken for granted up until this time. At MECT (Mechatronics Technology Japan) 2021, where we exhibited in October last year with thorough measures against infection in place, many customers visited our booth. I was very encouraged to see how lively this venue was after a long hiatus. This was a moment where I began to see signs of optimism for this year.

To give some personal news, in April this year my grandmother Kuni Takamatsu passed away. She was a valued contributor to the company, serving as its president under difficult circumstances following the death of our founder. I would like to tell you again how grateful I was for the words of condolence from you all. In May I was selected as one of the torchbearers for the Tokyo Olympics and I attended the ceremony. I was deeply impressed by the volunteers who committed themselves to supporting the event, and I think our company made a further contribution to society there too.

With these thoughts as the backdrop, in 2022 TAKAMAZ will move ahead with the focus on the Asahi Plant that is scheduled to start operations in April. For our customers, this is the plant where they see the final assembly of the products, and for members of staff it is the long-sought-after office where they can actually put into practice new ways of working, including paperless operations and an open-plan office. We will progress the development of products that will further improve our customers' manufacturing environments with this flagship factory aimed at achieving even better manufacturing.

I would like to conclude my New Year's greeting by wishing you all good health and continued growth.

Soichiro Takamatsu, President



New plant
Artist's impressions of the exterior and entrance.



Olympic torch relay

On May 31 2021, the relay on public roads was canceled due to the impact of COVID-19, and the only the torch lighting ceremony was held at San-no-Maru Square in Kanazawa Castle Park, Kanazawa City, Ishikawa Prefecture.



Offering a Fuller Lineup Again this Year

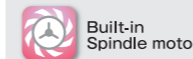
*Some photos show machines with special specifications.



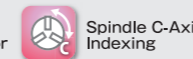
Scan the QR code with your camera phone or smartphone to see videos on YouTube.

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Display of Main Attachments



Built-in Spindle motor



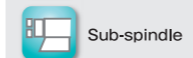
Spindle C-Axis Indexing



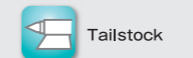
Spindle indexing (Electric/Mechanical)



Power tools



Sub-spindle



Tailstock



CE type



Environmentally friendly design ※
※Environmentally friendly product including energy efficient oil-less design in small footprint.



12 Number of turret stations



Gang type



Y-Axis control

X series

A best-selling machine with an extensive track record. TAKAMAZ's evolving standard.

1-spindle 1-turret



XT-8M

<The successor to XL-150M>

Offers a higher level of freedom with tooling because up to 12 power tools can be mounted. Turning performance is on a par with the XT-8, and powerful spindle options can also be selected. High levels of productivity and operability have been achieved through measures including featuring a cleaning function as standard to improve the operation rate.



8 Inch



XT-8

<The successor to XL-150>

Capable of more powerful heavy cutting with a large-bore, high-torque spindle as an option. An 8-station (standard) or 12-station (option) turret can be selected.



8 Inch (10 Inch)



XT-8MY

Supports compound machining of long shafts of up to 300 mm in length. Square slideways are adopted on all axes to achieve a highly rigid structure. While a tailstock specification can also be selected, it boasts the smallest floor space in its class, about 20% smaller than the competitors.



8 Inch



XT-6 <The successor to XL-100>

Shortens cycle times by increasing rapid traverse speeds (X axis: 18 m/min, Z axis 24 m/min). In addition to the Σ loader, the new-type FC loader that emphasizes operability and high speed can be selected. A touchscreen (option) for improved operability is also installed, while IoT technology that promotes "visualization" can also be supported.



6 Inch (8 Inch)



XT-6M <The successor to XL-100>

Capable of mounting six power tools. Side boring, keyway grooving and other compound processes can be performed on workpieces up to 240 mm long by efficiently integrating processes.



6 Inch

XC-100

This is a 6-inch machine that carries the DNA makeup of the TAKAMAZ X-10 model. For a machine with an automation loader, it is characterized by its space-saving design without sacrificing floor space.



6 Inch



XC-150

This is an 8-inch class general-purpose lathe. Its 1.85m floor space achieves the same level as previous 6-inch class machines. It is characterized by an angled slide construction and high rigidity.



8 Inch



XL-200

This 8-inch class machine supports long shaft workpieces up to ϕ 340 mm and 720 mm in length, realizing both heavy cutting and varied compound machining.



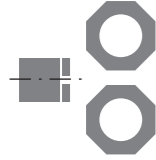
8 Inch (10 Inch)



Xseries

Shaft Cutting Machine

1-spindle 2-turret



X-S700

Greatly helps to shorten takt times through simultaneous turning with twin turrets, and supports long workpieces with the servo-driven tailstock. Also improves operability with an approach distance to the spindle of 370 mm.



XTT-500M

This is a compound precision lathe featuring power tools on upper/lower twin turrets as standard. A total of eight power tools can be mounted on the upper and lower turrets, expanding the range of machining. Workpieces with a turning diameter of up to $\phi 210$ mm and length of up to 400 mm can be handled.



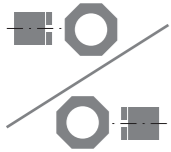
XTT-500

An 8-inch, twin turrets machine specializing in 450mm size shaft machining. Holds a high rigidity capable of heavy duty cutting and maintaining accuracy for an extended period of time. Various options are also available including a tailstock and a steady rest unit.



XYseries

Multi-turning



2 spindle and 2 turret are able to cast off processing methods with ease. Compound machining available with short cycle time.

XY-120 PLUS

This is a 6-inch class machine that can be loaded with sub-spindle, power tools, Y-axis controls, and even sub-turret, achieving compound product machining.



Main:6 Inch Sub:5 Inch

XYT-51 Gantry Loader With loader

The addition of a gantry loader enables flexible configuration of automated lines for flange-type workpieces.

※Not CE-compliant

XYT-51

Supports heavy cutting of large bar material, etc. The turret half-indexing mechanism allows up to 48 turning tools and up to 24 rotary tools to be mounted. In addition, the bolt mounting system (BMT45) is adopted.



Main-Sub:6 Inch



XDseries

2-spindle 1-slide



XD-8(t) PLUS

This is equipped with two high-precision collets made by TAKAMAZ. The tool slide can be selected from a Gang type and turret type, and it is possible to achieve high-efficiency production states.



5 Inch



XD-10i

This is a 6-inch chuck lathe that uses a structure with two spindles and one turret, and has a rich history of achieving zero loading time.



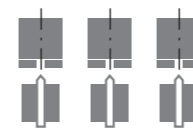
6 Inch



XVseries

Capable of 3-axis simultaneous cutting, with freedom in configuration of processes. Next-generation mode of production realized by inverted vertical lathes.

3-spindle 3-slide



XV-3

Three spindles are installed in one unit. Various machining is possible from turning to drilling with power tools. Processes can be compiled as required in a 1-1-1, 1-1-2, 1-2-2 or 1-2-3 pattern. In addition to saving the labor involved in setup changes, it also offers ease of maintenance and space savings, and can reduce total costs.

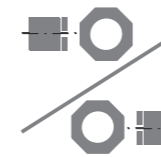


3-4 Inchx3



XWseries

2-spindle 2-slide



XW-30 PLUS

This is a 2-spindle lathe that corresponds to a 4-inch shaft, the same machine space as our well-regarded XW-30. Compared to the previous version of this machine, the high-speed loader has been improved, shortening the cycle time, and making possible the mounting of an optional hydraulic cylinder.



3-4 Inchx2



XW-60M

This is a 6-inch, 2-spindle machine with power tools. A single-tool drive system is used for power tools, which improves the transmission efficiency and enhances the machining capacity. Up to 20 power tools can be mounted, broadening the range of machining possibilities.



6 Inchx2



XW-130M

This is an 8-inch spindle parallel-type 2-spindle lathe where a maximum of 20 rotary tools can be mounted. A "vibration damping structure" damping vibration and a "headstock cooling mechanism" suppressing part dimensional changes are integrated that is compatible with process integration by compound machining, and pursuing stable finished product machining and mass production.



8 Inchx2



XWT-10

In addition to featuring two 10-station turrets and an expanded tool capacity, the Z axis is lengthened and the largest O.D. turning area in the XW series is secured. The machine can also handle workpieces that require simultaneous machining on inner diameters at depth. High-rigidity linear guides are adopted for each of the slides so that smooth linear motion is obtained even under high load conditions, giving stable machining accuracy.



10 Inchx2

XW-60

This is a 6-inch spindle, parallel-type 2-spindle lathe. As a mid size machine, it is suited for a wide range of production forms. The newly equipped 3-axis high-speed loader achieves a transfer system optimal for the machine, thereby contributing to cycle time reduction.



8 Inchx2

XW-130

This is an 8-inch spindle parallel-type 2-spindle lathe. The shaft is equipped with a standard 11/7.5kW motor in a $\phi 100$ bearing, achieving power cutting capacity.



8 Inchx2

XW-200

This is a 10-inch two spindle lathe. Its cutting capacity has been improved by about three times compared to the conventional machine, and it demonstrates strong cutting ability with high torque even in low-speed machining such as with large diameter flange-type workpieces.



8 Inchx2

GSL series

Simple machine that focuses on cost performance as well as ease of use.

1-spindle 1-turret



GSL-10H

This is a 6-inch machine pursuing the ultimate in cost performance. Its compact design takes up little floor space, with a machine width of 1,610mm and depth of 1,390mm. It combines a "practicality" and "durability" that can be used with confidence, even overseas. (Only the hollow chuck cylinder specifications are available.)



GSL-15 PLUS

This is an 8-inch lathe of the GSL series that has been well received for its excellent cost performance. It is more extensively streamlined than the existing machines, achieves further compactness, and offers improved working convenience and maintainability.



Skiving Machine

1-spindle 1-turret



SKV-8

This machine specializes in skiving, which achieves a high quality surface finish. The benefits of both cycle time reduction and machine integration can be attained by eliminating the grinding process with this innovative machine. Machine rigidity is heightened to enable skiving, and parts up to $\phi 180$ mm in size and 370 mm in length can be machined.



A special machine that expands manufacturing possibilities.

GANG TYPE series

XG-4



Equipped with a 4-inch built-in spindle motor as standard, this model achieves better machining accuracy and shorter spindle acceleration/deceleration times than the previous model. The narrow-width design shortens the loader transfer distance and reduces the line width, thereby reducing the necessary installation space and cycle times.



TOP-TURN II

1-spindle 1-slide



This uses a Gang type table structure and has the flexibility to mount a grinding unit.



USL-480

1-spindle 1-slide



This is a super-slim lathe with a machine width of 480mm. It can be effectively used with 1/3 of the space of conventional machines.



J-WAVE PLUS

1-spindle 1-slide



A gang type lathe which is a remodeled version of J-WAVE. Highly effective when machining with short takt times.



TAKAMAZ sells MECTRON INC. and Fair Friend Group (FFG) products, as well as products of 37 brands from around the world. Please feel free to contact your nearest TAKAMAZ office for more information.

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TAKAMAZ EMAG deals with all EMAG products from Germany. Please feel free to contact us if you have any questions.

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User Report

NITTO RASHI KOGYO Co., Ltd.

This company has continued to make screws on the bank of the Sumida River in Tokyo since pre-war times, and has manufactured products that keep pace with changing times. It supports all fields of manufacturing from automobiles to household electrical goods.

While running a hardware store, in 1934 they established a factory at the current site to manufacture wood screws and nails for selling at their store. Following a consolidation during the war, they renamed the company to the current name in 1946 and ever since, the company has continued to change the types of product it handles and refine its technology to meet the ever-changing needs of the times, as it continues to support various manufacturing fields by making screws and bolts.

Please tell us about your company's products.

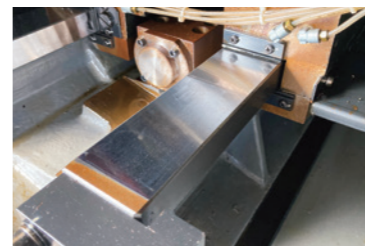
We manufacture screws and bolts that are used for products in all fields, including everything from automobile components to household furniture and display furniture. We specialize in high-mix, low-volume production as a maker of cold-forged bolts, and have recently come to supply products with a diverse range of forms and low material costs by adding NC machining to cold forging.

How did your dealings with TAKAMAZ start?

After receiving a request from a customer to apply NC machining to cold forged products, we first introduced the X-100 in 2007. Getting accustomed to machining on an NC lathe was challenging but also enjoyable. There was a lot we did not know at first, and we are very grateful to the TAKAMAZ sales and service staff for their help. The service staff in particular helped us by giving clear and step-by-step explanations, which enabled us to deal with the issues quickly.

What is your impression using TAKAMAZ products?

While using TAKAMAZ products, we have deepened trust in your products and your company as a manufacturer, and we have also gained trust from our customers in our production using NC lathes, which has led to an increase in orders. As a result, we have so far introduced thirteen NC lathes matched to different production items. As we use these lathes, we feel that your products are manufactured with a good understanding of our needs in part manufacturing, and their good chip disposal is an example of this. Thanks to the design of the machining chamber and the ingenuity of the chip expulsion method, we have only had a few problems a year involving chips getting caught on workpieces. However, we had one concern in introducing NC lathes into our company. Since NC lathes are designed to handle a diverse range of products through programming, we expected that if simple operations, such as that for part machining, were to be repeated hundreds of thousands of times, we would encounter problems like step wear of the slideways. For this reason, we have been removing the covers on the XC-100 and monitoring the slideway. But as you can see in the photo, the XC-100 has been able to maintain perfect slideways after 4 million part machining cycles alone, which has proven the basic machine design and the high level of scraping and other technologies. This comes under harsh usage



(At left) Factory manager Takemi Yamamura
(At right) Hiroaki Harimoto of our Atsugi Office

conditions, so I think it is a wonderful result. We believe that the technical value of aspects like this is greater than the price of the machine. It is not easy to properly make truly elemental parts of machines that are not shown in catalogs or at exhibitions. Thank you very much for providing good machines.

How do you expect to use TAKAMAZ products in the future?

TAKAMAZ's NC lathes are by nature suited to mass production, but when it comes to machining screws and bolts they still machine much more slowly and are costlier compared to cam-based machines designed for secondary machining, so we would like to keep making efforts for shortening cycle times and extending unmanned operation time. Our company's main business is cutting forged products, so the material being cut is viscous and consequently issues with built-up edges occur. We are aiming at restricting the growth of a built-up edge by shortening the span from formation until breaking away, thereby reducing wear damage to tools and supplying high-accuracy and stable products.



Some of the products with special shapes and machining achieved with cold forging and NC cutting

[A Word from Sales]

We are very grateful to NITTO RASHI KOGYO Co., Ltd. for purchasing TAKAMAZ equipment almost every year. We will continue to make proposals that can assist your company's production efforts and hope we can count on your continued support. Hiroaki Harimoto, Atsugi Office



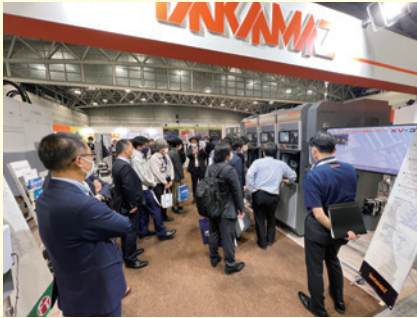
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Exhibited at MECT2021



We exhibited at Mechatronics Technology Japan 2021, which was held at Port Messe Nagoya (the Nagoya International Exhibition Hall) from October 20 (Wed) to 23 (Sat) 2021. The total attendance during the four days was around 69,000 and we had 560 visitors to our booth. With the transition to electric vehicles progressing rapidly, there is greater demand than previously for more efficient and more automated production. At this event we introduced the technologies of a total of five machines matched to these needs under the theme of “new modes of production”, including three from TAKAMAZ – the “XV-3”, “XT-8MY” and “XT-6M”, and products from our partners. This was the first time the XT-8MY had been exhibited and we ran demonstration machining on it with the focus on compound machining with milling and Y-axis machining. Attracting the attention of a lot of visitors, the XT-8MY showed its ability to machine like a machining center while still being a lathe. I would like to take this opportunity to thank everyone who visited the TAKAMAZ booth. For those who were not able to attend this time, we have upgraded our online offerings by making use of our website, social networking services and remote conferencing so that you can get to know about TAKAMAZ products.

Received the Invention Encouragement Prize at the 2021 Chubu District Local Commendation for Invention

At the 2021 Chubu District Local Commendation for Invention, Section Manager Hiromitsu Wada of the Development Section of the Technical Development Department received the Invention Encouragement Prize for “a mechanism for opening/closing a door linked to up/down movement of an operation panel”. This is a mechanism that allows two up/down movements to be performed at the same time by providing an operation panel that slides up and down on the upper part of the machine, and a means to slide a door up and down simultaneously with the movement of the operation panel. In addition, since this patented technology slides both the operation panel and door vertically, the door stays within the width of the machine, and working convenience is not hindered because the operation panel rises to the upper part of the machine. This technology is implemented on the XG-4 and J-WAVE PLUS (loader specifications). We will continue our efforts to deliver even more technology to our customers with our unrelenting spirit of inquiry.



Employee Introduction

Let's introduce some employees working at TAKAMAZ.



TAKAMATSU MACHINERY (THAILAND) CO., LTD.
Taku Niekawa
(Joined the company in 2020)

I was born in Miyazaki Prefecture but subsequently grew up in Thailand. I act as an interpreter at meetings inside and outside the company, and also translate email messages, documents and so on. I am brimming with curiosity and like learning new knowledge, so I very much enjoy people teaching me all kinds of things everyday. When interpreting or translating, I believe that you need a thorough understanding of things to be able to convey information, so I will

keep learning technical terms, equipment names and more to deepen my knowledge. I will also work to ensure smoother in-house communication between Japanese and Thai members of staff to help improve the service to our customers.



Operation Section,
Operation Department
Naomi Benya
(Joined the company in 2021)

As a receptionist, I mainly deal with visiting customers, handle office work and manage consumables. I felt very happy when visiting customers spoke to me with a friendly air although it hasn't even been a year since I joined the company. I am also glad and find it invigorating when my senior colleagues carefully explain tasks to me. My hobby is eating delicious food, so together with friends I look for highly-rated and new restaurants and go out to eat on

days off. I particularly like sushi, and my latest recommendation is a sushi restaurant called Kuratake in the Shiragiku-machi area of Kanazawa. I will keep up my efforts to be of service to the customers who visit the company.



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