

SYL

Sharing Your Life

Muratec Customer Magazine 2 | 2023 | EN



>>>MESSAGE

First of all, thank you for your continued patronage of our products.

Human mobility and economic activities have finally been returning to pre-COVID levels. Meanwhile, we are facing increasing constraints on business, including environmental and natural resource problems as well as the impact of various types of disruption on supply chain.

Nature of competition is also gradually changing from quantitative growth by higher productivity in the global market to qualitative differentiation by responding to each market's specific requirements. This kind of change also seems to be occurring in the preferences and behavior of end-consumers.

Looking back, the Muratec Air Splicer for the Automatic Winder, which triggered our growth, did not only pursue higher productivity and cost reduction. Its greater significance rather laid in helping our customers make high-quality yarn that offers new values to their market.

In our future machines as well, higher processing speed doesn't necessary mean only higher productivity, but also higher values of the yarn to the market. That means higher degree of sustainability with lower resource consumption and reduced environmental footprints. That also means flexibility and agility to high-mix/low-volume production to meet various needs, as exemplified by VORTEX.

In April of this year, we came up with the corporate slogan "Innovation. Mark the turning point." This slogan signifies our determination to mark a turning point for innovation by thinking of the various innovations we have made in the past and

continuously creating new technologies. It also implies our hope that our customers as well will mark their own turning point for innovation.

We believe that our non-stop winder FLcone, which we put on exhibit at ITMA Milan in last June, is one of the products that will mark a turning point for innovation. This winder is based on a new concept that ensures a high-speed, energy-saving, and safe winding process and, above all, the production of high-quality packages with minimal contamination by continuously winding the package even during yarn splicing. Although we may need to make further improvements before launching this product in the market, we are making our utmost efforts to bring it to completion as soon as possible.

Population growth and living-standard improvements, which are also the root causes of global environmental problems, are undoubtedly the products of technological advancement. Take food, for example, which is the most important product of all. If the new technology to fix nitrogen had not been developed in the early 20th century, we would not have been able to produce enough food to support such a large population. The core of sustainability is to solve the problems caused by the negative by-products accumulated as a result of various technological innovations. It is, however, also technology that enables us to solve these problems without hindering each person's pursuit of happiness. While what we can do may be limited in scope, we want to create technologies that will mark a major turning point when looked back at in the future. That is exactly the aspiration of ours embodied in the slogan "Innovation. Mark the turning point."



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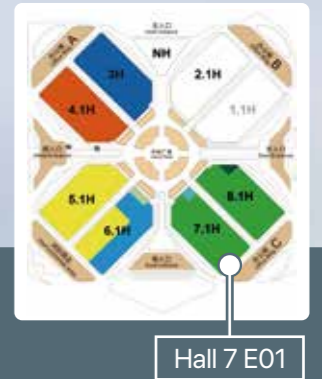
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[Cover Photo] Special thanks to Tomioka Silk Promotion Organization

Right Choice, Bright Future ITMA ASIA + CITME 2022

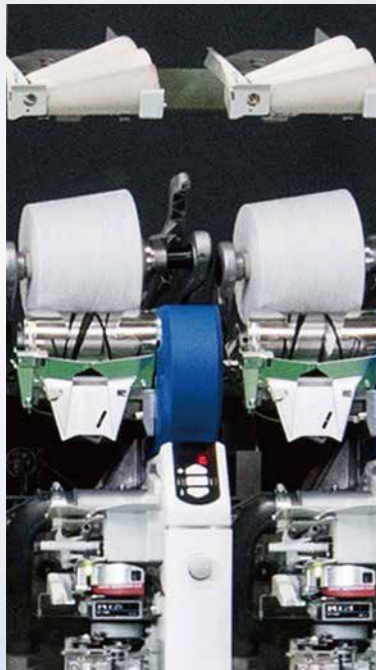
19-23 November 2023
National Exhibition and Convention Center, Shanghai, China

Muratec will be introducing the newest models under a theme of "Right Choice, Bright Future". This will be our first China exhibition of the PROCESS CONER Alcone, an automatic winder with improved operability, maintainability, and ease of cleaning.



1 Automatic Winder

PROCESS CONER Alcone 12 spindles



Alcone is a new model created from the over 70 years of technology and knowhow cultivated since Muratec entered the spinning machinery industry. This model further improves productivity and energy saving over the current model QPRO Series. In addition, the design not only focuses on functions which are easy to use for customers, but also takes into consideration about the sustainability for the entire supply chain from the standpoint of a company which is a part of the manufacturing industry. The machine to be exhibited will feature both drum and arm traverse units. Demonstrations will introduce a wide variety of packages, including soft winding, round edge, and more.



2 VORTEX Spinning Machine

VORTEX 870 EX 16 spindles

The VORTEX 870 EX has received high praise from around the world since its release. Demonstrations will mainly focus on spinning of recycled polyester, for which there has been a growing demand in recent years. We will also exhibit samples of VORTEX Yarns that can be produced from various materials as well as its wide range of applications, and allow visitors to actually touch and feel the samples to experience the functionality and quality of VORTEX Yarn firsthand.



3 IoT Solution

Muratec Smart Support (MSS)

Muratec Smart Support is an IoT solution from Muratec which is one of the first in the industry to enable operation and management using IT, including remote monitoring and centralized management of machine operation status. At this exhibition, visitors will be able to experience the MSS "3 E" - "Easy-Access, Easy-Solutions, and Efficient-Support" features firsthand while operating the screen, and we will also introduce opinions and reviews from actual MSS users. From the next page, an interview with customers who use MSS is posted. Please take a look.

[▶ More Articles on the Next Page](#)

4 Genuine Parts

We recommend the use of genuine parts in order to ensure the longest life and best possible performance for Muratec products. We will also be introducing peripheral devices which fully leverage Muratec's unique ideas and which are practical applications of our detailed customer support, including semi-auto bobbin strippers, sliver analyzers, and more.



How About Muratec IoT Solution ?

MSS Hub Debut!

More User-friendly, More Efficient Support



Muratec Smart Support (MSS) is an IoT integrated management system. In this ITMA ASIA 2022, the latest model "MSS Hub" debuts!

MSS Hub enables integrated management of production, quality, and maintenance of automatic winders and VORTEX spinning machines. It also simplifies your plant management on lot basis, instead of machine basis as earlier.

If you want to analyze machine operating data and information from anywhere, even outside your factory, the MSS Hub should be your best choice. In addition, when trouble occurs, you can get accurate and speedy technical support from Muratec and solve problems easily.

MSS Hub has improved its Triple-E feature (Easy-Access, Easy-Solutions, and Efficient-Support) and becomes more useful for our customers!

How Has MSS Changed Your Factory?

MSS User's Interview

[More User's Interviews Online](#)



Gimatex

MSS offers a comprehensive solution to evaluate the performance and efficiency

Gimatex industries is a vertically integrated company having operations in ginning, spinning, weaving, processing and apparels. For auto winding, almost 75% capacity is dedicated to Muratec auto winders.

MSS as a tool offers us an option to go towards Industry 4.0 which offers connectivity between the machines and our human workforce. It gives us an option to become more

sustainable by improving on our cost efficiencies and our production efficiencies. Also, it provides us a global benchmark for our production efficiencies at the international level.

As a Top Management, MSS offers a comprehensive solution to evaluate the performance and efficiency of each of our machines.



Sagar Manufacturers Pvt Ltd

MSS is helping us in achieving best possible utilization of Auto winders

MSS is helping us in achieving best possible utilization of Auto winders. In terms of quality data, we are checking quality alarms trend and taking necessary actions in back process. This helps us in reducing 2nd quality and optimize back process for achieving desired quality.

Earlier we used to engage one person per unit to note down the data of Link coner machines taking around 1 hr for writing

4-5 data by going machine to machine. Now for our 100+ winders without MSS, it would have been very tedious task to get these data timely & analyzing these data will take much more time.

We have reduced our MIS (Mis Splicing Ratio) data from 6-8% to 4-5% by continuous monitoring of MIS Data and regularly optimizing the settings and attending the drums/machines with abnormal data.



Sri Kannapiran Mills Limited

MSS is a Wonder gadget – solution at an affordable cost.

MSS started giving our required key data and additional details as well on real time basis. The real time corrective actions resulted in the improvement of AEF by about 10%. and we could increase the Ring Spinning production by about 3000 Kg per day.

Machine performance continuously improved. MIS% got reduced from 12 % to 5-7% level. Back process could be

corrected due to the availability of continuous data and diagnostic reports from MSS portal.

The data of all our Units could be visualized and compared in the MSS portal screen and thereby the overall group performance improved.

Our position in the World ranking moved from bottom 1/3 to top 1/3 (iMW Index). MSS is a Wonder Gadget at an affordable cost.



Suzhou Xingjingze Fiber Technology Co., Ltd.

MSS is an indispensable production management tool

We chose MSS in order to reduce management costs while keeping data and process management capabilities.

With MSS, we can achieve real-time monitoring and collection of all data without increasing labor and management costs.

MSS enables us to produce 40,000 tonnes per year in just 4

years have since we started producing VORTEX yarn.

We continue to focus on R&D of VORTEX products and increase production capacity based on the general direction of the national industrial policy.

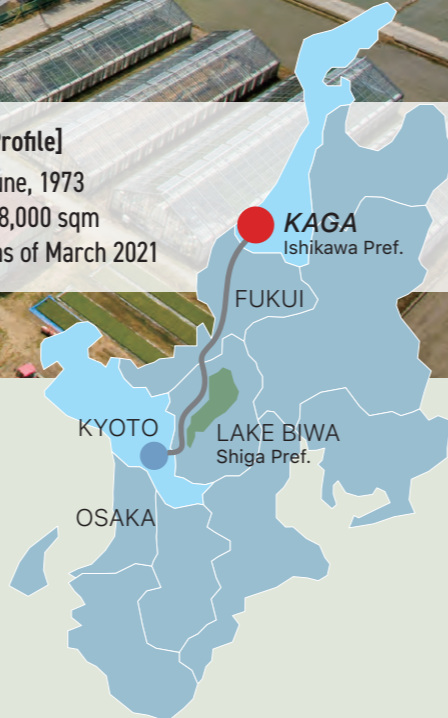


LET'S GO TO KAGA

Kaga factory is fully for textile machinery division, since its establishment in 1973. Now Kaga factory continues its modernization and growing as number one manufacturing plant for winding and VORTEX spinning machine in the world.



[Kaga Factory Profile]
Established in June, 1973
Total site area: 88,000 sqm
Employees: 419 as of March 2021



Kaga factory is 200 km away from our Kyoto head office. To get there, you can enjoy a two-hour train tour from Kyoto station to Kaga-Onsen station. Onsen means "hot spring", and Kaga or other neighboring cities are famous for "hot spring". In the train, you can find more passengers who are going to enjoy the site, than passengers for business trip.

From Kyoto to reach Kaga, we pass Lake Biwa, the largest lake in Japan, and Fukui prefecture. Along the railway, there are cities famous for their specialties. The founder for Murata Machinery Ltd., Mr. Sadasuke Murata, his origin is also in Fukui.

Now we introduce Kaga factory. Please enjoy it.



The express train is called "Thunderbird". This train departs from Osaka, stops at several stations including Kyoto, available almost every hour.



Almost 90% of the glasses in Japan are made in Sabae and Fukui area, also exported to many countries. If you find the glasses made in Japan, it may be from here.



Soba, special noodle in Japan. There are many areas famous for soba in Japan, and Fukui city is one of them.



From the train, you can enjoy the view of Lake Biwa, the largest lake in Japan. The picture shows the shrine in the lake.

History & Achievements

Kaga factory celebrates its 50th anniversary in 2023

In 1973, Kaga Factory started production of jacquard, hank winder and assembly winder. After #11 winder in 1974, production of Mach Coner #7-II was started in 1977, and it increased rapidly after ITMA 1979. In 1983, automated model such as Bobbin Tray and Link Coner's production started.

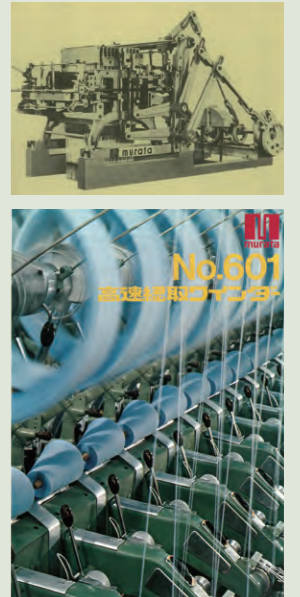
New winder model #21C had debuted in 2002, and it was changed to QPRO in 2014. Production of Air Jet spinning machine was started in 2003, which was transferred from Inuyama factory. VORTEX series after 861 are almost produced in Kaga factory only.

Next year, 2024, will be another turning point for Kaga factory to start the new line for Alcone, which was introduced in ITMA 2023 in Milan.



Memorial winding unit 1,000,000th drums

It is exhibited at the Kyoto head office on the first floor of R&D Building. We have reached its commemorative number in the 20th century.



Machines from our other divisions support Kaga Factory. From Machine Tool Division, punch presses and laser machines are used for sheet metal processing. Bending machines are also in use. Kaga Factory is one of the showrooms for Machine Tool Division to demonstrate machines to its customers.

Automated warehouse system from our Logistics and Automation Division will be installed in the near future to handle the materials.

Management system from our communication equipment system can be seen inside.

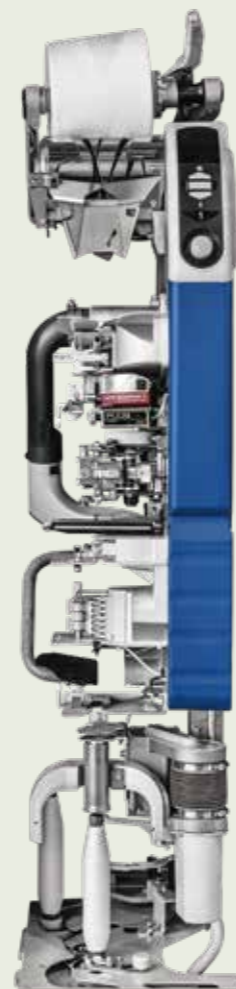
In a sense, Kaga Factory is the model factory filled with our corporate wisdom.

Other divisions support Kaga Factory



How Muratec Winding Machines are manufactured?

Let's see how our winding machines are manufactured in Kaga factory by explaining QPRO EX production line, which will be discontinued next year. Basically, the parts are delivered on time (Kanban system) with automated systems.



How to maintain Muratec quality

In Kaga factory, there are about 400 employees. There are many kinds of activities to train our employees and improve the efficiency in each line and group, as well as various discussions to maximize efficiency.

Recently, VORTEX has been required to increase production. Not only the factory staff, but also design and technical service teams worked together to maximize production capacity.

These activities are shared with other factories. Activities to improve the production process, even by a few seconds or minutes, are a great asset to Muratec.



concentration...

Checking the drums. We check each and every drums in every piece before installing on the winding units. PAC system that uses special drums is usually selected by customers, so we completely check to make the system more reliable.



gently and carefully

The same type of detailed inspection is done for each splicing unit. If the customer plans to use special yarn, we will ask the customer to send the yarn samples for splicer adjustment before shipment. Such inspection and adjustment will prevent any delay at the time of installation and commissioning of the machines.



AVGs runs too

AGVs run inside the Kaga factory. They're used to deliver parts to each assembly section. We use our automation technology for our manufacturing process.



to the customer

Finally, the frames are packed and ready for shipment. The drive end box, blower box, auto doffer and continuous bobbin feeder are completed on separate lines and collected for shipment at the same time.

Lunch break!

Let's have lunch at Kaga Factory!
The cafeteria was renovated in 2015. There are always more than 10 different menus, so you can choose what you prefer to eat. Each plate contains its own IC tag, and food prices can be counted in a second. Now you can eat healthy lunch menu set less than US\$5.
Please visit Kaga Factory!



“ Create people first before creating products ”

Kaga Factory has consistently provided education and training in our original manufacturing concepts passed down from generation to generation.

We are proud of "Kaga Quality" and the trust our customers have in us. All employees are always engaged in producing world-class machines.

With a culture of honesty rooted in the Kaga factory, every employee guarantees quality. We will continue to improve productivity with robots and IoT to achieve high quality and high speed manufacturing.



Kazuho Yamamoto
Kaga Factory Manager



富田シルク

Tomioka Silk

In this volume, we will be looking at the Tomioka silk industry and its products, which gave rise to technological revolutions in raw-silk mass production and drove technological exchanges between Japan and the rest of the world. In June 2014, the "Tomioka Silk Mill and Related Sites" were together registered as a UNESCO World Heritage Site, and the Tomioka Silk brand was established in support of this UNESCO designation.

Tomioka City, Gunma Prefecture is blessed with a temperate climate, as well as high-quality soil with excellent drainage characteristics that facilitates mulberry growth, both of which helped its silkworm industry prosper for many years. In 1872, the Tomioka Silk Mill was built here as the nation's first government-operated and mechanized model silk mill. The facility was equipped with 300 silk reeling machines lined up over a 140-meter (460-foot) span, making it the large-scale setup of its kind worldwide at the time, and people from all over Japan came in to work. Many women working here disseminated the mill's high-quality mechanized silk-reeling technologies, originally imported from France, all throughout Japan, helping to strengthen the nation's textile industry. By 1909, Japan had become the world's top exporter of raw silk. The Tomioka Silk Mill made this possible, contributing in major ways to the modernization of Japan and continuing to operate for 115 years until it was finally shut down in 1987.

Following the mill's closure, the building was preserved and managed by Katakura Industries Co., Ltd. With the aim of keeping this historical silk mill, which played a significant role in Japan's modern history, around for future generations to enjoy, Katakura Industries took great care to keep the facilities in good condition. Their devoted efforts are praiseworthy.

The main market for silk in Japan was kimono products. However, Japanese daily fashion trends faced a transition from Japanese- to Western-style

clothing, and imports of cheap silkworm cocoons and raw silk from overseas increased, causing great damage to the domestic silk industry and shrinking of the kimono market. As a result, silk production volumes in Tomioka declined constantly. Many felt that if silkworm cocoon production were to cease in Tomioka, the Tomioka Silk Mill could not truly be called a World Heritage Site. The Tomioka City government saw this as a problem, and took action by establishing the Tomioka Silk brand in order to revitalize the local silk-making industry.

Products that carry the "Tomioka Silk" name are made using only the finest materials, starting with the cocoons themselves—including some silkworm varieties unique to Gunma Prefecture. Under this brand, producers develop inimitable products that take advantage of said silkworm characteristics, with the Gunma Kogane and Gunma Hosoi breeds being particularly noteworthy. Even while still in their cocoons, Gunma Kogane have a beautifully lustrous coloring that is gold in color (Kogane in Japanese). There is almost no inconsistency in this coloring, and when used to produce silk for fabric, the result is a luxurious-feeling final product. Gunma Hosoi, on the other hand, are able to produce silk thread that boasts a rare 2.2-denier thickness, which is roughly 30 percent thinner than standard silk thread (hosoi in the name Gunma Hosoi means "thin" or "slender"). These threads feature a high degree of whiteness, are extremely responsive to dyeing, and offer luster and refined sheen suitable to luxurious products. Gunma Hosoi silkworms are raised by only a few select agricultural households in the Tomioka area, making them extremely rare and special.

Thread production for these varieties of silkworm is carried out by Ususeishi Co., Ltd., who owns one of Japan's few silk thread making plants. Ususeishi utilizes cocoons sent in from all over the country in production operations.

The Tomioka Silk Promotion Association, which is classified as a general incorporated association, unifies people and organizations from all stages of the silk production

process, from upstream producers such as silkworm farmers and silk thread makers to downstream producers such as processors and sellers. The Association works with these various parties to strengthen collaboration among high-quality cocoon cultivators, distributors, and retailers, and pursue the development and sale of products made from pure Japanese silk. Through close coordination with other production sites around the country, the Association is deploying their efforts on a nationwide scale.

Japanese silk is expressed using the word *kiito*, meaning raw silk. It is written using two Japanese characters: the character for "living" and the character for "thread." Japanese silk's outstanding breathability and heat-retention characteristics make it useful throughout all seasons of the year, as if it is a living being that adjusts itself to the changing weather conditions. Kimono made from this *kiito* are traditionally passed down through generations, from parent to child. One could say that continually using the same kimono from generation after generation in this way, all throughout the four seasons, is a truly sustainable practice.



Tomioka Silk Mill - UNESCO World Heritage

Special thanks to Tomioka Silk Promotion Organization

Division: Textile Machinery

Participation in the Intertextile Shanghai Apparel Fabrics Active Promotion of VORTEX Yarn in the Apparel Industry

Following our participation in March's Spring Edition, we joined August's Autumn Edition of this exhibition as well. At this latest event, countless visitors from not just China, but all parts of the world, visited, and through communication with a wide variety of visitors we learned that demand for mixed polyester-cotton blend fabrics is on the rise. Moving forward, we plan to support developments of viscose fabrics, which have already achieved popularity, as well as a wide range of other materials.



Division: Textile Machinery

Celebrating the Anniversary of Our Global Subsidiaries



The MURATA MACHINERY MEXICO S.DE R.L.DE C.V. office was established in June 2013. Now hot market gives us new challenges to support our customers. Our mission is to grow professionally day by day. Thank you for all the support from Murata offices worldwide.

Mr. Ivan Chavez



All Muratec members will continue to provide attentive support close to our customers.



Murata do Brasil was established in december 1973 in a small sales office base in Sao Paulo city. In 1978 moved to Itaquaquecetuba and began production of RT winders and Two-for-One Twister. In the 80's Brazilian economic suffered a downturn and the production division was closed in 1998. We renewed the building in 2010 and turned it to a show room of machine tools division. This year we celebrate 50 years in new office located in Jacarei. We will keep our efforts to maintain excelent sales, parts and service support to our customers.

Mr. Gunji



PT.MURATA MACHINERY INDONESIA was established in February 2011 and celebrated its 10th anniversary two years ago. This year, 2023, we will celebrate the 50th anniversary of our Textile machinery service activities in Indonesia. We would like to express our sincere gratitude to our customers, agents, and seniors for their efforts over the years.

Mr. Fukuda



Innovation. Mark the turning point

Muratec marks the turning point by introducing new innovations that move industries forward. We learn from the past and design for the future. Our mission is to transform what happens on the floor, improve the quality of work performed, and build industry standards for the future. We strive to provide a new vision and unlock untapped potential in the ever-changing landscape of society and the times we live in.

In April 2023, as part of our efforts to review and deepen Muratec's corporate philosophy, we established the corporate slogan "Innovation. Mark the turning point." This slogan intuitively expresses the essence of "expand the boundaries of technological advancement" and "provide meaningful products that enrich the lives of our customers" as stated in our corporate philosophy. It is also a key phrase that motivates us to look back at the innovative technologies we have created and to visualize more concrete images of our future innovations.

The radial lines in highly saturated colors are a design element that visually expresses the slogan "Innovation. Mark the turning point." The converging points of the lines represent both the future that lies beyond the turning points marked by innovation and the scope and potential of innovation inherited from the past. Together with the words of the slogan, the design represents Muratec's timeless commitment to providing products that mark the turning point in the times and the industry in which we operate.

Innovation. Mark the turning point



Continually creating innovative technologies for the fulfillment of a prosperous society



Textile Machinery
-Automatic Winder
-VORTEX Spinning System



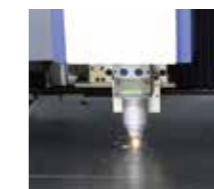
Logistics Systems / Factory Automation Systems
-Automated Storage & Retrieval Systems (AS/RS)
-Sorting System



Automated Material Handling Systems for Clean Rooms
-AMHS for Semiconductor Fab.
-MCS (Material Control Systems)



Machine Tools
-Twin Spindle CNC Chucker
-In-Line Opposed Twin Spindle CNC Turning Machine



Sheet Metal Machinery
-Laser Punch Press
-Press Brake
-Fiber Laser Cutting Machine



Communication Equipment
-MFP (Multifunctional Peripheral)
-Facsimile

Confetti

金平糖



Konpeito is a traditional Japanese candy made from granulated sugar that has been crystallized. Produced in various colors and featuring spiky protrusions across their surface, they are known for their pleasantly crunchy texture and delicate sweetness. In recent years, konpeito have incorporated varying aromas and in unique shapes suited to the changing seasons, bolstering their popularity as gift and souvenir items.

Originally brought to Japan in the 16th century by Portuguese missionaries, konpeito were just one of the cultural imports to Japan during that time of cultural influence by seafaring nations such as Spain and Portugal. The name is said to come from confeito ("sugar candy") in the original Portuguese. Initially, only people of high status in society had access to these candies, which were sold at extremely high prices.

By the 18th century, however, the confection had become popular among commoners as well. Experienced artisans passed down production techniques from generation after generation and even incorporated innovative ingredients and flavors unique to Japan. Regardless of its foreign origin, konpeito evolved into a singularly Japanese candy with an appearance and flavors different than what had come from Portugal.

Japan's colorful Konpeito look as adorably sweet as they taste, offer refined flavors, and express the characteristics of the changing seasons much like other types of Japanese confections do.

Each small morsel of candy comes packed with the far-reaching appeal of Japanese culture.

金平糖是由细砂糖为原材料结晶化制成的日本传统糖果之一。其特征是具有小小的彩色角状突起，口感酥脆，甜味细腻。近年来，市场上出现了根据季节改变口味和设计的不同品种，是送礼和特产的人气之选。金平糖是16世纪左右由葡萄牙传教士引入日本的葡式糖果之一，据说源自葡萄牙语的“Confeito”，意思是砂糖糖果。在当时，这是一种非常昂贵的糖果，只有社会地位高的人才能品尝到。到了18世纪，它开始受到大众的青睐，工匠们在继承传统制法的同时，也运用巧思，融入了日本特有的食材和风味等，使这种从海外传入的糖果成为一种外观和味道皆不同于原型的独特日本糖果。金平糖传承了外观鲜艳可爱、味道优雅、重视季节感的日本糖果特征。即使是小小一粒，也凝聚了日本文化的深厚魅力。