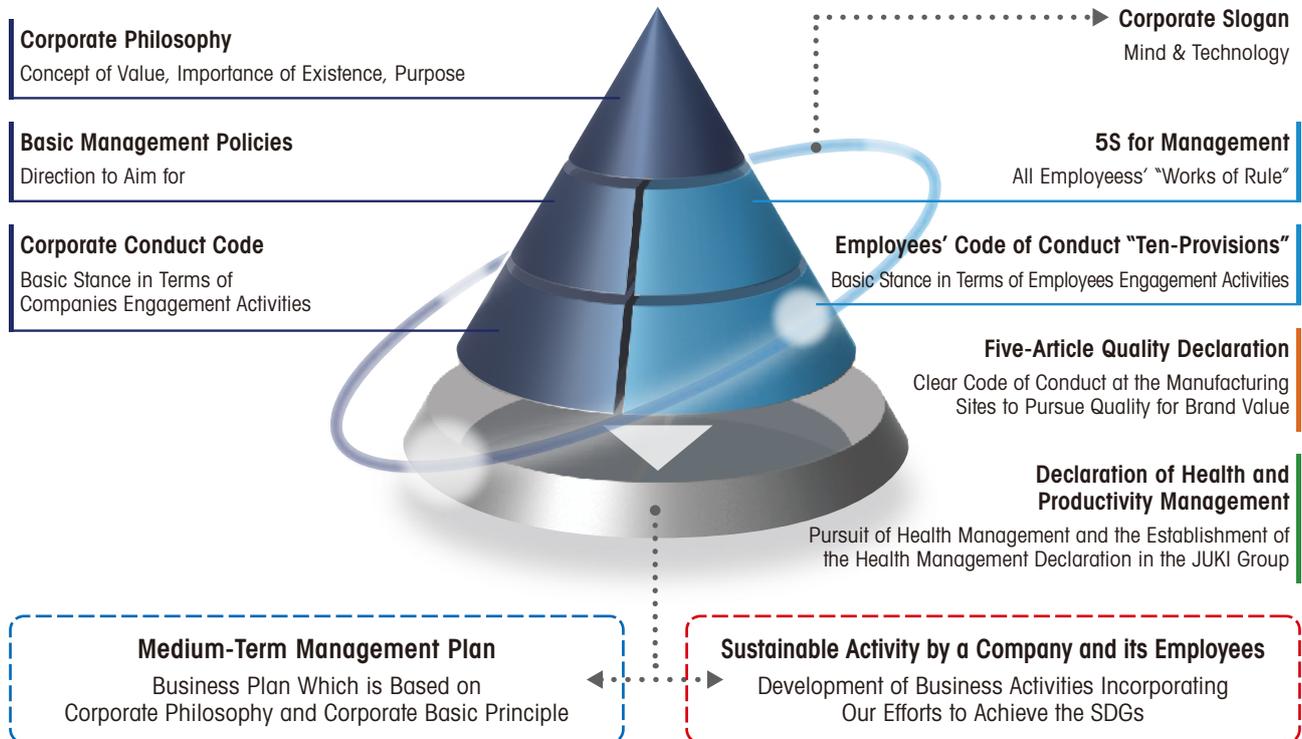




**JUKI Corporate Report 2020**



# System diagram of the JUKI Group corporate philosophy



## Corporate Philosophy

1. The men and women of JUKI work hand in hand to spread happiness and enrich society.
1. JUKI technologies are constantly evolving and creating new value.

## Basic Management Policies

1. Quality for Brand Value
1. Innovative and Active
1. Global Management Approach

## Corporate Slogan

Mind & Technology

## Corporate Conduct Code

1. JUKI creates and supplies products and services useful for society based on thorough considerations of safety, the protection of personal information, and the satisfaction and trust of its customers.
2. JUKI conducts its businesses fairly, transparently, and in keeping with the principle of free competition while maintaining a healthy relationship with national governments.
3. JUKI discloses its information fairly and consistently through open channels of communication with its shareholders and society as a whole.
4. JUKI works to ensure safety and ideal working conditions for every employee with full respect for his or her personality and individuality.
5. JUKI takes good care of the earth environment by using resources effectively, recycling, and saving energy.
6. JUKI maintains ideal community relations as a good corporate citizen and contributes to society through local activities.
7. JUKI takes a firm stand against antisocial individuals and organizations that adversely affect social order and sound business activities.
8. JUKI observes the international rules and local laws as a matter of course, esteems cultures and customs, and endeavors to contribute to the development of countries.

If actions or events in contravention to the JUKI Code of Conduct take place, top management at JUKI takes immediate and thorough steps to remedy both the causes and outcomes.



Your solution partner  
**Global &  
 Innovative**

JUKI has grown steadily as a supplier of the highest-quality products and services to industries around the world since its founding in 1938. To drive its development, JUKI has always believed that “everything it does, it does for the customer.”

JUKI will create value for the customer as a provider of solutions and innovations that raise the productivity of customer factory lines by leaps and bounds. JUKI will continue to expand its global presence and innovative powers as a provider of JUKI products, services, and ever-evolving technologies to 185 countries.

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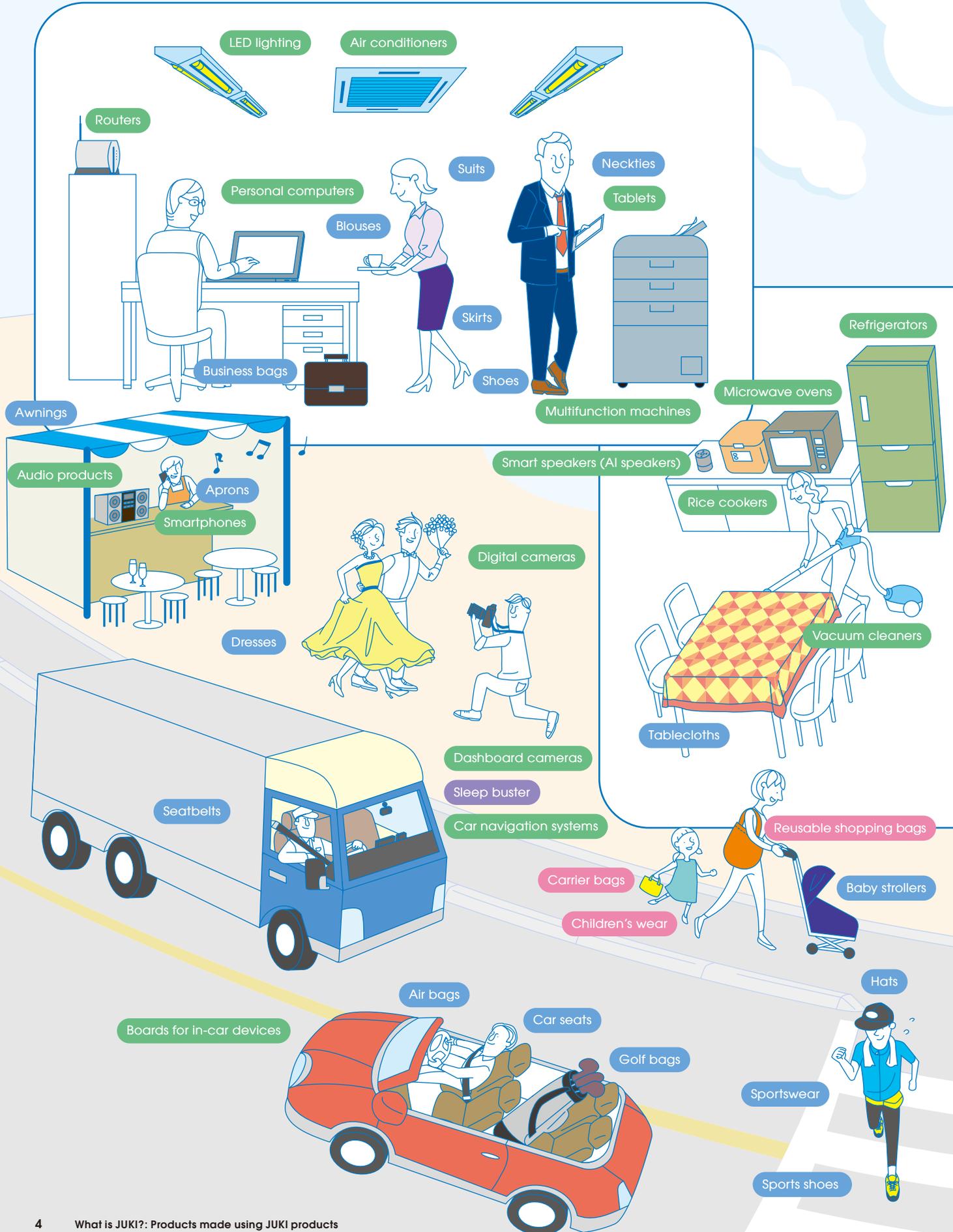
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# Products made using JUKI products

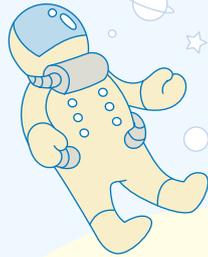
JUKI machines and systems make everyday products the public knows.



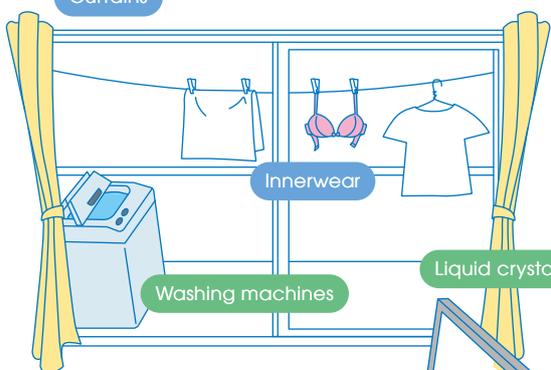
- Products made using Industrial Sewing Machines
- Products made using Household Sewing Machines
- Products made using Electronic Assembly Systems
- Products involved in the Group Business

What is JUKI?

Spacesuits



Curtains

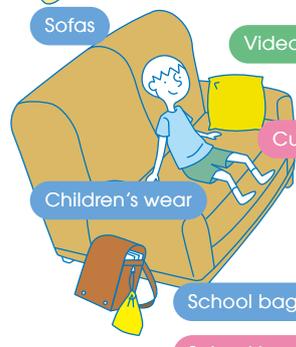


Innerwear

Washing machines

Liquid crystal display TVs

Sofas



Videogames

Cushions

Children's wear

Recorders

School bags

School lunch bags

Swimwear



Security cameras



Traffic lights

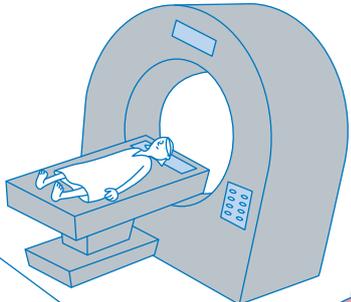
Artificial joints



Dress shirts

Handbags

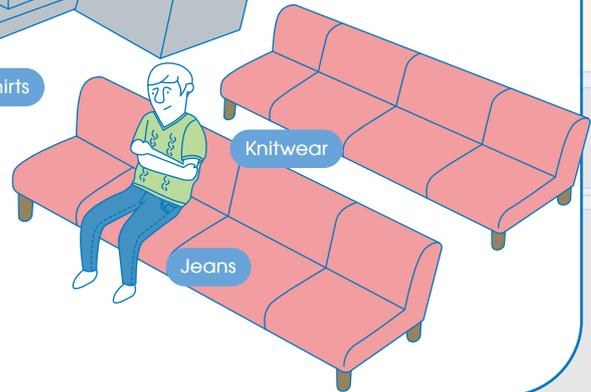
CT scans



Upholstered chairs

Knitwear

Jeans



# Flow for the creation of JUKI's corporate value (a business model)

JUKI is working to create corporate value for stakeholders such as customers, suppliers, shareholders, investors, society and employees by putting its Mid-term Management Plan, "JUKI Value up 2022," into practice. We are also working to realize our goal of becoming an innovative and vibrant (active) company and to reinforce our power to create JUKI corporate value through our growth cycle.

## Fiscal 2020-2022 Mid-term Management Plan

### Vision for 2020

A company that continues to provide innovative and high-quality products and services selected by customers  
-Let's deliver peace of mind and good impressions to customers all over the world-  
-Changing from a "Monodzukuri (manufacturing)" company to a "Kotodzukuri (value-creation)" company

### Code of Conduct

- ① Never halt a customer's production line anywhere in the world.
- ② Stick to the target achievement (Never Give Up).
- ③ Comply with the "5S's of management" and "10 Articles of the JUKI Group Employees' Standard of Conduct."
- ④ Practice SDGs management.

### Five Transformations For details▶p.12

- ① Developing growing markets and customers through a cross-border marketing strategy: **Borderless X**
- ② Expanding business domains that increase our earning capacity: **Business Model X**
- ③ Expanding technological innovation domains: **R&D Model X**
- ④ Establishing production systems and administration (back-office) operations centered on the 5S's of management\* (**Workstyle X**), and
- ⑤ Achieving sustainable management (**SDGs Management X**)

### Key initiatives in the Medium-Term Management Plan based on the Five Transformations

For details:▶p.13

\*5S's of management  
(Simple, Slim, Speedy, Seamless, Smart)

## JUKI's businesses

### Industrial Sewing Machinery Business ▶p.16



### Household Sewing Machinery Business ▶p.20



### Electronic Assembly Systems Business ▶p.22



### Group Business ▶p.27



### Customer Support Business ▶p.30

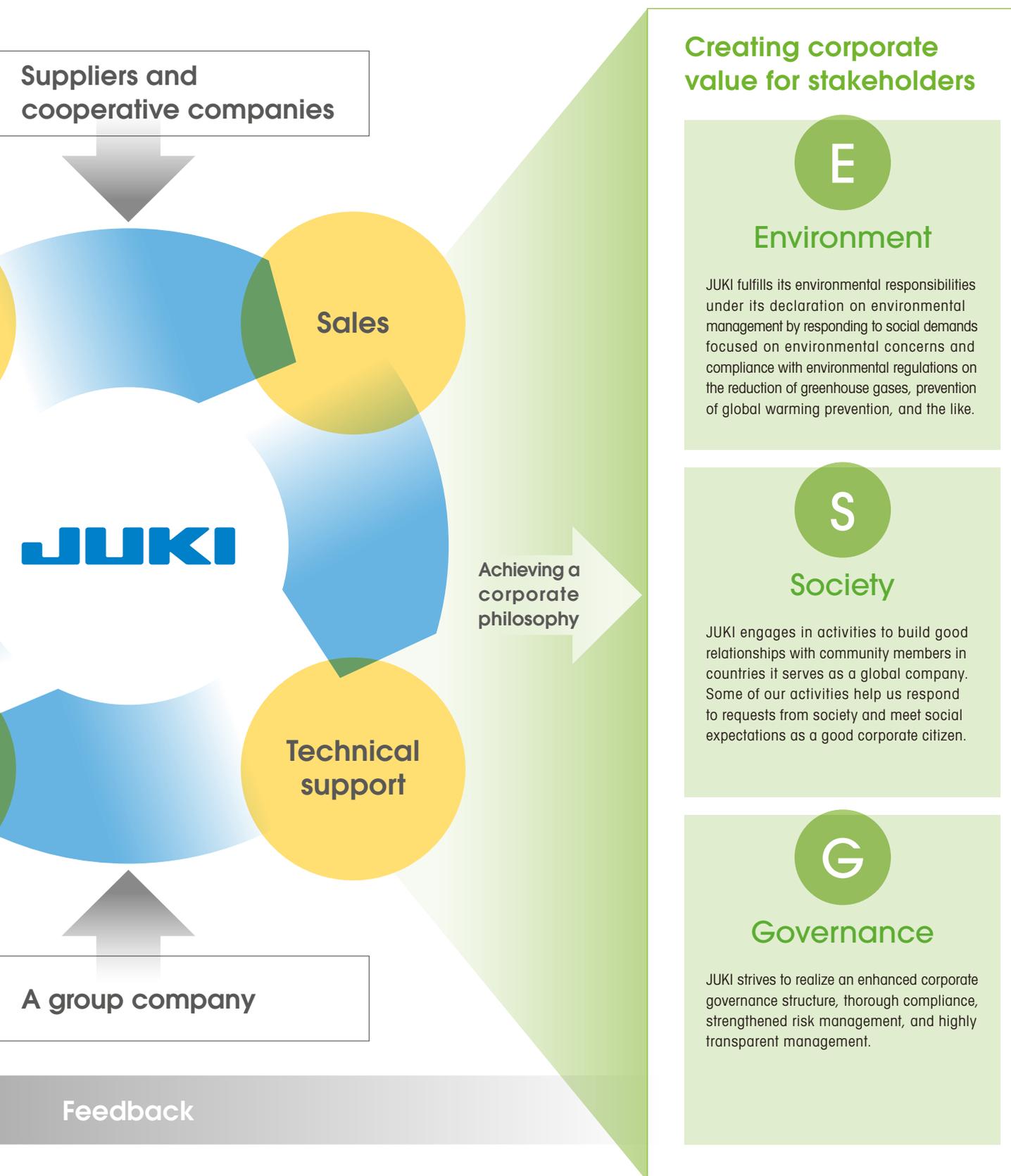


Production

▶p.36

Development

▶p.32





**Akira Kiyohara**  
JUKI CORPORATION  
President

## Interview with our president

# Working together to take on the challenge of creative and disruptive innovation and pave the way for sustainable growth of the JUKI Group

Amid the dizzying changes in the global economy and the rapid innovation of technologies, the JUKI Group is promoting a Medium-Term Management Plan 2020-2022 (Phase II) to build a foundation for future growth. Five young employees interviewed President Kiyohara about our current initiatives at JUKI, including our structural reforms and strategy for medium- to long-term sustainable growth.



### ● Interviewers

## Focusing on Business Structural Reforms to Achieve a Rapid Recovery

— **Manufacturing industries now face a challenging business environment under the influence of the global economy in fiscal 2019. What is your perception of the JUKI Group's consolidated results for fiscal 2019?**

The business environment in fiscal 2019 was defined by increased uncertainty in the global economy stemming mainly from the economic slowdown in China, the prolonged trade friction between the U.S. and China, and the Brexit issue, while technological innovations such as IoT, AI, and 5G progressed at a faster speed than we ever imagined. As the technologies evolved, our customers were pressed by a growing need to strategically invest in smart factories mainly using digitalization and systematization.

Looking back at JUKI's overall business results for the fiscal year ended December 31, 2019, net sales decreased 11.5% and ordinary income decreased 64.9% compared to the same period of the previous year, resulting in **lower sales and profits, year-on-year**. The U.S.-China trade friction significantly dampened demand for capital investment, particularly from the third quarter onward. While we took steps to reduce expenses, investments, and other costs with the thorough understanding and cooperation of our employees, the declines in sales and profits were too steep to offset, resulting in disappointing results for the full year.

The first of the three issues that emerged in fiscal 2019 was the lower-than-expected progress of JUKI's priority measures for "business domain expansion" and "borderlessness." Weaknesses in our ability to execute stalled progress. Overseas sales of industrial sewing machines were especially low, lagging well behind those of overseas manufacturers in some regions. Second, profitability deteriorated due to intensified price competition in the market and delays in bringing new and differentiated products to market. We faced quality issues

with some products, as well as mismatches with customer needs that took time to adjust. To respond to the trust and expectations of our customers, JUKI **must propose differentiated solutions** that align with their needs. The third issue we faced was a lack of progress in streamlining our administrative departments and getting our high cost structure under control. If JUKI is to maintain its growth trajectory, it will be essential to **quickly implement structural reforms that enable us to recover our earning capacity**.

— **As JUKI evolves its business and management structure, several initiatives and results in 2019 seemed to lay the path ahead for us going forward. Do you have an opinion in this regard?**

On the business side, we made several major moves that will drive the future growth of the JUKI Group. The first was an expansion of our inspection and measurement business through a collaboration between the Electronic Assembly Systems Department and the Group Business Department. This expansion allows us to **sell our inspection machines to non-SMT customers**, as well as our traditional SMT-related customers. We have been able to meet the needs of our customers during a labor shortage, mainly by providing labor-saving equipment such as MI (Manual Insertion machines) and automated warehouses as pre- and post-processes for SMT lines, as well as inspection and measurement machines. Our business has grown in line with this business domain expansion. Our Customer Business has also helped us **progress in system services** through alliances and has helped us expand our online parts support system. We have **made headway in bringing the system into a service business**, or in commercializing a service business. Our activities on SNS (Instagram and other social networking services) have helped us bring in a growing



Tomoaki Tega,  
joined in 2012

Satomi Yoshimura,  
Joined in 2016

Akira Kiyohara,  
president

base of customers for household sewing machines, with help from a unique marketing strategy that fits the IoT era. While JUKI's overall sales and profits decreased for the year, the user case histories we learned about on SNS helped us **increase our sales and profits from the household sewing machines business**. Our various strategies to improve the quality of the UX (User Experience) are also making steady progress. Our decision to introduce the UX design concept into our product development processes and emphasize "ease of use" based on user opinions has been fruitful.

All of these initiatives will strengthen our efforts to **expand our business and technical domains**. Our movement to capture new markets technologically and systematically through innovation is now in full swing. We feel that we are getting solid responses to our efforts and are able to meet a widening range of customer needs.

— **To respond quickly and accurately to the rapidly changing business environment, we at JUKI are constantly renewing its three-year Medium-Term Management Plan to formulate and implement various business strategies and measures. How does JUKI position Phase II of its Medium-Term Management Plan (2020-2022) and what policies are in place to execute the plan?**

Our basic policies for the new Medium-Term Management Plan (Phase II) are to work as "One Team" to respond to changes in the business environment and address issues that were left undone in Phase I of the plan, from fiscal 2017 to fiscal 2019. Broadly speaking, we seek to build a management foundation for the future while aiming to recover our earning capacity through structural reforms. "One Team" is the slogan of the Japanese national rugby team. To overcome our current situation at JUKI, we decided to embrace the same "One Team" concept ourselves. We want all employees in the Group to share a common vision and strive toward a common goal.

Several initiatives prescribed in the Medium-Term Management Plan up to 2019 were left undone. The main factors holding us back were delays in responding to market changes, slow progress in expanding our business domain into high value-added fields, and insufficient efforts to respond to customer needs and advanced technologies in the design of our products. We will incorporate these issues into our policies and measures in the Medium-Term

Management Plan 2020-2022 and focus on them intensively. We have positioned 2020-2022 **as a period for finishing the construction of our business foundation for JUKI's sustainable growth**. We will also be reviewing the progress of the plan every six months to check if the company is on the right track towards its goal in three years' time.

To reach our goal in 2022, we would like to realize our vision of being a "Monodzukuri (manufacturing) / Kotodzukuri (value-creation)" company capable of improving the corporate value of both JUKI and its customers by supplying excellent and innovative products and services," through the concerted efforts of all of our employees.

— **JUKI's own efforts as a company are the most important driving force to achieving the goals of the Medium-Term Management Plan for the JUKI Group. But it will also be necessary to keep an eye on the changes in the business environment and market trends. What is your take on the current and future trends in the external environment?**

We have come to a great turning point. We can look at the changes in the business environment by focusing on three areas: customers, competitors, and technological innovations. More and more of our customers are relocating their production sites due to the impacts of the U.S.-China trade frictions and labor shortages caused by declining birthrates and growing populations of the elderly. Regarding our competitors, we face increasing competition in the middle market for industrial sewing machines, and also in electronic assembly systems as our competitors expand their business domains and enter the market from different industries. In terms of technological innovations, or what we describe as the DX (Digital Transformation), forefront technologies such as AI, IoT, and 5G are making remarkable progress and significantly changing business activities and the way we live our lives. To respond quickly to these changes in the environment and carve out a new stage, we need human resources above all else. We need to raise each person's abilities and will to reform.

Another thing we must remember to do when considering the business environment is to see things from the perspective of our shareholders and investors. In recent years, investors have increasingly focused on a company's ESG-related measures and its stance on the



Chihiro Watanabe,  
Joined in 2016

Tougo Matsuura,  
Joined in 2014

Takahiro Sano,  
Joined in 2013

What is JUKI?

SDGs (Sustainable Development Goals). For a company to achieve sustainable growth and continuous improvement in corporate value, it must make have a positive and tangible presence in society. Addressing the SDGs will open up opportunities to create new businesses and expand the scope of our existing businesses. JUKI will continue to **work towards solutions to various social issues through its business activities.**

**SUSTAINABLE DEVELOPMENT GOALS**

JUKI is supporting the Sustainable Development Goals (SDGs).

— Each and every one of us needs to be strongly committed to steady implementation of the Medium-Term Management Plan 2020-2022. What are the basic policies of the Medium-Term Management Plan and the business structure JUKI should aim for?

As a basic policy set forth in our Medium-Term Management Plan, we will aim to build up and fortify our strengths in six domains through structural reforms. We need, first, to improve **our sales force** in order to strengthen the borderless customer base; second, to strengthen **our earning capacity** in order to reinforce our revenue base through business domain expansion; third, to improve **our development capability** in order to accelerate the development of new products and services; fourth, to lay **our production capacity** foundations in order to strengthen manufacturing; fifth, to rebuild **our management capability** in order to establish streamlined administrative and back-

office departments; and sixth, to raise the level of **our human resources** in order to better leverage our use of the JUKI workforce. We plan to thoroughly manage progress and regularly confirm that our strengths are reinforced and expanded in these six domains.

With respect to the restructuring of our portfolio, we will aim to increase sales with a focus on high-value-added fields and fields where future growth is expected. By 2022, we will **expand our high-value-added fields focusing mainly on non-apparel, specialized, and automatic machines**, while increasing the sales of our lockstitch industrial sewing machines. In parallel, we will structure our business to **expand the non-mounter and non-SMT fields** while expanding the SMT field more in electronic assembly systems. Looking at our portfolio by region, we plan to **deeply cultivate the middle market in each country** with our industrial sewing machines and will focus **strongly on Asia** with our electronic assembly systems.

— What are the quantitative targets (goals) of the Medium-Term Management Plan 2020-2022?

Our basic goal is to ensure sustainable growth. Our success hinges on increased sales and profits every year. We aim for a sales increase of more than 10% in each year of the management plan. By 2022, the final year of the plan, we target 130 billion yen in consolidated net sales at the planned exchange rate of 105 yen to the dollar. In terms of profits, we aim to achieve ordinary income of 12.5 billion yen at the same exchange rate.

— The year 2020, the first year of the Medium-Term Management Plan 2020-2022, is off to a difficult start. Would you please reiterate your basic policies for the current year?

The international situation remains uncertain under the stresses of the prolonged trade friction between the U.S. and China, the Brexit (British exit from the European Union), and various other issues around the world. In our daily lives, advanced technologies such as IoT, AI, and 5G are evolving and penetrating our lives at a faster speed than we ever imagined. They are changing the structure of industry and our lives. In this turning-point year, JUKI must do everything possible to achieve a rapid recovery in business

performance and establish a foundation for future growth.

Our most important task is to **innovate in all spheres of corporate activity**, especially sales, development, production, and management, without being constrained by conventional thinking and methods, and to **build new and sustainable business models**. To this end, we have included the “five transformations” in our Medium-Term Management Plan 2020-2022.

The five transformations, or the “5X” (X=Transformation), are: ① Developing growing markets and customers through a cross-border marketing strategy (**Borderless X**), ② Expanding business domains to increase our earning capacity (**Business Model X**), ③ Expanding technological innovation domains (**R&D Model X**), ④ Establishing production systems and administration (back-office) operations centered on the 5S’s of management\* (**Workstyle X**), and ⑤ Achieving ‘sustainable’ management (**SDGs Management X**). I am convinced that each and every one of our employees will review their old ways of doing business, take the initiative to try new things bravely, and promote the “5X” as a new growth engine that opens up JUKI’s possibilities and paves the way for sustainable growth.

— To achieve an early recovery in business performance and get back on a growth track, we know that each of us at JUKI needs to recognize the importance of our own efforts. Would you please explain your basic policy and business plan for fiscal 2020?

Our ability to achieve the goals of the Medium-Term Management Plan 2020-2022 will depend on the success

of our efforts in fiscal 2020, the first year of the plan. Based on the five transformations (5X), we will achieve the quantitative targets of 106 billion yen in net sales and 3.3 billion yen in ordinary income based on the planned rate of 105 yen to the dollar and add impetus to the progress of the Medium-Term Management Plan by implementing **the three-step business plan**: ① reducing costs through structural reforms (**cost structure reforms**), ② enhancing added value through business domain expansion (**maximizing added value through business domain expansion**), and ③ building a new borderless customer base (**strengthening the borderless customer base**).

As the first step, we will review our cost structure by streamlining administrative and back-office operations, restructuring SCM, carrying out reforms to make factories smarter, and so on to implement **cost structure reforms**.

Our second step is to take on the challenge of **maximizing added value**. We will work to strengthen our sales capabilities and increase the sales of new products in highly profitable fields in our Industrial Sewing Machines segment, and increase the sales of new and strategic products by segmenting our customers in the Household Sewing Machines segment. We will also work to increase the sales in the non-mounter and non-SMT fields in the Electronics Assembly Systems segment, strengthen the engineering business in the Group Business segment, and scale up our service business in the Customer Business segment. Through these value-added measures, we will build a profitable revenue base.

The third step is to strengthen **a borderless customer base**. Through cross-over marketing activities, we will strengthen the development of the middle market, rebuild our sales

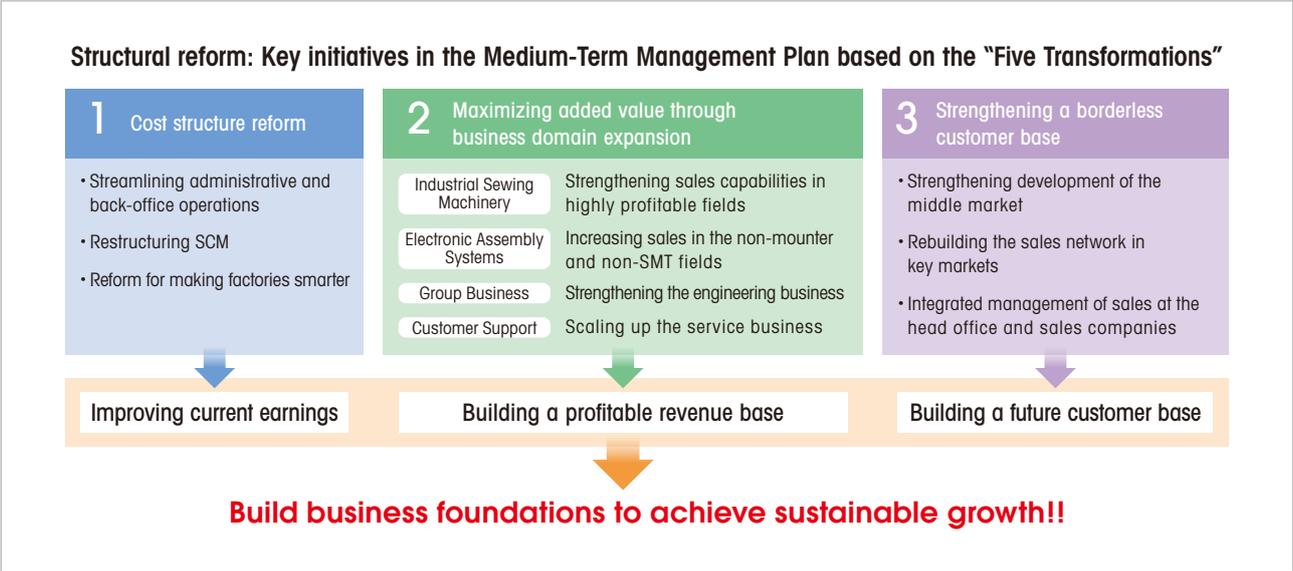


## 5X\* = The new JUKI growth engine

Through these transformations, we will create a “profitable business” model and build a future customer base. \*X: Transformation

### Five Transformations

- 1 **Borderless X**  
Developing growing markets and customers through a cross-border marketing strategy
- 2 **Business Model X**  
Expanding business domains that increase our earning capacity
- 3 **R&D Model X**  
Expanding technological innovation domains
- 4 **Workstyle X**  
Establishing production systems and administration (back-office) operations centered on the 5S’s of management\*  
\*5S’s of management (**S**imple, **S**lim, **S**peedy, **S**eamless, **S**mart)
- 5 **SDGs Management X**  
Achieving sustainable management



networks in key markets, and promote the integrated management of sales at the head office and sales companies. We will also be staging cross-over marketing activities to build a future customer base. Based on this three-step business plan, we will aim to build a business foundation that enables us to achieve sustainable growth.

— What policies do you have in place to shape JUKI's investment plans for fiscal 2020 onward?



Because investment activities are the lifeline of a manufacturer, we will continue to restrain from non-essential and non-urgent investments while actively promoting investment activities oriented toward future growth. In 2020 we will invest in automation and labor-saving to make our factories smart, while at the same time steadily investing in advanced development to create differentiated products and IT to improve operational efficiency.

We will also invest in human resources, the source of our corporate growth. As the total number of employees decreases through the natural attrition of employee retirement and cutbacks on hiring, we intend to further improve productivity by adopting a wide range of human resource measures, including proactive hiring of specialized personnel and support for current employees to encourage and enable them to "learn again."

— Finally, would you please tell us what you expect from JUKI's employees?

My strongest hope for our employees is that **they take on the challenge of creative and disruptive innovation**. Steadily maintaining one's current efforts on a surface level, conservatively maintaining the status quo, so to speak, is not the approach of a true innovator. I would like all employees at JUKI to work towards the advancement of Phase II of the Medium-Term Management Plan as a personal responsibility of their own. If they do, I am sure we will be soundly moving forward on the road to growth.

In his poem "Youth," the American poet Samuel Ullman (1840-1924) wrote that "Youth is not a time of life; it is a state of mind." I have great confidence that **the youthful minds of our employees will change JUKI**. Let's work hard together.

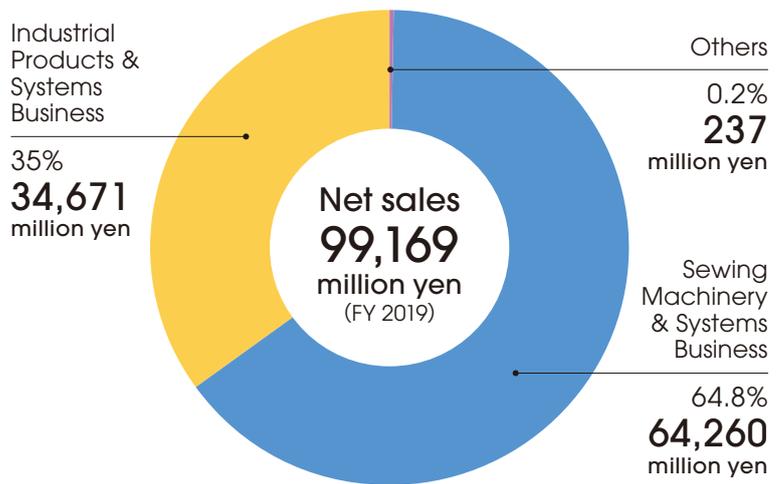
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## Business domains

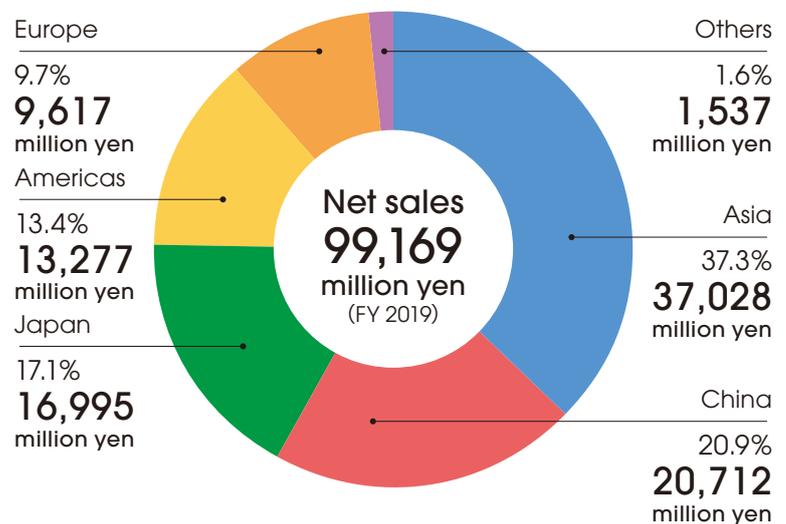
### Ratio of net sales by business

JUKI has been supporting the manufacturing (Monodzukuri) sectors in the world with advanced technology and valuable technology for mainly its flagship sewing machinery business.



### Ratio of net sales by area

JUKI has won strong support from customers all over the world by operating a sale and service network in about 185 countries.



# To spur innovation for customers all over the world, JUKI offers JUKI Smart Solutions

## Sewing Machinery & Systems Business

This business supports “stitches” of all types by supplying more than 2,000 sewing machine models and systems for customers at every level, from professionals to hobbyists.

### Industrial Sewing Machinery Business



A world-leading business driving the sewing machinery business

This business helps customers build the most suitable sewing factories equipped with the world's top-selling industrial sewing machines integrated with automation equipment, IT systems, and more. The business also helps customers improve productivity, save manpower, and deskill their production lines by offering optimal line solution proposals.

### Household Sewing Machinery Business



A business that provides products to stimulate the creativity of home sewers

This business supports comfortable sewing lives by combining appealing product features with industrial sewing machine performance. The business also holds various workshops to support hobbyists in wide-ranging fields.

## Industrial Products & Systems Business

This business supports customers' production factories by providing products, systems, development capacity and manufacturing capacity while utilizing “manufacturing (Monozukuri) capabilities” developed over many years.

### Electronic Assembly Systems Business

#### SMT-related system business



A business that provides total solutions to support circuit boards manufacturing factories

This business supports the smartization of whole factories by providing equipment and systems for the production of electronic circuit boards. We help our customers improve productivity and quality by operating automated warehouses and linking them with mission-critical systems.

#### Automated warehouse system and Inspection & Measurement system



A business that uses IoT and image processing technology to automate technical tasks conventionally done by hand

The technologies from this business support automation in other industries by making printed circuit board factories smarter. The business also supports automation of a parts shelf and a visual inspection, with equipment and a system.

### Customer Support Business



A business that provides support to promise that JUKI products in use all over the world remain in optimal operating status

This business supplies parts and controls machines remotely to ensure that customers in 185 countries use their industrial sewing machines and electronic assembly systems in optimum environments.

## Group Business

### Group Business

(contracted development and manufacturing business)



A business that supports manufacturing companies through the collective strengths of “people, equipment, methods, and materials”

This business makes arrangements to contract with manufacturing companies for the development, manufacturing, machining, etc. of various products using the know-how in development, design, production, and production control that JUKI group companies have.

### Sleep Buster



Supporting the driver's safe run

This business promotes conventionalization of safe driving with peace of mind using a device to collect drowsy driving data and alert drivers to drowsy driving dangers. The business also helps reduce traffic accidents by reducing overwork driving by driving professionals.

### Data Entry System



Supporting the data entry professionals

This business provides well-designed data entry systems to support the information processing industry in its work to process voluminous data. The business also responds to the needs of data-intensive industries such as life insurance companies and banks.

# INDUSTRIAL SEWING MACHINERY BUSINESS



## Products



Direct-drive, high-speed, lockstitch sewing system with automatic thread trimmer  
DDL-9000C



Semi-dry-head, Cylinder-bed, Bottom Coverstitch Machine  
MF-7900D



Semi-Dry head, Digital Zigzag Stitch Sewing System  
LZ-2290C



Computer-controlled Cycle Machine with Input Function  
AMS-221F



# A “No. 1 world share” business that supports a sewing industry with a network covering customers in 185 countries

JUKI’s industrial sewing machines widely support the global sewing industry by “stitching” products in all sewing fields, from maison brand products that propose the most advanced trends to casual apparel products, sporting goods, and car seats.

The sewing line can be set up with a wide range of lineups under a single brand focused on sewing machines designed to provide exclusive stitches such as a straight stitches, zigzag stitches, and button sewing. JUKI’s digital sewing machines can respond actively to changes in sewing items and materials. JUKI’s automatic machine sewing machines handle two or more processes with a single switch. An IoT based system capable of performing high-level factory management connects all of the machines in a network.

JUKI meets customer demands by proposing line solutions to overcome production challenges using innovative, high-precision technologies under the “Smart Solutions” slogan.



## Customer Solutions

### 1. Setting up a production line under one brand

JUKI’s lineup of industrial sewing machines consists of about 2,000 models. A wide variety of sewing machines—machines for cloth, knitwear, and non-apparel and automatic machines capable of handling two or more processes—are available to suit the sewing material and purpose. JUKI makes line solution proposals that achieve maximum performance with a wide range of lineups in pursuit of sewing quality, deskilling, and productivity.



### 2. Making a factory smart by digitalizing sewing machine information and visualizing the factory holistically

We adjust sewing machines digitally instead of mechanically. Sharing digitalized information among sewing machines and factories drastically shortens changeover time. In addition, we acquire sewing machine operation data and maintenance information by digitalizing sewing machine information and analyzing and processing the data to visualize the factory holistically. JUKI helps realize a smart factory by solving problems through the robotization of sewing processes.



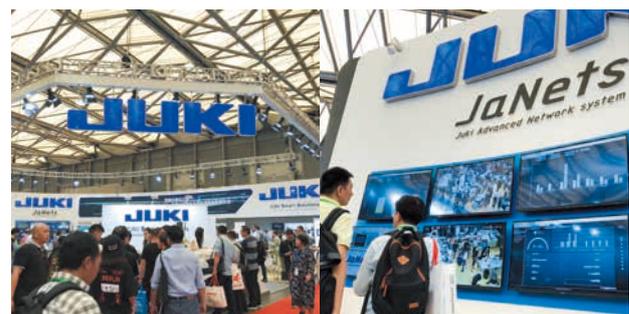
### 3. Offering peace of mind through stable quality and support

Using rich experience backed by active results for more than 60 years, JUKI arranges a professional group to accurately solve miscellaneous problems at customer factories in different parts of the world. JUKI also supports its customers with unparalleled customer services such as technical guidance, seminars, consultations on productivity improvement, and real-time responses to production troubles at factories where stable quality and productivity are required.

## TOPICS

### China International Sewing Machinery & Accessories Show (CISMA 2019)

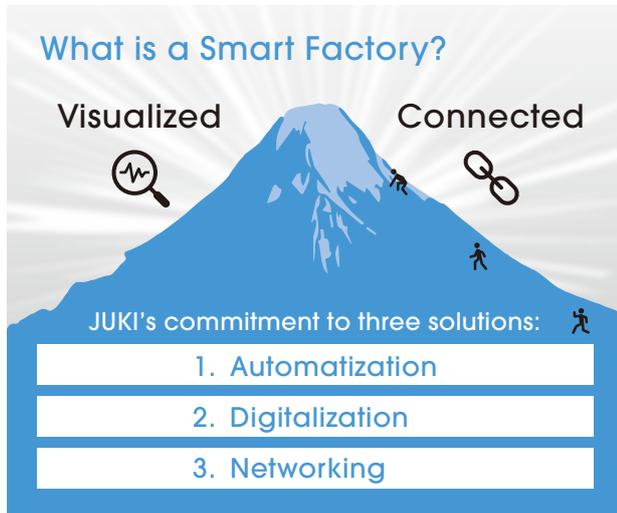
JUKI showcased its products in the China International Sewing Machinery & Accessories Show (CISMA 2019) held at the Shanghai New International Expo Centre. The core theme for the show was: “JUKI Smart Solutions - Innovation with our Best Global Support - (JUKI supports the smartization of your factories globally).” We also offered a leading-edge total line solution equipped with automatic machines to improve productivity and quality, state-of-the-art industrial sewing machines incorporating high-level automation and digitization technologies to complement manual tasks, and a host of peripheral devices to handle functions beyond sewing.



September 2019, Shanghai in China

# Industrial Sewing Machinery Business

## The Smart Factory that JUKI offers

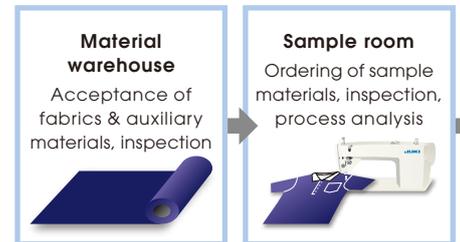


JUKI believes that “Visualization” and “Connected” are essential ingredients for the smart factory of the future. To introduce those ingredients, JUKI has evolved automatization, digitalization, and networking technologies that make customer factories smarter.

JUKI has a proven 60-year history of successes in plant engineering to improve the production processes and productivity of customer factories.

JUKI uses this advantage to offer an optimum method to adopt forefront automatization, digitalization, and systematization strategies and make the most of their effects.

### Flow of a sewing process



## 1. Automatization

### Automatic machines

A wide range of JUKI sewing machines fully automatize two or more processes that are conventionally handled with human hands: cutting work with scissors, the folding of fabrics, shirring, etc.



### Automatic machines and picking robots

The automatic machine sews sewing parts automatically on fabric conveyed from a cutting process by an AGV. The fabric is picked by a robot.



### AGVs (Automated Guided Vehicles)

Sewing parts in the factory are transported automatically with AGVs. The AGVs transport the parts according to the production plan with perfect time efficiency.



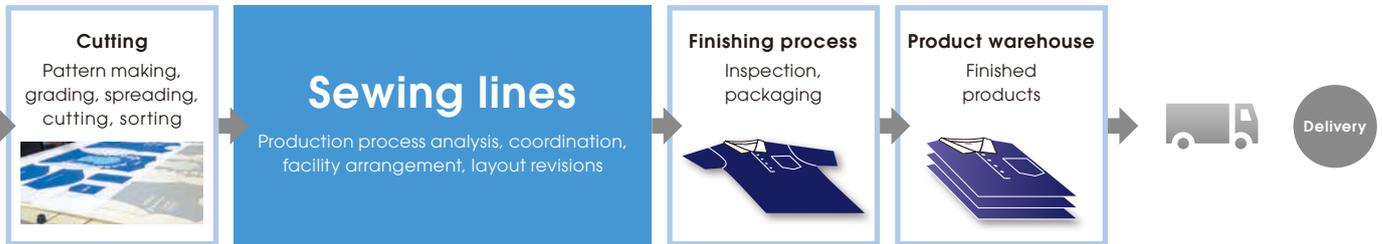
## 2. Digitalization

### Digitalization of a sewing process

The sewing operation is performed according to a digitalized specification. We summarize the operating status of the sewing machines and check the production progress or variations in production by operators.

### Digital sewing machines

These sewing machines are capable of digitalizing “seam” adjustment functions and memorizing them numerically. The data after adjustment can be memorized in tablets running a dedicated app (application program) and transferred to other sewing machines. The sharing and management of stitch data become easy enough to stabilize quality on a global basis.



JUKI's businesses

### 3. Networking

#### Visualization of the control room in a factory

We can confirm problems with the performance of the production plan, the line balance (a key factor for productivity), and bottleneck processes at first sight. We also connect factories to factories in order to smoothly advance the supply chain on a company-wide basis. Analyzing and processing these data enable us to visualize a problem and its effects throughout the whole factory.



#### Sewing management system software



Equipment data such as operation information on individual sewing machines is visualized in real time, analyzed by networking the sewing machines, and used to plot out production improvements. Digital sewing machines in a lineup can realize two-way communication and download control information on stitches to a sewing machine. Support content using "information" on presage management, traceability, etc. Will increase in the future.



# HOUSEHOLD SEWING MACHINERY BUSINESS



**To create new pleasure together with a pro-hobbyist customer (Home Sewer) using a sewing machine that supports creativity, JUKI does the following**

JUKI household sewing machines are used by a customer base spanning the gamut from sewing hobbyists (personal use) to tailors (professional use). We adopt technologies developed for JUKI industrial sewing machines to supply high-quality, sophisticated, high-grade products. We organize extensive and numerous “workshop activities” to provide JUKI products while sharing the joys of using sewing machine functions and producing superb sewing works. We also provide deep knowledge about sewing with sewing machines by finely classifying home sewing genres for hobbyists and collaborating with handicraft artists.

In the online space, we use SNS to create more JUKI fans while communicating with customers.



## Products



Computerized Long Arm High-performance Sewing Machine  
<Kirei> HZL-NX7



2-Needle, 4-Thread Overlock Machine with Differential feed  
MO-114DN



Straight line Sewing Machine for Professional Use  
TL-2200QVP Mini



Long arm Quilting Machine  
J-350QVP

# Customer Solutions

## 1. Providing reliable products and technologies

Sticking to a “seam” as the essence of a sewing machine, a “stitch” one notch above is offered. The machines not only stitch heavy-weight materials and multi-layered sections of materials, but also change small needle baselines and adjust seam lengths and stitch swing width smoothly and easily along the way. “Quilt” work with designed seams is also finished beautifully.



## 2. Providing sewing machine functions and sewing knowledge at the workshop

We hold workshops periodically with customers to deepen their knowledge about sewing and their experience with sewing machine functions by dividing the sewing hobby genres into “dressmaking,” “small articles and bags,” “doll costumes,” and “quilts.” The workshops are directed by artists who excel at producing the articles with the best machines for the task.



## 3. Providing sales and technical support covering the world

Our customers are supported by a global sales and technical network for industrial sewing machines. JUKI holds various workshops on sewing machine mechanisms, techniques to achieve beautiful seams, and methods to use and maintain products to offer “peace of mind.”



# TOPICS

## The 19th “Tokyo International Great Quilt Festival 2020”

JUKI once again showcased its products at the world’s largest quilt festival, Tokyo International Great Quilt Festival 2020 (attended by more than 200,000 visitors annually). The core theme for the show was: “Spreading my world with JUKI.” Our demonstration team introduced JUKI’s state-of-the-art sewing machines and attachments to increase sewing variety by showing visitors how to sew small quilt bags and genuine leather tote bags in a hands-on workshop.



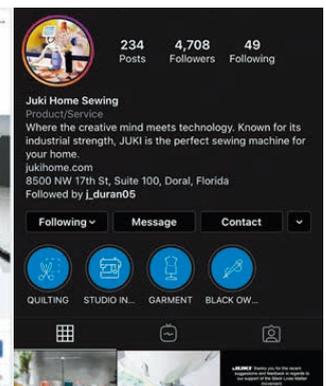
January 2020, Tokyo Dome

## Growing our fan base using SNS

JUKI conducts marketing activities for household sewing machines by utilizing SNS such as Facebook page and YouTube channel and Instagram, etc. Through user-participation-type campaigns, we actively communicate with users, leading to the acquisition of new fans and branding. Through these activities, the number of followers is increasing.



Facebook (JUKI America)



Instagram (JUKI America)

# ELECTRONIC ASSEMBLY SYSTEMS BUSINESS



## Products



Fast smart modular mounter  
RS-1R



High-speed compact modular mounter  
RX-7R



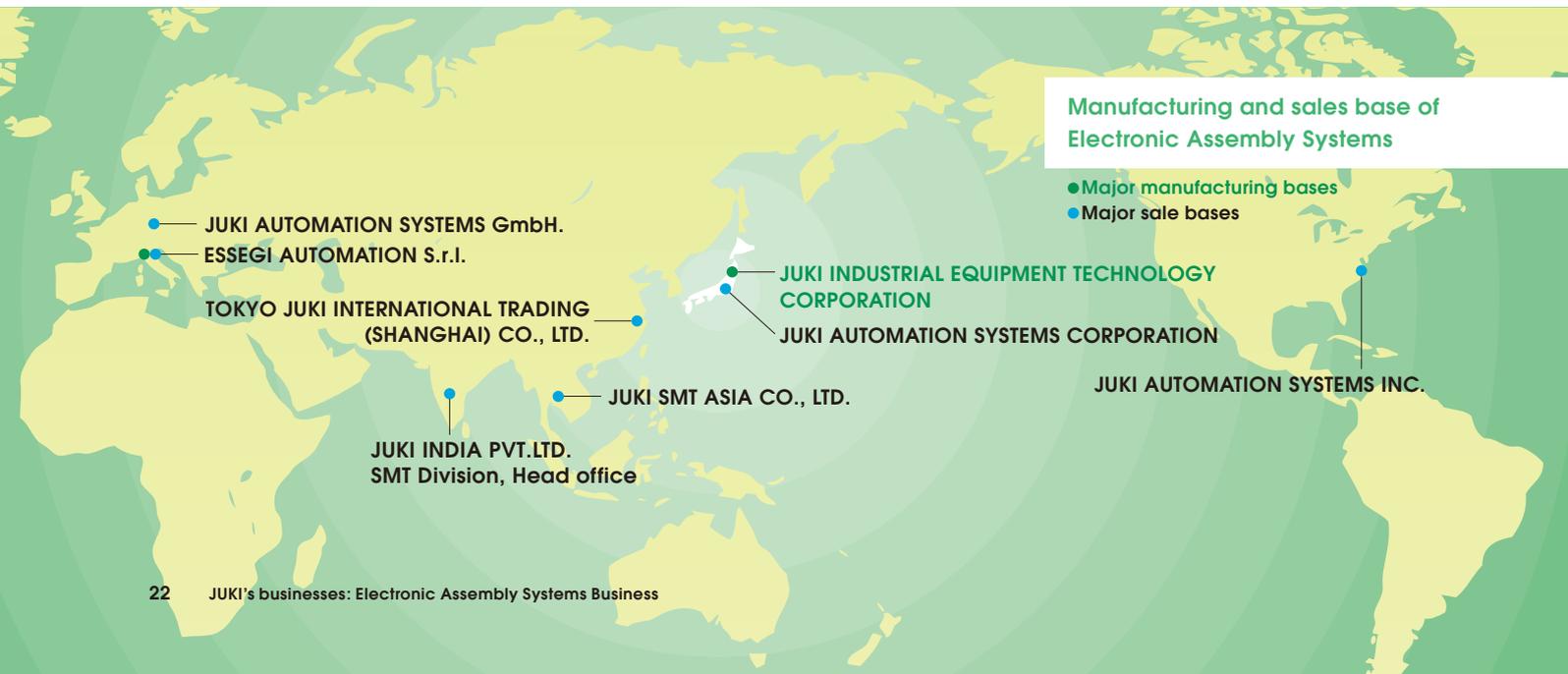
3D PWB Visual Inspection Machine (AOI)  
RV-2-3DH



Multi task platform  
JM-100



Intelligent storage management system  
ISM3600



## Manufacturing and sales base of Electronic Assembly Systems

- Major manufacturing bases
- Major sale bases

● JUKI AUTOMATION SYSTEMS GmbH.  
● ESSEGI AUTOMATION S.r.l.

TOKYO JUKI INTERNATIONAL TRADING (SHANGHAI) CO., LTD.

● JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION  
● JUKI AUTOMATION SYSTEMS CORPORATION

● JUKI SMT ASIA CO., LTD.  
● JUKI INDIA PVT.LTD. SMT Division, Head office

JUKI AUTOMATION SYSTEMS INC.

# To support circuit boards production plants through a total solution, JUKI does the following

The “electronic printed circuit board,” an artificial brain of sorts, is built into many thousands of “devices” we rely on in day-to-day living, from smartphones and home appliances to vehicles such as cars and trains, to the machines operating in offices, hospitals, and factories.

JUKI manufactures and sells a comprehensive range of PWB production equipment using state-of-the-art technologies responsive to customer needs, along with an automated warehouse that stores and supplies electronic components in conjunction with the equipment, an unattended transport device, and a robot insertion system.

JUKI’s total solutions aim to help customers improve the productivity of their manufacturing lines and factory floors holistically. JUKI’s “visualization” system displays the progress of production and the operating status of interconnected production equipment in real time and evolves the factory to a higher level.

JUKI will be using forefront technologies such as IoT, M2M (Machine to Machine), and AI to help customers create smart factories.



## Customer Solutions

### 1. Providing a full line of products to build flexible production lines

We offer a full line of equipment to produce printed circuit boards. We build flexible lines to perform high-mix, low-volume production and multiproduct, variable-quantity production using a mounter that runs at high production speed with high versatility, a high-speed 3D inspection machine that prevents the outflow of defective printed circuit boards, and a screen printer that applies solder to printed circuit boards with high-quality results at high speeds.



### 2. Providing support for managing and improving the whole factory

We provide total solutions to improve a whole factory, heighten productivity, and save labor using the necessary equipment and systems in a chain of processes from parts acceptance for PWB production to the shipment of finished goods. We provide support to manage a whole factory using system software to automatize human work, automatize component management, and achieve the production plan.



Automated warehouse safekeeping and management of electronic components

### 3. Providing remote control support

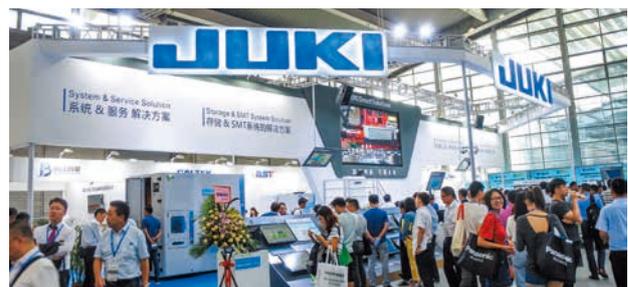
This support system monitors a whole production line remotely and rapidly finds obstacles in the line to correct. The system analyzes accumulated information to maintain a stable operating status, improve the productivity of the whole line, and maintain the quality of the results. We make the customer’s factory smarter by providing support for remote control.



## TOPICS

### NEPCON Asia 2019

JUKI’s products were showcased at NEPCON Asia 2019, an international exhibition for the electronics industry. The exhibition team offered several of JUKI’s latest solutions to help customers evolve their production lines into smart factories. The core theme for the show was: “JUKI Smart Solutions: Manufacturing innovation leading to the future.” The solutions showcased used automation technology with robots, image-recognition systems, and devices and systems combined with the latest IoT/M2M technology to perform the SMT process, the processes that come before and after surface mounting, and a comprehensive process spanning the steps from factory management to inspection.

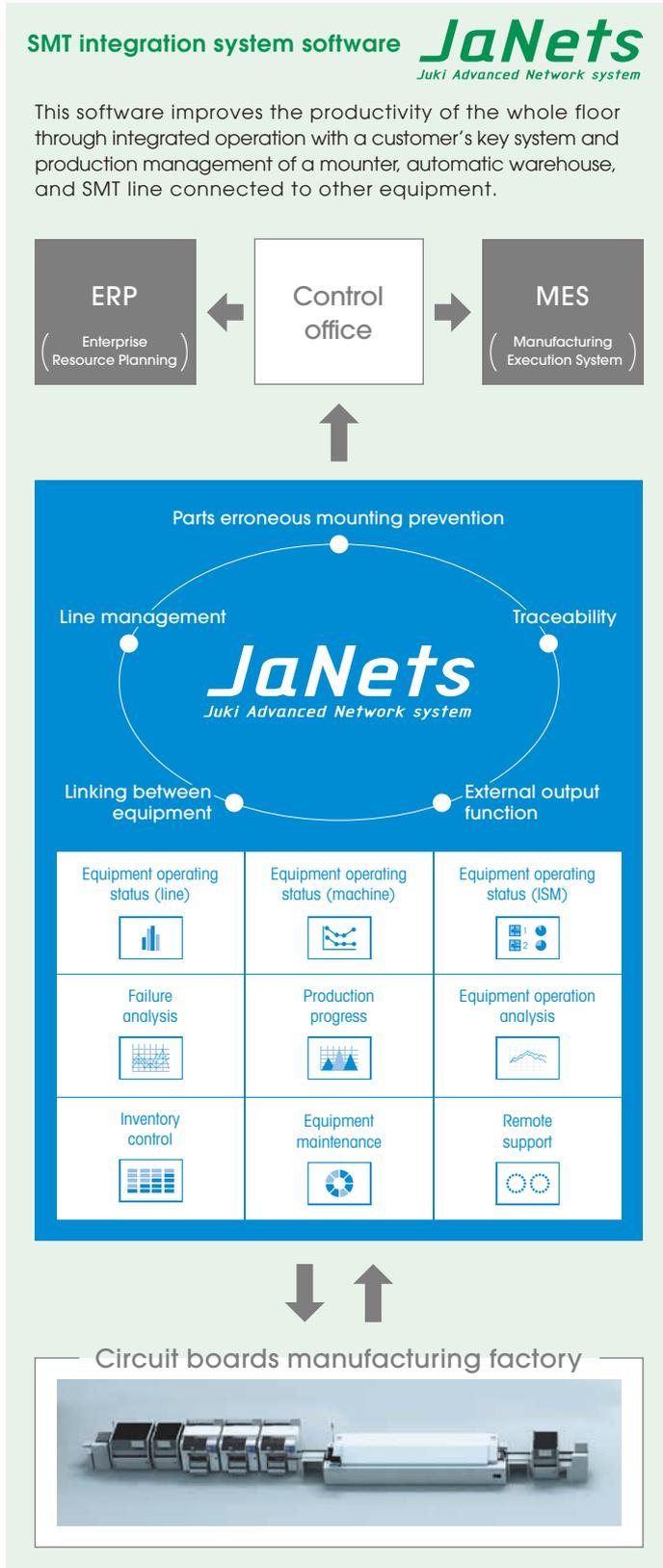


August 2019, Shenzhen in China

# Electronic Assembly Systems Business

JUKI's total solution integrating the whole factory by linking the equipment to the systems of a circuit boards production plants

## JUKI's proposal for a Smart Factory



### Solution for an SMT system

JUKI offers a full lineup consisting of a printing machine, inspection machine, chip mounter and general-purpose mounter equipped with JUKI's original mechanisms. (A reflow oven is excluded.) This equipment improves the productivity of an SMT line geared for various kinds and various volumes production by providing a wide range of lineup with a mounter requiring no head replacement and setting the component-recognition sensor attached to the head at a variable height according to the height of the electronics components to be placed.

# IoT innovation using *JaNets*

*Juki Advanced Network system*



JUKI's businesses

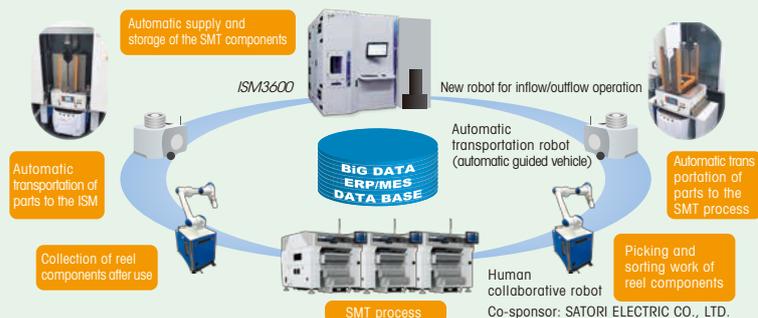
## Solution for a system to automate the post-process

This device automatizes the component insertion process that has always been performed by hand. The device centers the component lead tip with extreme accuracy, never failing to achieve flawless parts insertion.



## Solution for a storage system (Streamlining component supply management)

This system interlocks with the SMT line to automate the manual task of SMT component supply management. The system significantly enhances work efficiency and productivity using an automatic warehouse that automatically supplies and stores components, AGVs that automatically transport components from the automatic warehouse, robots that pick up reel components in collaboration with humans, and much more.



# Electronic Assembly Systems Business

## Expanding smart technology for electronic circuit board manufacturing factories to other industries

### Automated warehouses and Inspection & Measurement systems

We at JUKI have a 30-year track record as a manufacturer of SMT-related equipment for manufacturing electronic printed circuit boards.

We are expanding the scope of our existing business to support the automation of customer processes in other industries using automation technology, image processing technology, and IoT cultivated in-house.

We help provide innovative solutions to meet the automation and efficiency requirements now emerging in many industries due to shortages of manpower and skilled workers. Our solutions include storage systems that automate the inventory control of parts and products as well as the entry and dispatch of them into and from warehouses, and automatic inspection and measurement system to handle work formerly performed manually by technicians.



## Customer Solutions

### 1. Automated warehouse system (Intelligent storage management system)

This is a warehouse management system that automates the entry and dispatch of parts and products into and from a warehouse. The system, which can be linked with ERP and MES using IoT, enables inventory control and timely entry into and dispatch from a warehouse in real time in cooperation with the field. Pre- and post-processes mainly for manual picking and transportation can be also automated, all in a secure environment where the humidity is precisely controlled.



### 2. Inspection & Measurement system

This is an inspection system that automates the inspection and measurement of parts that are conventionally inspected visually by skilled workers. The system uses 3D and 2D image processing technology to inspect scratches and measure dimensions with high accuracy and speed. In-line 100% inspection prevents the outflow of defective products, and the inspection results are digitized for traceability.

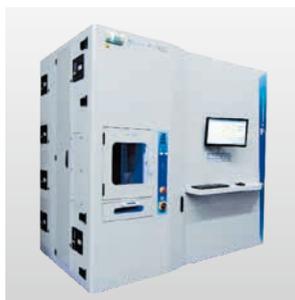


## TOPICS

### Investing in and strengthening cooperation with ESSEGI AUTOMATION S.r.l., a manufacturer, developer, and seller of automated warehouses.

In addition to investing in ESSEGI AUTOMATION S.r.l. (investment ratio of 49%), we have strengthened cooperation with that company in all of our businesses by combining our technical capabilities through all stages, from the planning and development of automated warehouses to sales and service.

An automated warehouse is a system that can automate the inventory management of parts and products, as well as their entry into and dispatch from a warehouse. In addition to electronic components, the system can be used in various other fields. The collaboration work with ESSEGI AUTOMATION will further strengthen and accelerate our automated warehouse business.



### Announcement of a technology partnership with XTIA Co., Ltd. to develop a Visual Inspection Machine

We have announced that our investment in and technical collaboration with XTIA Co., Ltd., which has the technology to successfully apply the principle of "Optical Frequency Comb" to industrial applications, allows us to combine this technology with a JUKI "3-D hybrid visual inspection machine" that has been used for the inspection of electronic circuit boards, mechanical parts, etc., with plans for commercialization in fiscal 2020.



A joint press conference by three companies that invested in XTIA Co., Ltd., along with XTIA itself (JUKI, second from the left)

# GROUP BUSINESS



JUKI's businesses

## Products (Contracted development and manufacturing business)



Examples of contract-manufactured parts



The AY555, a spectrophotometer



A casting loudspeaker (sample production)

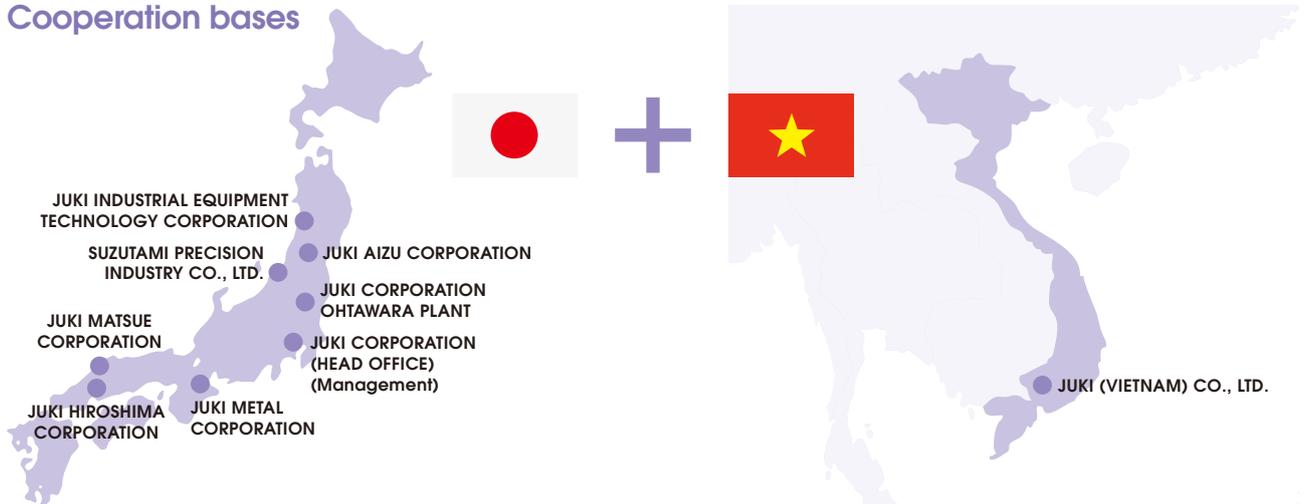


Label attachment robot



Small machining center

## Cooperation bases

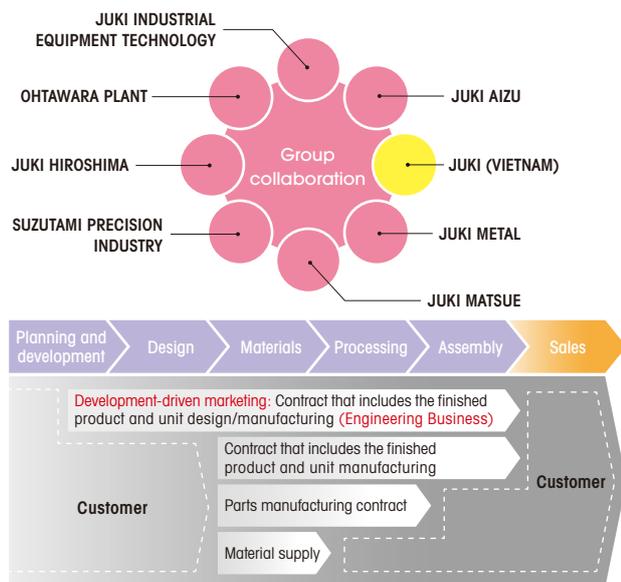


# JUKI's businesses

## Contracted development and manufacturing business

To support customers who engage in manufacturing through four collective strengths: “technician,” “development and manufacturing equipment,” “development and production know-how,” and “materials,” JUKI does the following:

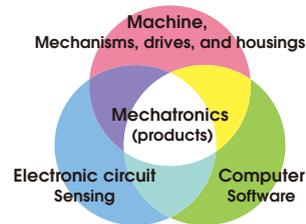
This business combines the manufacturing (Monodzukuri) capabilities of manufacturing companies. The business is endowed with development capacity cultivated through the design and development of major products, the manufacturing of parts, and assembly of products, as well as a wide range of high manufacturing (Monodzukuri) capabilities, etc. focused on precision work, press and sheet-metal working, pig iron casting, precision casting, and mold manufacturing. JUKI's group business produces parts or unit products customers want by deepening and combining their manufacturing technologies.



## Customer Solutions

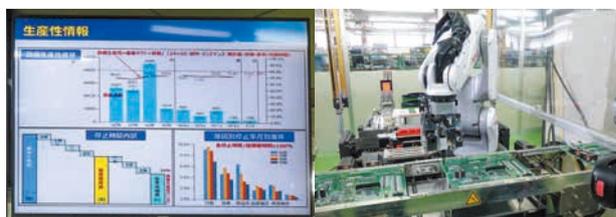
**1. Enabling development and design of equipment control**  
These customer solutions enable the development and design of equipment control based on technologies developed in the mounter design and development process.

Diverse human resources gathered from the fields of mechanical engineering, electronics engineering, and software combine flexible ideas to create new products.



**2. Building of the automated devices and lines for manufacturing (Engineering)**

We problem-solve from both the hardware and software sides by robotizing the hard work and the repetitive, simple work, upgrading to highly productive lines, and visualizing production based on production engineering results to promote the smartization of in-house factories through technologies such as IoT and robotization.



**3. Supplying high value-added products through full utilization of “people, equipment, method and materials” (Material → machining → assembly → finished goods)**

Technicians who have acquired various national qualifications complete products by means of multi-selection manufacturing suitable for customer's needs using a wide variety of technologies such as MC (Machining Center), casting, grinding, and painting. They also perform all of the processes from material procurement to manufacturing and assembly by means of a one-stop service.



## TOPICS

### The 24th Mechanical Components & Materials Technology Expo (M-Tech)

Our Group Business and Electronic Assembly Systems Business jointly exhibited at the Mechanical Components & Materials Technology Expo, an exhibition of the most advanced specialized technologies in precision processing and manufacturing.

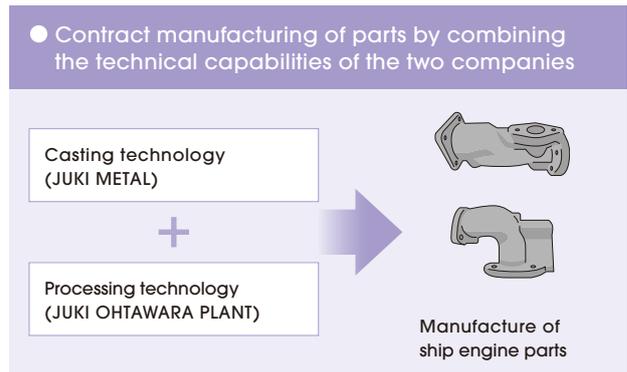
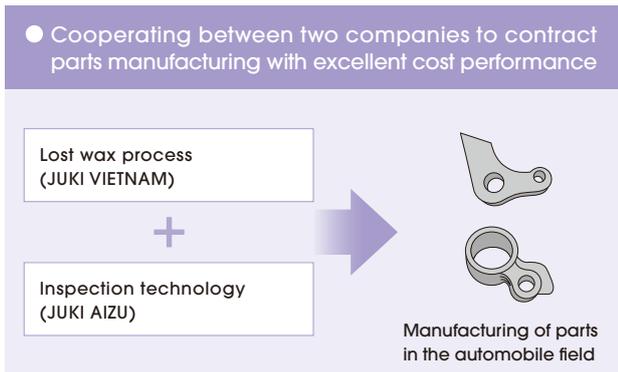
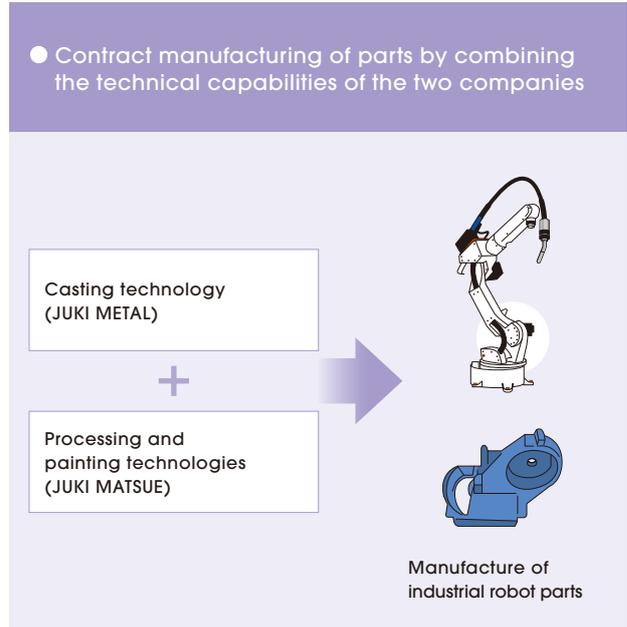
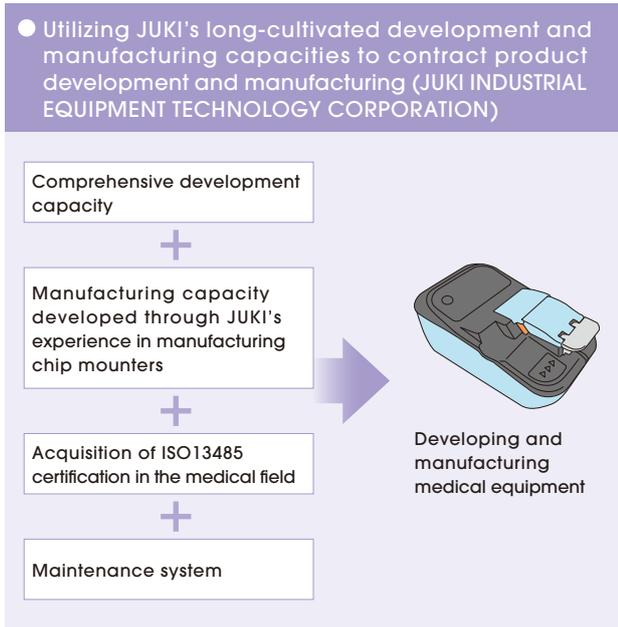
JUKI demonstrated the “Production capacity, Solution-proposing capabilities, and Technical capabilities” that power its “Contract Manufacturing and Development” operations by exhibiting its development capabilities, production capacity, and system for group cooperation, along with the inspection machines JUKI uses in actual manufacturing. The JUKI exhibition team also set up a sewing machine area where visitors could see the industrial sewing machine technologies and wide range of advanced manufacturing capabilities cultivated by JUKI.



At Makuhari Messe, Chiba, Japan in February 2020

# Contracted products example fusing the development and manufacturing technology at each base

## Examples of contract-manufactured parts and unit products using JUKI's manufacturing capabilities



JUKI's businesses

## Sleep Buster Supporting the driver's safe run

The Sleep Buster is a device developed to reduce traffic accidents and to prevent overwork driving. Sensor pads attached to the driver's seat monitors physiological signals in driver's upper body second by second. Built-in algorithms assess the degree of driver fatigue and issue warning displays or sounds whenever the driver's concentration or physical condition decreases or suddenly changes (e.g., when the driver drifts toward sleep). The driver's stress, concentration, arousal, and fatigue can all be analyzed in more detail by downloading the sensor data to a personal computer using JUKI's exclusive software called "Human Tachometer."



## Data Entry System JUKI's original information-processing system

A data entry system is a system for rapidly inputting large volumes of alphanumeric data. Insurance companies, banks, and other organizations that process great deals of information are members of the information processing industry. JUKI is now developing equipment to enhance processing capabilities and reduce human error for these organizations. Foremost among their needs are the "protection of confidential and personal information," "more efficient image entry with help from OCR processing," and "deliveryless system using high-speed communications infrastructure."



# CUSTOMER SUPPORT BUSINESS

Parts center for industrial sewing machines  
JUKI (NINGBO) PRECISION CO., LTD.

Parts center for electronics assembly systems  
JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION

Parts center for industrial sewing machines  
(OHTAWARA PLANT)

Parts center for electronics assembly systems  
(Warehouse in Hong Kong)



## Optimizing the operating status of machines in manufacturing lines all over the world to promise customers peace of mind one step ahead

This business provides information on timely preventive maintenance and parts supply and controls machines remotely for customers who purchase JUKI's core products, industrial sewing machines, and electronic assembly systems. Our information and remote monitoring services ensure that customers can use our machines and systems in optimum operating environments.

To support customers who use JUKI industrial sewing machines, we have prepared a tool that gives them easy access to information on preventive maintenance and alerts them when their machines need to be checked and consumable parts need to be replaced.

For customers who use JUKI electronic assembly systems, we remotely monitor the operational status of machines that operate around the clock.

We will deliver peace of mind one step ahead in addition to well-established parts supply and maintenance.



# Customer Solutions

## 1. Providing a support system for checking sewing machinery

To avert operating rate slowdowns caused by sudden machine stoppages, JUKI released a system for providing customers with information on consumable sewing machine parts and a smartphone application for inputting inspection information on sewing machines one by one. The scheduling for the next maintenance inspection and the replacement times for consumable parts are displayed by the smartphone app on screen. Summarizing those data ensures that the customer will always be informed of the preventive maintenance schedule. JUKI is working to enrich its customer support tools to ensure that the customers who purchase JUKI sewing machines can use them stably over many years.



## 2. Realizing a customer support remotely

**A tool for grasping the operating status of a production line and equipment and finding the most effective strategies for improvement**

This tool remotely monitors the operational status of the production lines for electronic assembly systems that have been operating for customers over long periods. We can maintain a stable operating status and improve the productivity and quality of a whole factory by analyzing the accumulated information gathered each time the operational status is monitored and by rapidly finding product line errors and restoring production. JUKI achieves a high-level smart factory through extensive supports aided by remote control.



# TOPICS

## Improving the prompt delivery rate of parts using a new stock and order management system

The efficiency of parts inventory must be near perfect if we are to uphold our pledge of never keeping the customer waiting. JUKI heightened its prompt delivery rate to 90% after adopting a new stock and order management system and optimizing its stock efficiency. JUKI will make further efforts to improve its prompt delivery rates and operate a members-only "technical support website" to provide technical information along with "Club-J," a site with information on parts for industrial sewing machines.



(Top) information site for engineers  
(Bottom) Parts website for industrial sewing machines

JUKI's businesses

# Technological development capacity



## High-level technological development capacity dedicated to the “Customer Creed”



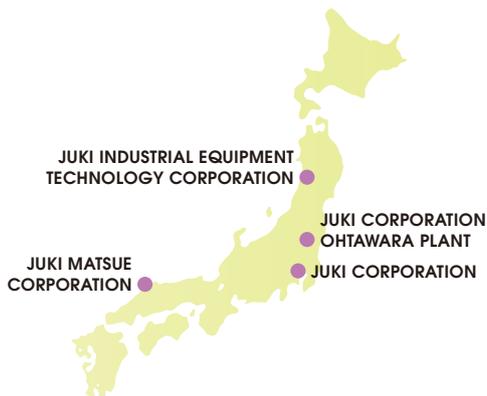
JUKI has applied its technology development capacity to the development of a single unit product and the creation of an automatic machine and automation system to meet customers’ challenges focused on productivity improvement, manpower saving, deskilling, and improvement of quality. JUKI has invented many “first in the world” mechanisms as a world leader in manufacturing.

Environmental considerations such as user-friendliness and electric power saving become bases for development and the pursuit of the latest technologies. JUKI strives to make products customers can use without any form of stress all through the day. JUKI sewing machines have the overwhelming support of both on-site users and factory administrators.

JUKI has also set up development bases in China, Vietnam, United States, and Poland to respond speedily and carefully to the needs and high-level requests of overseas customers.

# TECHNOLOGY & DEVELOPMENT

## Domestic development bases



## Overseas development bases



### JUKI's technology development

Customers require the production goods provided by JUKI to operate stably in different environments all over the world. JUKI repeats quality and specification tests (evaluation experiments) by exposing products virtually to various physical phenomena to ensure that no problems with strength, safety, durability, etc. occur.



Material research with an electron microscope



Elemental analysis using an EPMA



Hardness test using a Vickers hardness tester



Test using an electrostatics tester



Vibration test using a vibration exciter



Product package drop test



Durability test for a chip moulder



Stitch test for an industrial sewing machine



Noise rating in a semi-anechoic chamber

## TOPICS

### Complete digitization of eight basic industrial sewing machine models

Seam value adjustment has been digitized, and a digital sewing machine that lets the user easily set the seams on the sewing machine body panel has been developed. Eight basic lockstitch sewing machine models are now completely digitized. A digital sewing machine transfers and edits adjusted data wirelessly and allows substantially shortened setup times when changing sewing workpieces. The machine, in combination with its peripherals and applications, is referred to as a complete "sewing system." The system helps users grasp the production output and operating rate and then analyzes the production balance with an exclusive application.



All components of the digitized "sewing system" were designed in a unified color.

### The development of the world's only three-dimensional hybrid inspection machine commences.

We began developing the hybrid inspection machine in an alliance with XTIA CO., LTD. to expand the application of an inspection machine for printed circuit boards to the inspection of mechanical parts. The hybrid machine performs in-line inspections at high-accuracy and high-speed by combining JUKI's image-processing technology and XTIA's multi-wavelength and straight type laser. While JUKI's image-processing technology has difficulty judging the height and depth of scratches, XTIA's sensor is unable to detect cosmetic defects like stains. We aim to commercialize the three-dimensional hybrid inspection machine by combining mutual technologies to complement each other.



Fusion with an "Optical Frequency Comb," a Nobel-Prize-winning technology (on an alliance basis)



Prototype of a three-dimensional hybrid visual inspection machine

# Technological development capacity

## JUKI's core technology

JUKI's core technology connects directly to products by stabilizing quality, enhancing user friendliness, improving workability, and reducing power consumption. The technology also meets the diversified and sophisticated market needs accurately and creates functions full of attractions that meet customer demands all over the world.

### Core technologies for industrial sewing machines

#### Digital control

##### Digitalizing seam adjustments and transferring the data using IoT

This technology digitalizes adjustment functions for five "seams": the feed dog height, feed pitch, track, presser foot pressure, and needle thread tension and memorizes them numerically. The adjustment function settings depended formerly on experiences and intuitions of people. Data after adjustment can be memorized in a tablet running a dedicated app and transferred to other sewing machines wirelessly via the NFC function by simply holding it over the panel to transmit. This technology simplifies the settings for sewing machines in a sewing line to stabilize quality on a global basis.



Digital control for the DDL-9000C

#### Image recognition technology

##### Image processing to correct the gap between the actual fabric shrinkage and the amount specified in the program data

This technology sews seams at the exact target coordinates on a fabric to achieve high-quality, stable seams. When shrinkage-prone fabrics such as soft, elastic, and perforated fabrics are sewn, the shrinkage is measured at a marked position on the fabric with a camera and then corrected by reconciling the amount sidetracked during the sewing process with the amount specified in the basic program data.

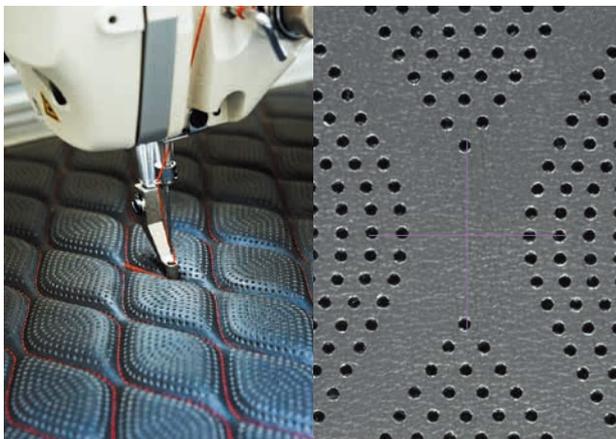


Image recognition technology of the AMS-251

#### Active tension

##### Dynamic control of thread tension to achieve stable "sewing"

This technology maintains optimal tension for the needle thread and bobbin thread to achieve beautiful stable sewing. It also opens and closes the thread tension disc by finely controlling a special solenoid with an electric current and achieves the best thread tension for balanced stitches.

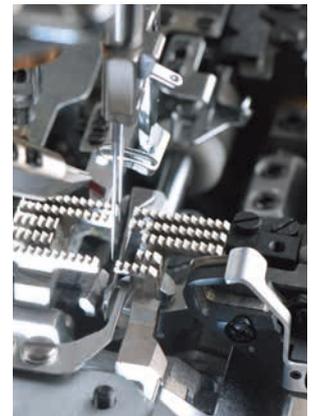


Solenoid control in AMS

#### Technology to prevent loose thread

##### Knot-tying to prevent loose thread at the finish of sewing

This technology ties knots at the finish of sewing. Many JUKI products apply similar mechanisms for tying knots. The covering stitch machine pulls the needle threads aslant with dedicated hooks, forms loops, and finally forms pseudo knots by dropping the needles into the loops.



Knot-tying technology for the MF-7900

#### Technology for preventing bird's nests and shortening leftover thread

##### Improving stitch quality for linings without picking threads

This technology prevents thread from tangling into bird's nests at the start of sewing and then cuts the leftover thread to as short a length as possible at the end of sewing. A thread nipper device captures the needle thread at the start of sewing and holds it until the sewing is complete. A blade cuts the needle thread short at the start of sewing and cuts both the needle thread and bobbin thread at the finish of sewing.



Mechanism for shortening leftover thread in the LK-1903BB

#### Other core technologies

Vertical drive during feeding operation

Dry technology

Energy-saving technology

Perfect stitches

## Core technologies for household sewing machines

### Built-in upper feed mechanism

#### Technology to ensure "fabric feed" from thin fabric to thick fabric

The technology prevents stitch skipping and stitch gathering using a forwarding top feed mechanism (JUKI smart feed) and a digitally controlled top feed mechanism. An exclusive stepping motor to control the top feed amount enables digital adjustment in 0.1 mm increments to suit the sewing pattern, fabric type, and number of fabric sheets.



HZL-NX7

### Automatic stitch balancing thread tension mechanism

#### Achieving balanced needle thread tension according to pattern types

The technology automatically adjusts the needle thread tension to suit the sewing pattern. An optimal needle thread tension is programmed for each of the 351 built-in sewing patterns and letter patterns based on the pressure determined by the swing width and thread feed amount. The rotation angle of the thread tension cam is controlled digitally by the exclusive stepping motor.



HZL-NX7

Other core technologies

Box feed

Fully automatic threading (Easy threader)

Automatic presser foot lifter

Slide throat plate

Float mode

Pivot functions

## Core technologies for electronic assembly systems

### Takumi head (for a mounter)

#### A head with both high-speed performance and versatility

In this head-mounting technology, only a laser recognition device moves up and down while the head itself stays at a fixed position according to the height of the components to be placed. The head achieves high-speed placement by recognizing and placing components at the optimum heights. The technology thus achieves high-speed performance and versatility by applying only one type of head in the specification.



Takumi head for the RS-1R and JM-100

### A high-speed image processing system for inspection machines

#### Clearly imaging components with a DLP (Digital Light Processing) system projection device

The 3D head unit in this system checks if components are placed accurately on a printed circuit board and properly joined with solder. DLP (Digital Light Processing) projectors set in four positions on the 3D head unit project 32 patterns of striped light onto components to improve inspection accuracy. Clear, high-speed inspection is achieved by speeding up the projection velocity, importing the necessary calculations in less time.



Image recognition for the RV-2-3D

### A planet head (for a mounter)

#### Achieving high-speed placement of small-sized components using JUKI's proprietary rotary type head

JUKI's proprietary rotary-type planet head picks, places, and positions small-sized components simultaneously at high speed. The original mechanism built into the head rotates sixteen nozzles separately in conjunction with the rotation of the whole head.

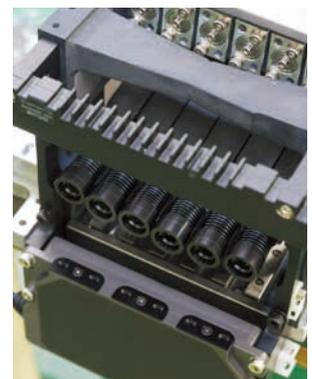


A planet head mounted on the RX-7R

### Laser recognition technology (for a mounter)

#### Enabling the recognition of differently shaped components using JUKI's originally designed technology

The positions and angles of the components are recognized by a high-resolution unit that applies light to the components and detects the shadows cast. This technology enables the stable and high-accuracy placement of a wider range of components. When a component is so small that its presence and pick-up posture become difficult to detect, the technology prevents inaccurate placement by detecting the pick-up status just before placement.



Laser recognition technology for the RS-1R

Other core technologies

Image recognition technology

Component Verification System (CVS)

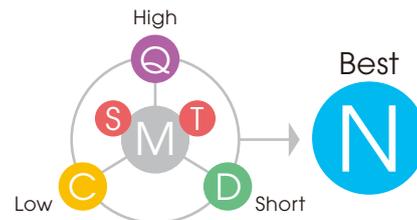
# Production capacity



“Made by JUKI” manufacturing (Monodzukuri) with a commitment to “produce 100% good-quality items”



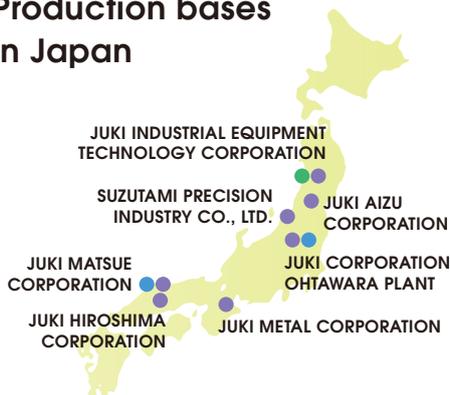
JUKI’s manufacturing factories are defenders of “JUKI Quality” and pioneers of further-evolved manufacturing (Monodzukuri). The “six elements of production” form the base of JUKI Quality: <Q> for quality, <C> for cost, <D> for delivery time, <S> for safety, <T> for human resources development, and <N> for new products. The cycle of management centering around the <M> for manpower drives continuous improvement activities based on these six elements.



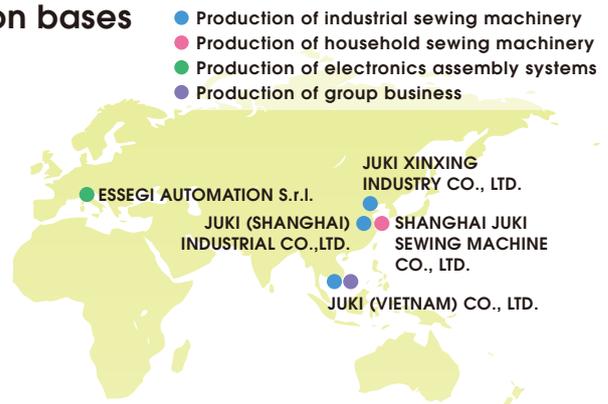
All of JUKI’s industrial sewing machines are “produced near the customer” at five factories in three countries: Japan, China, and Vietnam. The group companies producing “made by JUKI” products share manufacturing techniques, construction methods, know-how, etc. invented at the “OHTAWARA PLANT,” the mother factory.

JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION plays a role in producing JUKI’s electronic assembly systems. This company puts products of firm quality out into the world while working on flexible development methods and improvements.

## Production bases in Japan



## Production bases overseas



# JUKI's production capacity

## 1. Adopting a digital production system

The OHTAWARA PLANT (for production of industrial sewing machines) and JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION (for production of electronic assembly systems) introduced a digital production system that displays assembly procedures on a tablet screen for every cell. This system enables work proficiency in short time frames, the prevention of erroneous assembly, reduced loss due to inefficient line balance, and a stable production system overall.



## 2. Fostering quality technicians and education

The starting point of manufacturing (Monozukuri) remains "human resources creation." We continuously work to maintain and improve our QCD program (quality, cost and delivery time) by promoting the acquisition of skills and qualifications, quality-control education, and in-house tests for certification, etc. We also perform periodical education for the human resources who will be running JUKI's overseas factories in the future. Human resources educated in management support JUKI Quality at a deep level.



## 3. Making an approach toward making a factory more attractive

We advance an approach toward a smart factory through robotization and digitalization based on "5S, safe, and QCD." We also advance transformation to a highly-productive factory using IT for robotizing the processes of frame machining, air-blowing to remove the residual chips and shavings, and painting, in addition to automatic transportation system between processes as well as digital production.



# TOPICS

## Adopting cooperative assembly by humans and robots together in industrial sewing machine production

Robots at our Ohtawara plant attach "caution and warning seals" to an assembly line for an LK series engaged in takt production with an AGV, achieving cooperative assembly together with humans. The industrial sewing machine assembly is divided into simple mechanical work and human work (sensory work and adjustment work). Assigning the robots to the simple work saves space and raises the flexibility of the product line.



Robot attaching caution and warning labels to machines (at our Ohtawara plant)

## Visualization of line balance in moulder production

We are preparing to synchronize the moulder production operations at three factories run by JUKI Industrial Equipment Technology Corporation to realize a dispersed production strategy. The head office factory introduces takt control production using an AGV into a generalized overall assembly line synchronized with the production progress. Units assembled in the previous process and parts fabricated by the Daisen factory and Yoshino factory are supplied to the head office factory. Visualizing the progress and results of production helps to maintain line balance and improve the processes overall.



Takt-controlled production using the AGV (at JUKI Industrial Equipment Technology Corporation)

# Production capacity

## Introduction of main factories

The following factories produce industrial/household sewing machines and electronics assembly systems. Their manufacturing approach is based on a “made by JUKI” concept targeting good-quality products 100% centered on six elements of production.

### JUKI (VIETNAM) CO., LTD.



#### Manufacture of industrial/household sewing machines and Group Business products

As the operator of JUKI’s largest manufacturing facility, JUKI VIETNAM manufactures industrial/household sewing machines, develops industrial sewing machines, and engages in various works for the Group Business, as well. JUKI VIETNAM also operates systematically and consistently throughout all of its processes, from the procurement of parts and materials to processing, heat-treatment, painting, and assembly.

### JUKI (SHANGHAI) INDUSTRIAL CO., LTD.



#### Manufacture of industrial sewing machines

JUKI SHANGHAI manufactures a wide variety of sewing machines such as high-end lockstitch sewing machines and sewing machines for knit wear and non-apparel products. Its total production output makes up 30% of the industrial sewing machines JUKI produces in terms of both production quantity and the sales amount.

### Features of manufacturing

#### QCDSMS (Quality, Cost, Delivery, Morals, and Safety)

JUKI VIETNAM makes headway in its production and improvement activities every day in order to “Become a factory that faithfully excels in every aspect of QCDSMS.”



#### Approach to smartization

JUKI VIETNAM works to maintain and improve quality based on three guiding concepts: “visualization,” “sync,” and “automation.”



#### Approach to bringing up human resources

In-house teachers and outside educational institutions provide an intensive education program for human resources selected at each workplace to bring them up to become the key persons who possess the qualities necessary to lead the organization in the right direction.



### Features of manufacturing

#### Approach to SCM

JUKI SHANGHAI is working to reduce lead times and reduce factory inventory by optimizing safety stock, shortening transportation procedures, and introducing a one-gate acceptance inspection.



#### Approach to smartization

Once the standard automated transportation is upgraded to “stratified automated transportation,” the automated guided vehicles (AGV) begin travel between processes by themselves. JUKI SHANGHAI is working on early-stage improvements using a system that checks the status of processing, painting, assembly, and product completion, as well as production output and inventory levels in every process, at first sight.



#### Approach to bringing up human resources

JUKI SHANGHAI brings up all-around (cross-trained) workers equipped with the skills and knowledge to produce a broad range of mass-produced machines across industries.



**JUKI (VIETNAM) CO.LTD**  
 Established: 1995  
 Number of employees: 1430  
 Location: TAN THUAN EXPORT PROCESSING ZONE, TAN THUAN DONG WARD, DISTRICT 7, HO CHI MINH CITY, VIETNAM



**JUKI (SHANGHAI) INDUSTRIAL CO., LTD.**  
 Established: 2000  
 Number of employees: 614  
 Location: NO.435 XINGPING ROAD, JIADING DISTRICT, SHANGHAI, CHINA

## SHANGHAI JUKI SEWING MACHINE CO., LTD.



### Manufacture of household sewing machines

SHANGHAI JUKI manufactures major JUKI household sewing machines such as a computer-controlled sewing machine, an overlock sewing machine, and a sewing machine for professional use, as a mother factory. SHANGHAI JUKI's production activities culminate in the delivery of reliable quality and satisfaction to customers.

## JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY (Omitted JTEC)



### Manufacture of electronic assembly systems and Group Business products

JTEC manufactures chip mounters and products in various other categories to build production lines as a core factory for electronic assembly systems. JTEC also works, in collaboration with its two branch factories, the Yoshino factory and Daisen factory, to establish an integrated system that covers operations in every stage from order receipt, product development, and material procurement, to production control, manufacture, quality assurance, and delivery.

## Features of manufacturing

### Approach to smartization

SHANGHAI JUKI saves manpower through robotization and digitization. SHANGHAI JUKI is also using the AGV to transport frames, automating metal press-fit and parts assembly works, and making an automatic measurement necessary for manufacturing records.



### Automation of product packing

Product packing has also been automated to improve product identification and the prevention of careless mistakes.



### Smartization of an acceptance inspection

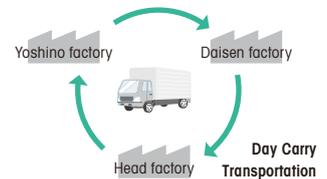
SHANGHAI JUKI automatically imports digitized inspection data to prevent incorrect input and improve traceability. SHANGHAI JUKI is also introducing IT into its parts shipment operations.



## Features of manufacturing

### Synchronized production in cooperation with three factories

JTEC thoroughly shortens the manufacturing lead times in pre-processes (maching, sheet-metal processing, surface mounting components on board, and other processes) and engages in synchronized production to meet the requirements and quantities needed in post-processes.



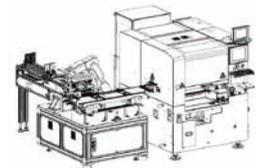
### SCM reform and visualization

The reality of the synchronized production is tracked and visualized every day using a monitor. Production delays and shortages of procured items are flagged to ensure that initial responses are quickly performed.



### Manufacture of Group Business products

JTEC manufactures various mechatronics products including FA-related equipment and medical-related equipment. JTEC also works on a contract basis to manufacture engineering devices that are challenging to design and fabricate.



### SHANGHAI JUKI SEWING MACHINE CO., LTD.

Established: 1990  
Number of employees: 245  
Location: No.580 DONG XUE Rd.YU YANG BANG CUN, DONG JING TOWN, SONGJIANG, SHANGHAI, CHINA



### JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION

Established: 1973  
Number of employees: 583  
Location: 70, Ishigaminishi, Masudamachisuda, Yokote-shi, Akita, Japan



## Approach to the SDGs – toward a sustainable society

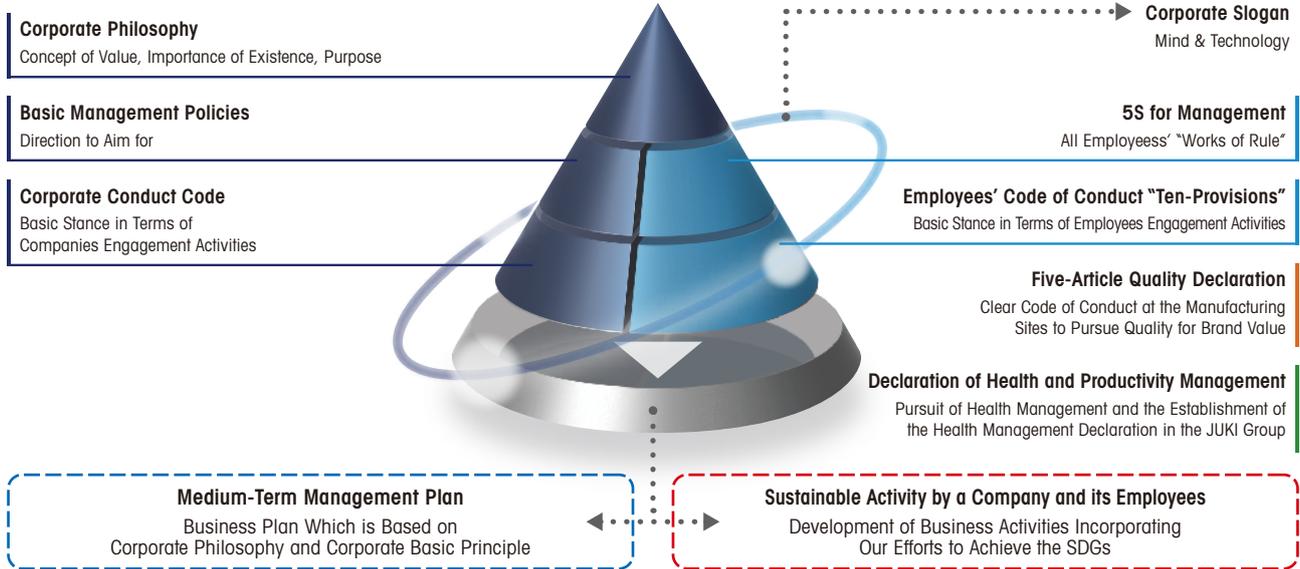
JUKI is appropriately taking on ESG (Environment, Social, and Governance) challenges by considering the environment, JUKI's contributions to local communities, and governance while contributing however it can to the achievement of the SDGs (Sustainable Development Goals). JUKI builds good relationships with communities in every country it serves as a global company, provides safe products with minimized environmental loads, and aims to continue to contribute as a responsible company that creates value for society.

# SUSTAINABLE DEVELOPMENT GOALS



We select important issues on which to focus in our work by balancing the interests of both JUKI and its stakeholders with equitable weightings, address those issues in our business plan and other plans, and develop detailed activities accordingly (sustainable behaviors of the company and its employees).

**System diagram of the JUKI Group corporate philosophy**



**JUKI's materiality map**

Stakeholder weightings	JUKI's weighting		Page	Initiative	
	Important	Extremely important			
Extremely important	<ul style="list-style-type: none"> <li>● Conservation of a clean atmosphere</li> <li>● Conservation of water resources</li> <li>● Appropriate control of chemical substances and prevention of pollution</li> <li>● Engagement with local communities</li> </ul>	<ul style="list-style-type: none"> <li>● Contribution to the economic development of developing countries</li> </ul>	p.42	Initiatives in the Industrial Sewing Machines Business	
		<ul style="list-style-type: none"> <li>● Response to climate change</li> <li>● Efficient use of resources and energy</li> </ul>	p.44	Improving Environmental Performance	
			p.45	ECO PRODUCTS	
		<ul style="list-style-type: none"> <li>● Further improvement of product quality</li> </ul>	p.33	Technical Development Capabilities	
			p.36-39	Production Capacity	
	More important	<ul style="list-style-type: none"> <li>● Conservation of biodiversity</li> <li>● Ensuring of industrial safety and health</li> </ul>	<ul style="list-style-type: none"> <li>● Supply chain management</li> </ul>	p.46-47	Efforts to Improve Customer Satisfaction
			<ul style="list-style-type: none"> <li>● Development of technological innovations seen in AI/IoT</li> </ul>	p.45	Green Procurement
			<ul style="list-style-type: none"> <li>● Improved education through job training</li> </ul>	p.32-35	Technical Development Capabilities
				p.42	Initiatives in the Industrial Sewing Machines Business
				p.43	Contribution to the Local Community
More important		<ul style="list-style-type: none"> <li>● Promotion of workstyle reforms</li> </ul>	p.43	Design of a Friendly Working Environment	
		<ul style="list-style-type: none"> <li>● Diversity and inclusion</li> </ul>	p.43	Promotion of Diversity	
		<ul style="list-style-type: none"> <li>● Upbringing of human resources</li> </ul>	p.36-39	Production Capacity	
			p.43	Our System for Bringing Up and Educating Human Resources	
		<ul style="list-style-type: none"> <li>● Respect for human rights</li> </ul>	p.43	Promotion of Diversity	
		<ul style="list-style-type: none"> <li>● Compliance with the principle of fair transactions</li> <li>● Compliance</li> <li>● Risk management</li> <li>● Reinforcement of governance</li> </ul>	p.48-49	Efforts toward Corporate Governance	

JUKI's SDGs



## JUKI's approach to economic development in developing countries

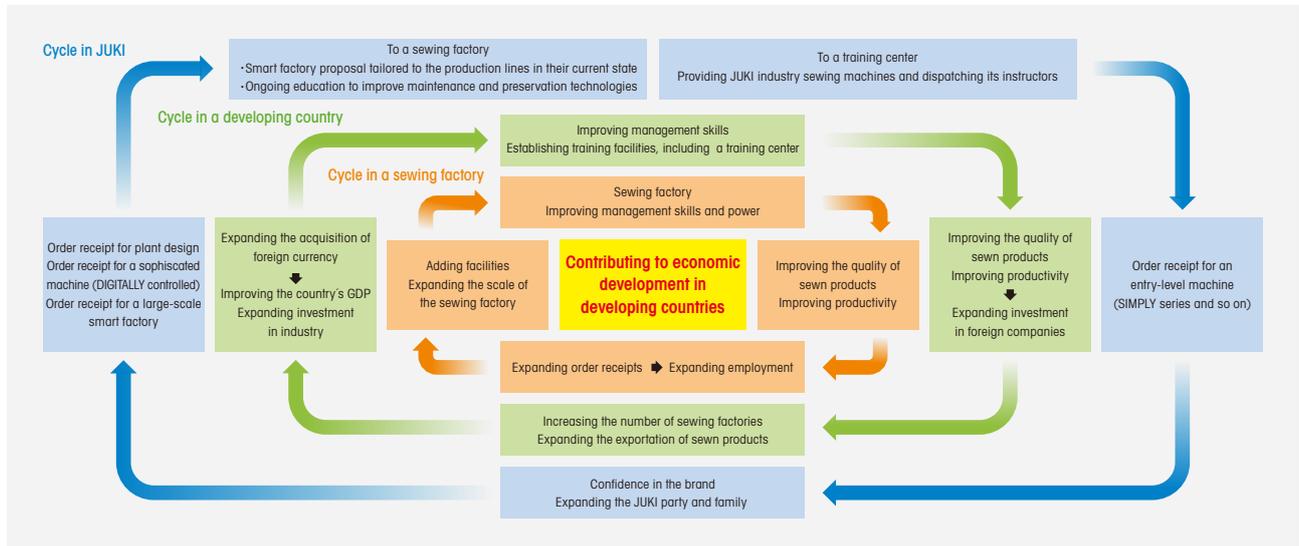
JUKI's industrial sewing machine business as one of its businesses supports the "clothing" in the trio of baseline necessities for human living -- food, clothing, and shelter. We are striving to support the development of the industries and economies of developing countries with our industrial sewing machine business.

### Smart factory proposal to realize the highest quality and highest productivity for sewing factories

JUKI established its Sewing Efficiency Laboratory in 1959, six years after launching its industrial sewing machine business. The Laboratory has drawn out the power of materials, equipment, and people to the full and more recently has launched support activities that employ production control and IE technologies to realize optimal performance. Apart from selling 'things' such as sewing machines, we grasp the myriad problems customers face in their factories and propose smart factory solutions tailored to their unique circumstances and needs.



### Examples of a virtuous cycle for the sustainable growth of the industrial sewing machine business



### Providing sewing equipment to the Garment Training Center in Cambodia and supporting human resource development

Almost nine years ago, JUKI provided sewing machinery and training materials to prepare for the establishment of the Garment Training Center in Cambodia. Since then we have been working to improve the quality and productivity of sewing factories by providing education and training at the Center.

The overarching purpose of the education and training we provide is to train instructors who can work independently in Cambodia without relying on technical guidance from overseas. The instructors, in turn, train sewing factory managers who can operate in their own country. By doing so they contribute to the development of Cambodia and a more active employment cycle. Thanks to the efforts of the Cambodian government and related organizations, the number of sewing factories and number of persons employed in the industry have increased since the Center was opened. The export volume of sewn products has also greatly increased. With help from the Center, sewn products have developed into the country's largest export industry in both name and reality.



### History of the Garment Training Center and Details of the Training Class

May 1997	JUKI joined the first team of investigators dispatched to Cambodia (9 investigators) by the Japanese Ministry of International Trade and Industry.
September 1998	A delegation of 18 people from Cambodia's Ministry of Commerce and a Cambodian sewing association visited Japan at the invitation of the Ministry of International Trade and Industry.
December 1999	The garment training center was opened. Japanese government (the Ministry of International Trade and Industry), JUKI, and Japanese trading companies provided full support. <b>Details of JUKI's support</b> Dispatch of an instructor (four instructors on a rotating basis), provision of training materials (in Khmer) and sewing machinery (53 units in total), and so on
Up to 2008	<b>Details of the training conducted by JUKI</b> • Supervisor course: The students who take the course learn about quality, productivity, and methods to reliably meet delivery times, among other subjects. In total, 622 student participants were trained in 25 training courses. • Training of Cambodian instructors

Development of the sewing industry in Cambodia	1995	2007	2019
Number of sewing factories	48 companies	305 companies	603 companies
Number of sewing workers	27,900 people	346,162 people	750,000 people
Export volume of sewn products	2.8 billion yen	294.3 billion yen	1,060 billion yen



# Initiatives in the Community, Society, and Company

As a company with global operations, we provide opportunities for employment and growth regardless of nationality, race, gender, or age. We build good relationships with the communities and societies in which we operate, and we strive, as a good corporate citizen, to meet the needs and expectations of society.

## Donation of handmade masks to the Tama City Board of Education

JUKI has hand-sewn a total of 10,500 masks using JUKI industrial sewing machines and household sewing machines to help curb the public spread of the novel coronavirus infection. The masks were donated to 26 elementary and junior high schools in Tama City through the Tama City Board of Education. The handmade masks come in S, M, and L sizes. About 50 employees of the Ohtawara Plant took part in the sewing operation.



President Kiyohara (right) presented the donated masks to Mayor Abe of Tama City on May 7, 2020.

Production at the Ohtawara Plant

## Promotion of diversity

JUKI is promoting diversity management to reap the benefits of individual diversity, to welcome a wider range of workstyles, and to remain impartial to gender, age, and nationality. We aim to maximize our organizational performance by pursuing three strategies: "Promoting achievement by female employees," "Arranging our human resources globally," and "Promoting achievement by specialized employees." By setting quotas to employ a higher ratio of female managers in Japan, we aim to widen the fields of activity for female employees, enhance their job experience, and encourage them to develop professional skills.

### Female manager ratio



### Diversity of attributes

- Gender
- Nationality
- Age

### Diversity of a work style

- Place of work
- Type of a job
- On-duty hours

We will accept various human resources and work styles to create an environment where they can exercise their abilities to the full.

## Field trip hosting for elementary schoolchildren

In 2019 we hosted field trip visits from two schools in Tama-shi and one school in Yokote-shi to share the opportunity to see, experience, and learn about new things. The students learned about the work design and manufacturing operations conducted at various facilities in JUKI, saw how designs were applied to products, and experienced the first-hand use of sewing machines.



A study tour to the JUKI Head Office

A study tour to JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION

## Cross-cultural exchange

We received a visit from 15 international students from a not-for-profit organization called World Campus Tama in August of 2019. The visitors came from eight countries: the United States, Gabon, Slovenia, China, Czech Republic, Norway, Finland, and Belgium. After a study tour to the showroom, they enjoyed the experience of making drawstring pouches with Japanese-pattern fabrics using household sewing machines. The shared activity deepened the exchange of cultures between their countries on a personal level.



International students using sewing machines for the first time

## Our system for bringing up and educating human resources

Fully aware that human resources are the linchpin for company development, we at JUKI are developing educational supports to reinforce workplace skills and the exchange of human resources at home and abroad to advance globalization. To bring up human resources who can perform their business operations from various viewpoints, we offer specialized and functional education, OJT, and hands-on workshops, especially during an employee's first three years in the company.



## Design of an employee-friendly environment

We at JUKI are designing a system that will enable us to build environment that is friendly to various human resources, where they can exercise their abilities to the full.

JUKI introduced a childcare leave system in 1992 and a short-time working system in 2002. In 2014 we introduced a career course program that enables employees to acquire new skills even when they are not transferred to another office or seconded to an affiliated company, in consideration of the different circumstances they face. In 2019, we introduced a slide-work system that allows employees to shift their working hours without changing the fixed number of hours worked. By the way, in February of this year we opened the JUKI Akihabara Office, a satellite workspace that accommodates about 30 people, near Akihabara station.

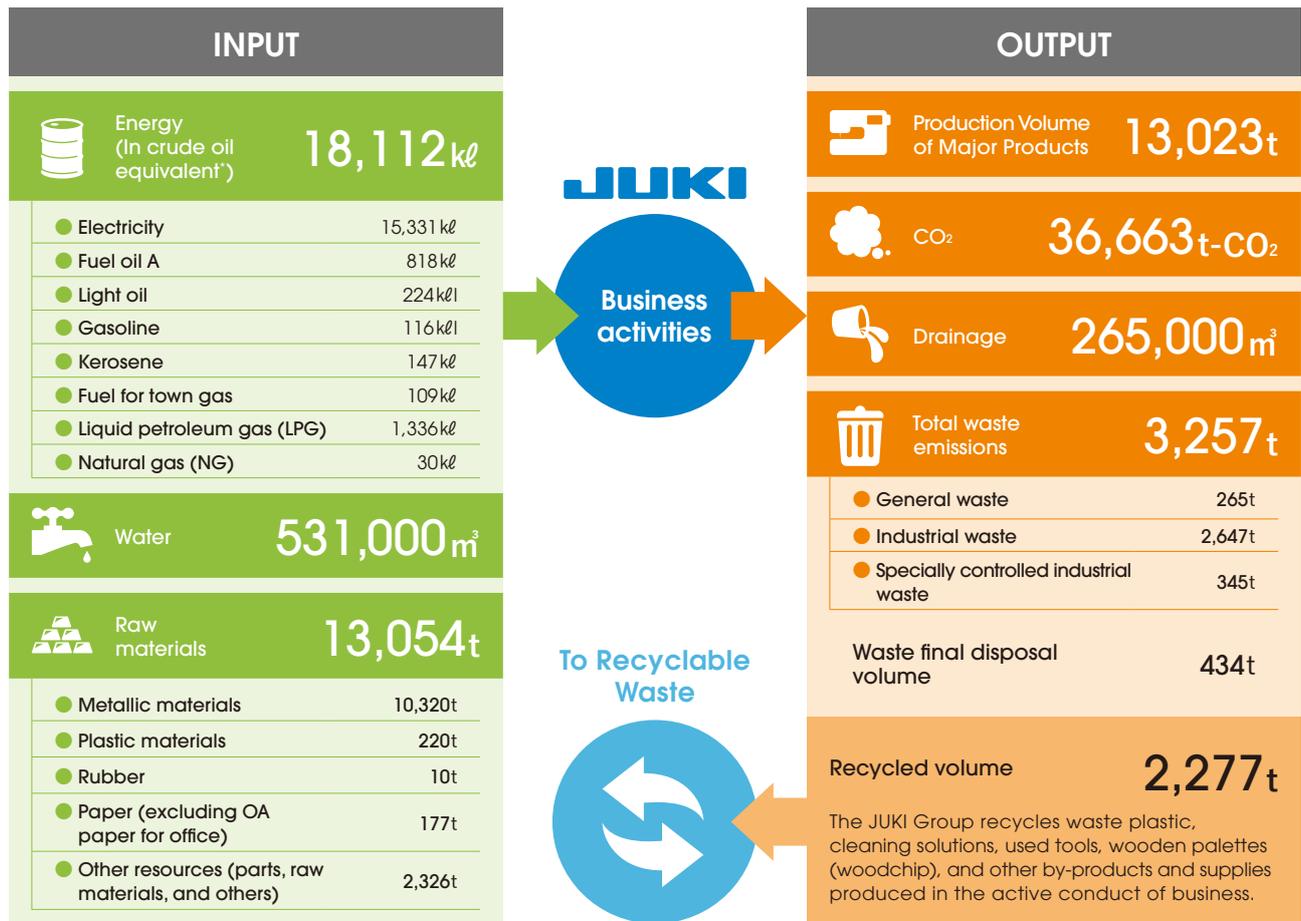


A satellite office in Akihabara(Japan)

## Improving Environmental Performance



We at JUKI have declared our commitment to environmental management and are fulfilling our responsibilities by complying with environmental regulations mainly to reduce greenhouse gases, prevent global warming, and fulfill our responsibility to society by considering the environmental effects of all of our operations. We are committed to improving our environmental performance in order to provide our customers with safe and environment-friendly products.



- **Electricity:** the electric power used in the factories and offices.
- **Fuel oil A:** used for operating equipment such as drying furnaces at painting facilities.
- **Light oil:** the fuel for trucks.
- **Gasoline:** the fuel for company-owned cars.
- **Kerosene:** the fuel for warm-air heating.
- **Fuel for town gas:** hot-water supply, cooking, heating, and air-conditioning
- **Liquid petroleum gas:** the fuel for regular-use electricity generators.
- **Natural gas:** fuel for cooking in kitchens or supplying hot water.
- **Metallic materials, plastic materials, and rubber:** materials for parts.
- **Paper:** cardboard for transporting and packing products and preventing the collapse of cargo and denting of products in the manufacturing processes.

- **CO<sub>2</sub>:** generated by the use of electricity and fuel.
- **General waste:** all waste discharged from homes and enterprises except industrial waste. Includes garbage from kitchens and other garbage discharged in business activities.
- **Industrial waste:** twenty kinds of waste set up by laws, rules, and regulations, among the wastes generated by business activities by entities such as factories. Includes abolished sand used for molds, pallets (made from wood pellets), cutting oil, and prototype machines for experiments and research.
- **Specially controlled industrial waste:** highly explosive, toxic, and infectious waste that may cause suffering to human health and the living environment. Especially strict management is crucial. The waste includes PCBs and the like contained in old condensers and other components.
- **Final disposal:** disposal of garbage at reclaimed disposal sites.
- **Recycle:** effective use of resources by recycling.

These figures summarize Fiscal Year 2019 data gathered from JUKI and its manufacturing group companies in Japan and overseas.

\* Crude oil equivalent: Conversion volume to crude oil using the heating value, for comparisons among different energy volumes using a common measure



# Eco-friendly efforts covering all parts of the product life cycle

We have established the green procurement activity guidelines and are making efforts to purchase parts in cooperation with partner companies. JUKI products that achieve low-level environmental burdens are certified as "JUKI ECO PRODUCTS." We understand that our eco-friendly efforts must cover all parts of the product life cycle.

## JUKI Group Green Procurement

Based on the "ECO MIND Declaration" established in 1998, the JUKI Group is working with its business partners to promote earth-conscious environmental conservation activities. Since 2011, we have adopted the industry-standard JAMP AIS survey tool for controlled substance management throughout the supply chain and have been developing related activities at domestic and overseas sites. We also analyze hazardous chemical substances when substances in general arrive at our manufacturing sites to strictly prevent their admixture with hazardous substances.

The first edition of the "JUKI Group Green Procurement Activity Guidelines" was established in August 2004. The revised ninth edition of the guidelines was established in December 2019 after a review to reflect revisions in law. The list of prohibited substances in the ninth edition has been changed to include only major substances. The details of other controlled substances have been changed to refer to the European Commission's website. Henceforth, the guideline will not have to be revised every time controlled substances are added to the European Commission's list.



\* "Green procurement guideline" is being introduced on the JUKI Website.

## ECO PRODUCTS (2019)



### Industrial Sewing Machines



#### LZ-2290C series

Semi-dry head, Digital Zigzag Stitch Sewing System

**ECO POINT** Stand-by power consumption reduced by 39.3%



#### LH-4500C series

Semi-dry head, 2-needle Lockstitch Sewing System

**ECO POINT** Stand-by power consumption reduced by 50.8%



#### DDL-8000A series

Direct drive, High-speed, 1-needle, Lockstitch Sewing Machine with an automatic thread trimmer

**ECO POINT** Stand-by power consumption reduced by 61.1%

### Household Sewing Machines



#### MO-114DN

Household Overlock Sewing Machine

**ECO POINT** Power consumption reduced by 13.5% \*Per basic performance

### Electronic Assembly Systems



#### RS-1R

Fast smart modular mounter

**ECO POINT** Fewer mounting screws and reduced waste of wrapping material



#### RX-7R

High-speed compact modular mounter

**ECO POINT** Power consumption reduced by 15.6% \*Per basic performance

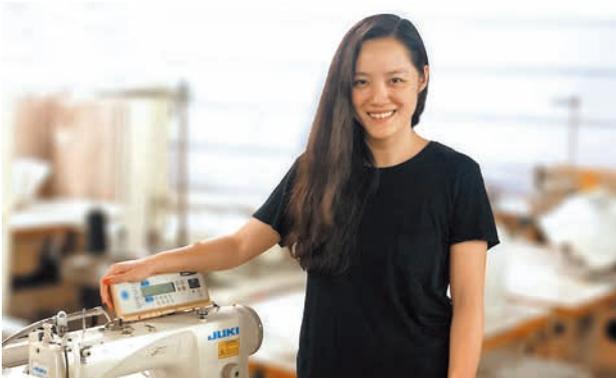
JUKI's SDGs

# JUKI's approach to the SDGs

## Efforts to Improve Customer Satisfaction

JUKI is working to enhance its support system for listening directly to the voice of the customer. JUKI continues to provide products and services that satisfy customers by increasing contact points with customers.

### Industrial Sewing Machines



Hempel International Group Co., Ltd.

<http://www.hempelgroup.com/>

President  
Nancy Gaomin

The approximately 6,000 employees in our company sew luxury ladies' wear for customers in markets all over the world.

Our keywords are (1) Quality first, (2) Quick Response, (3) Innovation, and (4) Social Responsibility. All of our employees engage in high-quality manufacturing by giving "quality" first priority. To achieve high-quality manufacturing, we define confident leadership, a complete understanding of the specifications and standards in every process, and prompt supply of materials as the core preconditions for factory management. We devote ourselves to following processes and supervise them with strict attention.

We have maintained a steady relationship with JUKI since we were established in 1992. So far we have purchased more than 10,000 JUKI sewing machines, or about 98% of the machines we own. JUKI products satisfy our high technical requirements and policy of pursuing high quality. We are also satisfied with JUKI's timely technical service and high production efficiency.

We expect that JUKI will cooperate in a smart factory and a platform we are building. We would like to succeed in growing up together with JUKI and further deepening our win-win relationship.

“Our “high-quality-first” philosophy is also applied to JUKI sewing machines.”



All of the employees in our company strive to achieve a higher awareness of quality, intoning a mantra we describe as "The Three Nevers": "Never accept a defective product," "Never manufacture a defective product, and "Never ship out a defective product."

### Household Sewing Machines



Pattern label

<http://www.pattern-label.com/>

Yuki Katagai

I had an interest in fashion and got a job in an apparel company. My experiences as a patternmaker and designer began by watching my mother work as dressmaker when I was a child. I began home sewing after I left the company, had a son, and decided to sew him a pair of denim pants. Now I sell patterns online, hold workshops, and write how-to books on sewing children's clothing.

I produce ladies' wear, menswear, children's wear, and bags. I now specialize in ready-made clothing and carefully finish all of the portions that can be seen from the outside. I also strive to bring out the "functional beauty" and "user-friendliness" of a sewing machine and cultivate production techniques I can share in my workshop.

I have always used sewing machines as a robust tool to produce garments in a short time. Now I work extensively with tailor-use sewing machines capable of sewing light to heavy-weight materials beautifully, with the same high quality and user-friendliness of all JUKI products. I think of my JUKI machines as irreplaceable partners.

I am now running workshops together with my husband and staff at my atelier. The joy I can share with our many workshop participants is endlessly rewarding. I would like to continue staging exciting events that we cannot put together alone, in collaboration with JUKI.

“My favorite JUKI sewing machines are the models designed to sew light to heavy-weight materials.”



"Pattern Label," a book of original patterns sold online with support from Yuki-san is very popular in sewing circles all over Japan. Yuki-san also published a popular how-to book on producing children's wear. About 200,000 copies have been sold so far.



## Electronic Assembly Systems



**Nidec Appliance Controls (Qingdao) Co., Ltd.**

<http://www.embraco.com.cn/>

**Project manager  
Zhu Xiaotuan**

Our company is a manufacturing compressors for freezing systems. We produce up to 37 million product units a year for sale and use in more than 80 countries.

Our Qingdao factory was established in 2007 and now employs a workforce of about 400. We make products every day with a firm dedication to high-efficiency production, high-level quality control, and strict adherence to delivery times as a factory manufacturing printed circuit boards, a linchpin component of EMBRACO products.

Four to five years ago our factory suffered a labor shortage just when other companies in our group were requesting that we further improve productivity. We then decided to adopt JUKI's odd-shaped component insertion machine to automate an insertion process formerly performed by hand.

This new equipment marked a major turning point for our production, reducing manpower by 70% in the insertion process and reducing the quality variation caused by humans.

We also improved the takt-time on the product line by 15% and saved 10% of the space in our factory. JUKI has provided us with various other useful services and supports since we adopted the equipment.

We expect JUKI to develop faster and more flexible equipment going forward. We would like JUKI to continue deepening its cooperative relationship with our company and supporting our production.

“All we need is generous support added to versatile and stable equipment.”



Our building

Our production site

## Group Business



**AIMECHATEC, Ltd.**

[https://www.ai-mech.com/wp\\_en/](https://www.ai-mech.com/wp_en/)

**Senior Engineer, Manufacturing Department  
Daisuke Hotta**

Our company develops and manufactures equipment to produce “flat-panel displays” used in wide-ranging products. Massive equipment weighing upwards of 60 tons, one of our product line-ups, processes parts with a micron-level of precision. Our company was split off from Hitachi, Ltd. in July 2016 as the newly born AIMECHATEC, Ltd.

The “AI” in our company name stands for Advanced and Innovative Technology. “Ai” in Japanese also means “love.” When written out in English in lower case, “ai,” these letters remind us of the love we have for both to our customers and products. We established a Process Development Center in July 2018 and continue to pursue further technical innovations and an expanded business domain.

Our outsourcing to the JUKI Ohtawara plant started with frame processing and has since expanded to the assembly of units. After training for about a month at our company, engineers from the JUKI Ohtawara plant built a jig and created a standard operation manual to improve the processes and ensure that everyone would perform high-quality assembly. I think that the certainty of JUKI's manufacturing capacity, together with JUKI's stoic determination to constantly find ways to improve no matter how well things are already working, enables JUKI to respond to the QCD we pursue. We expect that the collective strength of JUKI's production technology and quality assurance at the Ohtawara plant will help drive our next big leap to become a global company that pursues “Monozukuri” as uncompromisingly as JUKI does.

“We have the utmost confidence in JUKI's ability as a manufacturing company dedicated to the pursuit of “the world's best performance and quality.””



Process Development Center

High-precision Inkjet equipment

# JUKI's approach to the SDGs

## Approach to the Governance

We aim to achieve highly transparent management by enhancing our corporate governance system, ensuring thorough compliance, strengthening risk management, and maintaining close communications with our business partners, investors, and shareholders.

### Corporate governance

To secure the health and efficiency of management and respond to the trust of a stakeholder, JUKI regards the suitable maintenance and operation of its corporate governance system as one of the highest priority issues and strives to improve and enrich the corporate governance system.

JUKI also enhances management transparency through the disclosure of timely and accurate information.

JUKI's board of directors make decisions on statutory matters or important matters of management and successively supervise the status of business execution. JUKI has also introduced a Corporate Officer system to try to facilitate business execution and clarify responsibility.

The number of outside directors was changed to two persons out of six directors in total, in order to boost the management monitoring function for directors and the board of directors and strengthen the company's system to actively incorporate external voices in management.

A Corporate Strategy Committee has also been organized under the Board of Directors. The Directors, Corporate Officers and general managers of the departments in charge attend the meetings of the Committee and discuss basic management policies, strategies, etc. of the business group consisting of our company and group companies from various angles to enable more appropriate decision-making and operations.

A Risk Management Conference and Crisis Management Task Force have been set up as core parts of the risk management system.

An Internal Auditing Department has been set up as an organization for internal audits and has audited the business operations of all of JUKI's departments and each group company. The members of the Audit & Supervisory Board perform audits in accordance with the audit policy and work divisions set by the board, in cooperation with the Group Internal Auditing Department and accounting auditors. A Corporate Auditors Section has been established as an organization to assist the Audit & Supervisory Board Members.

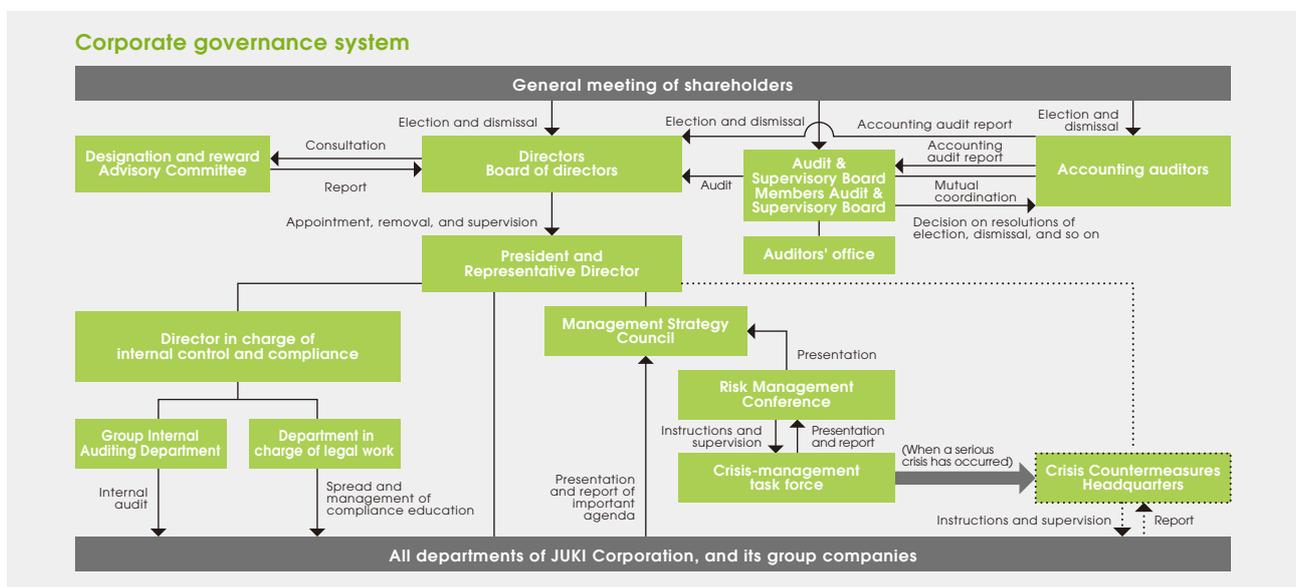
### Compliance

The JUKI Group positions compliance as a management foundation important for maintaining the Group's status as a business group that is widely trusted by customers and all of society and offers enough value to society to merit its existence. Corporate officers and employees of the group are asked to thoroughly behave in compliance with "The JUKI Group Employees' Standards of Conduct - 10 Articles" and to understand its explanations on legal compliance and common-sense behavior. JUKI and its group companies have a system for consulting with employees or answering their questions quickly at Compliance Helpline. The companies of the Group also manage important risks related to compliance at the Risk Management Conference.

### Risk management

The JUKI Group has set up a Risk Management Conference as a core part of its risk management system. The Risk Management Conference manages company-wide risks and important risks and directs the parties concerned to take remediation measures for risk reduction. The Group also sets up crisis-management task forces before and after crises (exteriorization of the risk) such as natural disasters, fires, explosions, and PL (product liability) incidents, and has a system to examine and execute its response measures.

When a serious crisis has occurred, a "Crisis Countermeasures Headquarters" is set up to take quick countermeasures.





# Directors, Audit & Supervisory Board Members and Corporate Officers

(as of April 1, 2020)

## Directors



### Akira Kiyohara

President and Representative Director and President and Representative Director of JUKI Automation Systems Corporation



### Shinsuke Uchinashi

Representative Director and Senior Managing Corporate Officer

In charge of the Global Cooperate Center (Financial Accounting Department), Business Center (Industrial Products & Systems Business Unit, Electronics Assembly & Systems Company, Group Business Company), and Production Center



### Toshimasa Miura

Director and Managing Officer

In charge of the Global Cooperate Center (Human Resources & General Affairs Department and Business Process Reform Department), Secretary's Office, Group Auditing Department, Group Quality Assurance Department, Internal Control and Compliance, and General Manager of the Human Resources & General Affairs Department



### Takeshige Hamasoto

Director and Managing Officer

\*in charge of the Business Center (Sewing Machinery & Systems Business Unit); General Manager of the Sewing Machinery & Systems Business Unit; \*in charge of the Business Center (Customer Support Business Company)\*



### Kazumi Nagasaki

Director (Outside)

(Independent Director)



### Yutaka Hori

Director (Outside)

(Independent Director)

## Audit & Supervisory Board Members



### Masahiko Suzuki

Audit & Supervisory Board Member (Full-time)



### Masato Tanaka

Audit & Supervisory Board Member (Outside)



### Junko Watanabe

Audit & Supervisory Board Member (Outside)  
(Independent Director)

## Managing Corporate Officer



### Hirofumi Gotoh

Managing Corporate Officer



### Yutaka Abe

Managing Corporate Officer



### Jirou Ishibashi

Managing Corporate Officer



### Katsumi Nihei

Managing Corporate Officer



### Satohiro Hama

Corporate Officer



### Minoru Nitta

Corporate Officer



### Kiyoshi Matsumoto

Corporate Officer



### Hiroshi Anzai

Corporate Officer



### Kunio Nukui

Corporate Officer



### Kenji Nakao

Corporate Officer



### Hiroki Konishi

Corporate Officer



### Takashi Nittou

Corporate Officer



### Toyoji Maeda

Corporate Officer



### Masanori Suzuki

Corporate Officer



### Yasuyuki Suzuki

Corporate Officer



### Toshiyuki Yamanaka

Corporate Officer



### Daizou Minami

Corporate Officer



### Shuuichi Nozaki

Corporate Officer

## Financial data

### Major financial data for two years (Consolidated)

(million yen)

	FY2018 FY ended December 31, 2018	FY2019 FY ended December 31, 2019
<b>Profit or loss situation (Fiscal year)</b>		
Net sales	112,064	99,169
(Ratio of overseas sales to net sales)	84.7%	82.9%
Gross profit	34,143	28,869
Operating income	9,148	3,838
Ordinary income	8,385	2,941
Profit attributable to owners of parent	6,640	1,763
Capital expenditure	2,721	2,907
Depreciation	2,525	3,063
R&D expenses	5,675	5,398
<b>Financial position (End of the fiscal year)</b>		
Total assets	119,121	114,715
Net assets	37,241	37,752
Shareholders' equity	36,529	37,037
<b>Financial index</b>		
Equity ratio	30.7%	32.3%
Return on equity (ROE)	19.2%	4.8%
<b>Cash flow situation (Fiscal year)</b>		
Cash flows from operating activities	2,682	3,054
Cash flows from investing activities	△ 2,390	△ 3,430
Free cash flows	292	△ 376
Cash flows from financing activities	967	△ 810
<b>Per share information</b>		
Earnings per share (EPS)	226.68 yen	60.20 yen
Dividend per share (DPS)	30 yen	25 yen
Book-value per share (BPS)	1,246.93 yen	1,264.28 yen
<b>Non-financial data</b>		
Number of employees	5,891	5,762
Ratio of overseas employees to total employees	57.8%	57.1%

# Consolidated balance sheet

(million yen)

	FY2018 FY ended December 31, 2018	FY2019 FY ended December 31, 2019
<b>Assets</b>		
Current assets		
Cash and deposits	7,324	5,987
Notes and accounts receivable - trade	33,465	30,461
Merchandise and finished goods	28,885	29,299
Work in process	4,796	3,798
Raw materials and supplies	9,835	8,363
Other	2,825	2,684
Allowance for doubtful accounts	△ 387	△ 383
Total current assets	86,744	80,210
Non-current assets		
Property, plant and equipment		
Buildings and structures, net	11,890	11,514
Machinery, equipment and vehicles, net	3,411	3,610
Tools, furniture and fixtures, net	1,053	1,079
Land	6,362	6,362
Lease assets, net	315	381
Construction in progress	107	329
Other	-	878
Total property, plant and equipment	23,141	24,154
Intangible assets	1,992	2,096
Investments and other assets		
Investment securities	2,563	3,888
Long-term loans receivable	0	0
Long-term prepaid expenses	260	226
Deferred tax assets	2,509	2,356
Net defined benefit asset	1,303	1,133
Other	2,007	2,006
Allowance for doubtful accounts	△ 1,402	△ 1,357
Total investments and other assets	7,242	8,254
Total non-current assets	32,376	34,505
Total assets	119,121	114,715

(million yen)

	FY2018 FY ended December 31, 2018	FY2019 FY ended December 31, 2019
<b>Liabilities</b>		
Current liabilities		
Notes and accounts payable - trade	11,145	7,120
Electronically recorded obligations-operating	5,140	2,877
Short-term loans payable	35,901	37,211
Lease obligations	101	123
Account payable - other	740	1,239
Accrued expenses	3,557	3,279
Income taxes payable	1,115	452
Provision for bonuses	38	28
Notes payable - facilities	191	527
Forward exchange contract	-	240
Other	1,335	1,667
Total current liabilities	59,266	54,769
Non-current liabilities		
Long-term loans payable	16,153	15,400
Lease obligations	223	264
Provision for directors' retirement benefits	68	61
Net defined benefit liability	5,582	5,251
Other	585	1,216
Total non-current liabilities	22,613	22,194
Total liabilities	81,880	76,963
Net assets		
Shareholders' equity		
Capital stock	18,044	18,044
Capital surplus	2,035	2,035
Retained earnings	19,610	20,494
Treasury shares	△ 607	△ 607
Total shareholders' equity	39,082	39,966
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	458	468
Foreign currency translation adjustment	△ 2,973	△ 3,437
Remeasurements of defined benefit plans	△ 38	40
Total accumulated other comprehensive income	△ 2,552	△ 2,929
Non-controlling interests	711	714
Total net assets	37,241	37,752
Total liabilities and net assets	119,121	114,715

## Financial data

### Consolidated statements of income

	(million yen)	
	FY2018 FY ended December 31, 2018	FY2019 FY ended December 31, 2019
Net sales	112,064	99,169
Cost of sales	77,921	70,300
Gross profit	34,143	28,869
Selling, general and administrative expenses	24,995	25,030
Operating income	9,148	3,838
Non-operating income		
Interest income	44	45
Dividend income	157	154
Commission fee	202	195
Reversal of doubtful allowance for receivables	228	79
Other	473	376
Total non-operating income	1,106	852
Non-operating expenses		
Interest expenses	805	796
Foreign exchange losses	980	874
Other	82	77
Total non-operating expenses	1,868	1,749
Ordinary income	8,385	2,941
Extraordinary income		
Gain on sales of non-current assets	17	11
Total extraordinary income	17	11
Extraordinary losses		
Loss on sales and retirement of non-current assets	50	16
Loss on valuation of investments in capital	-	5
Total extraordinary losses	50	22
Income before income taxes and minority interests	8,353	2,930
Income tax - current	1,749	977
Income tax - deferred	△ 175	164
Total income taxes	1,573	1,141
Net income	6,780	1,789
Profit attributable to non-controlling interests	139	25
Profit attributable to owners of parent	6,640	1,763

### Consolidated statements of comprehensive income

	(million yen)	
	FY2018 FY ended December 31, 2018	FY2019 FY ended December 31, 2019
Net income	6,780	1,789
Other comprehensive income		
Valuation difference on available-for-sale securities	△ 559	9
Foreign currency translation adjustment	△ 1,028	△ 474
Re-measurements of defined benefit plans	△ 247	79
Total other comprehensive income	△ 1,834	△ 385
Comprehensive income	4,945	1,403
(Comprehensive income attributable to)		
Comprehensive income attributable to owners of parent	4,829	1,386
Comprehensive income attributable to non-controlling interests	115	17

# Consolidated statements of cash flows

(million yen)

	FY2018 FY ended December 31, 2018	FY2019 FY ended December 31, 2019
<b>Cash flows from operating activities</b>		
Income before income taxes and minority interests	8,353	2,930
Depreciation	2,525	3,063
Increase (Decrease) in allowance for doubtful accounts	△ 199	△ 38
Increase (Decrease) of provision for bonuses	21	△ 9
Increase (Decrease) of net defined benefit liability	367	△ 54
Increase (Decrease) of net defined benefit assets ( △ : increase)	△ 193	4
Interest and dividends income	△ 201	△ 200
Interest expenses	805	796
Foreign exchange losses (gains)	△ 28	3
Loss (gain) on sales and retirement of property, plant and equipment and intangible assets	32	5
Decreased (increase) in notes and accounts receivable-trade	△ 2,153	2,578
Decrease (increase) in inventories	△ 8,035	1,361
Increase (Decrease) in notes and accounts payable	2,515	△ 6,159
Increase (Decrease) in notes discounted	-	12
Other, net	747	1,097
<b>Subtotal</b>	<b>4,557</b>	<b>5,392</b>
Interest and dividends income received	201	201
Interest expenses paid	△ 805	△ 799
Income taxes (paid) refund	△ 1,271	△ 1,740
<b>Net cash provided by (used in) operating activities</b>	<b>2,682</b>	<b>3,054</b>
<b>Cash flows from investing activities</b>		
Purchase of property, plant and equipment and intangible assets	△ 2,633	△ 2,262
Proceeds from sales of property, plant and equipment and intangible assets	148	48
Purchases of investment securities	△ 1	△ 1,234
Collection of loans receivable	1	0
Other, net	94	17
<b>Cash flows from investing activities</b>	<b>△ 2,390</b>	<b>△ 3,430</b>
<b>Cash flows from financing activities</b>		
Net increase (decrease) in short-time loans payable	2,377	838
Proceeds from long-term loans payable	6,754	8,690
Repayments of long-term loans payable	△ 6,928	△ 8,845
Purchase of treasury stock	△ 0	△ 0
Cash dividends paid	△ 1,022	△ 877
Repayments of sale and installment back payables	△ 32	△ 1
Others, net	△ 179	△ 614
<b>Net cash provided by (used in) financing activities</b>	<b>967</b>	<b>△ 810</b>
Effect of exchange rate change on cash and cash equivalents	△ 293	△ 138
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>965</b>	<b>△ 1,324</b>
Cash and cash equivalents at beginning of period	6,335	7,301
<b>Cash and cash equivalents at end of period</b>	<b>7,301</b>	<b>5,976</b>

# Corporate history

We together step toward our globalization “from Japan to 185 countries all over the world.”  
We have the backing of a history of innovative products and responding to the needs of customers as a “technology development company” since our establishment in 1938.

1940s

1950s

1960s

1970s

1980s

## TOKYO JUKI INDUSTRIAL CO., LTD.

**1938**  
Machinery manufactures in Tokyo invest to form “Tokyo Juki Manufacturers Association.”

**1947**  
The first machine of the Household Sewing Machines is completed. (HA-1)

**1953**  
The company enters the Industrial Sewing Machines market and releases the first machine. (DDW-II)

**1957**  
The company wins the Imperial Invention Award for the invention of a single-axis rotational thread take-up lever.

**1961**  
Manufacture and sale of electronic computer peripherals start.

**1964**  
The company's stock is listed on the First Section of the Tokyo Stock Exchange.

**1970**  
JUKI's first overseas sales company (present JUKI (HONG KONG) LTD.) is founded in Hong Kong.

**1972**  
A sales company (called JUKI (EUROPE) GMBH), a stronghold in Europe is founded in West Germany.

**1981**  
The headquarters of the Industrial Sewing Machines Business wins the Deming Prize (Deming Application Prize for Division).

**1987**  
The company enters a field of SMT (Surface Mount Technology) for an Industrial Equipment Business. The manufacturing and sales of the first machine starts. (KP-350)



**1945**  
The manufacturing of sewing machines is permitted.

**1971**  
The “OHTAWARA PLANT,” a manufacturing plant for the Industrial Sewing Machines is completed in Ohtawara-shi, Tochigi Prefecture.

**1974**  
A sales company (present JUKI AMERICA, INC.) is founded in the U.S.

**1982**  
A branch office of JUKI (HONG KONG) LTD. is founded in Singapore.

**1988**  
The company name is changed to JUKI CORPORATION.



## History of household sewing machines

**1947**  
HA-1

**1953**  
rotalix  
HW-62B

**1968**  
Knitting machine with simultaneous two-color knitting device  
K-811

**1977**  
Frou Frou  
HZL-11

**1978**  
FLORA  
HZL-550

**1985**  
The Misin  
HZL-7000

**1990**  
SPUR 90  
TL-90

**1993**  
ALLOWNE  
HZL-008

**1997**  
jupre  
HZL-009



## History of industrial sewing machines

**1953**  
Lockstitch sewing machine  
DDW-II

**1964**  
Safety stitch machine  
MO-357  
Overlock sewing machine  
MO-352

**1969**  
Lockstitch, automatic thread trimmer sewing machine  
DDL-555-II

**1979**  
Lockstitch button sewing machine  
LK-982

**1979**  
Automatic welt stitching machine  
APW-116

**1986**  
Juki Hanger System  
JHS-201

**1987**  
Quick Response Sewing System  
QRS

**1996**  
Single-thread, chainstitch, button sewing machine with a fraying prevention function  
MB-377



## History of electronics and electronic assembly systems

**1964**  
Card puncher  
H-163

**1976**  
Line printer  
5240

**1982**  
Data entry device, Chinese character key-to-floppy  
1860

**1988**  
Entry-level machine (introduction to machine learning)  
KP-350

**1997**  
High-speed chip mounter  
KE-750  
High-speed general-purpose mounter  
KE-760



# 1990s

# 2000s

# 2010s

# 2020s

## JUKI CORPORATION

**1990**  
JUKI's first overseas factory is founded in Shanghai, China jointly with another company. (SHANGHAI JUKI SEWING MACHINE CO., LTD., a manufacturing plant for the household sewing machines)

**1995**  
A company controlling the sales in Asia is founded in Singapore. (Present JUKI SINGAPORE PTE. LTD.)

**1995**  
A company manufacturing and procuring the parts for the industrial sewing machines is founded in China (present JUKI (NINGBO) PRECISION Co., Ltd.)

**2000**  
A wholly owned manufacturing plant for the Industrial Sewing Machines is founded in Shanghai, China. (JUKI (SHANGHAI) INDUSTRIAL CO., LTD.)

**2005**  
An office controlling the sales in Europe is founded in Poland. (JUKI CENTRAL EUROPE SP.ZO.O)

**2009**  
The company moves to the new company building built in Tsurumaki, Tama-shi, Tokyo. (December)

**2013**  
The company makes the department for Industrial Equipment independent and founds JUKI AUTOMATION SYSTEMS CORPORATION.

**2017**  
Three companies in Akita Prefecture are integrated into a company called "JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION"

**2019**  
Investment in ESSEGI AUTOMATION S.r.l.

**2020**  
JUKI (SHANGHAI) INDUSTRIAL CO., LTD. merged with JUKI (NINGBO) PRECISION CO., LTD. (JUKI (SHANGHAI) INDUSTRIAL CO., LTD. remains as the surviving company.)



**2014**  
JUKI AUTOMATION SYSTEMS CORPORATION merges with the business department for SMT Equipment of SONY EMCS.



**1994**  
A sales company is founded in China. (TOKYO JUKI INTERNATIONAL TRADE (SHANGHAI) CO., LTD.)

**1995**  
A manufacturing plant for the industrial sewing machines is founded in Langfang, China jointly with another company. (JUKI XINXING INDUSTRIAL CO., LTD.)

**1997**  
The company wins an award from the Japan Society for the Promotion of Machine Industry for the development of a "bobbin thread automatic feeder" used for the Industrial Sewing Machines.

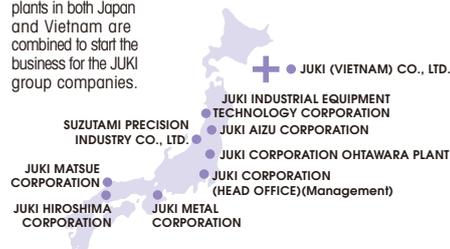
**2001**  
A fully owned subsidiary controlling a Chinese area is founded. (JUKI (CHINA) CO., LTD.)



**1995**  
A parts factory for the industrial sewing machines is founded in Vietnam. (Present JUKI (VIETNAM) CO., LTD.)



**2015**  
Manufacturing capabilities of manufacturing plants in both Japan and Vietnam are combined to start the business for the JUKI group companies.



**2001**  
Jureve HZL-010

**2003**  
Computer Sewing Machine HZL-E60

**2005**  
Overlock Sewing Machine RS-10

**2009**  
Exceed Quilt & Pro Special HZL-F600

**2013**  
Overlock Sewing Machine Easy Threader MO-1000

**2015**  
LONG ARM QUILTING MACHINE frame type TL-2200QVP

**2017**  
HY-SPEC SL-700EX

**2018**  
Computer-controlled Household Sewing Machine Kirei HZL-NX7

**2018**  
Long-arm Sewing Machine J-350QVP

**2019**  
Overlock Sewing Machine MO-114DN



**1996**  
Dry-head, lockstitch, automatic thread trimmer sewing machine DDL-5700N-7

**2000**  
Dry-head, electronic, single-thread, chainstitch button sewing machine MB-1800S

**2003**  
Dry-head overlock sewing machine MO-6100D

**2004**  
Single-thread, chainstitch, button-neck-wrapping sewing machine AMB-289

**2007**  
Automatic welt stitching machine (a diagonal pocket type) APW-896

**2016**  
Digital, lockstitch, automatic thread trimmer sewing machine DDL-9000C

**2017**  
1-needle, CNC sewing machine AMS-251

**2018**  
Lockstitch Sewing Machine with Automatic Thread Trimming (Voice guidance) DDL-8000A

**2019**  
Sewing Management System Software JaNets

**2019**  
2-needle, Lockstitch Needle Feed Sewing System LH-4500C



**2000**  
High-speed chip mounter KE-2010  
High-speed general-purpose mounter KE-2020

**2008**  
High-speed modular mounter FX-3

**2011**  
Post-process mounter multi-task platform JM-10

**2013**  
High-speed compact modular mounter RX-7

**2014**  
Automated warehouse intelligent storage management system ISM2000

**2017**  
High-speed smart modular mounter RS-1

**2018**  
3D PWB Visual Inspection Machine (AOI) RV-2-3DH

**2018**  
SMT Integration System JaNets

**2018**  
Multi-task platform JM-100

**2019**  
High-Speed Smart Modular Moulder RS-1R



# JUKI's global bases

(as of June 1, 2020)



1 4 1 2 1 2  
 JUKI CORPORATION  
 JUKI AUTOMATION SYSTEMS CORPORATION  
 JUKI SALES (JAPAN) CORPORATION  
 JUKI GENERAL SERVICE CORPORATION  
 JUKI Household Product Customer Center Corporation

4 3  
 JUKI CORPORATION OHTAWARA PLANT

1 2  
 JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION

7 5  
 JUKI MATSUE CORPORATION

8 6  
 JUKI (SHANGHAI) INDUSTRIAL CO., LTD.

9  
 JUKI XINXING INDUSTRY CO., LTD.

## PRODUCTION BASES

Japan		
1	JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION	Yokote-shi, Akita Manufacturing of chip mounter etc. Manufacturing of units and parts related to the group business
2	JUKI AIZU CORPORATION	Kitakata-shi, Fukushima Manufacturing of parts with lost-wax and MIM process. Manufacturing of parts related to the group business
3	SUZUTAMI PRECISION INDUSTRY CO., LTD.	Nagaoka-shi, Niigata Manufacturing of parts for industrial sewing machines, etc. Manufacturing of parts related to the group business
4	JUKI CORPORATION OHTAWARA PLANT	Ohtawara-shi, Tochigi Manufacturing of industrial sewing machines Manufacturing of parts related to the group business
5	JUKI METAL CORPORATION	Odaicho, Mie Manufacturing of pig-iron mold casting etc. Manufacturing of parts related to the group business
6	JUKI HIROSHIMA CORPORATION	Miyoshi-shi, Hiroshima Manufacturing of die, press processing parts, etc., Manufacturing of parts related to the group business
7	JUKI MATSUE CORPORATION	Matsue-shi, Shimane Manufacturing of industrial sewing machines etc. Manufacturing of products and parts related to the group business

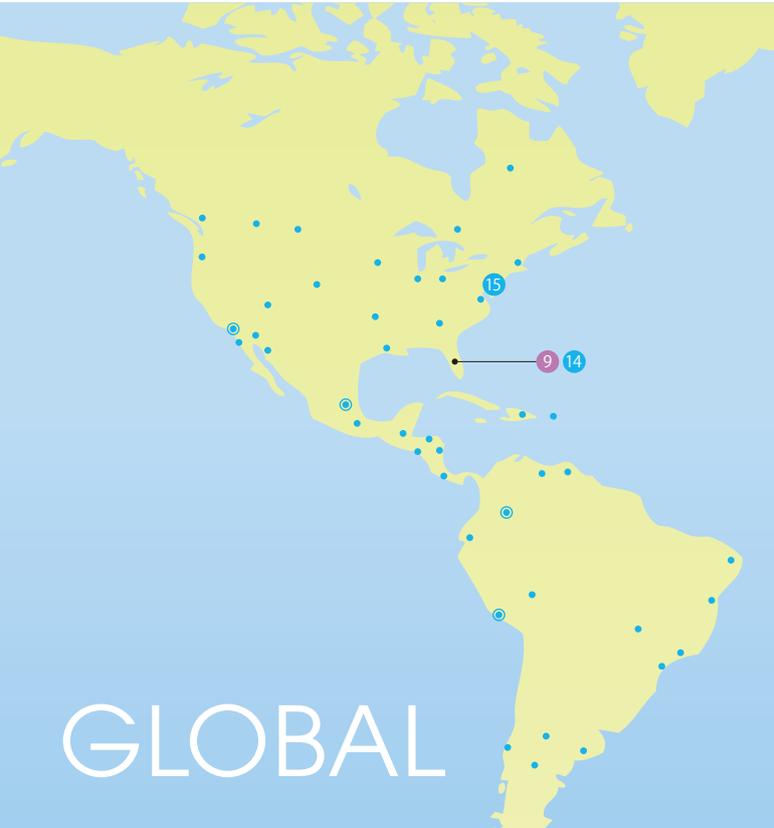
Global		
8	JUKI (SHANGHAI) INDUSTRIAL CO., LTD.	Shanghai, China Manufacturing of industrial sewing machines etc. Manufacturing of feeders for chip mounters
9	JUKI XINXING INDUSTRY CO., LTD.	Hebei, China Manufacturing of industrial sewing machines etc.
10	SHANGHAI JUKI SEWING MACHINE CO., LTD.	Shanghai, China Manufacturing of household sewing machines etc.

11	JUKI (VIETNAM) CO., LTD.	Ho Chi Minh, Vietnam Manufacturing of industrial sewing machines etc. Manufacturing of parts with lost-wax production Manufacturing of parts related to the group business
12	ESSEGI AUTOMATION S.r.l.	Vicenza, Italy Manufacture of automated warehouses

## DEVELOPMENT BASES

Japan		
1	JUKI CORPORATION	Tama-shi, Tokyo Product development and system development of industrial sewing machines, household sewing machines, chip mounters, etc.
2	JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION	Yokote-shi, Akita Development of Chip mounters, Electronic equipment, etc., and development of products related to the Group Business.
3	JUKI CORPORATION OHTAWARA PLANT	Ohtawara-shi, Tochigi Development of industrial sewing machines.
4	JUKI AUTOMATION SYSTEMS CORPORATION	Tama-shi, Tokyo Development of Chip mounters, etc.
5	JUKI MATSUE CORPORATION	Matsue-shi, Shimane Development of industrial sewing machines.

Global		
6	JUKI (SHANGHAI) INDUSTRIAL CO., LTD.	Shanghai, China Development of industrial sewing machines
7	JUKI (VIETNAM) CO., LTD.	Ho Chi Minh, Vietnam Development of industrial sewing machines
8	JUKI CENTRAL EUROPE SP.ZO.O.	Warsaw, Poland Development of industrial sewing machines
9	JUKI AMERICA, INC.	FL, U.S.A. Development of industrial sewing machines.
9	ESSEGI AUTOMATION S.r.l.	Vicenza, Italy Development of automated warehouses



# GLOBAL



# JAPAN



10 SHANGHAI JUKI SEWING MACHINE CO., LTD.    
 11 7 JUKI (VIETNAM) CO., LTD.    
 3 4 JUKI (CHINA) CO., LTD. TOKYO JUKI INTERNATIONAL TRADING (SHANGHAI) CO., LTD.    
 6 JUKI SINGAPORE PTE. LTD.    
 8 12 JUKI CENTRAL EUROPE SP.ZO.O.    
 9 14 JUKI AMERICA, INC.    
 15 JUKI AUTOMATION SYSTEMS INC.

## MAIN SALES BASES

Japan			
<span>1</span>	JUKI AUTOMATION SYSTEMS CORPORATION	Tama-shi, Tokyo	Sales of Chip mounters, etc.
<span>2</span>	JUKI SALES (JAPAN) CORPORATION	Tama-shi, Tokyo	Sales of industrial sewing machines, household sewing machines, etc.
⊙	JBranch Sales Offices, Service Centers, and others		

Global			
<span>5</span>	JUKI (CHINA) CO., LTD.	Shanghai, China	Sales of industrial sewing machines, household sewing machines, etc., Holding company, Comprehensive administration of holding company and Chinese bases.
<span>4</span>	TOKYO JUKI INTERNATIONAL TRADING (SHANGHAI) CO., LTD.	Shanghai, China	Sales of chip mounters, etc.
<span>5</span>	JUKI (HONG KONG) LTD.	Hong Kong, China	Sales of industrial sewing machines, etc.
<span>6</span>	JUKI SINGAPORE PTE. LTD.	Bendemeer, Singapore	Sales of industrial sewing machines, household sewing machines, etc. (Major bases: 8 countries, including Indonesia, Cambodia, and Myanmar)
<span>7</span>	JUKI (THAILAND)CO.,LTD.	THAI, Bangkok	Sales of industrial sewing machines, etc.
<span>8</span>	JUKI MACHINERY BANGLADESH LTD.	Dhaka, Bangladesh	Sales of industrial sewing machines, etc.
<span>9</span>	JUKI MACHINERY VIETNAM CO., LTD.	Ho Chi Minh, Vietnam	Sales of industrial sewing machines, household sewing machines, etc.
<span>10</span>	JUKI INDIA PVT.LTD.	Bangalore, India	Sales of industrial sewing machines, chip mounters, etc.
<span>11</span>	JUKI SMT ASIA CO., LTD.	Chan Buri, Thailand	Sales of chip mounters, etc.
<span>12</span>	JUKI CENTRAL EUROPE SP.ZO.O.	Warsaw, Poland	Sales of industrial sewing machines, household sewing machines, etc. (Other bases: Turkey, Russia, and Belarus)

<span>13</span>	JUKI ITALIA S.P.A.	Milan, Italy	Sales of industrial sewing machines, household sewing machines, etc.
<span>14</span>	JUKI AMERICA, INC.	FL, U.S.A.	Sales of industrial sewing machines, household sewing machines, etc.
	(Other bases: Peru and Mexico)		
<span>15</span>	JUKI AUTOMATION SYSTEMS INC.	NC, U.S.A.	Sales of chip mounters, etc.
<span>16</span>	JUKI AUTOMATION SYSTEMS GmbH.	Nuremberg, Germany	Sales of chip mounters, etc.
<span>17</span>	ESSEGI AUTOMATION S.r.l.	Vicenza, Italy	Sale of automated warehouses
⊙	JUKI's own Branch Offices, Sales Offices, Service Centers, and others		
●	Major distributors		

## OTHER BASES

Japan			
<span>1</span>	JUKI GENERAL SERVICE CORPORATION	Tama-shi, Tokyo	Service of facility management, renovation and printing, etc.
<span>2</span>	JUKI Household Product Customer Center Corporation	Tama-shi, Tokyo	Maintenance services for Household Sewing Machines

## Number of Major bases

	Japan	Global	Total
● PRODUCTION	7	5	12
● DEVELOPMENT	5	5	10
● SALES	2	15	17
● OTHER	2	0	2

# Company outline and stock information

(as of December 31, 2019)

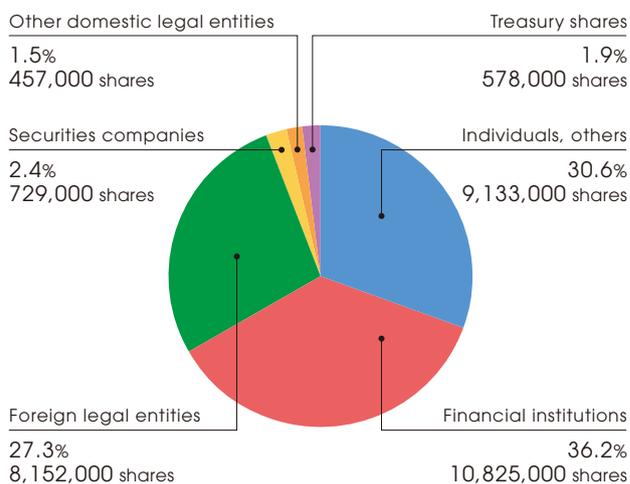
## CORPORATE SUMMARY

<b>Trade name</b>	JUKI CORPORATION
<b>Established</b>	December 15, 1938
<b>Directors</b>	Representative Director Akira Kiyohara
<b>Paid-in capital</b>	¥18,044 million
<b>Major business office</b>	<b>Head office :</b> 2-11-1 Tsurumaki, Tama-shi, Tokyo 206-8551 Japan Tel: 81-42-357-2211  <b>Ohtawara plant :</b> 1863 Kitakanemaru, Ohtawara-shi, Tochigi 324-0011 Japan Tel: 81-287-23-5111
<b>Fiscal year ending</b>	December 31
<b>Ordinary general meeting of shareholders</b>	March
<b>Number of employees</b>	5,762 (on a consolidated basis), 907 (on a non-consolidated basis)
<b>Number of affiliated companies</b>	26

## STOCK INFORMATION

<b>Total number of authorized shares</b>	80,000,000 shares
<b>Total number of issued shares</b>	29,874,179 shares
<b>Total number of shareholders</b>	11,349
<b>Listed on</b>	The first section of the Tokyo Stock Exchange (margin trading issue)
<b>Securities code</b>	6440
<b>Shareholder registry administrator</b>	Mizuho Trust & Banking Co., Ltd.

## STOCK DISTRIBUTION STATUS BY OWNER TYPE



### Edit policy

The JUKI Corporate Report 2020 is the combination of a company brochure and a report describing JUKI's approach to the SDGs. The report you have received contains rich content to help all of JUKI's customers, shareholders, investors, and other stakeholders understand the business and value creation of the JUKI Group.

### Disclaimer regarding forward-looking statements

This material contains forward-looking statements concerning future plans, target, strategies and assumptions of JUKI CORPORATION and its consolidated subsidiaries in light of the economic, financial and other data currently available when the material was prepared. Furthermore, they are subject to a number of risks and uncertainties. JUKI therefore wishes to caution readers that actual results may differ materially from those projected in such forward-looking statements.

***Mind & Technology***



# JUKI

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