JUKI Corporate Report 2017



# Evolving technology and creative minds JUKI Smart Solutions

JUKI supports people's dreams and lifestyles with the most advanced manufacturing (Monodzukuri).

JUKI has achieved continuous growth by offering the highest quality products and services to the world's industries ever since its establishment in 1938. JUKI's customer-first slogan, "Everything we do is for the customer," expresses the passion that has driven development for 80 years.

In addition to developing products to spur innovation, we help create value for the customer by offering solutions to raise the productivity of the customer's factory lines by leaps and bounds. JUKI will press ahead in its challenge to innovate while sticking to its DNA of evolution and reformation as a global company serving customers in 180 countries all over the world.



### **Business domains**

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#### JUKI's businesses

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#### 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 180 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 topselling 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 production factories by providing products, systems, development capacity and manufacturing capacity while utilizing "manufacturing (Monodzukuri) capabilities" developed over many years.

#### Electronic Assembly Systems Business



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

This business responds to diversified production needs by proposing line solutions in pursuit of productivity and efficiency focused on SMT (Surface Mounting Technology) equipment for electronic circuit boards production systems or related products such as printing machines and inspection machines.

#### **Customer Business**



A business that provides repair support and parts supply for JUKI products around the world

This business supplies consumables and spare parts for industrial sewing machines used in 180 countries, in addition to electronic assembly systems and after-sales services to help customers use their JUKI products in more efficient and streamlined environments.

### Group Business

Group Business (contracted development and manufacturing business)



Contracted

Manufacturina

Electronic Tools

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.

### Products made using JUKI products

# JUKI machines and systems make everyday products the public knows.





# Akira Kiyohara

President

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### Interview with the president

### To expand the corporate value of both the customer and JUKI through innovative business deployment around the world and grow together with the customer, we do something new and important as follows.

JUKI is now working at full swing to enhance its corporate value under "Value up 2022," the Medium-Term Management Plan started up in January of this year. Six young employees interviewed Mr. Kiyohara, JUKI's president, about JUKI's mid- and long-term vision and growth strategy.



Interviewers

The future-oriented mindset of JUKI's young employees sets the direction for the Medium-Term Management Plan.

### —JUKI's consolidated business performance in fiscal 2016 recorded decreased sales and profit on a year-onyear basis. What are your thoughts about the business environment and JUKI's performance?

Rising geopolitical risk around the world and the sudden rise of the yen have had negative influences on the sewing industry and electronic assembly systems market, the two mainstay segments for JUKI. Within JUKI itself, we were unable to release a new product as planned and several of our sales companies and distributors needed time to make the necessary conversions for a JUKI solution business. These were the main causes behind our decreased sales and profit. Various problems to be solved for the future became obvious in the past year.

#### —On a brighter note, inventory and interest-bearing debt both decreased, marking progress for the company fiscally and managerially. Would you please comment on these outcomes?

There was much positive performance in fiscal 2016, as well. First, we succeeded in substantially reducing interest-bearing debt on a year-on-year basis. We made efforts to shrink inventory through agile control of production volumes at our production bases, fine ordering management, and practical use of supply-chain management. So JUKI's financial strength became firmer than ever before.

Second, the expansion of our business domains through the launch of new products and services

generated good responses. We advanced in the building of a business portfolio that quickly meets the needs of the times, particularly in expanding sales of our automatic warehouses in the electronic assembly systems market and expanding the non-apparel field in sewing markets. Both our group business and parts business are tackling projects seriously and continue to grow steadily following the sewing machinery business and the electronic assembly sytems business.

Third, JUKI launched an automation project including a robot and had one of its innovative proposals accepted in the market. A workforce of young, midlevel, and expert developers ready to take on new challenges is in place and ready to go.

And fourth, national staff (overseas local staff) is playing an active part. Most prominently, the national staff at JUKI SINGAPORE is working borderlessly on the front lines to expand possibilities for business. I believe these fruits will contribute greatly to JUKI's future growth.

# — The "structure of management" changed in fiscal 2017. Would you please tell us the details of the change and the purposes behind it?

We changed the structure of management at the start-up of the current Medium-Term Management Plan in order to respond more promptly and accurately to changes in the business environment and establish a business structure that can bring in high profits continuously. Motoki Hirayama, joined in 2013 Naoki Kinebuchi, joined in 2010 Shouko Ringe, joined in 2013 Representative director and President, Akira Kiyohara

In our first change, focused on business segments, each former business was reorganized to become either the "Sewing Machinery & System Business" or the "Industrial Machinery & System Business." The new grouping in our organization clearly reflects the new "attitudes" and "strategies" of our segments both internally and externally. This fits the evolution of our sales style from conventional sales of single units to new sales through line solution proposals encompassing a system and explains the "& System" added to the segment name.

On that basis, both the Sewing Machinery & System Business and the Industry Machinery & System Business have a mission to aggressively deploy smart solutions useful for labor-saving and manpower saving for customers by making full use of resources such as products, equipment, and human resources seamlessly.

In our second change, we started a new expert employee program intended for rehired employees, contract employees, and part-time employees as a part



of a course-directed personnel system. As experts, young employees, female employees, and others more eagerly pursue work-life balance or "work in harmony with life," JUKI would like to accurately grasp the differences between the job consciousness and life environments of employees in order to arrange working environments where abilities in work can be shown to the full.

#### —JUKI is now working on "Value up 2022 Phase I," the Medium-Term Business Plan covering the three-year period from fiscal 2017 to 2019. Would you please tell us the background and aims in the planning process?

When drawing up the "Value up 2022," we had young employees who support the next generation take part from a study stage. The young employees had the idea of setting goals over a six year horizon (2022) and setting policies to be practiced over a three-year time frame. Hence, we decided shorter-term visions for fiscal 2019 and 2022" and a long-term vision of becoming "a global and innovative manufacturing (Monodzukuri) company that survives in the 21st century." First, we adopted the vision of becoming "a manufacturing (Monodzukuri) company that enhances corporate value together with customers through products and services" by fiscal 2022, six years later. On that basis, we decided to adopt the vision of becoming "a company that continues to provide high-quality products and services selected by customers" as the "Value up 2022 Phase I" vision for fiscal 2019. Under this vision, the current Medium-Term Management Plan up to fiscal 2019 plots out mutual growth for JUKI and its customers by delivering "good impressions and peace of mind" to customers all over the world.

# —I feel the enthusiasm of Mr. Kiyohara, our president, embodied in the respective visions and "JUKI Code of Conduct."

From JUKI's establishment in 1938 up to the present, we have continued to develop both as a global company

Tomomi Sugiyama, joined in 2011 Takeshi Maruyama, joined in 2009 Kahori Shimoda, joined in 2012

that makes the world its stage and as a technicaldevelopment company that innovates in various domains. JUKI's firm DNA as both a global company and an innovative company that has developed breakthrough products such as JUKI's "automatic thread trimmer sewing machine" serves as a driving force for growth.

We firmly maintain a global and innovative business commitment to transmit JUKI's original values to all of its stakeholders. A JUKI business aims to improve productivity and quality for customers. In other words, JUKI can keep developing by helping customers enhance their value. By playing this role, JUKI should achieve the three commitments embedded in "JUKI's Code of Conduct."

The first commitment is a guideline we share with our customers: "We do not halt production

lines of customers anywhere in the world." This commitment drives us to pursue an excellent QCD level in order to provide products or lines that never halt production lines due to breakdowns, etc. The second commitment is a guideline we share with our shareholders: "We stick to the achievement of a target (never give up)." In brief, we commit our full-fledged effort to achieve our business plans for our shareholders. The third commitment is a guideline we share with our employees as a basis for work: "We obey the 5S of management and the JUKI Group Employees' Standards of Conduct - 10 Articles." Each employee obeys the rules, puts work style reforms into practice, and commits his or her full-fledged efforts to contributing to customers and shareholders as a bearer of a mid-to-long-term vision and a Medium-Term Business Plan.

### < Long-term vision> A global and innovative manufacturing (Monodzukuri) company that survives in the 21st century



#### The thinking behind the new Middle-Term Management Plan



#### ----Would you please tell us about five basic policies of the "Value up 2022 Phase I" that was drawn up based on JUKI's Code of Conduct?

The first policy is to "Foster and utilize global and innovative human resources that achieve the vision." We position this policy at the beginning of the five basic policies for a reason. In order for JUKI to grow as a global manufacturing (Monodzukuri) company, every one of its employees must have a global viewpoint and innovative sensitivity. JUKI proposes smart solutions to its customer. Understandably, we make the contents and methods of our businesses smart by ourselves as the proposer. By plotting out a management path to becoming a bigger value-added and highly productive business, I believe we can realize true "work style reforms." To support changes in the consciousness of employees, management is also focusing on the building of pleasant work environments and the maintenance of a personnel system, etc. We are positively working on human resource exchanges between companies in Japan and overseas subsidiary companies while promoting diversity through positive appointment of the women, seniors, and young employees.

The second policy, "Build smart business foundations," has been hindered in several ways. I feel that it will be necessary for us to reform the whole factory by refining the supply-chain management. JUKI has provided products and services to customers in over 180 countries all over the world. In order to remain a company that is trusted by customers, we need to further shorten delivery times by increasing productivity, reforming physical distribution, and improving in other ways.

The third policy is to "Reinforce the creativity of value in solutions businesses." JUKI has so far supplied industrial sewing machines and parts to sewing factories for the most part. From now, JUKI's businesses will be completed by adding transportation equipment





and systems. We have to accelerate an approach toward connecting to the realization of a customer's smart factory by adding the latest automation and digitalization technology. We need to improve operating ratios for product lines and create systems capable of logging and utilizing repair information based on the technology and know-how we have developed as a top brand of industrial sewing machines. A new commitment to providing advanced services such as AI (Artificial Intelligence), remote control, etc. will become also indispensable from now on.

The fourth policy is to "Build up our net worth by reinforcing our financial strength." We want to promote prior investments in order to develop products and systems useful for customers using JUKI advantages such as innovative technology and global network. For this purpose, we also plan to build up an equity ratio of 30% in fiscal 2019 during the current Medium-Term Management Plan.

The fifth and last policy is to "Create and reinforce far-sighted business categories." In addition to the existing businesses of sewing machinery and electronic assembly systems, we have initiated our group business as the third pillar. While sales have stayed at around 8,500 million yen, the achievement of 10,000 million yen looks realistic in fiscal 2017. By utilizing the JUKI Group's proprietary high-precision machining technology and networks among group companies, we have also started transactions with major customers who represent Japan and have plans to find new customers. Next, a business to customers is our 4th pillar. We will respond to the launch of global companies and the diversification and sophistication of needs for parts. As for the fifth pillar, JUKI expects that every employee will create far-sighted business categories through his or her efforts to make JUKI a global and innovative company over the three years of this Medium-Term Business Plan.

# — Finally, would you please tell us your present impressions of the business environment and thoughts about a virtuous cycle for JUKI's growth?

The "time of technical innovation" is coming. IoT (Internet of Things) and AI will soon reform the industrial structure and capital investment in smart factories will be activated at production bases for sewing and electronics products everywhere in the world. We see the trend clearly and recognize the need to turn it into a business chance. Our employees who engage in sales, development, manufacturing, and administration all see the trend from a global viewpoint and are committed to innovate and reflect the trend in JUKI products and services. In an environment where capital investments are advancing one after another all over the world, customers everywhere need JUKI. Many markets, however, are still ill-equipped to sufficiently meet these needs. We cannot yield an inch at a time like this. Let's advance the "Value up 2022 Phase I" steadily and exert ourselves together to deliver "good impressions and peace of mind" to customers all over the world.

### Flow for the creation of JUKI's Corporate Value (Business model)

JUKI has worked to create corporate value for its stakeholders-customers, suppliers, employees, shareholders, investors, and society-by stressing three "management policies." JUKI's growth cycle strengthens the company as an innovative and active company and further enhances the creation of JUKI's corporate value.







Group Business
▶ P.26
A business that aims at new value creation by combining the high-level technological capacities of the domestic manufacturing companies in the JUKI Group



#### Customer Business ▶P.28 A business that provides

repair support and parts supply for JUKI products being used in 180 countries

### Improving earning capacity

- Create smart business foundations
- Reduce product costs
- Reinforce financial foundations

### active company

### Expanding growth investment

- Invest positively in advanced development
- Invest capital to realize truly "smart" production facilities
- Invest in personnel development

### Creating corporate value for stakeholders

#### Customers

- P.38Contributing to improved
  - competitiveness
- Proposing total solutions
   Clobal support and more
- Global support and more



- ▶P.40
- Co-existence and
- co-prosperity
   Creating relationships that promote mutual development through friendly competition and more



#### Shareholders and investors P.41

- Improving financial standing
- Improving shareholder value
- Stable dividends and more

#### Society

- ▶P.41
- Exchanges with the local community
- Respect for other cultures and contribution to local development
- Approaches to environmental issues and more

#### Employees >P.42 • Active organizational climate

- Improving the satisfaction of
- employees and others

### JUKI's businesses

# INDUSTRIAL SEWING MACHINERY BUSINESS

JUKI CENTRAL EUROPE SP.ZO.O. JUKI XINXING INDUSTRY CO., LTD.

JUKI (CHINA) CO., LTD. JUKI (SHANGHAI) INDUSTRIAL CO.,LTD —

JUKI MACHINERY BANGLADESH LTD.

JUKI INDIA PVT.LTD. —

JUKI SINGAPORE PTE. LTD.

Manufacturing and sales bases for Industrial Sewing Machines

JUKI AMERICA, INC.

JUK

JUKI Smart Solutions

Major manufacturing bases
 Major sale bases

JUKI CORPORATION OHTAWARA PLANT JUKI SALES (JAPAN) CORPORATION JUKI MATSUE CORPORATION

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JUKI (HONG KONG) LTD.

JUKI MACHINERY VIETNAM CO.,LTD.

16 JUKI's businesses: Industrial Sewing Machinery Business

# A "No. 1 world share" business that supports a sewing industry with a network covering customers in 180 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. Building a smart factory according to each customer's needs

In addition to the rich lineups, automated systems with robots to complement manual work are available. By connecting sewing machines in a network, the operating status of individual machines can be assessed in real time and production control can be remotely monitored. JUKI responds to the "mass customization" of a customer and achieves a smart factory.

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

Using rich experience backed by active results for more than 50 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 the strongest customer services such as technical guidance, seminars, consultations on productivity improvement, and real-time responses to production troubles.



#### **Products**



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



Semi-dry-head,Cylinder-bed, Bottom Coverstitch Machine

MF-7900D



Automatic 1-needle shoelace loop attaching machine AB-1360



1-needle CNC sewing machine

AMS-251

JUKI's businesses

### **Industrial Sewing Machinery Business**

# To evolve the customer's sewing business by offering advanced technology, JUKI does the following:

JUKI advances its activities to create the most suitable factories by making innovative efforts to solve the various problems a customer faces through the further evolution and systemization of products and IoT.

# Smart Sewing Factory proposed by JUKI



a solvent welding machine used in a preprocess are supplied. A one-stop line solution becomes available by connecting to printing, cutting, and sewing.



#### Smart Factory proposed by JUKI

Productivity improvement, manpower saving, deskilling, pleasant working environment, improvement of quality, and space-saving are achieved using a robot that complements manual work, in addition to large numbers of automatic sewing machines configured to handle two or more processes (mainly digital sewing machines that can respond actively to changes in a sewing item, material, etc.). A system capable of performing high-level factory management is commercialized using IoT and connected devices in a production factory network. JUKI achieves Smart Factories that meets customer needs by arranging and producing these system components.



#### **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.



#### **Automatic machines**

Many lineups of JUKI sewing machines make multiple processes fully automatic for manual sewing, cutting work with scissors, bends of fabric, shirring, etc. Productivity improvement and deskilling can be performed by using sewing machines programmed to automatically sew memorized sewing patterns as soon as the cloth is set or sewing machines that cut, sew, and bend a cloth automatically.





#### Sewing by robot

Heavy needlework and wide and cubic sewing areas translate into hard labor for operators and zero tolerance for operators with low sewing skills. Robotic sewing technology can be deployed by attaching a sewing machine onto a robot arm or sewing a design stitch on the instrument panel of an automobile using a 3D CAD system.



#### Automated sewing management system software

#### (Automated guided vehicle, AGV)

This vehicle automates transportation work in a sewing factory that depended formerly on people. Parts (clothes) after cutting, needlework in process, finished products, etc. are automatically transported between processes. By arranging simultaneous transport synched (synchronized) with the production system, JUKI can build a system that delivers products" when they are required," "to the required place," "in only the required quantity."



#### Sewing management system software JaNets

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.



### JUKI's businesses

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:

As a comprehensive manufacturer of household sewing machines, JUKI develops and sells products adopting high-precision technologies originally developed for industrial sewing machines. The rich selection of products, high-quality stitches, and the friendly operability attract a wide range of customers from beginners to professionals. JUKI will continue its customer-oriented business expansion to provide customers with the enjoyment of fullscale sewing.



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### **Products**



Household Computerized Sewing Machine HZL-DX7



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



Portable Semi-industrial Sewing Machine TL-2010Q



Long arm Quilting Machine TL-2200QVP

### **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 swings width smoothly and easily along the way. "Quilt" work with designed seams is also finished beautifully.

### 2. Holding a workshop to share the pleasures of sewing and sewing machine operation

JUKI runs workshops all over the world to familiarize customers with sewing machine functions, operation techniques, and the pleasures of sewing articles such as swagger bags, small articles, and quilts. The hobbyist's world of machine sewing is extended using high-utility functions only offered by JUKI.

#### 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

#### Supporting an "andMade" facility with a sewing machine

The "and Made" facility is a working space for clothesmaking opened by Furutachi-Project Corporation at the end of April 2017 near the northern approach to the Meiji Shrine in Tokyo. JUKI will support the pleasure of making clothes for those who aim to become creators, designers, artists, etc. by supplying tailor-use sewing machines, household lock sewing machines, and full-scale sewing machines such as a quiltmaking sewing machines and industrial lockstitch sewing machines (DDL-9000C).

#### \*What is an andMade.kitasando?

This is a membership-based co-working space. In addition to JUKI sewing machines, materials such as a textile printer, a laser cutter, a UV printer, a cutting plotter, and a three-dimensional printer are arranged to expand the possibilities of apparel creation. (The largest co-working space of its type in Japan)



A press release was issued on April 28. Mr. Ichiro Furutachi, a freelance announcer known for his rapid-fire delivery, introduced the concept, equipment, etc. at a machinegun pace.

(All of the sewing machines stored in the rear shelf belong to JUKI.)



Ms. Tomoe Shinohara, a personality (talent) and a designer, demonstrates the production of a personally designed ribbon for a matching one-piece suit produced with a JUKI's sewing machine.







#### Holding workshops in collaboration with sewing authors

A group of sewing hobbyists use sewing machines for separate projects to produce a dress, a cosplay costume, a doll costume, a small article, a work art, a knitwear garment, and a quilt. Workshops focused on their needs are held jointly with professional authors of sewing works in the respective categories.

JUKI provides a working space, sewing machines, and support to workshop participants according to the operational level of the sewing machines provided.

In the first half of fiscal 2017, workshops were held in collaboration with the respective authors of European clothes, cosplay costumes, doll costumes, small articles, and quilts. Many people attended.



A sailor dress workshop for Bryce dolls was held jointly with MOMORITA (a teacher), a doll costume author (Ms. Momoko Komori) in April 2017.



An eye-opening sewing lesson was held jointly with YUKA (a teacher) from Pattern Label— "Let's make a pocket tissue cover using a pattern with a margin for a seam." in May 2017.

JUKI's businesses

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# ELECTRONIC ASSEMBLY SYSTEMS BUSINESS

Manufacturing and sales base of Electronic Assembly Systems

JUKI AUTOMATION SYSTEMS INC.

Major manufacturing bases
 Major sale bases

JUKI AUTOMATION SYSTEMS GMBH.

- JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION JUKI AUTOMATION SYSTEMS CORPORATION

SXGA SXGA

— JUKI SMT ASIA CO., LTD.

JUKI INDIA PVT.LTD. SMT Division, Head office

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

The "electronic circuit board" is incorporated in modern electric appliances and electronic products, as well as the industrial robots and equipment that produce those products. The electronic circuit board is the brain of products that make our life so rich and convenient. JUKI supports a customer by studying the customer's market needs in advance of development, performing tests of all kinds when production goes on line, and providing generous repair services, etc. as a comprehensive manufacturer of circuit boards production equipment. JUKI aims at supplying a "total solution" that improves the productivity of the customer's whole manufacturing line and whole floor as well as the products themselves. JUKI also responds to customers engaged in today's fast-evolving electronic industry by providing circuit boards production equipment lineups that meet customer needs, automatic warehouses to store and supply electronic components in conjunction with the equipment, and the systems that integrate them and perform production management, etc.



### **Customer Solutions**

### 1. Providing a full line-up of SMT products responding to various kinds and various volumes production

These solutions respond smartly to changes in various production conditions by providing a full line-up of printing machines, mounters, and high-speed threedimensional inspection machines that stops the outflow of bad Circuit Boards. The mounters are configured to build the most suitable placement lines with no substitutions with different types of

equipment and no replacement of placement heads according to changes in production items and production volumes.



### 2. Supporting the management and productivity improvement on the whole floor

JUKI's total solution supports improvement on the whole floor, from acceptance of parts to

shipment of finished goods. JUKI supports productivity improvement by proposing evolving solutions such as automation of manual work after the mounting process, a product for storing and controlling electronic components automatically, and system software that contributes to the achievement of production plans.



Automatic warehouse for storing and controlling electronic components

#### 3. Providing generous before-and after-sales service In addition to maintenance checks when periodic

maintenance and parts replacement are performed, restored work is quickly provided whenever trouble occurs. Customers all over the world gain peace of mind from before- and after-sales services such as

manufacturing line proposals according to the production requests of customers before product purchase, placement tests for components on circuit boards, workshop programs, etc.



### **Products**



High-speed smart modular mounter RS-1



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



Multi-task platform

JM-20



Intelligent storage management system ISM-3600

### **Electronic Assembly Systems Business**

JUKI's total solution connecting equipment in a circuit boards manufacturing factory to the whole factory

### Circuit boards manufacturing factory Preparation of a Batch management of Maintenance production plan production conditions and program Acceptance of components 8 Nozzle washer **1** SMT integration system software **JaNets** 2 Automatic warehouse 3 X-ray reel counter 4 SMT line equipment **5** Transportation **6** Spot convevors soldering Automated equipment Warehouse for **SMT process** components

Making a JUKI proposal for a Smart Factory orchestrated with a

#### SMT line equipment

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.



#### Automated equipment 🕖

This equipment automatically inserts and places large-size electronic components, heavy components, and other components that are conventionally placed manually in a post-process due to difficulty in automatic placement on SMT lines.



### production flow



#### Automatic warehouse 2

This equipment automatically stores and manages electronic components of large varieties and in large volumes (such as components packaged with tape reels) used at circuit board manufacturing factories. This equipment is excellent at temperature and humidity control and contributes to parts supply management and circuit board production efficiency by keeping electronic components safely and shipping them automatically according to production conditions using SMT integration system software JaNets.



#### X-ray reel counter 3

This device calculates the number of electronic components in the tape reel using an X-ray inspection system. The device simplifies the inventory control of electronic components at high speed and with high accuracy. Transportation conveyors 6

This conveyor sends circuit

boards to the next process in

sequence, including a loader

that loads circuit boards into a

production line and an unloader

that unloads them from a

production line.

Nozzle washer 8

This device washes the "nozzles"

for the mounters that pick up

and place components. The

device improves mounting

quality and productivity.



Image for imaging a reel

#### Spot soldering 6

This device automatically and partially solders electronic components that have been inserted and placed with automated equipment in a post-process.



Image for spot soldering

#### SMT integration system software *JaNets* **0**

This software improves the productivity of the whole floor through integrated operation with a customer's key system and production management of a mounter, automatic warehouse, and SMT line connected to other equipment.



# GROUP BUSINESS



### 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.



111.55%

### 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."

### **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. Gathering JUKI's and the JUKI Group's manufacturing (Monodzukuri) capabilities (development capacity and manufacturing capacity) together

All of the companies at JUKI's manufacturing bases have acquired ISO9001 certification. They adopt scientific analytical methods based on JUKI's more than 50 years of manufacturing (Monodzukuri) experience and adhere to highly efficient practices with a commitment to eliminating waste. They also deliver high value-added production, good-quality manufacturing (Monodzukuri), and high-quality products.



# 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.



Contracted products fusing the development and manufacturing technology at each base



### 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."

### JUKI's businesses

# CUSTOMER BUSINESS

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

> electronics assembly systems JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION

Parts center for industrial sewing machines (OHTAWARA PLANT)

Parts center for

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



To deliver peace of mind to customers all over the world by providing the strongest customer support and parts supplies available, JUKI does the following:

All of us in this business feel the customer's needs in our bones as providers of industrial sewing machines and electronics assembly systems, the cores of JUKI's business. The business provides consumables and spare parts, as well as thorough after-sales services to ensure that customers who have already purchased JUKI products can use them in better environments. This industrial sewing machine business provides about 100,000 kinds of parts to customers and arranges a system for timely parts delivery in accordance with their demands. It The business also makes positive proposals for spare parts.

The electronic assembly systems business, on the other hand, proposes recommended spare parts for replacement purchases and maintenance with overhauls, etc. and performs preventive maintenance activities to ensure that customers can use our products habitually for many years to come.



Parts center for industrial sewing machines (at the OHTAWARA PLANT)



### **Customer Solutions**

#### 1. Offering a system for delivering parts promptly to customers all over the world

Parts are vital for production operations at the customer's factory, along with the industrial sewing machines and electronic assembly systems deployed. In supplying parts, the goal is therefore to reduce the non-operating time of the product to the utmost. Lack of repair parts for machine troubles of any kind will halt a production line and reduce the customer's product output.

JUKI delivers parts to customers all over the world quickly from parts inventories that each JUKI sales company throughout the world possesses to ensure that customers can use JUKI machines habitually for long periods.



Automatic warehouse for parts at JUKI AMERICA

#### 2. Providing a trouble-free and strongest customer support

JUKI periodically check the technical skills of its service engineers and deploys them to bases set up throughout the world to speedily recover halted customer manufacturing lines.

JUKI also provides various training courses and seminars using specialized knowledge, as well as other forms of knowledge support.

# -TOPICS-

#### **Renewing the website for industrial sewing machine parts** JUKI's website for industrial sewing machine parts was completely renewed in July 2016.

A customer must register to browse the new site, but necessary parts can be quickly found because the part numbers of products can be easily searched visually. This website also provides useful new product information and technical information on JUKI's industrial sewing machines to people in charge of technology for distributors or people in charge of maintenance for sewing factories.

#### System for parts supply



#### Parts for electronic



### Preventive maintenance activity for electronic assembly systems

JUKI grasps the state of outdated products and performs maintenance activities to restore them to the best possible condition. JUKI can also extend the life of products and raise the quality of placement accuracy to secure stability.





# 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 userfriendliness 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

Bases for development in Japan

JUKI INDUSTRIAL EQUIPMENT

JUKI MATSUE

CORPORATION

JUKI CORPORATION OHTAWARA PLANT JUKI CORPORATION HEAD OFFICE Bases for development overseas

JUKI CENTRAL EUROPE SP.ZO.O.
JUKI (SHANGHAI) INDUSTRIAL CO.,LTD
 JUKI (VIETNAM) CO., LTD.

JUKI AMERICA, INC.

#### 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 such as power, heat, vibration, and electromagnetic radiation using 3-dimensional CAD simulations and the latest test equipment to ensure that no problems with strength, safety, durability, etc. occur.



Material research with an electron microscope



Test using an electrostatics tester



Durability test for a chip mounter

# TOPICS-





Vibration test using a vibration exciter



Stitch test for an industrial sewing machine



Hardness test using a Vickers hardness tester



Product package drop test



Noise rating in a semi-anechoic chamber

#### Winning the texprocess award

The DDL-9000C won the texprocess Innovation award as the world's first sewing machine capable of saving sewing conditions, etc. This digital sewing machine can save thread tension and seam length values via touch panel operation or a smartphone app (application program). The Minister of the German Federal Ministry for Economic Affairs and Energy (BMWi) bestowed a prize upon Mr. Takashi Nittou, the person in charge of sewing machinery development at JUKI, at the Texprocess show held in Germany in May 2017.



Mr. Takashi Nittou, JUKI's developer (Center)

Award-winning DDL-9000C

### Holding the "Annual Special Commendation Presentation for Technical Performance"

The fiscal 2016 winners of the "Annual Special Commendation for Technical Performance" presented talks on eight themes related to development to an audience of like-minded engineers. The presenters

recounted lessons learned in their quests to overcome failure and hardships, together with their final achievements. The lessons will be developed horizontally to other engineers.



Scene of the presentation

### 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 DDL-9000C

#### Image processing technology

### Correcting divergences from the program data in image processing to sew elastic material

This technology uses a camera to measure the shrinkage of soft and elastic materials such as perforated fabrics during sewing. With this fundamental program data, the technology can calculate and correct for the difference in a revised sewing cycle.



Image processing technology of AMS



Vertical drive during feeding operation

Dry technology

Energy-saving technology

Solenoid control in AMS

### Technology to prevent loose thread

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

**Active tension** 

"sewing"

Dynamic control of thread

tension to achieve stable

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

for balanced stitches.

achieves the best thread tension

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

Perfect stitches

#### Core technologies for household sewing machines

#### Float mode

## Original technology for recognizing the presser lifter status

This technology enables the sewing of a cloth with the presser foot slightly lifted from the cloth surface. The technology can set the presser foot height in increments as small as 0.1 mm by detecting its height at all times using a built-in encoder to enable delicate adjustments in harmony with the material.



**Fully automatic** 

threading (Easy threader)

HZL-DX7

**Box feed** 

#### **Pivot functions**

#### Original technology adopted when a sewing machine starts and stops

This technology stops the needle at the bottom and raises the presser foot automatically when the sewing machine stops to stitch a corner or turn part of the cloth. The presser foot then lowers automatically when the machine restarts. The presser foot height can be changed according to the cloth thickness detected by a built-in encoder.

> Automatic presser foot lifter



HZL-DX7

Core technologies for electronic assembly systems

#### **Elaborate head**

Other core

technologies

### Changing the recognition height to fit the placed components

This technology moves a recognition sensor up and down according to the sizes (heights) of the placed components and picks and places the components at optimum heights. The technology can handle component sizes ranging from an extremely small (0.25 x 0.125 mm) to large (square 74 mm) with a single head unit.



Elaborate head for the RS-1

#### Planet head

### Changing the recognition height to fit the placed components

A planet head is a rotation-type head. This original JUKI technology can pick and place components while the heads rotate. The technology can auto-rotate 16 nozzles while the whole heads rotates for faster placement of small-size components.

Planet heads mounted on the RX-7

**Component Verification** 

System (CVS)

Other core technologies Laser recognition technology

#### 3D image recognition for an inspection machine Clearly imaging components with a DLP (Degital Light Processing) system projection device

This 3D monitoring technology checks if the components are being accurately placed on the printed-circuit board and the solders are being joined. The 3D head unit that performs projection and image is equipped with four DLP projectors. The projectors arranged in four directions improve measurement accuracy by projecting 32 patterns of striped light onto the components.



Image recognition for the RV-2-3D

#### Image recognition technology

### Stable component recognition using a dedicated camera and multiple recognition methods

This technology records images of components with a custom-designed camera and various lighting systems to confirm component positioning. Components of all types are recognized, from IC components to odd-shaped components. This technology also continuously records images of picked components for image recognition at high speed.



Image recognition technology in the RX-6

### **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 drives continuous improvement activity 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

Production bases in Japan

JUKI MATSUE

CORPORATION

JUKI HIROSHIMA

JUKI INDUSTRIAL EQUIPMENT

SUZUTAMI PRECISION JUKI AIZU CORPORATION INDUSTRY CO., LTD.

JUKI CORPORATION OHTAWARA PLANT

JUKI METAL CORPORATION

Production bases overseas Production of industrial sewing machines
 Production of electronics assembly systems
 Production of household sewing machines
 Production of parts, etc.

JUKI XINXING INDUSTRY CO., LTD. JUKI (SHANGHAI) INDUSTRIAL CO., LTD SHANGHAI JUKI JUKI (NINGBO) PRECISION CO., LTD. SEWING MACHINE CO., LTD.

JUKI (VIETNAM) CO., LTD.

### JUKI's production capacity

#### 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.

#### Fostering quality technicians and education

The starting point of manufacturing (Monodzukuri) 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.

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

We advance an approach toward a smart factory through robotization and digitalization based on "55, 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-

#### Integrating three companies in Akita Prefecture to establish the new "JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION"

JUKI DENSHI KOGYO CORPORATION, JUKI AKITA SEIMITSU CORPORATION, and JUKI YOSHINO KOGYO CORPORATION were integrated to deepen their cooperation and rationalize their overlapping businesses. Together they form JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATON, a new member of the JUKI founded on July 1, 2017.

This new company works to improve the productivity of JUKI's electronic assembly systems and reinforce group business by fusing technology in development, product assembly, press, sheet-metal, welding, painting, big structure machining, and precision work.





JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION (former JUKI DENSHI KOGYO CORPORATION, former JUKI AKITA SEIMITSU CORPORATION and former JUKI YOSHINO KOGYO CORPORATION)







### Building a system using a tablet terminal for maintenance work

A repair system using a tablet terminal was built to improve the working efficiency of equipment maintenance. The system provides a grasp of maintenance works in process via a tablet interface by building a database of past repair records. JUKI factories producing industrial sewing machines in China and Vietnam also plan to develop the know-how accumulated at the OHTAWARA PLANT to take advantage of the many common points in maintenance operation shared overseas.



Maintenance operations are performed using tablets issued to every maintenance engineer.

### **Production capacity**

# The "OHTAWARA PLANT," the evolving mother factory of the JUKI Group

### Approaches to make the OHTAWARA PLANT smart



#### Features of the OHTAWARA PLANT

The OHTAWARA PLANT in Ohtawara City, Tochigi Prefecture is the JUKI Group's core factory. This plant performs integrated production from machining to painting, assembly, packing and shipment, all with a focus on high value-added products.

This plant also plays a role as the mother factory of the JUKI Group's domestic and overseas manufacturing factories by sending out ever-evolving production knowhow on optimal procedures for mass-producing new products, building jigs, developing highly efficient and advanced production systems, etc.

### Utilizing an automated guided vehicle (AGV)

This vehicle automates conveyance work in factories for the transport of parts, works in process, finished products, etc. The earlier-generation guided vehicles deployed in JUKI plants are now replaced by an improved AGV transportation method that separates power units and carts to establish independently operated power units and towable carts.



#### Visualizing the production progress

The production progress of an assembly process is now shared over a network. Progress in a pre-process and post-process can now be checked with tablets in the field. When operated simultaneously with the AGV, the system delivers products "when they are required," "to the required place," "in only the required quantity."

### Offering high-quality manufacturing (Monodzukuri)

We make an effort to cultivate employees with skills in a planned way through the use of original tests at our factories for certification or a mapping of human resources development, in addition to various national tests. Two hundred and fifty-one applicants passed the national test in fiscal 2016, achieving an acquisition rate of 71.1% among JUKI personnel.





Frame machining This process surface cuts the frame (an arm and a bed) that serves as the core of an industrial sewing machine and then machines the screw holes, all with high accuracy and speed through computer control using a machining center (a numerically controlled-machine tool). Original JUKI tools designed in the most suitable shape are finely applied to this cutting and machining process for various kinds and various volumes production.

Painting

Assembly

The machined frame is covered with a powder coating. The robot powder-coats the body automatically using a program adapted to the sewing machine type to improve workability and safety and avoid adverse paint and chemical exposure to the human body. No longer does a skillful person in charge handle the painting of special sewing machines. Everything is robotized. The coating performance and coating efficiency of the paint are now raised by heating the frame before applying the undercoat.

driving motors, thread trimming units, etc. on painted frames according to an assembly procedure and a "digital cell production" system that displays necessary parts and tools on the monitor screen. Every cell has been built by in-house development. The system easily prevents erroneous assembly, reduces work-learning times, and easily accommodates various kinds and various volumes production. We improve the skill of employees through an original screening system.

In this process, workers mount parts,



Machining center Many of the processing machines (machining centers) lined up on the production line perform machining operations non-stop 24 hours a day.



Frame machining This machining takes place while large numbers of cutting tools such as a superparticulate tool are exchanged automatically using a program adapted to the sewing

machine type.



Transportation by a materialhandling robot The fully machined frame is transported on a palette, inspected by a 3D camera, and picked up and transported again by a

material-handling robot.



Removal of the residual chips and shavings by the air-blowing robots

Two robots blow air to remove the chips and shavings left in screw holes and on surfaces after machining.



Masking The machine is masked before the painting to block parts with screwholes that are not to be painted.



Pre-heat The frame is heated before applying the undercoat to raise the coating efficiency of the paint.



Painting by robot

The direction of application is adjusted to suit the sewing machine type in order to paint the machine with the most efficient program procedure. The overcoating process, undercoating process, and manual painting have all been robotized.



Printing of a JUKI logo

After painting by robot, this process performs print dryness and prints a "JUKI" logo. This process runs manually, under the concept of "careful handling, one by one."



Tools for assembly In an assembly process, the management of the tools

used, assembled parts, screw tightening torques, etc. is unified by computers linked to a central server.



**Digital cell production using "a self-contained system"** It began in 2004. A worker using

this system can complete a product even when handling a long or complicated assembly process alone. All steps in the assembly process are clearly displayed on the monitor. (For production of a special sewing machine and an automatic machine)



Digital cell production using "a relay system"

It began in 2005. A worker using this system divides the process for assembling a single type of product and relays the product to the next process on a mobile work table while supporting other workers without having to fix the work scope. (Mainly, for mass production)



Digital cell production using "a mixed flow system"

It began in 2016. A worker using this system divides a process for assembling several types of sewing machines and assembles the different types of sewing machines alternately on a mobile work table. (Mainly, for high-mix low-volume production)

### Relationship with stakeholders Relationship with customers

#### **Industrial Sewing Machines**



(Picture: Mr. Croce Angelo, technical service manager)

#### Herno Mr. Claudio Marenzi, CEO and an owner

Herno is a time-honored company founded in 1948. Next year it will be celebrating its 70th anniversary. A large number of outerwear garments, from luxury ladies' wear to men's apparel, are produced under the HERNO brand and sold in the US, Japan, Italy, and throughout Europe.

Our company is particular about the functionality, quality, and beauty of the designs as a brand of Made in Italy. To keep our customers satisfied with these qualities, our employees continuously deepen their knowledge of the production processes and exchange views in an open-space sewing floor set up for daily discussions on improvement of quality. Our practice of maintaining employee-defended traditions has sustained the robust growth of our company for the last 10 years.

When I first encountered a JUKI sewing machine way back in around 1985, I was surprised at the new high technologies incorporated in the design. In my relationship with JUKI for more than 30 years I have been satisfied with the high reliability of JUKI products and the high-quality of JUKI services. I would like to ask JUKI to continue researching, developing, and innovating technically to support the HERNO brand in world markets.

# The luxury brand HERNO has been supported with advanced technology.





Open-space floor

Outerwear under the brand of HERNO

#### **Household Sewing Machines**



### Quilt author and a teacher Ms. Felisa Nakazawa

The trigger that got me started at quilting was an encounter with an antique indigo dyeing fabric. It reminded me of the perfectly clear blue sky I remember from the place where I was born and grew up. I fell in love with it instantly.

A quilt has a long history and encompasses many different pieces of work. But what entices me most is the originality of a quilt. I value images such as the designs and shading that spring out in the progress of making a quilt. I try to augment those qualities when I perceive them.

I have won a lot many prizes. My works are featured in magazines and submitted to shows. But I apply myself to my production every day in pursuit of more quilting works that satisfy my own standards.

I have used a full lineup of JUKI household sewing machines, a tailor-use sewing machine, a lock sewing machine, a quiltmaking long-arm sewing machine, and sometimes JUKI's DDL-9000C industrial sewing machine. I love stability of the stitches and the detailing and friendly design. I clean the machines once a week and maintain them fastidiously with lubrication oil, etc. I would like JUKI to develop more technologies and someday a remarkable dedicated quilt sewing machine, a machine I have never had the pleasure of using.

### GUKI sewing machines have enlarged the range of quilt-making.



An atelier in Ms. Felisa Nakazawa's house and quilt work

#### **Electronic Assembly Systems**



#### Shenzhen Twowing Technologies Co., Ltd. Lai Wei Qiang, director

The TWOWING company was established in 2006 and currently employs about 3,000 people. Our company develops, manufactures, and sells products for communication such as a PON "Passive Optical Network" set box. We sell our products in China and export them to Europe and Southeast Asia.

Our company constantly strives to streamline the efficiency of our daily preparations for production due to the high-mix, lowvolume type of production we engage in to satisfy the highly diverse needs of our customers. We also put an emphasis on staff education to improve productivity. Our company works to improve the level of our employee's business knowledge level and foster teamwork through guidance according to an education curriculum and OJT education at the workplace. The JUKI's service engineers are very diligent. When a circuit failure occurs in a machine on a circuit board manufacturing line, every member of the JUKI service team trouble-shoots the problem perseveringly until the problem is fully analyzed and fixed. This type of eye-opening customer service has steadily deepened our trust in JUKI.

I would like to ask JUKI to continue supporting us so that our company can grow as JUKI further improves its technological capacity and provides its generous support.

### GUKI provides generous and patient support in response to unexpected situations.



#### **Group Business**



#### Hitachi Koki Co., Ltd. Kiyoshi Morita, General Manager of the Procurement Department

Our company is a comprehensive manufacturer of electric power tools offering a selection of about 1,500 product types. We produce our products in domestic and overseas nine factories for supply to customers all over the world. The roles of our procurement department are to "contribute to profit" and "realize a continuous stable supply." We perform a procurement activity every day while closely overseeing the balance of "Quality (Q), Cost (C), and Delivery time (D)." One of the conduct guidelines of our company prescribes something like an "ABC strategy": A for Akiramezuni (no quitting), B for Burezuni (unwaveringly), and C for Chantoyaru (properly). JUKI wholeheartedly supports this ABC guideline and makes efforts to develop timely new products for us as teammates sweating things out together with our own people. We have had business transactions with JUKI AIZU for about 30 years and with JUKI VIETNAM for about 15 years. They have become business partners indispensable to our manufacturing (Monodzukuri). We now plan to have JUKI OHTAWARA machine the cast made by JUKI METAL and are promoting expanded transactions with JUKI' group business. As a manager of the same type of manufacturing (Monodzukuri) company, I would like to ask JUKI to extend us assistance to help both of us become major players in the world while striving for self improvement.

# JUKI is a reliable business partner who works on manufacturing (Monodzukuri) together with us.



A showroom exhibiting Hitachi Koki products (at the Katsuta factory in Ibaraki Prefecture)

Parts manufactured by JUKI AIZU CORPORATION on a contract basis

### Relationship with stakeholders

### **Relationship with suppliers**

The JUKI Group promotes green procurement with its vendors as a globally active company. The JUKI Group focuses on even and fair deals and improves technical capabilities in mutual harmony and benefit with its suppliers. The Group also strengthens communications with its suppliers through briefing sessions and workshops.

#### Workshop for the JUKI Cooperation Club

A workshop for the JUKI Cooperation Club was held at Ho Chi Minh City in Vietnam in July 2016. Fifty-three companies (56 people from members) participated. We visited the factories of JUKI VIETNAM and TMI (Vietnam), a major user of sewing machines, and saw sewing machines into which our parts are incorporated actually being used at the sewing factory. A social gathering was held to deepen the members' exchanges with each other and with top people from JUKI.



Ceremonial pictures were taken in front of the factory of TMI (VIETNAM) CO., LTD., a major user of sewing machines.

#### Communication with suppliers

JUKI holds social events with suppliers three times a year to communicate mutually.

JUKI also holds the Quality Month workshop every November at the OHTAWARA PLANT. Ninety-three companies from the JUKI Cooperation Club and 98 persons from member companies participated in the workshop in 2016. JUKI maintains and grows its partnerships with suppliers by recognizing and awarding their merits. In Quality Month, for example, JUKI delivered Guaranteed Delivery Certificates to 55 companies and commended suppliers who made distinctive contributions for the sake of JUKI (8 companies: one winning a prize for outstanding performance and seven winning a prize for effort). JUKI also gave a lecture to summarize its concrete efforts to make the OHTAWARA PLANT smart and the current trends non-apparel businesses. The suppliers who participated rated the event highly. JUKI runs meaningful workshops like this throughout the group.



#### Green procurement

JUKI Group has been working on the earth-conscious environmental preservation activities based on the "ECO MIND Declaration" together with its suppliers. Since 2011, the Group has adopted the industry standard JAMP AIS investigation tool for material management in its supply chain and has been developing environmental preservation activities in its bases in Japan and overseas. The Group is preventing the unexpected contamination by analyzing hazardous chemical substances when parts and materials are delivered to its manufacturing bases. We enacted the first edition of the "JUKI Group Green Procurement Activity Guideline" in August 2004 and issued a revised 8th edition of the Guideline with various legal revisions, etc. in 2016. The revisions in the 8th edition reviews control criteria adapted to the spread of substances with growing influences on the environment worldwide and clarifies the evaluation criteria for the building and practical use of suppliers' environmental management systems.

Our company continues to provide eco-friendly products to customers by maintaining and improving the environmental compatibility of our products.

\* "Green procurement guideline" is being introduced on the JUKI Website. http://www.juki.co.jp/eco\_e/5\_green.html



# Relationship with shareholders and investors

### Relationship with society

The JUKI Group would like to improve management transparency through correct and timely information disclosure to shareholders and investors. The JUKI Group is also making an effort to respond to shareholder and investor expectations by keeping track of their opinions.

#### General meeting of shareholders

JUKI holds an ordinary general meeting in March every year. To ensure that more people attend, it schedules the event on days when few other companies hold shareholder meetings of their own.

On March 28, 2017, JUKI held the "102th Ordinary General Meeting of Shareholders" at its head office and many general shareholders joined. The company also organized a tour for attending shareholders after the meeting to show them JUKI's core products and

deepen communications with them. JUKI makes continuous efforts to respond to shareholder expectations and reflect shareholder opinions into the company's future actions.



#### **Briefing of IR results**

JUKI has worked actively to disclose information appropriately to and promote understanding of shareholders and investors in order to enhance communications with them. As one activity, briefings on JUKI's performance are held twice a year for institutional investors.

JUKI held a briefing at Japan Investor Relations and Investor Support, Inc. (Nihonbashi, Chuo-ku) on February 14, 2017 to present an "outline of achievements for the fiscal year ended December 31, 2016 and business forecast ending December 31, 2017" and JUKI's "approach toward the Medium-Term Management Plan - Value up 2022 - (fiscal 2017 to 2019) and priority policies." JUKI tries to engage in proactive dialogue by responding to inquiries from individual shareholders and specific questions from securities analysts, fund managers, and the like.



The JUKI Group has supplied products to customers in about 180 countries through its worldwide sales network. The JUKI Group is working to establish good relationships with society in every country where it does business.

#### Participating in the Niigata Prefecture Skill Tournament

Ms. Keiko Sato, an employee from the second section of SUZUTAMI PRECISION INDUSTRY CO., LTD., won a gold medal in a general heat-treat operation second-class test at the Niigata Prefecture Skill

Tournament in fiscal 2016. Ms. Sato was commended and received a testimony in an award ceremony held at the Niigata Prefecture Vocational Ability Promotion Convention at Toki Messe in Niigata City.



### Holding the 10th swagger bag making workshop for parents and children

Forty-one parent-and-child pairs (91 people in total) participated in "a swagger-bag-making workshop for parents and children" held at the head office for two days on July 21 and 22, 2016. Ten annual swagger-bagmaking workshops have been held so far, usually during the summer holidays. The children make practical swagger bags while their parents make wire cap bags of a popular design. We would like to promote this activity in the future to give families another opportunity to experience the pleasures of sewing and manufacturing (Monodzukuri).





Participating in a charity partnership quilt (Tokyo International Great Quilt Festival 2017) We sewed together pieces of the work sent in from around the country to create a "partnership quilt"

and then sold the quilt to raise donation funds that support a welfare facility and the area stricken by the Great East Japan Earthquake. The partnership quilt was submitted to the Tokyo International Great Quilt Festival 2017 at Tokyo Dome in January and sold.



### Relationship with stakeholders

### Relationship with employees

The JUKI Group aims to become a global company that gives "employment and growth" opportunities to individuals regardless of their nationality, race, gender, or age.

We make efforts toward business development and the improvement of employee satisfaction through an education system that enables various human resources to play active roles and create pleasant working environments both in Japan and overseas.

#### JGQMF2016

The JUKI GLOBAL QUALITY MANAGEMENT FORUM 2016 was held at the JUKI head office cafeteria on November 25, 2016. The 2016 forum focused on "The enhancement of JUKI's corporate value through work style reforms of every employee." Themes about implementing different work styles reforms were carefully selected from among many entries. The participants attended 10 presentations on reform strategies. Five hundred and forty-two participants from 12 bases took part via a videoconferencing system.



#### Training for national staff (local staff)

JUKI plans and conducts training seminars for local staff working at overseas group companies. We also conduct training seminars geared mainly for executives and manager class employees at major overseas bases and the head office. We continue to promote stronger human resources development in the group while deepening cooperation between the head office and group companies.



#### Work style reforms

JUKI omits "business waste" and raises consciousness on "work for enhancing added value" to aim for "a cycle for growth." Every JUKI employee pushes forward in these directions with the aim of making JUKI a company that continues to offer the high-quality products and services that customers select.



The first term of the "One JUKI project" for young employees started in April 2017. We work on themes such as the "MENDOMI campaign" and the "Future of JUKI," in addition to "work style reforms" to put them into practice for the future.

#### Lifesaving first aid course

A lifesaving first aid course is available. Course instructors lecture employees periodically to maximize the chance that employees present at accident events will have the skills to administer first aid to injured colleagues and operate an automatic extracorporeal system defibrillator (AED) if necessary.



### Approach toward diversity

We aim to create an innovative and vibrant organizational climate and employees and maximize organizational performance by accepting various human resources and work styles and practicing diversity management to capitalize on the individual differences of employees regardless of their gender, age, nationality, etc.



#### 1. Promote the success of female employees

The proportion of females in managerial positions is low compared with the proportion of female employees overall. The competence development and promotion of achievement among female employees has therefore become an issue. JUKI seeks to achieve a female manager ratio of 10% or higher by fiscal 2020 and is advancing supports for female career formation.

#### Female manager ratio



\* JUKI AUTOMATION SYSTEMS CORPORATION is included. As of July 1, 2017

# -TOPICS-

### Conducting the "Fostering female subordinates and management training seminar for them"

We conducted a training seminar for JUKI line managers who have female subordinates in December 2016. We invited an outside lecturer to enlighten employees on the various hurdles to female achievement in JUKI companies, strategies to assign work to female employees subject to time restrictions due to maternity leave, childcare leave, etc., and ways of thinking about career formation. Seminar participants gained much from the seminar lectures and discussions. One manager commented, "I gained a better understanding of female life events and all the necessary preparations they require." Another said, "I now have a more detailed, specific image of my subordinate's future career plan." Overall, participants left the seminar with a renewed commitment to solve problems hindering female advancement in their workplaces.

#### 2. Arrange human resources globally

We advance personnel exchanges between group companies to encourage employees who play active parts globally to climb higher in their careers. A situation where an environment clashes with a prevailing sense of values spurs change and connects to the activation of employees and organizations.

### 3. Promote outstanding performance of rehired and contract employees

About 130 non-regular employees (rehired employees, contract employees, and part-time employees) worked for JUKI as of December 2016. We started up an "expert employees program" in January 2017 to arrange an environment where employees with excellent abilities, know-how, and expertise can play more active parts. From now on we will work further to change the direction of working styles and revise our treatment system for expert employees.



### Approach to the environment

### **Environmental Vision**

The JUKI Group places importance on the global environment as a manufacturing (Monodzukuri) company and works aggressively on the effective use of resources, recycling, and energy saving. The Group also provides safe products that place less environmental load on customers and is helping to develop industry in the region with the aim of being widely trusted and valued by both society and JUKI customers.

### JUKI will strive to contribute to customers and the global environment through ecofriendly manufacturing (Monodzukuri).

### The JUKI Group's stance toward environmental conservation activities

The JUKI Group practices environmental management in three areas to contribute to the realization of a sustainable society: "Realization of a low carbon society," "Realization of a recycling society," and "Pollution prevention and the realization of an inclusive society rich with nature." The Group has established the "ECO MIND Declaration" to show its environmental activities more concretely to all of its stakeholders. The ECO MIND Declaration consists of an "Environmental Philosophy" and "Environmental Action Policy."

The "ECO MIND Declaration" has been issued by adding "Environment" (environmental consideration) to the existing concepts of "Quality," "Customer satisfaction," and "Respect for humanity" (concepts based on the "Mind" in JUKI's "Mind & Technology" corporate slogan.) Based on this, the JUKI Group has mapped out an "Environmental Conservation Guideline," a guideline for promoting detailed environmental approaches and practicing the environmental conservation activities as the JUKI Group.

JUKI Group companies also exchange information with each other and develop information horizontally to raise the level of the whole Group.

![](_page_43_Figure_8.jpeg)

#### **ECO MIND Declaration**

#### **Environmental Philosophy**

The JUKI Group recognizes that activities of enterprises are closely related to the global environment, and is making efforts to:

ECO MIND

Life of the Earth for the Next Generation

- 1. Contribute to the local community and society by environment-conscious activities.
- 2. Provide people around the world with environmentally friendly products.
- 3. Play an active role to hand down a better global environment to future generations through continuous activities.

#### **Environmental Action Policy**

- 1. Prevent global warming by promoting energy-saving in all business activities and use resource efficiently by implementing the 3Rs (Reduce, Reuse, and Recycle).
- 2. Provide products with less environmental load by planning, researching, developing, procuring, and manufacturing with environmental influences in mind.
- Contribute to countries and regions by modifying environmental conservation activities to suit local conditions wherever JUKI does business as a global company.
- 4. Observe environmental laws and other agreed requirements, and prevent environmental pollution.
- 5. Actively disclose environmental information.
- 6. Raise "awareness of ecological problems" among employees through educational campaigns.

### Environmental influences on the JUKI Group's business activities

JUKI products are still manufactured using abundant energy and resources, including precious resources for parts and materials. As an energy and resource consumer, the JUKI Group is determined to clarify the environmental load of its business activities and improve its environmental performance.

![](_page_44_Figure_2.jpeg)

- Light oil: the fuel for trucks.
- Gasoline: the fuel for company-owned cars.
- Kerosene: the fuel for warm-air heating.
- Liquid petroleum gas: the fuel for regular-use electricity generators.
- Acetylene: the fuel for gas welding for equipment repairs and cutting and soldering sheet steel.
- 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.

- 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 2016 data gathered from JUKI and its manufacturing group companies in Japan and overseas. Some group companies lack complete or sufficient information on raw materials.

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

### Approach to the environment **Overseas**

#### Taking measures for environmental legal restraints at JUKI (VIETNAM) CO., LTD.

This company introduced a treatment system to improve water quality in April 2016 after sewagecontaining water discharged from the second plant of JUKI (VIETNAM) CO., LTD. was found to exceed its reference values. This company has also put segregation management into effect by assigning numbers to different types of hazardous waste individually for easy visualization and charting.

![](_page_45_Picture_3.jpeg)

Processing system at the second plant of JUKI (VIETNAM) CO., LTD.

![](_page_45_Picture_5.jpeg)

Place for trash

![](_page_45_Figure_8.jpeg)

#### Promoting and reinforcing environmental education at JUKI (SHANGHAI) INDUSTRIAL CO., LTD.

JUKI (SHANGHAI) INDUSTRIAL CO., LTD. conducts a "tree-planting day" campaign every March to improve consciousness of the benefits of beautifying the factory environment. Besides this, the company works to reduce the generation of garbage by performing a one-day "eat up" campaign once a month at its cafeteria. The campaign typically saves up to 136 RMB a day with the full participation of 680 people on the day.

![](_page_45_Picture_11.jpeg)

Tree-planting Day at Participants JUKI (SHANGHAI) INDUSTRIAL CO., LTD.

#### Acting for reducing the packing materials at SHANGHAI JUKI SEWING MACHINE CO., LTD.

SHANGHAI JUKI SEWING MACHINE CO., LTD. improved its method for packing circuit boards in the stage of materials and parts procurement. This company used to place circuit boards individually into antistatic bags and transported them in corrugated cardboard, packaging materials that were finally discarded as waste. To eliminate waste, the company abolished the antistatic bag and replaced it with a newly designed antistatic tray that serves as a returnable case. The economic benefit resulting from the reduced emissions and waste is estimated to reach 8,170 RMB annually. While the improvement is currently adopted for the company's main Circuit Board only, the company will develop similar solutions for other types of Circuit Boards horizontally.

![](_page_45_Picture_15.jpeg)

Before implementation: the antistatic bag becomes waste material.

![](_page_45_Picture_17.jpeg)

After implementation: the electrostatic tray can be put into a line as is.

#### Acting for preventing environmental pollution at JUKI NINGBO PRECISION CO., LTD.

JUKI NINGBO PRECISION CO., LTD. used to fill its industrial wastewater into drums and outsource its treatment. Then it introduced treatments to change its internal treatment methods and reduce costs. The company also managed to achieve values substantially below the drainage regulation by thinking about the introduced equipment creatively in-house. To publicize its approach to the environment, the company released a video outlining the details of this disposal method to its customers and related institutions as well as its employees.

![](_page_45_Picture_21.jpeg)

They input the absorbent cotton to the precipitate pond.

Final effluent treatment equipment

### Japan

#### Adapting to the environmental laws at JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION

In response to the effectuation of the CFC emissions law in April 2015, an engineer at JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION acquired qualification for handling second-class refrigerant freon. The company also manages the usage conditions of its refrigerant chlorofluorocarbon equipment and performs regular checks on the equipment in-house.

![](_page_46_Picture_3.jpeg)

Regular checks on refrigerant chlorofluorocarbon (CFC) equipment

#### Making efforts to reduce CO<sub>2</sub> emission at the physical distribution stage at JUKI MATSUE **CORPORATION**

JUKI MATSUE CORPORATION is reducing CO2 in response to a change of the import port and the adoption of the "modal shift \*1." The company reduced the annual quantity of consumed oil by 1,375 $\ell$  and reduced the annual amount of general CO2 emissions by 3,555kg. These values together represent a total reduction of 88% per year, a higher reduction than ever before achieved.

\*1: "Modal shift": a change in transport means from line transport of passengers and goods by truck to transport by train and ships in order to reduce CO<sub>2</sub> emission through the scale benefit of mass transport.

![](_page_46_Figure_8.jpeg)

#### Communicating with the local community on environmental issues at the OHTAWARA PLANT

JUKI CORPORATION OHTAWARA PLANT participates in a cleanup of the drain together with people from neighboring districts to clean the environment and deepen communication. The OHTAWARA PLANT holds a JUKI briefing on the status of drainage every November. Administrators from all of the neighboring districts are invited to the factory to attend. The OHTAWARA PLANT also receives a report on the indepth result of drainage analyses from persons in charge of the Life Environment Department of the local city office and builds a relationship with the administrators based on mutual communication.

![](_page_46_Picture_11.jpeg)

Scene of cleaning the drain

Making efforts to reduce CO2 emissions in the stages of production at SUZUTAMI PRECISION INDUSTRY CO., LTD. To save energy and increase productivity, SUZUTAMI PRECISION INDUSTRY CO., LTD. has used a subsidy to

cover investment costs for the renewal of six of the airconditioning machines in the factory to energy-saving types. This company now operates 23 energy-saving air-conditioning machines accumulated from the installation of the first machine in 1991.

These six new air-conditioning machines are energysaving, silent, and equipped with easy-to-clean filters. A factory space is also widened because the main unit is compact. These compound effects enabled a reduction in the electricity consumed by 2,058 kWh a month.

![](_page_46_Picture_16.jpeg)

Before introduction

After introduction

#### Reduction in the electricity consumed

![](_page_46_Figure_20.jpeg)

Before improvement

### Corporate governance

### **Directors, Audit & Supervisory Board Members and Corporate officers**

(as of June 1, 2017)

#### **Directors**

![](_page_47_Picture_4.jpeg)

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

![](_page_47_Picture_6.jpeg)

Naotake Miyashita

Director and Managing Officer "in charge of the Business Center (for the Sewing Machinery Business & System Unit"), and General Manager of the Sewing Machinery Business & System Unit, and Company President of the Knitwear Machinery Company of the Sewing Machinery Business & System Unit, and General Manager of the Smart Solution Sales Department, and "in charge of the Business Center (Customer Business Company)" and General Manager for Sales of JUKI (CHINA) CO., LTD.

![](_page_47_Picture_9.jpeg)

Minoru Wada Director and Managing Officer "in charge of the Development Center" and "in charge of the Quality Assurance Department'

![](_page_47_Picture_11.jpeg)

#### Shinsuke Uchinashi

Director and Managing Officer "in charge of the Global Cooperate Center (Finance & Accounting Department)" and "in charge of the Business Center (Group Business Company)" and "in charge of the Production Center"

#### **Audit & Supervisory Board Members**

![](_page_47_Picture_15.jpeg)

Kazumi Nagasaki Director (Outside) (Independent Director)

![](_page_47_Picture_17.jpeg)

Yutaka Hori Director (Outside) (Independent Director)

![](_page_47_Picture_20.jpeg)

Yoshihiro Otake Audit & Supervisory Board Member (Full-time)

#### **Managing Officers**

![](_page_47_Picture_23.jpeg)

Katsumi Nihei Managing Officers

![](_page_47_Picture_25.jpeg)

Takeshige Hamasoto Corporate Officers

![](_page_47_Picture_27.jpeg)

Toshimasa Miura Yutaka Abe Managing Officers Managing Officers

![](_page_47_Picture_29.jpeg)

Hirofumi Gotoh

(Full-time)

Audit & Supervisory Board Member

Kiyoshi Matsumoto Jirou Ishibashi Corporate Officers

![](_page_47_Picture_32.jpeg)

Masato Tanaka Audit & Supervisory Board Member (Outside)

Corporate Officers

#### **Corporate Officers**

![](_page_47_Picture_35.jpeg)

Satohiro Hama Corporate Officers

![](_page_47_Picture_37.jpeg)

Corporate Officers

![](_page_47_Picture_39.jpeg)

Robert J. Black Jr. Hiroki Konishi Corporate Officers Corporate Officers

![](_page_47_Picture_41.jpeg)

Masahiko Suzuki Kunio Nukui Corporate Officers

![](_page_47_Picture_43.jpeg)

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

![](_page_47_Picture_45.jpeg)

Kikuo Takahashi Corporate Officers

![](_page_47_Picture_47.jpeg)

Kenji Nakao Corporate Officers

Minoru Nitta Corporate Officers

![](_page_47_Picture_50.jpeg)

![](_page_47_Picture_51.jpeg)

### JUKI Group's corporate governance operation system

The Group continuously endeavors to reinforce its governance system, strengthen compliance, and achieve highly transparent management.

#### 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 has decided upon statutory matters or important matters of management and has supervised the status of business execution in a successively. 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 Committee 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 have performed audits in accordance with the audit policy and work divisions set by the board, in cooperation with the 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.

![](_page_48_Figure_14.jpeg)

![](_page_48_Figure_15.jpeg)

### **Financial data**

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

		(million yen)
	FY2015	FY2016
Profit or loss situation (Fiscal year)		
Net sales	112,865	97,724
(Ratio of overseas sales to net sales)	85.6%	83.7%
Gross profit	34,571	29,590
Operating income	7,110	4,651
Ordinary income	5,728	3,022
Profit attributable to owners of parent	3,853	1,883
Capital expenditure	1,252	1,642
Depreciation	2,990	2,583
R&D expenses	4,871	4,408
Financial position (End of the fiscal year)		
Total assets	119,281	111,365
Net assets	28,477	27,582
Shareholders' equity	27,678	27,005
Financial index		
Equity ratio	23.2%	24.3%
Return on equity (ROE)	14.9%	6.9%
Cash flow situation (Fiscal year)		
Cash flows from operating activities	8,924	9,818
Cash flows from investing activities	△1,218	△1,046
Free cash flows	7,705	8,772
Cash flows from financing activities	∆9,044	△8,100
Per share information (* Data is described according to standards applicable after the reverse st	ock split implemented on July 1, 20	15.)
Earnings per share (EPS)	129.14yen	63.94yen
Dividend per share (DPS)	35yen	20yen
Book-value per share (BPS)	927.63yen	921.78yen
Non-financial data		
Number of employees	6,245	6,021
Ratio of overseas employees to total employees	59.9%	59.0%

### Consolidated balance sheet

		(million yen)
	FY2015	FY2016
Assets		
Current assets		
Cash and deposits	7,906	8,048
Notes and accounts receivable - trade	31,263	30,741
Merchandise and finished goods	31,689	28,412
Work in process	3,532	3,257
Raw materials and supplies	7,424	5,945
Deferred tax assets	2,595	1,680
Other	2,945	2,378
Allowance for doubtful accounts	△ 400	△ 399
Total current assets	86,958	80,066
Non-current assets		
Property, plant and equipment		
Buildings and structures, net	13,844	12,890
Machinery, equipment and vehicles, net	3,036	2,755
Tools, furniture and fixtures, net	1,047	967
Land	6,656	6,523
Lease assets, net	342	325
Construction in progress	97	49
Total property, plant and equipment	25,024	23,512
Intangible assets	1,797	1,711
Investments and other assets		
Investment securities	3,009	3,018
Long-term loans receivable	432	424
Long-term prepaid expenses	353	306
Deferred tax assets	202	1,021
Net defined benefit asset	982	874
Other	2,316	2,379
Allowance for doubtful accounts	△ 1,795	△ 1,951
Total investments and other assets	5,501	6,074
Total non-current assets	32,323	31,298
Total assets	119,281	111,365

		(million yen)
	FY2015	FY2016
Liabilities		
Current liabilities		
Notes and accounts payable - trade	10,126	9,972
Short-term loans payable	46,870	43,144
Lease obligations	123	109
Account payable - other	1,718	1,400
Accrued expenses	3,473	3,297
Income taxes payable	745	409
Provision for bonuses	60	15
Notes payable - facilities	111	61
Forward exchange contract	-	1,811
Other	1,205	1,031
Total current liabilities	64,436	61,254
No-current liabilities		
Long-term loans payable	20,101	16,647
Lease obligations	281	256
Provision for directors' retirement benefits	171	69
Net defined benefit liability	5,084	5,163
Other	728	390
Total non-current liabilities	26,367	22,528
Total liabilities	90,803	83,782
Net assets		
Shareholders' equity		
Capital stock	18,044	18,044
Capital surplus	2,094	2,035
Retained earnings	7,800	8,937
Treasury shares	riangle 66	△ 605
Total shareholders' equity	27,873	28,412
Accumulated other		
Valuation difference on available-for-sale securities	817	839
Foreign currency translation adjustment	△ 1,148	△ 2,274
Remeasurements of defined benefit plans	136	28
Total accumulated other comprehensive income	△ 194	△ 1,406
Non-controlling interests	799	576
Total net assets	28,477	27,582
Total liabilities and net assets	119,281	111,365

### **Financial data**

# Consolidated statements of income

		(million yen)
	FY2015	FY2016
Net sales	112,865	97,724
Cost of sales	78,293	68,134
Gross profit	34,571	29,590
Selling, general and administrative expenses	27,461	24,938
Operating income	7,110	4,651
Non-operating income		
Interest income	127	64
Dividend income	147	131
Commission fee	193	261
Other	445	397
Total non-operating income	914	854
Non-operating expenses		
Interest expenses	1,321	1,153
Foreign exchange losses	819	1,185
Other	155	144
Total non-operating expenses	2,296	2,483
Ordinary income	5,728	3,022
Extraordinary income		
Gain on sales of non-current assets	50	441
Others	0	_
Total extraordinary income	51	441
Extraordinary losses		
Loss on sales and retirement of non-current assets	65	125
Loss from valuation of investment securities	34	6
Impairment loss	32	105
Loss on valuation of stocks of subsidiaries and affiliates	—	55
Special severance payment	_	80
Others	4	_
Total extraordinary losses	137	373
Income before income taxes and minority interests	5,642	3,090
Income tax - current	1,625	1,333
Income taxes for prior periods	—	84
Income tax - deferred	364	34
Total income taxes	1,989	1,453
Net income	3,652	1,637
Loss attributable to non-	△ 200	△ 246
Net profit attributable to parent company shareholders	3,853	1,883

# Consolidated statements of comprehensive income

		(million yen)
	FY2015	FY2016
Net income	3,652	1,637
Other comprehensive income		
Valuation difference on available-for-sale securities	0	21
Deferred gains or losses on hedges	3	_
Foreign currency translation adjustment	△ 471	△ 1,156
Re-measurements of defined	88	△ 105
Total other comprehensive income	△ 379	△ 1,240
Comprehensive income	3,273	396
(Comprehensive income attributo	able to)	
Comprehensive income attributable to owners of parent	3,495	671
Comprehensible income attributable to non-controlling interests	△ 221	△ 274

### Consolidated statements of cash flows

		(million yen)
	FY2015	FY2016
Cash flows from operating activities		
Income before income taxes and minority interests	5,642	3,090
Depreciation	2,990	2,583
Impairment loss	32	105
Increase (Decrease) in allowance for doubtful accounts	137	174
Increase (Decrease) of provision for bonuses	△ 7	△ 40
Increase (Decrease) of net defined benefit liability	163	2
Increase (Decrease) of net defined benefit assets ( $ riangle$ : increase)	△ 62	△ 8
Interest and dividends income	△ 275	△ 195
Interest expenses	1,321	1,153
Foreign exchange losses (gains)	259	△ 238
Loss (gain) on sales and retirement of property, plant and equipment and intangible assets	15	△ 316
Profit and loss from valuation of investment securities ( $ riangle$ : profit)	34	_
Loss on valuation of stocks of subsidiaries and affiliates	_	55
Decreased (increase) in notes and accounts receivable-trade	△ 704	△ 581
Decrease (increase) in inventories	6,631	3,067
Increase (Decrease) in notes and accounts payable	△ 3,605	128
Increase (Decrease) in notes discounted	117	△ 161
Other, net	△ 871	3,570
 Subtotal	11,820	12,388
Interest and dividends income received	274	195
Interest expenses paid	△ 1,331	△ 1,154
Income taxes (paid) refund	△ 1,838	△ 1,611
Net cash provided by (used in) operating activities	8,924	9,818
Cash flows from investing activities		
Purchase of property, plant and equipment and intangible assets	△ 1,402	△ 1,727
Proceeds from sales of property, plant and equipment and intangible assets	205	750
Purchases of investment securities	riangle 0	△ 153
Payments of loans receivable	△ 8	_
Collection of loans receivable	21	8
Other, net	△ 33	75
Net cash provided by (used in) investing activities	△ 1,218	△ 1,046
Cash flows from financing activities		
Net increase (decrease) in short-time loans payable	△ 3,866	△ 1,417
Proceeds from long-term loans payable	9,924	7,195
Repayments of long-term loans payable	△ 13,210	△ 11,835
Purchase of treasury stock	△ 3	△ 539
Cash dividends paid	△ 889	△ 743
Proceeds of sale and installment back	57	-
Repayments of sale and installment back payables	△ 638	△ 526
Others, net	△ 418	△ 234
Net cash provided by (used in) financing activities	△ 9,044	△ 8,100
Effect of exchange rate change on cash and cash equivalents	△ 275	△ 450
Net increase (decrease) in cash and cash equivalents	△ 1,613	221
Cash and cash equivalents at beginning of period	9,285	7,671
Cash and cash equivalents at end of period	7,671	7,892

### History

### 1938

#### 1938.12

About 900 machinery manufacturers in Tokyo invested in the corporation and commenced operation. Corporate name: "TOKYO JUKI MANUFACTURERS ASSOCIATION."

![](_page_53_Picture_5.jpeg)

#### •1943.9

The corporation was reorganized as a joint stock corporation and renamed the "TOKYO JUKI INDUSTRIAL CO., LTD."

#### ●1947.4

### The first household sewing machine was introduced to the market.

The HA-1 household sewing machine, JUKI's first household model, is made with about 70% in-house manufactured parts and is consistently rated as outstanding in both quality and performance. The HA-1 was awarded the Minister of International Trade and Industry Prize, the highest prize awarded by the ministerial examination committee.

![](_page_53_Picture_11.jpeg)

### 1950

#### •1953.3

The first industrial sewing machine was introduced into the market. The industrial sewing machine "DDW-II," equipped with JUKI's original single-axis rotational thread take-up lever mechanism, is introduced into the market.

![](_page_53_Picture_15.jpeg)

#### •1957.4

The company receives the Imperial Invention Award for the invention of the single-axis rotational thread take-up lever. The history of the "technology-oriented JUKI" begins.

### 1960

#### •1961.10

Company stock listed on the Second Section of the Tokyo Stock Exchange.

#### •1963.7

JUKI HIROSHIMA CORPORATION was established.

#### ●1964.8

Company stock listed on the First Section of the Tokyo Stock Exchange and the Osaka Stock Exchange.

#### •1966.7

JUKI MATSUE CORPORATION was integrated into the JUKI Group.

#### •1969.1

SUZUTAMI PRECISION INDUSTRY CO., LTD. was integrated into the JUKI Group.

#### •1969.2

Developing an industrial sewing machine equipped with a stable "automatic thread trimmer" for the first time in the world. JUKI started to sell the model DDL-555-2 which was equipped with a stable automatic thread trimmer for the first time in the world. It was a dream technology that all of JUKI's competitors were trying to achieve. This success opened doors for JUKI in the sewing industry and JUKI has expanded its overseas markets.

![](_page_53_Picture_31.jpeg)

#### •1969.9

JUKI METAL CORPORATION was established.

### 1970

#### ●1970.7

JUKI (HONG KONG) LTD. was established. JUKI started exporting in 1956. Two years later we stationed an engineer in Hong Kong. In 1970, JUKI established its first overseas sales company in Hong Kong. JUKI then established the sales companies in Europe (Germany) in 1972 and in the United States in 1974 to set up better service support systems nearby the customers.

![](_page_53_Picture_37.jpeg)

### 1971.4Ohtawara Plant completed.

When the production volume of industrial sewing machines expanded and the production capacity of the factory located at the head office (at that time) was exceeded, JUKI decided to construct an integrated manufacturing factory. The company constructed the factory in Ohtawara-shi, where investment incentives from the municipality and the mix of nearby subcontracting factories satisfied its requirements.

JUKI now operates fourteen factories in Japan and overseas. The Ohtawara Plant plays an important role as the mother factory.

![](_page_53_Picture_41.jpeg)

#### 1972.4

JUKI (EUROPE) GMBH was established.

#### 1973.4

JUKI AIZU CORPORATION was established.

#### •1973.9

JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION was established formerly known as JUKI DENSHI KOGYO CORPORATION.

#### •1973.11

JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION Yoshino Plant was established formerly known as JUKI YOSHINO KOGYO CORPORATION.

#### •1973.11

JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION Daisen Plant was established formerly known as JUKI AKITA SEIMITSU CORPORATION.

#### 1974.3

JUKI AMERICA, INC. was established.

### 1980

#### •1981.10

The Deming Prize (Deming Application Prize for Division) awarded to the headquarters of the Industrial Sewing Machines Business. JUKI introduced TQC management as an approach to improve the quality of all of work, both services and products. The Company conducted ongoing guidance and education programs to establish and upgrade

a thorough style of management using statistical methods. Five years after the introduction of TQC management, JUKI won the Deming prize.

![](_page_53_Picture_58.jpeg)

#### ●1987.7

### The first pick-and-placer was introduced to the market.

JUKI has developed a chip mounter based on mechatronics technologies cultivated during the development and production of industrial sewing machines and electronic equipment, and enterd into an electronic

assembly systems business. Though large and high speed chip mounters were popular around that time, JUKI's new chip mounters with modular concept were well accepted in the industry.

![](_page_54_Picture_4.jpeg)

#### ●1988.4

### The company name was changed to JUKI CORPORATION.

JUKI shifted its focus away from the manufacturing of heavy machinery to become the "JUKI" now recognized as a maker of products. To plan for further globalization, JUKI changed its corporate name from "Tokyo JUKI Industrial Co., Ltd." to JUKI Corporation and renewed the "JUKI logotype" and established its new corporate slogan "Mind & Technology."

![](_page_54_Picture_8.jpeg)

![](_page_54_Picture_9.jpeg)

#### •1990.6

SHANGHAI JUKI SEWING MACHINE CO., LTD. was established.

#### ●1994.11

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

#### 1995.1

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

JUKI and eight companies in the JUKI Group jointly invested and established a parts manufacturing company in Vietnam to reduce the cost of parts production. Factory expansion to Vietnam was out of the norm at that time. The new JUKI production company was the first Japanese affiliate to set up shop in the country. Now, JUKI (Vietnam) Co., Ltd. is one of important production bases for development and production in the southeastern Asia market.

![](_page_54_Picture_17.jpeg)

#### •1995.3

JUKI SINGAPORE PTE. LTD. was established.

#### •1995.9

JUKI XINXING INDUSTRY CO., LTD. was established.

JUKI established JUKI XINXING INDUSTRY CO., LTD. as a joint venture with a government-run company in China. With help from the mother factory, "Ohtawara plant", JUKI XINXING became the factory to manufacture products having a high quality as JUKI factories in Japan produce. JUKI established JUKI (NINGBO) PRECISION CO., LTD., a supplier of parts, in November 1995 and established JUKI (SHANGHAI) INDUSTRIAL CO., LTD., which is second assembly factory in China in 2000.

![](_page_54_Picture_23.jpeg)

#### •1995.11

JUKI (NINGBO) PRECISION CO., LTD. was established.

#### ●1997.12

JUKI was conferred the Japan Society Prize for the Promotion of the Machine Industry to recommend the development of the world's first "bobbin thread automatic feeder" for industrial sewing machines.

#### •1999.10

JUKI SALES (JAPAN) CORPORATION was established.

![](_page_54_Picture_30.jpeg)

#### •2000.10

JUKI (SHANGHAI) INDUSTRIAL CO., LTD. was established.

#### ●2000.10

JUKI INDIA PVT. LTD. was established.

#### ●2001.1

JUKI (CHINA) CO., LTD. was established.

#### •2001.10

JUKI AUTOMATION SYSTEMS INC. was integrated into the JUKI Group.

#### ●2005.7 JUKI CENTRAL EUROPE SP.ZO.O was established.

●2006.10 JUKI SMT ASIA CO., LTD. was established.

#### ●2009.12

Functions of a head office and an R&D were moved to new premises in Tama City, Tokyo. The head office and R&D functions were moved to JUKI's new office building in "Tsurumaki, Tama-city". The new building consists of eight stories aboveground and two underground stories equipped with inspection hardware for the assessment of noise, vibration, and durability to further improve work efficiency and product quality.

![](_page_54_Picture_43.jpeg)

### 2010

#### ●2011.7

JUKI MACHINERY BANGLADESH LTD. was established.

#### **0**2012.5

JUKI MACHINERY VIETNAM CO., LTD. was established.

#### •2013.8

JUKI AUTOMATION SYSTEMS CORPORATION was established.

#### **0**2014.3

JUKI Automation Systems Corporation integrated its electronic assembly systems business with the division handling surface mounting devices for SONY EMCS Corporation. With this integration, the Corporation has gotten overall lineup to propose line solutions with general-purpose machines, JUKI's mainstream product, alongside Sony's high-speed mounting, printing, and inspection machines.

![](_page_54_Picture_53.jpeg)

#### •2017.7

JUKI DENSHI KOGYO CORPORATION, JUKI AKITA SEIMITSU CORPORATION and JUKI YOSHINO KOGYO CORPORATION are integrated and JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION is established as a new company.

### JUKI's global bases

(as of July 1, 2017)

![](_page_55_Figure_2.jpeg)

#### **PRODUCTION BASES**

I	Japan		
1	JUKI INDUSTRIAL EQUIPMENT TECHNOLOGY CORPORATION	Yokote-shi, Akita	Manufacture of chip mounter, etc., Manufacture of units and parts related to the group business.
2	JUKI AIZU CORPORATION	Kitakata-shi, Fukushima	Manufacture of parts with lost-wax and MIM production., Manufacture of parts related to the group business.
•	SUZUTAMI PRECISION INDUSTRY CO., LTD.	Nagaoka-shi, Niigata	Manufacture of parts for industrial sewing machines, etc., Manufacture of parts related to the group business.
4	JUKI CORPORATION OHTAWARA PLANT	Ohtawara-shi, Tochigi	Manufacture of industrial sewing machines, etc., Manufacture of parts related to the group business.
6	JUKI METAL CORPORATION	Odaicho, Mie	Manufacture of pig-iron mold casting, Manufacture of parts related to the group business.
6	JUKI HIROSHIMA CORPORATION	Miyoshi-shi, Hiroshima	Manufacture of die, press processing parts, etc., Manufacture of parts related to the group business.
•	JUKI MATSUE CORPORATION	Matsue-shi, Shimane	Manufacture of industrial sewing machines, etc., Manufacture of products and parts related to the group business.
*	JUKI DENSHI KOGYO CORPORATION, KOGYO CORPORATION were integra TECHNOLOGY CORPORATION in July	JUKI AKITA SEIMITSU COR ted into the newly estab 2017.	PORATION and JUKI YOSHINO Hished JUKI INDUSTRIAL EQUIPMENT
	Global		

<ol> <li>JUKI (NINGBO) PRECISION CO., LTD.</li> </ol>	Zhejing, China	Manufacture of prats, etc. for industrial sewing machines.
😢 Juki (Vietnam) Co., LTD.	Ho Chi Minh, Vietnam	Manufacture of industrial sewing machines, Manufacture of parts with lost-wax production, Manufacture of parts related to the group business.
DEVELOPMENT BA	SES	

JUKI AMERICA, INC.

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

FL, U.S.A.

Development of industrial sewing machines.

8	JUKI (SHANGHAI) INDUSTRIAL CO., LTD.	Shanghai, China	m
9	JUKI XINXING INDUSTRY CO., LTD.	Hebei, China	Me

SHANGHAI JUKI SEWING MACHINE CO., LTD. Shanghai, China

Manufacture of industrial sewing machines, Production of feeders for chip mounters. Manufacture of industrial sewing machines. Manufacture of household sewing machines

56 Data sections: JUKI's global bases

# GLOBAL

![](_page_56_Picture_1.jpeg)

SHANGHAI JUKI SEWING MACHINE CO., LTD.

JUKI (VIETNAM) CO., LTD.

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

**9 B** 

JUKI SINGAPORE PTE. LTD.

6

8 11 JUKI CENTRAL EUROPE SP.ZO.O.

76

9 13 JUKI AMERICA, INC.

141212

JAPAN

12

JUKI AUTOMATION SYSTEMS INC

LUKI

#### MAIN SALES BASES

	Japan				
1	JUKI AUTOMATION SYSTEMS CORPORATION	Tama-shi, Tokyo	Sales of Chip mounters, etc.		
2	JUKI SALES (JAPAN) CORPORATION	Tama-shi, Tokyo	Sales of industrial sewing machines, household sewing machines, etc.		
Branch Sales Offices, Service Centers, and others					
	Global				
3	JUKI (CHINA) CO., LTD.	Shanghai, China	Sales of industrial sewing machines, household sewing machines, etc., Holding company, Comprehensive administration.		
4	TOKYO JUKI INTERNATIONAL TRADING (SHANGHAI) CO., LTD.	Shanghai, China	Sales of chip mounters, etc.		
6	JUKI (HONG KONG) LTD.	Hong Kong, China	Sales of industrial sewing machines, etc.		
6	JUKI SINGAPORE PTE. LTD.	Cyberhub, Singapore	Sales of industrial sewing machines, household sewing machines, etc.		
	(Major bases: 8 countries, including Indonesia, Cambodia, and Myanmar)				
7	JUKI MACHINERY BANGLADESH LTD.	Dhaka, Bangladesh	Sales of industrial sewing machines, etc.		
8	JUKI MACHINERY VIETNAM CO., LTD.	Ho Chi Minh, Vietnam	Sales of industrial sewing machines, household sewing machines, etc.		
9	JUKI INDIA PVT.LTD.	Bangalore, India	Sales of industrial sewing machines, chip mounters, etc.		
0	JUKI SMT ASIA CO., LTD.	Chan Buri, Thailand	Sales of chip mounters, etc.		
0	JUKI CENTRAL EUROPE SP.ZO.O.	Warsaw, Poland	Sales of industrial sewing machines, household sewing machines, etc.		
	(Other bases: Turkey, Russia, and Belarus)				
12	JUKI ITALIA S.P.A.	Milan, Italy	Sales of industrial sewing machines, household sewing machines, etc.		
B	JUKI AMERICA, INC.	FL, U.S.A.	Sales of industrial sewing machines, household sewing machines, etc.		
	(Other bases: Peru and Mexico)				

#### () JUKI AUTOMATION SYSTEMS INC. NC, U.S.A. 15 JUKI AUTOMATION SYSTEMS GMBH

Sales of chip mounters, etc. Nuremberg in Germany Sales of chip mounters, etc. Branch Offices, Representative Offices, Service Centers, and others

#### OTHER BASES

	Japan		
0	JUKI GENERAL SERVICE CORPORATION	Tokyo, Japan	Service of facility management, renovation and printing, etc.
2	JUKI Household Product Customer Center Corporation	Tokyo, Japan	Maintenance services for Household Sewing Machines

#### Number of Major bases

	Japan	Global	Total
PRODUCTION	7	5	12
DEVELOPMENT	5	4	9
SALES	2	13	15
OTHER	2	0	2

### Company outline and stock information

(as of December 31, 2016)

#### **CORPORATE SUMMARY**

Trade name	JUKI CORPORATION
Established	December 15, 1938
Directors	Representative Director Akira Kiyohara
Paid-in capital	¥18,044 million
Major business office	<b>Head office :</b> 2-11-1 Tsurumaki, Tama-shi, Tokyo 206-8551 Japan Tel: 81-42-357-2211
	Ohtawara plant : 1863 Kitakanemaru, Ohtawara-shi, Tochigi 324-0011 Japan Tel: 81-287-23-5111
Fiscal year ending	December 31
Ordinary general meeting of shareholders	March
Number of employees	6,021 (on a consolidated basis), 846 (on a non-consolidated basis)
Number of affiliated companies	30

#### **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

#### Edit policy

This JUKI CORPORATE REPORT 2017 integrates elements from a CORPORATE RROFILE and an ENVIRONMENTAL REPORT. 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.

#### STOCK INFORMATION

Total number of authorized shares	80,000,000 shares
Total number of issued shares	29,874,179 shares
Total number of shareholders	13,395
Listed on	The first section of the Tokyo Stock Exchange (margin trading issue)
Securities code	6440
Shareholder registry administrator	Mizuho Trust & Banking Co., Ltd.

#### STOCK DISTRIBUTION STATUS BY OWNER TYPE

![](_page_57_Figure_20.jpeg)

#### 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

![](_page_59_Picture_0.jpeg)

![](_page_59_Picture_1.jpeg)

JUKI CORPORATION 2-11-1, Tsurumaki, Tama-shi, Tokyo 206-8551 Tel : 81-42-357-2211 http://www.juki.co.jp/index\_e.html