

**Securities Code: 6302**

**The 127th Interim Business and Financial Report  
April 1, 2022 through September 30, 2022**

## **To Our Shareholders**

I would like to express our sincere gratitude for your continued support and patronage. I am pleased to present our business and financial report for the first half of the 127th fiscal year (from April 1 through September 30, 2022) as follows.

### **Business Principles**

#### **Corporate Mission Statement**

We will aim to become a machinery manufacturer that continues to provide excellent products and services to the world. With integrity being a key principle in the Group, we will contribute towards society by gaining high respect and confidence from all stakeholders.

#### **Our Values**

Customer First:

We exceed customer expectations by providing sophisticated efficient products and services, giving the utmost consideration to their needs and requirements.

Embrace Changes:

We will continue to drive and embrace changes without accepting the status quo.

Commitment to Technology and Innovation:

We are passionate about contributing to society by further developing our unique, in-house technologies.

Respect People:

We will nurture an organizational climate that fosters mutual respect, tolerance and learning for growth.

### **Business Performance during the Half-Year Period under Review**

During the six-month period ended September 2022, global machinery demand showed a growth trend, with strong capital investment in Japan mainly driven by the manufacturing sector and despite some remaining effect from the COVID-19 pandemic, and solid capital investment overseas against a backdrop of economic recoveries in the United States and Europe. At the same time, the effect of lockdowns in China to prevent the spread of COVID-19 led to stagnation in some regions and industries, resulting in market bipolarization. Uncertainty also remains from factors including higher prices and a tighter supply and demand balance for raw materials and procured goods, continued geopolitical risk, particularly related to the situation in Russia and Ukraine, the yen's sharp depreciation, and crude oil price movements.

Given this operating environment, as set out in the Medium-Term Management Plan 2023, we are pursuing a variety of measures including developing a robust business entity, reformation for improving the corporate value, making a greater contribution to the achievement of the UN's Sustainable Development Goals (SDGs), and stepped-up efforts to reduce our environmental burdens, with the aim of continuous growth in corporate value through the use of our products and services to address social issues.

As a result of these efforts, operating profit decreased 13.6% year on year, to ¥26.7 billion, while ordinary profit was 6.9% lower, at ¥28.5 billion, and profit attributable to owners of parent decreased 3.4%, to ¥19.0 billion.\*1

We have paid an interim dividend of ¥45 per share, an increase of ¥10 year on year.

### **Progress under the Medium-Term Management Plan 2023**

To reflect the change of the Company's fiscal year from fiscal 2022, we have reset our numerical targets for fiscal 2023, the final year of the Medium-Term Management Plan 2023, that took effect from last year, with new targets of ¥1,050.0 billion for net sales, with operating profit of ¥76.0 billion, and ROIC\*2 of at least 7.5%.

The plan designates the sustainable growth and continuous generation of profit despite changes in social and market structures and becoming a corporate group that is able to contribute to the creation of social value as long-term target for both corporate value and social value, and we are pursuing the following policies to establish a solid foundation during the

period of this first medium-term management plan toward the achievement of our long-term targets for 2030.

(1) Developing a robust business entity

We are creating a business continuity plan (BCP) that addresses various risks including the COVID-19 pandemic, and continue to invest in competences needed for growth, including the completion of our plant for power transmission and control equipment in Mexico, to develop a robust business entity that is resilient against environmental changes.

(2) Reformation for improving corporate value

Along with the evolution of our ROIC management, we are working to use DX<sup>\*3</sup> to increase the added value of our products and transforming business processes to enhance our financial performance. We are also reviewing our business segments and working to create new products through new combinations. In addition, recognizing that our employees are the source of our corporate value, we are developing human resources including through the commencement of DX literacy training for 9,000 domestic Group employees and promoting work style reforms including the introduction of remote work system, while also striving to increase engagement by conducting regular employee awareness surveys.

(3) Transforming into a company with a comfortable work environment

In addition to promoting health management, we are working to obtain ISO 45001 certification for occupational health and safety. We are also reforming work styles through programs including the introduction of remote work system, promoting the taking of childcare leave, and rigorously managing appropriate work hours, to create comfortable work environments. Furthermore, as diversity is essential to our growth, we are raising awareness of LGBT-related issues and adjusting internal systems accordingly.

(4) Contributing to SDGs movement through products and services

We are continuously working to solve social issues and to increase corporate value by providing products and services that contribute to economic and technological development, and are promoting development in the priority areas of “energy and the environment” and “automation and digitalization” and bringing new products to market. Specifically, our development in the area of energy and the environment includes carbon recycling technologies, technologies for power generation from anaerobic wastewater treatment, and chemical thermal storage technologies using calcium oxide. In the automation and digitalization area, development includes a magnetic absorption-type robot that can travel on curved surfaces and a plant operation support system. Going forward, we will promote development in priority areas and bring products to market, to provide products and services that promote CSV.<sup>\*4</sup>

(5) Reducing environmental burdens through business activities

We are putting greater effort into reducing our environmental burdens through initiatives including reducing greenhouse gas emissions, promoting circular economies, and improving energy efficiency in our business activities and throughout the entire life cycle of the products we provide. We are also working to achieve CO<sub>2</sub> reduction targets for 2030 and carbon neutrality by 2050, as ways to contribute to address climate change toward the achievement of a decarbonized society.

Looking ahead, we expect to be significantly affected by accelerating moves toward decarbonization and the conflict for economic hegemony between the United States and China, as well as rising global inflation, monetary tightening in the United States and Europe, the increasing coalition into economic blocs resulting from Russia’s invasion of Ukraine, and in Japan, the yen’s sharp depreciation. Given this environment, we will steadily pursue the management strategies outlined in the Medium-Term Management Plan 2023, and provide top-quality products and services for the further enhancement of our corporate value and social value.

We intend to make every effort to take advantage of business opportunities in the global market and to act resolutely,

regardless of the management environment. I ask for the continued understanding and support of our shareholders.

\*1 At the 126th Ordinary General Meeting of Shareholders, held on June 29, 2022, a resolution for “Partial Amendments to the Articles of Incorporation” was approved to change the Company’s fiscal year-end from March 31 to December 31, from fiscal 2022. For the current fiscal year, which is the transitional period for the change, the first half of fiscal 2022 for the Company and consolidated subsidiaries with fiscal years ending in March will be the six-month period from April 1 through September 30, 2022, and for consolidated subsidiaries with fiscal years ending in December, the first half will be the nine-month period from January 1 through September 30, 2022. Therefore, information for the previous fiscal year has been retrospectively restated so that year-on-year comparisons shown for the current first half are with the corresponding period of the previous fiscal year.

\*2 ROIC: Return on Invested Capital

\*3 DX: Digital Transformation; the use of information technology to improve all areas of activity.

\*4 CSV: Creating Shared Value. The concept that contributing to solve social issues through business activities leads to the company’s continuous growth.

Shinji Shimomura  
President and CEO

### Interim Consolidated Financial Statements

Note: At the 126th Ordinary General Meeting of Shareholders, held on June 29, 2022, a resolution for “Partial Amendments to the Articles of Incorporation” was approved to change the Company’s fiscal year-end from March 31 to December 31, from fiscal 2022. For the current fiscal year, which is the transitional period for the change, the first half of fiscal 2022 for the Company and consolidated subsidiaries with fiscal years ending in March will be the six-month period from April 1 through September 30, 2022, and for consolidated subsidiaries with fiscal years ending in December, the first half will be the nine-month period from January 1 through September 30, 2022. Therefore, the figures for the previous fiscal year for the Interim Consolidated Statements of Income (Summary), Net Sales Ratio by Region, and Review of Operations by Segment have been retrospectively restated so that year-on-year comparisons shown for the current first half are with the corresponding period of the previous fiscal year.

(Amounts less than 100 million yen have been rounded off.)

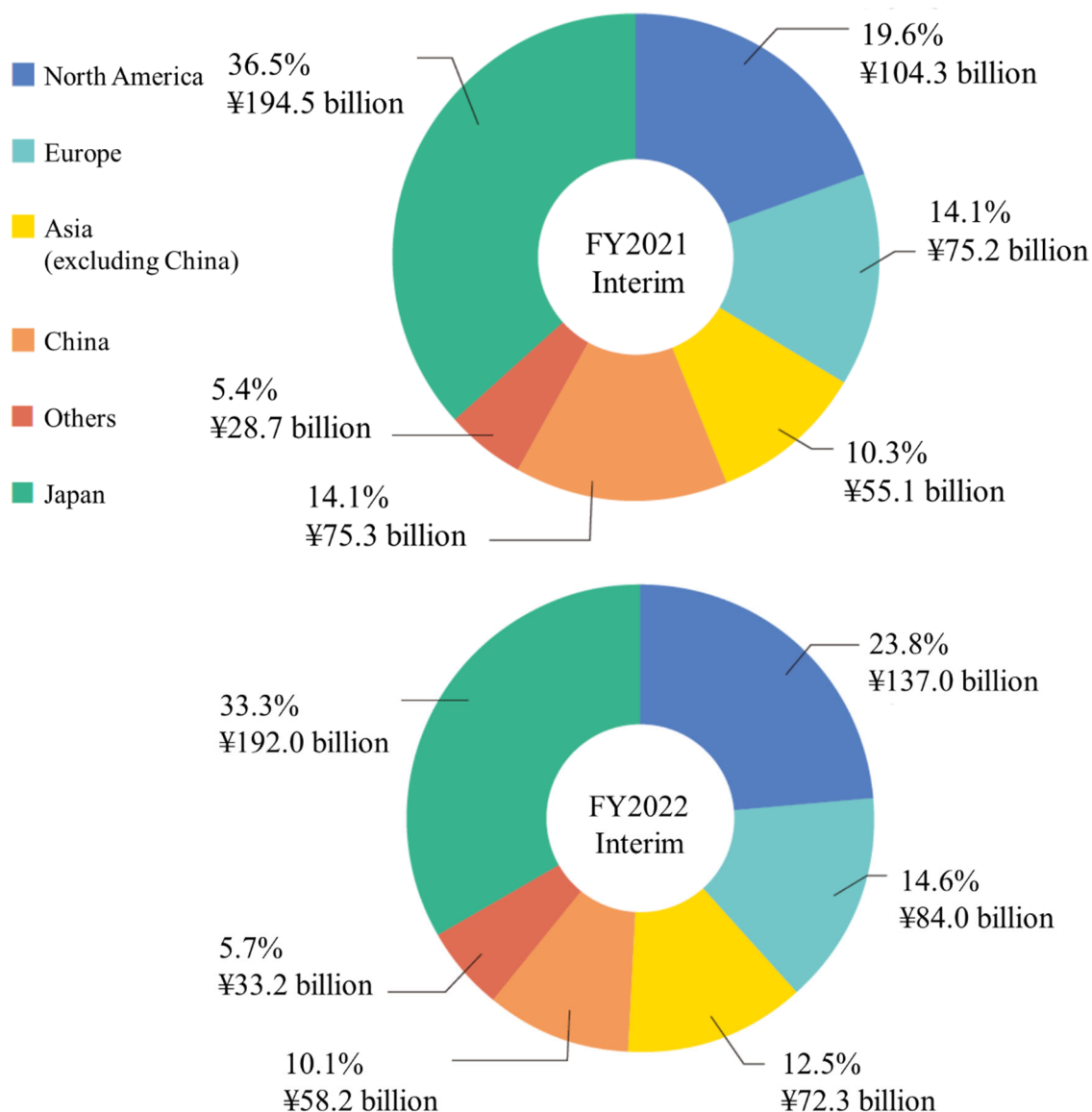
#### Interim Consolidated Balance Sheet (Summary) (Billions of yen)

Account Items	End of FY2021 (As of March 31, 2022)	FY2022 End of interim period (As of September 30, 2022)
Current assets	648.1	705.9
Cash and deposits	88.8	103.0
Notes and accounts receivable (including contract assets)	294.8	287.0
Inventories	232.1	280.2
Other	32.4	35.7
Fixed assets	446.8	473.5
Tangible fixed assets	301.0	319.4
Intangible fixed assets	77.6	78.8
Investments and other assets	68.3	75.3
<b>Total</b>	<b>1,094.9</b>	<b>1,179.4</b>
Liabilities	528.1	560.6
Notes and accounts payable	172.6	170.3
Interest-bearing liabilities	111.3	132.9
Other	244.2	257.3
Net assets	566.8	618.9
Stockholders’ equity	478.9	488.1
Accumulated other comprehensive income	72.5	115.5
Non-controlling interest	15.5	15.3
<b>Total</b>	<b>1,094.9</b>	<b>1,179.4</b>
Net ratio of interest-bearing debts	2.1%	2.5%
Stockholders’ equity ratio	50.4%	51.2%

#### Interim Consolidated Statements of Income (Summary) (Billions of yen)

Account Items	FY2021 Interim period (April 1, 2021 through September 30, 2021)	FY2022 Interim period (April 1, 2022 through September 30, 2022)
Orders	609.7	705.4
Net sales	533.1	576.6
Operating profit	31.0	26.7
Operating profit ratio	5.8%	4.6%
Ordinary profit	30.6	28.5
Ordinary profit ratio	5.7%	4.9%
Extraordinary gains (losses)	(0.3)	0.5
Profit before income taxes	30.4	29.0
Profit attributable to owners of parent	19.7	19.0
Ratio of profit attributable to owners of parent	3.7%	3.3%

## Net Sales Ratio by Region



### FY2021 Interim

Region	Net sales (Billions of yen)	Net sales ratio (%)
North America	104.3	19.6
Europe	75.2	14.1
Asia (excluding China)	55.1	10.3
China	75.3	14.1
Others	28.7	5.4
Japan	194.5	36.5

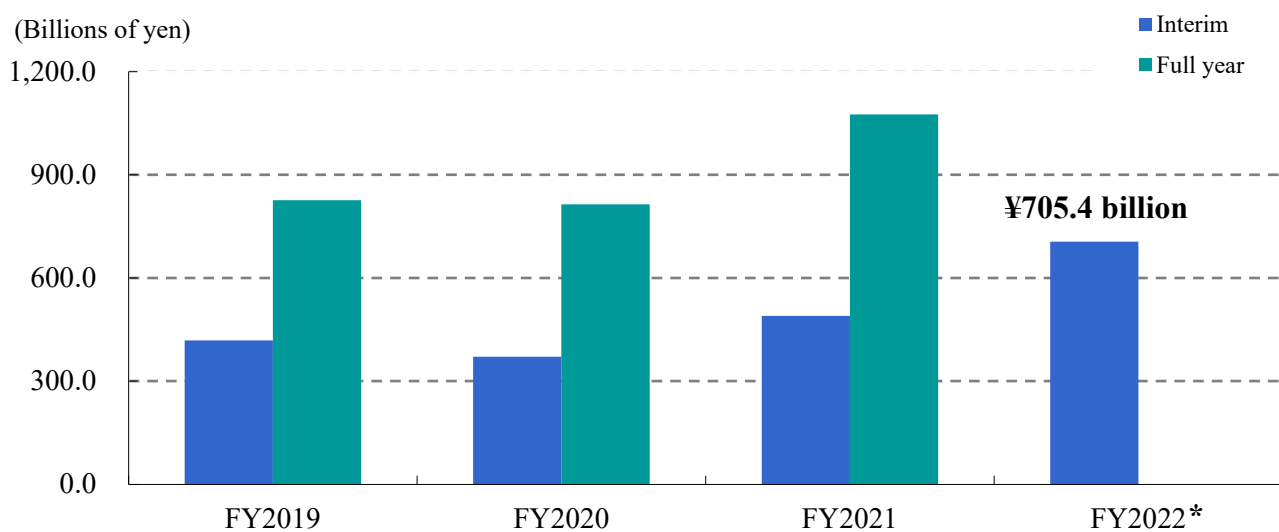
### FY2022 Interim

Region	Net sales (Billions of yen)	Net sales ratio (%)
North America	137.0	23.8
Europe	84.0	14.6
Asia (excluding China)	72.3	12.5
China	58.2	10.1
Others	33.2	5.7
Japan	192.0	33.3

## Consolidated Financial Highlights

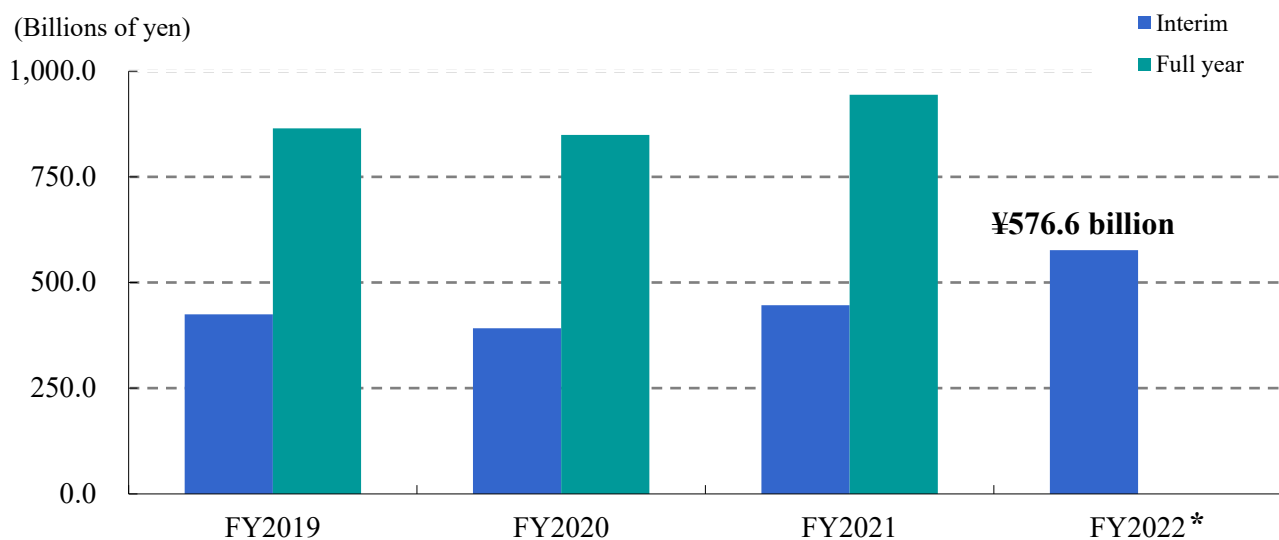
### Orders

(Billions of yen)



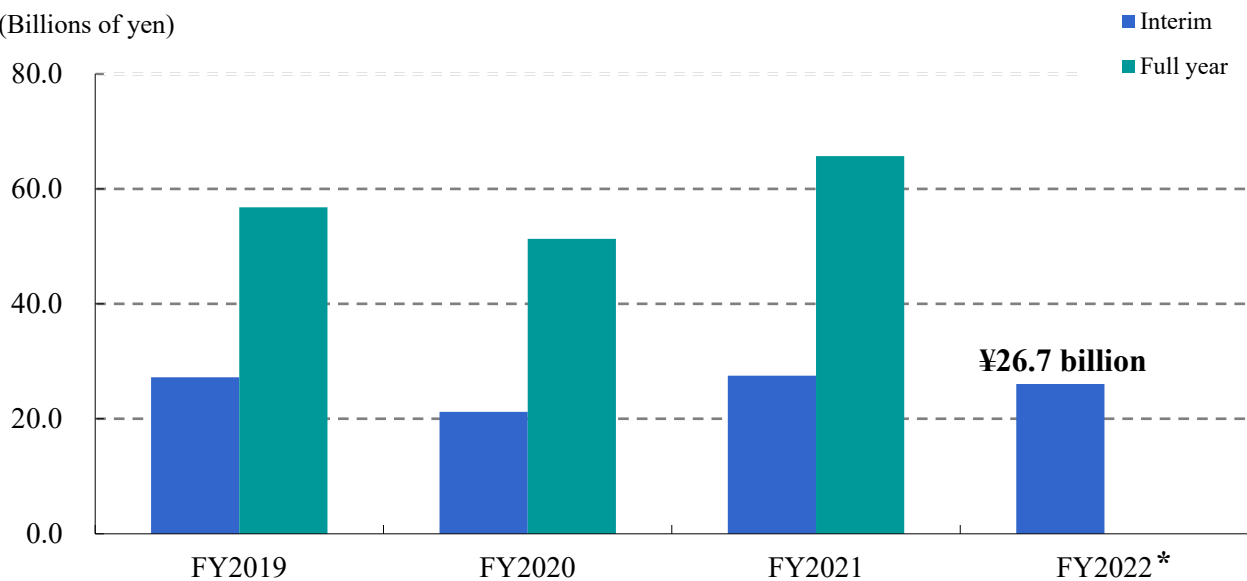
### Net Sales

(Billions of yen)



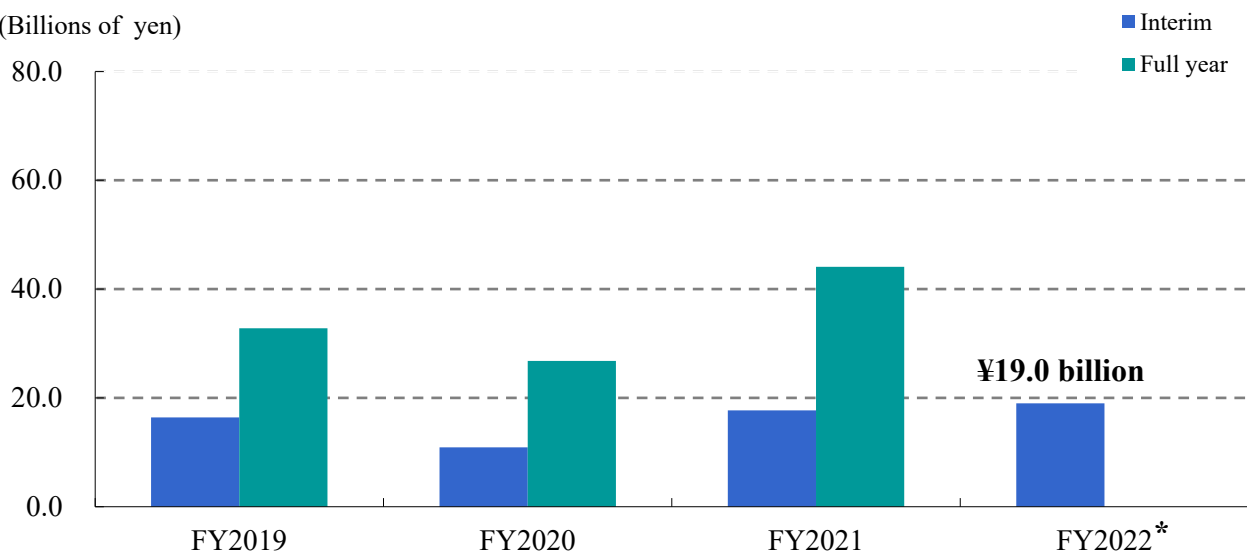
## Operating Profit

(Billions of yen)



## Profit Attributable to Owners of Parent

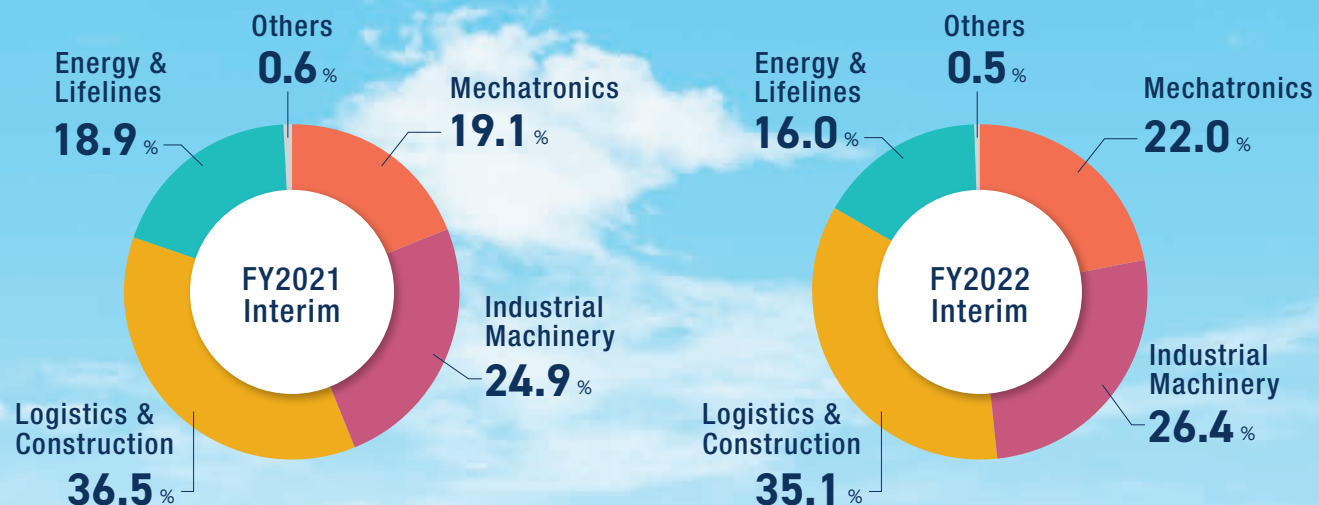
(Billions of yen)



\* With the change of fiscal year, the first half of fiscal 2022 for the Company and consolidated subsidiaries with fiscal years ending in March is the six-month period from April 1 through September 30, 2022, and for consolidated subsidiaries with fiscal years ending in December, the first half is the nine-month period from January 1 through September 30, 2022.

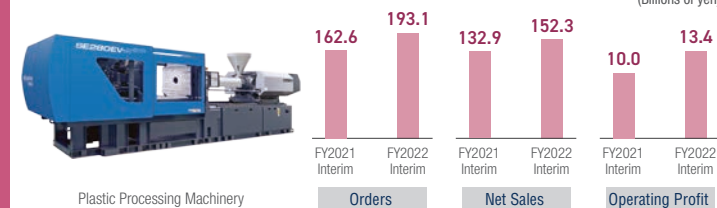


## Net Sales Ratio by Segment



## Industrial Machinery

Net Sales ¥152.3 billion Year-on-Year Change +15%



### Major Products

Plastic Injection Molding Machines, Film Processing Machines, Cryogenic Equipment, Precision Forgings, Semiconductor Manufacturing Equipment, Accelerators, Medical Equipment and Devices, Forging Presses, Machining Tools, Air Conditioning Equipment, Defense Equipment

Orders, sales, and operating profit all declined at the plastic injection molding machine business as demand in China and Europe, which had been solid on a post-COVID-19 recovery, weakened. In other businesses, increased semiconductor-related demand led to increased orders, sales, and operating profit.

## Logistics & Construction

Net Sales ¥202.2 billion Year-on-Year Change +4%



### Major Products

Hydraulic Excavators, Construction Cranes, Road Construction Machinery, Material Handling Systems, Logistics Systems, Parking Systems

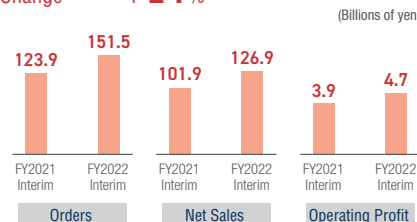
Despite a significant drop in demand in the Chinese market from the economic slowdown and lockdowns, the hydraulic excavator business recorded higher orders on strength in Japan and North America, but with the decline in China, sales and operating profit declined. In other businesses, the construction crane business saw increases in orders, sales, and operating profit on solid demand in North America, and although orders at the material handling systems business declined on a delayed recovery in shipbuilding demand, an order backlog meant that sales and operating profit rose.

## Mechatronics

Net Sales ¥126.9 billion Year-on-Year Change +24%



Fine Cyclo® High Precision Gearboxes



### Major Products

Power Transmission and Control Equipment, Motors, Inverters, Laser Processing Systems, Precision Positioning Equipment, Equipment for Control Systems

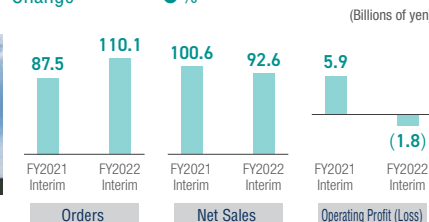
Orders, sales, and operating profit all rose due to increased demand for small and medium-sized power transmission and control equipment, robotics-use precision gear reducers, and motors in Japan, Europe, and the United States.

## Energy & Lifelines

Net Sales ¥92.6 billion Year-on-Year Change -8%



Circulating Fluidized Bed Boiler



### Major Products

On-Site Power Generation Equipment, Boilers, Air Pollution Control Systems, Water Treatment Systems, Turbines, Pumps, Reactor Vessels, Mixing Vessels, Food Production Equipment, Ships

Orders rose at the energy plant business in part because of large domestic orders for biomass-fueled power generation plant projects, but sales declined on a smaller order backlog in Japan, and this combined with a deterioration in profitability at large projects in Europe resulted in an operating loss.

Orders, sales, and operating profit at other businesses rose.

Note: Numbers less than one unit are rounded to the nearest unit.

# Development of Next-Generation Proton Beam Cancer Treatment System

The three main methods of treating cancer are surgery, chemotherapy, and radiation therapy, and recently much attention is being placed on radiation therapy, which takes less of a toll on the body from the perspective of quality of life. The most commonly used type of radiation therapy uses X-rays, but the particle beam therapies known as proton beam and heavy particle beam are gaining popularity both in Japan and overseas.

Here, we introduce the already released “proton beam cancer treatment system” and the “next-generation proton beam cancer treatment system” that is currently being developed for commercialization.



## What is a proton beam cancer treatment system?

This treatment system accelerates protons from the nuclei of hydrogen atoms as high-energy proton beams, which are targeted at cancer cells. The components include a cyclotron\*, a beam transport unit, and a 360-degree rotating gantry exposure device, making the system extremely large and highly precise.

\* Cyclotron: An accelerator that generates a high-intensity, continuous beam

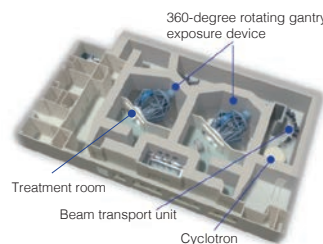
### Proton beam cancer treatment system

This is interesting

#### Special features of proton beam cancer treatment\*

- Effectively irradiates cancer at desired depth
- Less damage to normal tissue and milder side effects
- Irradiation can be tailored to complex shapes
- Because there is no surgery, the patient can be treated as an outpatient without disrupting their work and daily life, and is gentler for older patients

Multiroom [Facility size: 53 x 28 meters]

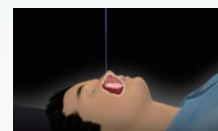


Treatment room interior

\* Based on SHI data

### Proton beam irradiation method

- A pencil beam scanning irradiation method, which makes it possible to cover the shape of the cancer with a narrow proton beam, is used.
- To minimize covering unevenness when irradiating an organ that moves when breathing, the beam can be synchronized with the patient's breathing, or the patient can be asked to hold their breath for a short time and the irradiation can be made while they are holding their breath.



Pencil beam scanning irradiation method



Please watch this video for more information!

<https://youtu.be/vaPbhN7k8Yg>

The fact that the proton beam cancer treatment system is extremely large and highly precise creates the following three issues.

#### Three issues with proton beam cancer treatment\*

- It takes time to irradiate the lungs, liver, pancreas, and other organs that move when breathing
- It takes time to position the patient with a high degree of precision, making the treatment take a longer time
- A large structure with sufficient floor space for the equipment is required

\* Based on SHI data

To address these three issues, SHI has engaged in developing a next-generation proton beam cancer treatment system that **reduces the proton beam irradiation time**, **simplifies the patient's positioning**, and **reduces the capacity of the structure required to install the equipment**

The project for commercialization is underway!



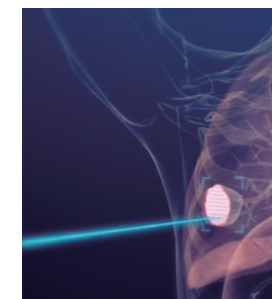
### Making it possible to reduce the time for irradiation of moving organs

#### Successful development of next-generation proton beam cancer treatment system

##### Reduction of irradiation time

Using a high-intensity, superconductive cyclotron and ultra-high-speed scanning technology, we succeeded in significantly reducing the proton beam irradiation time.

This makes it possible to irradiate while the patient holds their breath one time, which is expected to facilitate treatment that reduces the burden on the patient and precisely treats moving organs.



Please watch this video for more information!  
<https://youtu.be/0Kud8AxiiUQ>

##### Reduction of treatment time

The realization of a 360-degree rotating gantry and wide-view cone beam CT\* make it possible to simplify the patient's positioning with high precision. This is expected to reduce treatment time.

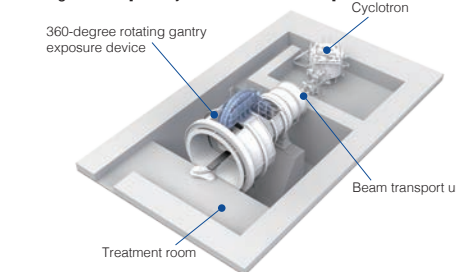
\* Cone beam CT: A three-dimensional CT obtained by taking X-ray images while rotating the gantry

##### System design optimization

The use of a system design optimized for a single room reduced the required structure capacity by 30% from previous systems.

This is seen reducing construction costs and construction times, which is expected to make it possible to start treatment more quickly.

Single room [Facility size: 13 x 29 meters]



Note: The next-generation proton beam cancer treatment system is an unapproved medical device.

SHI will continue to develop products in the field of cancer treatment, with the aim of realizing a society in which people live long and healthy lives.



The SHI Group is carrying out various research and development in the priority technological development areas of energy and the environment, and automation and digitalization. Our aim is to contribute to the preservation of the global environment and the realization of better lives and work styles.



## Energy and the environment

### Carbon recycling technology

We are developing technologies to convert CO<sub>2</sub> emitted from places like power plants to fundamental substances.

#### Electrochemical reduction

Creation of chemicals through electrochemical reduction using diamond electrodes



#### Absorption by algae

Algae is cultivated  
Used and secured as fuel or chemicals



#### Carbonization

Using incinerated ash from power plants,  
secured as calcium carbonate



## Automation and digitalization

### Magnetic absorption-type robot that can travel on curved surfaces

With a proprietary magnetic absorption mechanism, the robot can freely travel on curved surfaces like pipes and tanks, and therefore can be used for the harsh tasks of inspection, cutting, and welding. Our aim is to reduce the burden on operators, and realize next-generation heavy industry manufacturing sites that are safe and smart.



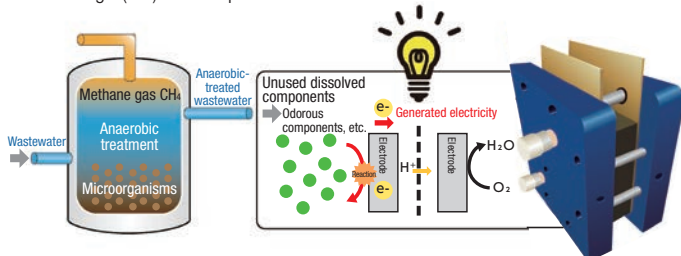
Please watch  
this video  
for more information!



<https://youtu.be/1miN09Ta9mg>

### Technology for generating electricity from anaerobic wastewater

This technology generates electricity from anaerobic-treated wastewater that has been disposed of to date. In the future, we expect this to be used as an environmental electricity generation technology at wastewater treatment facilities as a power source when the internet of things (IoT) is incorporated at wastewater treatment facilities.



### Development with the Challenge System

The Challenge System aims to provide employees who have technologies, ideas, and product concepts for the SHI Group's future with a place to realize dreams, to cultivate a spirit of taking up challenges in employees and invest in future products and technologies. The system is unique in that the Company does not provide the tasks, but instead solicits topics that employees themselves want to realize.

## Company Information (as of September 30, 2022)

### Corporate Data

- Incorporated: November 1, 1934
- Paid-in capital: ¥30,871,651,300
- Number of employees (consolidated): 25,153
- Offices
  - Head office: 1-1, Osaki 2-chome, Shinagawa-ku, Tokyo, Japan
  
  - Business offices: Chubu Office (Nagoya-shi)  
Kansai Office (Osaka-shi)  
Kyushu Office (Fukuoka-shi)
  
  - Plants: Tanashi Works (Nishitokyo-shi, Tokyo)  
Chiba Works (Chiba-shi)  
Yokosuka Works (Yokosuka-shi, Kanagawa Pref.)  
Nagoya Works (Obu-shi, Aichi Pref.)  
Okayama Works (Kurashiki-shi, Okayama Pref.)  
Niihama Plant of Ehime Works (Niihama-shi, Ehime Pref.)  
Saijo Plant of Ehime Works (Saijo-shi, Ehime Pref.)
  
  - Laboratory: Technology Research Center (Yokosuka-shi, Kanagawa Pref.)

### Directors and Corporate Auditors

Representative Director and Chairman of the Board	Tetsuya Okamura
Representative Director and President & CEO	Shinji Shimomura
Representative Director	Eiji Kojima
Director	Kazuo Hiraoka
Director	Toshihiko Chijiwa
Director	Toshiro Watanabe
Director	Susumu Takahashi
Director	Hideo Kojima
Director	Akio Hamaji
Standing Corporate Auditor	Hideo Suzuki
Standing Corporate Auditor	Jun Nogusa
Corporate Auditor	Masaichi Nakamura
Corporate Auditor	Yaeko Hodaka

### Executive Officers

President & CEO	Shinji Shimomura
Executive Vice President	Toshiharu Tanaka
Executive Vice President	Kazuo Hiraoka
Executive Vice President	Tatsuya Endo
Executive Vice President	Taiji Tsuchiya
Executive Vice President	Eiji Kojima
Executive Vice President	Toshihiko Chijiwa
Senior Vice President	Hiroo Morita
Senior Vice President	Morihiro Kondo
Senior Vice President	Yasunobu Kazumi
Senior Vice President	Shaun Dean
Senior Vice President	Tatsuro Araki
Senior Vice President	Toshiro Watanabe
Vice President	Shigeru Tajima
Vice President	Kazutoshi Shiraiishi

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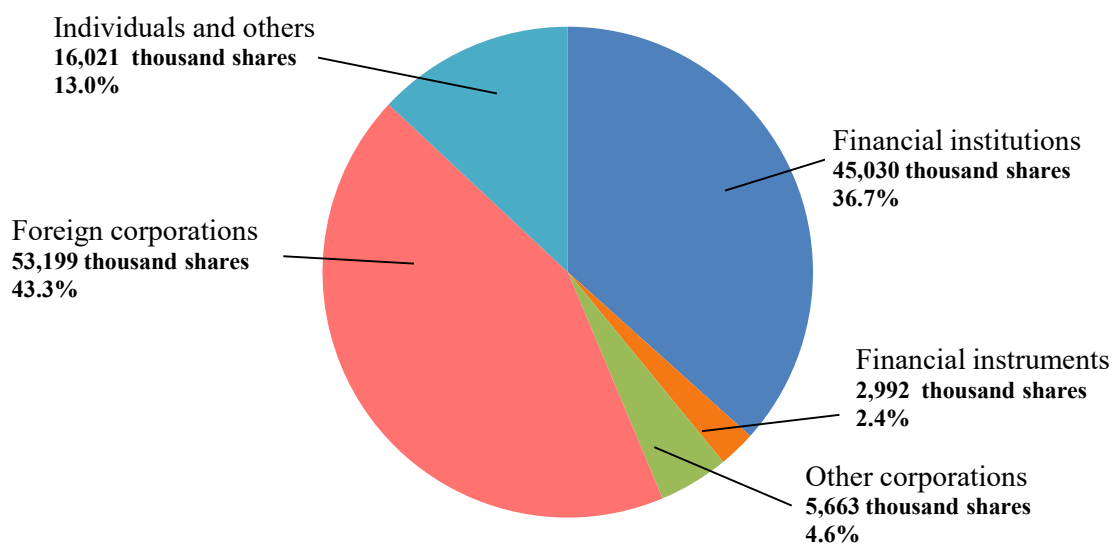
Mitsukuni Tsukihara  
Takanori Nagai  
Haruhiko Tsuzuki  
Melvin Porter

**Stock Information** (as of September 30, 2022)

**Stock Data**

• Total number of authorized shares:	360,000,000
• Total number of issued shares:	122,905,481
• Number of shareholders:	33,359

**Breakdown of Shareholders**



Note: The number of shares and shareholding ratios are rounded to the nearest unit.

## Shareholder Information

Fiscal Year	January 1 through December 31 of each year <sup>*1</sup>	
Ordinary General Meeting of Shareholders	March (every year)	
Record Dates	Ordinary General Meetings of Shareholders	December 31
	Payment of Interim Dividends	June 30 <sup>*2</sup>
	Payment of Term-end Dividends	December 31
Custodian of the Register of Shareholders and the Institution that Manages the Special Accounts	Sumitomo Mitsui Trust Bank, Limited 1-4-1, Marunouchi, Chiyoda-ku, Tokyo, Japan	
Handling Place of Register of Shareholders	Sumitomo Mitsui Trust Bank, Limited Stock Transfer Agency Department 1-4-1, Marunouchi, Chiyoda-ku, Tokyo, Japan	
	[Mailing Address] Sumitomo Mitsui Trust Bank, Limited Stock Transfer Agency Department 2-8-4, Izumi, Suginami-ku, Tokyo 168-0063, Japan	
	[Telephone Inquiries] Toll free number: 0120-782-031 Hours: 9:00–17:00 (except for Saturdays, Sundays, national holidays, and the New Year’s holiday)	
	[Website] <a href="https://www.smtb.jp/personal/procedure/agency/">https://www.smtb.jp/personal/procedure/agency/</a>	
Method of Public Notice	To be posted on the Company’s Website ( <a href="https://www.shi.co.jp">https://www.shi.co.jp</a> ). However, where required by unavoidable circumstances, public notices will be made in the Nihon Keizai Shimbun.	

\*1 The Company has changed its fiscal year from “April 1 each year through March 31 of the following year” to “January 1 through December 31 of each year.” Accordingly, the fiscal year ending December 31, 2022 is the nine-month period from April 1, 2022, through December 31, 2022.

\*2 The record date for the interim dividend for the fiscal year ending December 31, 2022 is September 30, 2022.

### [Notification or Inquiries about Change of Address with Respect to Shares]

Shareholders who have an account with a securities company are asked to give notification or make inquiries about matters such as change of address to the securities company at which he or she has an account. Shareholders who do not have an account with a securities company are asked to call the following telephone number.

### [Special Accounts]

For shareholders who did not use the depository and book-entry transfer system (*Hofuri*) operated by the Japan Securities Depository Center prior to dematerialization of share certificates, we have opened an account (called a special account) at the transfer agent Sumitomo Mitsui Trust Bank, Limited. Inquiries about, or notifications of, matters such as change of address with regard to special accounts should be made to the following telephone number.

### [Request for the Purchase or Sale of Shares of Less than One Unit]

Please contact the securities company at which you have an account for requests for the purchase or sale of shares of less than one unit (100 shares). In the case of requests regarding shares recorded in a special account, please call the following telephone number.

Contact: Stock Transfer Agency Department  
Sumitomo Mitsui Trust Bank, Limited  
Toll free number: 0120-782-031  
Hours: 9:00–17:00 (except for Saturdays, Sundays, national holidays, and the New Year's holiday)

Sumitomo Heavy Industries, Ltd.  
Website [www.shi.co.jp](http://www.shi.co.jp)