

# Automotive-related Equipment

Including EV-related systems and the primary components of power transmissions and drive trains to more specific components like computerized control systems, sensors, and the air compressors used in air-conditioning, we produce and sell a wide range of assembly equipment. Completely handling a large number of devices and items of equipment at our company, we run comprehensive in-house tests to ensure their correct operation before delivering them to our customers' factories.

Hirata's standard designs and solutions improve ease of maintenance for the end-user. In addition, digital twin technologies are used to design and develop production lines more efficiently.

<ol style="list-style-type: none"> <li>1. Integrated systems, from development to production and maintenance</li> <li>2. Engineering capabilities that enable us to fulfill customer requirements</li> <li>3. Vast plants where entire production lines can be verified</li> <li>4. Trust and continuous transactions from customers</li> </ol>	<p><b>Strengths</b> (Internal)</p>	<p><b>Weaknesses</b> (Internal)</p>	<ol style="list-style-type: none"> <li>1. Profitability management and profitability in new development projects</li> <li>2. Development capabilities for own key devices and standard equipment</li> <li>3. Competitiveness in specific regional markets</li> </ol>
<ol style="list-style-type: none"> <li>1. Expansion of market for products that address environmental issues</li> <li>2. Local production for local consumption (strengthening of local procurement at each manufacturing company)</li> <li>3. Advancement of DX for business</li> <li>4. Cooperation on overseas expansion with domestic companies</li> </ol>	<p><b>Opportunities</b> (External)</p>	<p><b>Threats</b> (External)</p>	<ol style="list-style-type: none"> <li>1. Changes in market environment due to tightening of environmental regulations</li> <li>2. Decrease in number of parts and in demand for production equipment due to shift to EVs</li> <li>3. Rise of Chinese companies</li> <li>4. Exchange rate fluctuations</li> <li>5. Loss of business opportunities due to travel restrictions brought about by spread of infectious diseases, natural disasters, etc.</li> </ol>

## Business Environment

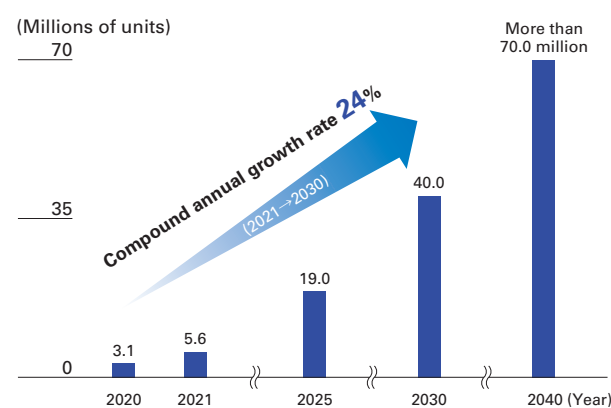
### • Industry Outlook

The long-term expansion of the EV market represents a future trend that can be regarded with certainty. To help curb global temperature rises, governments around the world and auto industry leaders have pledged to increase the market penetration of EVs, the sales of which are expected to reach 40 million units annually in 2030.

### • Major Business Partners

Our major business partners include General Motors and Ford Motor Company in North America, Fiat Chrysler Automobiles in Europe, Toyota Motor Corporation, Honda Motor Co., Ltd., and DENSO Corporation in Japan, as well as start-up EV manufacturers.

EV Global Sales Volume Forecast



### • Profit Opportunities

#### - North America

In recognition of the high regard in which our track record and reliability are held, in terms of EV-related equipment we will further strengthen our cost competitiveness, speed, quality, local support, and modification response, while strengthening the relationships with our customers.

#### - Europe

A market in which the in-region competition is intense, there is a sense that the export of equipment from Japan is problematic. In response to this situation and to lower prices, we will cultivate cooperation with peer companies and suppliers in Eastern European countries and strengthen our responsiveness by the building of supply chains, while working to increase profitability.

#### - China

There is a wave of local procurement by Japanese companies, amid which our company is also building up a track record. Going forward, we will further strengthen our sales and production as well as cost response capabilities, while expanding opportunities for receiving orders in China.

#### - Southeast Asia

We recognize that, at this point in time, EV-related investments have yet to begin in earnest, and that the resulting major wave of local production opportunities has yet to present itself. We will, however, make preparations for a smooth transition to the production systems in which Japan and other countries are taking the lead.

## Business Strategies

### • Retrospective Overview of Previous Medium-Term Management Plan

In EV-related equipment, we entered the European market and accumulated know-how with regard to customer specifications and other factors. We also aimed to strengthen cooperation by implementing measures that included personnel exchanges within the Group.

As an ongoing issue, in regions with high demand for EVs such as Europe and China, we came to recognize that the strengthening of the systems relating to local production, engineering, and procurement had been insufficient.

### • Business Strategies and Priority Measures in New Medium-Term Management Plan

Against the backdrop of efforts towards global carbon

neutrality, we regard capital investments in EVs and other initiatives as a major business opportunity. In aiming to improve our competitive advantage to win more orders in the Japanese, North American, European and Chinese markets, we are working on product development.

We are focusing in particular on the development and improvement of key devices in each type of manufacturing process in the field of EV batteries, where expansion in demand is expected.

Participating from the customer's product development stage—and actively collaborating with external parties so that we are not limited to our own resources—we are conducting the development of new EV-related products and implementing initiatives to save energy and reduce costs with the goal of creating products that meet customer needs and exceed their expectations.

### Topics

## New, EV-related Wire Bonder Product

Development of world's largest dual-head wire bonder capable of handling large battery modules for EVs

Installing two bonding heads has shortened cycle times, which are an issue with large batteries, and doubled the previous processing capacity. Also, configuring the standby position of the bonding heads outside the bonding area has achieved high maintainability, as the battery cells can be easily accessed should a problem occur.



## Strategies by Business Segment



# Semiconductor-related Equipment

We develop, manufacture, and sell the components—primarily the openers for various storage containers, atmospheric/vacuum robots, and aligners—used to transfer wafers in the semiconductor manufacturing process. We are also focusing on system product applications for these components. For semiconductor manufacturing equipment manufacturers, we provide optimized EFEMs\* for each item of equipment in original equipment manufacturer (OEM) and original design manufacturer (ODM) forms, and for semiconductor manufacturers (foundries) we provide EFEMs and sorters under our own brand.

We also support innovation (miniaturization and the switch to 3D modelling) in semiconductor manufacturing technologies. In addition to developing, manufacturing, and selling the various components and system products (EFEMs) used for panel level packaging (PLP) transport, we also provide N<sub>2</sub>EFEM, which transfers wafers in an N<sub>2</sub> (nitrogen) environment to reduce the adverse effects of the atmosphere on wafers.

\*Equipment Front End Modules

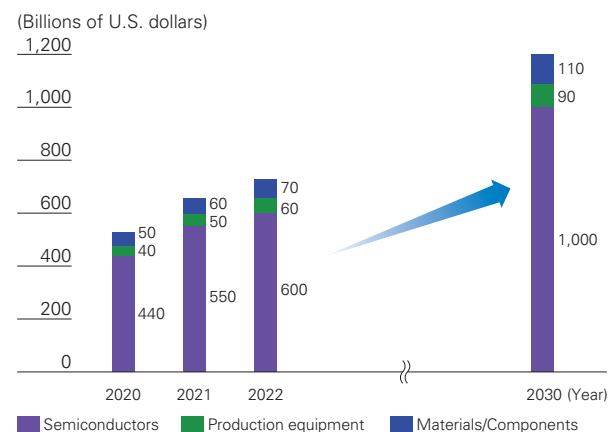
<ol style="list-style-type: none"> <li>Extensive line-up of wafer transfer components</li> <li>Provide lineup of components for PLP substrate transfer</li> <li>Lineup of system products that combine various components</li> <li>Knowledge and technology necessary for customization and optimization of components and system products</li> </ol>	<b>Strengths</b> (Internal)	<b>Weaknesses</b> (Internal)	<ol style="list-style-type: none"> <li>Delays in strengthening overseas production bases (cost competitiveness) and in responding to local production for local consumption trend</li> <li>Strengthening of sales structure in European and U.S. markets</li> <li>Profitability of parts sales/after-sales service business</li> <li>Insufficient development resources due to excessive customization</li> <li>Strengthening the lineup of our own-brand system products</li> </ol>
<ol style="list-style-type: none"> <li>Further growth of semiconductor market</li> <li>Innovation in semiconductor manufacturing technology</li> <li>Acceleration of electrification due to stricter environmental regulations</li> <li>Local production for local consumption</li> <li>Trends toward vertical set-up of/standardization of facilities for fabrications by end-users</li> <li>Establishment, revision/addition of SEMI industry association standards</li> </ol>	<b>Opportunities</b> (External)	<b>Threats</b> (External)	<ol style="list-style-type: none"> <li>Growing demand, soaring material prices and longer delivery times stemming from conflicts</li> <li>Rise of emerging market companies and start-ups</li> <li>Innovation in semiconductor manufacturing technology</li> <li>Economic friction, sanctions, disputes</li> <li>Market exclusion due to legal regulations and economic policies</li> <li>Establishment, revision/addition of SEMI standards</li> </ol>

## Business Environment

### • Industry Outlook

Demand for semiconductors, which can be said to be the core product of digitalization, is increasing year by year. Also, in societies that are aiming to be carbon neutral by 2050, electrification is gaining pace, and the importance of semiconductors, including their automotive applications, is increasing. Against the backdrop of governments around the world that are considering the introduction and expansion of policies to actively support investment in their semiconductor industries, the semiconductor manufacturers in each country are also planning record-high levels of capital investment. The semiconductor market is expected to reach the equivalent of approximately ¥100 trillion in 2030, and the semiconductor manufacturing equipment field is expected to grow accordingly.

### Forecast of Global Semiconductor-related Market Size



Source: Based on all kinds of data, including Japan Electronics and Information Technology Industries Association (JEITA), Ministry of Economy, Trade and Industry (METI)  
(Composition ratio of semiconductors, production equipment, and materials and components assumed to remain same until 2030, based on the METI's Strategy for Semiconductors and the Digital Industry [Summary] June 2021.)

### • Major Business Partners

Our major business partners include Tokyo Electron Limited, DISCO Inc., Advantest Corporation, ULVAC, Inc., and Ebara Corporation.

### • Profit Opportunities

We believe that further growth in the semiconductor market, allied with increasing our share of that market by

refining existing components and system products, will enable us to further increase our earnings. In the case of in-process transfer systems, we are also looking to further expand our earnings by broadening the scope of our Group's response through the development and market introduction of new products, such as vacuum-related components, systems, and logistics systems, outside the scope of the existing products mentioned above.

## Business Strategies

### • Retrospective Overview of Previous Medium-Term Management Plan

Amid burgeoning demand for semiconductors, we moved toward local production in China, implemented initiatives such as the building of a collaborative system within the Group, and achieved net sales of ¥10 billion.

In contrast, we recognized that there was still room for growth in terms of sales and various types of profit compared with other companies in the same industry. We thus believed that we needed to aim for further growth by building an optimal production system in this business, including the strengthening of our global production system. We also recognized that the promotion of product standardization and the shortening of lead times through bulk orders were issues that needed to be addressed.

### • Business Strategies and Priority Measures in New Medium-Term Management Plan

In a market in which growth is expected, we will promote the investment of resources in this business field through, for example, internal organizational restructuring while working to expand the scale of our response in each field. By strengthening our sales capabilities, we will deepen our understanding of customer needs to an unprecedented level and thereby promote the development of products with high added value. By focusing on standardizing products and the adding of functional products, we will broaden the scope of our responses to customer needs.

In our business, which has been based on a made-to-order business, we will also aim to realize an optimal production system and expand earnings by, for example, introducing a new production management system for mass-produced products and expanding the in-house production area in this business field.



300mm EFEM/Sorter series

An employee from #3 Engineering Department  
#3 Business Unit



## Other Automatic Labor-saving Equipment

Having started out as a manufacturer of transport equipment that supplied carts, our company commenced the manufacture of conveyors, which formed the catalyst for our current business, after its establishment in 1951 and then underwent a transformation into robots and production systems. Having pursued technological innovation with the desire to allow people to devote themselves to creative work that only people can do, and having not limited our selves to the automotive and semiconductor industries, we provide labor-saving equipment to customers in a variety of fields.

In formulating the Medium-Term Management Plan covering FY2022–2024, we reviewed our business segments and classified them into three businesses: Automotive-related, Semiconductor-related, and Other automatic labor-saving equipment. In the latter, we manufacture and sell production equipment for a variety of fields, such as flat panel displays (FPDs), home electronics, and medical/chemistry and physics devices.

### Individual Segments

#### FPDs



##### • Business Overview and Strategy

Utilizing the resources that the Group possesses (large, five-face processing machines, clean rooms for the final assembly of large equipment, design and manufacturing personnel with a wealth of experience, etc.), we mainly provide, in OEM/ODM form, vacuum process and vacuum transfer equipment in the production processes of sixth- to 10th-generation large glass substrate organic EL and liquid crystal displays. Applying the thin film coating technology that we have cultivated over many years, in recent years we have, on the basis of that technology, also been providing equipment for laminating cover glass and displays using silicon resin (adhesive) in the production process of in-vehicle displays that require weather resistance.

Due to the high image quality and high-speed response features of organic EL displays, demand for their use is increasing not only in mobile phones but also in devices with large screens, such as tablets and gaming displays. To improve productivity, there is a demand to shift the substrate size from G6 to G8, which is currently the mainstream, and equipment development

is progressing, but as the equipment has become larger, many technical issues have arisen. Expanding our technological strength and production capacity for large FPD production equipment that we have cultivated so far, our Group will work to acquire new markets by realizing the manufacturing of next-generation FPD production equipment.

#### Medical/Chemistry and Physics Devices



##### • Business Overview and Strategy

We are developing and manufacturing robot systems and medical devices that contribute to the automation of laboratory testing.

We are promoting product development with the goal of fully automating pathological examinations. In medical devices engaging in the development of equipment for medical use, with regard to cancer treatment equipment, we are working together with our customers to develop medical devices that comply with laws and safety standards for the purpose of obtaining pharmaceutical approvals.

#### Industrial Robots



##### • Business Overview and Strategy

Industrial robots represent our core technology. We have standard robot controllers and are able to operate multiple types of robots in the same environment. It is also possible to operate the robot from a host device such as a programmable logic controller (PLC) or PC without using a robot language, reducing the burden on system designers and shortening the time required to set up the equipment. Selling multiple types of robots articulated along orthogonal, horizontal, and vertical axes, we provide products that match the processes of a wide range of production systems.

Prioritizing functional safety, we are working on the development and improvement of industrial and medical robots.

Targeting production facilities in the EV and semiconductor fields, which are expected to see further growth in the years to come, we will make

more improvements in terms of safety, performance, functionality, and operability, and strive to broaden the spread and improve the performance of our equipment.

#### Distribution (Transfer Systems)

##### • Business Overview

For a variety of industrial fields, we offer highly versatile and customized automated warehouses and storage stockers with no restrictions, manufacturing and selling products tailor-made for the products and factory environments of our customers.

Constructed by means of advanced simulation technology and highly versatile and expandable transfer equipment, our Group's transfer systems have a proven track record in the automotive and home electronics fields and are in operation in many factories.

#### Home Electronics

##### • Business Overview

By effectively combining the technologies that are at the Group's disposal, such as transfer, robot, clean room and precision assembly technologies, we provide global support for parts and final assembly of home electronics that are continuing to evolve. These include mobile devices such as smartphones and tablets, high-quality displays, and high-performance vacuum cleaners.

#### Topics

##### Electrification

#### ECO Electric Series

Contributing to realization of carbon neutrality

Amid the environmental considerations, such as the SDGs, that are required, for example, in the automotive field, moves to shift from internal combustion engines to EVs are progressing on a global scale. In terms of production, there is a shift from pneumatic systems, which emphasize power and emit a large amount of CO<sub>2</sub>, to electric systems, which are environmentally friendly and safe.

Based on our achievements in a variety of industrial fields, we provide non-pneumatic, safe production equipment and contribute to the realization of factories that do not place a burden on the environment by realizing all-electric transfer on the basis of production equipment.

