

# ENVIRONMENTAL REPORT 2021

DIGEST VERSION For the year ended December 31, 2021

STAR MICRONICS CO., LTD.

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## Foreword

The impact of the new coronavirus infection has continued for a long time while waxing and waning, and it is also causing various problems such as a global shortage of materials and logistics disruptions. While these negative effects should continue to be noted, it is also true that they have contributed to the rapid acceleration of the digitalization of society as a whole.

Digitalization has brought efficiency and improved the convenience to our lives. While the flow of people is limited in society where we coexist with an infectious disease, the use of IoT, AI, and the cloud supports people's lives and businesses. These are now indispensable.

We regard ESG's efforts as an important management issue in the continuation of business management and further to improve corporate value as business opportunities for our company.

We will strive to achieve a sustainable society while fulfilling our corporate responsibilities. This includes taking into account our global environment, including climate change, promoting diversity and a work-life balance, and ensuring corporate governance and compliance.

We wish to extend our gratitude for your continued understanding and support of Star Micronics.



Mamoru Sato Representative Director, President and CEO

## **Company Profile**

Established	July 6, 1950
Representative Director, President and CEO	Mamoru Sato
Paid-in Capital	12,721 million yen
Number of employees	432 (As of December 31, 2021) Note:Excluding an annual average of 43 contract and other employees
Business Area	1. Special Products (Small Printers) 2. Machine tools (CNC Automatic Lathes and other Machine Tools)

## **Global Network**

#### Japan

## **Office Information**

- Head Office Department/ Special Products Division Head Office
- Special Products Division Quality Technical Center
- Machine Tools Division
   Kikugawa Factory
   Solution Center
   Tokyo Sales Office
   Osaka Sales Office
   Nagoya Sales Office
   Suwa Sales Office
- STAR Micronics Group Tokyo Office

#### **Subsidiaries**

Star Marketing Japan Co., Ltd. Star Metal Company Micro Sapporo Company

#### North America

Star Micronics America Inc. (U.S.A.) Star CNC Machine Tool Corp. (U.S.A.) Star America Holding Inc. (U.S.A.)

#### Europe

Star Micronics Europe Ltd. (U.K.) Star Micronics AG (Switzerland) Star Micronics GB Ltd. (U.K.) Star Micronics GmbH (Germany) Star Machine Tool France SAS (France)

#### Asia

Star Micronics Southeast Asia Co.,Ltd. (Thailand) Star Precisions Ltd. (Hong Kong) Shanghai Xingang Machinery Co.,Ltd. (China) Star Micronics (Thailand) Co.,Ltd. (Thailand) Star Micronics Manufacturing Dalian Co.,Ltd. (China) Star Micronics Manufacturing (Thailand) Co., Ltd. (Thailand)



## **Business Information**

Our company has aimed to create high value-added products that are universally available under the founding spirit of "business that maximizes results with the smallest amount of materials." In addition to optimizing planning, development, and sales from a global perspective, we are promoting environmental management activities, fulfilling our social responsibilities, and striving to improve our corporate value.

## Special Products

By fusing cutting-edge electronics with precision machining technology that has been cultivated since the company's founding, the company has established its own mechatronics engineering. In recent years, the company has promoted the development of high-value-added products by integrating with services utilizing software and the cloud. This engineering has been utilized in its products and services for the special products, including small printers and electronic journal services. We have also established an overseas production system early on, and now we are pursuing advanced technologies and high quality with a global perspective.





TSP100IV Series Receipt printer



## Machine Tools

With high performance and precision, our products have won high ratings from around the world as "machines that users make for users."

Beginning with the export of automatic lathes to the United Kingdom in 1962, Star Micronics has now established a production, sales and service system in Asia, and in Europe and the United States. Star has a line of machines to meet all your machining needs.



Swiss-type CNC automatic lathe SX-38 type B



Swiss-type CNC automatic lathe SL-10



Swiss-type CNC automatic lathe SR-20J || type B

## **Corporate Philosoph and Purpose**



## **Purpose**

Contribute to the sustainable development of society as a "leading small and medium-sized enterprise" that seeks to excel on the world stage

As a technology group, Star Micronics strives to provide new value through unique technologies that increase corporate value. At the same time, the Company will enrich the lives of its employees by providing a place where diverse engaged employees can contribute their best. Our goal as a group is to stand at the forefront of Japan's small and medium-sized enterprises by generating a high level of productivity that rivals large companies as we contribute to the sustainable development of society.



## **Corporate Governance**

#### Corporate Governance

At Star Micronics, our basic approach to corporate governance is based on fulfilling our social responsibilities as a company. To this end, we strive to achieve appropriate and efficient management with a view to the sustained enhancement of corporate value and the realization of a sustained society, and to distribute these the results of these efforts appropriately to shareholders and other stakeholders.

Star Micronics has adopted the structure of a company with an audit and supervisory committee in order to strengthen the supervisory function of its Board of Directors and to enhance its corporate governance capabilities.

Furthermore, an executive officer system was introduced to Star Micronics to speed up and raise the efficiency of business execution even further, and ensure that management as an organization is flexible and capable of prompt, rational decisions for executing business.

The Board of Directors is comprised of four Directors (one of whom is an independent Outside Director, excluding Directors who serve as Audit and Supervisory Committee Members) and three Directors who serve as Audit and Supervisory Committee Members (all of whom are independent Outside Directors), and is responsible for appropriate and efficient management decisions while supervising the execution of Directors' duties from an independent standpoint.

The Audit and Supervisory Committee is comprised of three independent Outside Directors. In addition to auditing the activities of Directors in the general conduct of their duties, the Audit and Supervisory Committee is responsible for auditing the Company's accounting statements and related documentation and preparing audit reports in accordance with audit policies and plans determined by the Audit and Supervisory Committee. Moreover, the Committee undertakes audits in conjunction with accounting auditors as well as internal audit and related departments.

On February 9, 2021, the Company established the Nomination and Compensation Committee as an arbitrary advisory body to the Board of Directors to increase the transparency and objectivity of procedures related to the nomination and compensation paid to Directors and Executive Officers. The Nomination and Compensation Committee is comprised of five Directors (four of whom are independent Outside Directors) appointed through a resolution of the Board of Directors. The Committee deliberates and reports on matters related to the selection, dismissal and compensation paid to Directors and Executive Officers in line with Board of Directors' consultations.



### Internal Control System

Star Micronics strives to maintain an internal control system that will enable proper and efficient management to drive a continuous increase in corporate value. To strengthen internal control, the Star Micronics Global Charter of Corporate Conduct was issued, setting out the Group's basic policies on compliance. Since then, the Star Micronics Global Code of Conduct was drawn up for employees to follow, and we have been working to establish rules and organizational structures to ensure compliance at every level of our activities. In addition, a department dedicated to corporate social responsibility (CSR) spearheads our compliance activities. This department plays a central role in providing reminders and education on compliance to the Group's Directors, Executives and Employees, and is charged with holding periodic committee meetings and monitoring the status in regard to the Group's adherence with all relevant laws and regulations. Star Micronics also has an appropriate internal control and whistleblower system for ensuring the reliability of its financial reporting, as stipulated in the Financial Instruments and Exchange Law of Japan.

## Compliance

#### Dissemination of the Star Micronics Group Charter of Corporate Behavior and Code of Conduct

The "Star Micronics Group Charter of Corporate Behavior" and "Code of Conduct" are summarized in the "Guide to Star Micronics Group Compliance Practice" along with a detailed explanation on corporate compliance. In addition to domestic officers and employees including those at our subsidiaries, Star Micronics also translated these into five languages, namely English, French, German, Chinese, and Thai, and are making these known to our overseas subsidiaries.

Furthermore, in addition to basic education at the company-wide level through e-learning, and group training, and the like, Star is also deepen its understanding of compliance internally through awareness-raising activities including compliance Q&A and company newsletters that utilizes the company web system.

Still further, every year, Star Micronics conducts a compliance awareness survey with our employees, including our overseas subsidiaries, to understand the status within our group and to maintain and improve our corporate compliance awareness.

## Compliance Promotion System

The company's Compliance Regulations defines the compliance promotion system as shown in the figure below.

#### **Basic Policy of the Compliance Regulations (Source: Compliance Regulations)**

- 1. The company fully recognizes that non-compliance can shake the company's management foundation, and positions thorough compliance as a basic principle of management.
- 2. The company promotes business with a world-class compliance system in its global business activities.
- 3. The company will develop the compliance activities set forth in the preceding paragraph. With this, the company will be highly appreciated by shareholders, customers, and all localities, will gain trust from the general public and will establish it as one that will not lose.



## Compliance Consultation Desk System

In order promptly to recognize that the organization, or an individual has conducted fraudulent, violating, or anti-ethical acts, and quickly respond thereto, the company has established a system for "Regulations for the Compliance Consultation Desk" and determined the operation of the consultation desk.

The Compliance Consultation Desk is operated by two people. The Compliance Committee Secretariat and the Audit Committee at the company headquarters. They receive consultations and reports on non-compliance from group officers and employees and temporary employees, and also respond to questions and concerns.

The compliance committee and a consultation desk have also been set up to make it easier for local staff at Star Micronics Manufacturing Dalian Co., Ltd., and Star Micronics Manufacturing (Thailand) Co., Ltd. which are major overseas production bases

Consultation methods include telephone calls, email, by letter, or interviews, or the like, thereby creating an environment that makes it easy for users to consult with the committee.

Star strives to strengthen the compliance system so that each employee has high ethical standards.

## **Risk Management**

The company must be able to anticipate all the risks facing the business, conduct routine prevention activities, and prepare for and implement contingency measures in advance. The company has established "Risk Management Regulations" that combine both those daily prevention activities and emergency responses, and defines the company's internal risk management system as shown in the figure below.

**Basic Policy of Risk Management (Source: Risk Management Regulations)** 

In order to ensure the soundness of management and the reliability of corporate value, the company positions risk management as an important issue for management and implements the following matters.

- 1. Recognize various management risks, prevent the occurrence of crises, and take reasonable and appropriate measures in advance to minimize any damage caused by a crisis and any impact on society.
- Establish a management policy for each risk and maintain a continuous management cycle with an organizational system.





#### Earthquake Risk Management

Based in a region where Nankai trough earthquakes are predicted to occur, the "Earthquake Risk Task Force" is moving forward to respond to earthquake risks. The headquarters building is a base-isolation structure. The company is also reinforcing buildings and fastening all types of equipment, based on seismic diagnoses of other offices. In addition, Star is also strengthening measures in the software field, such as formulating and promoting a BCP (Business Continuity Plan). Furthermore, for the purpose of confirming the safety of our employees in the event of a major earthquake and ensuring the implementation of BCP, Star has introduced a "safety confirmation system" to prepare for rapid response in the event of an emergency.

## Information Security Management

Media reports of information leaks and loss of personal information are more prevalent now; deficiencies in information security management are becoming a major trust issue. In order to ensure that the information and systems we possess are managed accurately and safely, Star has formulated an "Information Security Management Regulation" that defines a general security management policy for our information assets, and an "Information Security Risk Management Group," a sub-organization of the Risk Management Committee, is strengthening the security of our corporate systems to respond to the continually growing network risks.

## Security Export Controls

The company has set up a security export-control system, and for the purpose of maintaining international peace and security, exports of controlled cargo (related materials and equipment that contribute to the development and manufacture of weapons, and weapons of mass destruction, and the like, and general-purpose items related to conventional weapons) and related technologies are implemented based on the "Security Export-control Regulations."

Also, Star works to deepen its employees' understanding by informing its employees of relevant information through basic training at the company-wide level and through the company's website.

## **Customer Relations**

### Product Quality

#### **Quality Control**

High quality is what supports the growth of the Star brand making able to win in global competition. In addition to obtaining the international standard ISO 9001 for management systems, Star has also obtained the international standard ISO 14001 certification for environmental management systems at its domestic offices in Japan and its group subsidiaries. In the special products, Star has switched to the international standard ISO 27001 for Information Security Management Systems (ISMS) from May 2019, declaring ourselves compliant, and has thoroughly implemented internal management. Star always strives for the highest levels of quality and has established global standards.



#### Passing on Skills and Technology

In order to deliver high-quality products to our customers, it is indispensable to develop human resources who possess the necessary skills and engineering knowledge. In particular, in the manufacture of machine tools, "craftsmanship" called "hand scraping" is required. This is detailed work that requires skill in order to improve machine performance.

This work cannot be replaced by machines. This relies on the ability of a person. Therefore, the transfer of technology from veterans to young workers is an important factor.



craftsmanship "hand scraping"

#### **Machines with Excellent Support of the Environment**

With the exception of some models, our machine tools are subject to the Ministry of the Environment's subsidy system for eco-leasing promotion projects as high-efficiency cutting tools with high-power consumption-suppression effect.

Purposes of this system are to fight global warming, and to promote the use of products with high-power saving effect. Customers using our machine tools help protect our environment by reducing CO<sub>2</sub> emissions.

### **Protection of Personal Information**

Based on the Personal Information Protection Act and the Numbers Act, the company has set up "Personal Information Management Regulations" and "Specific Personal Information Handling Regulations" for the management of personal information such as customer information, business partner information, shareholder information, and employee information and others. Still further, specific warnings are being issued through internal communication documents, such as the "company-owned mobile phone management guidelines" and "measures to prevent information leakage caused by loss or theft of laptops," and others.

Personal information is managed appropriately not as "company property" but as "property with which others have entrusted us" to ensure that the personal information held by the Company will not be leaked.

## **Business Partner Relations**

In addition to procurement that pursues quality, price, and delivery time, Star is strengthening partnerships with suppliers that consider compliance with laws and regulations, respect human rights, and consider environmental initiatives.

## **Fair Trading**

In order to ensure fair and appropriate trading with all of our suppliers at all times, Star has established compliance with the Star Micronics Group Code of Conduct and has informed all of our officers and employees.

#### Fair trading with vendors (from the Star Micronics Group Code of Conduct)

- 1. Transactions with vendors and manufacturing contractors and the like must be conducted with common sense and integrity and in a fair and just manner.
- 2. When selecting vendors and manufacturing contractors, and the like, Star make fair comparisons and evaluations based on objective criteria such as quality, price, delivery time, technical ability, consideration for the environment, and response to social responsibility to determine optimal suppliers.
- 3. Star does not use its position to influence the selection and evaluation of vendors and manufacturing contractors to give favorable treatment to any particular vendor or manufacturing contractor.
- 4. As individuals, no one will receive rebates, commissions, or rewards or the like for transactions with vendors and manufacturing contractors.
- 5. When doing business with subcontractors, careful must be taken not to conduct acts such as delaying payment or the like after fully understanding the subcontracting law.

#### Efforts for Environmental Activities

With regard to products that fall under the European RoHS Directive, Star has received cooperation from related suppliers to promote green procurement and to change to materials that reduce the impact on the environment. Star is also changing the chemicals used in the company's production processes to ones that are environmentally friendly.

#### **Green Purchasing and Procurement**

With regard to purchases made through corporate activities, Star (including our affiliates) promotes green purchasing with the aim of comprehensively reducing the impact on the environment and actively and continuously contributing to the preservation of the global environment and the building of a recycling society.

With regard to materials that have an impact on the environment contained in the components, materials, sub-materials, packaging materials, and the like that compose Star-produced products, and materials that impact the environment used in production processes, Star has clarified the categories of content that is prohibited, that is to be completely disposed of, and proper management, and has established green procurement guidelines for the purpose of thoroughly informing the company and the outside world.

In order to strengthen the promotion of green procurement, these guidelines were reviewed in February, 2017 to clarify the four substances added by the EU's RoHS Directive, as well as high-concern chemicals (SVHC) specified in the REACH regulation.

## **Shareholder and Investor Relations**

#### **Disclosure Policy**

In accordance with the timely disclosure rules established by the Tokyo Stock Exchange, Star has made timely and appropriate disclosures of information. Furthermore, even if the information does not fall under the timely disclosure rules, Star actively discloses the information that the company believes is useful to shareholders and investors to understand the company.

### IR Activities

Star is proactively developing IR activities, including biannual financial results briefings for analysts and individual meetings with institutional investors. Star also has a variety of tools in place to provide timely and accurate management information, such as the "Star's report," "Annual Report (in English)" and "Annual Securities Report."

Particularly, Star recognizes that making disclosures on our website is an important means of ensuring fair disclosures of information, and promptly posts that information at the Investor Information section of our website.

#### General Meeting of Shareholders

In addition to company efforts for early sending of notices that a general meeting of shareholders will be held, and offering a pre-mailing disclosure on the company's homepage, Star strives fully to understand the content of proposals when exercising voting rights, such as responding to the exercising of voting rights on the Internet, participating in the electronic voting exercise platforms for institutional investors, and posting the English-language version of the summary of the notice of convening the general meeting on the Company website.

#### Shareholder Returns

Star has positioned the return of profits to shareholders as one of the company's important management measures, and the company's goal is to achieve a consolidated total return of more than 50%, including the acquisition of treasury shares.

## **Employee Relations**

### Promotion of Diversity

#### **Talent Strategy Goals**

Create an environment where all employees, regardless of gender, age, or race, can attain their full potential.

#### **Respect for Human Rights and Non-discrimination**

Star respects the human rights of our employees and acts in accordance with the Star Micronics Group Code of Conduct to create a working environment that is free of discrimination and harassment. Furthermore, in order to reduce employee workplace stress, Star has established a hotline run by industrial nurses to solve problems, and also receives consultations at the Compliance Consultation Desk set up in the Compliance Committee Secretariat and the Audit Committee.

#### **Reemployment System**

Star has set up a "Regulations for the Employment of the Elderly" that corresponds to the "Amended Employment Security Act for Senior Citizens" that makes it mandatory to provide continuous employment opportunities until the age of 65. Based on this, Star has set up a re-employment system that guarantees continued employment of all applicants until the age of 65, for the employment of full-time employees after the age of 60.

#### **Employment of Persons with Disabilities**

Star will move forward with preparing a working environment and strive to promote employment of persons with disabilities, who are increasingly being subject to social demands, by implementing professional management for employing persons with disabilities, and by opening up occupational areas to suit each person's own characteristics. The expectations from local regions, including the government, are very high. Star believes that the contributing to local regions is one of the things that the company can do to fulfill our social responsibility.

#### **Promoting the Activities of Women**

Star plans to organize various environments (promoting flexible and diverse work styles) and reform consciousness (management training, and the like) with the goal of achieving a female management ratio of 10% or more by 2030.

## Human Resource Training

Star conducts a variety of training according to the objectives.

## **Officer Training**

Training Name	Target	Purpose					
Executive Manager Training	Executive Manager Level	Gradually acquire the skills and mindset required of top management personnel who lead companies to sustainable growth in the midst of volatile changes to the business environment.					
Manager Training	Manager Level	<ul> <li>Acquire the management skills and company-wide view required of business leaders</li> <li>Strengthen logical thinking skills and learn from the basics of management up to its practice</li> </ul>					
Appraiser Training	New Officer Training	Understand the basic significance of the personnel evaluation system and clarify the criteria for selecting evaluation items and determining the stages of evaluation.					

## **Hierarchical Training**

Training Name	Target	Purpose
Assistant Manager Training	Person Promoted to Assistant Manager	<ul> <li>Master the leadership process that leads to action</li> <li>Raise awareness and perspectives as a leader responsible for organizational reform</li> </ul>
Chief Training	Person Promoted to Chief	<ul> <li>Improve problem-solving abilities to take independent actions</li> <li>Improve communication skills required for the surrounding work</li> </ul>
Second-year Follow-up Training	Second Year Employees	Look back upon the first year of working life, reaffirm your own role, identify challenges and problems in the workplace, and formulate future action plans.
New Employee Training	New Employees	Acquire the basics of business manners and work methods, and cultivate awareness as a member of society. During the first six months of being assigned in the company, training personnel (OJT leaders) will be assigned for training these employees in a planned and phased manner.

## Language and Global Skills

Training Name	Target	Purpose					
Global Leader Training	Young Employees	Training the next generation of leaders who can play an active role in Japan and overseas					
Young Employee English Language Training	Young Employees	Improvement of language skills (English) focusing on young employees					
TOEIC Examination Fee Subsidy TOEICIP Testing	All Employees	Improve employee ability with English and foster a global mindset					
Language Training Before Appointment	Overseas Loaned Employees	Acquisition of the language skills required to perform work at a local corporation overseas					
Pre-appointment Training	Overseas Loaned Employees	Acquisition of the business skills (intercultural understanding, human resources, labor management, accounting, taxation and others) required to perform work at a local corporation overseas					

#### **Business Skills**

Training Name	Training Name Target Purpose							
Business Skill Training for People Who are Promoted	Chief and Higher	Acquire business knowledge of people, things, money, and thinking required in each hierarchy.						
OJT Leader Training	OJT Leaders	Acquisition of knowledge required of an OJT leader to support the development of new employees						

## Training By Purpose

Training Name	Target	Purpose
Compliance Training	New Employees	Foster compliance awareness and improve related knowledge
Officer Harassment Training	New Officer Training	Foster an awareness to prevent harassment and improve related knowledge
Life-plan Seminar	Employees in their late 40s	Acquisition of know-how in understanding the HR system, health management, and life-long living design
Senior Life Seminar	Employees who are Retiring	Acquisition of know-how on life plans after retirement

## Self-development Support

Training Name	Target	Purpose
Support for telecommunications training	All Employees	A wide range of courses are available, ranging from English language and technical skills to business skills and general training. Depending on the theme of the course (considering the relevance to work), 90% to 50% of the tuition fee is paid as a subsidy by the company.
Incentive system for obtaining qualifications, and the like	All Employees	In company-designated qualifications, bonuses are paid to employees who pass examinations and to those who attain a score at a predetermined level.
Technician Qualification Reward System	All Employees	A bonus is paid to employees who has pass a skill test (machining, machine maintenance, machine inspection, finishing, and others) which is under a national examination system.

## Efforts for Health Management

### Star Micronics Health Management Declaration

The Star Micronics Group aims to achieve affluence and enrichment, and has defined in its Charter of Corporate Behavior that it will conduct business activities based on respect for human beings. As one of its responses, Star Micronics Group is committed to taking into consideration employee health and striving to develop a safe, hygienic and easy-to-work working environment.

Star will support the underlying physical and mental health through various initiatives to enable employees to make full use of their abilities.

Also, the company's efforts were recognized by the Nippon Kenko Kaigi, and in March, 2021, Star was recognized as a "corporation in 2021 with excellent health management."



#### Maintain and Promote Health

#### **Health Management**

Star has added an item on regular health checks to be in line with the company's health issues. Furthermore, employees over the age of 35 have the option of choosing a full physical examination, and the company subsidizes most of those costs to facilitate their seeing a doctor. As an activity to promote health, Star distributes a health-information e-mail magazines, offers a discount to designated physical training facilities, holds yoga classes and holds health seminars, subsidizes sporting groups, and holds walking events twice a year, all in an effort to establish good exercise habits.

#### **Health Counseling by Industrial Physicians**

Employees who have had issues pointed out in a regular medical examination or full physical examination are encouraged to visit their doctor for advice and are interviewed by our industrial physicians as a subsequent measure. Also, once a month, the industrial physician visits each office in Shizuoka Prefecture, offering employees a place where they can directly consult and see a doctor.

#### **Mental Health Care**

In an era with dramatically changing working environments, the number of people with mental health issues in the workplace is rapidly increasing. In an effort to prevent this from happening, Star has set up a mental health consultation desk within our company to help relieve our employees of their stress and concerns. In addition, our industrial physicians are set at designated, external medical institutions, and external counseling services are introduced to provide mental health care to our employees.

#### **Implementation of Stress Checks**

To understand the status of employee stress, Star conducts annual stress checks. Our industrial physicians interview employees based on each person's request for those who are highly stressed as indicated in a survey.

#### **Prevention of Passive Smoking**

The entire building is a smoke-free environment in view of compliance with the Health Promotion Act and workplace safety and hygiene considerations. Also, in order to prevent passive smoking, customers who come to the company are also asked to refrain from smoking inside the building. In addition, Star continuously conducts awareness-raising activities to help smokers to stop smoking.

## Promotion of Work-life Balance

#### **Childcare and Nursing Care Leave System**

Star has set up a childcare leave system, a system for shorter working hours for childcare leave, and a nursing-care leave system so that employees who need to care for a child or an elderly family member can still work with peace of mind. Star has set up an environment that makes it easier to work while giving childcare or nursing care.

At the workplace, Star has a cooperative system in place. This offers a follow up in the form of hearings with employees when they are leaving or returning to work.

The company has been certified as a general business operator that conforms to the standards at the end of February, 2020, satisfying all the "Kurumin certification standards" composed of 10 requirements defined by the government. These include obtaining childcare leave above a certain level and establishing a system of shorter working hours for childcare.

#### **Flexible Working System**

Considering employee work-life balance, in addition to the shorter working hours system for childcare and nursing care, Star has introduced a paid leave system for half-days and hourly work to support employees to attain a more leisurely life.

### Labor Relations

The labor union and management have established a labor-management council (a central labor-management council and a branch labor-management council) as a place to exchange opinions for periodically negotiating and discussing labor conditions and the various human resources systems. This built industrial relations based on mutual trust.

## Efforts for Occupational Safety and Health

#### Prevention of Occupational Accidents (Safety and Health Management)

In order to raise the safety and hygiene awareness of our employees and to prevent disasters and disease, Star has established a "Safety and Health Committee" at each business office. The committee meets once a month. It undertakes activities to improve daily safety and hygiene, such as by offering guidance and training, and patrols in the factory.

#### **Prevention of Traffic Accidents**

By ensuring that no employees have any accidents or commit any traffic violations, Star contributes to the development of business facilities, the safety of our drivers, and the traffic safety of the local community. Employees who drive a company car while on the job are required to obtain an "internal license." They are also subject to a driving suitability test.

## **Local Community and Society Relations**

#### Basic Policies of Social Contribution Activities

As stated in the Star Micronics Group Code of Conduct, Star is actively engaged in social-contribution activities as one of its CSRs (Corporate Social Responsibility). Star will strengthen its engagement with local and international communities, such as by participating in community cleaning activities and supporting NGOs and NPOs.

Contributing to Society (from the Star Micronics Group Code of Conduct)

- 1. As a corporate citizen, Star will actively participate in social-contribution activities and contribute to the development of society. Star will strive to implement continuous social-contribution activities such as cooperation with local communities and contribute to the international community.
- 2. Support employee voluntary social contribution activities and participation.
- 3. Star will disseminate the Group's social contribution activities to the wider society and strive to communicate with society.

#### Local Community and Social Contribution Activities

While responding to corporate social responsibility, Star is actively engaged in social contribution activities with the cooperation of its employees. Every year, our employees and their families are invited to cooperate and participate in community-cleaning activities sponsored by Shizuoka City. However, due to the impact of the coronavirus, the company stopped participating in 2021. Large events have been canceled because of the coronavirus pandemic, but the company hopes for an early end to that and will also explore other ways to contribute to society.

#### Service Activities in Dalian, China

At our overseas production base in Dalian, China, Star Micronics Manufacturing Dalian Co.,Ltd., an earth-hour\* was held on March 27, 2021. 317 employees participated. Later, an awards ceremony was held for employees who were given the title "Earth Guardians."

In addition, on June 6, 2021, garbage collection activities were held at Xiaoheishan Forest Park near the factory, and 94 people who aspire to that participated.

\* Activity in which the World Wildlife Fund (WWF) turns lights out for one hour worldwide to prevent climate change







People collecting garbage

\* See the attached "Social Data" for details of the relevant data.

#### **Use of Paper Considering Protection of Forests**

Shizuoka Prefecture, where Star is headquartered, is one region that is rich with mountain forest assets, but if mankind does not give attention to artificially planted forests including Japanese cedar trees or the like, they will become devastated. Well-thought-out logging helps keep forests healthy and protects biodiversity. By sponsoring the Fuji-no-Kuku Forest Township Association, a forest-protection activity promoted by the prefecture, and purchasing printed paper through that association, Star is promoting the use of paper using harvested wood.

#### **Collection Volunteers**

Social contribution organizations such as NGOs and NPOs help fund their activities by collecting income from membership fees and donations from corporations and individuals that support those activities, as well as collecting used stamps and the like.

As a close volunteer who can participate in our company, with the cooperation of our employees, Star collects used stamps, foreign coins, and the like, and donates them to UNICEF, JOICFP, and the Prefectural Volunteer Association, and others. Also, the company provides a certain amount of support with a matching gift for these donations.

#### Setup of Fundraising Type Vending Machines

The headquarters has set up fundraising beverage vending machines from which part of the purchase price is donated to a designated organization for fundraising. The headquarters vending machines are used for welfare activities in Shizuoka Prefecture as a joint fundraising for the Central Community Chest of Japan.

#### **Business Trip Blood Donations From the Japanese Red Cross**

Because life-sustaining blood cannot yet be artificially produced and stored for long periods of time, blood that is required for medical care is supported by donations.

Star is registered as a blood donor, and with the cooperation of our employees, the company conducts blood donations through the Japanese Red Cross twice a year.

#### **Support for Training Institutions**

Shizuoka University, a national university corporation headquartered in Shizuoka Prefecture, is implementing the "Asia Bridge Program." This is an educational program with the goal of strategically developing global human resources (international students and Japanese students) who are active overseas, mainly in Asia.

Star supports that program by endorsing its purpose and making donations.

#### Implementation of Ordinary Life-saving Training

In addition to installing AEDs internally, our "Ordinary Life-saving Training" is held annually with the cooperation of a local fire department.

This course includes simulations and practical skills such as giving first aid, handling bleeding, resuscitation methods during a cardiopulmonary arrest, and the use of AEDs and the like. All employees can take courses to be prepared for times when they may need to use those skills.

## Environment

## **Star Precision Environmental Charter**

### **Environmental Philosophy**

As a technical group with a core of information-related technology, compact precision machining, and assembly, Star positions environmental management activities as an important issue for the company, and promotes business activities and fulfills social responsibilities to contribute to the realization of a society that is in harmony with the global environment.

### **Basic Environment Policies**

1. Among the environmental aspects related to the company's activities, products and services, the following items are the focus of environmental management.

Each division (each factory) prepares and implements an environmental policy that sets the theme for its activities.

- Promote reducing waste, and reusing and recycling activities
- Promote the efficient use of resources and energy conservation.
- Reduce the use of harmful substances and properly manage chemicals.
- Promote the development, manufacture, and service of environmentally friendly products.
- Promote green purchasing
- Promote environment-communication internally and externally.
- 2. Make improvements to the environmental management system and conduct pollution prevention activities.
- 3. Comply with laws, regulations and regional agreements related to environmental aspects, as well as establish and undertake voluntary standards.
- 4. Understand the company's environmental activities, the social environment, and the requests of stakeholders, and review the basic environmental policy.

This environmental charter will be made known to all of our employees and suppliers, and will also be disclosed to the general public.

## **Environmental Management**

The Group has built an environmental management promotion system as described below. This strengthens internal environmental auditing, offers training to employees about the environment, and implements efforts to reduce environmental impacts and the like.







## Correspondence to ISO14001

While promoting the acquisition of ISO14001 certification, we moved some of our sites to self-declaration. We will continue to promote environment-friendly business activities based on our environmental policy, including our affiliates sites that have shifted to a self-conformance declaration.

#### Domestic

Company factories / Offices							
General Administration	n Headquarters	Head Office	Acquired September 2001 (Self-conformance declaration: September 2010)				
Special Products Divisi	on	Head Office / Quality Technical Center	Acquired March 2001 (Self-conformance declaration: September 2018)				
Machine Tools Division		Kikugawa Factory	Acquired March 2002				
Subsidiaries							
Star Matal Company	Manufacturing Department	Kikugawa Factory	Acquired April 2006				
Star Metal Company	Sheet Metal Department		Acquired March 2007				
Micro Sapporo Compa	ny		Acquired March 2007				

#### Overseas

Subsidiary (Key production site)	
Star Micronics Manufacturing Dalian Co., Ltd. (Dalian, China)	Acquired May 2002

## **Environmental Audits**

#### **Internal Environmental Audits**

Internal environmental audits are conducted regularly each year at domestic factories to confirm that environmental management systems are adequate and effective, and that environmental management programs are appropriate and legally compliant.We also conduct skills enhancement seminars for internal environmental auditors to improve the expertise of people conducting internal audits.A comprehensive environmental audit report is created listing items that fall below the expected standards, and the report is submitted to management as data for use in compiling the end-of-year environmental review. Thus audits contribute to improvements in the following year.

#### **External Environmental Audits**

Domestic factories that have acquired ISO14001 certification are subject to environmental audits (environmental management system inspection) by an external inspection authority. Certification maintenance inspections take place once a year, while renewal inspections are conducted every three years. The results of these inspections are submitted to management as data for use in compiling the end-of-year environmental review, thereby contributing to improvements in the following year.

## Environmental Training

We believe that to maintain, and further improve, the level of our environmental activities, we need to change the mindset of every single employee. We therefore offer training opportunities for all employees from new hires to management. Training comprises four core categories: general and rank-based, leader-oriented, specialist.

## Emergency Response

Every year, We plan and conduct emergency-related training of relevant parties and disaster prevention drills, as well as simulation-based drills for individuals and entire facilities based on manuals, which are evaluated as part of the process. These drills anticipate every conceivable accident or emergency (earthquake, typhoon, explosion, fire, blackout, chemicals leak, and airborne hazard, etc.).





Oil leak training

## **Lowering Environmental Contamination Risk**

## Less air Conditioning

We lengthened our Cool Biz Campaign in accordance with lengthening of the period at the Ministry of the Environment.

	Cool Biz Campaign	Warm Biz Campaign
Period conducted	May 6th to October 29th	December 1 to the end of March
Air conditioning temperature Set to 28°C		Set to 22°C
Attire	No neckties or uniforms are worn	Employees are encouraged to wear warm clothes

### Installation of Solar Power Facilities

As part of environmental conservation actions, we installed solar power facilities on roofs of Kikugawa Factory and the factory at Star Metal Company.

### Response to the Revised Energy Conservation Act

As a business which is subject to the revised energy conservation act, we must reduce our energy consumption rate every year in the mid- to long-term. In response to this law, we have appointed an Energy Management Supervisor and an Energy Management Planner who fulfill a central role in energy conservation activities. We have also established an Energy Conservation Task Force and formulated compliance rules for promoting energy conservation to serve as guidelines. Through such measures, we are actively working to conserve energy.

## Managing Chemical Substances

Star Micronics have created and implemented internal regulations for the management of harmful substances and dangerous materials handled by the company in order to ensure proper and safe management of chemical substances. These internal regulations, based on the relevant laws and statutory regulations, are designed to ensure that the environment is taken into account in the purchasing, storage, use and disposal of such substances.

#### **Response to PRTR\* Law**

In accordance with the PRTR (Pollutant Release and Transfer Register) Law, we have continued to submit notification regarding the emission and transfer volume for Class 1 Designated Chemical Substances. The annual handing volume of such substances has decreased greatly due to the use of powder paints which do not contain organic solvents (including substance subject to PRTR) and to a change to alternative materials. As a result, since 2011 there are no longer any offices for which submission is required.

However, from the perspective of appropriate handling of chemical substances, we will continue to gather data on emission and transfer volume.

\* The PRTR (Pollutant Release and Transfer Register) Law is a means of obtaining, collating and disclosing emission and transfer volume data for harmful chemical substances.

### Response to Air Pollution

## **Reduced VOC Emissions (Powder Coating)**

Our subsidiary Star Metal Company, uses powder coating that does not contain organic solvents (containing PRTR target substances) in the coating work of sheet metal parts on our company's machining tools. This is to reduce environmental impacts during manufacturing processes. As an environmental effect, it has been possible significantly to reduce emissions of air pollutants (VOCs) and reduce industrial waste by one-third.

At our overseas production base, Star Micronics Manufacturing Dalian Co.,Ltd., Star has improved the processing efficiency of organic exhaust gases by 90% or more by adding a ventilation system to the paint site VOC purification equipment and renovating the washing site. This has reduced exhaust gas-air pollution.

At the assembly site, activated carbon adsorption boxes were installed to enhance the treatment of exhaust gases at the washing site and to reduce air pollution.

This has also improved the working environment for workers.

### Response to EU Environmental Regulations

Environmental regulations in the European Union (EU) have had a significant impact not only within the EU region but also in various countries around the world, and many japanese manufacturing industries have been forced to respond in some way.

For our products that fall under WEEE and RoHS directives, we are operating based on our internal regulations for management of substances that burden the environment and on green purchasing guidelines.

Also, for REACH Regulations, we are implementing sequential surveys in regards to whether our products include any SVHC, which are added every year.

#### Use of X-ray Fluorescence Spectrometers

We use X-ray fluorescence spectrometers to measure levels of chemical substances contained in components of our printers that fall under the WEEE and RoHS directives, as well as to conduct inspections on receipt of the components.

Our machine tools do not fall under these directives, but we have taken aggressive measures such as using X-ray fluorescence spectrometers to measure the composition of components with a view to reducing harmful substances. Components used in the actual machines in our key products are 99% RoHS compliant, excluding certain NC control equipment.

## **Soil Pollution Countermeasures**

Star (including domestic subsidiaries) has created and operates "Soil Pollution Prevention Regulations" in order to prevent and properly to manage soil contamination of land that is owned and used, and newly purchased land.

## **Noise and Vibration Countermeasures**

Star (including domestic subsidiaries) has created and operates "Noise and Vibration Management Regulations." These define how to measure and manage noise and vibrations in order to comply with laws and regulations.

### Asbestos Countermeasures

#### **Investigation Reports and Responses of Our Products**

It has been found that asbestos is contained in some of the purchased components (packing, and brake material) assembled into our products produced in the past. However, the asbestos-containing materials are sealed or contained in resin, and for that reason, pose no risk of getting out into the environment. It will pose no harmful effects to the human body when used. Furthermore, our products currently under production no longer contain asbestos.

## Recycling

Star actively adopts environmentally friendly components. Company uniforms use plastic bottles as the raw material. Also, used uniforms are recycled into residential insulation and cleaning mops.

## Promoting Waste Reduction and Recycling Activities

Star has created and operates "Waste Management Regulations" to promote proper treatment and voluntary activities based on the "Waste Disposal Act", for waste that is discarded as a result of corporate activities.



## Green Purchasing and Procurement

When purchasing products and services, Star prioritizes green purchases by selecting components that have the least possible impact on the environment. Star also promotes green procurement activities actively to procure environmentally friendly components and materials in order to develop and sell environmentally friendly products.

In Star's special products, Star has established "Green Procurement Guidelines" as guidance for green procurement for all of our suppliers. These are posted on the company website.

## **Environmentally Friendly Manufacturing**

Star believes that reducing both space and energy is one way to consider the environment. By leveraging technology that is the core to compact precision machining and assembly, Star promotes the miniaturization and thinning of products to reduce the impact on the environment during the product-use phase, and actively to promote energy saving, resource saving designs, and long product-service life. Furthermore, Star is actively promoting the development of environmentally friendly products such as supporting lead-free and WEEE & RoHS directives and the like.

## Special Products

#### **Eco-friendly Products**

As environmentally friendly products, Star offers a lineup of printers that have low-power consumption.

Still further, in addition to providing an electronic journal service that electronically stores and reuses receipt data in the cloud, Star uses paper molded products (pulp molds) that recycle used paper including newspapers and cardboard packaging to reduce the amount of receipt paper used by installing a back-feed function that reduces margins.

The latest product model has been miniaturized by about 20% from the previous model. Star also supports BPA \* -free thermal paper in Europe.

\* Bisphenol A



mC-Print 3 series with the Back-feed function.

#### **Eco-friendly Designs and Publications**



TSP100IV series that has been miniaturized by about 20% from the conventional model.

Star has set up its own eco-profile and publishes it for each model. The eco-profile is composed of the following six elements.



## Machine Tools

#### Addressing Environmental Issues in Monozukuri

Star implements development with all aspects of machinery, controls, and software considering the environment.

For machines, it is possible to switch between the guide bushing and the non-guide bushing according to the overall length dimension of the workpiece. This minimizing the length of the

remaining waste material. Furthermore, high-cutter rigidity attains high productivity and ensures long tool-service life.

For controls and software, non-cutting times are greatly reduced by using Star Motion Control. This is Star's proprietary technology that analyzes programs and ensures optimal shaft movement. In the "step cycle," chips are divided by swinging shaft movements; productivity is improved by reducing the machine downtime. Machine-operation monitoring software called "SMOOSS-i" contributes to improving customer productivity by visualizing the state of the machine.



July 4, 2017 8:15 July 5, 2017 8:15 July 5, 2017 8:15 July 6, 2017 18:00

#### SMOOSS-i

Machine Name: Machine106		Unit Time: <b>24 hours</b>				Total						
End Date and Time	Program Name (Comment)	Planned Value	Actual Value	Failure	Operating Time	Operating Rate	Cycle Time	Planned Value	Actual Value	Failure	Operating Time	Operating Rate
July 3, 2017 (Mon.) 8:30 ~July 4, 2017 (Tue.) 8:15	O0001(TEST PATH1)	968	1,010	0	9h49m	126.7%	35s	1,000	1,010	0	9h49m	126.7%
July 5, 2017 (Wed.) 8:15	O0001(TEST PATH1)	1,000	595	0	5h46m	72.2%	35s	2,000	1,605	0	15h35m	99%
July 6, 2017 (Thu. ) 8:15	O0001(TEST PATH1)	1,000	931	0	9h02m	113%	35s	3,000	2,636	0	24h38m	103.7%
July 6, 2017 (Thu. ) 8:15 ~July 6, 2017 (Thu. ) 18:00	O0001(TEST PATH1)	1,000	950	0	8h50m	110.5%	35s	4,000	3,486	0	33h28m	105.5%

#### Launch of Swiss-type CNC Automatic Lathe "SL-7/10"

The new Swiss CNC automatic lathe product, SL-7/10, has been launched. The SL-7/10 was developed to meet the complex and diversified processing needs of small-diameter parts in the fields of communications equipment, automobiles, and medical care. A vertically arranged gang tooling lathe for face milling is equipped with a 5-axis cross-drilling unit with a bite holder for turning machining and four cartridge positions. A variety of rotating tools such as fixed hole drilling tools, cross-milling units, and slotting units can be mounted to the cartridge position. This is a compact machine size that

is ideal for machining small-diameter parts, but it also allows for machining using a variety of tooling arrangements. The 6-axis type unit with 2-axis and 3-stage Y2-axis control equipped for rear face machining can be fitted with a maximum of 4 rotary tool units. By expanding the multitasking capacity on the rear face side, cycle times are shortened by efficient processing divisions.

Thanks to this creative machine configuration, Star has succeeded in significantly increasing productivity per unit area and power consumption.



#### **Pursuit of Environmental Performance**

The company has established the following environmental standards, and models that meet the criteria are certified as environmentally friendly machine tools, and the ECO mark is listed as a "Star environmental standard compliant model".

Star Environmental Conformity Standard Powder coated exterior cover 99% or more of RoHS parts correspondence rate



Star environment standard compliant model

### Publication of the Environmental Report

From the perspective of conserving the environment through such measures as reducing energy usage and saving resources, we don't publish its environmental report in paper form. Instead, the report is published on the Star Micronics website as a PDF-format file.

## Environmental Activities of Star Micronics https://www.star-m.jp/eng/company/co05.html

**Contact Information** 

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## **Social Data**

#### **Promotion of Diversity**

New Grad	luate Recruitme	(Numbers	s of people)		
	FY2017	FY2018	FY2020	FY2021	
Male	2	4	10	6	0
Female	1	0	3	1	0
Total	3	4	13	7	0

Mid-caree	r Recruitment	t (Numbers of people)					
	FY2017	FY2018	FY2019	FY2020	FY2021		
Male	3	8	5	3	5		
Female	0	1	2	0	0		
Total	3	9	7	3	5		

Rates of Female Workers					(%)
	FY2017	FY2018	FY2019	FY2020	FY2021
Employees	19.5	19.6	19.9	19.5	19.8
Managers	1.1	1.1	1.1	1.1	1.1

Rates of	(%)				
	FY2017	FY2018	FY2019	FY2020	FY2021
Total	3.66	3.48	3.30	3.70	3.56

\*The employment ratio of persons with disabilities listed above is based on data collected at the end of March with the administrative report as a base.

Employee	(Age)				
	FY2017	FY2018	FY2019	FY2020	FY2021
Male	42.93	42.69	42.00	41.64	41.87
Female	42.13	43.22	43.16	43.50	44.33
Total	42.78	42.79	42.23	42.00	42.36

Average L	(Years)				
	FY2017	FY2018	FY2019	FY2020	FY2021
Male	19.55	19.35	18.62	18.14	18.36
Female	20.25	21.47	21.02	21.50	22.34
Total	19.68	19.76	19.10	18.80	19.16

Turnover	(%)				
	FY2017	FY2018	FY2019	FY2020	FY2021
Total	6.28	5.63	8.22	8.23	2.89

#### **Human Resource Training**

#### Investment in Education and Training

	FY2017	FY2018	FY2019	FY2020	FY2021
Average Training Expenses Per Employee (JPY)	15,570	18,726	27,179	37,462	52,731
Total Training Expenses (Thousands JPY)	8,283	9,560	13,209	16,858	22,780

Technician Certification System Acquisition by Le	(Numb	ers of people)			
	FY2017	FY2018	FY2019	FY2020	FY2021
Special Grade Certified Skilled Professional	1	1	0	0	0
1st Grade Certified Skilled Professional	5	3	4	4	2
2nd Grade Certified Skilled Professional	6	8	5	5	6
Total	12	12	9	9	8

#### **Efforts for Health Management**

Health Management					(%)
	FY2017	FY2018	FY2019	FY2020	FY2021
Health Checkup Response Rate	99.7	100.0	100.0	100.0	100.0
BMI Over 25	15.1	15.0	18.4	19.5	18.4

Specified Medical Checkup and Specific Health Guidance (%)							
	FY2017	FY2018	FY2019	FY2020	FY2021		
Rate of Specified Medical Checkup	100.0	100.0	100.0	100.0	100.0		
Rate of Metabolic Syndrome Diagnosed	6.2	6.5	6.6	8.7	7.8		
Rate of Pre-Metabolic Syndrome Diagnosed	7.4	8.5	11.7	8.7	12.0		
Rate of Specific Health Guidance Provided	73.9	56.4	55.6	47.7	70.3		

※Items not listed specifically are aggregate results of single units.※The data is as end of December, unless otherwise specified. (However, end of February for FY2017 only)

## Promotion of Work-life Balance

Childcare	Leave Taken	ken (Numbers of people)					
	FY2017	FY2018	FY2019	FY2020	FY2021		
Male	0	0	2	3	4		
Female	6	8	9	6	6		
Total	6	8	11	9	10		

Nursing (	Care Leave Tak	en	(Numbers	s of people)	
	FY2017	FY2018	FY2019	FY2020	FY2021
Male	0	0	0	0	0
Female	0	0	0	0	0
Total	0	0	0	0	0

Employee	s Working Sho	(Numbers of people)			
	FY2017	FY2018	FY2020	FY2021	
Male	0	0	1	1	1
Female	14	14	17	14	18
Total	14	14	18	15	19

Employees Working Shorter Hours for Nursing Care				(Numbers of people)			
	FY2017 FY2018 FY2019				FY2021		
Male	0	0	0	0	0		
Female	0	0	0	0	0		
Total	0	0	0	0	0		

#### Labor Relations

Labor Union		
		FY2021
Number of Employees	(Numbers of people)	432
Number of Trade Union Members	(Numbers of people)	343
Ratio	(%)	79.4

### Occupational Safety and Health

Serious Workplace Accidents (Numbers of accidents)							
	FY2017	FY2018	FY2019	FY2020	FY2021		
Fatal Workplace Accidents	0	0	0	0	0		
Accidents Requiring Absence	0	1	1	0	0		

## Social Contribution Activities

The Amount of Expense by Category	(JPY)	_	Social Contribution Activities (Numbers of people)			Political Donations	(JPY)
	FY2021			FY2021			FY2021
Social Welfare	110,000		Blood Donations	132		Total	0
Education	0		Cleanup Campaigns · Volunteers	411			
Disaster Aid	0		No-Car Campaign	0			
Total	110,000		Bazaar	1			
		-	Total	544			

%The social contribution activities participants and political donations data above are the total figures for three companies in Japan and two outside of it.

In-Kind Donation	(Units)	
	FY2021	
CNC Automatic Lathe	2	

\*Donated a CNC lathe (SK-51 type D) to Shizuoka Prefectural Kakegawa Technical High School.

### ■ Number of Violations of Laws, Codes of Conduct, and Ethical Standards

Number of Employee Punishment and Dismissal Incidents	(Numbers)	Fines, Penalties, and Settlements	(JPY)
	FY2021		FY2021
Total	0	Total	0

% Items not listed specifically are aggregate results of single units.

\*The data is as end of December, unless otherwise specified. (However, end of February for FY2017 only)

## **Environment Data**

### ■ Scope of Analysis

Japan	:	STAR MICRONICS CO., LTD.	(Head Office/Quality Technical Center/Kikugawa Factory/Solution Center
			Tokyo Sales Office/Osaka Sales Office/Nagoya Sales Office/Suwa Sales Office)
		Star Metal Company	
		Micro Sapporo Company	
Outside Japan	:	Star Micronics Manufacturing Dalian	Co., Ltd.
		Star Micronics Manufacturing (Thaila	nd) Co., Ltd.
		Shanghai S&E Precision CO., Ltd. (E	Ends in FY 2018)
Target Period	:	FY2017: March 1, 2017 - February 2	8, 2018
		FY2018 : March 1, 2018 - December	31, 2018
		FY2019 : January 1, 2019 - December	r 31, 2019
		FY2020 : January 1, 2020 - December	r 31, 2020
		FY2021 : January 1, 2021 - December	r 31, 2021

## ■ Solar Power Facilities

	FY2021
Output	350kW
Average Households	130Households
Power Generated	455,000kWh

%Scope of Analysis : Kikugawa Factory/Star Metal Company.
%Selling Destination : Chubu Electric Power Company, Incorporated.

## **Environmental Impact Related to Climate Change**

Scope 1, 2 CO <sub>2</sub> Emissions (t-CO	2)		FY2017	FY2018	FY2019	FY2020	FY2021
Scope1	Heavy Oil	Japan	244	119	234	201	190
		Outside Japan	0	0	0	0	0
	Gasoline	Japan	143	138	148	108	131
		Outside Japan	176	163	145	84	104
	Light Oil	Japan	0	0	0	0	0
		Outside Japan	19	24	22	15	20
	kerosene	Japan	2	1	1	0	0
		Outside Japan	0	0	0	0	0
	LPG	Japan	124	97	87	84	115
		Outside Japan	126	175	166	83	225
	Total	Japan	513	355	470	393	436
		Outside Japan	321	362	333	182	349
Scope2	Electricity	Japan	5,971	5,275	5,960	3,895	4,426
		Outside Japan	8,507	6,989	6,788	4,417	5,816
	Steam	Japan	0	0	0	0	0
		Outside Japan	1,119	703	929	684	602
	Total	Japan	5,971	5,275	5,960	3,895	4,426
		Outside Japan	9,626	7,692	7,717	5,101	6,418
Scope1 and Scope2	Japan		6,484	5,630	6,430	4,288	4,862
	Outside Japan		9,947	8,054	8,050	5,283	6,767
	Total		16,431	13,684	14,480	9,571	11,629

Scope 1, 2 CO <sub>2</sub> Emissions Per Unit of Sales (t-CO <sub>2</sub> /million JPY)			FY2018	FY2019	FY2020	FY2021
Scope1 and Scope2	Japan and Outside Japan	0.270	0.208	0.239	0.210	0.181

\*Scope1 greenhouse gases is calculated for CO2 only.

\*\*Scope2 emission factor uses the Ministry of the Environment's "Electric Power Company Emission Coefficient" for each supplier in Japan and representative values for suppliers outside of Japan.

% Scope3 CO2 emission volume calculations are currently under consideration and have not yet been implemented.

\* Emission calculations for greenhouse gases other than CO2 are currently under consideration and have not yet been implemented.

\* The calculation of CO<sub>2</sub> Emissions Per Unit of Sales is "Scope1+Scope2 in the scope of analysis"/"Consolidated net sales".

## Environmental Impact Related to Energy

Total Energy Consumption (GJ)		FY2017	FY2018	FY2019	FY2020	FY2021
Total Energy Consumption	Japan	157,545	127,785	142,090	103,789	118,469
	Outside Japan	190,126	153,436	159,504	108,001	143,703
	Total	347,671	281,221	301,594	211,790	262,172
Total Energy Consumption Per Unit of Sa	ales (GJ/million JPY)	FY2017	FY2018	FY2019	FY2020	FY2021
	Japan and Outside Japan	5.721	4.265	4.973	2.365	4.074
Electricity Consumption (MWh)		FY2017	FY2018	FY2019	FY2020	FY2021
Electricity Consumption	Japan	13,851	12,438	13,757	9,969	11,411
	Outside Japan	16,616	13,760	13,911	103,789 108,001 211,790 FY2020 2.365 FY2020	12,839
of which electricity purchased	Japan	13,851	12,438	13,757	9,969	11,411
	Outside Japan	16,616	13,760	13,911	9,399	12,839
of which electricity purchased	Japan	0	0	0	0	0
from renewable energy sources	Outside Japan	0	0	0	0	0
Renewable Energy Generation	Japan	0	0	0	0	0
	Outside Japan	0	0	0	0	0
Renewable Energy Ratio	Japan	0	0	0	0	0
	Outside Japan	0	0	0	0	0

%Energy conversion outside of Japan is calculated using Japan's coefficients.

Heavy Oil (kℓ)	FY2017	FY2018	FY2019	FY2020	FY2021
Japan	90	44	87	74	70
Outside Japan	0	0	0	0	0
Total	90	44	87	74	70

Gasoline (kf)	FY2017	FY2018	FY2019	FY2020	FY2021
Japan	24	20	23	17	18
Outside Japan	83	50	62	36	45
Total	107	70	85	53	63

Light Oil (kℓ)	FY2017	FY2018	FY2019	FY2020	FY2021
Japan	0	0	0	0	0
Outside Japan	7	9	9	6	8
Total	7	9	9	6	8

Kerosene (kť)	FY2017	FY2018	FY2019	FY2020	FY2021
Japan	1	0	0	0	0
Outside Japan	0	0	0	0	0
Total	1	0	0	0	0

LPG (kg)	FY2017	FY2018	FY2019	FY2020	FY2021
Japan	42,009	38,671	37,932	27,970	38,412
Outside Japan	49,660	58,286	55,403	27,608	75,089
Total	91,669	96,957	93,335	55,578	113,501

Steam ( t )	FY2017	FY2018	FY2019	FY2020	FY2021
Japan	0	0	0	0	0
Outside Japan	6,971	4,382	5,788	4,260	3,749
Total	6,971	4,382	5,788	4,260	3,749

## **Environment Data**

#### **Environmental Impact Related to Waste**

Total Waste, Hazardous Waste, Recyc	led Waste	FY2017	FY2018	FY2019	FY2020	FY2021
Total Waste (t)	Japan	531	360	304	248	320
	Outside Japan	749	598	693	324	527
	Total	1,280	958	997	572	847
of which hazardous waste(t)	Japan	87	76	59	70	74
	Outside Japan	80	95	17	46	69
	Total	167	171	76	116	143
Recycled Waste ( t )	Japan	528	357	301	247	318
	Outside Japan	635	589	337	293	449
	Total	1,163	946	638	540	767
Recycling Rate (%)	Japan	99.4%	99.2%	99.1%	99.4%	99.4%
	Outside Japan	84.8%	98.5%	48.6%	90.4%	85.2%
	Total	90.8%	98.8%	64.0%	94.3%	90.6%

%Harmful waste refers to materials classified as specially-controlled industrial waste in Japan's Waste Management Act. \*Recycling volume is the total of thermal recycling and material recycling.

\*In Japan, our recycling rate goal is 99.0%.

Non-recycled Waste ( t )		FY2017	FY2018	FY2019	FY2020	FY2021
Land-filled	Japan	3	3	3	2	2
	Outside Japan	114	9	356	31	78
	Total	117	12	359	33	80
Incinerated without Recycling	Japan	0	0	0	0	0
	Outside Japan	-	-	-	-	-
	Total	-	-	-	-	-

Waste incineration volumes without related recycling outside of Japan are not known. \*Items without clear data are marked with "-".

#### Environmental Impact Related to Water

Water Use (m <sup>3</sup> )		FY2017	FY2018	FY2019	FY2020	FY2021
Groundwater (recyclable)	Japan	943	584	943	0	0
Third-party Source (city water)	Japan	20,139	21,042	24,307	17,452	18,894
Third-party Source (industrial water)	Japan	0	0	0	0	0
Total (Japan)		21,082	21,626	25,250	17,452	18,894
Groundwater (recyclable)	Outside Japan	0	0	0	0	0
Third-party Source (city water)	Outside Japan	40,415	40,257	25,796	21,263	26,418
Third-party Source (industrial water)	Outside Japan	11,206	14,955	21,444	13,808	20,312
Total(Outside Japan)		51,621	55,212	47,240	35,071	46,730
Total (Japan and Outside Japan)		72,703	76,838	72,490	52,523	65,624
Water Discharge (m <sup>3</sup> )		FY2017	FY2018	FY2019	FY2020	FY2021
Surface Water	Japan	0	0	0	0	0
Third-party Destination	Japan	21,082	21,626	25,250	17,452	18,894
Total (Japan)		21,082	21,626	25,250	17,452	18,894
Surface Water	Outside Japan	40,415	40,257	25,796	21,263	26,418
Third-party Destination	Outside Japan	11,206	14,955	21,444	13,808	20,312
Total(Outside Japan)		51,621	55,212	47,240	35,071	46,730
Total (Japan and Outside Japan)		72,703	76,838	72,490	52,523	65,624

## **Environment Data**

## ■ Response to the PRTR Law in Japan (FY2021)

%Only chemical substances with emissions or movements are displayed.
%Measurements taken for Japan only.

			Emissions		Transfer Volume (kg)		
Fr	actory	Discharged to the Atmosphere	Discharged to Public Water Bodies	Discharged to the Soil at the Sites	Land-filled at the Sites	Transferred to Sewers	Transferred to Off-site
	Ethylbenzene	0	0	0	0	0	79
	Xylene	0	0	0	0	0	100
Kilman Frankara	1,2,4-Trimethylbenzene	0	0	0	0	0	7
Kikugawa Factory	Toluene	0	0	0	0	0	60
	Normal hexane extracts	418	0	0	0	0	0
	Butyl methacrylate	0	0	0	0	0	7
Stee Metal Commence	Toluene	827	0	0	0	0	146
Star Metal Company	Xylene	21	0	0	0	0	10
Micro Sapporo Company	Nickel compound	0	0	0	0	4	25
Total		1,266	0	0	0	4	434

Total Volume of PRTR Emission and Transfer (Kg)	FY2017	FY2018	FY2019	FY2020	FY2021
	1,055	972	1,199	999	1,704

## Copy Paper

Copy Paper Purchased (Thousand Sheets)	FY2017	FY2018	FY2019	FY2020	FY2021
Japan	2,849	2,788	2,572	1,369	2,068
Outside Japan	3,067	1,301	3,043	2,074	3,025
Total (Japan and Outside Japan)	5,916	4,089	5,615	3,443	5,093

## **Environmental Accounting**

Target Period	:	January 1, 2021 - December 31, 2021
Japan	:	STAR MICRONICS CO., LTD. Star Metal Company Micro Sapporo Company
Outside Japan		Star Micronics Manufacturing Dalian Co., Ltd. Star Micronics Manufacturing (Thailand) Co., Ltd.

### **Environmental Protection Costs**

					(Th	ousands of JPY)
Category		Initiatives	Japan		Outside Japan	
			Investment	Cost	Investment	Cost
Costs within business area	Pollution prevention cost	Prevention of air/water/ground contamination	0	3,389	1,756	7,013
	Environmental preservation cost	Energy conservation	0	1,136	0	673
	Resource recycling cost	Treatment/disposal of waste	0	9,418	0	4,192
Upstream/down	nstream cost	Green procurement difference	0	181	0	0
Management activity cost		EMS operation, education, on-site planting	0	12,103	0	5,034
Research & development cost		R&D, WEEE/RoHS measures	0	28	0	0
Social contribution cost		Donations, financial support	0	94	0	0
Environmental damage response cost		Repairs for ground/water contamination	0	0	0	0
Total			0	26,349	1,756	16,912

\*Excludes depreciation expense.

## **Financial Impact Resulting from Environmental Protection Measures**

(Thousands of JPY)

	Category	Japan	Outside Japan
Earnings	Gains from sales of marketable waste from business activities	10,248	3,280
Expense reductions (Year on year)	Total energy expense (electricity/heavy oil/LPG/gasoline/light oil) reductions	▲9,819	▲38,398
	Reductions in water/well water usage expense	1,274	▲1,266
	Reductions in copy paper purchase expense	▲279	▲306
	Reductions in waste disposal expense	840	▲1,381
	Others	0	0
	Total	▲7,984	▲41,351

## Costs Related to Water-related Risks

(Thousands of JP		
Investment in Research and Development, and Cost of Countermeasures		
Investment	0	
Cost	0	

## ■ Environment-related Accidents, Violations, Fines, etc.

Violations of Environmental Laws and Regulations and Occurrence of Accidents	
Serious violations of environment-related laws and regulations	0
Serious accidents related to the environment	0