This catalog is printed using environmentally friendly soy ink.
To continue supporting your tomorrow. That’s EBARA’s mission.

Water nourishes lives, electricity sustains society, and electronic technology brings diversity to daily life. In their daily lives, people receive great benefit from things such as nature, science and technology. What should we do to support an affluent society in which people can live in safety, and what should we do for further progress?

EBARA has been thinking about the future of people, society, and the environment through “monozukuri” (manufacturing) since it started business as a pump maker in 1912. The pumps supporting society's infrastructure, incineration and gasification technologies supporting environmental conservation, and semiconductor manufacturing device supporting the information society, — EBARA’s products and technologies — are behind the scenes. However, everyone comes into contact with those technologies in all aspects of society, industry, and daily life. Treating all relationships with respect, EBARA helps to make an affluent society.

* Models (expressed in alphanumeric characters) in this brochure are the model names of EBARA products.
With the founding spirit of “Netsu To Makoto”, EBARA continues to pursue superior technologies.

“Netsu To Makoto” means grappling with a task while having enthusiasm and sincerity based on one’s ingenuity and effort, instead of simply doing an assignment. And it was the spirit of Issei Hatakeyama, the founder of EBARA. That spirit is the backbone of EBARA, a company that keeps pursuing superior technologies.

Hatakeyama founded the Inokuchi Type Machinery Office in order to spread superior products based on the world’s highly-regarded centrifugal pump theory invented by Dr. Ariya Inokuchi (Dr. Inokuchi was Hatakeyama’s professor at Tokyo Imperial University.). Since then, EBARA’s history has involved a continuing pursuit of superior technologies.

Hatakeyama manufactured unprecedentedly large pumps at that time in a workshop without a crane. He thought that the waterworks pump market, dominated by imported products, was an area in which the nation was losing, and he kept stressing the need to be able to compete in terms of performance, to beat the foreign competition. It was this spirit of “Netsu To Makoto” that led to the adoption of Japanese-made pumps and produced various first made-in-Japan devices such as an axial-flow pump, centrifugal chiller, and rapid sand filtration system.

On the other hand, Hatakeyama was anxious about damage to waterworks caused by earthquakes. Therefore, he constructed and donated a water supply facility at his own expense. As a result, the facility helped waterworks to recover after the Great Kanto Earthquake and helped to prevent the spread of epidemics. He also acted as a chairman of the Japan Institute of Invention and Innovation to improve the social status of engineers and inventors. Hatakeyama’s spirit of social service is another backbone of EBARA, together with the belief that “working is for our own benefit and also contributes to society”.

Today, about a century after the company’s foundation, Hatakeyama’s spirit is still present in EBARA’s business environment with fluid machinery and systems, environmental engineering, and precision machinery. And Hatakeyama’s spirit still lives on in EBARA of today. We believe that Hatakeyama’s spirit is a heritage we should directly and continuously pass on to the future generations of EBARA, a company that continues to pursue superior technologies in every field of business and aims to contribute to society by manufacturing better products.

EBARA will make progress toward the future, with its founding spirit.
EBARA conducts business activities with “concerns”.

Even though the times change, EBARA pursues technologies with the same spirit as it had at its foundation. EBARA produces leading-edge products in the fluid machinery and systems, environmental engineering, and precision machinery businesses, and has grown into a world-class industrial manufacturing enterprise that supplies products for many systems associated with social foundations.

It is almost a century since our foundation.

EBARA is geared for further leap forward with our four “concerns”.

The Group’s “Concern” as a Manufacturing Enterprise

By continuing to provide products and services that conserve energy and contribute to preserving the natural environment, the Group intends to contribute to improving the Earth’s environment and assist in passing this improved environment on to the next generation.

“Concern” for Improving the Environment

To create a culture that emphasizes compliance, we are continuing to work not only to enhance our internal control systems and enhance management transparency but also to improve operating efficiency.

“Concern” for Internal Control Systems and Improvement in Operating Efficiency

We will aim to accurately identify and anticipate customer needs, which change from one era to the next and, by responding to these needs, will work to enhance customer satisfaction and, at the same time, work toward the further development of the EBARA Group.

“Concern” for Our Motto, “EBARA Walking with Its Customers”

EBARA conducts business activities with “concerns”.

“Concern” for growing as the world’s first-grade industrial machinery maker

EBARA conducts business activities with “concerns”.

We will achieve continuous growth by providing superior products and keep our position as one of the world’s leading manufacturers of industrial machinery.

- Manufacturing and selling superior products and providing support.
- Establishing a framework of selling and supporting products on global markets.
- Improving and developing original products, devices, and materials.
- Increasing market shares of core business
- Expanding new businesses and reducing lead times.

One of the world’s leading manufacturers of industrial machinery

“Concern” contributes to improvement of the Earth’s environment.

EBARA, as a manufacturer of industrial machinery, contributes to the improvement of the Earth’s environment by developing and producing environmentally friendly and energy conserving products in the fluid machinery & systems, environmental engineering, and precision machinery businesses, making best use of the engineering technologies we have accumulated over a long time.

Manufacturing and selling superior products as a manufacturer of industrial machinery and providing high-quality support.

- Saving costs
- Simplicity
- Making products compact and lightweight
- Long-life and energy conserving characteristics
- High performance
- Reducing emission of greenhouse gases

Engineering business developed by making full use of the environmental and energy-related technologies we have accumulated over a long time.

- Incineration and gasification technology
- Water treatment technology
- Biomass power generation technology
- Biomass treatment and recycling technology
- Operation and maintenance

Contribution to improvement of the Earth’s environment
EBARA increases its markets in various business fields throughout the world.

Compressors and pumps used in oil and gas facilities in the Middle East, pump facilities and water treatment facilities in China and other Asian countries, the semiconductor markets extending all over the world. EBARA’s products are used to promote industries and to build infrastructures all over the world. Our worldwide business is made possible by linking up our domestic business bases, branch companies, offices, and associated companies all over Japan, representative offices in major cities overseas, and subsidiaries and affiliated companies in 24 countries and regions all over the world. The three in-house companies have specific technologies, developing capabilities and manufacturing capabilities, enhancing the business basis. This is the total strength of EBARA, expanding our business in the global marketplace.
Transporting water, air, and heat

The Fluid Machinery & Systems Company has long provided pumps, fans, compressors, chillers and other machinery that serve as the infrastructure of daily life and industry. The company is expanding overseas production and sales bases to extend our business from a global perspective, and are greatly contributing to the industrial progress and infrastructural development around the world.

Main products
- Large pumps, high-pressure pumps, process pumps
- Large fans, blowers
- Compressors, turbines
- Standard pumps, fans
- Chillers
- Energy system equipment
- Fluid machinery systems engineering
- Other associated equipment

Frontier

Simulation technology
EBARA’s evolving “monozukuri” (manufacturing) process
Computer performance has been improving 100 times in every 3 years, and 1,000 times in every 10 years, and great changes are occurring in “monozukuri” (manufacturing) processes. The prediction of complex flow conditions using computational fluid dynamics and three-dimensional structures and static analysis of whole pump station constructions are essential technologies to secure performance and reliability of fluid machinery under severe operating conditions. In addition to abundant data, knowledge, and experiences accumulated over the years, EBARA’s “monozukuri” process has been evolving still further with the numerical simulation technology and numerical optimization technology as its core technologies.

Seawater Desalination
EBARA’s high-pressure pumps for seawater desalination support water in the 21st century
21st century has been called the “century of water” because the global water shortage will be a serious problem. Seawater desalination is humankind’s final solution for the global water shortage problem. EBARA has a world-class delivery record of pumps for evaporation desalination plants, and is tackling the urgent task of enhancing products for reverse osmosis (RO) membrane desalination plants, which is becoming a mainstream in the market. EBARA’s technology supports the core of the desalination process, such as a high-pressure pump that pressurizes high-pressure seawater to an RO element, and highly efficient energy recovery systems from concentrated seawater after taking out the fresh water.

In the Wanjiazhai Yellow River Diversion Project, which was launched to solve the persistent water shortage problem in Shanxi Province in China, five pump stations were built to take the water from the middle of the Yellow River and deliver it through channels over a total distance of 270 km and at an altitude difference of 632 m.

This project is one of the largest water supply projects in the world, and makes high demands in terms of the water-feeding pumps; high-density sand, large capacity, high pressure, and high efficiency. The project needed highly advanced and complex technologies. To achieve high efficiency and high suction performance, the 3-D Inverse Design Method was applied for the hydrodynamic design. To ensure erosion-resistance while operating in high-density sand water, EBARA reviewed the pump structure design, conducted research and development on durable materials for pump parts such as impellers, and reviewed the construction techniques. It was an unforgettable moment for all the members when the pumps of the five stations were connected and the water finally went into a dried branch of the Yellow River.

EBARA awarded The Japan Society of Mechanical Engineers (JSME) Medal for New Technology (2006).“
Building a sustainable society

The Environmental Engineering Company sets up a corporate mission of “building a sustainable society”, and conducts global-basis businesses infrastructure facilities associated with environments and energy. The company, on the basis of advanced environment- and energy-related technologies centering on the incineration and gasification technology and water treatment technology, provides total solutions for various types of problems.

Main products
- Waste treatment and recycling facility and equipment
- Biomass power generation plant
- Water treatment and recycling facility and equipment
- Biomass treatment and recycling plant
- Water and incineration ash treatment chemicals and industrial chemicals

Frontier

Fluidized-bed gasification and ash melting furnace
High efficiency recovery of energy and recycled metal

This system adopts a proprietary swirl melting furnace and has the following features:
1. Can be stopped safely in an emergency whenever required.
2. Melting with outstanding energy efficiency
3. Metals can be recovered as valuable byproducts
4. Can also be operated easily as an incinerator

Total services in plant construction and operation
Secure and safe services
As a result of extensive expertise in industrial waste treatment technology and a nationwide operation and maintenance management service network, we provide secure and safe total services not only in the planning, design, procurement, and construction of plants but also in their operation and maintenance management.

Water treatment plant business
3-company joint venture intended for the dramatic growth as a comprehensive water solution business company

In April, 2010, Ebara Engineering Service Co., Ltd. (EES) which handles the water business of the EBARA Group, formed a new 3-company joint venture between Ebara Corporation, Mitsubishi Corporation (MC) and JGC Corporation (JGC) with a view to expanding business further in the growth field of the water business in Japan and overseas. This joint venture aims to parley each company’s strengths into a stronger business platform for EES in Japan and further expansion in the global market for water business, where European companies have a commanding presence. EES has engineering expertise in water business, and a Japanese network in the operation and maintenance (O&M) of water supply and sewage systems. MC possesses a global network as well as expertise in business management, while JGC has a proven track record in global engineering and project management.

Water treatment and recycling facility and equipment

Kazusaki Watanabe (left of photo)
Engineering Department 3, Maintenance Engineering Division
EBARA ENVIRONMENTAL PLANT CO., LTD.

Mitsuyoshi Takami (center of photo)
Long-term & Umbrella Agreement Management Division
EBARA ENVIRONMENTAL PLANT CO., LTD.
Providing leading-edge microfabication technology

The semiconductor, FPD and alternative energy industries are of increasing importance as a social infrastructure. The Precision Machinery Company, with an eye toward the full-fledged arrival of the nanotechnology age, has developed, manufactured, and sold various semiconductor manufacturing equipment and component devices meeting customers’ needs.

Main products
- Vacuum equipment
- Turbo molecular pump
- Semiconductor manufacturing equipment and device
  - CMP systems
  - Plating systems
  - Plasma etching equipment
  - Gas abatement systems
  - Ozonized water generator
  - Ultra high concentration ozone chamber
- Clean pumps

Frontier

Technology for saving resources
EBARA’s technologies for saving resources and fighting global warming
In production lines of state-of-the-art electronic devices such as semiconductors, LCDs and photovoltaic cells, EBARA makes continued efforts toward protecting the Earth’s environment, and puts the industry’s highest grade of environmental conservation technology into use to meet customers’ needs.
In the field of dry vacuum pumps, EBARA has released a series of products with a power consumption at rated operation reduced to under 500 W (2,000 L/min class). In the field of emission-gas abatement equipment, EBARA was successful in putting into use a combustion-type emission gas abating device that decomposes high-flow process gas containing PFC gases, which are a global warming gas, and a fluorine-gas-captured emission gas abatement device, which never emits water tainted with hydrofluoric acid.

CMP systems
EBARA’s planarization technology supporting fine processing of semiconductor wafers
CMP system is a planarization tool, installed in a cleanroom to polish semiconductor wafer surface unevenness and mechanical properties in the semiconductor manufacturing process. This system, built on a concept of dry-in, dry-out processing, is highly regarded by semiconductor device makers for its excellent processing performances, high reliability, and flexible system configuration meeting customers’ specifications. To meet the demands for ever-advancing technology of semiconductor manufacturing, EBARA will make continuous efforts in developing advanced processes, manufacturing new equipment, and expanding service and support framework.

Topics
Semiconductor manufacturing technology that will make for a comfortable life in the future

“The dramatic changes in our daily lives in recent years owe much to the technological innovations in semiconductors, which are installed in many electronic devices. I was stationed in the U.S.A., and had a challenging opportunity of supporting the best-of-the-industry customers in the world. EBARA’s plating systems are used in important processes of forming fine patterns on semiconductors. To produce semiconductors, which become more and more compact and high-speed every year, it is essential to continue developing manufacturing technologies, including the implementation of fine designs, and therefore problems that we shall overcome occur one after another. To solve these problems, EBARA takes advantage of its comprehensive technological prowess, conducts a series of examinations and reviews, and works out the best solutions. Sometimes our opinions conflict with our customers. However, we feel a great sense of accomplishment and joy when we finally solve a problem after presenting our opinions on the basis of our own technological prowess and having a series of tough discussions.”

Toshihisa Loga,
Planning & Engineering Group, Plating Equipment Department, Semiconductor Equipment Division, Precision Machinery Company
EBARA’s technologies are found here and there

EBARA’s products, technologies, and services support many social scenes in cities, towns and agricultural villages. A pump prevents floods by draining rainwater to an ocean or a river. Technologies of water treatment and water supply and drainage are indispensable for lives in society. Although they are behind the scenes, and not in everyday view, technologies such as those used in fluidized-bed gasification and ash melting plants for extracting gases from waste, contribute to creating a recycling-based society and to reducing greenhouse gases, and they support the basis of society.

Supporting Society

Pumps playing great roles in social infrastructure

Pumps play important roles close to our daily lives including use in water supplies, flooding prevention, and seawater desalination. We are highly regarded as the best pump manufacturer in the business by society and customers with our superior technology and reliability based on our real accomplishments since our foundation. EBARA’s origin of “monozukuri” (manufacturing) is pumps, which are essential for social infrastructure such as water supplies, sewage, flooding control and agriculture, and EBARA will keep taking on challenges to create new value and make technological innovation.


**Power plant facility**

Technologies in a power plant

A variety of EBARA’s devices and technologies are used in power plants. Many of EBARA’s products and technologies are employed in a number of power plants all over the world, for example, high-pressure boiler feed pumps, large-capacity cooling water pumps, hydro turbines for hydroelectric power plants, and water treatment equipment for nuclear power plant condensate and cooling water systems.

**Tunnel ventilation facility**

Technology for protecting road tunnels

Inside tunnels, where natural ventilation is difficult, forced ventilation is necessary to avoid the accumulation of soil dust, carbon dioxide, and other toxic substances contained in exhaust gas. Cylindrical jet fans on the ceiling and large axial fans installed in ventilation towers are used for tunnel ventilation. EBARA’s fans are installed in many tunnels all over Japan, not only for tunnel ventilation, but also as an emergency smoke ventilation system in case of fire.

**Waste treatment facility**

From waste treatment to creation of energy and resources

EBARA’s waste treatment technologies are divided into two incineration technologies: one for a stoker furnace and another for a fluidized bed furnace. To tackle this as a model undertaking.

The company always provides the latest technologies to contribute to recycling and building a sustainable society by using the wastes as a source of energy and a new resource.

**Water purification facility and sewage treatment facility**

Advanced technology that conserves water environments

EBARA delivered the first made-in-Japan high-speed filtration system in 1931, since then we have a long list of systems delivered to facilities as a pioneer in water treatment. Meeting the needs of society, EBARA has provided advanced technologies and products in water purification plants and wastewater treatment plants, taking advantage of its abundant experience in high-grade processing, energy saving, labor-saving, and anticorrosion measures.

**Operation & Maintenance business**

Operation and maintenance to draw out the best performances

Even superior technologies and state-of-the-art facilities may not sufficiently deliver performances without the correct operational and maintenance practices. EBARA’s accumulated total technologies spanning fields from engineering and operation management to maintenance, enables optimized and low-cost operations of facilities and lower lifecycle costs. With the total business capacity of the group, EBARA is also working toward lengthening the service life and the collective commission of operations to a private company regarding existing waste disposal plants and water supply and sewage plants.

**Preventing global warming and reducing energy costs**

EBARA has been developing products and technologies for effective use of energy resources such as biomass energy, which have not been sufficiently used. Taking advantage of digestion gases from sewage treatment plants and energy generated by livestock secretion is effective not only for reducing energy-related costs but also for reducing the emissions of global-warming gases.

**Facility for effective use of unused energy**

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**Maintenance and management of facilities**

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Taking advantage of its knowledge and technological capabilities as an operator, the company provides rapid and optimal services to control engineering offices all over Japan and Europe and establishes a unique system to control engineering offices all over Japan and Europe.

**Dea Reformer (sludge deaerator facility)**

This is EBARA’s original technology for efficiently removing bubbles in sludge by using the heat generated by the incineration of plastic waste, and recycling power. Ebara Engineering Service Co., Ltd.

**Water purification facility**

The plants will all meet Japan’s strict standards to ensure top quality water that people can drink with a sense of security, free of instability, and with a service provider on a sustainable basis.

**Sewage Treatment facility**

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EBARA’s technologies are found here and there

EBARA’s products, technologies, and services support every industry. Turbines and compressors are used for the petrochemical industry. Pumps and water treatment equipment are used for various fields including food manufacturing and paper manufacturing, and vacuum technology and gas emission technology are indispensable for semiconductor manufacturing processes.

Facilities in the petrochemical industry

Fluid machinery working in petrochemical plants all over the world

Fluid machinery, such as high-performance compressors, turbines, and pumps, are essential products for oil refineries and petrochemical plants. Compressors, in particular, are called “heart of the plant” and high reliability is required in both performances and functionalities. EBARA has supplied numerous compressors from early in its history, as seen in an epoch-making large gas turbine driven compressor for LNG (liquid natural gas) plant in 1976 which was the world’s largest compressor at that time. EBARA also has many delivery records of cryogenic pumps which are used for processing LNG with an ultra-low temperature of -162 degrees centigrade.

Seawater cooling pump

Pumps with low cost, high quality and short lead time are achieved using stainless steel that has excellent performance against pitting corrosion and stress corrosion and steel welded casing. This pump has many delivery records.

Cryogenic pump

EBARA’s cryogenic pumps are actively working in many LNG plants, tankers, and bases all over the world.

Large horizontal split type compressor

This type of compressor has a world-class high efficiency. In addition to the horizontal split type, barrel-type compressors can be used for high-pressure or hydrogen-rich gas operation.

Multistage steam turbine

This is a multistage steam turbine used for driving compressors. EBARA has delivered more than 250 units all over the world since 1972, the first shipment of the product.

Elliott Group

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Elliott Group
Semiconductor manufacturing equipment

Leading-edge semiconductor manufacturing technology

Manufacturing semiconductors involves various processes. EBARA develops and manufactures various types of semiconductor manufacturing equipment required for major manufacturing processes, such as a process of evenly polishing the surface of a wafer, which is a material for a semiconductor; a process for removing and cleaning defects on the edges of wafers; and a process for polishing the surface of wafers and forming an electric circuit. And, we devote our energies to developing advanced technologies for next-generation equipment.

High vacuum and emission gas abatement required for manufacturing processes of electronic devices

Dry vacuum pumps and turbo molecular pumps are used to create a high vacuum required for manufacturing semiconductors, LCD panels, and photovoltaic cells. Meanwhile, the various gases used in manufacturing processes include many types of gases that directly affect global warming, such as PFCs gas that is said to have a global warming factor 10,000 times as high as that of carbon dioxide. The gas-emission abating technology works to decompose and treat those gases securely and efficiently. EBARA’s technology that of carbon dioxide. The gas-emission abating technology works to decompose and treat those gases securely and efficiently. EBARA’s technology that is expected to see practical application even more as a trump card for preventing global warming and contributes to the industrial field by providing the best water processing systems that meet the customers’ needs.

Biomass power generation plant

Fuel conversion power generation plant using ligneous biomass

EBARA provides an internal circulation fluidized-bed boiler (ICFB) that applies fluidized-bed technology, a technology developed by the effective use of energy from various types of waste discarded from industries, to biomass power generation. Thanks to reliability backed up by extensive results so far and a revolutionary boiler evaporation control technology using a proprietary in-water heat recovery mechanism, ICFB achieves stable power generation in fuel conversion systems that use ligneous biomass as their raw material. ICFB is expected to see practical application even more as a trump card for preventing global warming and as a countermeasure to escalating fossil fuel prices.

Supply water and wastewater systems

Contribution to water and wastewater systems of every industry with state-of-the-art technology

To supply water of the required quality, to process wastewater, and to recycle water, EBARA meets various needs in the industrial field. To satisfy the quality of water required for industries and plants, the company has developed various processing technologies for water supply using pre-processing equipment, water softening equipment, and pure water equipment. In addition, it has developed various wastewater processing and water recycling technologies in accordance with water qualities and target substances, using a chemical oxidation process with ozone, an adsorption with activated carbon, and filtering. EBARA contributes to the industrial field by providing the best water processing systems that meet the customers’ needs.

Pumps and fans influence steel quality

Many pumps and fans are used in the steel industry. EBARA has delivered many gas circulation fans used to extinguish red-hot coke, and high-pressure pumps called descaling pumps used to clear impurities on steel sheet surfaces in manufacturing processes. EBARA’s pumps and fans, which have high efficiency to satisfy the energy-consuming steel industry requirements and advanced performance to secure high-quality production, are highly regarded in the global steel industry.

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Supporting people’s lives

EBARA’s technologies are found here and there

EBARA’s products, technologies, and services support people’s lives in a variety of scenes in offices and households: chillers for air conditioning systems in large facilities such as office buildings, public buildings, or shopping malls; ventilation fans for changing the air in closed, windowless spaces such as high-rise buildings or underground shopping arcades; pump units that send tap water to the top floor of high-rise buildings such as office buildings or condominiums; and fire extinguisher pump units used in case of fire.

Building water supply and sewage facility

Pumps working in familiar places

Pumps are used for various purposes in buildings and condominiums. Even though many people do not have much opportunity to see these pumps, which are used for tap water supplies, emergency fire extinguishers, sewage and rain water discharge, and wells, EBARA’s pumps support people’s daily lives in familiar places.

- Fire pump unit
  This pump is used for fireplugs and sprinkler facilities. It is certified by the Fire Equipment and Safety Center of Japan.

- Direct-water supply booster pump
  This pump is connected directly with a city water pipe and provides additional pressure to supply tap water with adequate pressure. This pump eliminates the need for a water receiving tank and enables a hygienic water supply while saving space and energy.

- Stainless steel vertical multistage pump
  High-efficiency and high-performance pumps with stainless-steel hydro parts (impellers, middle casings, etc.) designed by EBARA’s original design and analysis method.

- Water supply unit for high-rise buildings
  This pump unit has a high capability to supply water up to a height of 60 stories (250m). It has an enhanced backup function to prevent any water outage in the event of a failure.
Building ventilation facility

Breathing technology for buildings and underground shopping arcades

Adequately air conditioned buildings or underground shopping arcades are combined, but at the same time they are closed spaces. In facilities where natural ventilation is difficult, it is essential to have forced ventilation systems using fans. External air taken by fans is led to every place in the facility through air supply ducts, and internal air collected through exhaust air ducts is exhausted by fans. In the same way as a human breathes, so a facility breathes with EBARA’s fans.

Air conditioning facility

Supporting technology for air conditioning in cities

In large commercial facilities like office buildings or shopping malls, refrigeration equipment such as chillers or water chillers is used for air conditioning. EBARA’s refrigeration equipment can be applied in a wide variety of applications from general air conditioning to industrial use, especially in semiconductor manufacturing plants. Corresponding to the increasing awareness of environmental problems in society, such as preservation of the ozone layer and suppressing global warming, EBARA devotes its energies to developing high-efficiency and energy-saving products, which can contribute to environmental load reduction, and gives support for creating a comfortable environment.

Cooling tower facility

Supporting technology for air conditioning and production lines

The user of chillers causes the temperature of cooling water in equipment to ease up. Cooling towers fulfill the function of radiating the heat from this hot cooling water to the outside air to lower the temperature of the cooling water and once again return it to the chiller. Cooling towers are indispensable for circulating and recycling cooling water. They are also used as cooling facilities in production lines, for example, for compressors and die/injection molding machines.

Personal computers and digital appliances

Challenging nanotechnology

Semiconductors are the brains of electronic devices so to speak, and are indispensable in people’s lives today. It is difficult to find a device that does not use any semiconductors. EBARA’s technologies are employed also in manufacturing semiconductors. It is necessary to proceed to develop leading-edge nanotechnologies and to accomplish a clean environment. EBARA help to create people’s abundant lifestyles by supporting the semiconductor industry.

Water recycling, amusement and environmental conservation facility

Technologies to create water familiar to daily life

EBARA’s water processing technology helps people to relax in their daily lives. The company provides optimum systems for aquariums and amusement parks, taking advantage of its abundant track records of achievement and technologies. In complex buildings and hotels, on the other hand, the systems process drain water from kitchens and various types of sewage, and uses the processed water and wastewater in a “recycling system” for recycled water supply. EBARA supports the use and recycling system of water. Taking advantage of its abundant experiences and technologies in water processing, such as advanced processing techniques of sewage and wastewater.

Dry vacuum pumping (EV-G model)

This compact air-cooled, non-contact type dry suction unit has the high performance of vacuum pumps, high energy savings, performance, and light weight (20 kg or less).

Dry vacuum pumping (DFV model)

This compact air-cooled, non-contact type dry suction unit has the high performance of vacuum pumps, high energy savings, performance, and light weight (20 kg or less).
As an R&D-oriented company, EBARA values research and development as an important theme of its business operations. The mid-term and long-term management plans state promotion of research and development, meeting customers’ needs, improvement of research and development efficiency (contribution of investment on research and development to profits), and reviewing its management of intellectual properties. In existing business fields, EBARA will promote research and development to increase added values of products, as well as research and development related to cost reductions and manufacturing technologies, toward improving its competitiveness and profitability in each business field.

R&D Themes
In existing business fields, EBARA has selected R&D themes from a customer needs viewpoint—the development of new products, higher added value in existing product groups, higher performance and efficiency, and reduced lifecycle costs and environmental impact, and improved customer services. Besides these, it is also implementing measures to reduce costs and improve manufacturing technologies. Semiconductors and electronic devices today are indispensable in supporting the very fabric of our lives and all sectors of industry. This is an area of spectacular growth, and R&D matched to advances in this area, too, is vital. Driven by a corporate philosophy of substantive contribution to society by providing superior technologies and services related to water, air, and environment,” also reliably sensing major market trends and devoting its energies to promising fields amongst its existing product groups, without losing sight of its mission to help solve themes of climate change, energy, food, water, and environment confronting Man in the 21st century.

Technical departments and research laboratories within the Company’s Patent Departments and Patent Liaisons, who serve as patent counselors at each Technology Division through formal and informal communications and interactions. The Intellectual Property Department has functioned as part of the Corporate Division executing Headquarter functions to manage all of the EBARA Group’s IP, while the Patent Departments have been established at each of the internal companies. We have deployed an electronic patent application and patent information distribution system for communicating filing documents between inventors, patent liaisons, companies, patent departments, intellectual property departments, and patent attorneys, and are currently expanding this into an integrated network system for also handling inquiry and investigation tasks.

Effective Use of Intellectual Property is an Important Activity
EBARA’s rich history as an innovator has resulted in more than 1,200 Japanese patents, 1,600 patents overseas, as well as over 670 trademark rights in Japan and over 1,200 overseas. EBARA uses IP not only for implementing on its own products to secure a competitive advantage in the market, but also for licensing and various other purposes. In line with positive business development in Asian markets including China headed by wind and water power business, EBARA’s policy is to reinforce its activities for supporting business growth in this direction through the protection and effective utilization of IP.
To connect people and society, and live together

EBARA contributes to people’s lives, the progress of society, and improvement of the Earth’s environment through its businesses. At the same time, as a member of society, EBARA contributes to people, society, and the Earth’s environment by promoting interaction with local communities, by fostering cultures, sports activities, by promoting technological advance activities and environmental conservation activities.

Furtherance of arts and technologies

Hatakeyama Memorial Museum of Fine Art

The Hatakeyama Memorial Museum of Fine Art opened in October 1964. Its collections, nearly 1,300 pieces of tea sets, pieces of calligraphy, china, Japan ware, and Noh play costumes including Japan’s designated 6 national treasures and 32 national important cultural properties are displayed.

Akaraku teacup “Seppo,” by Honami-Koetsu, National Important cultural property, Collection of the Hatakeyama Memorial Museum of Fine Art

Environmental preservation

EBARA GREEN FUND

To study the prevention of global warming and the preciousness of nature, the EBARA Group conducts tree-planting activities in Japan and overseas, and activities of preserving tree-planting forests and back hills.

The EBARA Group Worldwide Kid’s Environment Paint Exhibition

The exhibition started in 1998 to understand the beauty and preciousness of nature by drawing pictures under the theme of nature. Paintings by children of the EBARA Group’s employees and their friends all over the world are exhibited.

Sports

Basketball coaching

The “EBARA Vickers” teaches the basics of basketball as a special guest instructor, not only in the local Ohta area but also in Japan, when they visit for away matches.

Tennis school (Ebara Shonan Sports Center)

Using fully-equipped facilities the school devotes itself to fostering junior players so that they can play on the global stage in the future.

On September 29, which is “TENNIS DAY,” it holds a free tennis workshop for children.

Social welfare

Recycling used clothing

Used and unnecessary clothing are collected from employees and sent to support regions suffering from poverty and refugee camps, through a volunteer organization “Wakachiai Project” (the Japanese word “wakachiai” means sharing).

Supporting disaster recovery

When an extensive natural disaster occurs, EBARA collects donations from employees and supports recovery from the disaster through organizations such as the Japan Red Cross Society.

Communication with local community

Communication with people in the local area

EBARA, supporting school education aid activities planned by Hatakeyama Foundation, accepts children of primary schools for factory tours. The tour lets them know the relation between EBARA’s products and their lives.

Cleaning and greening of local areas

Offices of the EBARA Group all over Japan conduct cleaning and greening of areas around the offices on the “World Environment Day” and “Environment Month.”

Employees’ activities

The EBARA Group holds many club activities, sports days and recreational meetings (such as marathons and tennis days) to help promote friendship among employees.

*See the latest issue of the CSR Report for details.