

Research and Development, Intellectual Property Activities

Research and Development (R&D) and intellectual property rights are how we began. We will continue to focus on research as an R&D-oriented company.

Basic Approach

As an R&D-oriented company, the EBARA Group positions research and development as a cornerstone of its business operations. Ever since our founding in 1912, we have valued intellectual properties very highly as typified by two inventions, including Japanese Patent No. 21092, which formed the Company's business base.

The Group is promoting intellectual property activities combined with business and R&D strategies based on the management policy. The focus is on the following basic strategies.

Basic Strategies of E-Plan2016

The new medium-term management plan E-Plan2016 sets out four basic strategies, of which one calls on us to *Continuously enhance our core competencies (technological capabilities) as an industrial machinery manufacturer.*

Technologies and R&D

R&D activities that are fully integrated with intellectual property activities for supporting competition and growth strategies

We will conduct research and development that will give us an edge in terms of competition and growth strategies, upon capturing and predicting general trends and needs from a global perspective.

- 1) We will reinforce scientific information-gathering and processing abilities and lead the way in research and development based on marketing. Furthermore, we will establish a system of registration and control of information regarding technology and R&D and develop an environment where necessary information will be accumulated, shared, integrated, and utilized among companies.
- 2) We will fully utilize the open innovation system as establishing a new organization, within the corporate headquarters, dedicated to research and development in order to contribute to the further reinforcement of core technologies of each business and the basic research and development of new business themes that are extensions of existing business domains.
- 3) We will position "numerical analysis technology" and "analytical technique" as critical core technologies and engage in long-term and sustained development in both the tangible and intangible aspects of such technologies including the development of human resources, to the end of providing backup for business infrastructures and promoting research and development.

- 4) We will establish a system of information security and trade secret management and manage risks of unexpected technology leakage and non-compliance.

Intellectual Property

Promoting "strategic intellectual property strategies" that incorporate full utilization of the Group's intellectual properties

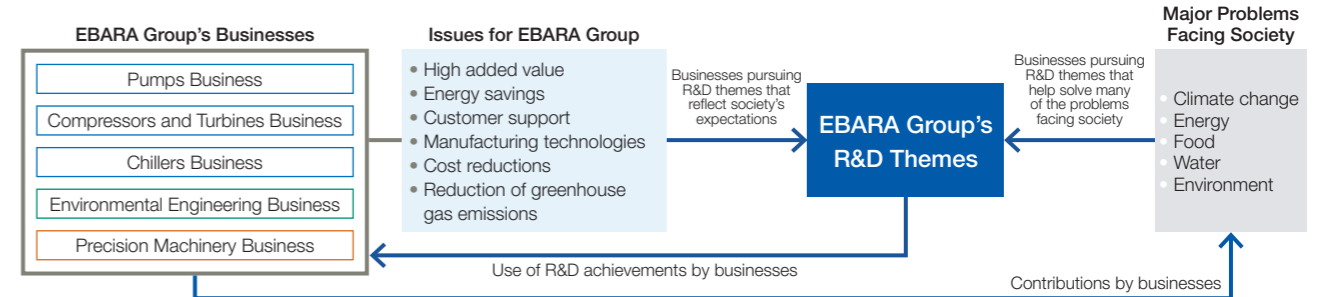
- 1) We will contribute to the ongoing reinforcement of our core competence as an industrial machinery manufacturer by maximizing and managing the Group's intellectual properties, which will include the strategic acquisition of intellectual property rights in line with the Group's global business expansion.
- 2) We will mitigate business risks by establishing a system for the management of risks involving global intellectual property rights and enhancing our capabilities for dealing with intellectual property rights litigation and reviewing intellectual property rights contracts.
- 3) We will "enhance the EBARA brand value" through the strategic utilization of the Group's brands and promotion of the proper use of the CI mark, and will "protect the EBARA brand value" by exercising countermeasures against unauthorized use of the CI marks and counterfeit products.

R&D Themes

In existing business fields, EBARA selects R&D themes with a view to developing new products, heightening the competitiveness of existing products, and meeting customers' needs. Also, R&D for advancing industrial engineering and upgrading semiconductor chips and electronic devices is indispensable. Furthermore, we are fortifying our technological foundations by

returning to fundamental principles, analyzing theories, and conducting numerical analysis. Based on its philosophy, the Group will confront and help solve many of the problems facing society in the 21st century, such as climate change, by making every effort to accurately grasp the current and future needs of society and concentrating on existing product lineups that have particular advantages.

R&D Themes



Effective Use of Intellectual Property

EBARA's rich history as an innovator has resulted in a large number of intellectual properties, including more than 1,300 patents in Japan and more than 1,500 overseas, more than 170 design rights in Japan and more than 140 overseas, and more than 430 trademarks in Japan and more than 1,100 overseas.

In line with positive business development in Asian markets including China, EBARA is reinforcing its activities for supporting business growth in this area through the protection and effective utilization of intellectual property.

Organizations

Technologies and R&D

At corporate headquarters, we established an organization that is responsible for Groupwide R&D in April 2014. This organization provides fundamental support in relation to technology and products by strengthening fundamental technologies, product core technologies, and numerical and instrumental analysis technologies. Meanwhile, to promote the development of current businesses, Group companies lead R&D efforts in their respective areas. Moreover, we pursue open innovation with universities and other outside organizations. In all of our activities, corporate headquarters and Group companies coordinate closely to ensure that they exchange technological information and accumulate expertise efficiently.

Intellectual Property

In addition to the Intellectual Property Division at corporate headquarters, we have established an intellectual property department at each Group company, and we are heightening the mobility of intellectual property activities. Further, intellectual property supervisors have been located at affiliated companies in Japan, and patent liaisons (patent advisors) have been located at all technical departments. We have built and are operating a workflow system and a patent information distribution system for sending and checking the files and other documents between inventors, patent liaisons, Company Intellectual Property Departments, the Intellectual Property Division, and patent firms.

Corporate / Company Framework

