

<Company Profile>

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URL	http://www.heishin.jp/en/
No. of employees	415 (consolidated) (as of January 1, 2019)
Capital	99.50 million yen
Established	January 1968
Representative	Sumio Ono, President

<Business Overview>

Production and sales of industrial pumps and related peripheral equipment

A manufacturer of industrial pumps that offers products used for conveying, filling, injecting, and applying fluids and provides related services.

<Technology>

Heishin PC Pumps and Heishin Dispensers—state-of-the-art fluid conveyance technologies backed up by the experience of developing as many as 45,000 variations of 60 product lines.



For over 50 years since its establishment, Heishin Ltd. has continued to meet various needs associated with the conveyance of fluids normally difficult to convey, and has been a pioneer in industrial pumps. The company's two leading products are Heishin PC Pumps and Heishin Dispensers.

Heishin PC (progressive cavity) pumps are characterized by their ability to successfully transport fixed, metered amounts of highly viscous and highly concentrated liquids, fluids containing solids, delicate fluids, or powders normally susceptible to quality deterioration, and other types of fluids with high accuracy, and these pumps are utilized in various industries such as the food, chemical, electrical machinery and equipment, car, paper, civil engineering, construction, and water supply and sewerage services industries.

[Six Fundamental Performance Characteristics of the Heishin PC Pump]

1. Can convey fluids or powders that are normally hard to convey.
2. Can convey fluids without causing them to deteriorate while being conveyed.
3. At any given moment, discharges a fixed amount without pulsation.
4. Can instantly change the amount it discharges by controlling its rotation speed.
5. Quiet and energy-saving, and does not let dust, noise, or offensive odors leak out of it.
6. Is broadly applicable to a wide range of fluids: small to large volumes of fluids, low to high pressure fluids, and acidic to alkaline fluids.

Heishin Dispensers, the company's other main product group, are discharging devices that can be installed on the tips of industrial robots' arms and can apply and fill extremely small quantities of high-viscosity fluids with high accuracy. They are used in the fields of electrical machinery and equipment, automobiles, and the like. The latest model of the Heishin

Dispenser enables high-precision dispensing of ultra-tiny spots with a diameter of 0.2 mm and of minute beads with a line width of 0.2 mm. The Heishin Dispenser ND, which can release fixed, metered volumes of high-viscosity fluids, won the Good Design Award in 2004, and the Heishin Dispenser HD, which can dispense and freely control microliter (μL) amounts of highly viscous fluids, received the same award in 2016.

[History of Development]

Because the rotor and stator of the Heishin PC Pump, the pump's most significant parts, had been very difficult to make, since Heishin's establishment all rotors and stators used for Heishin PC Pumps had long been imported from the German company NETZSCH. However, with the aim of manufacturing and selling high added-value products using its own unique techniques, Heishin succeeded in starting to make its own in-house rotors in 1984, and its own in-house stators in 1992. The in-house production of rotors and stators has enabled Heishin to freely develop its own unique products. Meanwhile, in 1985 a prototype of Heishin's new product, which had begun being developed based on the idea of creating a PC pump that could write letters on cakes, was presented at exhibitions under the name of Heishin Dispenser. The prototype immediately created a great sensation, and it was decided that this new product would actually be brought to market. Efforts were then devoted to make it smaller and more lightweight and to improve its performance, which contributed to further expanding markets for the product.

[Originality]

Heishin PC Pumps and Heishin Dispensers can convey fluids, even those normally difficult to convey, without pulsation; can transport fixed, metered quantities with high accuracy; and can control flow volumes with high precision; all highly advanced features unrivaled in the industry. In particular, the metallic, screw-shaped rotor and the rubber stator of the Heishin PC Pump, which serve as key parts of the pump, have competitive advantages in that special manufacturing techniques utilizing complicated mold fabrication methods are used in production. The place that serves as the development hub for these special techniques at Heishin is the High-Precision Machining Room. This room isolates itself from outside temperatures, which are always changing, and shuts out all vibrations occurring outside it—thereby creating a special environment that enables the ultra-high precision required for machining components and molds. It is through these improvements in precision machining techniques that extreme miniaturization of rotors and stators have been made possible.

[Future Development]

At production sites of lithium-ion batteries, which are used for electric cars, smartphones, and the like, and where high sanitary and hygienic conditions are required, Heishin PC Pumps now hold competitive advantages. At many of these sites, they are starting to be actively adopted; therefore, it is anticipated that markets for them will further expand. Of all the markets worldwide, China's PC pump markets, mainly those associated with the production of electric car batteries, are especially anticipated to expand. It is also expected that, along with the expansion of Chinese markets for PC pumps, exports of Heishin PC Pumps to China will increase. Meanwhile, because many Heishin PC Pumps utilized at sewage treatment facilities across Japan will soon need replacing, it is predicted that there will be greater demand to replace the pumps as well as increased market share due to many facilities switching from other companies' pumps to Heishin's.

<Topics>

Heishin Product Square—the company's product showroom facility where the functions and performance of Heishin's products can be experienced through demonstrations!

In June 2017, Heishin opened its permanent showroom facility called Heishin Product Square at Shiga Business Complex (in Shiga Prefecture, Japan). Thus far it has attracted more than 3,000 visitors (as of March 2019). On the 1st, 2nd, and 3rd floors of the facility's new building are three main exhibition areas: the Area for Fundamental Structures and General Purpose Equipment, the Area for Sanitary Equipment and New Products, and the Area for Dispensers. In these areas, over 40 units of Heishin products, such as Heishin PC Pumps and Heishin Dispensers, which are actively utilized in various business sectors for a variety of purposes, are displayed and demonstrated. As visitors look around the showroom facility, they can directly observe and touch many kinds of Heishin products while in operation, and also confirm the products' actual performance.

Employee health management from business management and strategic perspectives Certified as an Excellent Enterprise of Health and Productivity Management 2019

Heishin has been selected as one of the Excellent Enterprises of Health and Productivity Management 2019 (in the "Small and Medium-sized Enterprise" category) jointly by Japan's Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi. The Excellent Enterprises of Health and Productivity Management Program recognizes and awards those

entities, such as large corporations and small and medium-sized businesses, that conduct particularly outstanding health and productivity management and work on the health management of their employees from business management and strategic perspectives. Heishin has been recognized for its efforts and achievements in: implementing measures to promote in-house corporate communications (e.g. informal gatherings between the president and employees, which have been continuously conducted for a long time), adopting plans to increase exercise opportunities (e.g. conducting radio calisthenics and supporting various club activities), enacting strategies to promote good health (e.g. conducting full-scale periodic medical checkups, on which much emphasis has recently been placed), and striving to attain work-life balance within the company based on a flexible employment system.

<Corporate History>

- 1968 Heishin Ltd. is established in Kobe, Japan, and a technical cooperation agreement is formed with NETZSCH in West Germany.
- 1969 First versions of the Heishin PC Pump are delivered to customers.
- 1973 Construction of the Shiga Factory (in Shiga Prefecture) is completed.
- 1986 First versions of the Heishin Robo Dispenser are delivered to customers.
- 1988 First versions of the Heishin PC Pump for powder are delivered to customers.
- 2003 ISO 14001 certification is obtained by all Heishin's offices, branches, and factories.
- 2004 Construction of the Technical Institute (in Shiga Prefecture) is completed.
- 2007 Construction of the Technical Center of Heishin Techno Werke Ltd. (in Shiga Prefecture) is completed.
- 2017 Heishin Product Square, the product showroom facility, is opened.
- 2019 Heishin is certified as one of Hyogo's "Only-One" Companies.