Small Precision Motors

Review of FY2023

Net sales decreased 2.3% year on year to 415,709 million yen. Sales of HDD motors decreased 10.0% year on year to 70,608 million yen, mainly due to a decrease in sales volume. Sales of other small motors decreased by 0.5% year on year to 345,101 million yen, while operating profit increased by 40.5% year on year to 37,474 million yen as a result of the significant reduction in fixed costs and the steady improvement in cost and sales prices in response to the impact of the decrease in sales and changes in the product mix. In addition, the impact of foreign exchange rates increased sales by approximately 20,800 million yen compared to the previous year, and operating income increased by approximately 1,400 million yen compared to the previous year.

Regarding HDDs, the global shipment volume decreased from approximately 170 million units in 2022 to approximately 120 million units in 2023. Regarding HDDs for data centers, after the coronavirus pandemic ended, there was a slowdown in investment by major IT companies, leading to inventory adjustments, and demand for our HDD motors also continued to decline, but there were signs of a recovery in demand in the second half of 2023. Demand for DC motors also fell for other small motors, such as those for optical discs and office automation equipment. On the other hand, new business opportunities have arisen, such as water-cooling modules for data centers, against the backdrop of the rapidly growing demand for AI.

Medium- to long-term growth strategies

The demand for the optical disc and office automation equipment motors that our company has been involved with is decreasing as a medium- to long-term trend. In addition, it is difficult to expect significant growth in the existing products of this division, as global shipments of IT equipment such as PCs equipped with HDD motors and fan motors, and smartphones equipped with vibration motors, are not expected to grow significantly in the future.

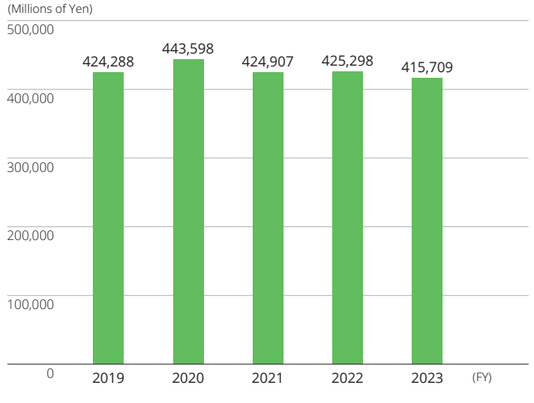
In this business environment, it is essential to shift the business portfolio in order to continue growing in the future. In this context, we are working on a new growth business: water-cooling modules for AI servers. Until now, the mainstream method for cooling the computing servers used in data centers, companies, research institutions, etc. has been air cooling using fan motors, but in the field of AI, which is expected to expand in the future, the AI-oriented semiconductor computing devices (CPUs/GPUs) that perform learning processes based on huge amounts of data generate significantly more heat than conventional devices. Therefore, it is thought that water-cooling systems, which have significantly higher cooling capacity than air-cooling systems, will become essential in the future, as air-cooling systems that rely on air conditioning equipment will be unable to cool the large number of servers lined up in buildings. In order to meet the growing demand for water-cooling modules accompanying the development of AI, our company is working to expand production capacity, manufacture parts in-house, and develop next-generation products.

We are also working on the development of motors for electric motorcycles. Just like in the four-wheeled vehicle market, the wave of electrification is also sweeping over the two-wheeled vehicle market, and we recognize this as a market where we can expect to see a significant expansion in demand for motors for drive units in the future. The global production volume of two-wheeled vehicles is approximately 60 million units, and India, which accounts for approximately 20 million of these, is the largest market. Therefore, we are focusing our sales activities on two-wheeled vehicle manufacturers in India, and we are already supplying several top manufacturers.

In 2014, we established a factory in Nimrana, Rajasthan, India, for the purpose of manufacturing and selling Automotive products and Appliance, Commercial & Industrial Products. In December 2023, we opened a new building to produce drive motors for e-Bikes. We hope to capture the strong demand for motors for e-Bikes in India.

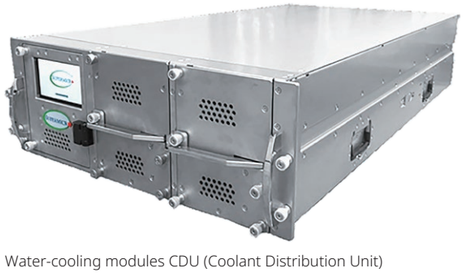
In fields other than those listed above, we recognize that there are significant business growth opportunities in fields such as logistics, agriculture, and medical and nursing care and healthcare, and we recognize these as key areas for our Three New Activities (New markets, New products, New customers).

Net sales



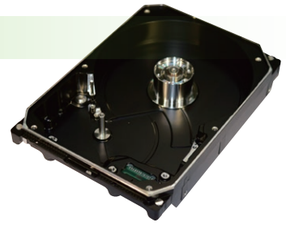
Operating profit / Operating profit ratio

Main Products

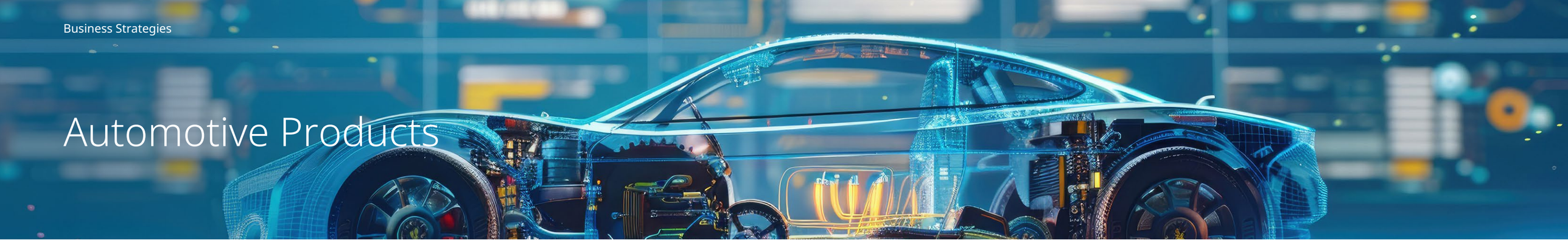


Water-cooling modules CDU (Coolant Distribution Unit)

e-bikes motors



HDD motors



Automotive Products

Review of FY2023

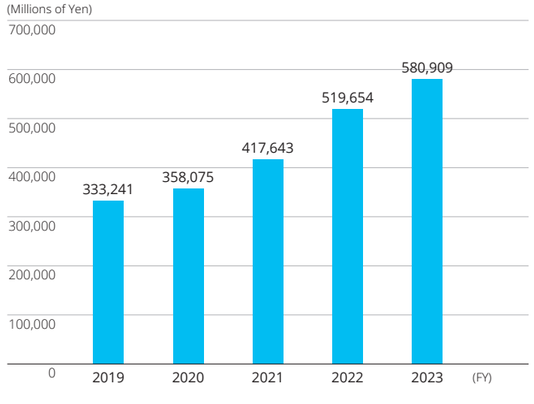
Net sales of this category increased 11.8% to 580,909 million yen for this fiscal year compared to the previous fiscal year by the impact of recovery in automobile production on a global basis, although NIDEC faced the fiercer competition in Chinese EV market.

In the automotive organic business (existing business), NIDEC promoted a significant reduction in fixed costs even though this business increased profits due to sales expansion. In the Battery EV related business, in addition to further significant reduction in fixed costs, we have shifted the strategy to put first priority on our profitability such as limiting orders for unprofitable models.

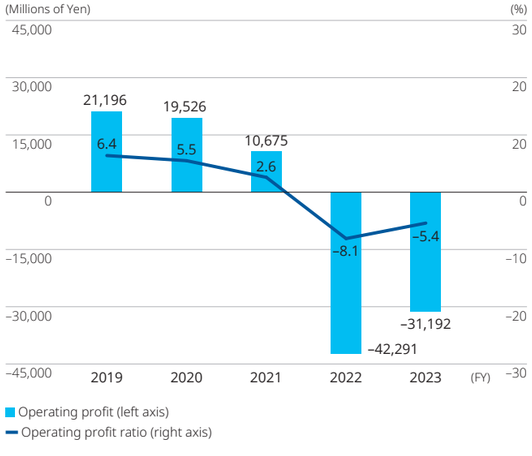
Along with this, including an impact of recording restructuring costs by approximately 59,800 million yen, operating profit of this category increased 11,099 to 31,192 million yen loss for this fiscal year compared to the previous fiscal year. The impact of foreign exchange rates on sales was an increase of approximately 31,500 million yen compared to the previous year, and on operating income, an increase of approximately 300 million yen compared to the previous year.

Regarding Battery EV related business, we made "Re-start" in line with the strategic shift, and the new structure is going smoothly. We will take on the speedy challenges for our future growth that maximizes the our group's inherent strengths.

Net sales



Operating profit / Operating profit ratio



Medium- to long-term growth strategies

1. Automotive organic business (existing business)

In the Automotive organic business (existing business) segment, we aim to leverage the tailwind of market changes, such as the recovery in global automobile production volumes due to the easing of supply constraints for semiconductors and other components, and the electrification of automobile components associated with the "CASE revolution" typified by the spread of automated driving, to drive business growth. In addition to automotive products such as electric power steering motors and brake motors, which boast the world's largest market share, we expect sales of products essential for the electrification of automobiles, such as electric oil pumps and electric water pumps, to grow.

The realization of automatic driving is dependent on the implementation of by-wire technology, which controls brakes, steering, etc. using electrical signals, and motors are essential for the realization of this technology. For example, feedback actuators provide a reaction force to the steering wheel to assist the driver's movements. Furthermore, motors for electric power steering require a higher level of redundancy than conventional products.

In addition, we have received a large order for power control components such as inverters and DC/DC converters for hybrid vehicles. The entire group has a diverse lineup of automotive products, and we will continue to support the evolution of automobiles by providing solutions that meet customer needs.

2. EV traction motor business

1 E-Axle business of the joint venture company

In the Chinese EV market, where the healthy competitive environment is being lost due to the development of intense price competition, we have quickly made a strategic shift to prioritizing profitability ahead of other companies. We have established a joint venture with a Guangzhou Automobile's group company, and for the time being we will focus on producing E-Axles for Guangzhou Automobile through this joint venture, while limiting orders for unprofitable models. At the same time, we are implementing measures to respond to competition in the Chinese EV market, such as thorough cost reductions through further localization of development and parts procurement, and the development of a third-generation E-Axle.

In Europe, meanwhile, Nidec PSA emotors (NPe), a joint venture with the Stellantis, began full-scale mass production of E-Axle in FY2024, and the company's results have also started to be included in consolidated results. We are currently working to rapidly ramp up production, and in the first half of FY2024 we will assess the production capacity required in Europe, while also working to improve profitability through measures such as reducing material and subcontracting costs and improving quality, in preparation for the full-scale production that will begin in the second half of FY2024. The Stellantis Group has announced that it will produce 5 million electric vehicles globally in 2030, and NPe will ensure that it captures the long-term shift to electrification as an in-house function.

2 Supply of motors and motor components for E-Axles

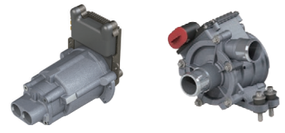
Among European automobile manufacturers, there is consideration of importing and selling products from China in partnership with Chinese EV manufacturers, and of producing in Europe in anticipation of additional EU tariffs on Chinese-made EVs. In light of these developments, our company will leverage the technological capabilities, cost competitiveness, and sales track record we have cultivated in the challenging market since the dawn of the EV market to focus on supplying not only E-Axles themselves, but also the motor components of E-Axles, such as rotors and stators. We will also propose the same parts supply to Japanese automobile manufacturers. By developing a high-value-added parts business that makes the most of our strengths, we will work to improve the profitability of our EV traction motor business.

Main Products

New electric power steering motor power packs (Column-Type)

E-Axle

ABS/ESC motors



Electric oil pumps (left)
Electric water pumps (right)

Appliance, Commercial & Industrial Products

Review of FY2023

In the Motion & Energy (MOEN) with a focus on industrial related sector, in addition to capturing the tailwinds of expanding power generator and clean energy markets consistently, we expanded new businesses against the backdrop of strong infrastructure related demand despite the continued reconciliation of the demand for home appliances. As a result, net sales of this category increased 5.7% to 966,082 million yen for this fiscal year compared to the previous fiscal year. In the home appliance related sector, we realized a significant increase not only in sales but also in profit due to fundamental cost structure reform such as a substantial reduction in fixed costs. In the industrial related sector, we also realized a significant increase in profit due to the continuous manufacturing cost and sales prices improvement, in addition to the higher sales. As a result, operating profit of this category increased 62.2% to 114,874 million yen for this fiscal year compared to the previous fiscal year.

The impact of exchange rates on sales was an increase of approximately 58.6 billion yen compared to the previous year, and on operating income, an increase of approximately 5.9 billion yen compared to the previous year.

Medium- to long-term growth strategies

Since the outbreak of the new coronavirus infection in 2020, so-called “nesting demand” has driven growth in this division, with compressors for refrigerators, motors for home air conditioning, and motors and gears for transport robots used in the delivery centers of e-commerce companies. After the coronavirus pandemic, global demand for home appliances and CAPEX have continued to be sluggish, and the drivers of performance in FY2023 have shifted to industrial-related products, including generators for auxiliary power supplies for data centers, battery energy storage systems (BESS), and medium- and large-sized motors for energy infrastructure-related equipment. Although this division has a diverse range of businesses under its umbrella, we believe that growth can be expected in the following fields in the medium- to long-term.

Generators for auxiliary power supplies for data centers

The amount of data in the world continues to increase, and the number of data centers is also on the rise. The demand for generators for auxiliary power supplies as a backup in the event of a power outage is increasing, and orders are increasing. We expect sales to increase at a CAGR of 12% from FY2022 to FY2026.

Solutions for renewable energy

Against the backdrop of the trend towards net zero CO_2 emissions, and with the increasing demand for alternative power, there is a growing need for battery energy storage systems (BESS). BESS is a system that stores and transmits the electric power generated by renewable energy sources such as solar power and wind power. We provide services to transmission operators in various countries, and contribute to the stable supply o renewable energy. In response to the increase in demand, we expect sales to increase at a CAGR of 28% from FY2022 to FY2026.

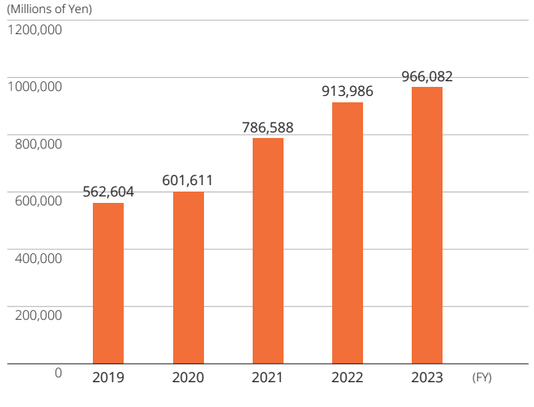
In FY2023, multiple contracts for the installation of BESS were announced. Two contracts worth a total of approximately 70 million euros have been signed with Neoen, a French renewable energy power generation company, for the installation of BESS. These systems are scheduled to begin operating in Finland and Sweden in the first half of 2025, with capacities of 93.9 MWh and 112.9 MWh, respectively.

We also announced a collaboration with French company NW. We plan to supply a total of 2.5 GWh of BESS in France by 2028.

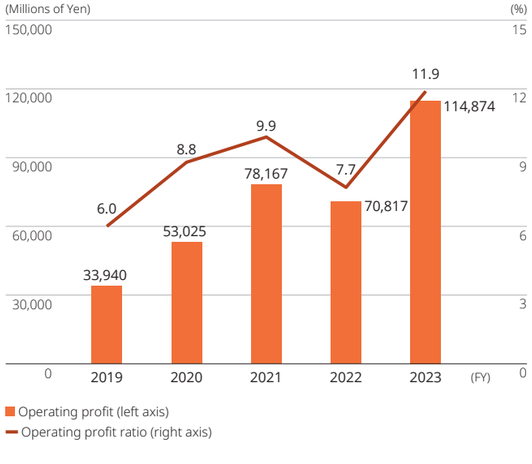
Medium- and large-sized motors for energy infrastructure-related equipment

In 2012, our company acquired Ansaldo Sistemi Industriali S.p.A. of Italy. The company has now been in business for over 170 years, and since its founding it has been supplying large motors, generators, drives, etc. for the power generation and oil & gas fields. Currently, these businesses are growing significantly in response to the trend towards the use of renewable energy and the electrification and efficiency of energy infrastructure. As an example of a recent large-scale project, we received an order for large motors for the Transalpine Pipeline (TAL) efficiency improvement project, which transports oil from Trieste in Italy to Austria, Germany and the Czech Republic. By supplying high-efficiency motors, we contributed to improving pump efficiency and reducing vibration. We also received an order for motors for a liquefied natural gas production system in Qatar. In liquefied natural gas production sites, compressors are used in the process of condensing and liquefying natural gas. Gas turbines were previously used, but there is a demand to switch to motor-driven systems due to environmental measures and efficiency needs, and we received the order. As customer needs shift in line with decarbonization, NIDEC’s large motors are playing an active role. In these businesses, we also provide maintenance after delivering the motors. As our large motor business expands, we would like to focus on the maintenance business as well.

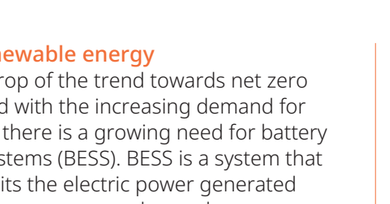
Net sales



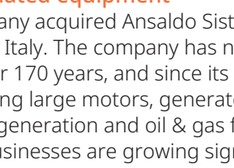
Operating profit / Operating profit ratio



Main Products



Battery Energy Strage System (BESS)



Generators for auxiliary power supplies

45MW hi-speed moter-generator

Other Products

(Machinery, Electronic and Optical Components, etc.)

Review of FY2023

In the machinery category, net sales increased 5.2% to 298,375 million yen for this fiscal year compared to the previous fiscal year due to sales increase of machine tool and press machine related business and newly consolidated subsidiaries despite lower sales of semiconductor inspection systems, LCD panel handling robots affected by market cycle. Operating profit of this category increased 24.7% to 43,867 million yen for this fiscal year compared to the previous fiscal year, mainly due to an increasing sales.

In the Electronic and optical components category, net sales decreased 1.4% to 81,839 million yen and operating profit of this category decreased 2.7% to 13,214 million yen for this fiscal year compared to the previous fiscal year. In addition, the impact of foreign exchange rates increased sales by approximately 2,100 million yen compared to the previous year, and operating income increased by approximately 500 million yen compared to the previous year.

Medium- to long-term growth strategies

Other products are divided into two groups: machinery, which account for about 80% of sales, and electronic and optical components, which account for about 20% of sales.

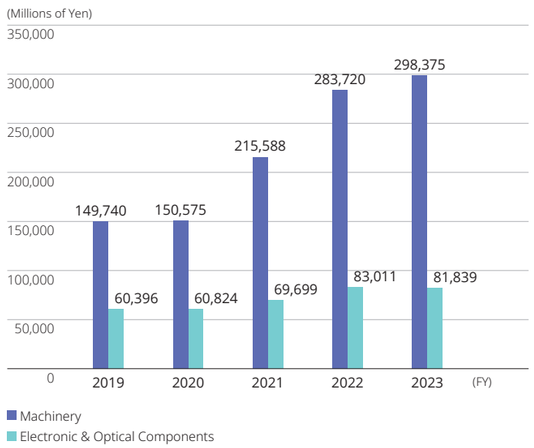
Machinery and Automation Business Unit, which accounts for the majority of the Machinery segment, is expected to be the core of future growth. Nidec Drive Technology Corporation (formerly Nidec-Shimpo Corporation), one of the group companies, is divided into three main businesses: Reducers, Press machines, and Machine tools.

The reducer business is expected to see future demand increase due to the labor shortages that are spreading, particularly in developed countries. With the aging population and declining birth rate in the world's top GDP countries such as the United States, China, Europe and Japan, the ratio of the working-age population (aged 15 to 64) is decreasing, and automation in factories is becoming an urgent issue. For this reason, the use of collaborative robots in production processes is expected to accelerate in the future. We have newly released the medium- to large-sized internal gear planetary reducer "Kinex" in November 2023. This, together with the small-sized FLEXWAVE® strain wave gear that we have been producing for some time, means that we now cover all the Reducers for robot axes. We manufacture in Japan at the Ueda and Komagane factories, in Asia in China and the Philippines, and in Europe in Germany and Spain, and supply our products widely both in Japan and overseas. We will also expand our business to include collaborative robots, which are expected to grow in the future.

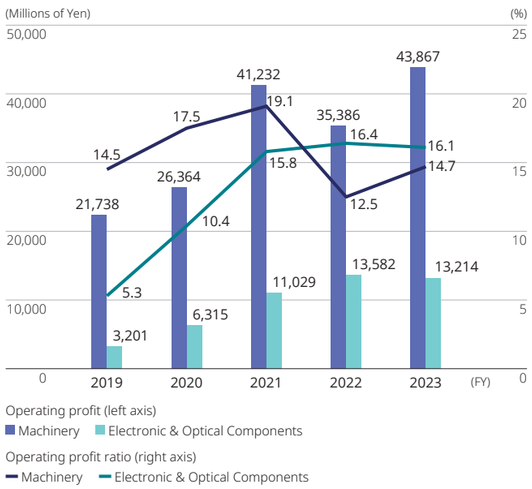
In the Press machines business, we have a full lineup of products, from 10-ton to 4,500-ton press machines, as well as peripheral equipment such as roll feeders. Furthermore, we produce products in Japan, the United States, and Spain, and supply a wide range of products globally.

In the Machine Tools business, we acquired Mitsubishi Heavy Industries Machine Tool (now Nidec Machine Tool) and OKK (now Nidec OKK) in FY2021, PAMA S.p.A. in Italy in FY2022, and TAKISAWA in FY2023. The acquisition of TAKISAWA was the first takeover bid by our company. Our machine tools business, which was launched with the acquisition of Mitsubishi Heavy Industries Machine Tool in 2021, has grown to approximately 100 billion yen in sales in 2023. Today, our product portfolio includes machining centers, lathes, gear cutting machines, and large-scale general-purpose machine tools, and now we provide one-stop products and services to many customers. We aim to become the world's No. 1 comprehensive machine tool manufacturer by fiscal 2030.

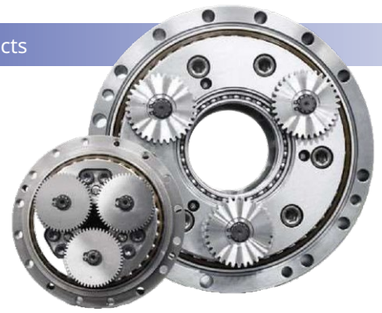
Net sales



Operating profit / Operating profit ratio



Main Products



Reducers

CNC Lathe

Press machines