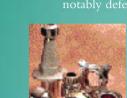
In fiscal 2000, Minebea reclassified its operations into three categories—machinery components, electronic devices and components, and consumer and others—to better reflect the nature of the Company's business.

# **Machinery** Components

Ball bearings



Rod-end and







Defense-related special parts

# **Electronic Devices and** Components

electric power steering systems, as well as PC keyboards, floppy disk drive (FDD) submeasuring instruments and other electronic devices.

This category encompasses the manufacture and sale of ball bearings; rod-end and spherical

bearings for the aerospace industry; HDD pivot assemblies and other bearing-related

products, fasteners used in aircraft and automobiles, and a variety of other products,



Spindle motors for HDDs



stepping motors



(PM)-type stepping



Fan motors



PC keyboards



**Speakers** 



FDD subassemblies



Switching power supplies



Inductors



Strain gauges

Consumer and Others

Operations in this category focus on retail sales of furniture and interior decor items.

# **Machinery Components**

Percentage of net sales

Percentage of operating income



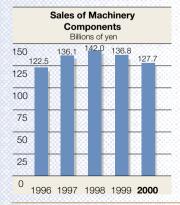
# **Principal Products**

# Bearings and Bearing-Related Products

Miniature ball bearings Small-sized ball bearings Integrated-shaft ball bearings RO bearings Rod-end and spherical bearings Roller bearings Journal bearings Pivot assemblies Tape guides

#### Other Machinery Components

Aerospace fasteners Automotive fasteners Wheels Defense-related special parts Magnetic clutches Magnetic brakes



Reflecting steady growth in demand from customers in the information and telecommunications industry, notably PC manufacturers, and the household electrical appliance industry, sales of ball bearings and HDD pivot assemblies and other bearing-related products were brisk during the period under review. In contrast, sluggish conditions in the aerospace industry, particularly in the United States, led to slow demand for rod-end and spherical bearings, fasteners and other aerospace components. Special machinery components remained comparatively firm.

Sales in this category for the period under review declined 6.6%, to ¥127,734 million, and accounted for 44.9% of net sales. Category sales were ¥11,584 million lower, and those of mainstay bearings and bearing-related products ¥11,207 million lower than would have been the case had the fiscal 1999 average exchange rate been applied. Category operating income was ¥21,996 million, equivalent to 70.8% of operating income.

## Bearings and Bearing-related Products

Sales of bearings and bearing-related products, comprising small ball bearings, rod-end and spherical bearings, pivot assemblies and other related products, slipped 7.0%, to ¥101,847 million.

Small ball bearing sales flagged in the first half, but recovered with a sharp increase in demand from the information and telecommunications industry. As a consequence, shipments rose 10.0% from fiscal 1999, although the impact of the strong yen led to a decline in sales.

In fiscal 2000, Minebea continued to focus on enhancing product quality. The Company also expanded its lineup of high-value-added ball bearings by inaugurating full-scale mass production of RO bearings, primarily for use in internally manufactured spindle motors for HDDs, and by commencing production of ceramic balls. With demand for products in this category expected to continue rising, Minebea will expand its monthly production capacity for bearings to 150 million pieces by the end of calendar year 2000, from 120 million in the period under review. The Company also anticipates growth in demand for small ball bearings for use in automotive equipment, a new market for these products, reflecting greater emphasis on energy efficiency, safety and comfort and a corresponding increase in

the use of sophisticated electronic systems in vehicles.

During the period under review, Minebea announced plans to enter the market for fluid dynamic bearings, which are expected to become the principal choice for spindle motors for HDDs. Accordingly, by the end of calendar year 2000, Minebea intends to launch production of these bearings for use in spindle motors for HDDs manufactured for Seagate of the United States. This move will reinforce Minebea's lineup of small bearings, as well as enhance its overall supply capabilities.

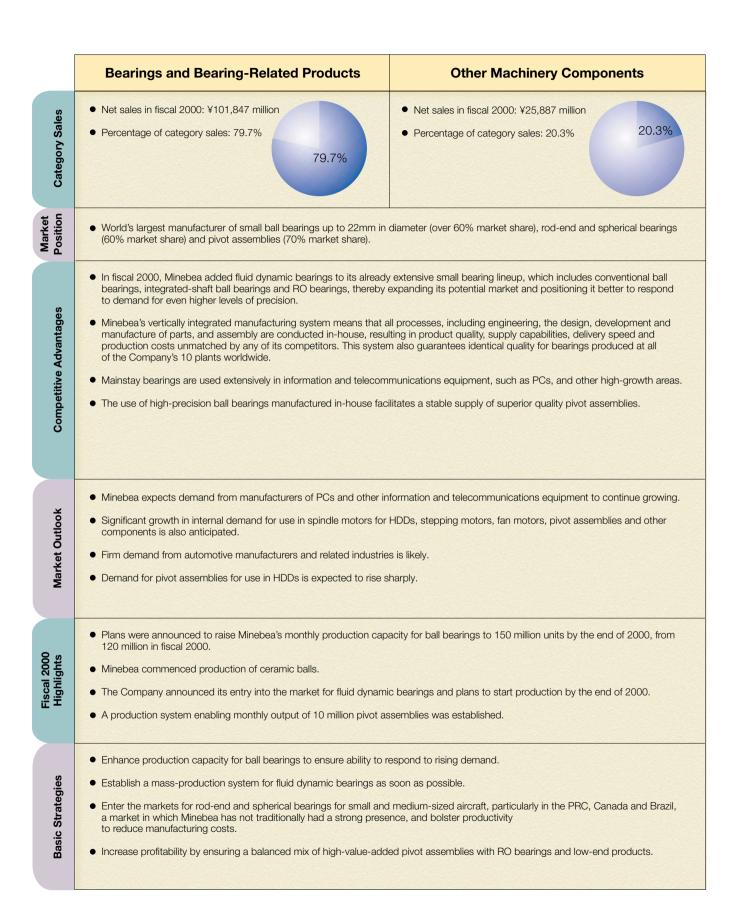
Owing to flagging demand from aerospace companies, primarily in the United States, the principal customers for rod-end and spherical bearings, sales of these products fell in fiscal 2000. Demand remains slack, but is expected to pick up gradually in fiscal 2001, spurred by economic recovery in Southeast Asia. Minebea will strive to expand sales in this product group by cultivating demand from manufacturers of small and medium-sized aircraft, particularly in the PRC, Canada and Brazil, a market in which it has not traditionally had a strong presence. The Company will also endeavor to enhance production efficiency for these products.

Demand for pivot assemblies continued to soar in fiscal 2000, offsetting the impact of declining sales prices. As a consequence, sales of mechanical assemblies, which also include tape guides, rose from the previous period. With demand expected to remain on an upward trend in fiscal 2001, Minebea plans to boost production capacity and enhance profitability by offering a balanced mix of high-value-added and low-end products.

## **Other Machinery Components**

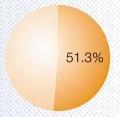
Sales of other products in this group, which include fasteners, wheels and defense-related special machinery components, declined 5.1% in fiscal 2000, to \\$25,887 million. With demand from the aerospace and automotive industries unchanged, sales of fasteners remained level with fiscal 1999. In fiscal 2001, Minebea expects demand from the aerospace sector to remain flat and will respond by reducing inventories and further rationalizing operations. A decline in orders prompted a decline in sales of wheels. Sales of special machinery components fell, also reflecting falling orders from defense contractors. In fiscal 2001, Minebea will step up marketing efforts for the latter to private-sector manufacturers.

Note: For more information on Minebea's RO and fluid dynamic bearings, see pages 6-7 in the special feature section of this annual report.

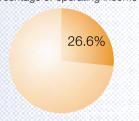


# **Electronic Devices and Components**

Percentage of net sales



Percentage of operating income



#### **Principal Products**

**Rotary Components** 

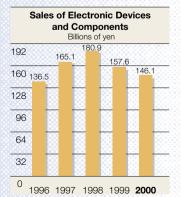
Spindle motors for HDDs
Hybrid-type stepping motors
PM-type stepping motors
Fan motors
DC brushless motors for electric
power steering systems
Resolvers

#### Other Electronic Devices and Components

PC keyboards
Speakers
Electronic devices
(FDD subassemblies, magnetic heads for FDDs, front light assemblies)
Power electronic components (switching power supplies, inductors)
Transformers

Hybrid integrated circuits (ICs)

Measuring instruments (strain gauges, load cells)



Demand for electronic devices from PC manufacturers and other customers in the information and telecommunications industries remained firm throughout fiscal 2000. Despite higher shipments, sales were hampered by intense pricing competition.

Sales in this category amounted to \\ \frac{\text{\$\frac{4}}}{146,133}\$ million, or 51.3% of net sales. Category sales were \( \frac{\text{\$\frac{4}}}{5,535}\$ million lower than they would have been had the same exchange rate been used as in the previous period. Operating income in this category totaled \( \frac{\text{\$\text{\$\frac{4}}}}{8,254}\$ million, or 26.6% of operating income.

## **Rotary Components**

Sales of motors, including spindle motors for HDDs, stepping motors and fan motors, edged down 1.6%, to ¥63,758 million.

## Spindle Motors for HDDs

In the area of spindle motors, Minebea shifted its marketing focus from those for 3.5-inch low-end HDDs to high-value-added motors for 3.5-inch and 2.5-inch high-end HDDs, resulting in a temporary decline in shipments and a 23.3% decrease in sales in this product group in fiscal 2000. However, increased shipments of high-value-added products to major HDD manufacturers and firm orders for next-generation models are expected to support a significant increase in sales in fiscal 2001. In response, Minebea plans to increase its monthly output of spindle motors for HDDs to 3.5 million units, from 2.0 million, in the third quarter of 2000. Moreover, Minebea expects to complete a new facility exclusively for spindle motors for HDDs at its Bang Pa-in Plant in Thailand late in calendar year 2000, thereby boosting its monthly production capacity to 10.0 million. On another front, Minebea will commence production of fluid dynamic bearing spindle motors for HDDs by the end of 2000.

## Fan Motors

Falling product prices also affected sales of fan motors, although the impact was largely offset by expanded shipments, particularly to PC manufacturers and other customers in the information and telecommunications industries. Accordingly, sales of fan motors were up from fiscal 1999. In the immediate future, the Company will endeavor to expand sales of

high-value-added fan motors, such as those for mobile telephone base stations, and develop high-value-added new products for the automotive industry.

# Stepping Motors and Other Motors

Despite sagging product prices, firm demand, especially for use in office automation (OA) equipment, led to an increase in sales of stepping motors and miscellaneous other small motors. In fiscal 2001, Minebea will strive to cultivate new markets for stepping motors and other motors, such as that for automotive use, which includes DC brushless motors for electric power steering systems.

# Other Electronic Devices and Components

Sales of other electronic devices and components decreased 11.2%, to ¥82,375 million, in fiscal 2000. PC keyboard sales rose, spurred by rising demand for use in high-end desktop and notebook PCs. Severe pricing competition contributed to a decrease in sales of speakers. During the period, Minebea acquired a speaker box manufacturer in Malaysia, where many of the leading audio equipment manufacturers have key production bases. In fiscal 2001, the Company plans to enter the growing market for microspeakers for mobile telephones.

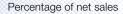
Electronic device sales also fell, a consequence of flagging demand, particularly for FDD subassemblies. Minebea will launch production of front light assemblies, which are expected to see a sharp increase in demand, particularly for use in mobile telephones.

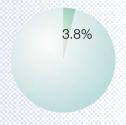
Sales of power electronic components expanded. In the current period, Minebea will work to bolster productivity at its mass-production facility for switching power supplies, the principal product in this group, in Thailand. At the same time, the Company will step up development of products for the telecommunications market in Europe and high-voltage power supplies in the United States.

Falling orders in the domestic market prompted a decline in sales of measuring instruments in fiscal 2000.

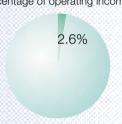
	Rotary Components	Other Electronic Devices and Components
Category Sales	<ul> <li>Net sales in fiscal 2000: ¥63,758 million</li> <li>Percentage of category sales: 43.6%</li> </ul>	<ul> <li>Net sales in fiscal 2000: ¥82,375 million</li> <li>Percentage of category sales: 56.4%</li> </ul>
Market Position	<ul> <li>Spindle motors for HDDs: 17% market share         Hybrid-type stepping motors: 35% market share         PM-type stepping motors: 25% market share         Fan motors: 30% market share     </li> </ul>	● PC keyboards: 20% market share
Competitive Advantages	<ul> <li>Minebea's rotary components are manufactured using the Company's market-leading ball bearings, giving it a significant competitive advantage in terms of product quality and supply capabilities.</li> <li>Minebea's vertically integrated manufacturing system means that all processes, from design and development to the production of pressed parts, plastic injection molded parts, die-cast parts, machined parts and magnets, to final assembly and testing, are conducted in-house. This enables the Company to respond promptly to increased demand and rising expectations in terms of quality.</li> <li>Minebea has testing facilities in each of its major production bases and leading markets, earning the Company a reputation for outstanding reliability.</li> </ul>	<ul> <li>Minebea's vertically integrated manufacturing system means that all processes, from design and development to the produc- tion of pressed parts, plastic injection molded parts, die-cast parts, machined parts and magnets, to final assembly, are conducted in-house. This enables the Company to respond promptly to increased demand and rising expectations in terms of quality.</li> </ul>
Market Outlook	<ul> <li>Minebea expects demand from manufacturers of PCs to continue growing. In particular, the Company anticipates demand for high-value-added spindle motors for 3.5-inch and 2.5-inch high-end HDDs to expand in fiscal 2001.</li> <li>Substantial demand for DC brushless motors, stepping motors and other products from automotive manufacturers and related industries is likely.</li> </ul>	Minebea forecasts an increase in demand from PC manufacturers, particularly for wireless keyboards and notebook PCs.      New Minebea products, such as front light assemblies, are expected to benefit from growth in the markets for mobile telephones and other information and telecommunications equipment.
Fiscal 2000 Highlights	<ul> <li>Minebea began supplying DC brushless motors to Delphi, the world's largest manufacturer of automotive components.</li> <li>Minebea announced plans to begin producing spindle motors for HDDs containing fluid dynamic bearings, which will be launched before the end of 2000.</li> </ul>	<ul> <li>A new R&amp;D center was completed in Germany that specializes in the design and development of switching power supplies for non-PC applications and conducts thermal analysis and other testing procedures for these applications.</li> <li>Minebea acquired a speaker box manufacturer in Malaysia, where many leading audio equipment manufacturers have production bases.</li> </ul>
Basic Strategies	<ul> <li>Grow rotary components into a second pillar of operations for Minebea that is similar in scale to the Company's bearings and bearing-related products business.</li> <li>Increase the weight of high-value-added products and expand product lines to better respond to a wider range of market needs.</li> </ul>	<ul> <li>Increase the weight of high-value-added products and expand product lines to better respond to a wider range of market needs.</li> </ul>

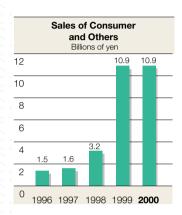
# **Consumer and Others**





Percentage of operating income





This category focuses on the operations of subsidiary Actus Corporation, which encompass retail sales of imported and domestic furniture and interior decor items in Japan. Despite weak consumer spending, Actus recorded firm results for the third consecutive year in fiscal 2000. As part of an assertive effort to expand its operations, Actus opened a new 3,000m² store at Itami Airport in Osaka. Minebea's other non-core subsidiary, Minebea Credit, which provides real estate collateralized loans, was sold to LSF Nippon Investment Company, LLC, of the United States during the period.

Sales in the consumer and others operations category edged down 0.2%, to ¥10,890 million, or 3.8% of net sales. Operating income in this category, at ¥819 million, represented 2.6% of operating income.