

**Review of operations and results in Minebea's three industry categories in the fiscal year ended March 31, 2002**

**Machinery Components**

***Bearings and Bearing-Related Products***



Ball bearings



Ball bearings (RO bearings)



Pivot assemblies



Rod-end bearings



Spherical bearings



Journal bearings

***Other Machinery Components***



Roller bearings



Fasteners



Special machinery components



Solenoid valves

**Electronic Devices and Components**

***Rotary Components***



HDD spindle motors



Hybrid-type stepping motors



PM stepping motors



Fan motors



DC brushless motors



VR Resolvers

***Other Electronic Devices and Components***



PC keyboards



Speakers



Switching power supplies



MO Disk Drives



Front light assemblies for reflective color LCDs



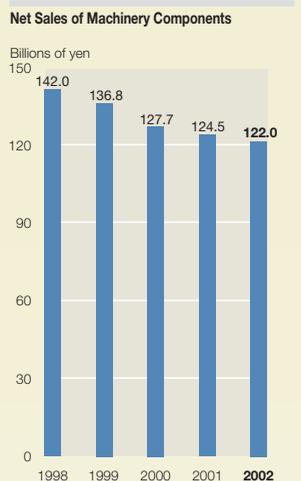
Measuring equipment (strain gauges, load cells)

**Consumer and Others**

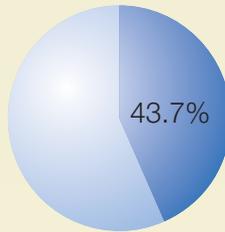
Operations in this category focus on retail sales of furniture and interior decor products.

(This segment comprises the operations of subsidiary Actus Corporation. In February 2001, Minebea transferred its holding in Actus to TRS Co., Ltd.)

## Machinery Components



Percentage of net sales



### Principal Products

#### ● Bearings and

##### Bearing-Related Products

Miniature ball bearings  
 Small-sized ball bearings  
 Integrated-shaft ball bearings  
 RO bearings  
 Fluid dynamic bearings  
 Rod-end bearings  
 Spherical bearings  
 Roller bearings  
 Journal bearings  
 Pivot assemblies  
 Tape guides

#### ● Other Machinery Components

Aerospace/automotive fasteners  
 Special machinery components  
 Magnetic clutches and brakes  
 Solenoid valves

### Highlights of the Fiscal Year Ended March 31, 2002

- We completed our withdrawal from the wheel business.
- We refurbished the Karuizawa Manufacturing Unit—the parent plant for overseas plant in this segment—to enhance its product development capabilities.

### Business Environment

- Despite sluggish markets for information and telecommunications equipment, demand began to pick up in the latter half of the term.
- The Chinese market continued to expand, especially for ball bearings used in air conditioners, vacuum cleaners and other household electrical appliances, with further growth expected in the future.

- The fiscal year ended March 31, 2002, saw the widespread adoption of HDD spindle motors containing fluid dynamic bearings.

### Issues and Strategies

- In the medium-to-long term, we expect demand for ball bearings to grow amid the increasing digitization of household electrical appliances, greater use of electric control systems in automobiles and the expanding Chinese market. We will further upgrade our ball bearing business, which is a key pillar in our new medium-term management plan's earnings strategy.

In the fiscal year ended March 31, 2002, sales of machinery components amounted to ¥122,025 million, down 2.0% from fiscal 2001, and accounted for 43.7% of consolidated net sales. Reflecting efforts to reduce manufacturing costs, category operating income was held to a 7.4% decline, to ¥22,135 million, and the operating margin was 18.1%.

### Bearings and Bearing-Related Products

Sales of bearings and bearing-related products slipped 1.0%, to ¥100,114 million. Despite healthy sales of bearings to manufacturers of household electrical appliances and automobiles, demand from the information and telecommunications industry for these products and pivot assemblies stagnated. As a result, overall sales were weak. By contrast, rod-end bearings and spherical bearings performed well.

In the fiscal year ended March 31, 2002, our monthly average **ball bearing** output slipped to between 110 and 120 million pieces, reflecting weak demand from manufacturers of information and telecommunications equipment, especially PCs, although it recovered to approximately 140 million pieces toward the end of the period. The volume of ball bearings sold for internal use—notably in fan motors and stepping motors—declined. In contrast, shipments to makers of air conditioners, vacuum cleaners and other household electrical appliances, especially in China, were solid.

In the fiscal year ending March 31, 2003, we predict a recovery in demand from the information and telecommunications industry, as well as increased demand from the household electrical appliance and automotive sectors. We also anticipate a major gain in in-house sales thanks

to a growing motor business. Meanwhile, the Chinese market—centering on household electrical appliances—continues to expand, and demand for bearings for use in motors is rising in line with the increasing use of electric control systems in automobiles. Accordingly, demand for ball bearings is forecast to climb in the medium term. We will continue with efforts to achieve further cost reductions, and thus expect to record a significant improvement in earnings.

Sales of **rod-end bearings and spherical bearings** were healthy in the first half of the period, helped by solid orders from the aircraft industry. Although sales remained firm as we filled a backlog of orders, in the latter half, new orders declined considerably owing to the September 11 terrorist attacks in the United States. Expecting the impact of these attacks to continue in the fiscal year ending March 31, 2003, we plan to expand marketing and cultivate new customers in markets for small and medium-sized aircraft, while emphasizing enhanced production efficiency.

Sales of **pivot assemblies** were slow, reflecting flagging performances in the PC industry. In the fiscal year ending March 31, 2003, we will endeavor to raise profitability by targeting sales to manufacturers of HDDs, a market in which our share remains low. By providing low-cost products, we hope to expand sales to existing customers while also targeting new ones.

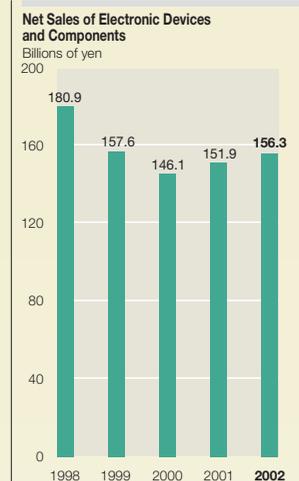
### Other Machinery Components

Due to a decline in revenues from our wheel business, which was liquidated in the fiscal year ended March 31, 2002, sales of other machinery components fell 6.2%, to ¥21,911 million.

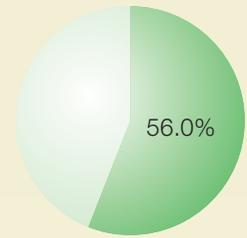
Sales of **fasteners** remained practically unchanged. Despite weak demand from the automotive sector, sales to aircraft manufacturers were solid. The Company also benefited from a reassessment of its product lineup, which has been under way since the previous fiscal year. In the fiscal year ending March 31, 2003, we will further raise the ratio of high-value-added products in our fastener lineup to improve profitability.

Sales of **defense-related special machinery components** were in line with our forecasts, which were based on the Japanese Defense Agency's medium-term plan. In fiscal 2003, we expect sales to this sector to remain largely unchanged.

## Electronic Devices and Components



Percentage of net sales



### Principal Products

#### ● Rotary Components

- HDD spindle motors
- Hybrid-type stepping motors
- PM stepping motors
- DC brushless motors
- Fan motors
- DC brushless motors for electric power steering systems
- VR resolvers

#### ● Other Electronic Devices and Components

- PC keyboards
- Speakers
- Electronic devices (FDD subassemblies, magnetic heads for FDDs, MODs, front light assemblies for reflective color LCDs)
- Power electronic components (switching power supplies, inductors, hybrid ICs)
- Measuring equipment (strain gauges, load cells)

### ● Highlights of the Fiscal Year Ended March 31, 2002

- The Company shifted its measuring equipment operations from Singapore to China.

### ● Business Environment

- Stagnating markets for information and telecommunications equipment weakened sales of fan motors, stepping motors, switching power supplies, FDD subassemblies and other products.
- Demand for HDD spindle motors containing fluid dynamic bearings grew significantly.
- Markets for precision small motors and other products in this category expanded further amid the increasing digitization of household electrical appliances and the growing use of electric control systems in automobiles.

## Issues and Strategies

- We have identified reinforcing product development capabilities as an urgent priority, crucial to increasing the weighting of high-value-added products capable of withstanding market fluctuations and price declines.
- To respond effectively to the needs of mainstay customers that have shifted production to China, we further upgraded our manufacturing bases and reorganized our sales structure in that country.
- In the fiscal year ended March 31, 2002, we proceeded with measures in line with our basic strategy for building precision small motors and other rotary components into a second pillar of the Company business, similar in scale to our bearing operations.

**Sales of electronic devices and components increased 2.9%, to ¥156,303 million, or 56.0% of consolidated net sales. While overall market conditions were difficult, sales of HDD spindle motors and PC keyboards were solid. We reported a category operating loss of ¥163 million. This result reflected intense price competition, weak demand from manufacturers of information and telecommunications equipment and forward investment in our HDD spindle motor business.**

### Rotary Components

Sales of fan motors and stepping motors declined, although sales of HDD spindle motors, including those containing fluid dynamic bearings, were strong. As a result, overall sales of rotary components grew 3.9%, to ¥76,440 million.

Demand for **HDD spindle motors** was generally solid, owing in part to the rapid proliferation of fluid dynamic bearing motors from autumn 2001. In the fiscal year ending March 31, 2003, we will start shipping fluid dynamic bearing HDD spindle motors to companies other than Seagate Technology, Inc.—currently our sole customer for these products. To this end, we plan to step up production, raising combined monthly capacity for these motors and RO bearing motors for server workstations to as high as 7.0 million units in the fiscal year ending March 31, 2003, from between 3.5 and 4.0 million units in the fiscal year ended March 31, 2002. In June 2002, we concluded a consignment production

agreement with Matsushita Electric Industrial Co., Ltd., covering 2.5-inch fluid dynamic bearing HDD spindle motors. Depending on the progress of related arrangements, we will further reinforce production capacity.

Strengthening our HDD spindle motor business will be key to achieving the goals of our new medium-term management plan. Accordingly, we are focusing efforts on upgrading product development capabilities and production technologies. We are now well positioned to supply HDD spindle motors containing either ball bearings or fluid dynamic bearings according to emerging demand trends and user needs.

Sales of **fan motors** were slow, reflecting depressed demand from the PC sector. In response, we worked to lower manufacturing costs while expanding sales of high-value-added models and cultivating new markets. At the same time, we pursued a business strategy emphasizing expanded sales of high-quality, low-cost products to low-end markets. In the fiscal year ending March 31, 2003, we expect burgeoning demand for fan motors for use in telecommunications equipment and high-value-added server products. For this reason, we plan to raise monthly fan motor output to more than 6.0 million units, from 4.0 million units in the fiscal year ended March 31, 2002.

Owing to low prices and weak demand from OA equipment manufacturers, sales of **stepping motors** were slow. We expect this trend to continue in the fiscal year ending March 31, 2003, and will respond by further lowering manufacturing costs, while redefining target markets to raise the proportion of high-value-added products in our lineup.

We currently manufacture **DC brushless motors for electric power steering systems**, as well as stepping motors for optoaxial headlight adjustment. We are also actively developing motors for vehicle distance sensors, electric brake systems and other applications and have already secured new development contracts. We will commence production of these motors in 2004 and expect them to begin contributing substantially to earnings growth in the fiscal year ending March 31, 2006.

### Other Electronic Devices and Components

Although sales of FDDs, MODs and other products were weak, sales of PC keyboards and speakers were favorable. As a result, sales in this segment rose 2.0%, to ¥79,863 million.

Amid a slowdown in the PC market, we increased the weighting of high-value-added **PC keyboards**

while expanding sales of low-end items. As a consequence, we recorded solid sales of PC keyboards. In the fiscal year ending March 31, 2003, we will strive to further raise profitability by expanding sales to manufacturers of notebook PCs and targeting new markets.

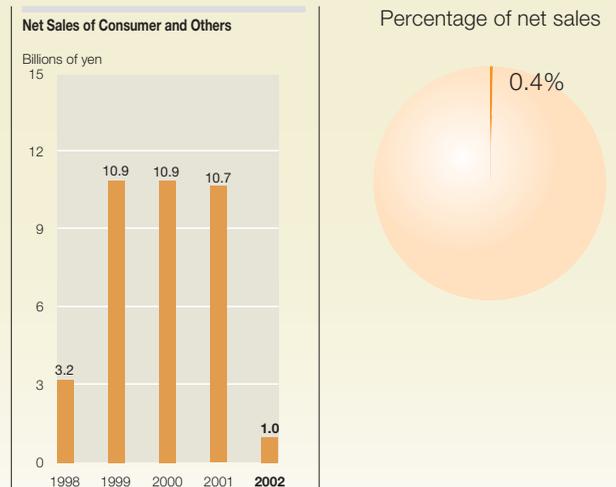
Our **speaker** business benefited from focused rationalization measures implemented during the previous period. In the fiscal year ending March 31, 2003, we will take further steps to raise sales to the PC sector and to manufacturers of medium- and high-end products. We also plan to cultivate new customers in the cellular telephone and other markets.

**Electronic device** sales were weakened considerably by poor demand for FDD subassemblies and MODs and depressed conditions in the PC market. Sales of front light assemblies were sluggish as domestic demand failed to meet our projections. In the fiscal year ending March 31, 2003, we will endeavor to cultivate the markets for cellular telephones with color liquid crystal displays (LCDs) and personal digital assistants (PDAs) by promoting both front and back light assemblies.

Sales of **power electronic components** were hampered by sluggish demand for mainstay switching power supplies. However, we benefited from focused measures taken during the past two years, including reinforcement of our product development capabilities and rationalization of operations, which enabled us to enter markets for high-value-added products used in servers and workstations. We also developed cost-efficient business models. In these and other ways, our business restructuring efforts are reaping rewards.

**Measuring equipment** sales were generally slack, reflecting sluggish conditions in the domestic market. To address the needs of customers in the expanding Chinese market for such equipment, especially for weight scales, we shifted measuring equipment production from Singapore to China.

## Consumer and Others



In the fiscal year ended March 31, 2001, we transferred our holding in Actus, a furniture and interior decor product sales subsidiary, to a third party, although we continued to procure furniture on behalf of Actus until February 2002. As a consequence, sales in this category declined to ¥1,016 million, from ¥10,674 million. Although we reported operating income of ¥812 million in fiscal 2001, we did not report operating income in the period under review.

As of the end of the period under review, we have withdrawn from the consumer and others industry category and thus will not report sales or earnings in this industry category in the fiscal year ending March 31, 2003, or thereafter.