

Bearing Business



Katsumi Yamamoto
General Chief of Bearing Business Unit

Our bearing products are used in rotating parts for all industries, from cars to industrial machinery, and are working in the background to support society.

In the automotive field, we will respond to electrification and autonomous driving trends while in the industrial machinery field we will develop solution proposal-type businesses and offer value and service throughout the lifecycle of products.

Through these activities, we will contribute to the realization of a better society from the perspective of energy-saving and social infrastructure.

Description of business

Development and manufacturing of bearings for vehicles such as powertrains, chassis-related parts, and bearings for all industrial machinery, ranging from bearings for unit products and precision machinery to super-sized bearings for tunnel boring machines

Value created in fiscal 2018

Advance of automation and unmanned operation

- In anticipation of needs within a declining workforce, we are expanding automated and unmanned lines utilizing automated appearance inspections, conveyance, and packaging as well as IoT.

Business structure enhancements

- Going forward, we will enhance our global production system and production capabilities in China, India, and other countries where the market is expected to grow.

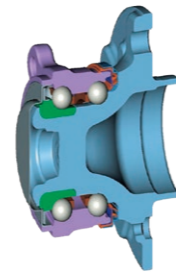
Introduction of new products and technologies

- We will introduce high-speed single ball bearings (SBBs)¹ for motors, new materials, and bearings for special environments leveraging technologies accumulated up to now.

1. A type of rolling bearing that separates moving parts of bearings using a single row of balls

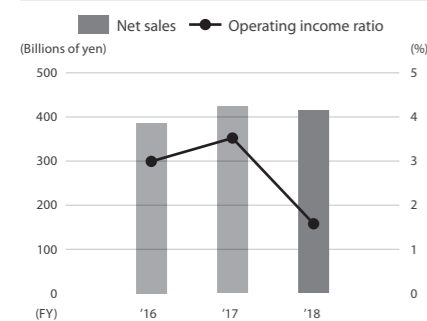


Single ball bearing for high-speed rotation

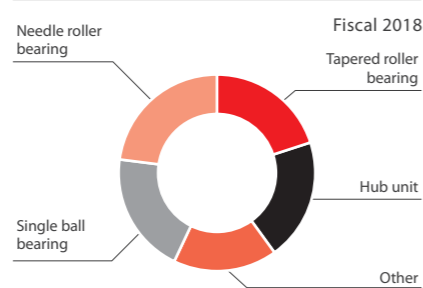


Lightweight, low-torque hub unit

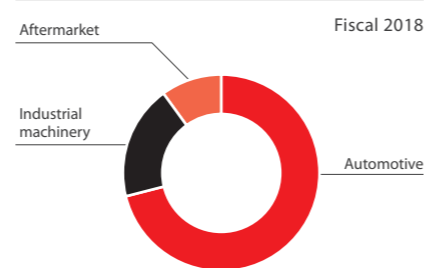
Net sales and operating income ratio



Ratio of sales by product



Ratio of sales by industry



Business environment analysis

(Automotive bearing) Acceleration of product development

Product release considering advancement of electrification and autonomous driving needs surrounding changes to cars

(Industrial machine bearings) Further diversification of the environments in which bearings are used

Timely development and market release of products, technologies, and services responding to further sophistication of robots and automation

Strengths

Low-torque technologies

Overwhelming low-torque² technology represented by the LFT (Low Friction Torque) series

Broad product lineup

Responding to a wide-variety of industrial machine applications

2. Objects may be moved with low torque (equivalent to low friction)

Technique for testing and analysis

Enables testing and analysis in an environment closely resembling actual cars at the Iga Proving Ground or actual machines at the Large Size Bearing Engineering Development Center

JTEKT Group strengths

The ability to execute comprehensive development projects from our customers' perspectives due to having both an auto parts business and machine tools business within the JTEKT Group.

Solutions for social issues (from the perspective of the SDGs)



- Contributing to reduced energy loss in all fields by better low-torque technology and supporting electrification
- Contributing to energy loss reduction through downsizing and lightweight technologies



- Supporting industrial advancement and helping to maintain / improve abundant life environments for people by making proposals to the global market that foresee needs

Medium-term policies

Productivity improvements

- Reduce lead times and costs by establishing a new construction method
- Promote unmanned operation through thorough automation

Strengthen global production system

- Further increase production capacity in developing countries in Eastern Europe, China, and India

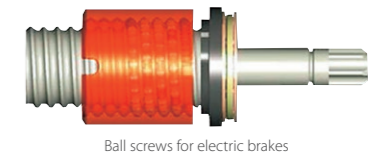
New product launches

- Development of products corresponding to the electrification of automobiles (ball screws³ for electric brakes)
- Product development (new materials, special environments) corresponding to various operation environments in the industrial machinery field

New business development

- Expand unit product, magnetic bearings⁵ system businesses

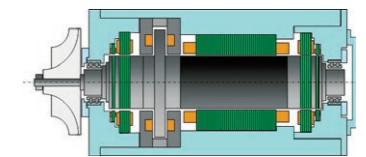
3. High-precision, compact, and lightweight ball screws that enable fine braking control
4. Long-life bearings using new materials
5. A bearing that supports the rotating object through magnetic levitation



Ball screws for electric brakes



NK bearing⁴



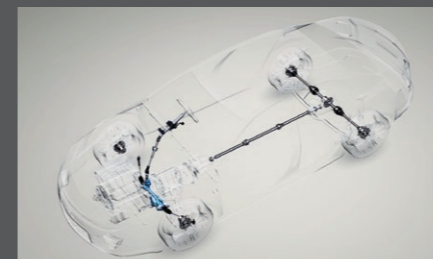
Control-type magnetic bearing



Focus

Contributing to automated operation of sensing hub units that monitor the driving environment

To facilitate autonomous driving, high levels of "cognition," "judgment," and "operation" are required. JTEKT aims to develop a system that uses a hub unit as a sensor to ascertain road surface changes and abnormalities and failures that occur in vehicles. We will continue efforts toward the resolution of social issues by realizing highly accurate vehicle controls and the early detection of abnormalities and failures using sensing hubs⁶.



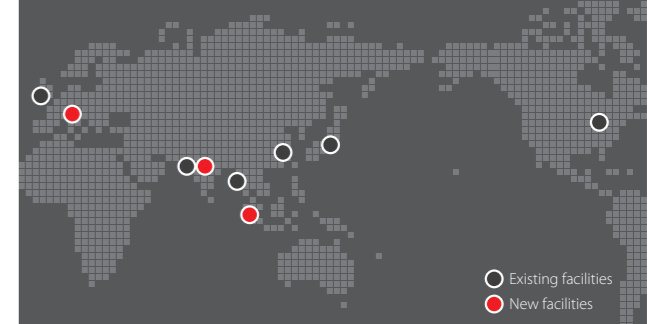
6. A hub unit that supports vehicles from their wheels with a built-in sensor that detects road surface conditions



Global Topics

Enhancing hub unit production systems

From fiscal 2019 onward, we will promote production system enhancements, and in Europe we will add a facility in Romania as a second production site. Additionally, we will attempt to increase production capacity in the ASEAN region, where we aim to establish a facility in addition to Indonesia and another facility in India as a second production site. We will engage in enhancements in each region to accelerate the steady achievement of growth and development.



○ Existing facilities
● New facilities