

Bearing business



Since developed in 1983, the low friction torque tapered roller bearing, LFT, has helped to improve vehicle fuel efficiency. This torque reduction technology has been widely applied to other bearing types, such as hub units, and is contributing to the conservation of the global environment. JTEKT also provides a wide variety of bearings for the rotating parts of machinery in every industry from automobiles to various industrial machines. One such example is our extra large size bearing adopted in Japan's largest shield tunneling machine. JTEKT bearings, thus, will always support society in the background.



Hub Units for automobiles (HUB-LFT)



Extra large size bearing for tunnel boring machines

TOPICS

Super-low friction torque tapered roller bearing (LFT-IV)

Evolution of No. 1 low-torque performance

The cage is made of resin, which provides great flexibility for cage design. Agitation resistance caused by lubricating oil has been successfully reduced by optimizing the cage shape to control the amount of lubricating oil that flows into the bearing interior. Bearing seizure life has also been improved.

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Lower torque
Expected decrease compared to current No. 1 low torque TRB "LFT-III" By Approx. **30%**

Expected fuel efficiency improvement
Compared to standard TRB when using in a differential unit Approx. **2.5%**



Low friction torque & long life deep groove ball bearing for motors

Reduction of energy loss for industrial machinery

JTEKT approached the challenge of accomplishing the trade-off characteristics of low torque and long life with a new analysis technique that extends to the molecular structure of grease. JTEKT was awarded the 2016 Tribo-Technology Award by the Japanese Society of Tribologists for developing grease for a motor bearing that achieves both low torque and long life.

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Torque loss
Compared with conventional Approx. **50%** reduction

Life
Compared with conventional Approx. **2** Times

Quietness
Compared with conventional Approx. **33%** improvement



- * LFT is an abbreviation of Low Friction Torque, a registered trademark of JTEKT Corporation.
- * LFT-HUB is a registered trademark of JTEKT Corporation.

A look back on FY2016

1 Net sales 8.1% lower compared to last FY at 375.4 billion yen

Net sales were 8.1 percent lower compared to last FY at 375.4 billion yen due to the appreciation of yen and a drop in sales in Japan, Asia & Oceania and North America.

2 Strengthening of business structure

In structural reforms currently underway, JTEKT has re-organized our domestic production systems by transferring and integrating product groups. Moreover, we have produced results relating to the establishment of a profit foundation for overseas businesses. At Kameyama Plant, we have introduced an innovative line and are constructing No. 2 Plant with strengthened energy-saving and environment countermeasures. We have realized a highly competitive global model plant which is gentle on people and the environment.



No. 2 Kameyama Plant



New plant at Kiyohara Industrial Park for Utsunomiya Kiki Co., Ltd.
(photo care of Tochigi Promotion Council of Establishment of New Business Facilities)

As a part of efforts to strengthen the global production and development systems of needle roller bearings, JTEKT's group company, Utsunomiya Kiki Co., Ltd., acquired new land for its new plant at Kiyohara Industrial Park. This plant will serve as the central hub of business expansion, increasing speed in all processes from development to manufacturing, and fulfilling our customers' needs.

Future prospect

1 Initiatives at hand

In order to improve the profitability of our domestic businesses, JTEKT is pushing ahead with productivity improvement, sales expansion, fixed costs reduction and investment efficiency improvement. In the production aspect, based on the concept of "advanced factories", we are focusing on IoT utilization, automation, unmanned operation and small lot production system. We will transform our production worksites into those which consider the declining workforce population and work-style reforms.

In the market sales area, we are promoting expansion of our sales network, enrichment of our product lineup/logistics and professional development in order to improve profitability.

2 Actions for the future

In regards to automobile bearings, we will seek to achieve even lower torque at the same time as developing new products preempting evolution of cars, such as electrically driven vehicles and ADAS.

For industrial machinery, we are exerting efforts to develop high-functionality products which satisfy customer needs and strengthen our production and service systems.