

Reducing energy losses and preserving the environment through tribology

Tribology is the study of interacting surfaces. It can be used to help control friction, wear, and lubrication to make sure things move smoothly.

Bearings are parts with smoothly moving surfaces that reduce friction and reduce energy consumption, which truly makes them eco-friendly products.

NTN technology is used in numerous industries to realize an ideal level of smooth motion.

Wind power generation

Wind power is a clean form of energy without CO₂ emissions.

In order to achieve harmony with the natural environment and to help solve the global warming problem, we are contributing to the spread of wind power generation by providing bearings for wind power generators.

PCs and hard disks

Our fluid dynamic bearings are used in the hard disk drives (HDDs) integrated in products such as PCs and hard disk recorders – products that have become integral parts of everyday life.

The bearing itself contains lubricating oil and has excellent running accuracy and minimal noise, making it a preferred choice for HDD motor bearings.



Fluid dynamic bearing



Bearing for railroad journal applications



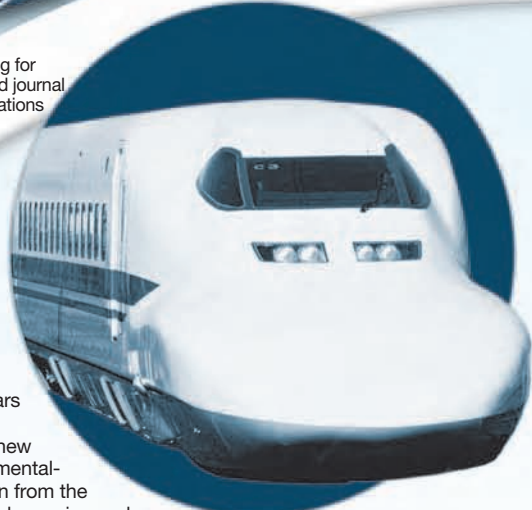
Cylindrical roller bearing



Insulated bearing for generators



Spherical roller bearing for machine main shaft

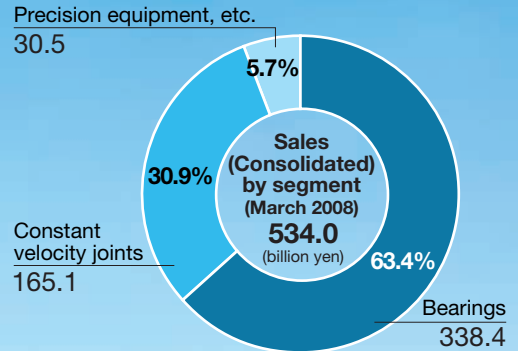
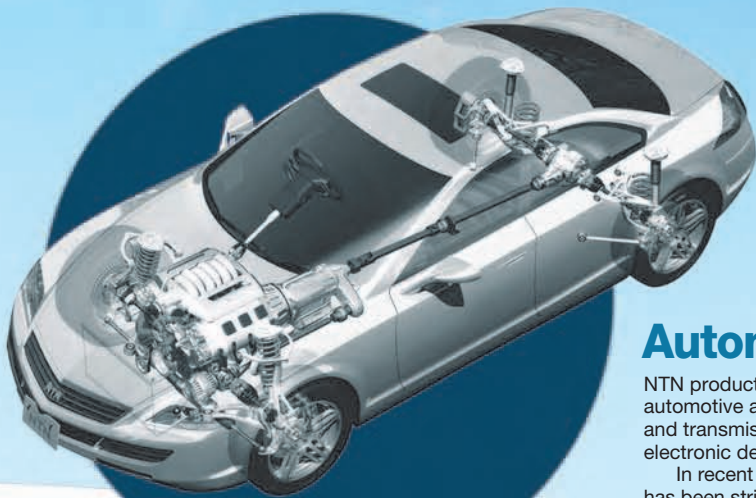
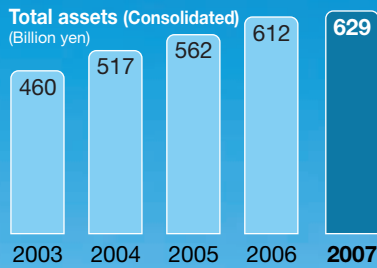
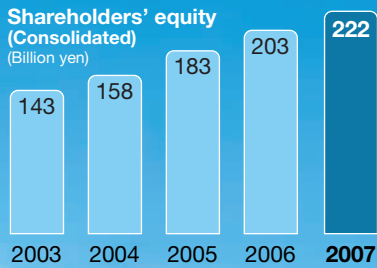


Railcars

NTN bearings are used in a large number of passenger and freight cars in Japan including the Shinkansen (the bullet train), as well as in railcars outside of Japan.

Rail transport is getting a new look worldwide as an environmental-friendly mode of transportation from the standpoint of preventing global warming and demand for railcar bearings is on the increase.

In order to ensure the safety of large numbers of people and large quantities of cargo transported by railcars, NTN uses a special management system to maintain and improve quality.



Automobiles

NTN products are used widely in critical automotive applications – from the engine and transmission to the drivetrain and electronic devices.

In recent years, the automotive industry has been striving to improve the safety and environmental performance of vehicles to make them better for people and better for the earth.

To meet these needs, NTN has been developing our technology to enhance function, to improve precision, to reduce weight, and to devise new processing technologies, as well as to find ways to fuse these together into composite technologies.

Office equipment

NTN supplies small bearings and plastic products to office equipment manufacturers.

This industry started environmental preservation efforts early, and NTN has been responding to their needs by eliminating and reducing environmentally hazardous materials by enacting internal standards.

We will continue to create environmentally friendly products.



Hub bearing with a high-resolution rotational sensor



V-series hub joint



Angular contact ball bearing for machine tool spindles



Thin-section radial ball bearing



Bearing with high-resolution rotational sensor

Industrial machinery (e.g. construction machinery)

Our bearings are highly regarded for their high quality and for NTN's ability to respond flexibly to increases in demand. They are used in a wide variety of areas including construction machines, which are critical from the standpoint of infrastructure maintenance, mining machines, and industrial robots, which require a high degree of precision and speed. They are also used in machine tools and medical devices.

