

>>> Research & Development

THK's research and development activities conform to its corporate philosophy of "providing innovative products to the world and staying abreast of new trends to contribute to the creation of an affluent society." Adhering to this philosophy, we are developing product-out products that help our customers to provide high-value-added, and top-quality products and comprehensively reducing the manufacturing costs.

Based on this policy, we are setting up the following R&D subject in the current fiscal year.

1 Development of integrated "unit element" products combining linear motors and LM guides, to meet the requirements for higher precision as well as upsizing and higher speed in LCD and semiconductor production equipment.

2 Further development of our lineup of ecologically friendly products conforming to the E³ (Cubic E) Concept, which embodies our environmental policies, and expanding the product series of Caged Ball™ Technology products such as LM guides, ball screws, ball splines, and LM guide actuators.

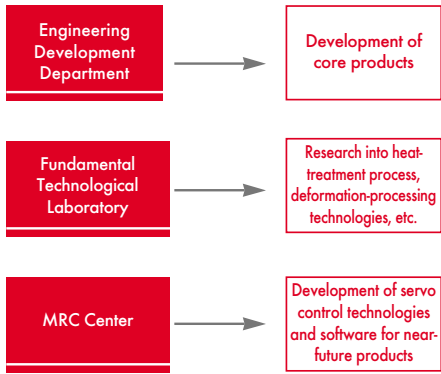
3 Development of self-lubrication devices and methods that satisfy the strong market demand for products realizing long maintenance-free operation. We will also develop micro LM guides, micro ball screws, and micro ball splines for the micro-machine industry, which is expected to grow in the future.

Over the longer term, we are primarily planning to develop of the following types of products.

1 Development of products with fault-detection functions that enhance reliability in unmanned operation of machinery and around-the-clock factory operation.

2 Development of products with damping function to minimize vibration, noise, and settling time that tend to increase as machines are operated at high speed.

THK's product development system includes three departments (see diagram), and is designated for global markets and entry into new fields. We are committed to developing products that accurately and flexibly meet the needs for higher level of diversification and speed, and challenging "Know-how" that means the letter K of THK .



Durability testing devices for determining reliability of LM guides



LM Guide with Caged Roller™ Technology boasting high rigidity and quiet motion



Ball Screw with Caged Ball™ Technology boasting high-speed and high load capacity



LM Guide actuator with Caged Ball™ Technology



High-speed, high-precision, long-travel linear motor unit

Products developed by the Research and Development Department are distributed by the THK's various applications development departments, which actively facilitate access to customers and markets in order to expand the Company's business domain.

