Guided by the business philosophy of “providing innovative products to the world and generating new trends to contribute to the creation of an affluent society,” THK continually strives to create original products as a creative development-driven enterprise.

**A Global R&D System for the Next Generation**

The major task force of the Group’s R&D activities, primarily at the Technology Center (Tokyo) established as the R&D base for new products, is actively engaged in the research and development of products for use in the mechatronics, consumer goods, transportation equipment, and core LM systems markets. Drawing on its core linear motion system technologies and know-how, THK is ramping up its product development activities in fields that are close to consumer goods including seismic isolation and damping systems, medical equipment, aircraft, renewable energy, and robotics in a bid to expand into new fields.

Turning to activities outside Japan, THK established its first overseas R&D facility in China in 2010. Later, the Company opened a designated R&D Center in 2012. Together with the R&D Division of Germany-based THK RHYTHM AUTOMOTIVE, a subsidiary newly included in THK’s scope of consolidation in 2015, the THK Group is working to develop products that are tailored to increasingly diverse global needs.

**Product Development in fiscal 2015: Realizing the “cubic E” Concept**

Leveraging its creative ideas and proprietary technologies, THK is currently engaged in R&D activities that focus mainly on an E^3 (Cubic E) Concept theme. Guided by this theme, which embraces the three keywords “Ecological,” “Economical” and “Endless,” we continued to speed up development with the aim of extending the range of applications for our technologies and to pursue highly original and attractive products for launch 5-10 years in the future throughout fiscal 2015.

Major achievements in fiscal 2015 included the development of products for a number of original applications. In the industrial machinery field, beginning with LM guides and electric actuators, we developed a variety of new products that contribute to the automation of customers’ production lines. THK also focused its attention on product development aimed at increasing sales and entering new markets including seismic isolation and damping systems, renewable energy, aircraft, medical equipment, and robotics.

**Policies and Initiatives for fiscal 2016**

We plan to continuously focus our efforts in fiscal 2016 on the efficient development of new products with the aim of expanding applications for THK technology further. Specifically, we will pursue themes such as customer convenience while promoting designs that incorporate the potential for enhanced productivity and quality. Moreover, by conducting in tandem basic and applied development activities, we will focus on developing products that can quickly generate commercial returns.

Complementing these endeavors while strengthening our global development capabilities, we will actively promote technological interaction between Group companies in an effort to stimulate maximum synergies through the mutual rerouting of technologies thereby leading to new product development.
MAJOR NEW PRODUCTS

**Caged Ball LM Guide**
Model SPR/SPS 15LR and 20LR

THK upgraded and expanded its lineup of compact-type model SPR/SPS, which achieve ultra-high rigidity and super-low waving. It helps to reduce total costs by allowing the replacement of the more expensive air slider and other static pressure guides.

**Electric Actuator**
Compact Series KSF

The KSF offers high-speed, high acceleration/deceleration features. By providing a large variation of sizes from compact to large, these steps to expand the product lineup are helping to better address a broad spectrum of market needs.

**Caged Roller LM Guide**
Model SRG 12

Model SRG 12 is the world’s smallest caged roller LM Guide and also features ultra-super-high rigidity. The use of small diameter rollers helps achieve high precision and low waving.

**Caged Ball Screw**
Model SDA-V

Model SDA-V is a caged ball screw that complies with DIN specifications, an industry standard in Germany. This model is spearheading the Group’s efforts to secure a firm foothold in Europe and such emerging markets as China. With the addition of a large-lead type product to the lineup, positive steps are being taken to realize higher speeds.

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**Element/Components for Robot Technology Systems**
SEED Solutions

The SEED Solutions is a smart actuator that enables the use of kits to build frameworks with ease. Amid ongoing steps to upgrade and expand the lineup, positive steps are being taken to commercialize and commence sales of robotic hands that employ these technologies. Looking ahead, every effort will be made to develop products and put forward proposals that can be used in fields that are close to consumers.