Overview

THK has continued to expand the scale of its industrial machinery business by providing LM guides and other products that are components of industrial machinery such as machine tools and semiconductor production equipment. In addition, THK is actively engaged in the manufacture and sale of electric actuators and unit products that combine many machine elements. In this manner, THK is making significant contributions to increasing precision, rigidity, speed, and energy efficiency in the industrial machinery field, while at the same time addressing production line automation needs.

Business Environment and Initiatives

In an effort to expand its top line, THK is strengthening its global sales network and constructing a global production structure. At the same time, the Group is pursuing initiatives to expand its sales activities to work with the wide range of customers it has been made aware of through its marketing activities.

These particular customers are not machine manufacturers, but rather the end users of equipment, who will use THK parts in their in-house production equipment and equipment related to automation. In an effort to reach every one of these customers, THK is employing new strategies to attract and interact with more customers at product exhibitions. The Company is also pursuing highly efficient sales activities to further heighten customers’ understanding of THK, while also making use of various IT tools to provide the optimal service and information to customers at each step of the purchasing process. In addition, THK began selling semi-custom LM Guide Actuator Model SKR/ KR products in August 2016, primarily in Japan. THK took five custom products with high customer demand and made them into semi-custom products, allowing the lead time to be shortened to a minimum of 10 days. In an effort to further shorten lead times, in January 2017, the Group began providing a set of online optimal product selection tools that can be used to easily calculate product life or select a part number from a smart phone or computer. In March 2017, the Company launched Omni THK, a website for use in Singapore, Malaysia, and Thailand, to enable customers to easily purchase THK products at any time, even if there are no THK sales offices nearby. Moving forward, the Company plans to expand this type of system to other regions, not only strengthening how THK serves a wide range of customers, but also determining their needs and accurately using that information to develop new products and sales methods.

To strengthen its bottom line, in addition to robotization and automation of its production lines, THK is also promoting measures that utilize the IoT. In March 2017, THK finished installing the Eagle System, which enables the operation conditions of machines at each facility in Japan, the Americas, Europe, and China to be viewed at a glance. In the future, THK aims to further increase productivity by using this system not just for equipment, but also for its products and personnel.

Activities in New Areas of Business

THK is committed to cultivating opportunities in consumer goods-related fields as part of its efforts to promote the development of new business areas. To this end, the Company will draw on the underlying strengths of its accumulated core linear motion system technology and ample expertise in other areas of the industrial machinery field. The applications of THK’s compact and highly rigid products have expanded into many fields where they help people to live safe and comfortable lives.

Seismic Isolation and Damping Systems

In the seismic isolation and damping systems field, the THK Group is employing its core linear motion system technology to supply a broad range of products from seismic isolation and damping systems for high-rise buildings, low-rise residences, and historical structures such as temples and shrines, to seismic isolation tables for servers and a variety of manufacturing equipment. In this manner, the Group is helping to minimize the damage caused by earthquakes.
**Medical Equipment**

In the medical equipment field, LM guides, electric actuators, and related products are increasingly being used, mainly in analysis and measurement equipment that require a high level of reliability and quality. The Group’s products are also expanding into next-generation medical equipment, including robotic surgical systems and walking assist devices.

**Aircraft**

In the aircraft field, the THK Group is witnessing an upswing in the use of its compact and highly rigid products that is spurred by a demand for mechanical parts that are safe and lightweight. Centered mainly on aircraft interiors, this expansion in THK product use includes products that are suited for control sticks, the reclining mechanisms of aircraft seats, and the sliding parts of folding tables and cockpit doors.

**Robotics**

In the robotics field, the THK Group is developing and marketing optimal components for use in robots across a broad range of fields. This extends from industrial robots that contribute to the automation of production lines to next-generation robots that can be expected to deliver benefits in consumer-related fields.

**Renewable Energy**

The THK Group is working to develop and promote the sale of products for use as mechanical components in the renewable energy field. THK has begun selling low-torque shaft units for wind power generation systems and is establishing deep ties within each region and conducting tests for hydroelectric generators.

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**Industrial Machinery Business Activities**

**Expand Sales to a Wide Range of Customers through Efficient Sales Operations**

1. **Increase coverage**
   - Double the number of visitors at international exhibitions
   - *As compared with pre-project exhibitions

2. **Select optimal customers using the optimal means**
   - Marketing Automation
   - Telemarketing

3. **Gain customers**
   - Direct sales
   - Salesforce + Leads
   - Indirect sales
   - Distributor support and Omni site

**Semi-custom products (SKR/KR)**

- Semi-customization for five products in high demand
- Shipped in as little as 10 days

**Web-exclusive optimal product selection tools**

- Calculate product life
- Select optimal model
- Download CAD data
- Confirm delivery date

**Omni THK**

THK utilizes all sales channels to reach a wide range of customers so that they can purchase what they want anytime, anywhere.

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**THK ANNUAL REPORT 2017**
Automotive and Transportation Business

Overview

In its automotive and transportation business, as a global supplier with independently operating sales, production, and development structures established around the globe, the THK Group supplies a wide range of customers in the automotive manufacturing sector with undercarriage L&S (linkage and suspension) products.

Since its foundation, THK has continued to promote its link balls, which are the mainstay of its automotive and transportation business, alongside other products. Working to further expand its business, the Company acquired RHYTHM CORPORATION (currently THK RHYTHM CO., LTD.) in 2007. In 2015, THK completed the transfer of the L&S business from what was previously TRW Automotive Inc. and incorporated it into the THK Group as THK RHYTHM AUTOMOTIVE (TRA), thereby establishing a global business platform. The Company is also promoting synergistic activities through means such as integrating the automotive component businesses of THK America and THK Europe into THK RHYTHM and TRA, respectively.

Business Environment and Initiatives

For its L&S business, the THK Group is expanding activities to obtain orders in China and other emerging markets by making use of both TRA’s and THK RHYTHM’s sales and production structures, employing strategies such as making proposals to use THK RHYTHM’s Chinese plants to supply European automakers who are primarily supplied by TRA. Furthermore, the Group is working diligently to exhibit synergies that will strengthen profitability, including the integration of products and steps to reinforce joint purchasing by region.

In terms of new automotive products, the THK Group is working to expand the use of linear motion-related products for next-generation L&S systems, steering, brakes, suspensions, and various other automotive mechanisms. Mass production lines were built in 2016 for new products whose future use by customers has already been confirmed, and those lines are being tested in 2017. With sales scheduled to begin in 2018, preparations for expanding this business are progressing steadily. As demand for linear motion products is expected to rise from the momentum provided by the development of self-driving car technology and the increasing incorporation of electrical components in automobiles, the THK Group will further accelerate the expansion of linear motion product usage in these areas.

Expansion of L&S (Linkage and Suspension) Business

July 2016: Integrated THK America’s automotive parts business into THK RHYTHM
January 2017: Integrated THK Europe’s automotive parts business into TRA

Expanding sales activities through the shared sales and production systems of THK RHYTHM and TRA

Linear Motion Products for Automobiles

Electric power steering parts
Next-generation suspension parts
Interior
Next-generation brake parts

2017: Mass production line testing
2018: Sales scheduled to begin

With the growing trend of electric and self-driving cars, we will accelerate the development of linear motion products for automobiles