

# Global Specialization Know-how

Japan, United States

Canada, Brazil, Germany

United Kingdom, Ireland

**The Mark of Linear Motion**

Italy, Sweden, Austria

Spain, France, Turkey

Czech Republic, China, Taiwan

Singapore, India

Thailand, Korea

Toughness

High quality

Know-how

# SPECIAL FEATURE: THE POTENTIAL OF THK

Establishing business platform full-scale overseas operations

## Building an integrated production/sales set-up to service world market requirements

We adopted “Full-Scale Globalization” as one of the pillars of THK’s long-term business strategy in fiscal 2000, shortly before we celebrated the 30th anniversary of the company’s establishment. Supporting this view was the realization that a vast untapped potential market existed for the Company overseas. Although machine tools, semiconductor production equipment and other industrial machinery were being produced in every region of the world, THK’s overseas sales ratio in fiscal 2000 was a relatively low 26%. This implied many situations where firms based overseas were not using LM guides manufactured by THK in linear motion-related applications. The excellent prospects for growth in production of industrial machinery in developing countries provided another good reason why overseas markets held huge potential for THK.

We formulated a plan to expand and upgrade our sales network and reinforce our production set-up across the four regions of Japan, the Americas, Europe and Asia. By tailoring production to the precise needs of regional markets, our objective was to raise the overseas sales ratio to 50%. We started building an integrated manufacturing and sales set-up for this task.

In **the Americas**, we increased production capacity at local subsidiary THK Manufacturing of America, Inc., which we had originally established in 1997. A second factory began operating in 2001. At the same time, we strengthened our overall operating set-up in the region, creating a sales network within the United States while also starting to develop new markets such as Canada and Mexico. In **Europe**, our production subsidiary THK Manufacturing of Europe S.A.S., which is based in France, began operating in 2001. Today, we have established sales bases in 10 countries in Europe and we are continuing to upgrade our regional sales capabilities. In 2008, our new regional distribution center began operating on the site of THK’s manufacturing subsidiary in France. Located conveniently near the geographical center of the region, this facility is set to make our logistics operations more efficient while reinforcing our ability to provide customers with reliable supplies and short delivery lead-times. In **Asia**, we have production facilities in China, South Korea and Thailand. We are also rapidly expanding our sales network within the region, reflecting its high rate of economic growth. (Please refer to the following page for details of developments in China).

THK’s explicit focus on full-scale globalization since fiscal 2000 has helped to push up the overseas sales ratio from 26% in fiscal 2000 to 39% in fiscal 2008. Going forward, we remain focused on developing our global operations so that we can become more internationally competitive.

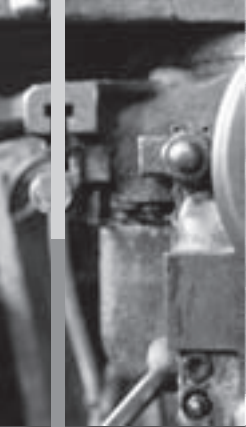


Photo: Image of manual machine tool

THK Holdings of America, L.L.C.

THK America, Inc.

THK Manufacturing of America, Inc.

Rhythm North America Corporation

THK Europe B.V.

THK GmbH

THK France S.A.S.

THK Manufacturing of Europe S.A.S.

PGM Ballscrews Ireland Ltd.

THK TAIWAN CO., LTD.

THK (CHINA) CO., LTD.

THK (SHANGHAI) CO., LTD.

DALIAN THK CO., LTD.

THK MANUFACTURING OF CHINA (WUXI) CO., LTD.

THK MANUFACTURING OF CHINA (LIAONING) CO., LTD.

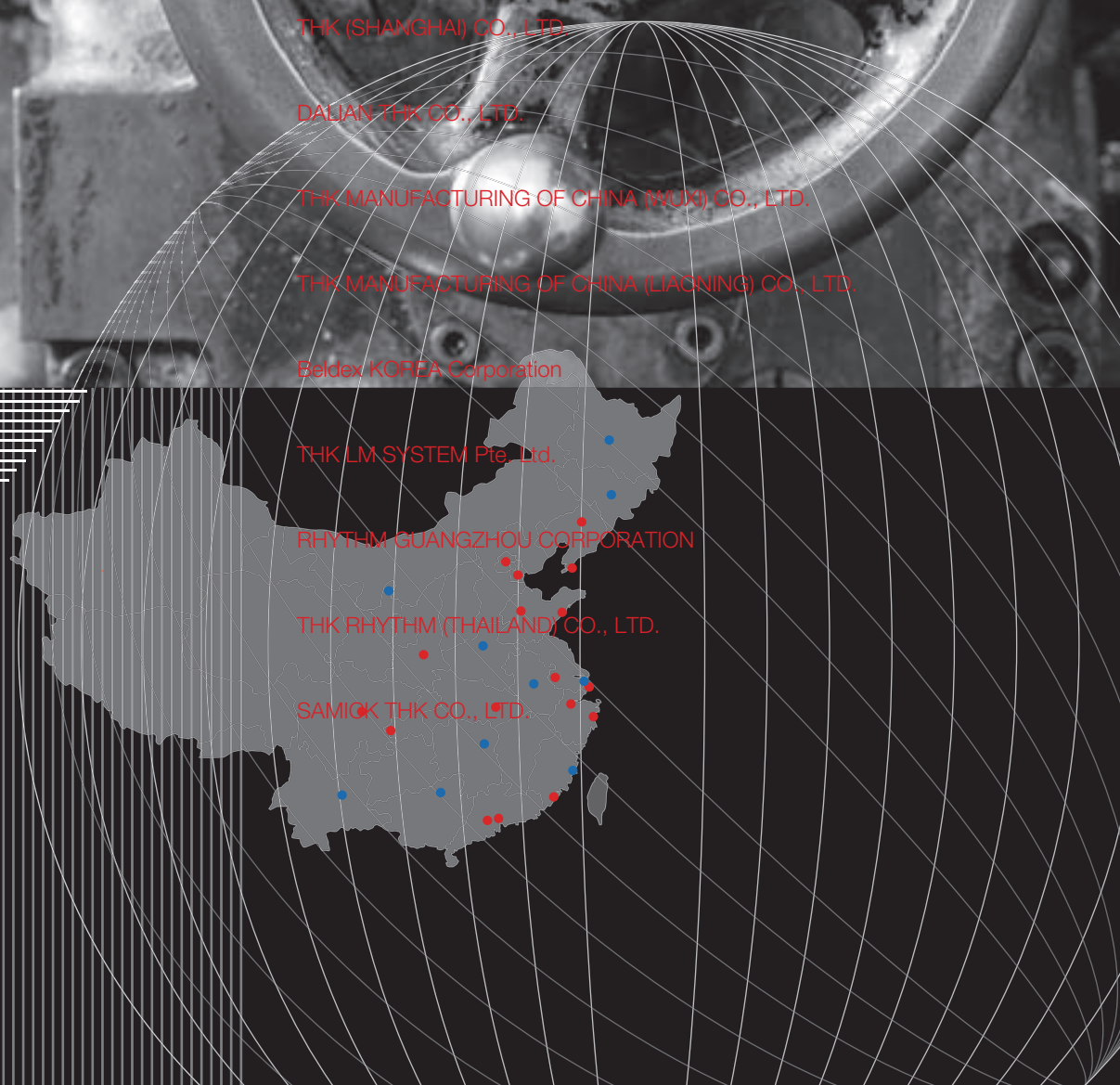
Beldex KOREA Corporation

THK LM SYSTEM Pte. Ltd.

RHYTHM GUANGZHOU CORPORATION

THK RHYTHM (THAILAND) CO., LTD.

SAMIQK THK CO., LTD.



# Globalization

# SPECIAL FEATURE: THE POTENTIAL OF THK

Promoting overseas development of products with high growth potential

## China: A story of economic growth and increasing adoption of NC machine tools

The sharp deterioration in the global economy during the second half of 2008 did nothing to alter the medium-to-long-term growth potential of the BRICs economies. In China, where the economy has also slowed, the effects of the central government's economic stimulus measures (totaling approximately 4 trillion yuan) have started to manifest. This has led to a revival in demand for small machine tools used in applications relating to consumer appliances. Demand for large machine tools, used in applications relating to sectors such as energy and railways, has also remained firm. Assuming that China's economy stages a complete recovery, we see THK's business in the country continuing to expand going forward.

We believe that there is significant growth potential for THK products in the Chinese market in the mainstay machine tools sector. China already has the highest demand for machine tools of any country in the world. As production volumes continue to increase, it is expected to become the leading producer of machine tools as well.

An increasing proportion of NC\* models in the machine tools made in China also points to rising demand for THK products. The Japanese machine tool market evolved from manually operated models to NC models years ago. Machine tools used in metal fabrication require massive power. In this kind of situation, an LM guide is essential to enable the small or high-precision linear motion capabilities needed for rapid, efficient computer-controlled fabrication. In Japan today, approximately 90% of machine tools fall into the NC category. In China, the same ratio is no more than 20%. This implies that the market demand for LM guides could expand as much as fourfold as the shift to NC machine tools takes place in China.

Based on these two factors, we expect machine tool-related demand for THK products to grow in China as production volumes and the NC ratio increase. India is also at a similar stage to China in this area. These emerging markets are set to generate huge growth in future demand in volume terms.

Securing the latent demand for THK products in China is a key challenge for us. Accordingly, the industrial equipment-related business is continuing to focus on reinforcing its integrated manufacturing and sales set-up in China. On the sales side, we have 17 bases managed by THK (CHINA) CO., LTD., the regional operating company, and THK (SHANGHAI) CO., LTD.. On the production side, DALIAN THK CO., LTD., THK MANUFACTURING OF CHINA (WUXI) CO., LTD. and THK MANUFACTURING OF CHINA (LIAONING) CO., LTD. oversee our manufacturing operations in the country. Elsewhere in the Asian region, THK has a network of either sales and or production bases, or both, located in Taiwan, Singapore, Thailand, South Korea and India, another major focus of future world economic growth. Our aim is to construct a competitive base of operations across Asia to tap into the region's projected growth.

Local sourcing is expected to become an increasing feature of business in China in the sectors in which we operate. We see this as an excellent opportunity to bolster THK's domestic production capabilities within China. Going forward, we aim to use our upgraded production and sales system to leverage the power of the THK brand based on our trustworthy reputation in order to generate dramatic growth as the Chinese market continues to expand.

\* NC stands for Numerical Control. NC machine tools operate automatically and are controlled using numerical information, as opposed to conventional manually operated machine tools.

Japan was a global pioneer in the adoption of NC machine tools starting in the 1960s. As a result of this success, Japan still dominates the global NC machine tool market. The mass adoption of high-precision fabrication and a progressive shift away from the use of skilled craftsmen have revolutionized production technology. NC machine tool technology has also become more advanced than simple industrial robots or other mechatronic equipment. It was one of the driving forces behind the rapid progress made by Japanese industry in the 1970s and 1980s.

**LM Guide**

**Ball Spline**

**Actuator**

**Slide Pack**

**Ball Screw**

**Cross Roller Ring**

**Link Ball**



WENZ

Businesses

**Rod End**

**Tie Rod**

**Steering Linkage**

**Aluminum Suspension Link**

**Suspension Ball Joint**

**Stabilizer Connecting Rod**



# SPECIAL FEATURE: THE POTENTIAL OF THK

Creating new business portfolio through application of technology to new business areas

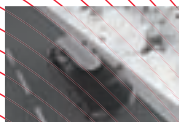
## Building a presence as a global automotive parts maker

Since the establishment of THK in 1971, we have principally developed the business by trading with companies making capital goods such as machine tools, industrial robots and semiconductor production equipment. While these industries retain excellent future growth potential, they are heavily exposed to capital investment trends. In contrast, the scale of THK's business in areas related to consumer goods remains relatively small, which implies that there is major potential for THK products in these sectors. Business expansion into consumer-related areas offers the potential to achieve more stable growth in sales. Recognizing this opportunity, we made "development of new business areas" one of the pillars of THK's long-term business strategy in fiscal 2000. We have since been actively developing operations in new business areas. These efforts have been led by the FAI Division, which supplies automotive parts to improve vehicle safety and comfort, and the ACE Division, which is developing seismic isolation devices to protect human life and property from the threat of earthquakes.

One of the mainstay products sold by the FAI Division, link balls are used in automobile undercarriages as joint sections to connect the stabilizers to the suspension. Many leading automakers in Japan, the Americas and Europe have adopted link balls. THK offers a product that is made using aluminum die-casts, a process that makes them much lighter than conventional steel versions and also highly resistant to corrosion or abrasion. The performance benefits of THK's products are attracting increasing attention from automakers worldwide. Besides product performance, THK has also received plaudits for superior quality control and after-market servicing. In other areas, this division has also gained a solid reputation for THK's LM guides in applications relating to special vehicles designed for disabled people. LM guides are a vital part of such vehicles by facilitating movement of the driver's seat.

In 2007, RHYTHM CORPORATION became a consolidated subsidiary of THK as part of our ongoing efforts to accelerate the development of new business areas. RHYTHM is a company that has developed forging technologies and superior quality control systems to enable the supply of steel parts to extremely strict dimensional and strength tolerances. Within the transportation-related equipment sector, we plan to develop the operations of the FAI Division and RHYTHM as an integrated business. As well as trying to expand the range of vehicle models that use THK parts and grow our automaker client base, we are also working to develop applications for LM guides, ball screws, actuators and other THK products as automotive parts. At the same time, we are seeking to leverage the combined technical expertise of THK and RHYTHM to develop original products for the automotive sector.

One of the characteristics of the automobile business is that it typically takes several years to progress from the design stage to mass production, but once a model enters production it can generate stable revenues over a long period. Going forward, we plan to focus on expanding the scale of this business by responding quickly and precisely to changes in the global automotive market.



**New business areas:**

**Building**

**Consumer Appliance**

**Vehicle**

**Humanoid Robots**

**Medical Equipment**

**Wind Power Generation**

**Aerospace**

# New

# Businesses



# SPECIAL FEATURE: THE POTENTIAL OF THK

Creating new earnings opportunities through development of new business areas

## Pursuing expansion opportunities in new business areas

In 2001, as part of efforts to expand into new business areas, we established the ACE Division to sell seismic isolation devices for enhancing the safety of housing. Despite seismic isolation devices being a more effective protective measure than earthquake proofing, there remains no de facto technical industry standard in this area. A number of structural designs are on the market, promoted not only by construction companies and house-builders, but also by firms making rubber goods and hydraulic equipment. In seismic isolation applications, the key technical characteristic of THK's products such as LM guides and ball screws is their ability to cope with high loads. This translates into the ability of our seismic isolation devices to be used in a wide variety of building types, from high-rise apartment blocks to detached houses and historical structures such as temples and shrines. We market a wide range of products in this area.

In addition, we have applied the know-how that we have gained in seismic isolation technology to sell seismic isolation platforms. These are products designed to protect specific business assets such as servers and PCs from damage due to earthquake. Compared with conventional products, our seismic isolation platforms are more effective in reducing the amount of vibration that affects the protected equipment during a tremor. This is one segment of the market where we expect to gain share going forward.

Another area where demand is expected to grow in the future is in the use of electric-powered technology to automate the movement of consumer goods around the home. Just as THK products have become more widely adopted with the shift to automatic electric-powered capital equipment, we expect to see THK products begin to play a wider role in enhancing everyday comfort and safety.

In the automotive sector, rapid growth is forecast in the adoption of hybrid and electric vehicles due to increasing global interest in environmental protection. We view this trend as a major opportunity, and we are actively engaged in R&D to broaden the utilization of THK products as automotive components.