

THK's History

THK CO., LTD., manufactures and supplies vital machine components around the world. THK products help to convert slippage into controlled rotary motion, enabling parts of machinery to move smoothly, easily, and precisely with linear motion. As a company focused on creation and development driven by its corporate philosophy of *providing innovative products to the world and generating new trends to contribute to the creation of an affluent society*, THK has continued to focus on the development of a variety of products, including Linear Motion (LM) Guides, since its establishment in 1971.

The 1970s: Establishment and the Early Years

While rolling motion was commonly achieved through rolling contact utilizing rotary bearings, linear motion was considered impossible to achieve through rolling contact, and it primarily came from sliding contact instead.

In 1971, THK developed the ball spline, which enabled a higher level of linear motion precision and performance. This ball spline was the predecessor to THK's current mainstay product, the LM Guide, which was first introduced in 1972.

In 1978, the Company's products were adopted by a U.S.-based pioneer of the machining center and world-class leader of its day. This breakthrough was the catalyst for the increased use of LM Guides in machine tools.



Ball Spline

Developed in the same year that THK was established, the ball spline was the precursor to the LM Guide. This revolutionary product allows balls to roll along a rounded groove machined into the ball spline's shaft, boosting the load that the device can tolerate and permitting the transmission of torque.

- 1971 THK established
- 1972 Production and sale of LM Guides began
- 1977 Kofu Plant (JPN) established

The 1980s: Significant Developments in Factory Automation (FA)

The 1973 oil crisis saw the demise of heavy industry, pushing technology-based industries, such as the automotive, semiconductor, and home appliance industries, increasingly to the fore. Buoyed by depreciation in the value of the yen as well as the outstanding quality of products manufactured in Japan, export volumes to Europe and the United States climbed steadily. Under these circumstances, there was a demand for mass production of high-quality products. With FA advancing across production front lines, machine tool production volumes increased, and the proportion of advanced machine tools with numerical control (NC) saw steady growth. Against this backdrop, the application of LM Guides experienced explosive growth.



LM Guide

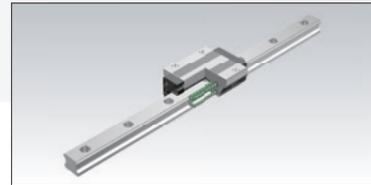
Developed utilizing the structure and mechanism of ball splines, LM Guides today are THK's mainstay product. The use of LM Guides by a major U.S.-based machine tool manufacturer spurred a significant increase in the application of these products in machine tools.

- 1981 THK America, Inc. (USA) established
- 1982 THK Europe GmbH (GER) established
- 1984 Gifu Plant (JPN) established
- 1985 Mie Plant (JPN) established
Yamaguchi Plant (JPN) established
- 1989 THK listed on over-the-counter (OTC) market
THK TAIWAN CO., LTD. (TPE) established

Expansion of numerically controlled (NC) machine tools and factory automation

The 1990s and Onward: The Rise of the Electronics Industry

During the 1990s, the number of LM Guides used in semiconductor manufacturing equipment surged dramatically, in line with the increase in semiconductor demand. Entering the 2000s, amid the proliferation of mobile devices and digital home appliances, as well as the upswing in demand for semiconductor, flat panel display, and other similar manufacturing equipment, there was a rise in the use of LM Guides, especially the second-generation Caged Ball LM Guide. In tune with the increasing globalization of manufacturing, THK accelerated its business development globally.



Caged Ball LM Guide

The Caged Ball LM Guide was developed as the second-generation LM Guide. By keeping the balls in place, the use of caged ball technology extends service life, reduces noise, and enables long-term maintenance-free operation when compared with first-generation LM Guides.

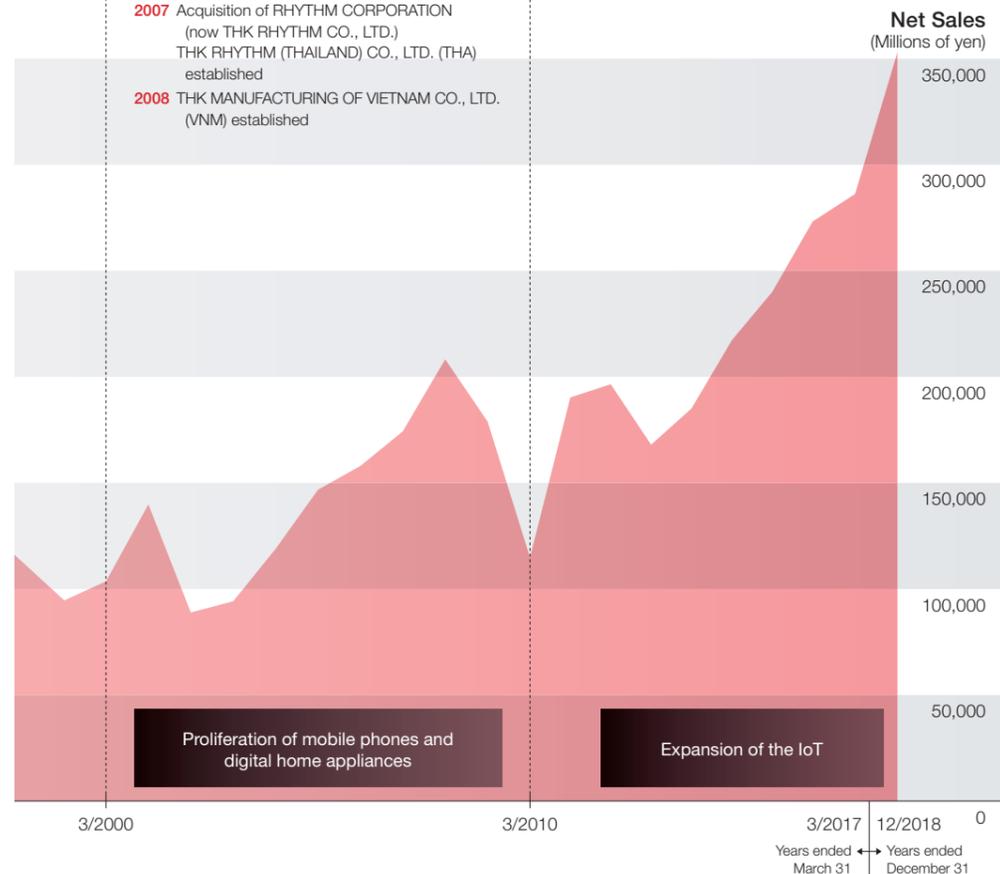
- 1991 Yamagata Plant (JPN) established
- 1996 Production and sale of the Caged Ball LM Guide began
DALIAN THK CO., LTD. (CHN) established
- 1997 THK Manufacturing of America, Inc. (USA) established

Rise of the electronics industry
Growth of semiconductor manufacturing equipment industry

Toward a New Era: Achieving Management Targets and Expanding Business Domains by Implementing Three Growth Strategies

As globalization has progressed, the market around THK has also steadily expanded with the rapid development of new technologies such as AI and the IoT. Under these circumstances, the Company aims to expand its business domains through three growth strategies: expanding its geographical range through *full-scale globalization*; purposefully expanding its domains through the *development of new business areas*; and fully utilizing AI, robots, and other technologies in a variety of ways through a *change in business style*. While moving forward with those strategies, THK is accelerating the initiatives being conducted in its industrial machinery and automotive and transportation businesses to achieve the following management targets by the end of the 2022 fiscal year: consolidated net sales of ¥500 billion, an operating income of ¥100 billion, an ROE of 17%, and an EPS of ¥560. Furthermore, the Company will continue vigorously promoting its growth strategies to aim at achieving not only these management targets, but also long-term growth and an increase in its corporate value.

- 2000 THK Manufacturing of Europe S.A.S. (FRA) established
- 2001 Production and sale of the Caged Roller LM Guide began
THK listed on the first section of the Tokyo Stock Exchange (TSE)
- 2003 THK (SHANGHAI) CO., LTD. (CHN) established
- 2004 THK MANUFACTURING OF CHINA (WUXI) CO., LTD. (CHN) established
- 2005 THK MANUFACTURING OF CHINA (LIAONING) CO., LTD. (CHN) established
THK (CHINA) CO., LTD. (CHN) established
- 2006 THK LM SYSTEM Pte. Ltd. (SIN) established
- 2007 Acquisition of RHYTHM CORPORATION (now THK RHYTHM CO., LTD.)
THK RHYTHM (THAILAND) CO., LTD. (THA) established
- 2008 THK MANUFACTURING OF VIETNAM CO., LTD. (VNM) established
- 2011 THK RHYTHM CHANGZHOU CO., LTD. (CHN) established
THK RHYTHM MALAYSIA Sdn. Bhd. (MYS) became a consolidated subsidiary
- 2012 THK RHYTHM MEXICANA S.A. DE C.V. (MEX) established
THK India Private Limited (IND) established
- 2015 Purchased the European and North American L&S business from TRW Automotive Inc. and established THK RHYTHM AUTOMOTIVE (TRA)
- 2017 TRA Holdings, CO., LTD. (JPN) established



As it was the year during which THK transitioned to a new reporting period, the data for the fiscal year that ended December 2017 reflects a modified reporting period that includes 9 months from consolidated companies whose fiscal years ended in March and 12 months from consolidated companies whose fiscal years ended in December.

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Disclaimer

This report contains forward-looking statements from THK CO., LTD., and its consolidated subsidiaries pertaining to plans, forecasts, strategies, and results. These forward-looking statements are based on currently available information, and actual results may vary significantly from the forward-looking statements contained in this report due to a range of variable factors.