

ANNUAL REPORT **2019**

# 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 the Linear Motion (LM) Guide, 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 difficult 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 the LM Guide 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 the LM Guide began
- 1977 Kofu Plant (JPN) established

**Net Sales**  
(Millions of yen)  
1972-1990: Non-consolidated net sales  
1991-2019: Consolidated net sales

## 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 the LM Guide experienced explosive growth.



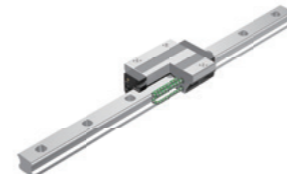
**LM Guide**  
Developed utilizing the structure and mechanism of ball splines, the LM Guide today is THK's mainstay product. The use of the LM Guide by a major U.S.-based machine tool manufacturer spurred a significant increase in the application of these products in machine tools.

- 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 use of the LM Guide 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 the LM Guide, especially the second-generation Caged Ball LM Guide. In tune with the increasing globalization of manufacturing, THK accelerated its business development around the world.



**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 the first-generation LM Guide.

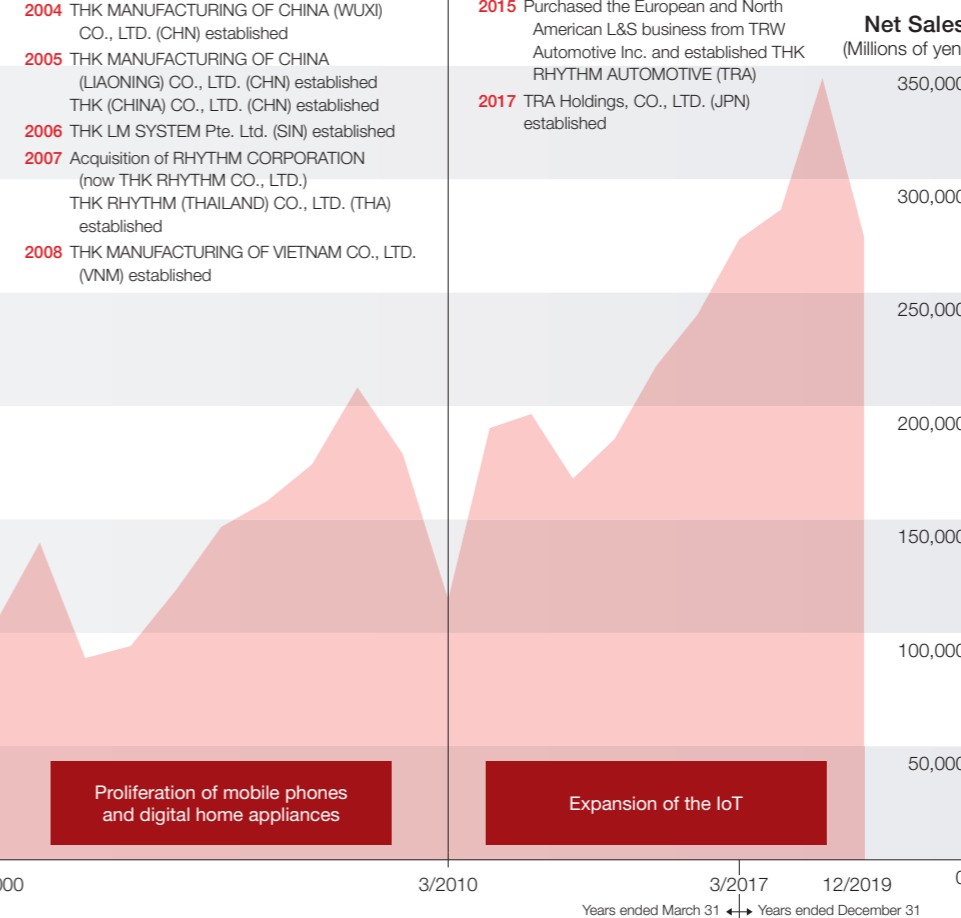
- 1991 Yamagata Plant (JPN) established
- 1996 Production and sale of the Caged Ball LM Guide began
- DALIAN THK CO., LTD. (CHN) established
- 1997 THK Manufacturing of America, Inc. (USA) established

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, the IoT, 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 aim to achieve not only these management targets, but also long-term growth and an increase in its corporate value as it contributes to the creation of a sustainable society.

- 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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Please refer to THK's website for the Financial Section.  
<https://www.thk.com/eng/ir/annual/>

**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.

The THK Group decided to adopt IFRS beginning with the 2019 fiscal year. For the purposes of comparison, the results for the 2018 fiscal year are also noted in accordance with IFRS.

# Value Creation

With solid capital supporting its manufacturing, sales, and R&D activities, THK has provided solutions to customers in the form of tough, durable, and high-quality products and extensive know-how. THK has grown rapidly as a result, contributing to society through manufacturing.

To achieve long-term growth and contribute to the creation of an affluent society during a time when the business environment changes at a bewildering pace, THK will promote its growth strategies and strengthen the various forms of capital that support its business.



THK stands for "Toughness," "High Quality," and "Know-how." THK applies these aspects of its identity to the development of products and technology in order to contribute to the development of society and industry.



### Challenges facing society

- Labor shortages
- Demand for the sophistication of industry
- Disaster mitigation
- Environmental conservation
- Governance issues

#### THK's Capital (2019 Fiscal Year)

Net Worth	¥280.3 billion
Net Worth Ratio	59.8%
Employees	Consolidated 13,260 Non-consolidated 3,891
Ratio of Female Employees	Consolidated 22.4% Non-consolidated 15.0%
Ratio of Group Employees Outside of Japan	59%
* Group employees outside of Japan include employees dispatched overseas from Japan.	
R&D Expenses	¥5.1 billion
R&D Facilities	3
Number of Registered Patents	Japan 603 Outside of Japan 1,174
Production Facilities	Japan 12 Outside of Japan 25

#### Corporate Philosophy, Strategies, and Key Characteristics

##### Corporate Philosophy

Providing innovative products to the world and generating new trends to contribute to the creation of an affluent society

##### Corporate Basic Policies

1. Creating value and contributing to society
2. Being customer-oriented
3. Compliance with laws and regulations

##### Action Charter

Principles of behavior set forth for the THK Group to shoulder social responsibility based on high ethical standards to create a sustainable society

##### Three Key Characteristics

- ▶ Innovative Core Technology
- ▶ Ample Expertise and Wide-Reaching Proposals
- ▶ Global Structure for Supplying Products

##### Growth Strategies

- ▶ Full-Scale Globalization
- ▶ Development of New Business Areas
- ▶ Change in Business Style

#### Performance (2019 Fiscal Year)

Consolidated Net Sales	¥274.5 billion	ROE	4.2%
Operating Income	¥18.2 billion	EPS	¥92.37

#### Management Targets (2022 Fiscal Year)

Consolidated Net Sales	¥500 billion	ROE	17%
Operating Income	¥100 billion	EPS	¥560

#### Actions to Support Our Strategies

- Products**
  - Core technology products  
High precision, high rigidity, long service life, low noise
  - Next-generation products  
Renewable energy, robots, seismic isolation systems

- Corporate Activities**
  - Strengthening our business foundation  
Governance, compliance, BCP
  - Connecting with local communities  
Community involvement, volunteering, developing the next generation
  - Strengthening supply chain relations  
THK Association, technology proposals
  - Actively sharing information with shareholders  
IR events, IR tools
  - Revolutionizing how we work  
Human rights, diversity, health and safety, supporting development
  - Efforts for environmental conservation  
Conserving energy, managing hazardous materials, reducing waste

#### Activities

- Industrial Machinery Business [p. 12](#)
- Automotive and Transportation Business [p. 15](#)
- Review by Geographic Region [p. 22](#)
  - Development of core technology and next-generation products
- Corporate Governance [p. 25](#)
  - Strengthening relationships with stakeholders
- Involvement in Society [p. 30](#)
  - Creating a pleasant work environment
- Harmony with the Environment [p. 29](#)
  - Reducing environmental impact

\* The THK Group decided to adopt IFRS beginning with the 2019 fiscal year.

# Three Key Characteristics and Strategies

## The Key Characteristics of THK, the Pioneer and Top Manufacturer of the LM Guide

As the world's leading manufacturer in its field with a proven track record of long-standing success, THK has fostered three key characteristics over many years. Drawing on the strengths of its corporate culture, the Company is further honing these key characteristics in an effort to secure long-term growth and generate corporate value.

### 1 Innovative Core Technology

THK pioneered the development of the world's first LM Guide based on an original concept and innovative technology. By providing components essential to increased precision, rigidity, speed, and energy efficiency in such wide-ranging fields as machine tools and semiconductor manufacturing equipment, the Company has consistently played a major role in the ongoing development of industry.

# Key Characteristics

### 2 High-Quality Products and Wide-Reaching Proposals

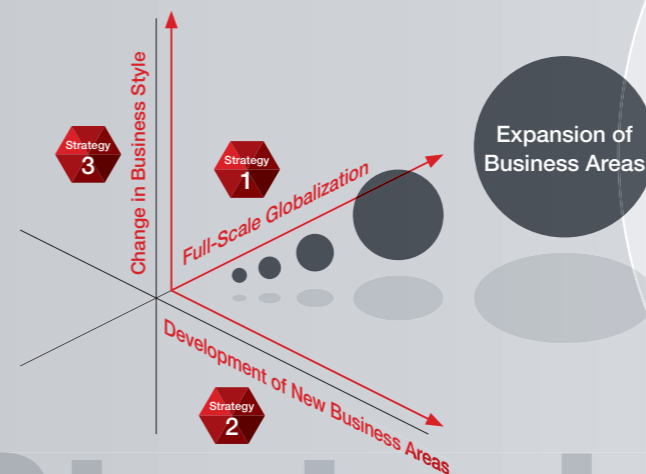
Since it successfully developed the LM Guide, THK has commanded the leading share of the global market. As the world's top manufacturer, the Company has earned the trust of its customers by creating high-quality products and wide-reaching proposals based on extensive expertise developed in response to customers' needs. In addition to refining these key characteristics, THK has actively expanded its reach beyond the field of industrial machinery to also encompass fields related to consumer goods.

### 3 Global Structure for Supplying Products

THK has actively promoted the development of an integrated production and sales structure with facilities and operations close to centers of demand. The Company currently maintains local production and sales networks that cover its four principal markets: Japan, the Americas, Europe, and Asia. As a result of its activities, THK has steadily built a global business platform, with branches currently established in 25 countries around the world, and continues to cultivate new markets.

## Strategies to Expand Business Domains

THK is committed to developing its business 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, the IoT, robots, and other technologies through a change in business style.



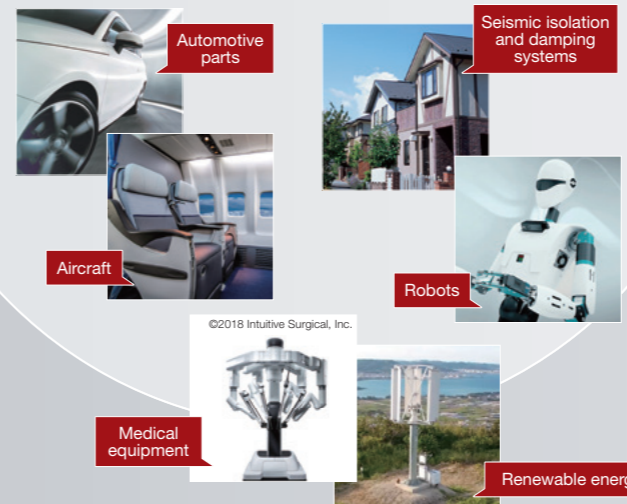
### Strategy 1 Full-Scale Globalization

THK has established an integrated production and sales structure with facilities and operations close to centers of demand in order to produce and sell locally in four regions: Japan, the Americas, Europe, and Asia. The Company is working to expand its sales network and production structure in light of the medium- to long-term demand increases that have been forecast for China and other emerging markets in recent years. In developed countries, THK is also enhancing its sales network in a bid to steadily capture demand amid expansion in its user base. Through these means, the Company is diligently promoting additional growth.



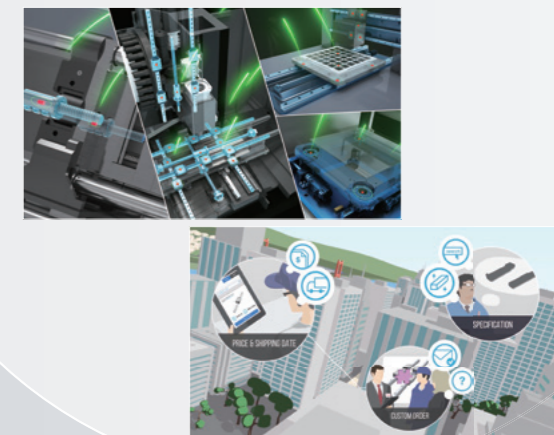
### Strategy 2 Development of New Business Areas

THK is accelerating its expansion into fields related to consumer goods such as automotive parts, seismic isolation and damping systems, medical equipment, aircraft, robotics, and renewable energy. In order to capitalize on the vast potential in these industries, THK is honing its abundant expertise and the core linear motion system technology it has cultivated over time to accelerate the pace at which it develops new business areas.



### Strategy 3 Change in Business Style

As digital technology rapidly develops, the Company is also making efforts to further expand its business domains by ensuring the thorough use of new technologies such as AI, the IoT, and robotics in sales, production, and development. In this way, THK is working to transform the frameworks and methods by which it does business.



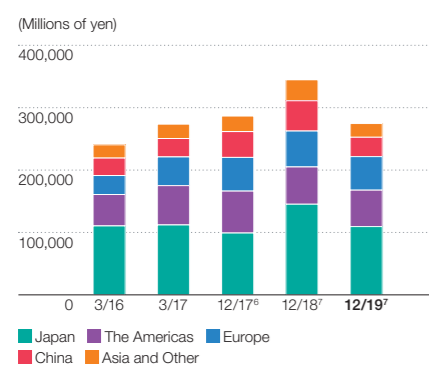
# Financial and Non-Financial Highlights

In an effort to better facilitate the global comparison of financial information in the capital market and to strengthen its global financial management by standardizing accounting processes, the THK Group decided to adopt the International Financial Reporting Standards (IFRS) beginning with the 2019 fiscal year. To facilitate comparison with the 2019 fiscal year, the results from the 2018 fiscal year are also noted in accordance with IFRS.

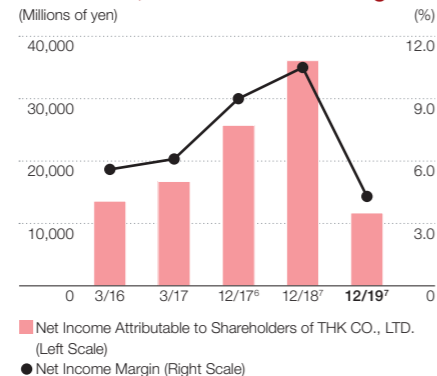
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	Millions of yen				Millions of yen							Thousands of U.S. dollars <sup>5</sup>
	3/2010	3/2011	3/2012	3/2013	3/2014	3/2015	3/2016	3/2017	12/2017 <sup>6</sup>	12/2018 <sup>7</sup>	12/2019 <sup>7</sup>	12/2019
Net Sales <sup>1</sup>	¥ 115,330	¥ 190,661	¥ 196,866	¥ 168,366	¥ 185,466	¥ 217,678	¥ 240,478	¥ 273,577	¥ 286,603	¥ 344,718	¥ 274,599	\$2,526,674
Japan	70,295	117,304	117,900	101,443	101,052	113,361	110,498	112,061	99,099	145,238	109,424	1,006,845
The Americas	14,552	20,812	22,279	22,527	28,900	34,856	50,343	63,025	67,194	59,792	58,390	537,265
Europe	12,635	16,106	19,979	15,194	18,427	20,456	30,424	46,004	54,001	57,540	53,766	494,718
China <sup>2</sup>	—	13,219	17,087	13,203	19,351	28,302	27,967	29,513	41,410	48,554	30,996	285,204
Asia and Other <sup>2</sup>	17,846	23,218	19,620	15,996	17,734	20,700	21,243	22,971	24,896	33,592	22,021	202,622
Gross Profit	23,189	54,442	53,975	44,298	52,903	67,024	67,766	70,464	72,112	101,985	67,469	620,804
Operating Income (Loss)	(9,508)	21,844	19,745	11,692	17,370	28,388	23,169	24,653	29,279	52,848	18,277	168,172
Income (Loss) before Income Taxes and Minority Interests	(14,510)	21,612	18,520	14,737	24,004	33,501	19,612	23,057	31,034	52,262	18,168	167,169
Net Income (Loss) Attributable to Shareholders of THK CO., LTD. <sup>3</sup>	(14,300)	13,959	12,641	9,808	15,590	22,705	13,575	16,731	25,729	36,100	11,690	107,563
Total Assets	236,374	279,768	288,333	293,145	336,416	373,610	407,808	414,931	436,664	471,369	468,945	4,314,915
Net Assets	162,258	167,937	175,516	189,058	222,148	250,498	250,540	251,540	281,754	289,278	291,132	2,678,800
Per Share												
Net Income (Loss)—Basic	¥ (111.20)	¥ 108.55	¥ 98.31	¥ 76.96	¥ 123.16	¥ 179.36	¥ 107.24	¥ 132.18	¥ 203.28	¥ 285.23	¥ 92.37	\$ 0.84
Net Income (Loss)—Diluted	—	—	—	—	—	—	—	—	—	—	—	—
Net Assets	1,252.71	1,296.52	1,352.00	1,479.41	1,736.51	1,957.48	1,953.97	1,966.80	2,140.71	2,198.17	2,214.98	20.38
Cash Dividend	15	16	20	18	26	50	50	41	62	85	32	0.29
Overseas Sales Ratio (%)	39.0	38.5	40.1	39.7	45.5	47.9	54.1	59.0	65.4	57.9	60.2	
Operating Margin (%)	(8.2)	11.5	10.0	6.9	9.4	13.0	9.6	9.0	10.2	15.3	6.7	
Return on Equity (ROE) (%)	(8.5)	8.5	7.4	5.4	7.7	9.7	5.5	6.7	9.9	13.3	4.2	
Return on Assets (ROA) (%) <sup>4</sup>	(3.9)	8.6	7.1	4.2	5.7	8.2	6.1	6.1	7.0	11.2	4.1	
Net Worth Ratio (%)	68.2	59.6	60.3	63.9	65.3	66.3	60.7	60.0	62.0	59.0	59.8	
Asset Turnover Ratio (Times)	0.48	0.74	0.69	0.58	0.59	0.61	0.62	0.67	0.67	0.75	0.58	

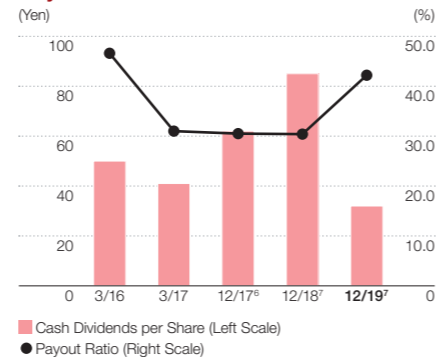
## Net Sales



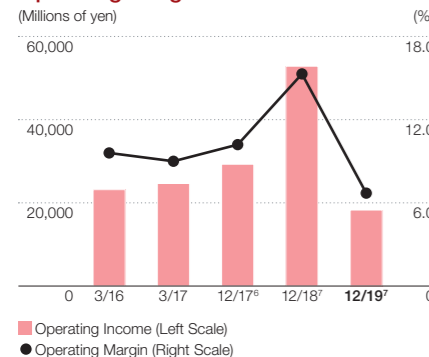
## Net Income Attributable to Shareholders of THK CO., LTD./Net Income Margin



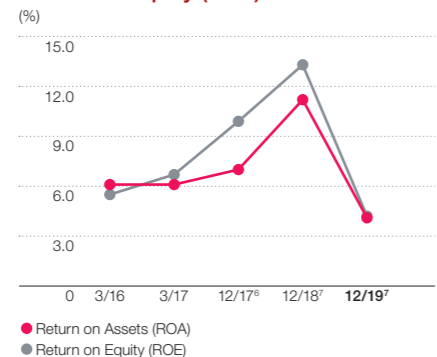
## Cash Dividends per Share/Payout Ratio



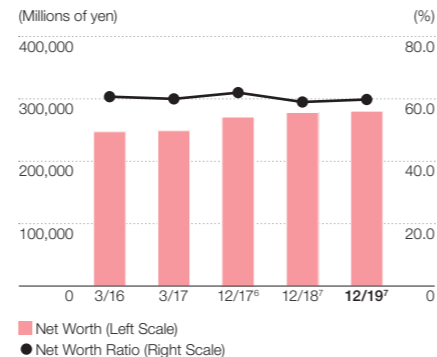
## Operating Income/Operating Margin



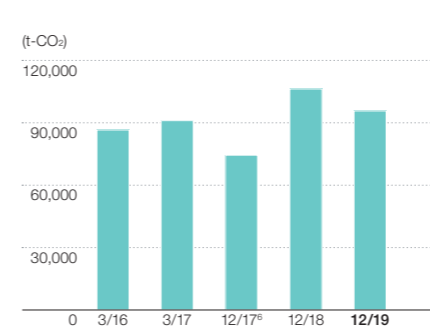
## Return on Assets (ROA)/Return on Equity (ROE)



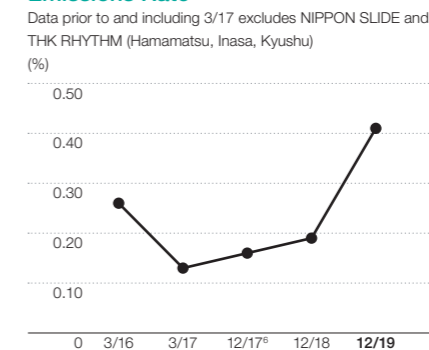
## Net Worth/Net Worth Ratio



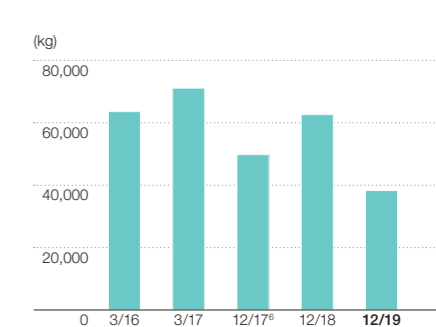
## CO<sub>2</sub> Emissions



## Emissions Rate



## PRTR-Designated Substances



This data was taken from the following 12 production facilities in Japan: Yamagata, Kofu, Gifu, Mie, Yamaguchi, THK NIIGATA, THK INTECHS (Sendai and Mishima), NIPPON SLIDE, and THK RHYTHM (Hamamatsu, Inasa, and Kyushu)

## HR Data (Parent Company)

	3/2016	3/2017	12/2017 <sup>6</sup>	12/2018	12/2019
Number of Employees (Consolidated)	11,754	11,738	13,364	13,478	13,260
Number of Employees	3,386	3,429	3,581	3,773	3,891
Average Years of Service	17.8	18.3	17.5	17.1	17.3
Ratio of Female Employees (%)	14.1	14.5	14.5	14.4	15.0
Individuals on Childcare Leave	23	21	41	46	52
Turnover Ratio (%)	1.7	1.5	1.6	1.8	1.5
Percentage of Employees with Disabilities (%)	2.21	2.17	2.20	2.12	2.30

Data from the 2017 fiscal year that ended December 31, 2017, includes data from January to March 2017.

<sup>1</sup> Segments are based on where THK's customers are located.  
<sup>2</sup> Prior to and including the fiscal year that ended March 2010, the net sales for China were included under "Asia and Other."  
<sup>3</sup> The Accounting Standards for Business Combinations (ASBJ Statement No. 21, published on September 13, 2013) and other standards have been applied, and from the first-quarter consolidated cumulative accounting period, "Net income" is stated as "Net income (loss) attributable to shareholders of THK CO., LTD."  
<sup>4</sup> Return on assets (ROA) represents operating income (loss) plus interest and dividend income as a percentage of average total assets.  
<sup>5</sup> U.S. dollar amounts are provided for reference only, converted from Japanese yen at the rate of ¥108.68 = U.S. \$1, the approximate rate of exchange prevailing in Tokyo on December 31, 2019.  
<sup>6</sup> This data 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.  
<sup>7</sup> The THK Group decided to adopt IFRS beginning with the 2019 fiscal year. For the purposes of comparison, the results for the 2018 fiscal year are also noted in accordance with IFRS.

# To Our Stakeholders



## Striving for Medium- to Long-Term Market Expansion

**Akihiro Teramachi**  
President and CEO  
THK CO., LTD.

### Looking Back on the 2019 Fiscal Year

In terms of the external environment during the 2019 fiscal year, the signs of an economic slowdown spreading mainly in China due to trade friction with the United States strengthened fears of a global economic downturn. In Japan, factors such as sluggish exports and production due to reduced external demand from China have clouded the future of the economy with uncertainty. Even as the THK Group saw adjustments in overall demand due to the trade friction between the United States and China, we steadily achieved sales through the high backlog of orders we accumulated during the previous period of increased demand for electronics and accelerated movement toward automation and robotization. However, our consolidated net sales decreased to ¥274.5 billion, a 20.3% reduction from the strong results of the previous fiscal year.

In terms of cost, we strove to minimize our losses from reduced sales by continuing to promote initiatives aimed at boosting productivity along with other improvement activities. However, the magnitude of the reduction in sales resulted in an operating income of ¥18.2 billion, a decrease of 65.4%.

### Short-Term Adjustments and Medium- to Long-Term Market Expansion

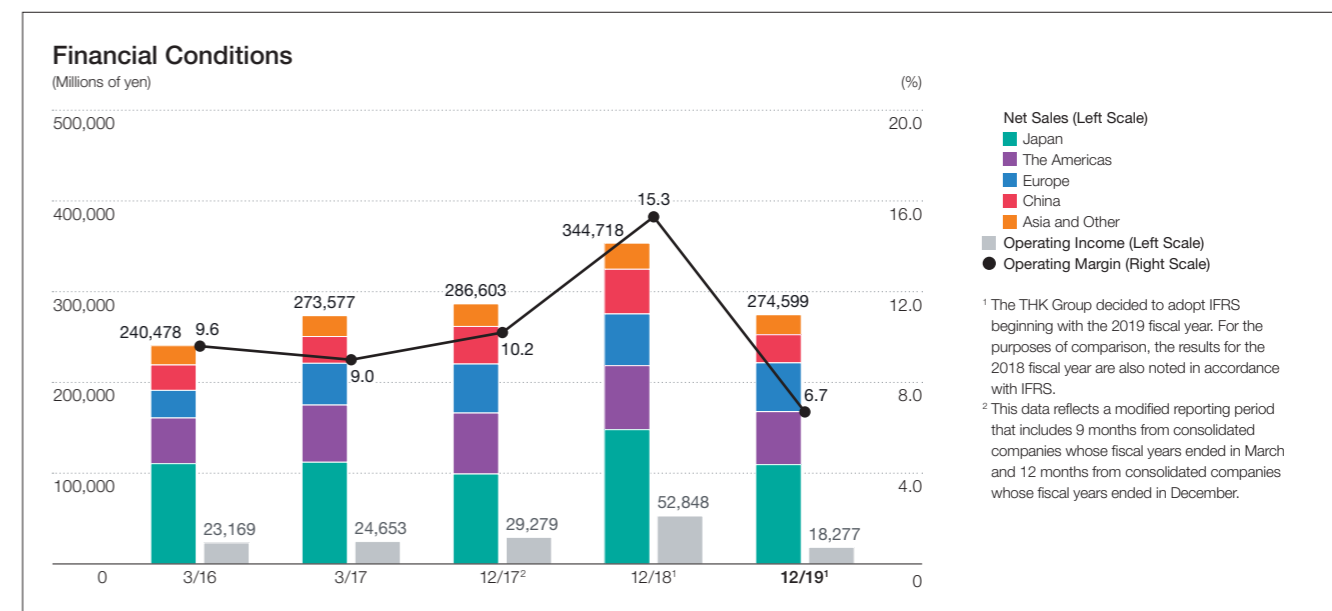
Although demand for THK products was sluggish in every region due to the trade friction between the United States and China, adjustments are occurring in customer inventories and our order backlog, and signs indicate that orders have bottomed out and we will start to hear about recovery. Nevertheless, we are anticipating lower revenue and profit in the 2020 fiscal year, which ends December 31, 2020. We are planning for our consolidated net sales to reach ¥264.0 billion, a decrease of 3.9%, and for our operating income to reach ¥11.4 billion, a

decrease of 37.6% compared to the previous fiscal year.

However, as we weather this short-term period of adjustment, there is no doubt that the THK Group's markets will experience medium- to long-term growth. As current megatrends revolve around macrodynamic changes such as the rapid advancement of digital technology, the heightened momentum of environmental conservation, and the labor shortages and increased lifespans occurring in developed countries, the keywords to address these changes are 5G, AI, the IoT, CASE, Industry 4.0, automation, and labor and energy savings. These keywords drive demand for the types of solutions THK offers, resulting in a dramatic medium- to long-term growth potential. Therefore, even as we continue to control costs in the short term, we will prepare ourselves for the full recovery of demand and invest in our medium- to long-term growth.

### Steps Toward Further Growth

Under these circumstances, the THK Group has accelerated its provision of new solutions in various domains to create a new kind of customer experience. For our industrial machinery business, we began accepting orders for LM Guide applications of our "OMNIedge" IoT service for the manufacturing industry on December 18, 2019. At the same time, we are working to expand the service to other machine components, having begun recruiting participants for a ball screw trial. We will also make the system even easier to use by providing connectivity with external manufacturing IoT infrastructures. As we enter the 5G era, further strides will be made in automation and robotization once Industry 4.0 environments are established, and the speed at which a company can achieve predictive failure detection and preventative measures will be critical as machines become increasingly interconnected. In this





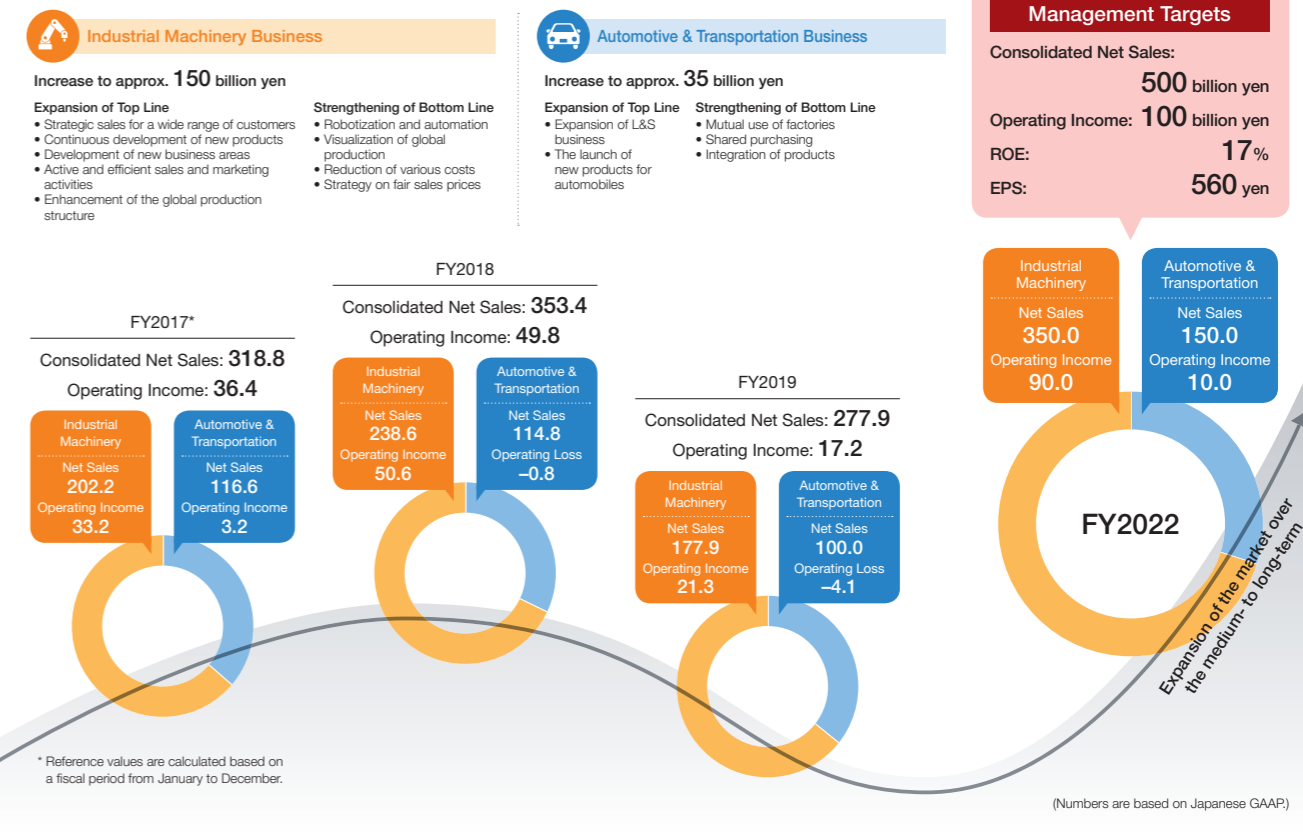
situation, a key feature of OMNIedge is that, in addition to being installed on new machines, it can also be added to the machines customers are currently using and are more concerned about. Furthermore, gathering and analyzing large volumes of data will enable us to not only perfect the service, but also develop new products and provide upgrades. We will continue to develop this system in partnership with NTT DOCOMO, Cisco Systems, and CTC, a company renowned for its large-scale infrastructure technology. With regard to Omni THK, our platform for communicating with customers, we will expand several of our new services, including our Fast Delivery service for our e-commerce site; Your Catalog, which digitally links customer and THK product information; and Forecast, which enables customers to manage planned versus actual orders by comparing their demand forecasts with THK's production plan. In

January 2020, we established a new IOT Innovation Division to accelerate our efforts to deliver innovative services to our customers and society through digital technology revolving around the IoT and AI, including Omni THK and OMNIedge. As short lead times become critical in this era of rapid change, we have launched the THK DX Project to accelerate the pace of our work through internal reforms. During Step 1 last year, we reduced the time it takes to perform routine tasks in every department. For Step 2, we will shift the employees that were freed up during Step 1 toward work with higher added value and develop measures to expand sales.

To cultivate new business fields, we continue to develop and propose new products for medical equipment, aircraft, seismic isolation and damping systems, renewable energy, and other fields, thereby steadily expanding the use of our products. Additionally, due to labor shortages and rising labor costs, there has been an increasing demand for products that will reduce labor needs in service industries such as logistics, retail, and restaurants. We will continue to make every effort to capture this demand.

For our automotive and transportation business, we faced an operating loss in 2019 due to the slowdown in global automotive sales as well as unforeseen costs related to the launch of new products manufactured entirely—from the aluminum forging process to machining and assembly—at THK RHYTHM AUTOMOTIVE CANADA. As a result of shipments for a large line of business being postponed due to a schedule change, we forecast that the investment made in advance will overtake our profit, leading to an operating loss for 2020. However, we anticipate that these products will begin shipping toward the end of 2020, and we will be bolstering our productivity and process improvements in addition to revamping our global products and manufacturing lines, restructuring our employees

### Progress and Approach of Management Targets



and organization, and outsourcing. As a result, we will reduce our costs by around ¥2 billion, and we estimate turning a profit of ¥1.5 billion in the 2021 fiscal year. As we move forward, we are also accelerating our efforts to develop and sell new automotive products that make use of our core linear motion technology, spurred by the momentum of self-driving automobiles, electric vehicles, and other CASE trends.

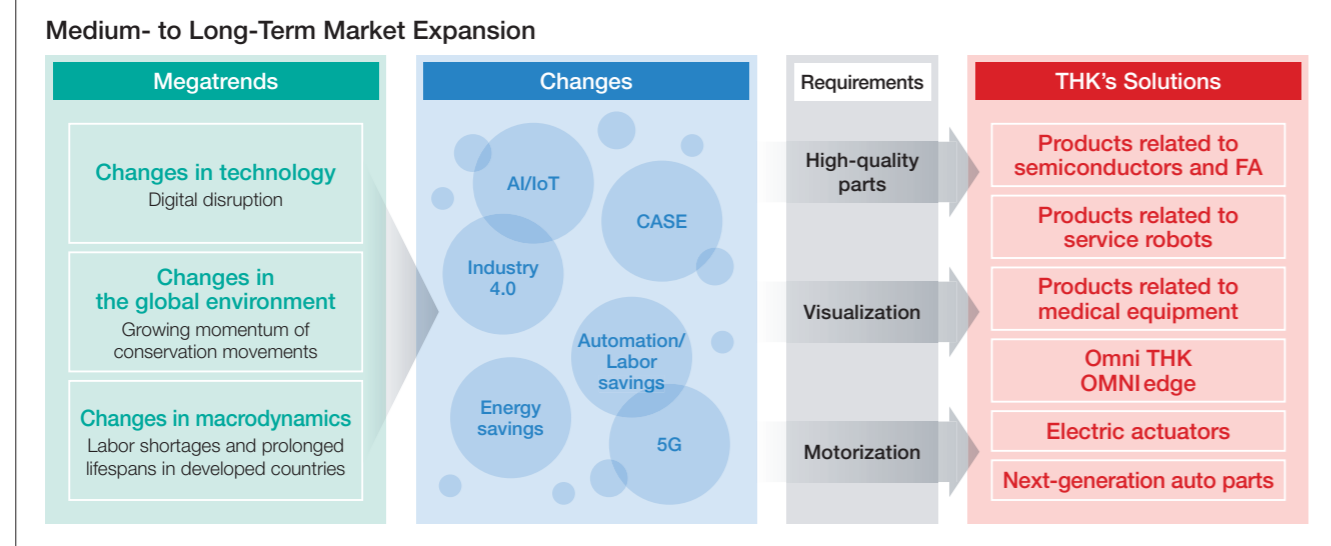
In addition, as both business divisions advance their respective initiatives, we have strengthened our global production structure to support medium- to long-term top-line expansion. Besides the already completed expansions of the THK Yamagata plant (Japan) and THK MANUFACTURING OF VIETNAM (Vietnam), we are scheduled to finish construction and begin production at our new facilities for THK India (India) and SAMICK THK (a South Korean affiliate) in 2020. For the automotive and transportation company, we have completed the new expansions that multiple facilities underwent to prepare for large-scale business, and we are preparing for shipping. At the same time, we are strengthening our bottom line through controlling costs and making improvements in productivity by utilizing automation, robotization, and the IoT in our production processes in addition to implementing IT tools in our internal business processes, including in our sales and administrative departments.

### Striving for Sustainable Growth and Solutions to Social Challenges

Our high-performance, high-quality products have contributed to labor and energy savings and advancements in machinery and many other industries. In addition to seizing opportunities for market expansion exemplifying the keywords of change that reflect the times, we will continue to establish our global production structure, improve our global procurement rate, and further strengthen our BCP to achieve our corporate philosophy of providing innovative products to the world and generating new trends to contribute to the creation of an affluent society. Furthermore, while we contribute to society through our business activities, we will also make efforts to achieve a sustainable society as the world experiences climate and other environmental changes. As we work toward achieving our established goals, we kindly request the continued support of all stakeholders.

April 2020

Akihiro Teramachi  
 President and CEO  
 THK CO., LTD.



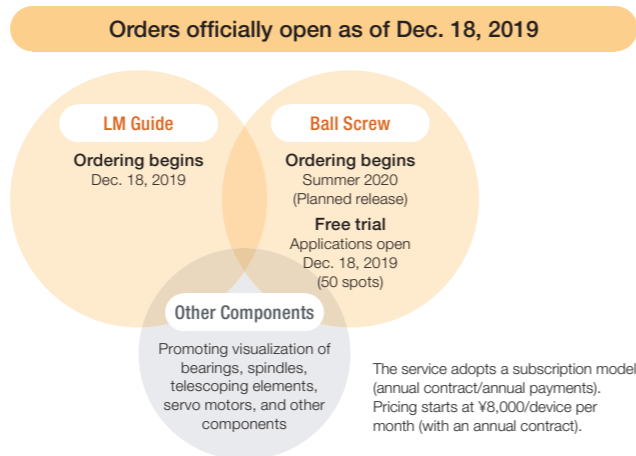
# Activities to Foster Medium- to Long-Term Growth

As current megatrends revolve around macrodynamic changes such as the rapid advancement of digital technology, the heightened momentum of environmental conservation, and the labor shortages and increased lifespans occurring in developed countries, the keywords to address these changes are 5G, AI, the IoT, CASE, Industry 4.0, automation, and labor and energy savings. These keywords drive demand for the various solutions THK offers. The Company is promoting various initiatives in both its industrial machinery and automotive and transportation businesses to realize this growth potential.

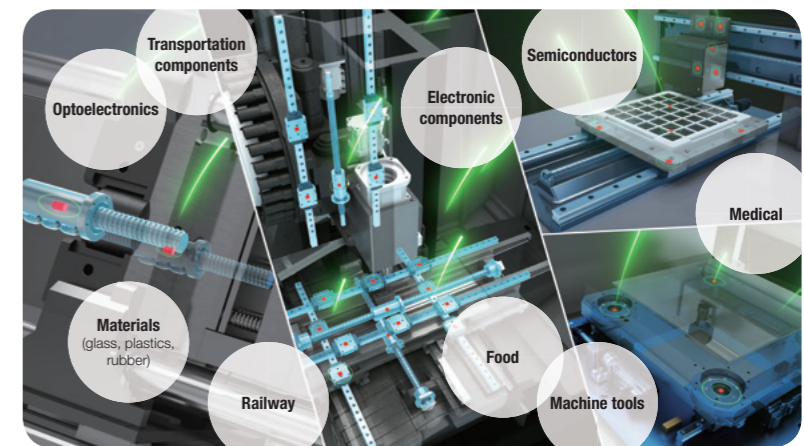
## Industrial Machinery Business

### Orders Officially Open for OMNIedge, an IoT Service for Manufacturing

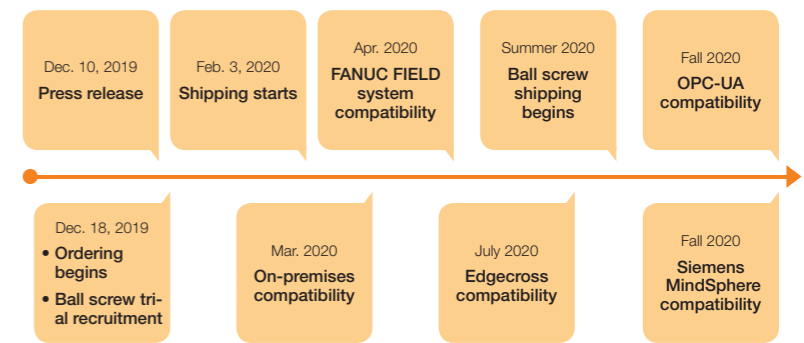
THK began accepting orders for LM Guide applications of OMNIedge on December 18, 2019. At the same time, the Company also began recruiting 50 participants for a free trial of ball screw applications. When recruiting for the free OMNIedge trial beginning October 2018, THK received applications from over 100 companies. Fifty-one were selected from various industries to participate in the trial, during which the Company collected and analyzed data about actual equipment environments. Many companies praised OMNIedge as a result of the trial, which led to the commercialization of the service.



**Industries Involved in the LM Guide Trial**  
Rather than being restricted to a particular industry, OMNIedge can be used on a wide variety of devices with an LM Guide. The trial that THK conducted involved everything from specialized machinery such as machine tools to general transfer and assembly mechanisms used in many industries.



**Future Developments for OMNIedge**  
In addition to expanding the service to ball screws and other machine components besides the LM Guide, THK will make the service even easier to use by providing connectivity with external manufacturing IoT infrastructures.

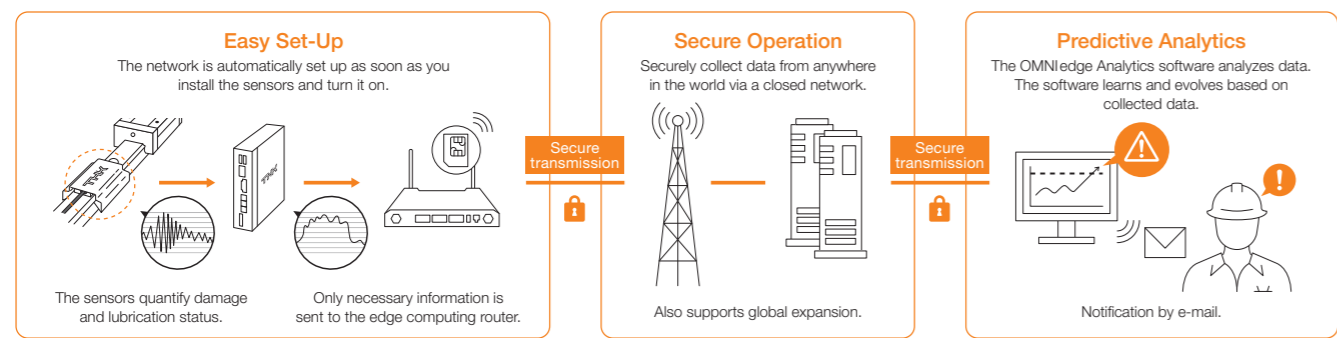
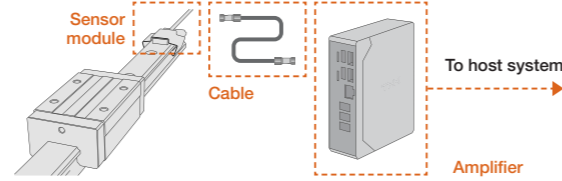


### What is OMNIedge?

OMNIedge is a system that uses the data-collecting THK SENSING SYSTEM, a Cisco edge computing router, and an NTT DOCOMO network to predict failures before they happen by quantifying and analyzing the status of machine components. Through the visualization of a component's status, OMNIedge supports effortless production planning by making maintenance more efficient, reducing inventory management costs, and improving machine operating rates. In addition to adopting a subscription model that limits initial investment costs, THK offers a package that is easy to install and includes everything from the sensor to the network, providing a simple and secure system with zero initial costs.

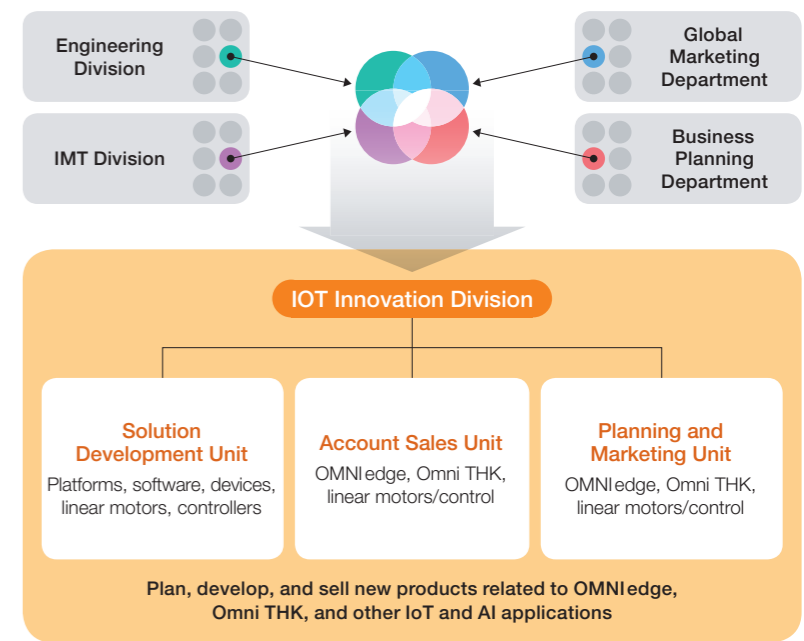
### THK SENSING SYSTEM

- Concept**
  - Quantifying the condition of an LM Guide, ball screw, etc.
- Features**
  - Quantifies condition (damage/lubrication) of an LM Guide, ball screw, etc.
  - Can be installed on current equipment
- Structure**



Global internet providers can be selected based on customer location.

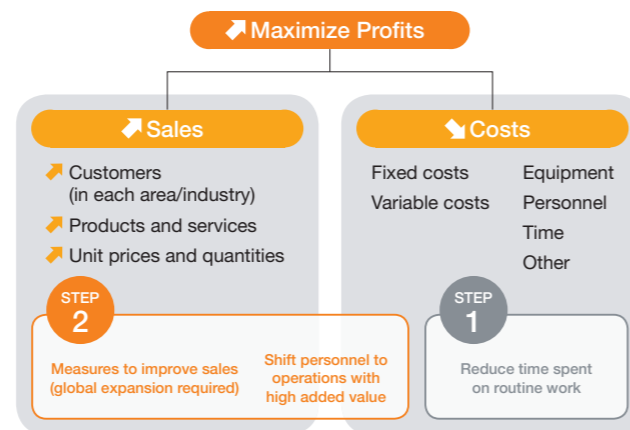
**Establishing the IOT Innovation Division**  
In January 2020, THK established a new IOT Innovation Division to deliver innovative services to its customers and society through digital technology revolving around the IoT and AI, including OMNIedge and Omni THK. The Company will accelerate its efforts to achieve this objective.





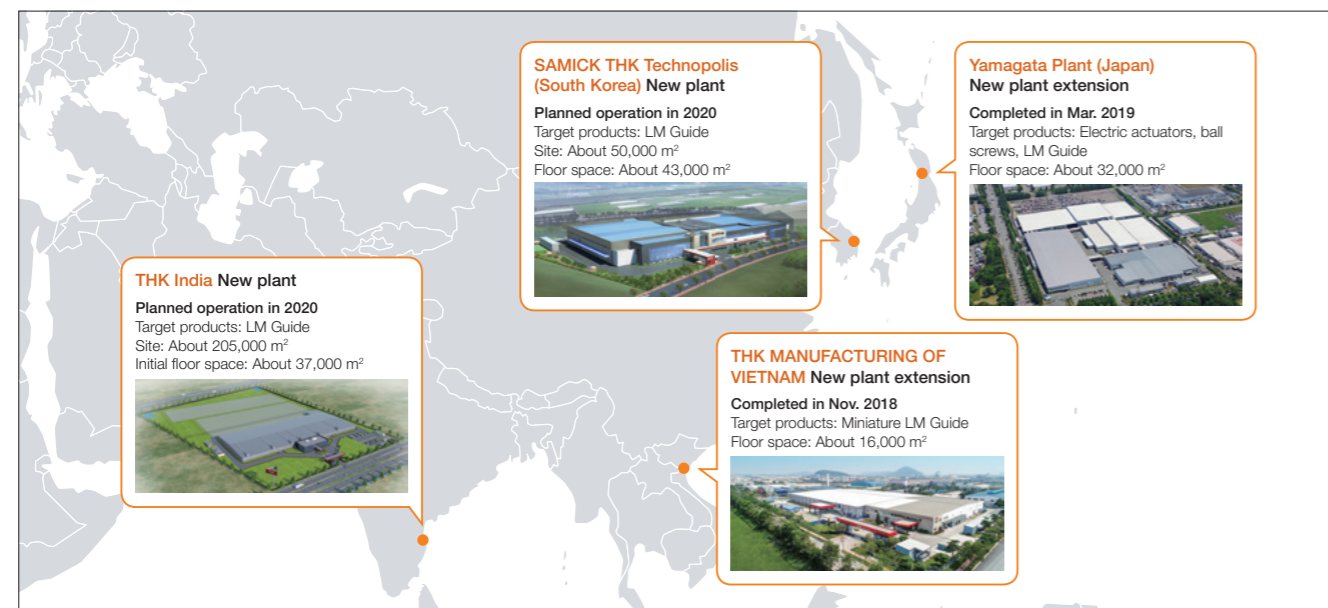
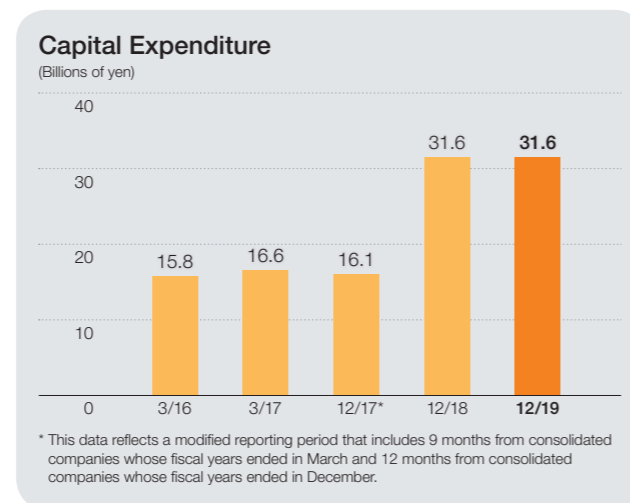
### Initiating Step 2 of the THK DX (Digital Transformation) Project

As digital technology advances around the world, every industry is rapidly advancing efforts to generate new value for existing business. Under these circumstances, the THK Group is promoting the THK DX Project in order to comprehensively organize the IT efforts of each department and branch, thereby enhancing customer satisfaction in a manner fitting with the times. During Step 1 in the 2019 fiscal year, THK worked to reduce the time it takes to perform routine tasks in every department. For Step 2, the Company will shift the employees that were freed up during Step 1 toward work with higher added value and develop measures to expand sales.



### Expanding THK's Global Production Structure

In an effort to support medium- to long-term top-line expansion, THK is strengthening the global production structure for its industrial machinery business. Besides the expansions of the THK Yamagata plant (Japan) and THK MANUFACTURING OF VIETNAM (Vietnam) that are now in operation, the Group is scheduled to finish construction and begin production at its new facilities for THK India (India) and SAMICK THK (a South Korean affiliate) in 2020. THK will continue to strengthen its production structure in order to steadily capture the anticipated medium- to long-term growth of demand spurred by the aforementioned keywords that accompany evolving trends.



### Automotive and Transportation Business



### Expanding the L&S Business and New Automotive Products

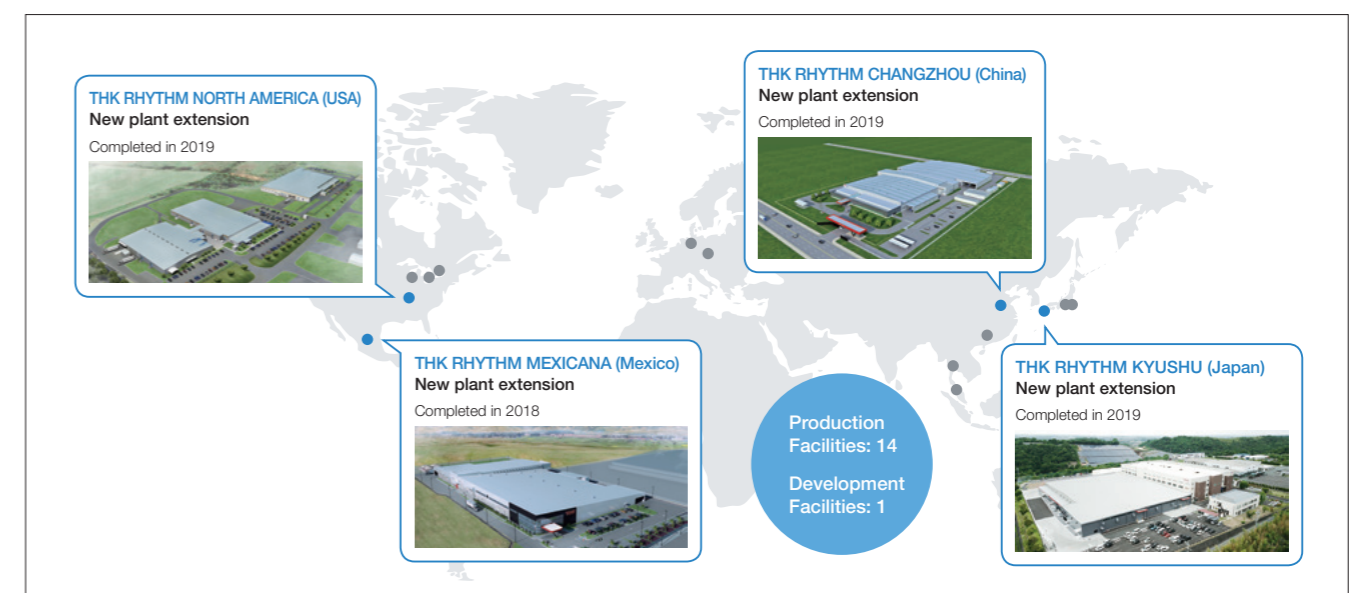
The automotive industry is said to be undergoing a once-in-a-century revolution, and "CASE" is the keyword that exemplifies this new era. CASE is an acronym combining the words "Connected," "Autonomous," "Shared/Service," and "Electric." Together, these elements have given birth to revolutionary technologies and services and are creating ripples of change that intersect with other industries.

Under these circumstances, while the L&S (Linkage and Suspension) business, centered around THK RHYTHM and TRA, is actively promoting sales activities to gain new business, it is also investing in equipment in every region around the world to increase production for that new business. In terms of new automotive products, the THK Group has been developing and mass-producing linear motion products for self-driving cars and working to expand the use of such products in various automotive mechanisms. As demand for linear motion products is expected to rise from the momentum provided by CASE trends, the THK Group will further accelerate its development

and sales activities in anticipation of the expansion of linear motion product use.

### Toward Profitability in 2021

The automotive and transportation business experienced an operating loss of ¥4.1 billion during the 2019 fiscal year, and a loss is also forecast for the 2020 fiscal year. This loss is the result of shipments for a large line of business being postponed, due to a schedule change from the automotive manufacturer, and investments made in advance, such as those for expanding its facilities, overtaking its profit. However, the THK Group anticipates that these high-volume products will begin shipping toward the end of 2020, and it will continue to bolster its productivity and process improvements in addition to revamping its global products and manufacturing lines, restructuring its employees and organization, and outsourcing. As a result, THK will reduce its costs by around ¥2 billion, and it estimates turning a profit of ¥1.5 billion in the 2021 fiscal year.



# Research and Development

Guided by the corporate 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 company focused on creation and development.

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

THK conducts R&D at the Technology Center and its new headquarters established in October 2017 in Tokyo. At these locations, the Company is endeavoring to use its core linear motion system technology and expertise to develop its mainstay linear motion systems, mechatronic devices such as XY precision stages and linear motor actuators, and products in fields related to consumer goods such as automotive parts, seismic isolation and damping systems, and medical equipment.

In 2010, the THK Group established the R&D Center in China. This facility, which was THK's first R&D facility outside of Japan, began full operation in 2012. With the addition of TRA's German R&D facility in 2015, the THK Group is on its way to building R&D structures oriented toward the Americas, Europe, and Asia in order to more accurately meet the needs of customers around the world.



Headquarters (Tokyo)



Technology Center (Tokyo)



R&D Center (China)

## Initiatives During the 2019 Fiscal Year

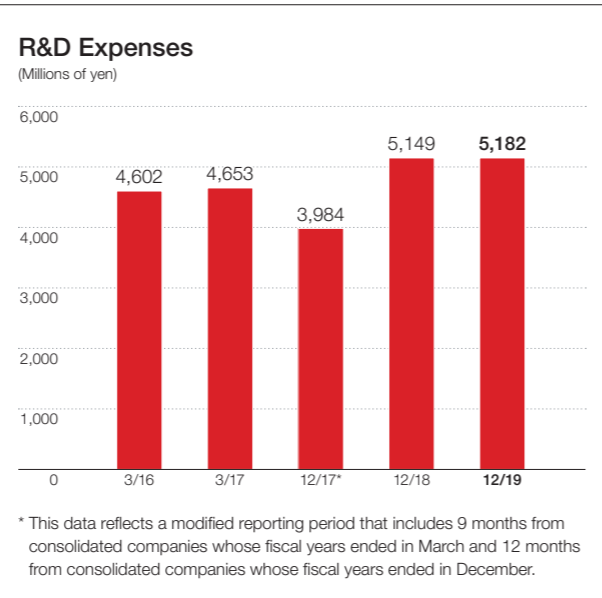
To meet the varied needs of its customers, THK's industrial machinery business has expanded its lineup of LM Guide and ball screw products and developed a wide array of new products that contribute to the automation of customers' production lines.

In terms of the IoT, the Company has begun to operate its OMNI edge service, which has networking capabilities, introducing a system that can diagnose LM Guide failures and lubrication status. THK has also begun recruiting for a free trial of a system to diagnose preload loss on ball screws. The Company endeavors to provide continuous service covering predictive failure detection through replacement part procurement.

Furthermore, as automation and robotization progress in every field, many visitors came to the 2019 International Robot Exhibition held in December, where the Company displayed demos and products that contribute to automation and robotization in various areas, all highlighting the theme of "Supporting people with motion technology."

For its automotive and transportation business, in response to the shift towards electric automobiles, THK has utilized new production methods to introduce aluminum products to the market in order to expand sales and meet customer needs for more lightweight components. The Company has also developed aluminum hot forging technology in-house in North America and delivers products manufactured with this technology to customers. As a second pillar in addition to its linkage and suspension business, the Company is also developing and mass-producing linear motion products for use in CASE-related autonomous driving, and is working to serialize these products and

expand sales. Furthermore, as a third pillar, the THK Group will promote the development of next-generation products incorporating multiple technologies in development departments in Japan and overseas by looking forward five or ten years and anticipating needs customers might not be aware of yet while also working to expand the Company's product lineup to meet current customer needs.



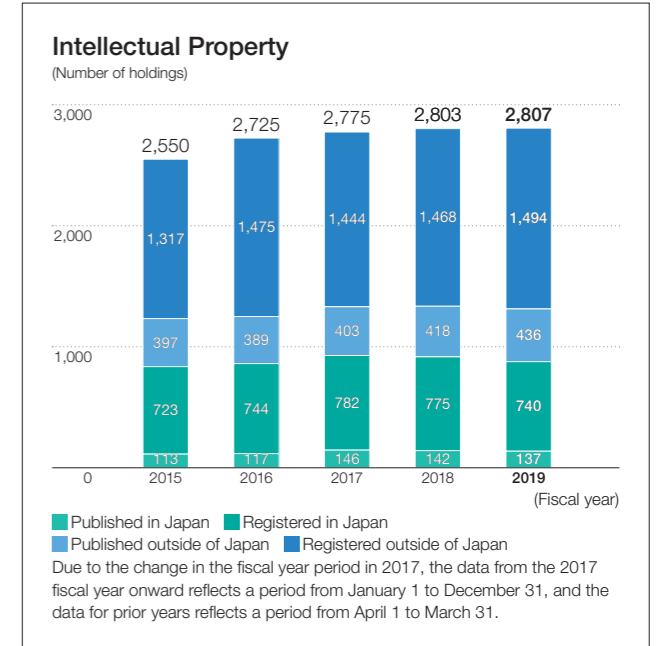
## THK's Philosophy on Intellectual Property

### Basic policy

As a company focused on creation and development, THK values and promotes the creation and full utilization of its intellectual property to continue contributing to the development of its customers around the world and to the creation of an affluent society through the development of innovative products.

By applying for patents and preserving its specialized knowledge, THK exercises exclusive rights to its linear motion technology and eliminates imitations. At the same time, to avoid infringing upon the patents of others in the industry, THK works with its planning and development departments to conduct thorough patent searches while still in the development stage, and the Company internally educates its employees so that they respect the patent rights of third parties to avoid patent infringement.

Through full-scale globalization and other means, THK is striving to expand the breadth of its preservation of effective intellectual property rights that contribute to industry.



## Efforts to Support Automation and Labor Savings

Here are some of the items contributing to automation and robotization that were displayed at the 2019 International Robot Exhibition.



### Adaptive Hand

A versatile end effector that adapts to various production line applications.



### Picking Robot Hand System Model PRS

A versatile robot hand that adapts to various logistics picking applications.



### Autonomous Movement Control System "SIGNAS"

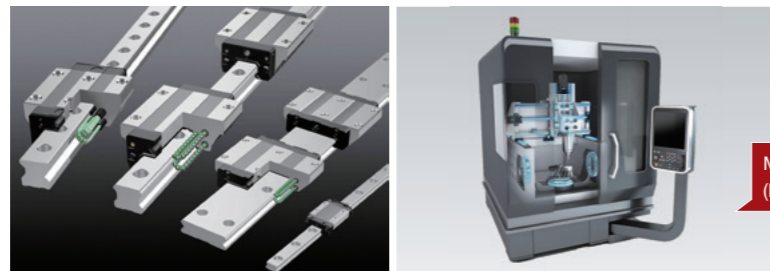
A robot that navigates easily through various kinds of terrain for construction sites.

# THK's Products

THK was the first company in the world to develop the Linear Motion (LM) Guide, which is based on an original concept and innovative technology. THK also develops, produces, and supplies to the world a range of other vital machine components, including ball screws and electric actuators, as well as automotive and transportation components, such as L&S (Linkage and Suspension) products. Because of the smoother, more accurate movement they provide to every type of mechanism, all of THK's technologies have gathered attention and are driving innovation around the world.

## The LM Guide

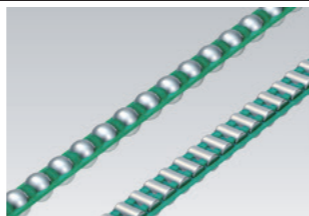
The LM Guide is a machine component that converts sliding motion into rolling motion, enabling machine parts to move smoothly, easily, and precisely in a straight line. As a result, the LM Guide has enabled the precision, rigidity, speed, and energy-saving properties of a wide range of industrial machinery. With the introduction of products such as the Caged Ball LM Guide in 1996 and the Caged Roller LM Guide in 2001, the Company has continued to improve every aspect of the LM Guide and further expand its applications. As a result, LM Guide products with caged ball and caged roller technology are now vital components of machine tools, semiconductor manufacturing equipment, and other industrial equipment.



Machine tool (Machining center)

### Ball Cages and Roller Cages

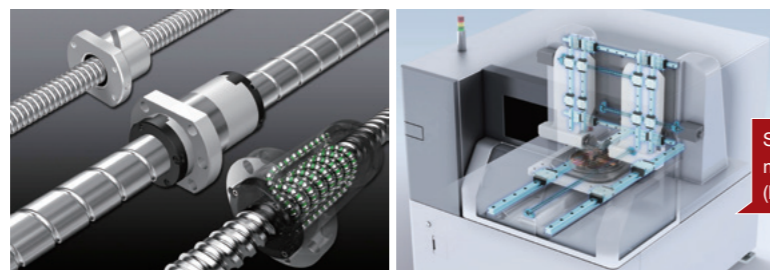
The cages are resin parts that hold and guide the balls or rollers as they move. The use of cages reduces noise and friction by preventing direct contact between the balls or rollers. This allows for a longer service life, reduced noise, and an extended period of maintenance-free operation.



## Ball Screws

Ball screws are machine components that function by causing a large number of balls to circulate between a screw shaft and a nut. This mechanism efficiently converts rotary motion into linear motion. With the Caged Ball Screw, THK has incorporated caged ball technology into its existing ball screw designs, thus helping to achieve longer life with reduced noise and provide an extended period of maintenance-free operation.

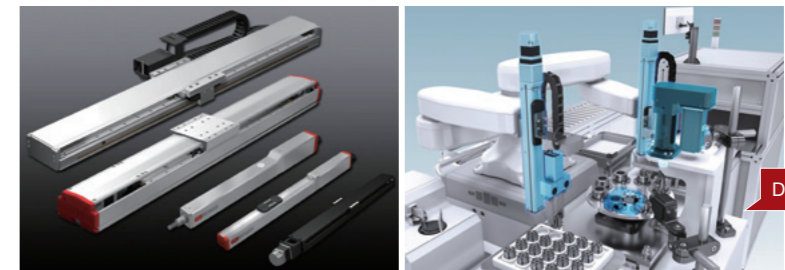
As a result, these products are now essential elements in machine tools, industrial robots, semiconductor manufacturing equipment, and other industrial equipment. THK also offers ball screws that are designed to support high loads, making them ideally suited for replacing the hydraulic cylinders used in equipment such as injection molding machines, presses, and die casting machines.



Semiconductor manufacturing equipment (Dicing saw)

## Electric Actuators

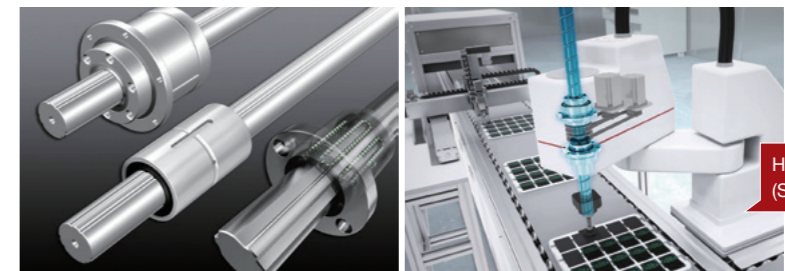
Electric actuators are hybrid products combining a guide component, such as an LM Guide, with a ball screw, linear motor, or other drive component. In industries such as electronics, there is an increasing need to shorten development and manufacturing lead times. Modularization allows these electric actuators to meet such requirements by simplifying the design and reducing assembly time. THK offers a varied lineup of electric actuators ranging from basic, cost-effective units to high-end components designed to operate with high precision or perform to clean room specifications. Such advanced electric actuators have become indispensable parts in equipment used in the manufacture or inspection of semiconductors and liquid crystal displays.



Dual-arm robot

## Ball Splines

Developed in 1971, the same year that THK was established, ball splines were the precursor to the LM Guide. This revolutionary linear motion guide element 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. Compared with the products that came before, these ball splines boosted the permissible load by a factor of 13 and service life by a factor of 2,200. THK offers an extensive lineup featuring ball splines with integrated ball screws and other products that are used in a variety of equipment, including industrial robots, medical equipment, and chip mounters.



Horizontal articulated robot (SCARA robot)

## Cross Roller Rings

Cross roller rings are roller bearings that feature internal cylindrical rollers arranged orthogonally so as to facilitate load bearing in every direction. The incorporation of the spacer cages between rollers prevents roller skew and friction between the rollers. Possessing high rigidity while maintaining a compact structure, cross roller rings are used in the rotating parts of many different types of industrial machinery, including the joint areas and rotating parts of industrial robots, as well as machining center swivel tables. Other applications include rotating parts of medical equipment and semiconductor manufacturing equipment.



Transfer robot

**Products Using Core Linear Motion System Technology**

**Seismic Isolation and Damping Systems**

Seismic isolation and damping systems make use of THK's core linear motion system technology. The THK Group supplies a broad range of products from seismic isolation and damping systems for high-rise buildings, low-rise residences, and other structures such as temples and shrines, to seismic isolation systems for servers and a variety of manufacturing equipment. In this manner, the Group is helping to minimize the damage caused by earthquakes.

**Seismic Isolation System for Buildings**

Recovery System with Laminated Rubber

Return

Support

Reduce

Linear Re-Circulating Guide CLB

Viscous Damping System RDT

**Seismic Isolation Platforms**

Seismic Isolation Module Model TGS

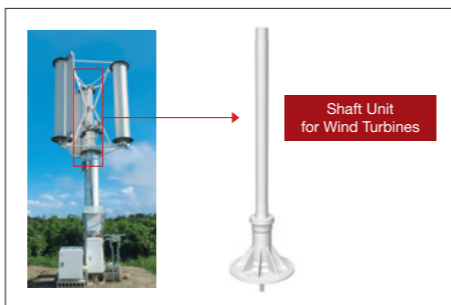
Servers

Seismic Isolation Table Model TSD

Works of Art

**Renewable Energy**

Due to their unique mechanisms, THK's shaft units for wind turbines possess high strength and durability in addition to achieving dramatically lower torque and improved power generation efficiency. In 2017, THK began supplying these products to Challengeenergy Inc., which developed the world's first wind turbine capable of generating energy even during typhoons.



**Automotive and Transportation Equipment-Related Products**

The automotive and transportation business, centered on THK RHYTHM and THK RHYTHM AUTOMOTIVE (TRA), focuses on products related to undercarriage L&S (Linkage and Suspension) components. Made from aluminum, THK's link balls are highly resistant to corrosion and wear. They are also considerably lighter than traditional steel parts.

In addition to the cold-forged ball joints that have been its mainstay, THK RHYTHM has expanded the range of products it offers to include aluminum links that integrate ball joints with aluminum suspension links. Through its critical safety parts that meet the automotive industry's requirements for the highest levels of quality and performance, the Company contributes to the production of safer, more comfortable automobiles.

**Suspension arms**

**Suspension ball joints**

**Height sensor joints**

**Steering tie rods (Rack and pinion)**

**Steering linkages**

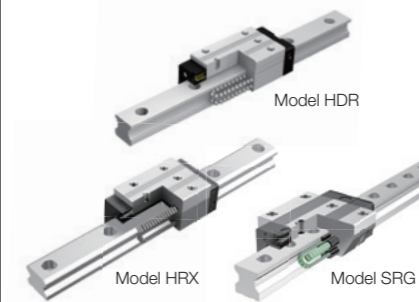
**Stabilizer connecting rods**

**New Products**



**Miniature LM Guide Model RSX**

This product is easily customizable to specialized block lengths often requested by customers. It uses a corner-type wire to achieve excellent ball retention.



**Interchangeable LM Guide Model HDR, Model HRX, and Model SRG**

Interchangeable rails and blocks can be managed separately, and rails can be disconnected and used as needed. These products simplify the process of replacing blocks.



**Hollow Ball Screw N Series**

This product is intended for small, high-precision machining devices. It enables forced cooling and has a maximum shaft length of 3,000 mm.



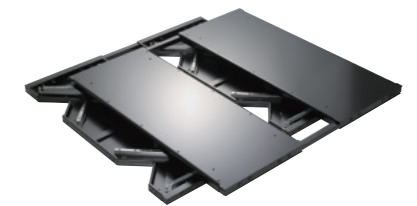
**Lightweight Actuator Model CFK37**

This product utilizes a lightweight end material (CFRP) on the outer rail to maintain rigidity while significantly decreasing weight. It has excellent damping properties and helps reduce takt time.



**Lightweight Actuator Models ALK20 and 45**

These products were added to the existing lineup of models ALK26 and 30. The main components of these products are made of extruded aluminum, making them significantly more lightweight at a reasonable price.

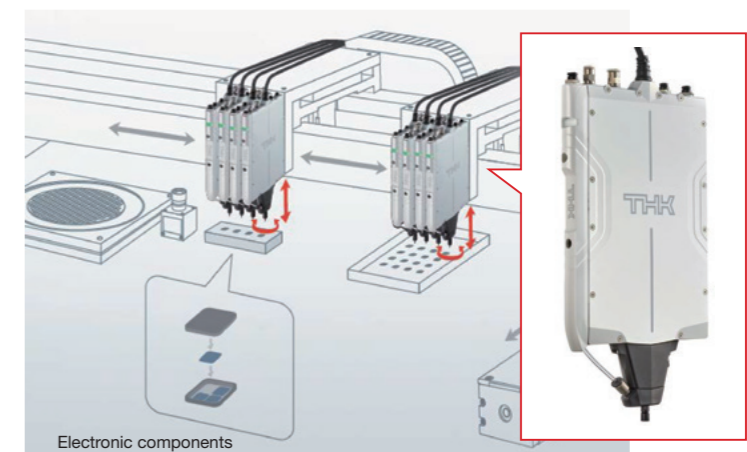


**Seismic Isolation Table for Servers TSD-1200L**

The maximum displacement when activated is  $\pm 250$  mm, a 25% improvement over conventional models, providing better protection against large earthquakes and long-period ground motion. It has an improved ability to absorb seismic energy.

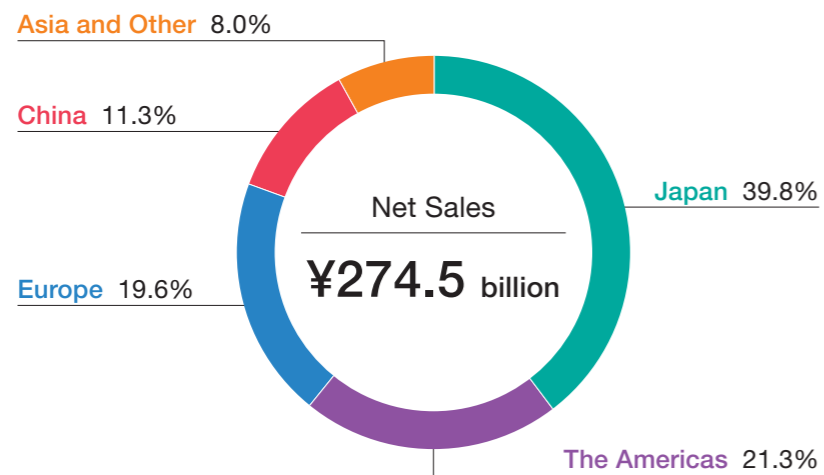
**Pick and Place Robot Model PPR**

This is a robot specialized for picking and placing electrical components. Its high-precision force-sensing technology reduces damage to electrical components. In addition, the visualization of force, position, and pressure data assists with troubleshooting and quality improvements.



# Review by Geographic Region

As THK advances its growth strategy of full-scale globalization, the Company has established an integrated production and sales structure that encompasses four centers of demand: Japan, the Americas, Europe, and Asia. During the 2019 fiscal year, THK worked to expand sales around the world through Omni THK and officially opened orders in Japan for OMNIedge, an IoT service for the manufacturing industry. In terms of production, THK has reduced lead times by improving productivity through efforts related to automation, robotization, and the IoT, as well as by making investments that will increase production volumes in both its industrial machinery and automotive and transportation businesses. In addition to continuing to strengthen its sales structure through Omni THK in each region, during the 2020 fiscal year, THK will promote the expansion of OMNIedge and accelerate its efforts to establish a secure, flexible production structure. Through promoting the systematization of business processes, including those of support departments, the THK Group will provide products and services promptly to customers and improve its overall productivity.



The THK Group decided to adopt IFRS beginning with the 2019 fiscal year.

## JAPAN

### Operating Conditions and Performance Review

Sales in Japan decreased 24.7% year-on-year, to ¥109.4 billion.

The THK Group steadily achieved sales from the backlog of orders it had accumulated during the prior period of strong overall demand. However, revenue decreased as a result of the weakening of exports and production due to a slowdown in foreign demand in China and other regions influenced by the trade friction between the United States and China.

### Year Ended December 2019

#### • Sales

The demand for THK products is expected to demonstrate medium- to long-term growth with the advancement of digital technology. In

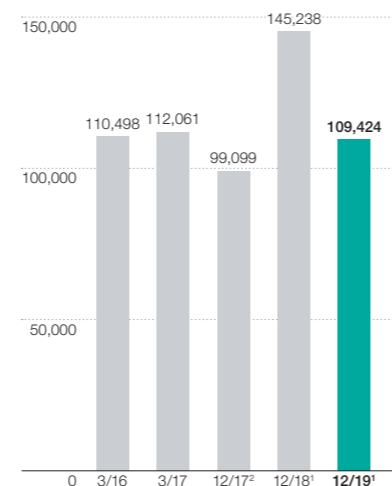
December 2019, the Company began officially accepting orders for its OMNIedge IoT service for the manufacturing industry. Orders were opened for LM Guide applications, and THK began recruiting participants for a trial for the ball screw version.

#### • Production

In March 2019, the expansion of the Yamagata plant was finished, and THK RHYTHM KYUSHU—one of the main factories for the automotive and transportation division—completed its expansion to meet the demands of new, large-scale business. As part of its efforts to improve productivity, the Company promoted automation and robotization in addition to developing measures that utilize digital technology.

### Net Sales

(Millions of yen)



<sup>1</sup> The THK Group decided to adopt IFRS beginning with the 2019 fiscal year. For the purposes of comparison, the results for the 2018 fiscal year are also noted in accordance with IFRS.  
<sup>2</sup> This data 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.

## THE AMERICAS

### Operating Conditions and Performance Review

Sales in the Americas decreased 2.3% year-on-year, to ¥58.3 billion.

In the midst of continued economic growth centered on domestic demand, the THK Group worked diligently to expand transactions with existing customers through unified production and sales efforts while developing new business areas, including the automotive, medical equipment, and aircraft fields as well as energy-related fields. However, revenue decreased primarily due to demand adjustments in the electronics field.

### Year Ended December 2019

#### • Sales

The THK Group increased its market share by expanding transactions with existing customers while taking business from competitors. In

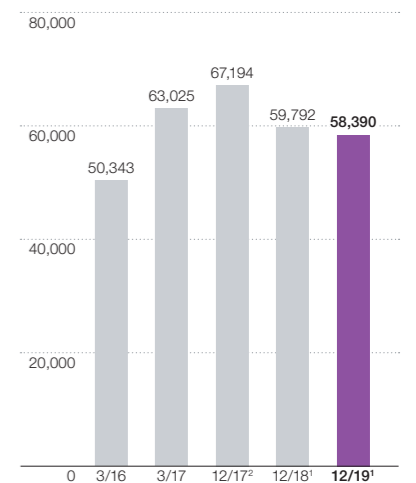
addition, the Group promoted sales activities targeting a wide range of customers by making use of its mobile showroom at exhibitions. Furthermore, the Company actively drove sales activities in medical equipment and other new business areas such as aircraft and robotics to generate new demand.

#### • Production

THK has made improvements in productivity by reducing manufacturing lead times, automating, and making other improvements to machine utilization in order to capitalize on its strengths as the only company in the linear motion industry with a production facility in North America and to conduct its production activities in a way that meets customer needs. In the automotive and transportation business, the expansion of THK RHYTHM NORTH AMERICA was completed.

### Net Sales

(Millions of yen)



<sup>1</sup> The THK Group decided to adopt IFRS beginning with the 2019 fiscal year. For the purposes of comparison, the results for the 2018 fiscal year are also noted in accordance with IFRS.  
<sup>2</sup> This data 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.

## EUROPE

### Operating Conditions and Performance Review

Sales in Europe decreased 6.6% year-on-year, to ¥53.7 billion.

As exports and production weakened due to the influence of the trade friction between the United States and China, the THK Group's revenue declined despite working to expand transactions with existing customers through unified production and sales efforts while developing new business areas, including the automotive, medical equipment, aircraft, and robotics fields.

### Year Ended December 2019

#### • Sales

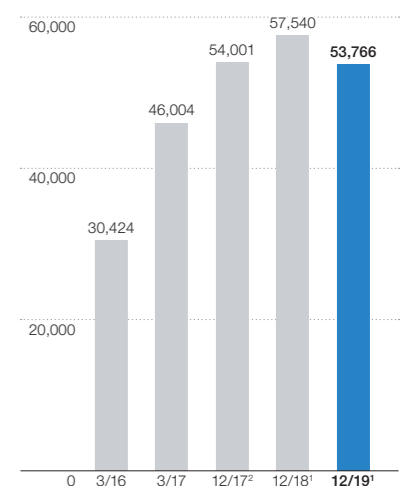
In addition to expanding transactions with existing customers, THK actively developed various initiatives aimed at expanding sales to a wide range of customers. Furthermore, the Company accelerated its efforts to take business from competitors in new fields related to medicine, food, and robotics.

#### • Production

THK improved productivity by analyzing its machining and assembly work processes and installing new equipment to promote further automation and robotization. In addition, the Group promoted additional process improvements such as automating process management through IoT advancements.

### Net Sales

(Millions of yen)



<sup>1</sup> The THK Group decided to adopt IFRS beginning with the 2019 fiscal year. For the purposes of comparison, the results for the 2018 fiscal year are also noted in accordance with IFRS.  
<sup>2</sup> This data 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.



# Corporate Governance

## CHINA

### Operating Conditions and Performance Review

Sales in China decreased 36.2% year-on-year, to ¥30.9 billion.

China saw broad adjustments being made to capital investments due to trade friction with the United States. Although the THK Group achieved sales from the demand for electronics and products related to automation and robotization, which had been trending favorably, the result of these circumstances was a reduction in revenue.

### Year Ended December 2019

#### • Sales

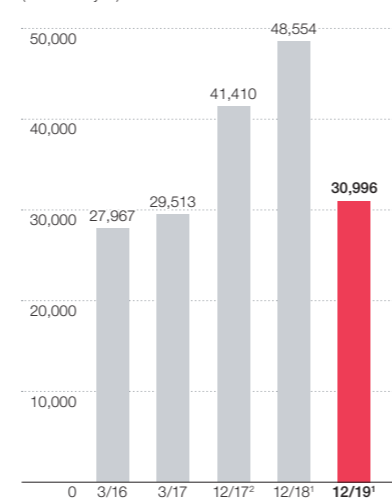
In order to expand transactions with existing customers as well as sales to a wide range of

customers, THK has been bolstering its sales network and developing measures to attract more customers at trade shows. The Company has also expanded the lineup of products and distributors available on Omni THK, and the number of registered users has grown.

#### • Production

Each plant further improved its productivity by promoting automation and robotization based on an analysis of its work processes and by using the IoT to collect and analyze data. With regard to the automotive and transportation business, the THK RHYTHM CHANGZHOU expansion was completed, and the Company steadily prepared for top-line growth.

**Net Sales**  
(Millions of yen)



<sup>1</sup> The THK Group decided to adopt IFRS beginning with the 2019 fiscal year. For the purposes of comparison, the results for the 2018 fiscal year are also noted in accordance with IFRS.  
<sup>2</sup> This data 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.

## ASIA AND OTHER

### Operating Conditions and Performance Review

Sales in Asia and other regions decreased 34.4% year-on-year, to ¥22 billion.

As the range of demand for THK products is steadily growing in India, the ASEAN region, and other parts of the world, the Group bolstered its sales network and undertook aggressive sales activities to expand transactions with existing customers and acquire new customers. However, reduced demand in China impacted certain regions, resulting in decreased revenue.

### Year Ended December 2019

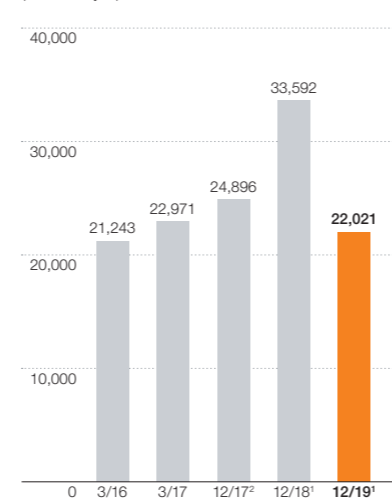
#### • Sales

In Taiwan, THK strengthened its top line by expanding sales with existing customers, bolstering its indirect sales network, and introducing quick-delivery products to the market. In the ASEAN region, the Group strengthened efforts to develop Omni THK and thereby expand sales to a wide range of customers. Furthermore, various initiatives were developed to expand sales of electric actuators.

#### • Production

Each plant further improved the productivity of its production processes through automation and robotization. In India, construction began on a new factory in response to demand that is expected to demonstrate medium- to long-term growth.

**Net Sales**  
(Millions of yen)



<sup>1</sup> The THK Group decided to adopt IFRS beginning with the 2019 fiscal year. For the purposes of comparison, the results for the 2018 fiscal year are also noted in accordance with IFRS.  
<sup>2</sup> This data 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.

### Basic Stance on Corporate Governance

Intending to maximize its corporate value, THK strives to maintain solid corporate governance in order to make medium- to long-term improvements to its corporate value by sustaining growth through appropriate cooperation with all its shareholders and other stakeholders.

## THK's Corporate Governance Framework

In June 2014, THK introduced an executive officer system. After the Company's 46<sup>th</sup> General Meeting of Shareholders on June 18, 2016, and in conjunction with its establishment of an Audit and Supervisory Committee, THK instituted a non-mandatory Nomination Advisory Committee and a Remuneration Advisory Committee to act as advisors to the Board of Directors. In doing so, THK has endeavored to bring enhanced transparency and objectivity to management, strengthen the auditing functions of the Board of Directors, and bring greater speed and efficiency to management-related decision-making and the management of corporate affairs.

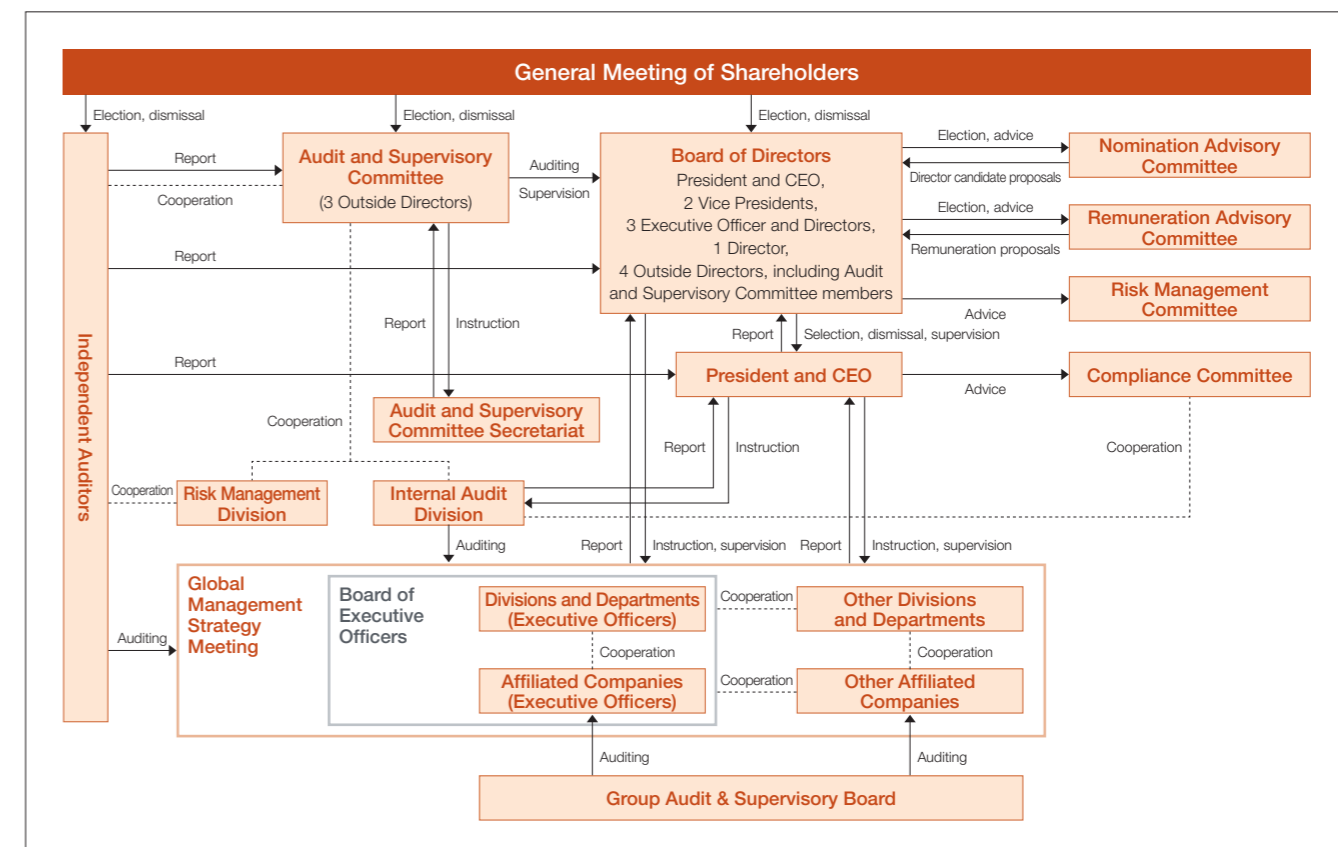
### Board of Directors

THK's Board of Directors comprises a total of eight directors—including one outside director—who are not members of the Audit and Supervisory Committee, in addition to three outside directors who are Audit and Supervisory Committee members. The Board of Directors makes decisions on important matters of general management and carries out the oversight of directors and executive officers in the

execution of their duties. There are also four outside directors whose independence meets the evaluation criteria stipulated by the Tokyo Stock Exchange and THK. With over a third of the directors being outside directors who possess specialized professional knowledge and qualifications related to corporate accounting or general management, this structure has further enhanced management neutrality, legality, and validity while improving the board's management oversight function.

### Audit and Supervisory Committee

Comprising three outside directors who are Audit and Supervisory Committee members, the Audit and Supervisory Committee utilizes the internal control system to audit and supervise directors and executive officers with regard to the current status of the execution of their duties. The effectiveness of the audits is also enhanced by collaboration between the Audit and Supervisory Committee and independent auditors. In addition, the Audit and Supervisory Committee Secretariat was established to support the Audit and Supervisory



Committee and its members. The Audit and Supervisory Committee Secretariat follows the instructions of the Audit and Supervisory Committee, coordinates with each department, and conveys instructions to the Internal Audit Division and the Risk Management Division, which is responsible for the maintenance and operation of internal controls.

### Nomination Advisory Committee and Remuneration Advisory Committee

The non-mandatory Nomination Advisory Committee and Remuneration Advisory Committee are each composed of four directors, two of which are outside directors. This composition is in accordance with the rules for both committees, which stipulate that outside directors must make up half or more of the members. As advisory bodies to the Board of Directors, both committees review and deliberate on director candidates and remuneration proposals, and they propose the content and outcomes of those deliberations to the Board of Directors. The Board of Directors conducts its own deliberations on the subject matter before deciding on a resolution.

### Executive Officer System

By introducing the executive officer system, THK has endeavored to accelerate decision-making and operational execution, in addition to improving the management oversight function of the Board of Directors and clarifying roles and responsibilities relating to the management of corporate affairs. As a means to share information throughout the Group and improve corporate governance through collaboration between the directors, executive officers, and other members of the management team, the Company implemented its Board of Executive Officers, which is attended by directors and executive officers, and established the Global Management Strategy Meeting, which is attended by members of the Board of Executive Officers in addition to those in charge of each division, department, and affiliate company. To clarify the roles and responsibilities of executive officers relating to the management of corporate affairs, an executive officer's term in office is deemed to be one year.

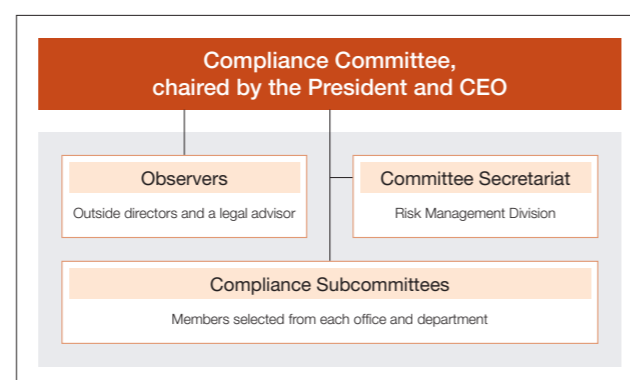
### General Meeting of Shareholders

THK has consistently regarded active communication with all stakeholders as a crucial part of management. Accordingly, the Company is actively committed to maintaining fair and proper disclosure of corporate information. In an aim to have open meetings, THK has held its General Meeting of Shareholders on a Saturday every year since 1998, thereby avoiding the period when many shareholder meetings are scheduled. At the General Meeting of Shareholders, the Company provides seating for business partners and other stakeholders to observe the proceedings. A product exhibition is held after the end of the meeting to help more people gain a greater understanding of the Company.

\* The 50<sup>th</sup> General Meeting of Shareholders was held on a Friday that was a national holiday. In addition, as a precaution for the new coronavirus (COVID-19), there were no seats for observers or a product exhibition.

### Compliance Structure

The Compliance Committee, chaired by the CEO, approves the annual activity plan and reports on the execution of those activities, as well as on the handling of legal violations by employees and other matters to report internally. This committee is also attended by outside directors and a legal advisor, and it functions in a proper and legal manner. In addition, THK has established compliance subcommittees reporting to the Compliance Committee, with the working group members being selected from each site and department. The working group members play an important role in maintaining the compliance system by means such as holding voluntary seminars on compliance and fulfilling an advisory function.



### Risk Management Committee

THK has established a risk management structure that anticipates future circumstances, enabling management to take appropriate risks by identifying, analyzing, and responding to conceivable risks from the perspective of management and the company as a whole. Under its policy of "We facilitate assertive governance with elements of bold risk-taking," the Risk Management Committee convenes annually and is headed by the CEO. The committee, which is attended by outside directors and legal counsel, approves the annual activity plan and works to establish, promote, and maintain the risk management structure by controlling risks throughout the entire Group.



## Board of Directors and Executive Officers (As of March 20, 2020)

### Directors



**Akihiro Teramachi**  
President and CEO



**Toshihiro Teramachi**  
Executive Vice President and CIO



**Hiroshi Imano**  
Executive Vice President and CFO



**Nobuyuki Maki**  
Director and Senior Managing Executive Officer  
Senior General Manager of Automotive & Transportation Headquarters



**Takashi Teramachi**  
Director and Senior Managing Executive Officer  
Senior General Manager of Industrial Machinery Headquarters



**Junji Shimomaki**  
Director and Managing Executive Officer  
General Manager of Industrial Machinery Headquarters  
Senior General Manager of Sales Division, Industrial Machinery Headquarters



**Junichi Sakai**  
Director  
(In charge of Quality Assurance, Risk Management, and Production Engineering)



**Masaaki Kainosho**  
Outside Director



**Masakatsu Hioki**  
Outside Director  
(Audit and Supervisory Committee Member)



**Tomitoshi Omura**  
Outside Director  
(Audit and Supervisory Committee Member)



**Yoshiki Ueda**  
Outside Director  
(Audit and Supervisory Committee Member)

### Executive Officers

Managing Executive Officer  
**Takashi Okubo**  
Executive Vice Chairman of THK (CHINA) CO., LTD.

Managing Executive Officer  
**Masaki Sugita**  
Representative Director and President of THK Holdings of America, L.L.C.  
Representative Director and President of THK America, Inc.

Managing Executive Officer  
**Tetsuya Hayashida**  
Special Appointive Officer to President

Managing Executive Officer  
**Masato Sawada**  
General Manager of Automotive & Transportation Headquarters  
Director and Executive Vice Chairman of THK RHYTHM CO., LTD.

Managing Executive Officer  
**Takanobu Hoshino**  
General Manager of IMT Division, Industrial Machinery Headquarters  
Director and Executive Vice Chairman of THK INTECHS CO., LTD.

Managing Executive Officer  
**Akihiko Kambe**  
Senior General Manager of Production Division, Industrial Machinery Headquarters

Managing Executive Officer  
**Kaoru Hoshide**  
Senior General Manager of Engineering Division, Industrial Machinery Headquarters

Managing Executive Officer  
**Toshiki Matsuda**  
Representative Director and President of THK Europe B.V.  
Representative Director and President of THK GmbH  
Representative Director and President of THK France S.A.S.  
Representative Director and President of THK Manufacturing of Europe S.A.S.  
Representative Director and President of THK Manufacturing of Ireland Ltd.

Executive Officer  
**Naoki Kinoshita**  
President of THK (CHINA) CO., LTD.

Executive Officer  
**Yukio Yamada**  
General Manager of Sales Division, Industrial Machinery Headquarters  
General Manager of International Sales Division, Sales Division, Industrial Machinery Headquarters

Executive Officer  
**Takehiro Nakanishi**  
Deputy Senior General Manager of Production Division, Industrial Machinery Headquarters  
General Manager of Production Engineering Department, Production Division, Industrial Machinery Headquarters  
General Manager of Global Procurement Department, Production Division, Industrial Machinery Headquarters

Executive Officer  
**Yasutoshi Hoshino**  
Deputy General Manager of Corporate Strategy Headquarters

Executive Officer  
**Kenji Nakane**  
General Manager of Finance & Accounting Department, Corporate Strategy Headquarters

Executive Officer  
**Akira Furihata**  
Representative Director and President of THK RHYTHM CO., LTD.

Executive Officer  
**Masaki Kimura**  
Head of The President's Office  
Head of Corporate Planning Department, Corporate Strategy Headquarters

Executive Officer  
**Takuya Sakamoto**  
Head of IOT Innovation Division



## Harmony with the Environment

### The Selection of Outside Directors

<b>Masaaki Kainosho</b> Outside Director (as of June 2012) <hr/> <b>Significant concurrent positions:</b> Representative Director of KAINOSHO CO., LTD. Professor at Otsuma Women's University Junior College Division	<b>Reason for selection</b> In addition to being a university professor deeply versed in business administration, Masaaki Kainosho possesses a wealth of experience, a history of success, and sound judgment from managing an executive consulting company.
	<b>Independent status</b> Masaaki Kainosho was employed at THK's current lender, Sumitomo Mitsui Banking Corporation (previously Mitsui Bank), from April 1976 to April 1996. However, he was consistently working in a systems-related division, and the THK Group did not do business with Mitsui Bank at the time. Therefore, he is considered to be independent.
<b>Masakatsu Hioki</b> Outside Director, Audit and Supervisory Committee Member (as of June 2016) <hr/> <b>Significant concurrent positions:</b> Outside Director of SUKIYA Co., Ltd. Outside Director of ZUIKO CO., LTD. Visiting Professor at Ritsumeikan University Graduate School	<b>Reason for selection</b> In addition to possessing sound judgment, Masakatsu Hioki has extensive experience and a proven history of success as an executive responsible primarily for human resources and general affairs in a global manufacturing company.
	<b>Independent status</b> Masakatsu Hioki began his career with Komatsu Ltd. Although THK and Komatsu do have a business relationship that includes the sale of THK products, the sum value of those transactions equals less than 1% of THK's and Komatsu's consolidated net sales for the corresponding fiscal year. Therefore, he is considered to be independent.
<b>Tomitoshi Omura</b> Outside Director, Audit and Supervisory Committee Member (as of June 2016) <hr/> <b>Significant concurrent positions:</b> Certified Public Accountant Managing Director of Omura Accounting Office	<b>Reason for selection</b> In addition to the knowledge of corporate accounting he has gained over many years as a certified public accountant, Tomitoshi Omura is an expert who possesses a wealth of experience, a history of success, and sound judgment.
	<b>Independent status</b> There are no particular conflicts of interest concerning Tomitoshi Omura's relationship with THK. Additionally, although he does not have direct experience in corporate management, the Company has determined that he appropriately executes his duties as an outside director because of the aforementioned reasons.
<b>Yoshiki Ueda</b> Outside Director, Audit and Supervisory Committee Member (as of June 2016) <hr/> <b>Significant concurrent positions:</b> Outside Director of SINTOKOGIO, LTD. Representative Director & Vice-Chairman of Makino Milling Machine Co., Ltd. Visiting Professor of National University Corporation Shizuoka University	<b>Reason for selection</b> In addition to possessing sound judgment, Yoshiki Ueda has extensive experience and a proven history of success as an executive deeply versed in corporate management, having spent many years at a global company active in machinery-related fields.
	<b>Independent status</b> Yoshiki Ueda is an outside director at SINTOKOGIO, LTD., a representative director and vice-chairman at Makino Milling Machine Co., Ltd., and a visiting professor at National University Corporation Shizuoka University. Although THK and SINTOKOGIO do have a business relationship that includes the purchase of SINTOKOGIO products, the sum value of those transactions equals less than 1% of THK's and SINTOKOGIO's consolidated net sales for the corresponding fiscal year. Additionally, although THK and Makino Milling Machine do have a business relationship that includes the sale of THK products, the sum value of those transactions equals less than 1% of THK's and Makino Milling Machine's consolidated net sales for the corresponding fiscal year. There are no particular conflicts of interest regarding the relationship between the Company and Shizuoka University.

The THK Group contributes to both society and the economy through our pioneering role as manufacturers of the Linear Motion Guide and other products. We also believe that it is a company's social responsibility to leave the global environment in a healthy state for the next generation, which is why we are promoting the following initiatives to continually decrease our environmental impact and to sustain and improve the natural environment.

### THK Group's Basic Environmental Policy

1. We consider conservation of the environment to be a major management challenge, and we are striving to accurately understand how our business activities, products, and services impact the environment. All divisions set appropriate environmental goals to address this challenge.
2. In addition to complying with environmental laws, we have set self-imposed standards that are reviewed regularly to improve the efficiency and effectiveness of our environmental management.
3. We will continually promote the development of products that help reduce environmental impact.
4. We will cut down energy use in our business activities and continually promote the reduction of energy consumption and greenhouse gas emissions.
5. With a particular focus on the reduction and recycling of waste, we will not only continue to promote the saving and recycling of resources, but also strive to prevent pollution.
6. We recognize the impact our business activities have on biodiversity, and we will actively work toward the conservation of all life on Earth.
7. To achieve greater collaboration with regard to our environmental activities, we provide guidance and support to our affiliate companies and business partners, and also strive to work in cooperation and harmony with the community.
8. This basic environmental policy is disseminated to all divisions in the group through education, training, and awareness campaigns, and we facilitate the timely release of information on the environment both within and outside the Group.

Revised on August 21, 2019

### Energy-Saving Initiatives

#### Solar Panels at the Yamaguchi Plant

The Yamaguchi plant is carrying out plans to reduce CO<sub>2</sub> emissions by installing solar panels. Fifty-seven fluorescent bulbs are used to light the walkway between Factory 1 and Factory 7 for the safety of night workers. Technicians certified for Type 1 and Type 2 electrical work installed solar panels there in order to generate and store electricity during the day and reduce CO<sub>2</sub> emissions. Operation began February 2020, and the panels are expected to produce 26,964 kWh of electricity per year and reduce yearly energy consumption by the equivalent of 7.1 kL of crude oil. The panels can also be used as an emergency power source, so the plant is planning to establish an effective system for energy self-sufficiency as a BCP measure.



#### LED Upgrade Results

The Company has established a plan to upgrade to LED lighting where needed in its five Japanese THK production facilities by the end of December 2020. The following table shows the status and results of the LED lighting upgrades in all Group companies in Japan during the 2019 fiscal year.

Plant	Location	Time frame	Bulbs replaced	Reductions	
				Energy (kWh)	Crude oil equivalent (kL)
Yamagata Plant	Factory 1	10/2019	Fluorescent: 1,339	78,000	20.0
	Factory 2	10/2019	Fluorescent: 289	35,000	9.0
Kofu Plant	Factory 3	9-11/2019	Fluorescent: 993	118,277	30.4
	Factory 4		Mercury: 41		
Gifu Plant	Chubu Distribution Center Gifu Plant	9/2019	Fluorescent: 324 Mercury: 3 Ceramic metal halide: 3	52,567	13.5
Mie Plant	Factory building Office building	9-11/2019	Fluorescent: 585 Mercury: 125	200,369	50.0
Yamaguchi Plant	Entire factory	9-12/2019	Fluorescent: 377 Mercury: 217	218,950	56.3
THK NIIGATA	Entire factory	12/2019	Fluorescent: 48	37,393	3.9
THK RHYTHM Hamamatsu	Cold-forging factory Machine factory Welfare building	12/2019	Fluorescent: 144 Fluorescent: 350 Fluorescent: 104	204,817	529.0
THK RHYTHM Kyushu	Office building Factory 2 (New factory)	5/2019 11/2019	Fluorescent: 195 New: 300	34,593	89.0



# Management Base Involvement in Society

As a good corporate citizen, THK actively contributes to society in the following ways.

1. Establishing a basic philosophy of contributing to society through our business activities
2. Identifying areas to prioritize our efforts and using our corporate resources to promote specific contributions based on our corporate philosophy
3. Coordinating and cooperating with various stakeholders, including NPOs, NGOs, local communities, governments, and international institutions
4. Supporting employees' own community contributions and involvement
5. Participating in the social efforts of the industry and business community

## Working with Vendors

THK's daily operations are performed in accordance with its policy to manufacture products in the optimal location and to conduct its business and improve its technology in a way that meets the needs of its customers.

Throughout its supply chain, from design to sales, THK strives to adhere to social norms and be environmentally conscious in order to create a sustainable society. In accordance with the revised RoHS directive effective in 2021, companies will no longer be able to ship steel, aluminum alloys, or copper alloys that contain lead to Europe. After issuing surveys to each of its suppliers and gathering information, THK is working with suppliers to investigate lead-free alternatives.

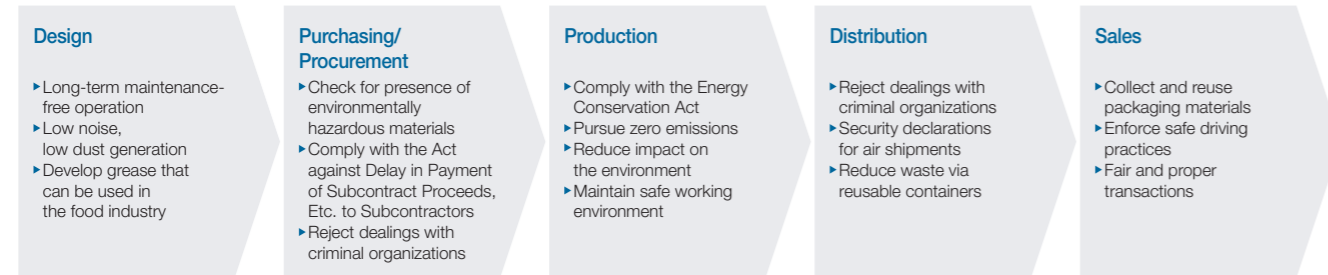
### THK Basic Policy on Procurement

In order to continue to provide THK products that satisfy our customers, we establish good, healthy, and mutually beneficial relationships with our suppliers.

#### Activities

1. Procurement practices emphasizing communication with suppliers. Evaluating and choosing suppliers with thorough consideration for QCDES
2. Fair and equitable dealings in compliance with all pertinent laws and social norms
3. Efforts to minimize costs. Encouraging the active pursuit of cost-saving projects and value analysis initiatives
4. Pursuit of global procurement
5. Implementation of a BCP (business continuity plan)
6. Environmental consciousness through green procurement

### THK's Supply Chain



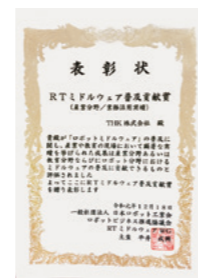
## The Promotion of Robotic Systems

In December 2019, the Japan Robot Association's Robot Business Promotion Council awarded THK the 5<sup>th</sup> Award for Contributions to the Promotion of RT-Middleware for the Company's notable success at promoting the use of RT<sup>1</sup> Middleware<sup>2</sup> robotic systems in industrial factories through the "SIGNAS" autonomous movement control system.

<sup>1</sup> Robotics Technology  
<sup>2</sup> Software that acts as a bridge between the operating system (OS), which performs basic computer operations, and the application software that processes various tasks



Autonomous Movement Control System "SIGNAS"



Award for Contributions to the Promotion of RT-Middleware

## Talent Development

To support future developments, THK is strengthening the technical skills and the ability of every employee to make proposals as appropriate for their role and to respond to globalization. The Company conducts efforts to support such growth of individual employees with the premise of "strengthening the individual."

The Company performs the following activities in alignment with its three growth strategies:

- ▶ Full-scale globalization: Developing talent that can succeed globally
- ▶ Development of new business areas: Conducting the unique 66 Project and the basic technical training program that has been held since 1998
- ▶ Change in business style: Developing talent that utilizes data to quickly adapt to a digital society

### Specific Activities

#### ▶ Developing talent that can succeed globally (supporting growth through international experiences)

In 2018, THK launched a program for employees in Japan who joined the company hoping to gain experience abroad, in which employees spend several months working in another country. Around five employees have participated in this program so far. The Cross-Border Trainee Program, in which participants spend a year at an overseas facility, was established in 2016 based on feedback from employees, and there have been around nine participants so far.

#### ▶ 66 Project

This project began with six employees creating six cross-departmental teams within the Engineering Division as a research activity to lead to new market expansion for THK products. The results from the research teams are presented once a year, and some have led to ideas that are currently in development to become future products.

#### ▶ Basic technical training

To impart technical knowledge that will aid the development of innovative new products and to improve the quality of developed products, lectures are held for new employees entering with technical degrees. Furthermore, THK has developed an internal engineering test and certification program for employees to broaden their knowledge and explore their areas of specialization more deeply as engineers.

#### ▶ Developing talent that utilizes data (supporting digitalization)

To make tasks that use data more sophisticated and increase their added value, the Company began a three-level training program in 2019 that covers basic, intermediate, and advanced skills.

##### Basic

- Using data for one's area of responsibility
- Aggregating and visualizing data, analyzing a root cause, and developing a solution based on an understanding of the entire picture shown by the data and basic methods of visualization and analysis (statistics, etc.)

##### Intermediate

- Promoting the use of data in each department
- Using data analysis to execute the entire process of identifying a departmental challenge, conducting the analysis, and solving the challenge

##### Advanced

- Promoting company-wide data use as an expert, advising others on data utilization, and conducting training sessions to develop talent
- Using data analysis to solve inter-departmental or even more complex challenges

#### ▶ Supporting new employees

New employees in Japan continue their development through on-the-job training at their assigned departments after completing their new hire orientation and a period of practical training at various production facilities. Beginning in 2017, to make sure new hires are staying motivated and confirm that they are not overwhelmed by or anxious about their daily work, the Company has been taking care of those employees by conducting monthly check-ins.

## Subsidiaries & Affiliate

As of December 31, 2019

Subsidiaries	Main Operations	Head Office	Percentage Owned by the Company, Directly or Indirectly (%)
THK INTECHS CO., LTD.	Manufacture and sale of vital machinery components and machinery	Tokyo, Japan	100.00
TALK SYSTEM CO., LTD.	Sale of machinery parts and various types of equipment	Tokyo, Japan	99.00
THK NIIGATA CO., LTD.	Manufacture of ball splines	Niigata, Japan	100.00
THK RHYTHM CO., LTD.	Transportation equipment-related business	Shizuoka, Japan	70.00
NIPPON SLIDE CO., LTD.	Manufacture and sale of slide rails	Tokyo, Japan	100.00
TRA Holdings, CO., LTD.	Holding and management company	Tokyo, Japan	70.00
THK Holdings of America, L.L.C.	Holding and management company	Illinois, U.S.A.	100.00
THK America, Inc.	Sale of the LM Guide, ball screws	Illinois, U.S.A.	100.00
THK Manufacturing of America, Inc.	Manufacture of the LM Guide	Ohio, U.S.A.	100.00
THK RHYTHM NORTH AMERICA CO., LTD.	Transportation equipment-related business	Tennessee, U.S.A.	70.00
THK RHYTHM MEXICANA, S.A. DE C.V.	Transportation equipment-related business	Guanajuato, Mexico	99.99
THK RHYTHM AUTOMOTIVE MICHIGAN CORPORATION	Transportation equipment-related business	Michigan, U.S.A.	100.00
THK RHYTHM AUTOMOTIVE CANADA LIMITED	Transportation equipment-related business	Ontario, Canada	100.00
THK Europe B.V.	Holding and management company	Amsterdam, Netherlands	100.00
THK GmbH	Sale of the LM Guide, ball screws	Ratingen, Germany	100.00
THK France S.A.S.	Sale of the LM Guide, ball screws	Tremblay-en-France, France	100.00
THK Manufacturing of Europe S.A.S.	Manufacture of the LM Guide, ball screws	Ensisheim, France	100.00
THK Manufacturing of Ireland Ltd.	Manufacture and sale of ball screws	Dublin, Ireland	100.00
THK RHYTHM AUTOMOTIVE GmbH	Transportation equipment-related business	Dusseldorf, Germany	100.00
THK RHYTHM AUTOMOTIVE CZECH a.s.	Transportation equipment-related business	Dacice, Czech	100.00
THK CAPITAL UNLIMITED COMPANY	Financing and loan management for affiliated companies in the Americas	Dublin, Ireland	100.00
THK FINANCE UNLIMITED COMPANY	Financing and loan management for affiliated companies in Europe	Dublin, Ireland	100.00
THK (CHINA) CO., LTD.	Holding and management company, sale of the LM Guide	Dalian, China	100.00
THK (SHANGHAI) CO., LTD.	Sale of the LM Guide, ball screws	Shanghai, China	100.00
DALIAN THK CO., LTD.	Manufacture and sale of ball screws, actuators	Dalian, China	70.00
THK MANUFACTURING OF CHINA (WUXI) CO., LTD.	Manufacture of the LM Guide	Wuxi, China	100.00
THK MANUFACTURING OF CHINA (LIAONING) CO., LTD.	Manufacture of the LM Guide	Dalian, China	100.00
THK RHYTHM GUANGZHOU CO., LTD.	Transportation equipment-related business	Guangzhou, China	70.00
THK RHYTHM CHANGZHOU CO., LTD.	Transportation equipment-related business	Changzhou, China	75.00
THK MANUFACTURING OF CHINA (CHANGZHOU) CO., LTD.	Manufacture of LM-related parts, unit products	Changzhou, China	100.00
THK TAIWAN CO., LTD.	Sale of the LM Guide, ball screws	Taipei, Taiwan	100.00
THK LM SYSTEM Pte. Ltd.	Sale of the LM Guide, ball screws	Kaki Bukit, Singapore	100.00
THK RHYTHM (THAILAND) CO., LTD.	Transportation equipment-related business	Rayong, Thailand	70.00
THK MANUFACTURING OF VIETNAM CO., LTD.	Manufacture of the LM Guide, slide rails	Bac Ninh, Vietnam	100.00
THK RHYTHM MALAYSIA Sdn. Bhd.	Transportation equipment-related business	Penang, Malaysia	56.00
THK India Pvt. Ltd.	Sale of the LM Guide, ball screws	Karnataka, India	99.97

Affiliate	Main Operations	Head Office	Percentage Owned by the Company, Directly or Indirectly (%)
SAMICK THK CO., LTD.	Manufacture and sale of the LM Guide	Daegu, South Korea	33.82

## Corporate Data

As of December 31, 2019

### Company Profile

Headquarters	2-12-10 Shibaura, Minato-ku, Tokyo 108-8506, Japan Telephone: +81-3-5730-3911
Established	April 1971
Number of Employees	13,260 (consolidated); 3,891 (parent company)
Month of Ordinary General Meeting of Shareholders	March
URL	www.thk.com
Independent Auditors	Grant Thornton Taiyo LLC

### Stock Information

Common Stock: Authorized Issued	465,877,700 shares 133,856,903 shares
Stock Exchange Listing	Tokyo Stock Exchange (1 <sup>st</sup> Section)
Stock Transfer Agent	Mitsubishi UFJ Trust and Banking Corporation
Number of Shareholders	20,463

### Major Shareholders

Shareholders	Number of Issued Shares Held (Thousands of shares)	Shareholding Ratio (%)
Japan Trustee Services Bank, Ltd. (Trust Account)	12,604	9.95
The Master Trust Bank of Japan, Ltd. (Trust Account)	8,243	6.51
JP MORGAN CHASE BANK 385632	4,570	3.61
Akihiro Teramachi	3,398	2.68
FTC CO., LTD.	2,774	2.19
SSBTC CLIENT OMNIBUS ACCOUNT	2,709	2.14
SMBC Nikko Securities Inc.	2,459	1.94
Japan Trustee Services Bank, Ltd. (Trust Account 5)	2,358	1.86
OPPENHEIMER GLOBAL OPPORTUNITIES FUND	2,000	1.58
STATE STREET BANK WEST CLIENT - TREATY 505234	1,892	1.49

<sup>1</sup> The Company holds 7.286 million shares of treasury stock, but it is omitted from the above list of major shareholders.

<sup>2</sup> The calculation of the shareholding ratio does not include treasury stock.

### Shareholder Composition

Shareholder Type	Number of Shareholders	Number of Issued Shares Held (Thousands of shares)	Shareholding Ratio (%)
Financial Institutions	70	41,859	31.27
Securities Companies	42	4,346	3.25
Other Corporations	290	4,828	3.61
Overseas Institutions	620	58,741	43.88
Individuals and Others	19,440	16,794	12.55
Treasury Stock	1	7,286	5.44

### Stock Price and Trading Volume





**THK CO., LTD.**

URL: [www.thk.com](http://www.thk.com)