ACE Division

Broad Possibilities for THK's Seismic Isolation and Damping Technologies

ACE stands for Amenity Creation Engineering. Guided by the concept of "developing technology to realize creative living spaces for greater comfort," the ACE Division has sought to apply THK's original linear motion technology since its establishment in 2001. The division develops and markets seismic isolation devices and damping systems that protect human life and property from the threat of earthquakes. In addition, steps are being taken to promote increased use of the division's products and technologies in home automation-related devices.

Seismic isolation devices and damping systems help buildings to dampen or absorb the vibrations and shaking caused by an earthquake. THK supplies a broad lineup of such devices, which apply basic technology such as LM guides and ball screws. These products are unique in that they can give adequate earthquake protection to a wide range of structural types, from high-rise buildings and low-rise residences to historical structures such as temples and shrines.

A related area where interest among Japanese companies has grown recently is in the development of business continuity plans (BCPs). Applying THK's original expertise in seismic isolation technology, the division is selling seismic isolation platforms for protecting operating assets such as PCs and servers from damage caused by earthquakes. Compared with rival products on the market, THK's high-performance seismic isolation platforms ensure greater stability when an earthquake hits by preventing any damaging twisting or vertical motion.

In fiscal 2010, the ACE Division continued to undertake sales and marketing activities that emphasized the competitive advantage of THK's products. Thanks largely to these endeavors, the division secured a steady increase in the number of buildings adopting the Company's seismic isolation systems which account for over 60% of the division's total sales.

Bolstering Sales and Marketing Activities Amid Growing Awareness and Needs

Amid increasing general awareness of the need to implement disaster-related contingency measures, THK expects demand for seismic isolation devices and damping systems to continue growing over the long term. The ACE Division will continue to promote the unrivalled benefits of THK's seismic isolation and damping technologies to architectural firms and homebuilders. Moreover, the division will expand sales of new damping systems and technologies that further dampen the vibrations and shaking caused by earthquakes compared with existing products.

The division also aims to promote more widespread product uptake by continuing to organize seminars for consumers to help explain to people the importance of installing seismic isolation devices and damping systems, along with the advantages offered by THK technology and products. The division also plans to make more effective use of earthquake simulation vehicles in marketing activities. Taking into consideration growing overseas interest in seismic isolation devices for residences, steps have been taken to post appropriate details in English on the Company's homepage.

In addition, in an environment where corporate demand for BCP-related products continues to increase, the division is focusing on expanding sales of seismic isolation platforms to protect specific pieces of equipment such as servers. These seismic isolation platforms, which helped protect equipment critical to business operations from the Great East Japan Earthquake that struck on March 11, 2011, attracted high praise from a number of customers. In fiscal 2011, the division will bolster its lineup by adding the TGS-type seismic module which in further strengthening dampening capabilities makes it possible to protect floor and large-scale equipment while actively expanding sales.

An example of residential seismic isolation application

An example of seismic isolation table application (seismic isolation platforms for servers)

FAI Division

Targeting Higher Earnings from the Transportation Equipment Fields

FAI stands for Future Automotive Industry. THK set up the FAI Division in 1999 to expand usage of the Company's products as automotive parts. THK's link balls, which are the division's mainstay product, employ an integral molding process for the production of aluminum die-casts making each link ball much lighter than their conventional steel equivalent. At the same time, the Company's link balls are highly resistant to corrosion and abrasion. This product is attracting keen interest from major automobile manufacturers both in Japan and overseas as the demand for fuel efficient automobiles continues to rise.

In 2007, RHYTHM CORPORATION, an automotive parts manufacturer that boasts superior forging technologies, was included in THK's scope of consolidation as a subsidiary company. In the ensuing period, and with the addition of RHYTHM, the FAI Division has worked diligently to promote business development under an integrated format. In order to further strengthen this collaboration, steps were taken to change the name of RHYTHM to THK RHYTHM CO., LTD. in June 2010. The THK Group is targeting a global presence as an automotive parts supplier through the pursuit of synergies with RHYTHM to enhance the Group's ability to respond rapidly and precisely to changes in the global automotive market.

Pursuing Synergies with THK RHYTHM

Projected major developments in the FAI Division over the medium-to-long-term include significant growth in automobile demand within emerging markets and in the number of major automobile production regions. Another key change is an ongoing trend to make automobiles lighter and more energy efficient, reflecting greater global interest in environmental protection and hybrid and electric vehicles are expected to gain in popularity in the future. Against this backdrop, THK continues to further develop those synergy effects to accrue from its relationship with THK RHYTHM. In this manner, the Company is working to expand the use of its products across a wider spectrum of automotive models.

Among a host of specific benefits to accrue to date, THK has witnessed increased efficiency in the handling of orders. From a management perspective, a fewer number of people are attending to a larger volume of orders. This has been achieved by consolidating the corporate function at THK RHYTHM's head office, and has further helped in building a structure that increases the speed of product use. From the standpoint of sales, proposals with respect to THK RHYTHM's products were implemented using THK's sales channels as well as its established trading relationships with domestic and overseas manufacturers of finished automobiles. Moreover, steps have been taken to consolidate overseas branches and to bolster collaboration among staff. Turning to production, the manufacture of THK's link balls began at THK RHYTHM's head office factory in Hamamatsu and the China factory of THK RHYTHM GUANGZHOU CO., LTD. By leveraging THK's outstanding production technologies accumulated as a leading manufacturer of LM guides together with the production management techniques of THK RHYTHM, a manufacturer of automotive parts, successful efforts have been made to secure highly cost competitive production. On the technology front, subcommittees were established to better promote the interaction and exchange of the technological expertise of both companies. As one example, THK RHYTHM's forging technologies are being applied to the manufacture of LM guides, a core THK product. On this basis, the Group is implementing activities aimed at expanding use in consumer product areas and enhancing the cost competitiveness of LM guides.

In this manner, the Group is working diligently to draw out synergies between THK RHYTHM and THK at each of the management, sales, production and technology levels. As a result, the Group successfully captured demand in tune with the steady increase in the number of global automobile models adopting the Group's products during fiscal 2010. In fiscal 2011, the THK Group will establish THK RHYTHM CHANGZHOU CO., LTD. as a new production base and commence construction of a plant in order to bolster its production structure in the Asia region, which is enjoying demand growth. In addition, operations will commence at a second THK RHYTHM (THAILAND) CO., LTD. plant in Thailand. Looking ahead, the THK Group will further accelerate efforts aimed at developing synergies in order to increase product use while at the same time increasing the take-up of the Company's core products including LM guides and actuators, as it works toward improving profitability in the transportation equipment fields.

An example of link ball application

IMT Division

Expanding the Group's Actuator and Unit Products Businesses

The Innovation Mechatronics Technology (IMT) Division was established in June 2009 with the aim of expanding the Group's electric actuator and unit products businesses, areas which are projected to experience future market growth.

In recent years, amid the growing need for enhanced productivity, calls for higher performance and functionality increased economy in machinery architecture and design, with respect to such industrial machinery as semiconductor and flat-panel production equipment, have seen a shift in demand from individual components to hybrid units. At the same time, extending beyond industrial machinery, momentum is projected to gather toward electric-powered production lines across all areas.

Against the backdrop of this operating environment, the IMT Division is leveraging THK's original concepts and innovative technologies to cultivate new markets. As an initial step, the Division will work to expand the application of electric actuators and hybrid units in industrial machinery. Recognizing the existence of wide-ranging needs in such community and general living environment areas as fitness and nursing care, the Division will endeavor to draw on this latent demand to spur earnings growth. In this regard, every effort will be channeled toward actively developing electric actuators that combine varied and diverse applications while at the same time nurturing the market.

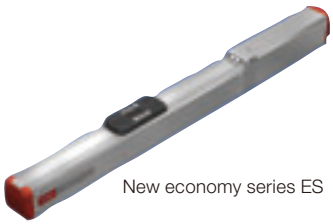
Building an Operating Structure that is Capable of Fulfilling Market Needs

Since its establishment, the IMT Division has taken steps to build a sales system that is capable of accurately and swiftly responding to wide-ranging customer needs. Moreover, the Division has adhered strictly to a policy of human resource education and training. In specific terms, the Division has combined its individual electric actuator catalogues into a single comprehensive package while also putting in place an information website complete with video presentations. Through these means, considerable emphasis has been placed on enhancing the convenience of its production presentation tools. In order to better respond to customer inquiries and requests for technical advice, the IMT Division has put in place a specialized electric actuator customer support service. From a human resource education and training perspective, the Division is implementing broad training programs to help gain a higher level of technical expertise.

In fiscal 2010, its second year of full-fledged activity, the IMT Division made the effort to reconfirm customer needs while analyzing market trends. While reflecting the results of these efforts in the Division's product development activities, steps were also taken to upgrade and expand the Division's development and sales structure. Complementing these initiatives, new products were introduced during various exhibitions.

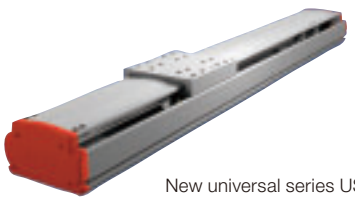
Looking ahead, the IMT Division will bolster its product lineup with the aim of boosting sales. At the same time, work will be undertaken to strengthen the Division's operating structure in Japan. Turning to its overseas operations and efforts to promote Full-Scale Globalization throughout the Americas, Europe, and Asia, the Division will actively build local operating bases incorporating production and sales focusing mainly on Asia where significant market growth is forecast.

Electric Actuators Series

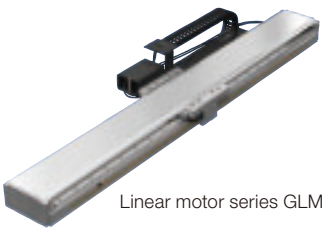

New economy series ES


New economy series EC

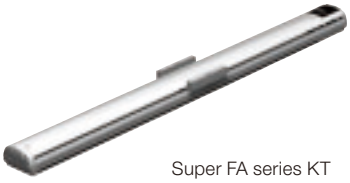

New driver controller TSC


New universal series US


Compact series SKR


Linear motor series GLM


Clean series CSKR


Super FA series KT