

HIWIN - Machine tool makers march toward Industry 4.0

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Taichung City-based Hiwin Technologies Corp. develops robotics systems for use in various industries. (Chin Hung-hao)

Machine tool makers in central Taiwan's Taichung City are ramping up efforts to utilize smart manufacturing technologies in their production processes and product development so as to boost their international competitiveness.

These moves are in line with the government's plan to transform the country into a global manufacturing hub for intelligent machinery and necessary as industry members increasingly face threats from regional competitors.

"Adopting intelligent automation equipment allows us to tackle labor shortages, improve productivity and enhance product quality," Deta International CEO Alen Hwang said. "Smart systems are helping us maintain stable business growth despite the global economic slowdown."

Two years ago, Deta International, the world's largest manufacturer of automatic tool changers, began using intelligent manufacturing systems with sensing, computing and machine-to-machine communication capabilities.

All over the world, advanced economies are exploring technologies for the fourth industrial revolution, also dubbed Industry 4.0, a burgeoning era of digitally connected manufacturing that combines artificial intelligence, big data management, smart automation and the Internet of Things.

Hiwin Technologies Corp. is a major manufacturer of precision machinery components. The company is the world's second-largest supplier of motion control devices, and has produced robotics systems used in myriad industries.

"With our long-term experience in producing key components for automation systems and in view of growing demand for smart factories, our company is striving to provide Industry 4.0 solutions," said Enid Tsai, president of Hiwin. "We believe such devices can help our clients increase their product value and quickly respond to emerging trends and production requirements."

Quaser Machine Tools Inc., another major Taichung-based company, produces cutting-edge machining centers. "We have to develop high-precision intelligent devices if we want to stay ahead of our competitors," said Samuel Shieh, president of Quaser. "Our five-axis machining centers, for instance, can perform complex tasks and handle small-volume runs of advanced products."

Taiwan is home to some 13,000 machinery factories, employing about 470,000 people. Many of these facilities are located in the so-called Golden Valley, an area spanning roughly 60 kilometers around the base of Mt. Dadu in Taichung. The region has the highest density of machinery plants in the world.

The government plans to turn Taichung into a hub of the smart machinery industry by offering support in such areas as international cooperation, land acquisition, marketing, research and development and talent recruitment. Bolstering this industry is one part of the government's five major industrial development objectives. The other industries targeted for promotion are biotech and pharmaceuticals, national defense and green technology, in addition to the Asian Silicon Valley initiative. (KH-E)

Write to Taiwan Today at ttonline@mofa.gov.tw