

Beckhoff

German automation leader at the heart of revolutionary innovation

Germany is one of the world's most international economies after the USA, China, and Japan, owing to its national focus on innovation and international exports. Since 1990, Germany's total foreign investment abroad has increased five-fold to more than €1T, and, in 2020, Germany's investment in research and development rose to €106B, enabling the country's economic core of medium-sized companies to maintain excellent performance throughout the Covid-19 pandemic.

Germany boasts the most automated economy in the EU and accounts for 33% of Europe's automation inventory. Globally, Germany ranks fifth after China, Japan, Korea, and the USA for the number of industrial robots in use and is a major supplier to the Chinese and American manufacturing markets. Despite the impact of the Covid-19 pandemic, the automation industry is experiencing a boom, with an order intake increase of 38% year-over-year as of April 2022 and integrated assembly solutions the biggest gainer.

Founded in 1980, Beckhoff is one of the largest privately held automation companies and a global standard-setter for PC-based control technology. Started in a garage by its owner, Hans Beckhoff, Beckhoff is now one of Germany's hidden champions (publicly less well-known international market leaders). The company supplies more than 20 industries, with subsidiaries across 40 countries; employs more than 5000 people, including 2000 engineers; and has a worldwide market share of about 3%.

Beckhoff is renowned for its Industrial PC-based control technology, building its first IPC for control applications as early as 1986. The fusion of information and automation technology proved incredibly successful for applications of all kinds of machinery, such as a tool-laser for packaging and semiconductor machinery. The same technology also controls modern production lines for batteries, electric engines, and smartphones. In other application areas, wind turbines, stage automation, as well as scientific research are also controlled intelligently by Beckhoff systems.

To serve these different markets, Beckhoff offers a powerful automation platform, including all standard sequential and motion control, as well as vision, artificial intelligence, scientific engineering, and Industry 4.0 functionalities. With Beckhoff, engineers have the most advanced tools at their fingertips for implementing state-of-the-art functionality and efficiency in their projects.

Beckhoff sees itself as a technology company and is constantly improving automation technology - often through revolutionary quantum leaps. For instance, the Beckhoff bus terminal, the EtherCAT communication



Hans Beckhoff
Managing Director

protocol, and many other Beckhoff inventions have become world standards.

Beckhoff's factories remained open throughout the Covid-19 pandemic, maintaining the company's strong output and supply levels. "From our point of view, it was a difficult but extremely successful period. Our employees and engineers bravely kept production running smoothly and ensured that all customer orders were fulfilled," says Hans. As a testament, Beckhoff saw an increase in sales by nearly 30% in 2021, becoming a €1B company in the process, and has maintained a full order book for the entirety of 2022 so far.

Hans attributes much of his company's historic success to a strategy of "harmonic growth." Whilst driving expansion through buying small companies, Beckhoff focuses more on the technology they can offer than their market share. "We're growing in a way that the company can sustain. Over the past 22 years, we've grown at an average rate of 15% per year. Our business model is highly scalable, and we're now looking to scale up further," says Hans. By the end of this year, Beckhoff will have grown a further 20-23%

and is on track for €1.45B worldwide revenue.

Looking to the future, Beckhoff has invested in a sales channel designed to connect directly with customers and is constantly increasing its production capacity to drive new innovative market-changing products to market - with the final aim to become a €3B company by 2030. Recent examples include Beckhoff's XTS and XPlanar motion systems, which provide advanced linear and planar motion functionalities and allow for entirely new machine concepts. Another example is the MX-system, which will replace the conventional building of electrical cabinets!

At present, Beckhoff is strengthening its international network to increase its global presence further. Beckhoff already conducts two-thirds of its business internationally.

Customer satisfaction lies at the heart of Beckhoff's business philosophy, and the company offers bespoke customisation options across its product range. Beckhoff strives to provide the most intelligent, cutting-edge automation technology available on the market and manages this without sacrificing any of the traditional family values upon which the company is built. "Our focus on trust-based business and long-term relationships is why so many worldwide specialists want to work with us. As a high-tech company with a traditional approach, we are unique in our industry," says Hans.

For Hans, Beckhoff's future success is not only good for business but good for the environment. As climate change continues to build tensions in the form of increased demand for limited resources, technological advances will play a major role in resolving this. The company thus feels it has a duty to help to educate the future generation of engineers and enable German industries to set the standard for future solutions. "Automation is an important base technology for all parts of our society, and our powerful system is perfectly suited for all these different applications," says Hans, adding: "The engineers have to save the world! Energy and resource reduction has to be achieved. Precise and intelligent automation is the key to it."

BECKHOFF New Automation Technology