

# Beckhoff short profile

Beckhoff implements open automation systems based on PC Control technology. The product range covers Industrial PCs, I/O and Fieldbus Components, Drive Technology and automation software. Products that can be used as separate components or integrated into a complete and seamless control system are available for all industries. The Beckhoff New Automation Technology philosophy represents universal and open control and automation solutions that are used worldwide in a wide variety of different applications, ranging from CNC-controlled machine tools to intelligent building automation.

## **Worldwide presence on all continents**

The central divisions of Beckhoff, such as development, production, administration, distribution, marketing, support and service are located at the Beckhoff Automation GmbH & Co. KG headquarters in Verl, Germany. Rapidly growing presence in the international market is taking place through subsidiaries and branch offices. Through worldwide cooperation with partners, Beckhoff is represented in 75 countries.

# Beckhoff milestones

## Innovative products and a full range of services

Since the foundation of the company in 1980, continuous development of innovative products and solutions using PC-based control technology has been the basis for the continued success of Beckhoff. Many automation technology standards that are taken for granted today were conceptualised by Beckhoff at an early stage and successfully introduced to the market.

- 1982:** P1000 – single-board motion controller
- 1986:** PC Control – first PC-based machine controller
- 1988:** S1000 – software PLC/NC on PC (DOS)
- 1989:** Lightbus – high-speed fieldbus based on optical fibre
- 1990:** All-in-one PC motherboard
- 1995:** Bus Terminal – fieldbus technology in terminal block format
- 1996:** TwinCAT – real-time software package under Windows with PLC and motion control functions
- 1998:** Control Panel – remote IPC Control Panels
- 1999:** Fieldbus Box – the I/O system in IP 67
- 2002:** CX1000 – modular Embedded PCs for DIN rail mounting
- 2003:** EtherCAT – real-time Ethernet fieldbus system
- 2005:** TwinSAFE – integrated functional safety
- 2005:** AX5000 – EtherCAT Servo Drive
- 2007:** Industrial Motherboards – made in Germany
- 2008:** XFC – eXtreme Fast Control
- 2009:** HD Bus Terminals – 16-channel terminals in 12 mm
- 2010:** TwinCAT 3 – eXtended Automation Technology
- 2011:** AM8000 – Synchronous Servomotors with One Cable Technology
- 2012:** second generation of Control Panels – Panel PCs and Control Panels with multi-touch technology
- 2012:** XTS – eXtended Transport System
- 2014:** Many-core machine control
- 2014:** AX8000 – multi-axis servo system
- 2014:** EtherCAT plug-in modules – Bus Terminals for circuit boards
- 2015:** EtherCAT P – One Cable Automation
- 2015:** TwinCAT HMI – for platform-independent user interfaces
- 2015:** TwinCAT IoT – for simple cloud communication
- 2015:** TwinCAT Analytics – recording and analysis of process data
- 2016:** EtherCAT measurement modules – system-integrated high-end measurement technology
- 2017:** Process technology – system-integrated solutions for explosion protection requirements
- 2017:** C60xx – the generation of ultra-compact IPCs
- 2017:** AMP8000 – Distributed Servo Drive system
- 2017:** TwinCAT Vision – machine vision integrated into automation technology
- 2018:** EtherCAT G – ultimate I/O performance
- 2018:** XPlanar – flying motion
- 2018:** Embedded PCs – with ARM Cortex™ M7 processor
- 2019:** C70xx – multi-core Industrial PCs in IP 65/67
- 2019:** TwinCAT Machine Learning – scalable, open and in real time
- 2019:** TwinCAT Cloud Engineering – smart engineering directly in the cloud

# Beckhoff technology sectors

## **Beckhoff | The Automation Company**

Beckhoff offers comprehensive system solutions in different performance classes for all areas of automation. Beckhoff control technology is scalable – from high-performance Industrial PCs to mini PLCs – and can be adapted precisely to the respective application. TwinCAT automation software integrates real-time control with PLC, NC and CNC functions in a single package. All Beckhoff controllers are programmed using TwinCAT in accordance with the globally-recognised IEC 61131-3 programming standard. With TwinCAT 3 C/C++ and MATLAB®/Simulink® are available as programming languages in addition to IEC 61131-3.

## **Beckhoff | The IPC Company**

Beckhoff supplies the right Industrial PC for every application. High-quality components based on open standards and the rugged construction of the device housings mean that the Industrial PCs are ideally equipped for all control requirements. Embedded PCs make modular Industrial PC technology available in miniature format for DIN rail mounting. In addition to their application in automation, Beckhoff Industrial PCs are also ideally suited to other kinds of tasks – wherever reliable and robust PC technology is required.

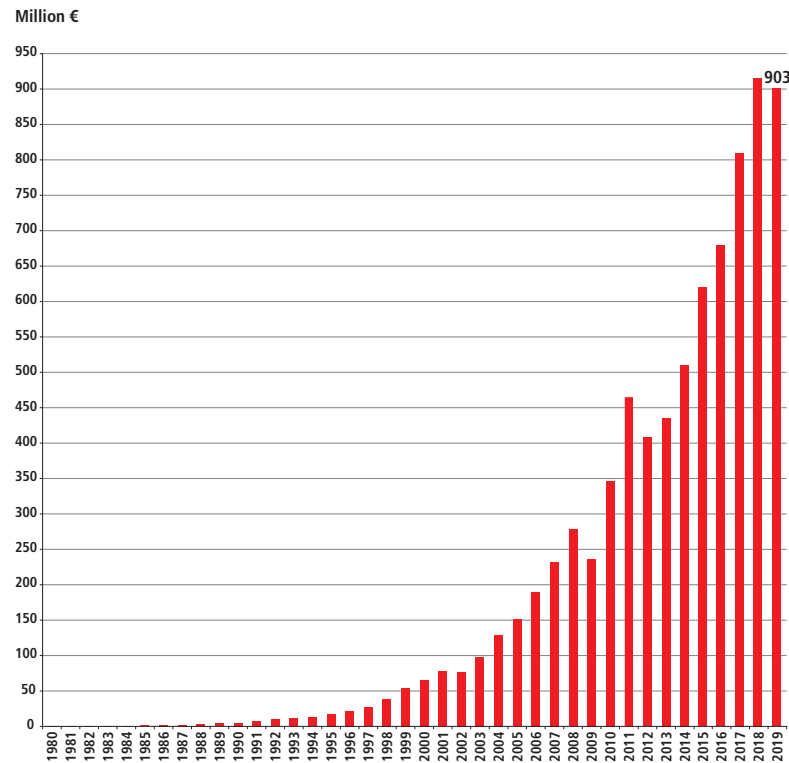
## **Beckhoff | The I/O Company**

Beckhoff has the right technology for every signal and every fieldbus. Beckhoff supplies a complete range of Fieldbus Components for all common I/Os and over 15 major fieldbus systems. With the Bus Terminals in protection class IP 20, and the Fieldbus Box modules in IP 67, a complete range is available for all important signal types and fieldbus systems. In addition to conventional bus systems, Beckhoff offers a complete EtherCAT I/O range for the high-speed Ethernet fieldbus based on EtherCAT Terminals, the EtherCAT Box and the EtherCAT Plug-in Modules.

## **Beckhoff | The Motion Company**

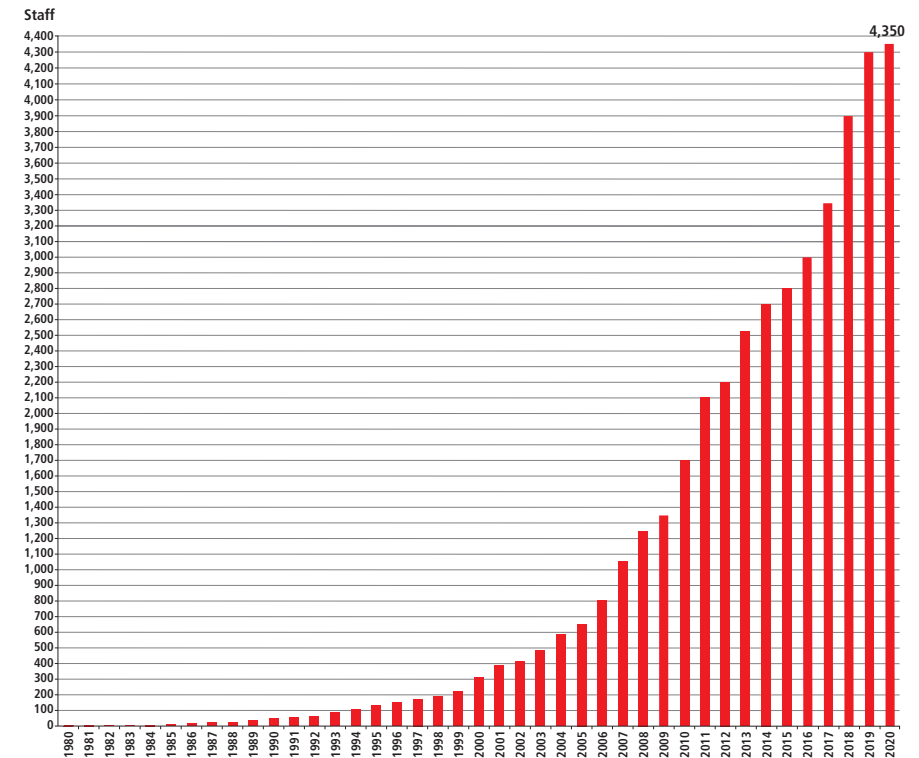
In combination with the motion control solutions offered by the TwinCAT automation software, Beckhoff Drive Technology represents an advanced and complete drive system. PC-based control technology from Beckhoff is ideally suited for single and multiple axis positioning tasks with highly dynamic requirements. The AX5000 Servo Drive series and the AX8000 multi-axis servo system with high-performance EtherCAT system communication offer maximum performance and dynamics. Servomotors with One Cable Technology, which combines power and feedback system in a standard motor cable, reduce material and commissioning costs. The drive system XTS (eXtended Transport System) replaces classic mechanical systems by innovative mechatronics. It enables individual product transport applications with a continuous flow of material.

# Beckhoff at a glance



## Sales 2019

- 903 million EUR (- 1%)
  - export share: 65%



## Staff (04 | 2020)

- 4,350 worldwide
  - 3,080 in Germany
    - 2,750 in the headquarters in Verl, Germany
    - 1,750 engineers
    - 124 trainees in Verl, Germany
    - 102 students in Verl, Germany

# Beckhoff worldwide

## Global presence

- Beckhoff subsidiary companies and representative offices in 39 countries
- worldwide cooperation partners in 75 countries

## Beckhoff subsidiary companies and representative offices

Beckhoff Automation Pty. Ltd. (Australia)

Beckhoff Automation GmbH (Austria)

Beckhoff Automation bvba (Belgium)

Beckhoff Automação Industrial Ltda. (Brazil)

Beckhoff Automation Ltd. (Canada)

Beckhoff Automation (Shanghai) Co., Ltd. (China)

Beckhoff Automation s.r.o. (Czech Republic)

Beckhoff Automation ApS (Denmark)

Beckhoff Automation Contact (Egypt)

Beckhoff Automation OÜ (Estonia)

Beckhoff Automation Oy (Finland)

Beckhoff Automation Sarl (France)

Beckhoff Automation Kft. (Hungary)

Beckhoff Automation Pvt. Ltd. (India)

Beckhoff Automation Pte. Ltd. (Indonesia)

Beckhoff Automation Ltd. (Israel)

Beckhoff Automation S.r.l. (Italy)

Beckhoff Automation K.K. (Japan)

Beckhoff Automation Sdn. Bhd. (889044-H)  
(Malaysia)

Beckhoff Automation SA de CV (Mexico)

Beckhoff Automation B.V. (Netherlands)

Beckhoff Automation Limited (New Zealand)

Beckhoff Automation AS (Norway)

Beckhoff Automation Sp. z o.o. (Poland)

Beckhoff Automation OOO (Russia)

Beckhoff Automation Pte. Ltd. (Singapore)

Beckhoff Avtomatizacija d.o.o. (Slovenia)

Beckhoff Automation (Pty) Ltd (South Africa)

Beckhoff Automation Co., Ltd. (South Korea)

Beckhoff Automation S.A. (Spain)

Beckhoff Automation AB (Sweden)

Beckhoff Automation AG (Switzerland)

Beckhoff Automation Co., Ltd. (Taiwan)

Beckhoff Automation Pte. Ltd. (Thailand)

Beckhoff Otomasyon Ltd. Şti. (Turkey)

Beckhoff Automation FZE (United Arab Emirates)

Beckhoff Automation Ltd. (United Kingdom)

Beckhoff Automation LLC (United States of America)

Beckhoff Automation Pte. Ltd. (Vietnam)

## Distributors (Europe)

Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Greece, Iceland, Ireland, Kosovo, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Montenegro, Portugal, Romania, Serbia, Slovak Republic

## Distributors (worldwide)

Argentina, Bahrain, Bangladesh, Brunei, Cambodia, Chile, Colombia, Ecuador, Fiji, Jordan, Kuwait, Laos, Lebanon, Melanesia, Myanmar, Oman, Peru, Philippines, Polynesia, Qatar, Saudi Arabia, Sri Lanka, Sub-Saharan, Uruguay

## Companies of the Beckhoff Group

ADL Embedded Solutions GmbH (Germany)

Fertig Motors GmbH (Germany)

Schirmer Maschinen GmbH (Germany)

Smyczek GmbH (Germany)

# Beckhoff contact

## Headquarters

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State: May 2020

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