

PR292026

AMB

August 20, 2026

Page 1 of 3

Beckhoff at AMB 2026: Hall 2, Booth 2C10

Greater competitiveness in machine tool manufacturing with TwinCAT and PC-based control

From September 15 to 19, 2026, Beckhoff will be appearing at AMB in Stuttgart to demonstrate how metalworking processes can be optimized across the board with PC-based control. The spotlight will shine on TwinCAT 3 as an all-in-one CNC, new function libraries for HMIs, and modular technology packages, such as those for additive manufacturing and EDM.

The machine tool industry is under constant pressure to make machining processes more efficient, more flexible, and at the same time more cost-effective. Beckhoff addresses these requirements with its integrated PC-based control architecture, which combines PLC, CNC, motion control, and HMI into a single automation software solution. In this sense, TwinCAT 3 functions as an all-in-one CNC system with an integrated cycle library, allowing machine builders to tailor their control functions precisely to the specific application.

Based on the proven TwinCAT 3 HMI Server, TwinCAT 3 CNC HMI Base (TF5310) enables intuitive, CNC-specific user interfaces. A comprehensive choice of technology-specific control elements is included, such as axis display, screw and speed override, jog and inching functions, a contour editor, plus a tool data and zero offset table. Users can customize the HMI to suit their needs or use pre-designed templates. The real-time connection is provided by an extension that aggregates data from TwinCAT PLC and CNC into a common data model. Machine builders thus benefit from a

PR292026

August 20, 2026

AMB

Page 2 of 3

customizable user interface and can significantly speed up the engineering process using templates.

The CNC HMI Simulation Server (TF5320) provides additional process reliability by integrating the 3D simulation control element with real-time data from TwinCAT CNC. Based on the current tool data and the blank definition stored in the NC program, the simulation runs either synchronously with the actual machining or in fast-forward mode.

At AMB 2026, Beckhoff will also showcase modular technology packages for TwinCAT 3 CNC. Extended Interpolation (TF5263) allows for programming and interpolation of two independent paths within a single CNC channel – including tool radius compensation – while Online Adaptation (TF5262) adjusts the interpolation path, tool compensation, and feed rate through the integration of customer-specific TcCOM modules. For additive manufacturing, AM Plus (TF5291) provides interfaces for predictive consideration of future contour elements and dynamic data to synchronize external process variables such as laser power or powder supply. EDM Plus (TF5292) is specifically designed for electrical discharge machining.

Beckhoff also demonstrates just how flexibly modern machine concepts can be implemented with the TwinCAT Runtime for Linux®. It enables the distribution of runtimes and functions in containers, thereby providing scalable, hardware independent virtual controls. Last but not least, the exhibition will also showcase the XPlanar planar motor system with floating movers, as well as the MX-System, a modular system for control cabinet-free automation.

➔ www.beckhoff.com/amb

PR292026

August 20, 2026

AMB

Page 3 of 3

Press picture:



Picture caption:

With TwinCAT 3 CNC HMI Base and CNC HMI Simulation Server, Beckhoff is presenting two new function libraries for CNC-specific user interfaces at AMB 2026.

Press kit:

www.beckhoff.com/media/downloads/press/2026/pr292026_beckhoff.zip