



Beckhoff at Motek 2012: Hall 9, Booth 9108

XTS: higher flexibility and lower engineering effort for handling and assembly

Beckhoff will present its PC- and EtherCAT-based automation solutions for assembly and handling technology at Motek 2012, which takes place from 8 to 11 October in Stuttgart, Germany. In addition to product innovations, including new multi-touch panels or the new AM8000 servomotor generation, the main focus at Motek will be on the new XTS drive system (eXtended Transport System) from Beckhoff. XTS integrates feeding, handling and assembly in a single system and enables totally new and customizable machine concepts.

XTS combines the advantages of two proven drive principles: rotary and linear systems. The motor is completely integrated together with power electronics and displacement measurement. One or more movers – wireless, mobile carrier modules – can be moved highly dynamically at up to 4 m/s on an almost arbitrary and flexible path configuration.

Optimized material flow for assembly applications

XTS can be used in many different ways in the most diverse industries. It is predestined for high-speed material handling: pushing products,

adapting product spacing, reducing or increasing product speed, clamping and moving products, transporting and discharging products, or manipulating products. An irregular product flow is isolated and transferred at a constant interval and constant speed to the next workstation.

XTS enables more compact and efficient machine designs for handling, feeding and assembly. In applications such as conventional rotary transfer machines all machining stations are subject to the same basic cycle. In other words, the whole system has to operate based on the cycle of the slowest station. XTS enables the processing steps to be controlled individually and independent of each other. For example, a second station could be used for parallel handling of the slowest process. XTS optimizes feeding. The total machine output is no longer limited by the slowest working cycle. XTS can also be used as an alternative to a delta robot, in order to synchronize an irregular product stream and then push the product into packaging or transfer it to the next processing step.

The XTS drive system (eXtended Transport System) from Beckhoff offers new options and increased flexibility for the design and construction of automatic assembly and handling machines.

**Flexible product changeover:
standardized machine – adaptation through programming**

In assembly applications, machines are often used for a wide range of different tasks. In many cases, product changeovers involve significant intervention in the mechanical systems. XTS offers new opportunities and increased flexibility for the design and construction of automatic assembly and handling machines. XTS can be used as quasi-standard hardware, and new or additional handling and assembly options can be implemented based on software. This means that the machine manufacturer may only have to build a standard machine, which could then be used for processing a wide range of products with minimum need for mechanical adaptations. Complex processes are transferred into the software.

In this way, even special-purpose machine manufacturers can achieve larger production runs, since standard machines can be adapted to different applications through programming of software parameters. The time to market can be reduced significantly, and implementation of the solution requires less engineering effort: special-purpose machine manufacturers only need to modify their machines slightly and program the associated software, so that they can respond faster to customer orders. The same benefits apply to end customers: fewer machine types, fast product changeover and fast time to market.

XTS – the new linear motor principle

XTS is a modular mechatronic system that can be configured to match the required geometries. The machine volume is utilized to the maximum, since the outward and return path as well as the curves can be used for the active material transport. The movers can accelerate, brake, position and synchronize themselves. They can take up absolute positions and positions relative to each other; they can group themselves and accumulate; they can create clamping forces in motion, drive through curves and along straights, recover energy through regenerative braking and use both the return paths and the outward paths for transport purposes.

Further Information:

www.beckhoff.com/motek

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