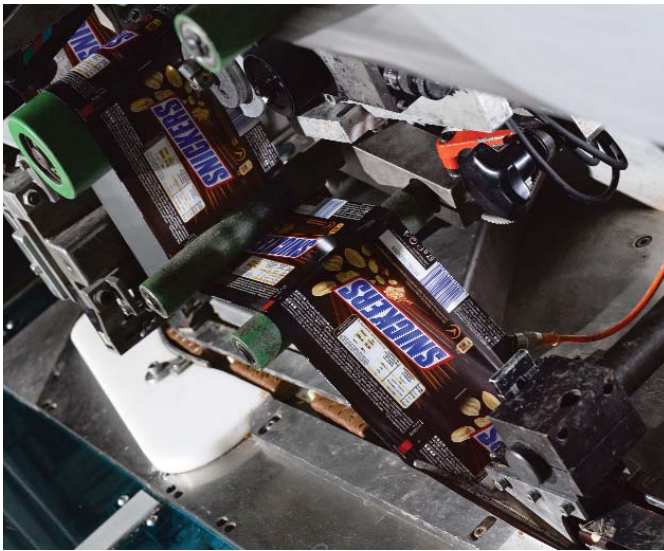


# Digitax ST Servodrive boosts throughput of packaging machine



At the world's largest chocolate factory in Veghel in Holland, Mars Nederland B.V. is constantly on the search for increased efficiency, with refinement of production machinery designed to increase throughput, eliminate bottlenecks and reduced costs.

So, when it came to very specific requirements for a servodrive for a show-box packaging machine on the 'Snickers' production line, Mars' Improvement Engineer Kees Kleijn asked the advice of Control Techniques, one of the main drives suppliers to the plant.

"We use both Epsilon EP and Unidrive SP extensively," explains Kees Kleijn. "But for this application Control Techniques suggested their most recent servo product, Digitax ST and this has proved to be ideal. I really like the fact that all Control Techniques drives are flexible in operation and are completely compatible as retrofits with other equipment, such as PLCs, drives or motors that may already be fitted."

The machine is designed to pack Snickers bars (or Mars bars or Snickers Cruncher bars) into 'show-boxes' for use at the point of sale. The same machine can be used for different sizes of show-boxes, holding either 24 or 36 bars.

Bars are fed down the production line to the packaging machine, whose main motor is controlled by a 4kW Unidrive SP in closed loop, which is synchronized to the previous machine on the line. Bars are rotated 90° and moved into the 'buncher' section – controlled by the new Digitax ST servodrive – that feeds bars onto a chain feed

#### KEY BENEFITS

- 15% INCREASED THROUGHPUT
- FLEXIBLE INTEGRATION FEATURES
- FULL FUNCTION MOTION CONTROLLER
- COMPLETELY COMPATIBLE FOR RETROFIT
- SAFE TORQUE OFF

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conveyor with separators that have to be precisely positioned between the bars to prevent any product damage. From here the bars are stacked together in sixes, over three rows and fed into the show box, front and back, with a Control Techniques Epsilon EP servo-controlled pusher (boxes of 24 have just two rows).

“The buncher application requires servo control for speed and accuracy,” says Kees Kleijn, “but we needed additional features too. We chose the Digitax ST Plus unit that features a full function motion controller within the drive to give us the flexibility we needed – and it uses the same programming that we had written during development using Control Techniques’ SyPT software on a Unidrive SP drive. During shutdown we have complete safety because of the Safe Torque Off feature and the drive retains its memory, so that it restarts exactly where it left off, without requiring moving everything back to the start point. This saves considerable downtime and labour both during development and in production. I’m amazed at just how much is packed into this small package!”

The machine throughput has been increased 15% per minute, principally due to the increased speed of the buncher and Mr Kleijn is considering ways to improve speeds further by upgrading the filling section.

The Digitax ST range has been designed to meet the requirements of machine designers and system integrators – a compact servo drive with an unmatched range of flexible integration features, optimised for servo applications

requiring high peak torque, exceptional dynamic response, faster installation and start-up as well as ease of integration. Four product variants make up the range at launch – Base, Indexer, EZ Motion and Digitax ST Plus.

Top of the range is the Digitax ST Plus that features a full functionality motion controller, optimised for high performance machine cells requiring drive-to-drive networking, cam profiling and synchronised motion. The on-board drive-to-drive networking links multiple axes and enables true distributed control. The drive’s advanced motion features are programmed in a flexible IEC6113-3 software development environment using PLC-open motion function blocks within Control Techniques’ SyPTPRO software.

“Above all, it is the cross platform compatibility offered by Control Techniques drives that makes my work of development so much easier,” adds Mr Kleijn “and the excellent support that I get from the Control Techniques’ Drive Centre in Rotterdam.

Mars’ factory in Veghel, in the southern part of the Netherlands, is the world’s biggest chocolate factory. In addition to producing products for the Dutch market, markets across Europe and beyond, the Veghel factory also services many other Mars factories with semi-finished products such as chocolate and peanuts. The site also houses their Dutch snackfood and petcare sales divisions. Brands include Mars®, Bounty®, Twix®, Snickers®, Milky Way®, M&M’s®, Maltesers®, Balisto®, Dove®, Celebrations® and Mars Delight®.



For further information please visit  
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