

Zünd presents Q-Line with BHS180

Altstätten, Switzerland, April 19, 2023 – Zünd, the leading manufacturer of digital cutting technology, is expanding its machine portfolio with a powerful system solution. The company has raised the bar for industrial, pallet-to-pallet production with the new Q-Line with BHS180 Board Handling System and UNDERCAM. Its smart machine-control technology and high level of automation make the Q-Line with BHS180 the leading digital cutting solution in its class.

Zünd is further expanding its portfolio of powerful digital cutting solutions. The new Q-Line with BHS180 complements Zünd's current offering and raises the bar for industrial, efficient, pallet-to-pallet production. The new Q-Line with BHS180 board handling system is an integrated system solution. It is specifically intended for the demands of highly automated, industrial finishing of printed boards for displays and packaging. The individual components – board feeder with UNDERCAM, the new Q-Line cutter generation, and the off-load unit – are optimally coordinated and provide previously unattainable levels of productivity. Together, they offer incredible cutting accuracy and reliability. Consequently, they make it easier than ever for packaging and display manufacturers to automate their cutting operations and achieve maximum efficiency. In doing so, the Q-Line with BHS180 helps manufacturers optimize their production processes and increase their overall productivity.

A new machine concept for the ultimate in performance

The Q-Line with BHS180 is a comprehensive, advanced system solution that takes digital production to a new level. It offers exceptional performance for any display and packaging manufacturer. Each component of this advanced digital cutting system is replete with exciting new features. In combination, they enable an unsupervised, uninterrupted production workflow and provide users with an enormous potential for savings, irrespective of company size. The bottom line is that this constitutes an investment that can help customers sustainably improve their competitive edge.

The all-new machine concept behind the Q-Line with BHS180 has redefined performance in many respects. Working together, the new machine components generate an impressive speed of up to 2.8 m/s. The new substructure for Q-Line cutters is made from extremely stable concrete. It ensures incredibly smooth operation and optimum cutting precision, even at extremely high speeds. The beams are made of carbon fiber-reinforced plastic, which makes them very light and exceedingly strong. This means even demanding materials can be processed at top speeds and the highest quality levels. Unprecedented performance also manifests itself in various other aspects, including in the impressive acceleration of up to 2.1g made possible by the new, linear drive system. Jobs can therefore be processed at even greater speeds which, in turn, leads to significantly shorter cycle times per job.

The Q-Line with BHS180 comes with the latest generation of modules and tools. AUTOMO L is all about force and provides a creasing pressure of up to 50 kg. This makes it the perfect carrier module for creasing with large crease wheels such as the CRETO 150. AUTOMO E excels particularly in the speed in which it lowers and lifts the tools in use. Each beam is equipped with a total of four modules: two AUTOMO E modules, one AUTOMO L, and one fixed INCAM sensor module to capture registration marks, QR codes, and material edges.

The tools

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UNITO is the tool used with centered and off-centered drag knives and is suitable for processing materials up to 5 mm thick. ELOSTO is available in two different variations for cutting operations requiring electric motor-driven oscillation. If creasing wheels are to be used, CRETO is the required tool. CRETO 24, CRETO 61, and CRETO 150 differ slightly in their design and can accommodate crease wheels of different types and diameters. PERTO is the tool used in conjunction with perforating wheels. DRAWTO is for marking and drawing on an extremely wide range of materials.

Digital tool management

The new tool-management system for Q-Line with BHS180 makes digital finishing more efficient than ever before. Q-Line cutters come standard with an automatic tool-changing system. The TOMAC Tool Management Client takes care of tool management from start to finish, ensuring easy and, above all, automated processes. Tool management digitally links the tools with presets, which saves valuable time in setup and tool changes.

Automated pallet-to-pallet production

The Q-Line with BHS180 removes bottlenecks in digital cutting by eliminating the need for manual material handling. Automatic material transport from pallet to pallet maximizes the productivity of the production workflow and prevents idle time.

A customizable, transparent production workflow also ensures smooth and reliable order processing. The system captures the information stored for each job using QR codes and thus ensures an intelligent, error-free, QR code-based production workflow. It enables processing a variety of different jobs in the stack. Processing begins automatically.

The UNDERCAM integrated in the board feeder captures the precise location of the image printed on the board. It reliably identifies any distortions in the print, compensates for them, and perfectly matches the cut to the print every time. With every scan, the software adjusts the cut paths to the printed image, on the fly and in real time, significantly reducing the cycle time for each job.

During the feeding process, sensors capture the edges of the material, and the board is correctly aligned. If the board is not within tolerance, the board feeder grabs the board once more and realigns it so that it can be fed onto the cutter without interruption. This allows even imperfectly stacked materials to be processed, which further streamlines the production workflow. To ensure reliable board and sheet separation, redeveloped suction cups can be individually adjusted for different materials via Zünd Cut Center – ZCC.

The innovative design of the off-load unit allows bridge-free cut boards to be stacked easily and cleanly. Different jobs are stacked slightly offset, which enables finished jobs to be easily and neatly removed for downstream processing. Any faulty boards are also set aside with an offset and can easily be detected as the pallet is removed.

The new Q-Line with BHS180 is an all-in-one solution. In addition to the hardware, it also comprises a complete set of services, intuitive and straightforward software, such as the latest Zünd Cut Center – ZCC operating software, Version 4.0, or the Zünd Connect production monitoring and analyzing tool, as well as a wide selection of consumables. All components were developed with a consistent focus on maximizing machine performance and productivity while decreasing setup times. And first and foremost, they have already been extensively and successfully tested by various beta customers, ensuring outstanding results at maximum speeds.

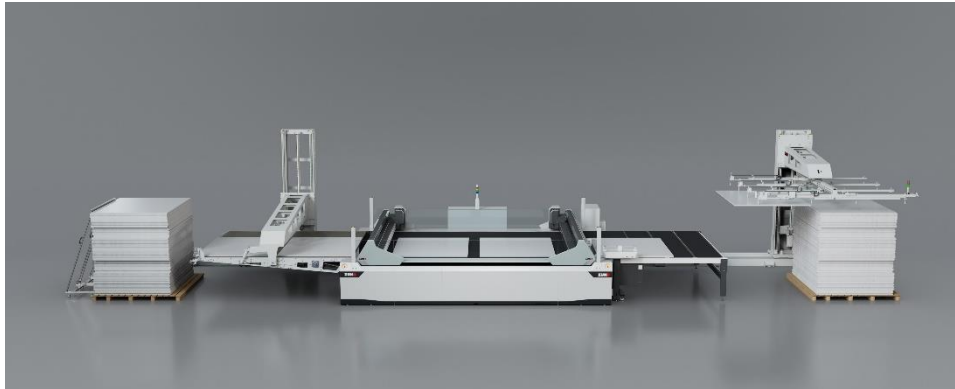
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Cutter sizes

In an initial phase, the new Q-Line with BHS180 is available as a dual-beam system in three different sizes. Users select the appropriate machine size for their specific requirements, no matter whether their production involves one-offs, small batches, or high-volume orders. The Zünd Cutter Q 32-32 D has a working width of 3.2 m, the Q 22-32 D a working width of 2.2 m, and the Q 18-32 D a working width of 1.8 m.

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**About Zünd Systemtechnik AG**

Zünd Systemtechnik AG, is a globally operating, family-owned Swiss manufacturer of highly advanced digital cutting systems. The Zünd name stands for Swiss quality and is synonymous with precision, performance, and reliability. Zünd has been developing, producing, and marketing modular cutting systems since 1984 and is one of world's leading manufacturers.

The Zünd customer base includes service providers and manufacturers in the graphics, packaging, garment, and leather industries, as well as in textile and composites applications. Zünd maintains global headquarters in Altstätten, Switzerland, where the company's R&D, marketing, and production facilities are located. Besides its own sales and service organizations, Zünd Systemtechnik relies on a worldwide network of long-standing, independent distribution and service partners.

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