



Ronald Reddmann

The Trio Has Become a Quintet – Finishing 4.0 at its Best

In addition to the [Prinova Digital saddle stitcher](#), which was presented as a world premiere, the End sheet feeder/Vareo PRO/InfiniTrim line, which was supplemented with a [De-Stacker and sorting solution](#), was the second attraction on the Muller Martini stand at the [Hunkeler Innovationdays](#). Thanks to the two new systems at the beginning and end of the line, you can increase efficiency and optimize logistics in the digital production of softcover and hardcover books in very short runs.

This is not the first time that the Vareo has taken center stage at the HID. After all, there was a great deal of amazement among experts when Muller Martini presented the 1350-cycle perfect binder, which is predestined for digital and offset printing, with its unique operating concept to a wide audience in Lucerne in 2015. Its most important technological revolution: since each of the three clamps has their own servo drive and is therefore individually driven, each processing step can also be individually adapted.

How the duo became a trio

Four years later at the HID, Muller Martini showed the trio of face sheet feeder, Vareo and [\(InfiniTrim\)](#) (the 2000-cycle trimming robot with revolutionary drive, transport and trimming concept had made its debut a year earlier at drupa) for industrial production of hardcover book blocks in edition 1. This was the first time that a highly automated end sheet feeder was also used in a lower performance class and has since ensured that book blocks with end sheets and mull stripes can be produced inline in top quality even in very short runs. The

„unbeatable duo“ has thus become an [„indomitable trio“](#) and, as if by magic, the softcover range has also been extended to hardcovers.

New with De-Stacker and sorting solution

Therefore, now the trio becomes an inline quintet. At this year's HID, Muller Martini will be presenting an end sheet feeder/Vareo PRO/InfiniTrim line supplemented by a De-Stacker solution for greater efficiency when destacking book blocks at the beginning of the line and an intelligent sorting solution for flexible, fully automated sorting of books at the end, tailored to individual customer requirements.

The De-Stacker placed at the entrance to the line separates the book blocks, which are usually digitally printed, folded and pre-glued, from the top of the pile. This gives you high process reliability and high efficiency. You can reliably separate blocks with variable thicknesses (controlled via barcode) as well as with constant thicknesses.

At the infeed of the end sheet feeder, the barcode on each individual book block is scanned. In addition to the job ID and various format data, information is stored as to whether the book block is a softcover or a hardcover. This means that all units in the line, right through to sorting, know exactly what they have to do with the respective book block. Both softcover and hardcover book blocks can be within the same pile and be mixed in terms of sequence.

Shorter delivery times

In the case of softcover, the end sheet feeder only transports through, and in the Vareo PRO, the cover is applied when a positive match is made. If a hardcover is detected at the infeed of the end sheet feeder, side gluing and endpapers are applied accordingly, and in the Vareo PRO, the application of a mull strip takes place. A scan and print unit downstream of the Vareo PRO automatically prints a barcode on the mull strip for hardcover book blocks so that the book can be further identified.

This so-called mixed mode, patented by Muller Martini, not only saves any sorting effort in advance, but also ensures ever-shorter delivery times at the end. Because if problems arise in one of the subsequent process steps, the already completed production of softcover brochures and hardcover book blocks gives you time to react in time if necessary.

Fully automated sorting of mixed orders

The new sorting solution integrated into the Connex workflow system from Muller Martini at the end of the line comes into its own in a Smart Factory, particularly when you trim the book blocks – down to edition 1 – from several Vareo PRO perfect binders into finished end-products in a single InfiniTrim trimming robot. Whether separating hardcover and softcover jobs, different end customers, products that still need to be foiled, or high urgency: the new intelligent transport control system ensures the desired sorting of the colorful mix of jobs leaving the cutting robot in a fully automated process. „With this new logistics application, we are offering you another important building block for automating production even further – that's Finishing 4.0 at its best!

New VPN-Flex nozzle: up to 30 percent less adhesive loss and up to 20 percent higher productivity

The [Vareo PRO](#), which replaced the Vareo in 2021, also got a technological upgrade at this year's HID. It features a completely new VPN-Flex nozzle system developed together with Robatech for variable thickness production. No matter what the thickness of a product: Excess PUR adhesive is no longer squeezed out of the nozzle, nor does it have to be wiped off, because these situations do not even arise with the new system.

The new technology thus ensures significantly more efficient use of the adhesive with up to 30 percent less glue loss and, conversely, up to 20 percent higher productivity, as production can be continuous. In addition, the new system has a simpler design, particularly in the area of the application head, and can also be easily maintained by a semi-skilled machine operator.

We have also revised the LAK glue application control system, which now uses both new hardware and software components and new algorithms to enable even more precise evaluation of the glue application on the block back.

Yours,
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Muller Martini