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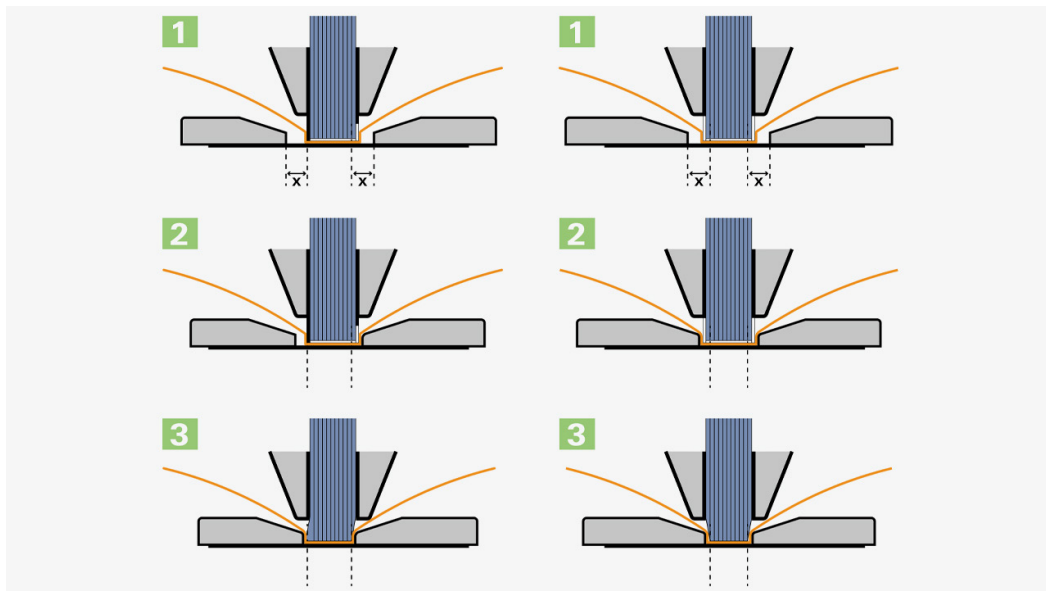
Perfect Binders: the Right Pressure For Every Performance Class

In this blog, I would like to focus attention on an important detail process in the demanding perfect binding production: the effective spine and side pressing of the book block. It plays a decisive role in ensuring that the quality of perfect bound products is consistently high.

From a purely product-related point of view, it is a matter of flawlessly joining the cover or backgluing to the spine of the book, with the lateral pressure on both sides and the spine pressure giving the perfect bound product both a distinctive and stable spine shape. In terms of process technology, all developments in the area of pressing in recent years have focused on optimizing the quality of the product and the automation of the process. Muller Martini uses different processes depending on the performance class.

Symmetrical pressing

Today, all Muller Martini pressing stations ensure that the book block is pressed symmetrically. This means that the front and rear pressing plates reach the book block synchronously and press at the same time. This prevents it from shifting and the book block from deforming. You can also see this in the graphic below.



In contrast to conventional perfect binders (left 1-3), the pressing on Muller Martini perfect binders is carried out symmetrically (right). The front and rear pressing plates reach the book block synchronously (2) and press simultaneously (3), resulting in angular and stable book spines. The symmetrical pressing motion is designed to produce beautiful book spines with a wide variety of papers and covers in just one pressing operation.

Digital production with the Vareo PRO

With the [Vareo PRO](#), each clamp is driven by its own servo motor for the first time. This perfect binder thus combines the advantages of a discontinuous drive – namely the longest possible pressing time – with the higher output of a continuously driven system. The duration and pressure of the cover pressing can be precisely adjusted to the respective product on the touchscreen.

Thanks to the innovative individual drives of the clamps, the book block is always pressed on during the stop phase for the maximum possible duration to produce a perfectly pressed, square-edged spine. Cover and glue layer thickness are automatically taken into account. This ensures first-class binding quality combined with constant production output – which is unique in this performance class.

Medium performance: moving station on the Alegro

Since the clamp in the [Alegro](#) perfect binder moves in contrast to the Vareo PRO, we use a servo-controlled MC (Motion Control) cover pressing station here. The pressing station has the same speed as the clamp that runs over it. This means that the products are pressed centrally for an exceptionally long time – more than twice as long as with other perfect binders.

So that the station knows what needs to be done, all the data is now defined in the job ticket. Depending on whether it is a folding or a softcover brochure, the pressing station adjusts itself automatically accordingly. If you then want to increase or reduce the pressing pressure during production, fine corrections can be made easily at each station. This means that production does not have to be interrupted, which saves time and money.

Medium output: long synchronization phase with the KM 610.M

The [KM 610.M](#) perfect binder (up to 5000 cycles per hour) features active cover alignment to the trailing edge of the fixed clamp. This means that the cover alignment is independent of the clamp chain (chain elongation). The pressing station on the KM 610.M has a long synchronization phase to the clamp. Another advantage of the KM 610.M is that the pressure bars can be released and fixed at the push of a button thanks to a pneumatic system. The machine operator therefore no longer needs any tools for this.

High-performance brochures production with the Publica PRO

The [Publica PRO](#) produces at 12,000, 15,000 or 18,000 cycles per hour and has an upstream pressure roller and two pressing stations downstream. The Publica PRO12 with the optional mull station operates according to the synchronized system with two superimposed movements comparable to the Alegro and KM 610, with maximum possible synchronization phase.

In the PRO15 and PRO18 versions, the pressing station in the perfect binder works in the circulation system, which guarantees very smooth running even at high production speeds.

In the circulation system, the perfect binder works only with a short point contact at the spine of the product and also laterally. The table and the swinging arms each make a circular movement. The machines are always equipped with two pressing stations and process the products mainly with EVA gluing, for which the point contact is sufficient. And what you may also be interested in: The Publica PRO's press-on station with a circulation system is significantly cheaper than the press-on station with a synchronized system.

Yours

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