

# Alegro Perfect Binder

In a Class of Its Own



# Success with Motion Control Technology

**The market for perfect bound products is changing. Runs for print products made on traditional offset presses are becoming increasingly smaller. At the same time, print runs in digital printing are on the rise, requiring the right technology in finishing.**

**The requirements for perfect binding machines in the mid-performance range are therefore quite diverse. On the one hand, the jobs must be processed efficiently and cost-effectively, and on the other hand, it is essential to have a wide range of applications in print finishing.**



**The Alegro Perfect Binder with the innovative Motion Control Technology meets these high demands. It enables the shortest job-processing times for increased profitability. At the same time, it forms the basis for a very wide range of applications in which the Alegro stands out with its special sizes and**

**production methods. The machine concept is extremely flexible and can be adapted to changing requirements.**

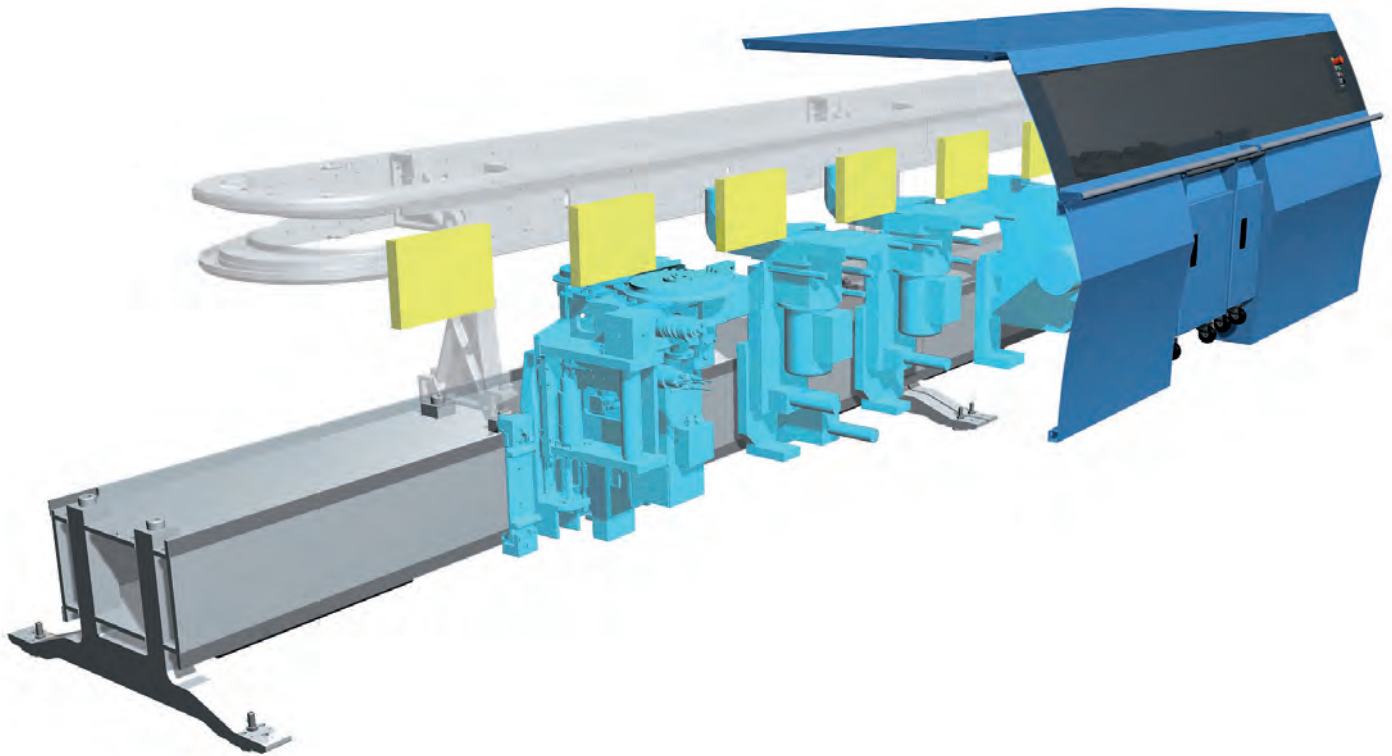
**With its full automation and networking function, the Alegro is well-equipped for the demands of digital printing.**



**The Benefits of the Alegro Perfect Binder with Motion Control Technology:**

- ▶ Shortest job processing times
- ▶ Maximum productivity
- ▶ Wide range of sizes
- ▶ Future-oriented flexibility and wide range of application
- ▶ Maintenance-friendly design

# Motion Control Technology – Short Production Times and High-quality Products



## **Stations with Separate Drives**

With the intelligent machine concept, all stations are driven directly and individually controlled. The settings can be applied directly to the product ensuring highest quality. Motion Control optimizes the motion sequences of the individual process steps that correspond to each product, reduces changeover times and rapidly achieves maximum output levels.

## **Highly Flexible Machine Concept**

The separate drives, base frame and the easy mounting of the stations enable a highly flexible machine concept, which allows the Alegro to be adapted to changing requirements. Motion Control provides the Alegro with the high level of flexibility required for optimal, future-oriented softcover and book block production.

## **Sturdy Construction for Precise Settings**

The massive, sturdy construction provides the basis for the highest level of precision and absolute reproducibility of jobs. The setting positions are driven to the pre-defined target values without any deviations. With Motion Control, the need for readjusting the settings is reduced to a minimum.

## **Maintenance-friendly Design**

By implementing separate drives, there is no need for shafts, gear boxes or chains to drive the stations. That considerably reduces the need for lubrication and maintenance. Motion Control reduces operating costs and increases production reliability.

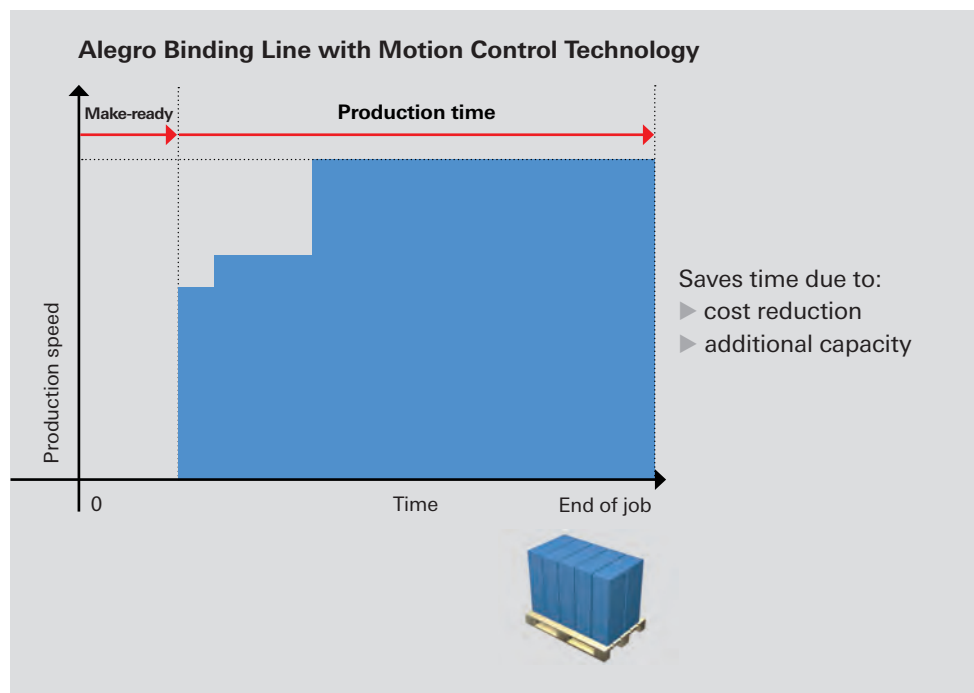
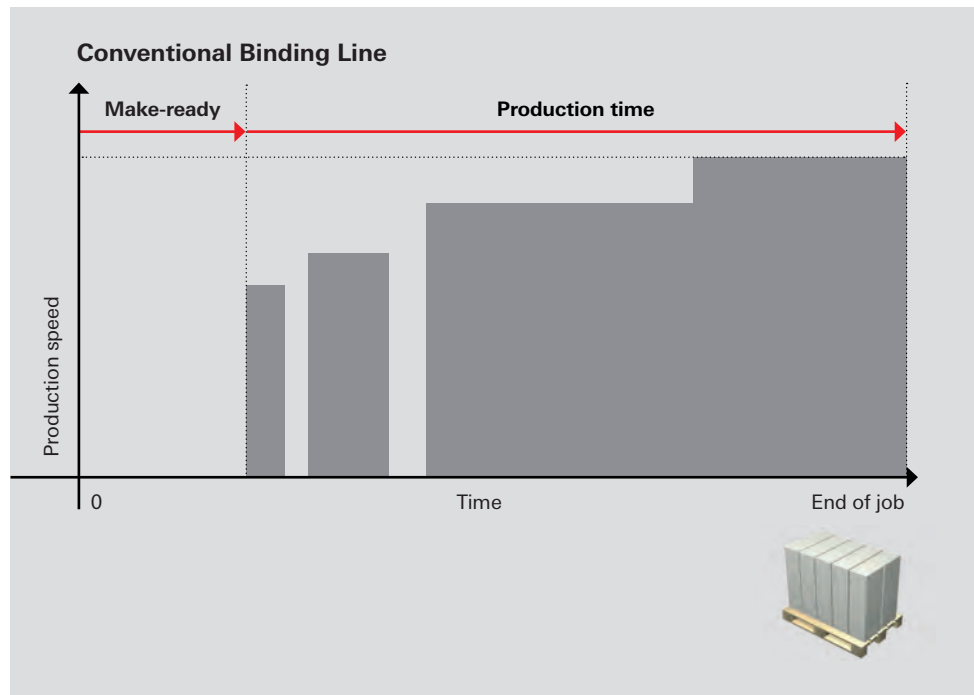
# Shortest Processing Times – a Combination of ...

## ... Minimal Changeover Times

Thanks to the efficient handling of production data and the high degree of automation, the Alegro perfect binding line can be changed over in record time.

## ... and the Shortest Production Times.

With Motion Control, all stations are set quickly and precisely. Fine adjustments can be made while the machine is running, saving valuable time. This allows the Alegro perfect binding line to make products at the desired speed and in first-class quality. The Motion Control Technology reduces the processing time of each job, lowering costs and generating additional production capacity.



# Minimal Changeover Times ...



## Quick Data Entry

The machine operator centrally controls the entire production using the **Commander**, which can retrieve the production data from the Book Data Center **BDC** or the **Connex** workflow system. As the subsequent jobs are prepared while the machines are running, changeover times are reduced to a minimum.

## Book Data Center BDC

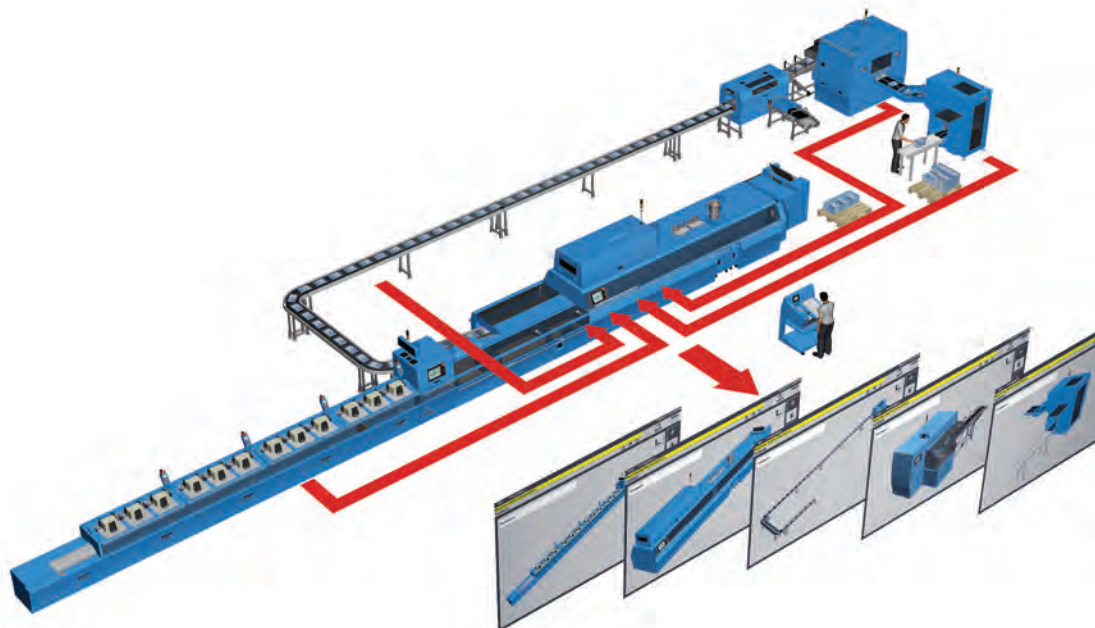
With the electronic Book Data Center **BDC**, book dimensions are measured precisely and made available to the individual machines on the line. Supplementary production data can be entered directly on the Commander. This time-saving process leads to uniform data among various users and eliminates input errors.

## Alegro with Full Automation

Thanks to full automation of the size settings for book thickness and hang-out, all stations on the Alegro can be changed over with the utmost precision. Interfaces to the perfect binder, such as the transfer elements and the lay-down device, are automatically adapted to the book thickness. This allows the Alegro perfect binder to be changed over in less than 90 seconds for softcover production.

## Commander

The Commander supports users in operating the completely networked perfect binding line. The ability to access the visualization of all line aggregates from a central command position enables efficient operator intervention. This eliminates unnecessary travel paths and changeover times are reduced at the same time. In addition, messages or warnings for individual machines are automatically displayed on all touch screens on the line. The machine operator can access line status information from any point on the line.



... and Shortest Production Times.



**Simple Operation  
with Job Management**

Previously produced jobs can be uploaded with the job management function. The data, which is already optimized, is precisely set and the fine adjustments are limited to a minimum.

**On-the-fly Fine Adjustments**

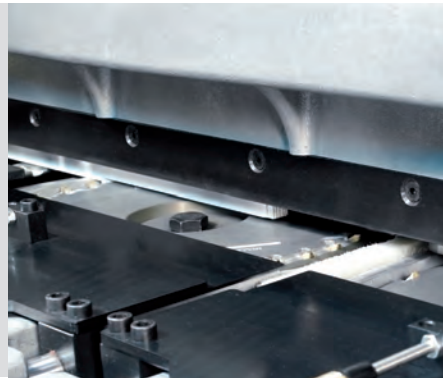
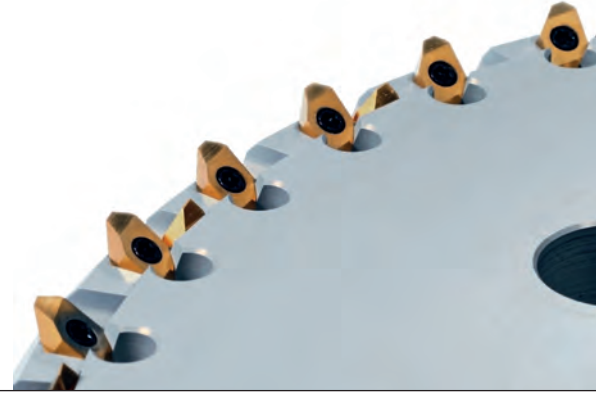
Thanks to the full automation of the Alegro perfect binder, fine adjustments can be made to any station while the machine is running. These manual interventions can be made easily and quickly on the Commander or the HMI panel on the cover feeder and are directly implemented thanks to the Motion Control Technology.

The desired production speed is achieved in the shortest time possible and the production time for each job is reduced considerably.

**Maximum Process Reliability**

The geometry of the product infeed has been optimally designed on the Alegro. The infeed belt speed can be set in such a way that products always enter the clamps most gently. This ensures the highest level of process reliability, and the desired production performance can be attained quickly.

# Maximum Product Quality



## Milling Station

The pressing discs can be set eccentrically to each other without the need for tools, which allows for separate pressing forces to paper and clamps. This way, square, parallel book spines can be produced. For thread-sewn book block production, the milling station can be lowered in seconds. The additional pressing of the book blocks with the pressing discs results in a perfect book spine shape.

## Spine Preparation Stations with Proven Technology

The Alegro perfect binder uses the same spine preparation technology as the higher output Bolero perfect binder. Depending on the model, the Alegro can have up to three spine preparation stations, whereas the third optional station can be a perpendicular brush. This station removes paper dust with the greatest efficiency and provides for high page pull values.

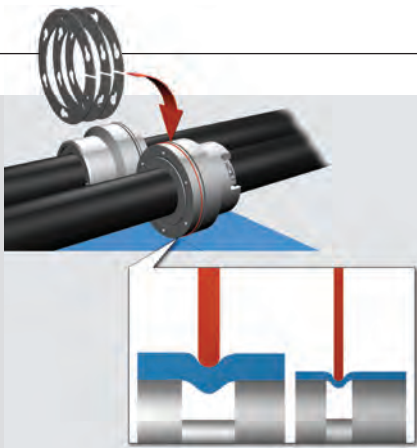
As with the mill, the spine preparation tools have reversing blades, eliminating the need for grinding or alignment. The Fibre Rougher ensures that the fibres are exposed in an optimal manner even for low-fibre paper for maximum page pull values. For a short changeover to produce thread-sewn book blocks, the stations are lowered quickly and automatically.



## Cover Scoring

The massive scoring shafts and scoring tools with a large diameter ensure dead straight scoring with equal depth and optimal hinge effect. This creates most attractive softcover products.

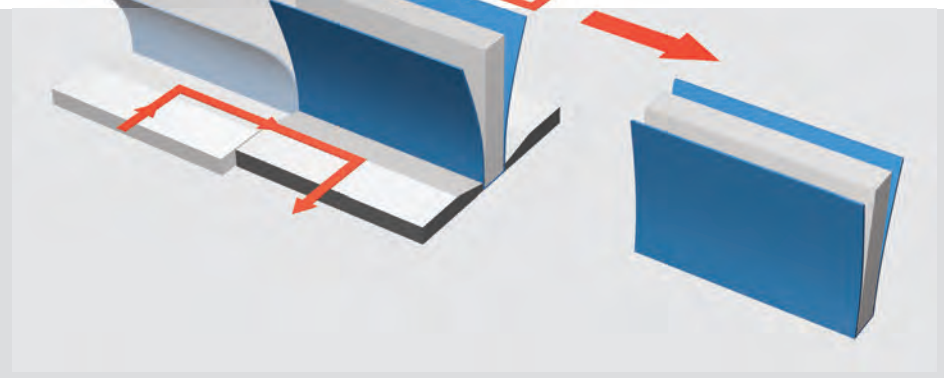
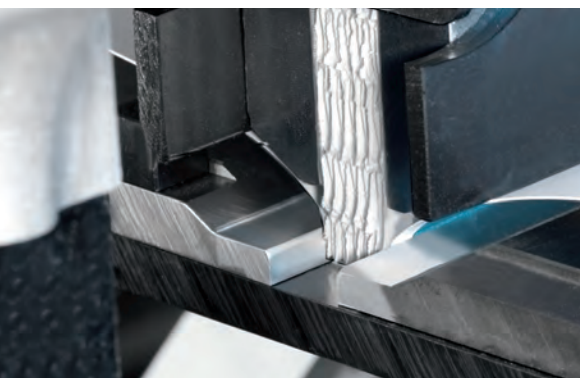




The scoring tools can be used flexibly, as they can be adapted to all types of covers. The slot width can be adjusted easily from the outside.

The scoring tool is a disc that can be changed quickly whenever necessary to match its strength and diameter to the cover thickness, grammage or finishing. In addition, the spacing between the scoring of the book spines can also be set quickly.

For special binding methods the scoring tools can easily be installed and removed.



### **Nipping Station MC**

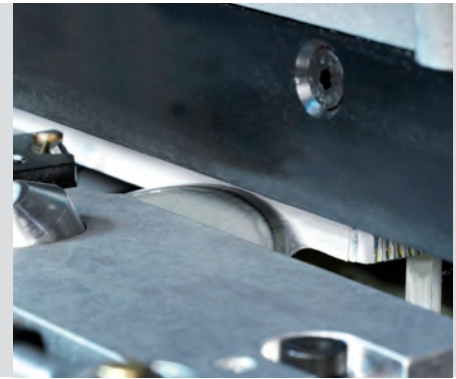
The servo-controlled nipping station MC (Motion Control) is designed for optimal book spine shapes. Decades of experience in softcover production by Muller Martini has gone into the design

of this new technology. The products are not only centrally pressed for an extraordinary great length of time, they are also then symmetrically pressed, enabling beautiful book spines to be produced from a wide range of paper-

and cover-stocks in just a single pressing operation. The press timing can be adjusted while the machine is running to ensure perfectly-shaped book spines.

# Wide Range of Applications and Formats

Spot Gluing



## Hotmelt Spine Glue Station

The spine glue stations with two application rollers and a backspinner are enhanced by the Motion Control Technology. Due to the directly controlled doctor blades, the pre-defined glue film is applied to the book spine with the utmost precision.

Gluing patterns for spot gluing can be easily selected on the controls, saving valuable time.

## VPN Spine Glue Nozzle for PUR Application

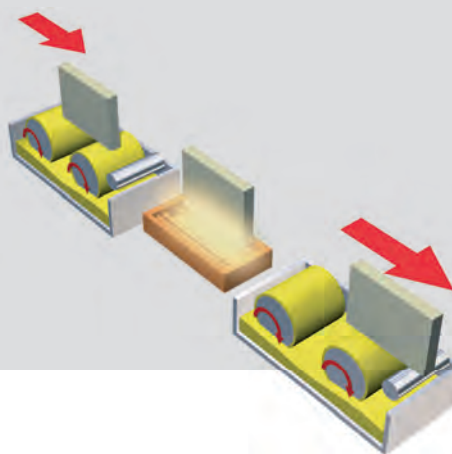
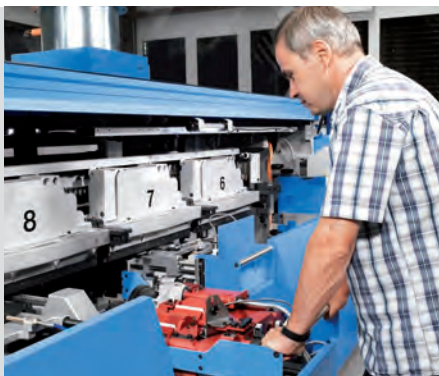
The VPN spine glue nozzle together with the Melting On Demand block pre-melter form a closed PUR application system. Only the necessary amount of adhesive is melted. The VPN application unit can be used to apply the PUR glue film at a consistent, minimum thickness and with exact glue cut-off. The distinguishing features of PUR products are first-class, square-edged book spines with perfect layflat characteristics.

## Hotmelt Side Gluing Unit

The values set in the controls for the glue film lengths and widths are transferred precisely onto the book block. Both settings can be fine-tuned on the Commander while the machine is running.

## SPN Side Glue Nozzle for PUR Application

The SPN side gluing unit can be used for processing PUR adhesive. It ensures high-quality products and creates a versatile print product design.



## Primer Two-Shot

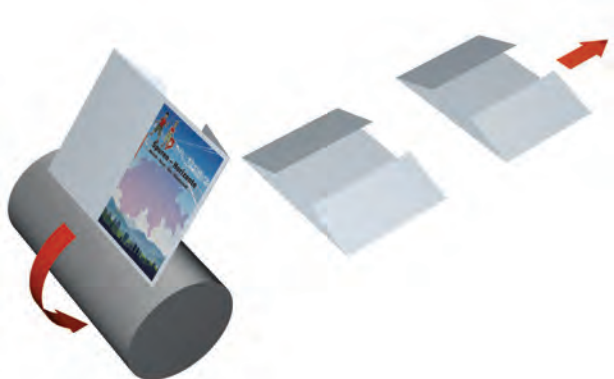
With the 25-clamp Alegro perfect binder, combined gluing processes such as PVA/hotmelt can be used. For intermediate drying an infrared dryer with several individually activated heaters is used.

## PUR Spine Glue Station

The specially-coated dual roller pot has been optimized for processing PUR and is easy to use. For cleaning purposes, the mobile gluing unit can simply be removed from the machine.

## PVA Spine Glue Station

Depending on the application, the cold glue is applied using two applicator rollers or one applicator roller with a counter-rotating brush.

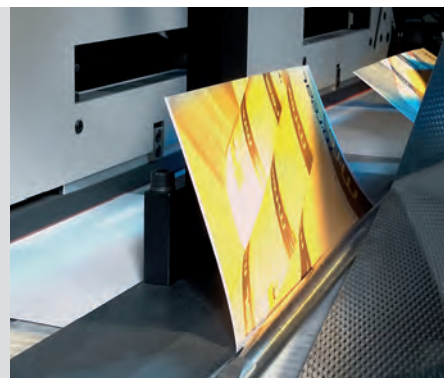


#### Drum Cover Feeder

The drum cover feeder allows for a fast product change with no delay to the overall changeover process. Covers can be loaded ergonomically into the hopper once the size change has been completed. Thanks to individually adjustable suckers, any type of cover can be processed seamlessly. Gatefold covers cannot be opened when fed around the drum, allowing them to be processed without the need for interchangeable parts and without having to apply glue spots.

#### Stream Cover Feeder

For long print runs, large capacity stream cover feeders can also be used.



#### Gate Folding Station

With the fully-integrated gate folding station and a face trimmer, the Alegro perfect binding line can be optimally expanded for the in-line production of brochures with flaps.



#### Large Size Range

The Alegro can process a huge range of sizes. Through the production of ultra-small sizes or of products in DIN A3 format, the Alegro user stands out from the competition. Even products in the maximum size of DIN A4 oblong can



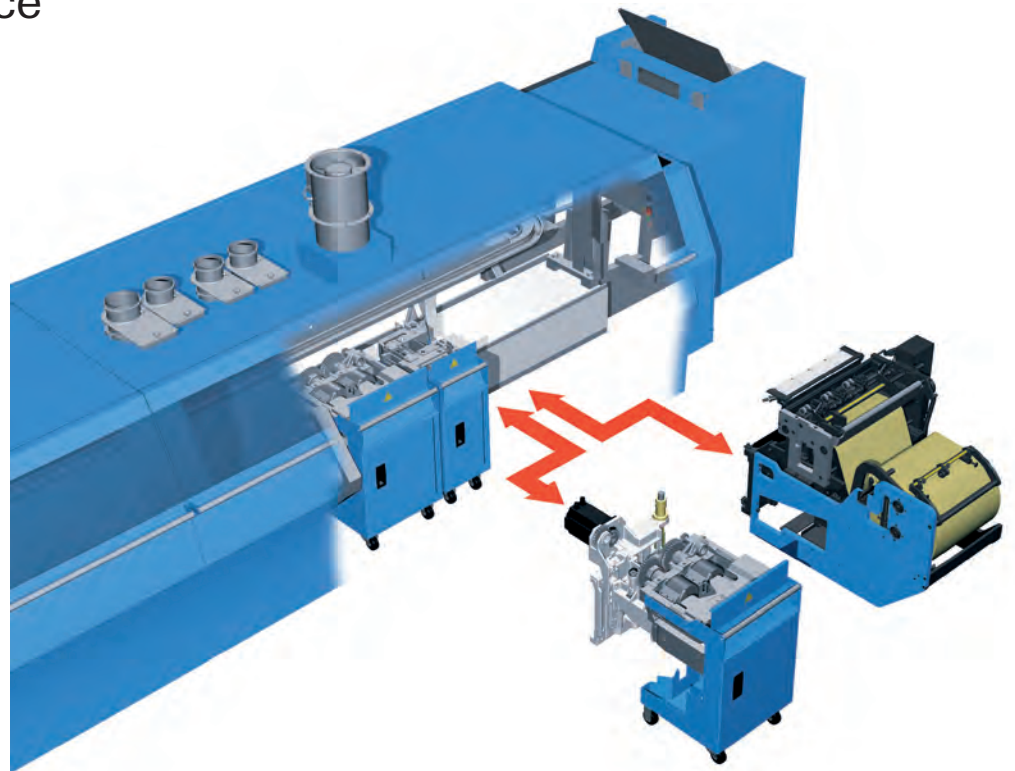
be run in two-up production, which reduces production costs.



#### Mull Station

The mull station is highly automated, making your changeover times significantly shorter compared to a traditional perfect binder. Controlled by the Commander, the liner strip is accurately centered on the book spine.

# Unique Flexibility and Easy Maintenance



## Adapts to Your Daily Needs

Thanks to an extremely flexible machine concept, the configuration of the Alegro can be adapted easily to changing production and customer requirements.

- ▶ An Alegro perfect binder with 19 clamps and two gluing units can be adjusted to a configuration with one mull station for the production of book blocks or layflat books.



- ▶ Conversely, the perfect binder with a mull station can be changed over quickly to a machine with two gluing units. With this configuration, a faster changeover from hotmelt to PUR is possible, or products in the two-shot process can be produced.



## Future-oriented Concept

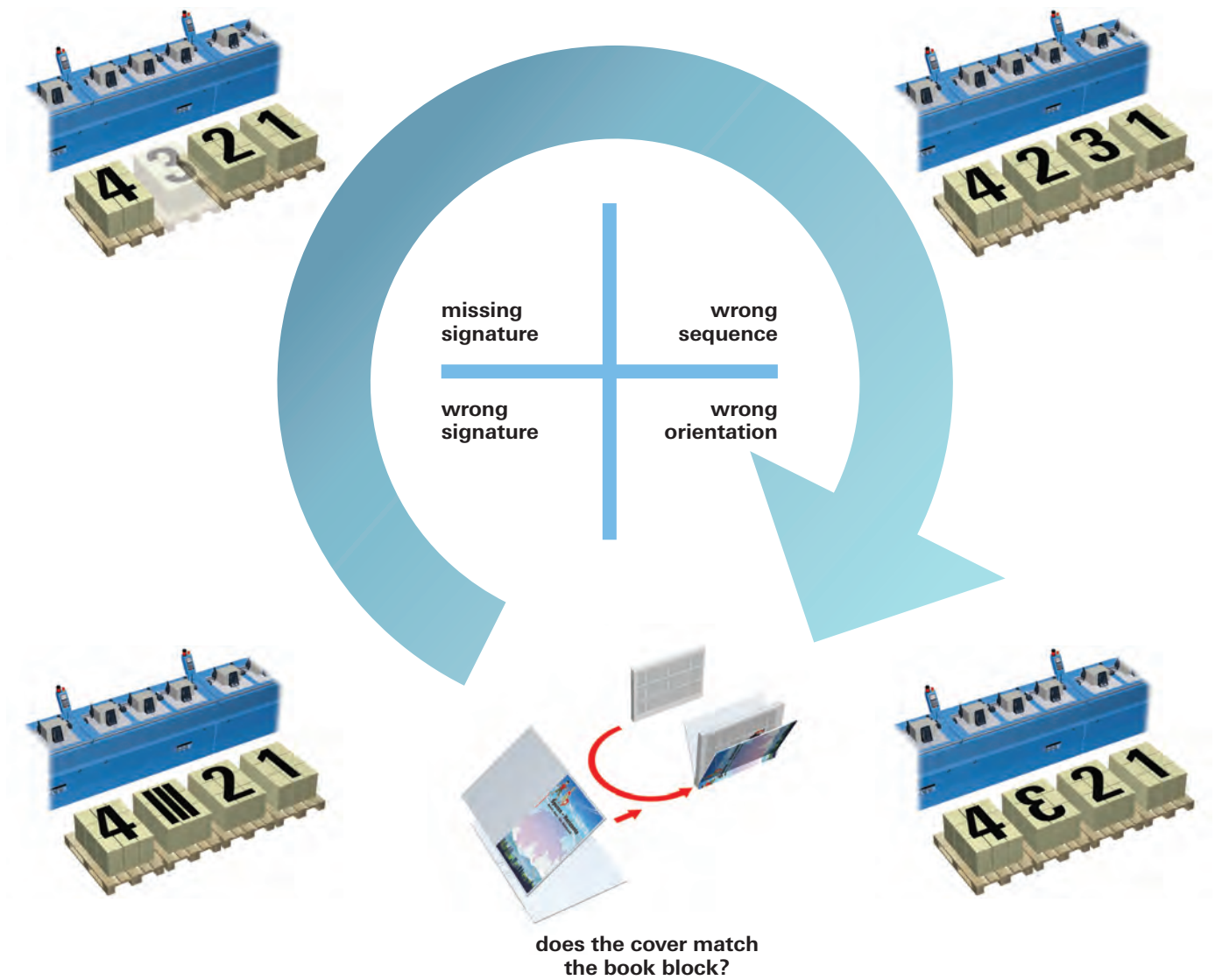
The shaftless servo drive system and the fixation for the free positioning of stations help adapt your machine to future needs.



## Very Easy Maintenance

The Motion Control Technology ensures low costs for spare parts and maintenance. As with individual drives there is no need for gear boxes and drive chains, wear and maintenance are reduced. The entire perfect binding line has a very high level of operational profitability.

# Reliable Monitoring of Product Quality

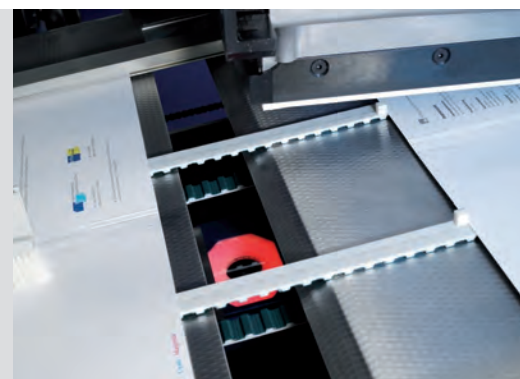


## Guarantees Complete and Correctly Assembled Print Products

Cover control with Asir is a component of the book verification system from Muller Martini. With the signature control in the gathering machine, signatures and covers are reliably controlled using image comparison or bar-code recognition. When using **AsirCode**, the entire product structure,

that is the correct sequence of signatures and the correct placement of the covers with the content can be controlled. **AsirCode** prevents the production of incorrectly assembled products.

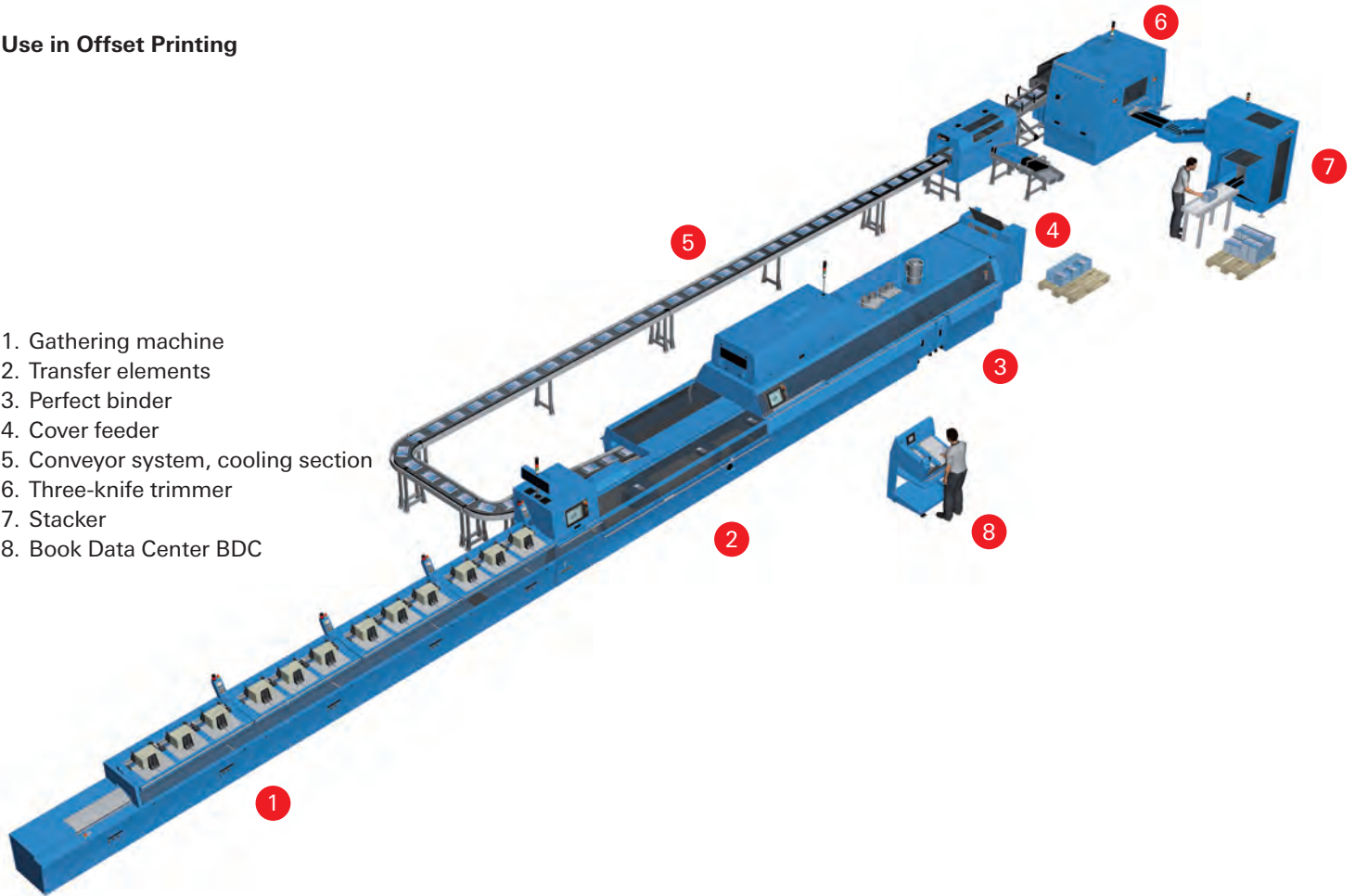
**Asir Sensor in the cover transport on the Alegro.**



# The Alegro Perfect Binding Line – Ideal for Offset and Digital Printing

## Use in Offset Printing

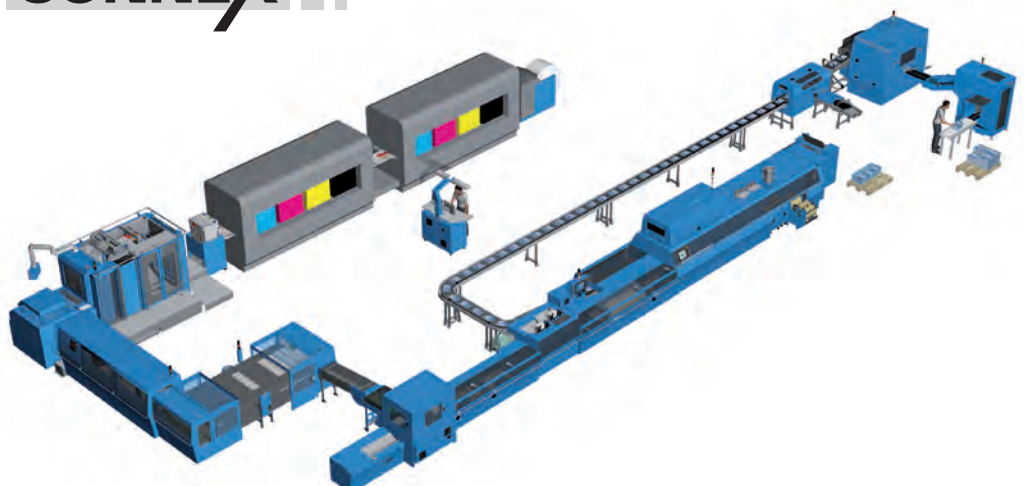
1. Gathering machine
2. Transfer elements
3. Perfect binder
4. Cover feeder
5. Conveyor system, cooling section
6. Three-knife trimmer
7. Stacker
8. Book Data Center BDC



## Use in Digital Printing

With the SigmaLine, Muller Martini has extensive experience in finishing digitally-produced print products. Inline and offline connections to the printing systems are created successfully with the Connex data and process management system. By constantly improving production in inkjet digital printing, the Alegro perfect binder is increasingly implemented in this area. Thanks to the full automation and the fact that it is completely networked, the Alegro perfect binder is ideally equipped for the job.

**CONNEX**



# Professional Support for Training and Service

## Comprehensive Training

Muller Martini training courses place particular emphasis not only on conveying theoretical knowledge to course participants, but also on building on this know-how expediently through practical experience on the machine. Theory is thus implemented quickly and effectively. Training courses can be completed at Muller Martini's book-binding academy.

Training courses can also be individually tailored to the particular customer situation with supplementary courses and follow-up training sessions on site.



## MM Services

### Reliable Service

The key to superior daily production output lies in optimal interaction between machines, service support and people. The availability of local Muller Martini service personnel minimizes the risk of downtimes and loss of production.

At the same time, our people will offer you solutions to ensure the greatest possible utilization over the entire lifetime of your system. Services for preventive maintenance and repair can be customized to your needs or specific installations.



MM Startup



MM Repair



MM Remote



MM Uptodate



MM Inspect



MM Improve



MM Select



### **Variable Size Web Offset Printing Presses**

with in-line finishing ensure top-quality advertising, commercial and security printing. These infinitely variable web presses are used for label and package printing, and combine offset printing with flexo and rotogravure printing methods.

### **Press Delivery Systems**

Efficient and reliable solutions are required for press delivery systems to convey and cut signatures, form and palletize bundles or stacks and create rolls. This is the ideal connection between press and print finishing.

### **Saddle Stitching Systems**

A full range of stitchers, inserting, film wrapping and packing systems in a range of performance categories automates the print finishing process. Modern systems produce products of top-class quality and with high added value.

### **Softcover Production**

Perfect binding lines in all performance categories produce a wide range of spine-glued products, such as brochures, magazines, catalogs and paperbacks in perfect quality and at the highest speeds.

### **Hardcover Production**

Whether connected inline to production systems or operating as stand-alone systems, the hardcover systems complete all the processing steps to create books from folded signatures with hard covers and protective jackets.

### **Newspaper Mailroom Systems**

Efficient and flexible mailroom systems transport and process newspapers straight off the press fully automatically, from the printing press via the insertion process and stacking to the loading dock.

### **Digital Solutions**

The more efficient digital printing systems become, the more challenging the finishing process will be. Muller Martini develops innovative digital printing solutions that yield new growth opportunities for the graphic design industry – for stitching as well as softcover and hardcover production.

### **<sup>MM</sup>Services**

Muller Martini's global service portfolio ensures productivity, quality and added value and offers reliable investment protection for production systems. With <sup>MM</sup>Services operating costs and investment costs are optimized.

This leaflet may include components that are not part of the standard equipment and are available as options only. In some cases, protective covers have been removed in photographs, in order to provide a more detailed view of the equipment. Subject to design and equipment changes.

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