

Acoro A7 Perfect Binder

The perfect binder with the
fastest changeover – worldwide

MÜLLER MARTINI

Acoro A7 Perfect Binder

Outstanding Flexibility due to quickest makeready, **Superior Production** **Quality**

due to reproducible production data

Production flexibility and product quality make the Acoro Perfect Binder the most cost-effective machine of the mid-size bindery, which allows you to compete more successfully in today's market.

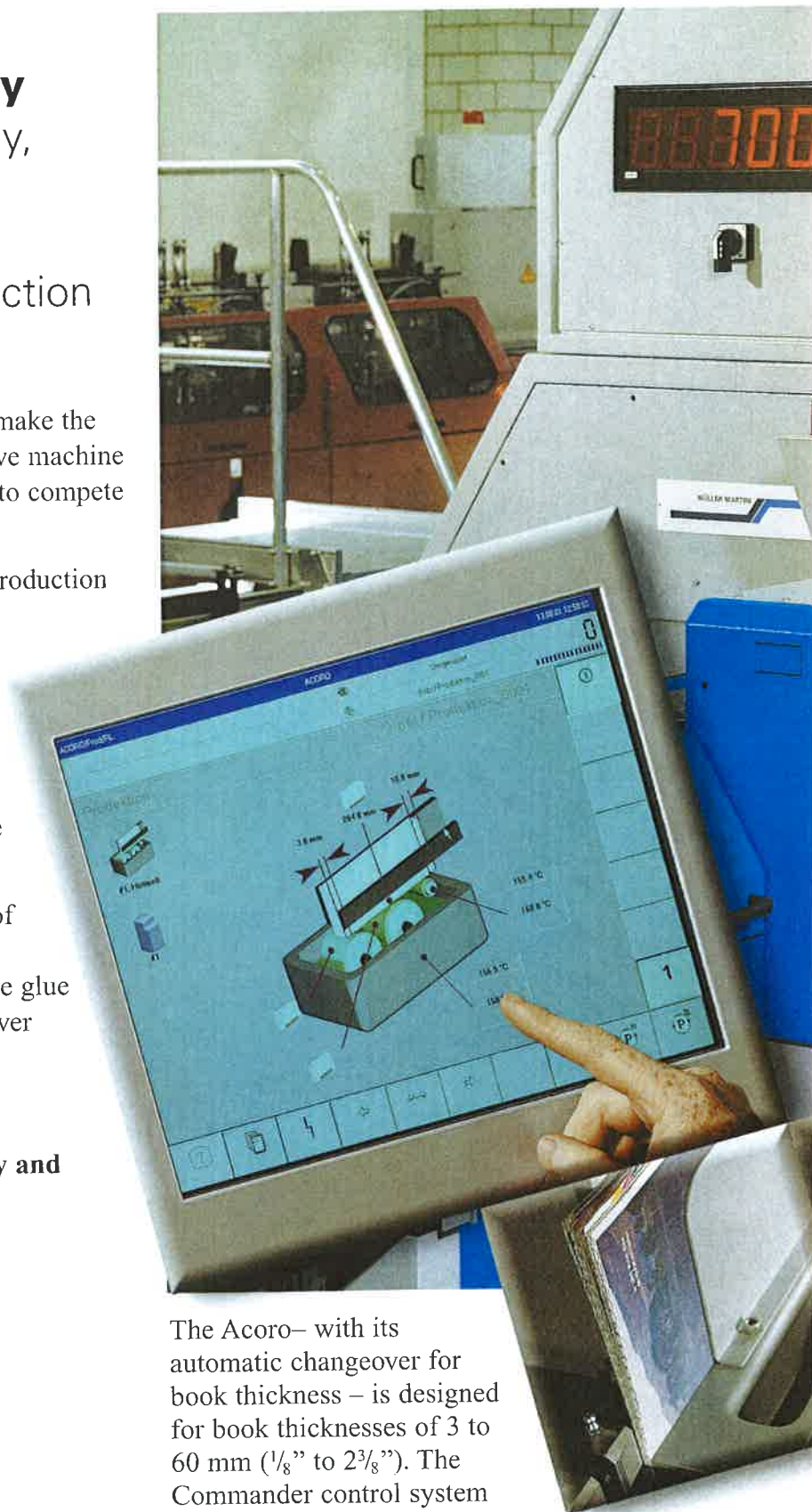
The machine operator controls the entire production from a touch screen monitor.

All job and book thickness related makeready and changeover positions are controlled centrally at the Commander.

Even small and medium runs can be produced profitably due to the high degree of automation.

The well-known superior binding quality of Muller Martini perfect binders is achieved through intensive spine preparation, precise glue and cover application as well as double cover pressing

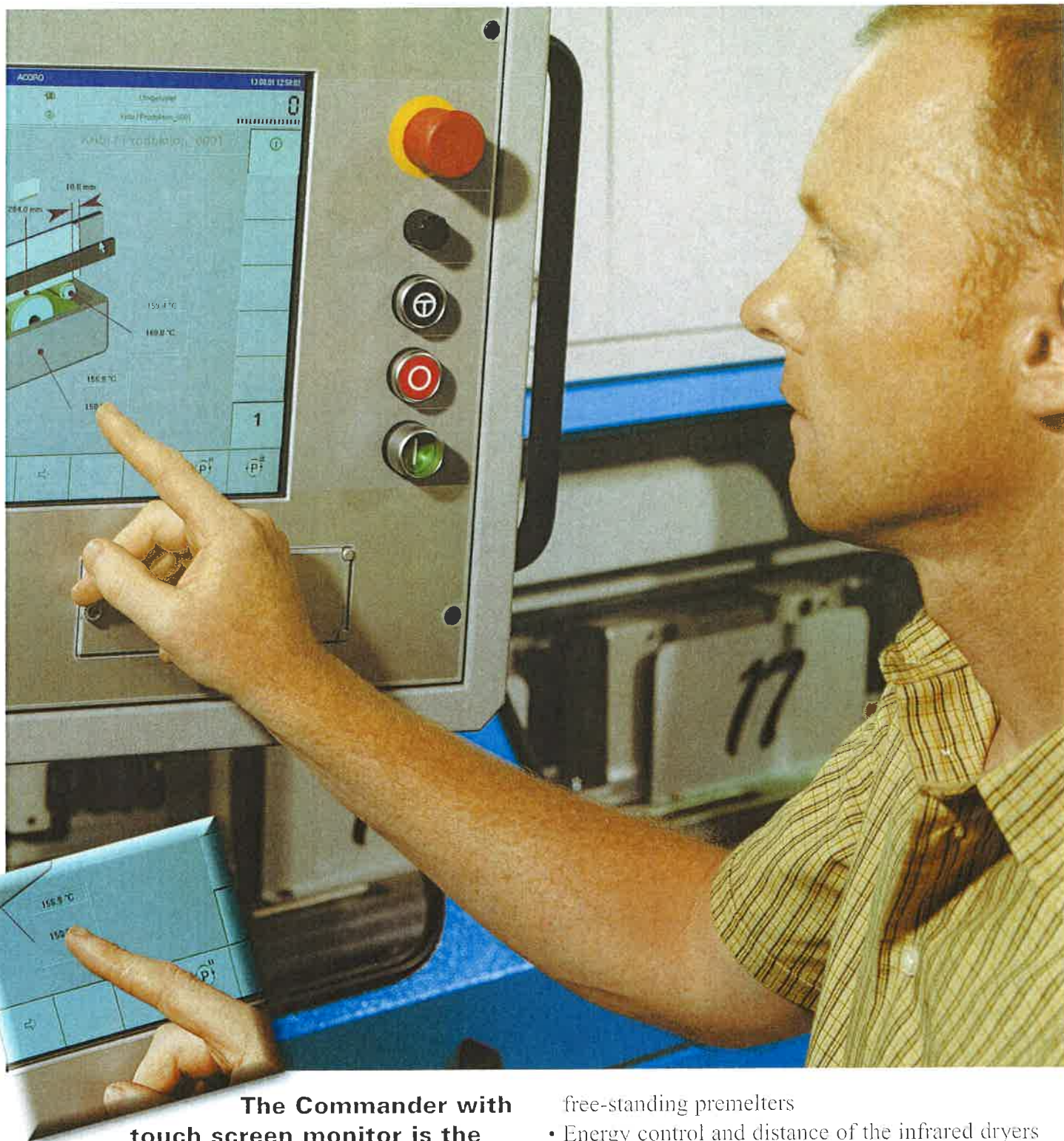
Acoro perfect binder:
world champion for quickest makeready and changeover.



The Acoro– with its automatic changeover for book thickness – is designed for book thicknesses of 3 to 60 mm ($\frac{1}{8}$ '' to $2\frac{3}{8}$ ''). The Commander control system allows on-the-fly adjustment of individual machine settings while the machine is running.

This perfect binder is also suitable for the production of «Swissbind Brochures», «Swiss Brochures», soft cover books with cover detached from the spine and «English Brochures».





The Commander with touch screen monitor is the central control and operating station.

Product and production data is entered simply by tapping the relevant graphic symbols on the touchscreen. All settings are entered at the Commander:

- Raceway clearance at the infeed
- Clamp opening
- Lateral guides and height of the leveling shelf (book hangout)
- Pressing wheel and covers over the milling and spine preparation stations
- Length controlled, and if desired, intermittent glue application as well as control of the doctor blade system
- Spacing between the side glue wheels
- Temperature parameters in the glue pots and

- free-standing premelters
- Energy control and distance of the infrared dryers
- Centering of the liner at the mull station
- Lateral guides of the cover feeders
- Lateral guides of the cover infeed
- Spacing between scoring lines on the cover
- Book thickness, nipper table height and cover register of the pressing station
- Raceway clearance of the downhill delivery and laydown

A complete make-ready of the Acoro perfect binder takes about 90 seconds-making it the world champion for quickest changeover.



Inclined infeed with lateral air cushions

Gentle infeed of the book blocks by creating air cushions between the side guides and the first and last pages.

Precise transfer into the exclusive Muller Martini parallel closing clamp.

Leveling shelf

The book hangout is adjustable by motor, by adjusting height of the leveling table. The setting is entered at the Commander.

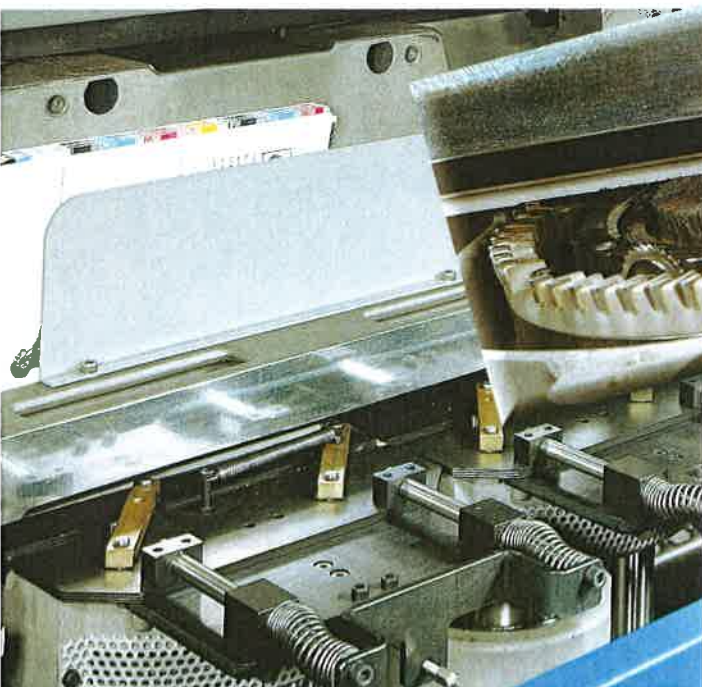


Milling station

Exceptional pressing of the book block and spine is achieved by means of split, eccentrically adjustable pressing wheels.

Choice of milling or shredder head. The shredder tools can be resharpened without removal from the knife station. For processing sewn book blocks the milling station can be quickly lowered by pneumatic adjustment.

Quick-lowering is programmed and triggered from the Commander.



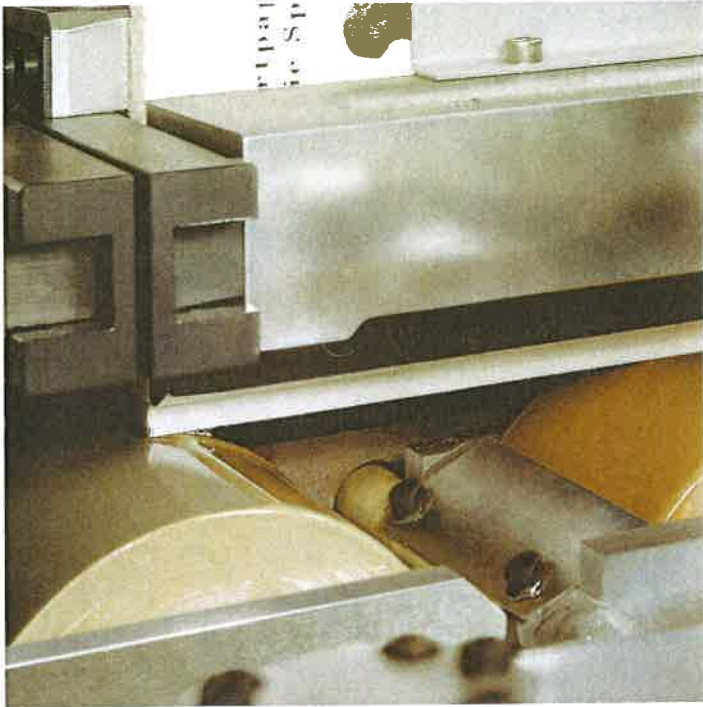
Spine preparation

Spine preparation is optimized by

utilizing standardized

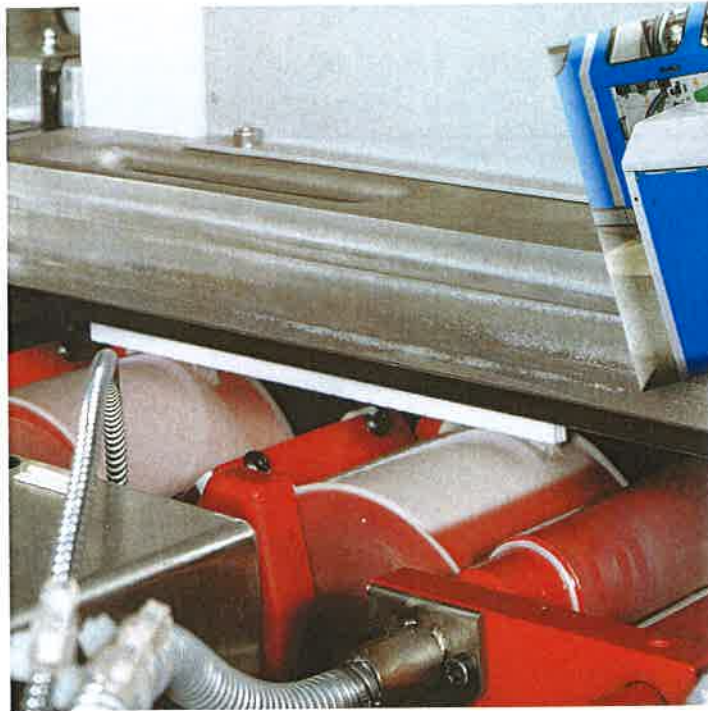
combination heads with leveling saw, notcher blades and ring brush. Uniform notch spacing is achieved through a frequency controlled, synchronized drive. A second

spine preparation station, after the combination spine preparation head, including Fibre Rougher and ring brush is standard equipment in the Acoro A7. The spine preparation station can also be lowered quickly.



Hotmelt spine glue station

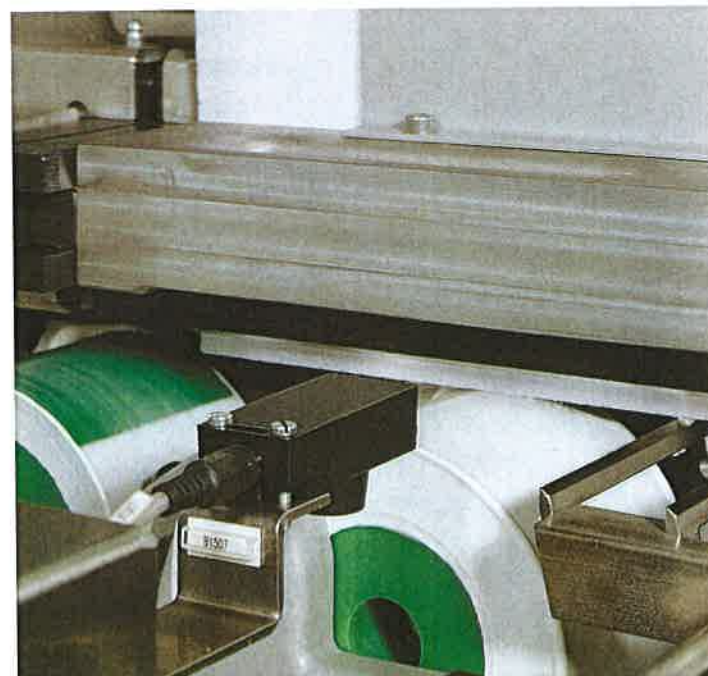
Spine gluing station with two applicator rollers and counter-rotating spinner. Consistent binding quality is achieved through electronic monitoring of glue temperatures at various measuring points. Automatic glue-level control ensures a constant filling level in the hotmelt pot. Automatic glue length control. Intermittent glue application during gluing off of the book blocks reduces glue consumption. It also prevents glue build-up at the head and tail of the book, soiling of the knives during the subsequent trimming operation, as well as glue contamination of the trim waste. The free-standing premelter is furnished with a heated supply hose.



PUR spine glue station

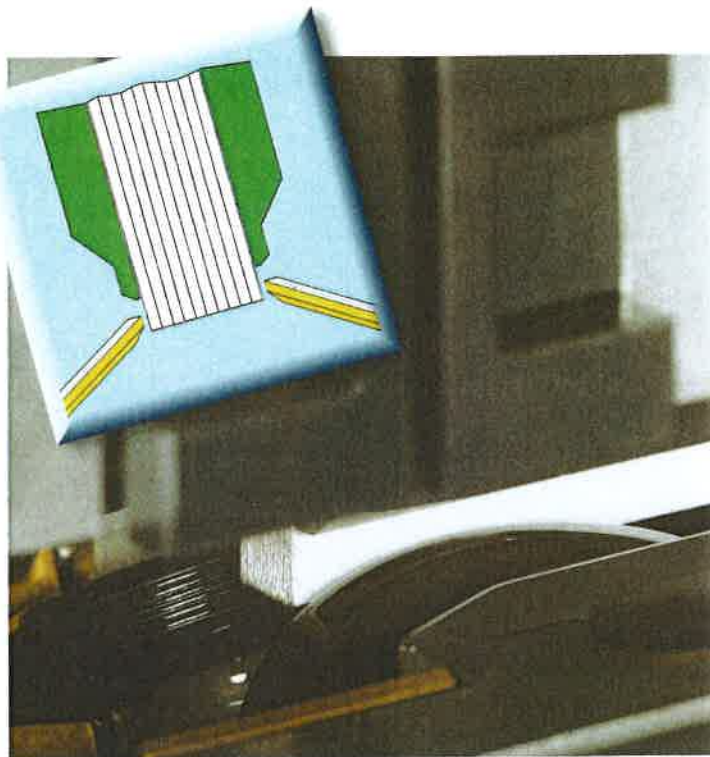
A specially coated, volume-optimized spine glue unit with two applicator rollers is provided. Superior binding quality is achieved through electronic monitoring of glue temperature and glue level.

For cleaning and exchange of wear parts, the glue rollers are hinge-mounted, independently of the PUR glue pot. The freestanding PUR tank or vat melter is equipped with heated supply hose.



PVA spine glue station

A specially coated spine glue station with two plastic fiber applicator rollers is provided. Depending on customer requirements, the PVA spine glue station can be equipped with a counter-rotating backspinner or dual doctor blade scrapers. Uniform glue application is ensured through automatic level control and the use of a pneumatic glue pump.

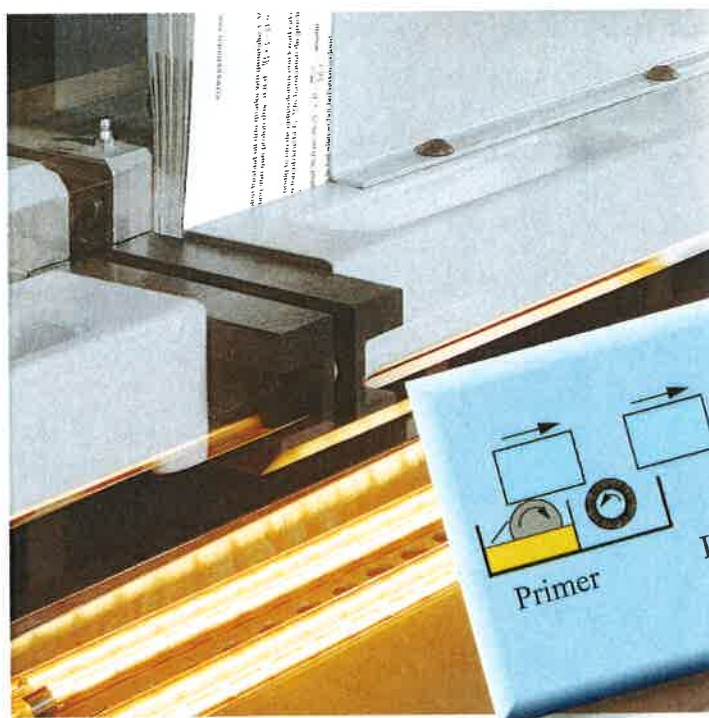


Hotmelt side glue station

The settings for precisely applied glue film length and book spine thickness are entered at the Commander. The glue film width is height-adjustable. The glue film temperature is set at and monitored by the Commander.

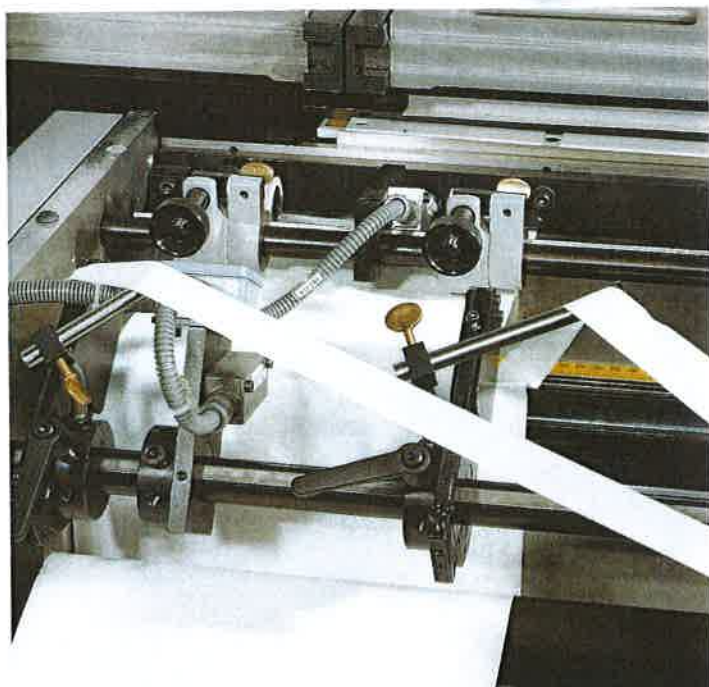
The glue application discs are interchangeable for use for different binding methods using mull or liner (e.g Swiss Brochure).

Automatic glue level control ensures a constant glue level in the glue pot. Glue is supplied from a free-standing premelter with heated supply hose.



Infrared dryers

Intermediate infra-red drying is used for two-shot binding methods. Individual dryers can be switched on at the Commander as needed. If the dryers are not used, the cover closes automatically, to prevent contamination of the dryers by glue deposits and dust.



Mull/lining station (optional)

The mull station is mechanically engaged as needed. Precise centering of the mull strip or liner on the book spine is set at the Commander.

The spine lining material is cut precisely with adjustable edge trimming knives. The edge trim is automatically suctioned off into a waste container. The liner misfeed detector is optional.



Universal drum cover feeder

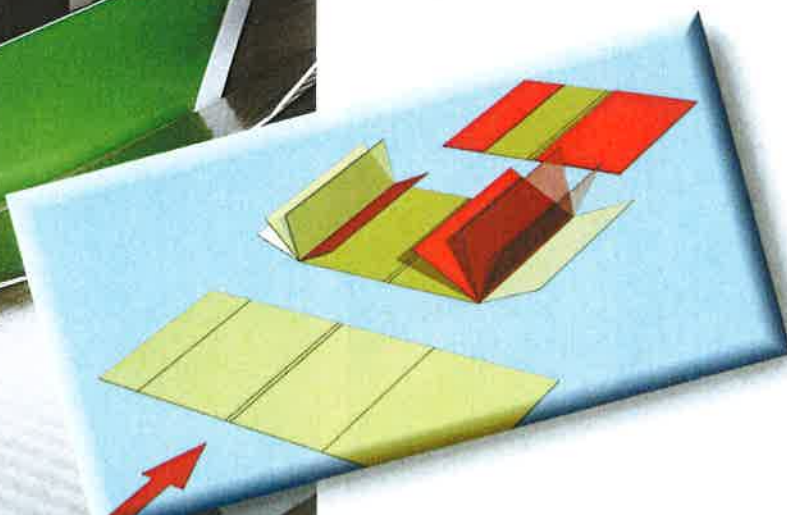
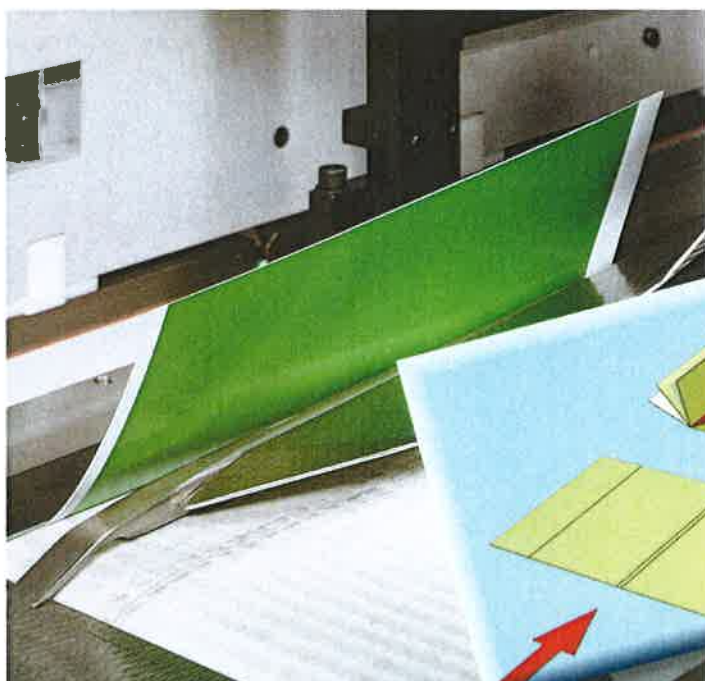
Continuous feeding from the hopper, which has motorized adjustment, is ensured. It also provides for positive separation and precise alignment of the covers, using pulsating, lateral blow air and a jogger. Reliable processing of all types of covers (including covers with flaps) is controlled by 5 individually adjustable suckers.

Stream cover feeder

A stream cover feeder with large hopper capacity and level infeed can be substituted for the drum cover feeder.

Gate folding station

An extra-wide drum cover feeder with gate folding station and built-in inline scoring is used for turning in the flaps of the cover.





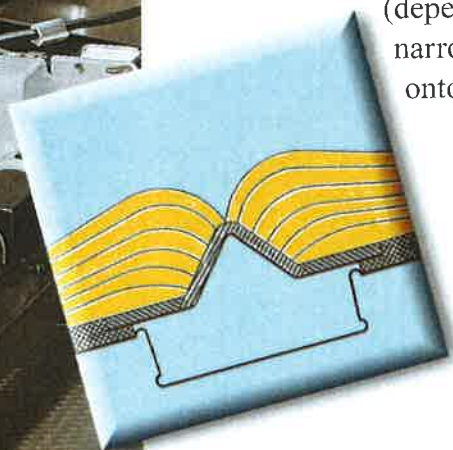
Aqua Nozzle Scoring System (optional)

The optional Aqua Nozzle Scoring System (ANSY) located upstream of the scoring wheels applies two thin lines of liquid on the cover. The liquid partially softens the cover and improves scoring, which helps with the application of the cover to the book block in the subsequent cover nipping station, to ensure a tight, square backbone.



Overhead glue station for layflat books (optional)

For inline production of softcover books with cover detached from the spine, such as «Swiss Brochures» or «Swissbind Brochures», an optional overhead nozzle gluing station is used, with which one or two (depending on the type of book) narrow lines of hotmelt are applied onto the cover.



Cover nipper

The «flying cover nipper» ensures precise cover registration and high-quality spines. Optimum book spine formation is achieved through adjustable pressing time.

Pressing table height, book thickness and cover registration are fine-adjustable on the fly at the Commander.

Optional second pressing station for re-nipping.



Downhill delivery

Bound books are gently transferred from the clamp to the horizontal delivery section. The pusher fingers of the horizontal belt, which are synchronized with the movement of the clamps, then guide the books into the slightly angled downhill delivery channel. The raceway clearance is automatically adjusted to the book thickness at the Commander.



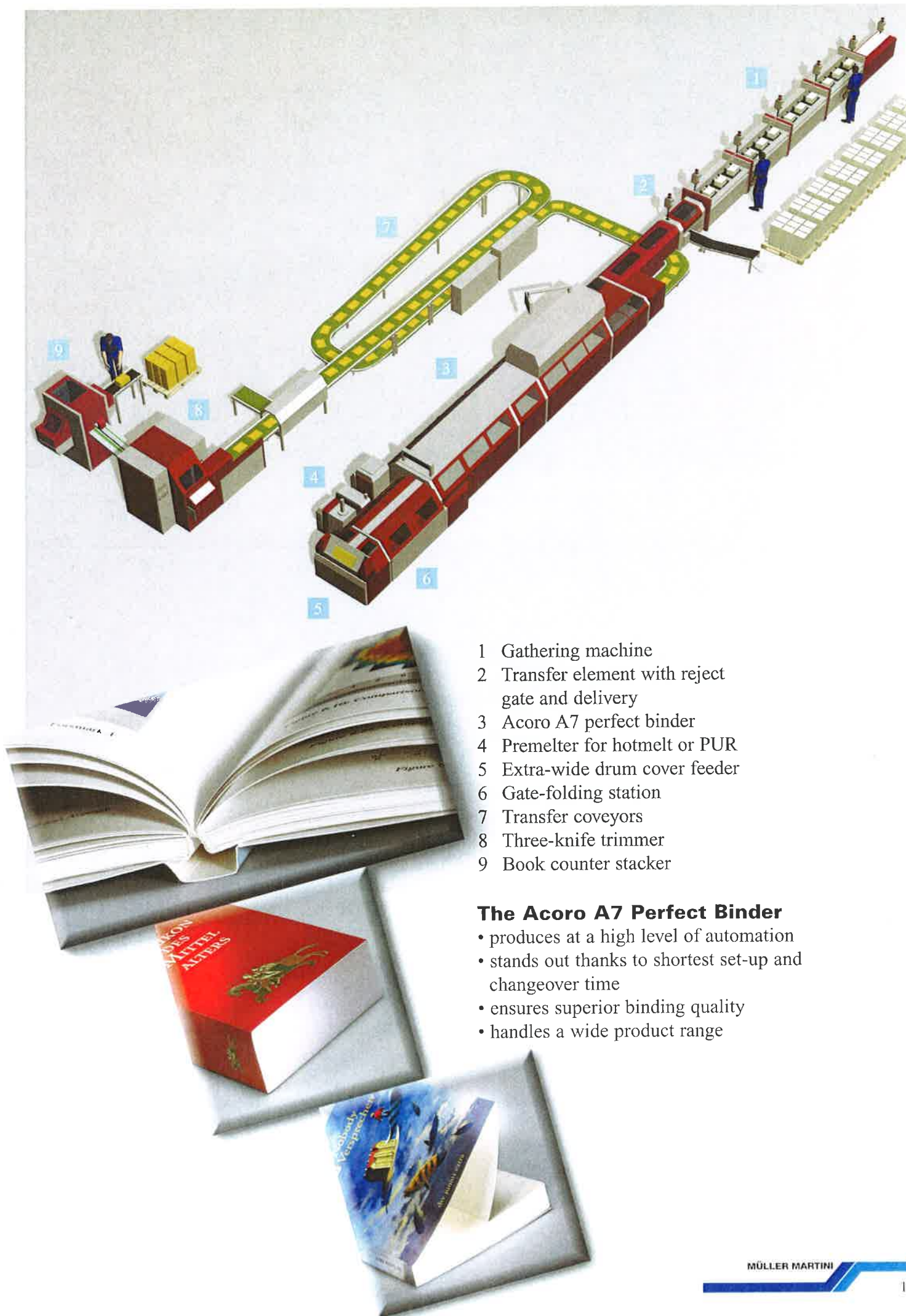
Laydown device

Books exiting in the vertical position through the delivery channel are gently laid down onto the conveyor of the laydown. The clearance is automatically adjusted to the book thickness at the Commander. When processing book blocks and/or PUR bound books, a vertical channel can be installed in place of the laydown device.



In-line processing

A customized conveyor system gently transports the finished books to the three-knife trimmer, book stacker and through mailing or packaging lines. The conveyor controls are designed and synchronized to follow the speed of the perfect binder. The production mode (single or shingled processing) is PLC programmed according to type and size of product as well as production speeds.



- 1 Gathering machine
- 2 Transfer element with reject gate and delivery
- 3 Acoro A7 perfect binder
- 4 Premelter for hotmelt or PUR
- 5 Extra-wide drum cover feeder
- 6 Gate-folding station
- 7 Transfer coveyors
- 8 Three-knife trimmer
- 9 Book counter stacker

The Acoro A7 Perfect Binder

- produces at a high level of automation
- stands out thanks to shortest set-up and changeover time
- ensures superior binding quality
- handles a wide product range



Acoro A7 Perfect Binder

Future-oriented perfect binding technology for mid-range market needs

This brochure may show components which are not standard equipment and are available as options only.

In some cases, protective covers in the photographs have been removed or opened for illustrative purposes.

Design and equipment configuration subject to change

Sales and Service

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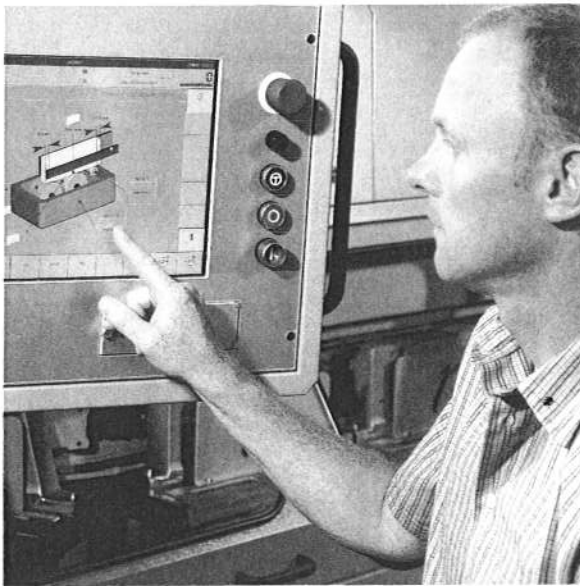
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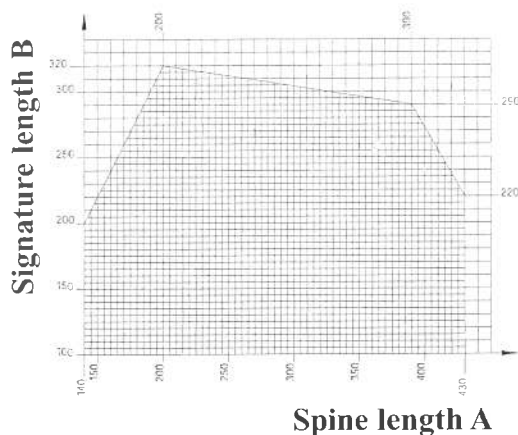
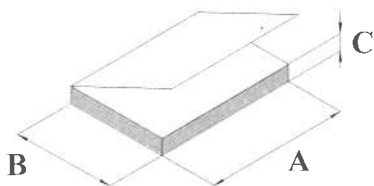
Acoro A7 Perfect Binder

Specifications

Mechanical speed		1,000 to 7,000 cycles per hour	
Clamp pitch		21"	
Number of clamps		22 or 28	
Clamp opening		max.	82 mm (3 1/4")
Sizes	spine length	min.	140 mm (5 1/2")
		max.	430 mm (16 7/8")
	book width	min.	100 mm (4")
		max.	320 mm (12 5/8")
	book thickness, compressed	min.	3 mm (1/8")
		max.	60 mm (2 3/8")
	cover width	min.	203 mm (8")
		max.	642 mm (25 1/4")
	cover length	min.	140 mm (5 1/2")
		max.	430 mm (16 7/8")
	book hangout (after spine cut-off)	min.	8 mm (5/16")
		max.	17 mm (11/16")
Premelter free-standing	for spine glue station	capacity	80 liter (21 US gal)
		power consumption	11 kW
	for side gluing unit	capacity	18 liter (4.8 US gal)
		power consumption	6 kW
Air consumption	premelter for side gluing unit		4 m ³ /hr @ 6 bar (2.4 ft ³ /min @ 87 psi)
	drum cover feeder	blow air	20 m ³ /hr @ 6 bar (21 ft ³ /min @ 87 psi)
		vacuum	20 m ³ /hr @ 60% (12 ft ³ /min @ 60%)
	stream cover feeder	blow air	36 m ³ /hr @ 6 bar (21 ft ³ /min @ 87 psi)
		vacuum	20 m ³ /hr @ 60% (12 ft ³ /min @ 60%)
	mull feeder	blow air	60 m ³ /hr @ 6 bar (36 ft ³ /min @ 87 psi)
		vacuum	32 m ³ /hr @ 60% (19 ft ³ /min @ 60%)
Exhaust	milling station	air consumption	1500 m ³ /hr (884 ft ³ /min)
		static pressure	min. 1500 Pa (0.22 psi)
	spine preparation, per station	air consumption	1000 m ³ /hr (590 ft ³ /min)
		static pressure	min. 1500 Pa (0.22 psi)
	hotmelt glue station	air consumption	1200 m ³ /hr (708 ft ³ /min)
		static pressure	min. 150 Pa (0.02 psi)

Other sizes on request.
Specifications, measurements and configurations subject to change.

Acoro A7 Book Block Sizes



A	min.	140 mm (5½")
	max.	430 mm (16⅞")
B	mi.	100 mm (4")
	max.	320 mm (12⅝")
C	min.	3 mm (⅛")
	max.	60 mm (2⅜")

Diagram

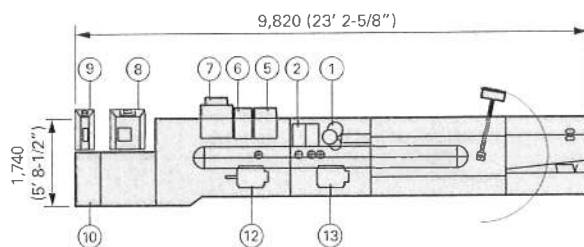
Max. signature width B

In relation to spine length A

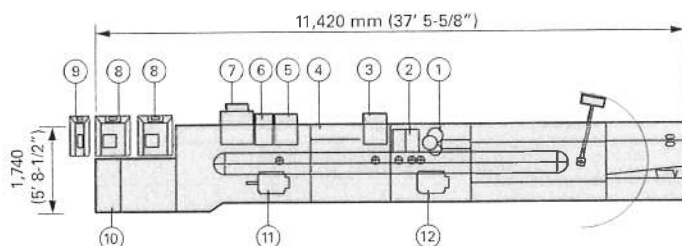


Size range depends on machine settings and type of signatures

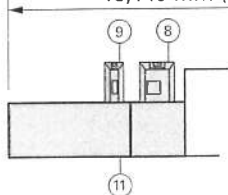
Acoro A7 with 22 clamps



Acoro A7 with 28 clamps



11,545 mm (37' 10-1/2") for A7 with 22 clamps
13,145 mm (43' 1-1/2") for A7 with 28 clamps



Acoro A7

1. Milling station
2. Spine preparation
3. Spine glue station 1
4. Infrared dryers
5. Spine glue station 2
6. Side gluing station
7. Mull feeder (optional)
8. Premelter for spine glue station
9. Premelter for side gluing station
10. Drum cover feeder
11. Stream cover feeder
12. Cover pressing station
13. Second pressing station (optional)

Other sizes on request.

Design, specifications and dimensions subject to change.

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