Automatic book sewing machine

ASTER 220 SA

ASTER 220 SA AUTOMATIC BOOK SEWING MACHINE

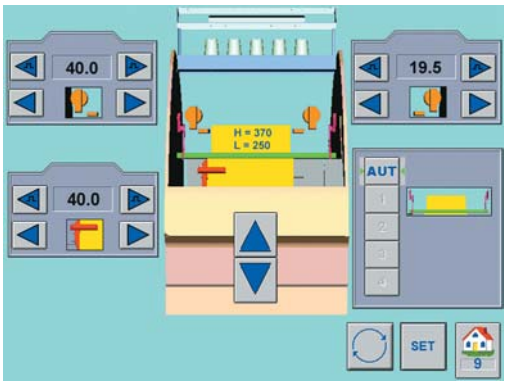
The Aster 220 SA is the flagship model in the line of Aster machines. It is the fastest and the most automated sewing machine on the market, an ideal solution both for long and short run production. The Aster 220 SA has set a new standard for performance, build quality and ease of use.

The Aster 220 SA sewing unit comes in two models: the 42 and the 51. The maximum size of the 42 model is 320 x 420 mm, while the maximum size of the 51 model is 320 x 510 mm. The Aster 220SA/51 guarantees top performance with two-up signatures coming from web press.

The Aster 220 SA can be employed in various types of Meccanotecnica automatic gathering and sewing lines: Multiplex SA, Magix, Bombax and Bombix.

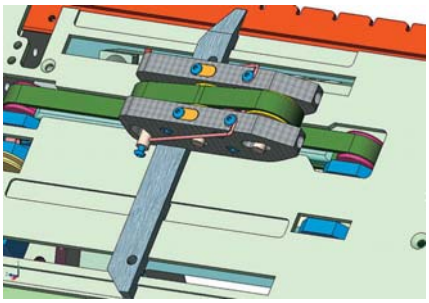
The Siemens PLC S7 controls all machines functions. A 12" swivel touch-screen colour monitor provides:

- quick and easy programming without having to stop the machine;
- storing of up to 30 different sewing programs that can be recalled during production;
- displaying of production data, machine speed and alarm messages;
- automatic variation of the machine speed in case of books with complex signatures;
- automatic set-up.

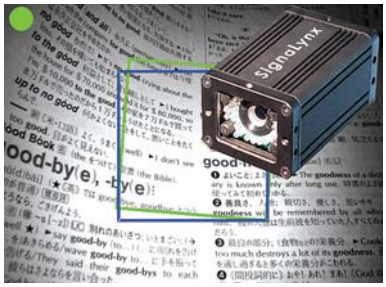


The Aster 220 SA has virtually fully automatic size change. The machine can automatically recognize the size of the first signature extracted from the hopper. This data is used for automatic set-up of the sewing head, the transport system, the accelerator wheel, the signature registering device on the sewer saddle, the punch needles, the extractor bar, the side knives and the delivery table. The machine can be ready for the next job within a few minutes.

If required, each automatic adjustment can be modified via the touch-screen monitor without the need for any tools.

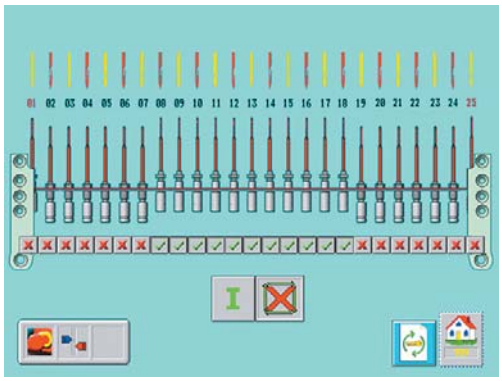


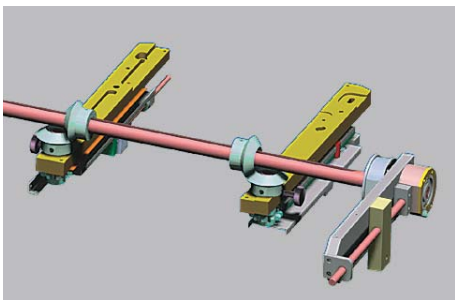
The signature registering device with its double belt is motorised and fully automatic. It moves to the best position according to the signature size.



The loading hopper is fitted with the SignaLynx system that ensures that signatures are gathered in the correct sequence. This device exploits the "artificial vision" technology to reliably recognize even text-only signatures. Just one book is sufficient for the automatic self-learning stage.

The positioning of the punch needles is an integral part of the automatic set-up. In case of two-up production the central stitch can be eliminated by retracting the corresponding two punches via the monitor. The reduced changeover time provided is especially helpful in case of short and medium run production.

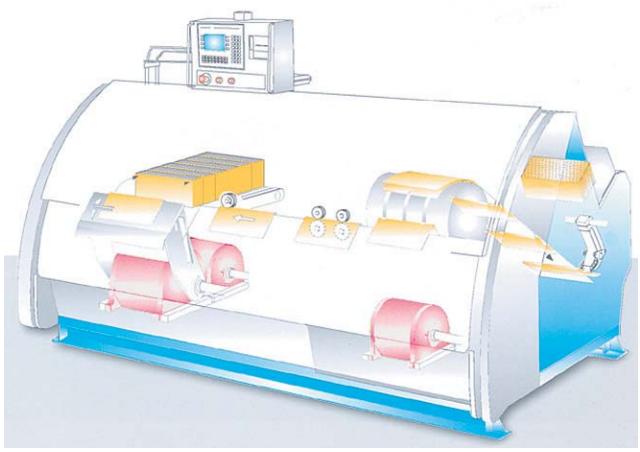




The book block supporting side knives at the sewing machine delivery are also motorised and fully automatic. The emptying of the sewn book blocks leaving the sewing machine is automated right to the end of the job.

The signature extractor bar is made of carbon fibre in order to minimise vibrations at high speed. It automatically positions itself according to the signature size spine to front edge. The operator can also choose one of the four possible bar positions via the monitor. Thus the extractor bar can always stay fixed in its seat for all signature sizes.

The top mechanical speed of 220 cycles/min is a result of new motorization, the use of individual components made of new carbon fibre materials and, especially, the three cam boxes. All movements of the Headop feeder, the sewer saddle and the sewing unit are controlled by three cam boxes. This makes for minimum vibrations and noise and exceptionally long cam life with no maintenance.



The newly designed spool holder makes threading the machine easier and more ergonomic.

ASTER 220 SA

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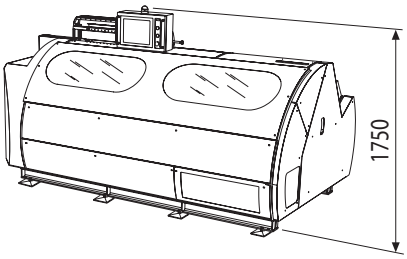
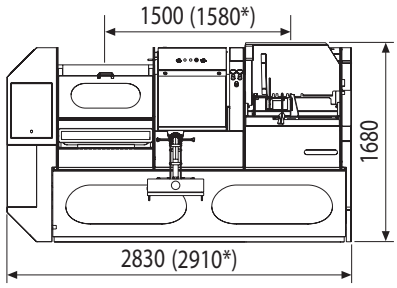
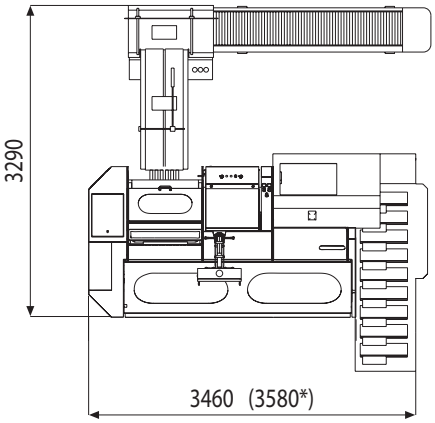
ASTER 220 SA WITH PRE-LOADER AND PLUS STACKER WITH 2M ROLLER DELIVERY







TECHNICAL DATA

Max. mechanical speed	220 cycles/min (200 cycles/min)*	Stitch length	19 mm
Min. size	75 x 120 mm	Rated power	8,08 kW
Max. size	320 x 420 mm (320 x 510 mm)*	Standard voltage	400 V, 50 Hz, 3 phases
Openings available	4 above, 4 below	Air consumption (external supply at 6 bar)	max. 500 l/min at 6 bar
Number of stitch positions	10 (12)*	Net weight	3930 kg (4030 kg)*

(*) Aster 220 SA/51

The Aster 220 SA sewing unit bears CE and GS safety marks and has EMC electromagnetic compatibility certificate.