



SMYTH
PERFECTLY SEWN

YOUR PARTNER IN BOOK FINISHING SOLUTIONS

FF-250 4D

AUTOMATIC BOOK SEWING MACHINE



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SMYTH FF-250 4D automatic book sewing machine is the top of the range solution for those who need to produce high quality sewn books. Its proven reliability is the result of the Company experience gained over decades combined with its long standing tradition in bookbinding. Unique design features allow the FF-250 4D book sewing machine to process all types of signatures, and the latest technology helps to make it simple to use and operator friendly. Fast set-ups and the exceptional versatility of the 4D feeder are just some of the features that make the FF-250 4D capable of fulfilling an unparalleled range of production requirements.

LOADING, FEEDING AND OPENING – Smyth Patented Feeder

Signatures to be sewn are loaded in the hopper. A photocell gathering control (optional) monitors the correct sequence of gathered signatures and stops the machine in case of mistake. In Smyth patented feeder the signatures are transported in a shingled stream by means of geared belts. This unique system reduces by 50% the travelling speed of the signature, compared to a conventional transport of a signature at a time. Contact time with the vacuum openers is longer and the special movement of suction cups ensures a gentle and precise opening of the signature even in presence of porous paper, heavy perforation and static electricity. The shingled stream transport also reduces the risk of “flying paper” when signatures are transported at high speed (especially with light paper).



INTEGRATED LAP OPENING DEVICE

The integrated LAP opening device is ready to work when programmed and does not require any installation. It provides the possibility to open overlapped signatures having different back to front size (i.e. different size signatures) and different overlap size on both sides (i.e upwards lap and downwards lap). For porous paper, Venturi-type openings are also available (optional).

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REFORMING SYSTEM

This system consists of 3 wheels that assure the complete opening of the signature spine for the perfect centering of the sewing stitches.



SIGNATURE LOCKING SYSTEM

The mobile saddle is equipped with a precise signature locking system. This system holds the signatures down on the saddle and assures the exact centering of the stitches on the spine.



Operator interface

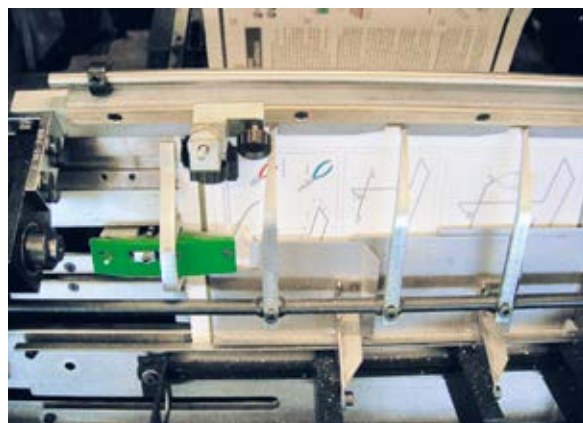
Programming and Diagnostics are performed through OMRON PLC and a new software designed by the in-house team of Smyth engineers.

A 12" color touch screen is placed centrally on a pivoting console to enable all machine functioning parameters and automatic adjustments to be set and checked easily from both sides of the machine.



KICKER WHEEL

The kicker wheel speed can be automatically adjusted according to the signature thickness and paper type to allow the optimal feeding of the signature on the mobile saddle.



MIXED HEADING UP SYSTEM

The mixed Vacuum and Pressure system facilitates the transfer of the signature from the saddle to the sewing head using a venture type heading up mechanism. This mechanism further ensures the proper transfer of all types of signatures to the sewing head.



IN LINE CONNECTION

Smyth FF-250 4D book sewing machine is designed to be connected in line with Smyth gathering machines series P12. It means that this machine can be purchased individually and then connected in line later. This is possible thanks to the modular design of Smyth gathering and sewing system mod. UNIT and CONCEPT.



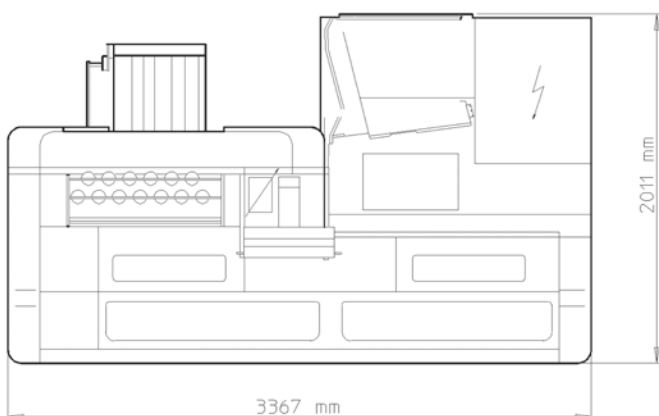
THE GATHERING SEQUENCE CONTROL

The gathering sequence control is a self-learning system performed by Omron Camera which is located in the hopper of the book sewing machine. This camera performs the gathering sequence control by reading shapes (text) and colours. Thanks to continuous measurements this system ensures the highest level of control by filtering data and info, preventing false alarms and unnecessary stops.



SMYTH STACKER "Easy Stack"

It is the stacker that makes piles of sewn books delivered by the sewing machine in order to facilitate the unloading operations. Pile height is programmable up to 120 mm.



TECHNICAL FEATURES

	FF-250 4D	FF-250S 4D	FF-250 XL
Signature size	Max. 340 x 560 mm Min. 80 x 135 mm up to 150 rpm	350 x 560 mm 80 x 135 mm up to 150 rpm	340 X 600 mm 80 x 135 mm up to 150 rpm
Max. mechanical speed	4 upper + 4 lower + LAP 4	upper + 4 lower + LAP 4	upper + 4 lower + LAP 4
Openings	13	13	14
Stitches number	24 mm.	24 mm.	24 mm.
Length stitch	300 N/l min. - 6 bar*	300 N/l min. - 6 bar*	300 N/l min. - 6 bar*
Max. air consumption	400V Three phase 50HZ	400V Three phase 50HZ	400V Three phase 50HZ
Electrical	7 Kw	7 Kw	7 Kw
Rated power	kg 3700	kg. 3700	kg 3700
Total weight	3,36 x 2,01 x H 1,7 m	3,36 x 2,01 x H 1,7 m	3,36 x 2,01 x H 1,7 m
Dimension			

*The air (externally supplied) must be dry to optimize the correct functioning of the machine



PASTING DEVICE

The pasting device is specifically designed to obtain higher spine book solidity. It is composed of a pneumatic driven gun that applies a thin clod glue strip. It is controlled via touch screen for accurate glue application and simple operation. The glue system is easy to maintain as it is a self contained pot and does not require daily clean up of the glue tank. The application of the glue strip is set to be applied on the second and on the last signature of the book. However, the glue strip can also be applied on any combination of signatures or on each signature of the book.



GAUZE DEVICE

The book sewing machine can be equipped with the gauze device to reinforce the book spine during the sewing operation. This device applies the gauze material on the spine of the book block automatically, sewing it together with the book signatures.



Helix Device

It is designed to improve reliability of the signature transfer from the feeder to the fixed saddle with any type of signature and any type of paper. This device can be adjusted during the machine set-up, and it keeps the signature open easily.