

Stitch/Tape/Cut DSI Mk1



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1 *Company Overview*



Company Overview

The Binderee Company has a unique history of developing and manufacturing bookbinding and stitching equipment. Here is a brief overview of the company's history to date:

Founding and Early Years:

The Binderee Company traces its history through Deluxe Stitcher Inc., Bostitch, and The Boston Wire Stitcher company back to the inventor of wire stitching, Thomas Briggs in 1896. The company established to meet the growing demand for high-quality bookbinding and stitching machinery.

Growth and Innovation:

Throughout the mid-20th century, Deluxe Stitcher gained a reputation for innovation and reliability in the bookbinding industry. They developed a range of machines designed for both commercial and industrial use, including saddle stitchers, booklet makers, perfect binders, and many packaging and industrial applications.

Product Development:

The company's product line expanded significantly, with various models tailored to different binding needs. Their machines were known for their durability and precision, which helped them secure a strong market presence.

Technological Advances:

In the latter half of the 20th century, Binderee incorporated Deluxe Stitchers technologies into their machinery, such as automated features and electronic controls, to improve efficiency and ease of use.

Company Overview

Modern Era:

Today, Binderee is a well-respected company in the bookbinding machinery market. They offer a range of products that cater to modern printing and binding needs. They continue to maintain their legacy of quality and innovation. Binderee has recently perfected a side stitcher application for producing blocks for medical pads, raffle tickets, NCR pads, etc.

Marrying our talents for semi-automatic stitching with spine taping and guillotine features provides a new solution for customers. Their innovative machinery can be relied upon for their durability, reliability, and the high-quality finish of products. These exceptional standards are the cornerstone of Binderee's reputation.

Summary

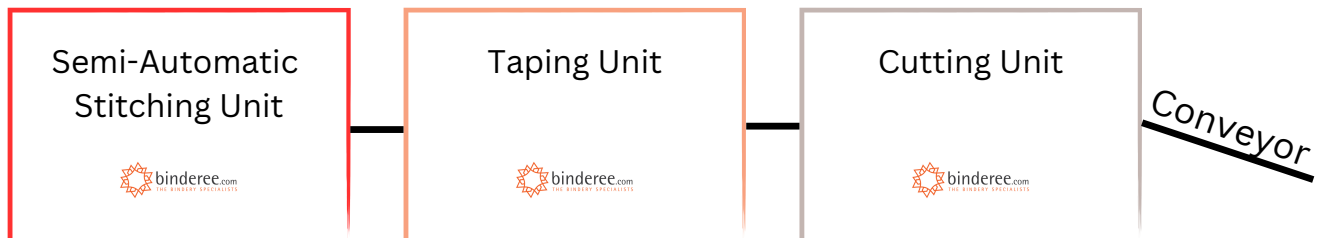
The Stitch/Tape/Cut DSI MK1 is designed to produce cheque or voucher books. Firstly, the folio is fed as a collated and jogged set into the stitcher element of the machine. From here the machine, once set up, will take the folio through the process to completion with no further operator intervention required. It is based on the three elements, namely Stitch, Tape, and Cut, working together to produce the finished product.

The beauty of this system over any known competitors is the flexibility of this system. Firstly, the maximum thickness that can be accommodated is 20mm and the potential sizes of folio that can be processed are larger. Also, the individual elements of the system can be used in isolation. For example, there is the option to use the semi-automatic stitcher or the spine taper in isolation. This provides greater production flexibility.

The complete system consists of:

- 1 x semi-automatic stitcher with LCD programmable operator interface
- 1x spine-taping unit
- 1 x multi-cutting unit
- 1 x transport unit for finished product
- 1 x interphase via the internet to allow off-site troubleshooting
- Complete tool kit
- Spares kit to cover the first 2 years of production
- Installation, training, and back-up
- Full CE approval of system issued in Ireland
- Operator manuals

Machine configuration for chequebook production:



1. Semi-Automatic Stitcher Unit:

Manually fed documents are placed onto the feeder one at a time. The machine grips the folio and passes it under the M19So Stitcher Unit. This stitcher is programmable with up to 20 pre-set programmes to give a fast, accurate and high-quality stitch. The stitched folio is then conveyed to the taping unit. (M19 stitcher unit is made in USA and CE approved)

2. Taping Unit:

The taping unit is manually set to the thickness of the folio being delivered from the stitcher. This unit (made in UK to our specification) will apply the pressure sensitive self adhesive tape and give a flush cut of the tape at the end of the folio. The taped document is then conveyed to the guillotine. As an individual unit it too is CE approved.

3. The Guillotine Unit:

The Guillotine Unit then jogs and cuts to the pre-set size using a single knife made from European blades (from Germany). A spare blade is also supplied with the machine. The finished and cut chequebooks are transported via a conveyor for packing or additional services.

Machine configuration for chequebook production:

CE approval:

Each individual element is CE approved. However, as they are working together to form one complete production unit, this assembly in turn must be inspected. The complete DSIMk1 will be issued with a CE certificate to cover the whole assembly. This work is carried out by Kinetic Engineering Oscar Unit 6, Falcon Avenue, Waterford Airport Business Park, IE,X91 W42W
www.kinetic-eng.ie

3.1 *Specification*



3.1 Semi-automatic stitcher

This system marries the Deluxe Stitcher M19G20 with an accurate, programmable stitcher with a 20 programme memory for different sizes and stitch positions. The folio to be stitched is presented to the stitcher, a gripper then clasps the folio and moves the folio. When passing over the sensor it activates the stitcher to make the stitch in the pre-programmed positions (up to 24 stitches per folio). However, in this application it is assumed that 6 to 10 stitches will be the norm.

Steps:

- The gathered papers or book blocks are manually fed into the machine in open form (unfolded).
- The stack is then jogged and fed into the gripper.
- The gripper holds the signature and passes over the sensor to the first stitch position. It dwells in this position to enable the stitch to be made when the signature is stationary. In this way, the gripper positions the signature until all programmed stitches have been made and the signature is released to pass on to the taping system.
- Stitching is carried out using G20 head on a Deluxe Stitcher M19 machine (made in USA).
- We recommend using 20 x 24 flat wire but other options are available

3.1 *Specification*

3.1 Semi-automatic stitcher

Speed: Up to 20 sections per minute (approx. 1200 cheque books per hour)

Book length: 800mm max; 90mm min

Width: 300mm max; 165mm min

Wire: 0.9 x 0.6mm flat wire is recommended but other sizes can be accommodated

Power: 3.18Hp (2.37kw), 50Hz, 415 VAC

Dimensions: 2.0m x 1.0m x 1.5m

The following link contains a video of the M19 Deluxe Stitcher in use:

<https://drive.google.com/file/d/1osEMyApG19XGk4dt18UhHj3KfRwd6G19/view?usp=sharing>



3.2 *Specification*

3.2 Spine Taping

These machines are typically used in bookbinding processes to enhance the structural integrity, and aesthetic appeal of the spine. They are essential for producing high-quality, durable books, ranging from notebooks and notepads to novels and textbooks. The taping, not only enhances the aesthetic appeal it also is a safety feature as the tape masks the clinched stitch so prevents any snags or cuts caused by a poor quality stitch.

This machine takes the folio from the transport feed from the stitcher, it cuts a length of tape applies glue, and attaches the tape to the spine of the book with an adjustable compression to get the quality of product you desire. This machine will run up to 2000 folios per hour if used as a separate element and, therefore, the speed of stitch is the controlling factor to output.

Max book size: 407mm x 340mm

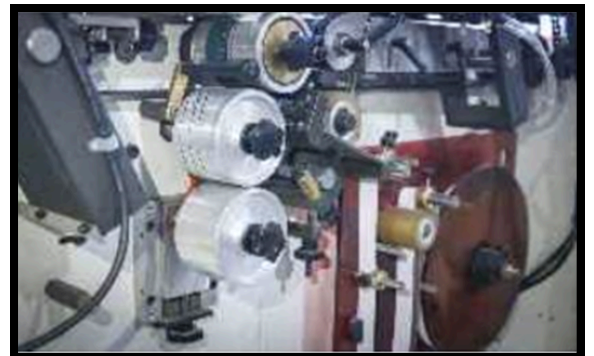
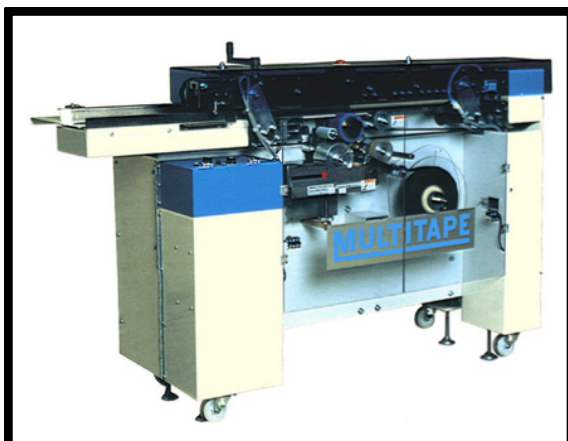
Width of spine tape paper: 15mm to 55mm

Speed: Up to 2400 per hour

Power: 3 phase 2kw

Weight: 600kgs

Size: 2.0m x 0.78m x 0.95m



3.3 *Specification*

3.3 Multi-cut guillotine

Lastly, the stitched and taped folio is run through the multi-cut guillotine. In many ways, this is the most important element. At this point, poor execution will lead to waste and loss of production of the material, when it is at its highest value.

The machine offers an efficient solution for two finishing problems often encountered by printers and print finishers. First, for cutting items in multi-positions, such as pads, booklets, chequebooks, samples, etc., after stitching and/or glue binding, in this case, the machine proves an excellent complement to this system.

Max. cutting width: 260mm

Min. cutting width: 120mm

Max thickness: 20mm with hydraulic cut

Size: 1.0m x 1.0m x 1.0m

Weight: 800kgs

Power: 3 phase 3.5kw



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