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# Stitchmaster ST 300

Saddle Stitcher

**HEIDELBERG**

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# Stitchmaster ST 300 – Flexibility Guarantees Economic Efficiency • Reliable production output for different jobs and high standards are the distinguishing features of the ST 300 for use in the publishing and printing production on a worldwide basis.

Since its introduction in 1995, the Heidelberg saddle stitcher Stitchmaster ST 300 has established itself worldwide thanks to numerous advantageous features. The ST 300 is the only saddle stitcher covering an output range up to 13,000 cycles/h with four feeder variants. Feeder makereadies are reduced to a minimum and operating facility is convincing. This system is prepared to meet any standard concerning paper, format and folding. The feeders, including the cover folder feeders, are mounted on a universal frame. They can be arranged in any sequence thereby providing highest flexibility and economic efficiency.

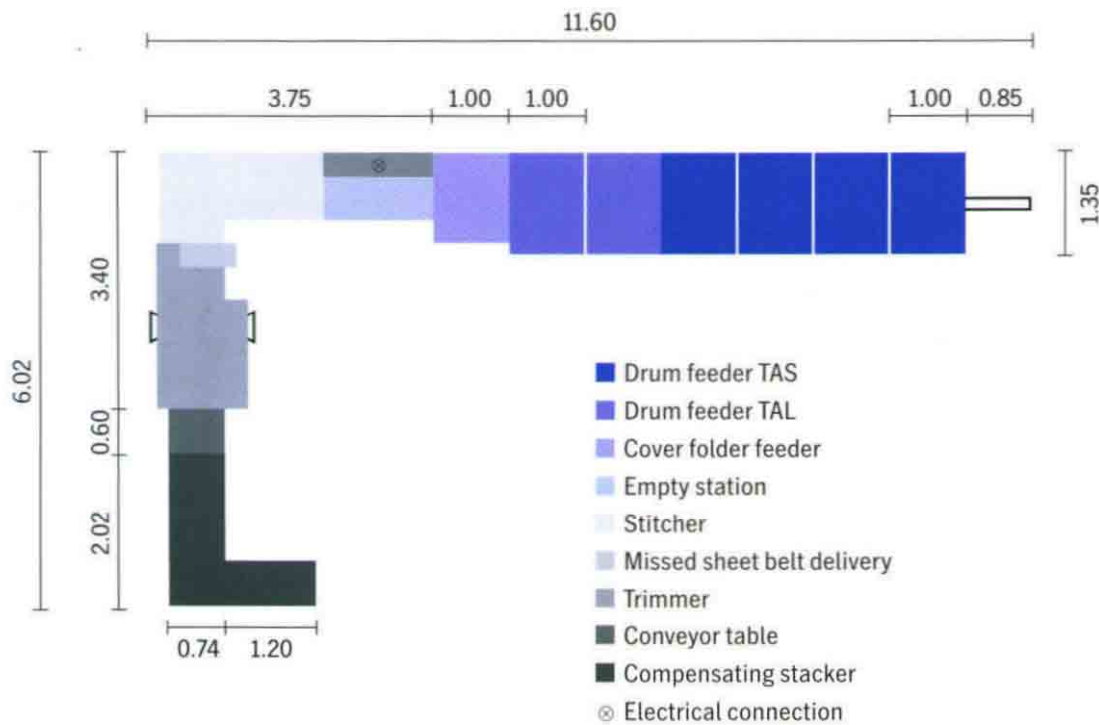
## Signature Feeders

The modular-design signature feeders are suited for feeding vertical or flat-lying signatures. The ST 300 can be extended to a total of 16 signature feeders, including the cover folder feeders. Each feeder position can be used as a hand feed station by swing up of the feeder heads to an angle max. of 50° from the horizontal level. A card gluer can be easily attached. With a few adjustments the feeders can be connected or disconnected or run at full (1:1) or half (1:2) speed.

Four Stitchmaster ST 300 in practical operation providing the operator with an almost unlimited range of production and capacity.



# Stitchmaster ST 300



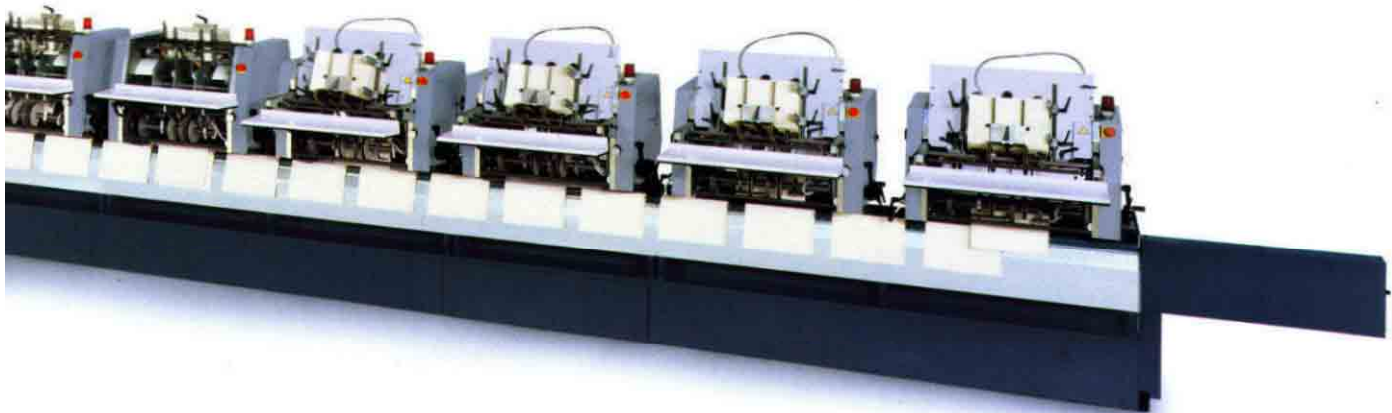
Dimensions in m, scale 1:100



Maximum flexibility and high production safety, an output max. of 13,000 cycles/h, a total of 16 feeders, quick change over from the vacuum to the gripper operating mode, a great variety of feeders and deliveries, and attachments for the parting cut and the punch cut make the ST 300 suitable for a large economic range of applications.

#### **Cascade Function with Series Feed Control (Standard)**

The last feeder starts sheet separation at production start and all the other feeders are then connected in product running direction. The same procedure is carried out when the saddlestitcher is shut down. Sequential feeder monitoring defines whether the signature separated by cascading has fallen onto the gathering chain. In case one signature has neither been separated nor fallen onto the gathering chain, the succeeding feeders stop feeding thereby guaranteeing complete books from start to stop. The cascading capability ensures high productivity and, at the same time, reduces the number of incompletely pre-collated sections which have to be separated by hand and re-fed.



### Format Changes

Formats are quick and easy to change. Change over from the vacuum to the gripper operating mode is carried out fast. Operational parts need not be exchanged. Depending on the feeder type, the signatures are stacked vertically or flat-lying in an ergonomically favorable height, picked up by grippers or suckers and quickly placed on the gathering chain. For irregular signatures, the feeders can be moved from the chain center to either the front or the back or be adjusted to height to the gathering chain, if required. Each feeder is equipped with an air blower attachment which can be adjusted during the production run.

### Drum Feeder TAS

Double grippers pick up vertically loaded signatures. The signatures may be vacuum or gripper opened (either forward or reverse lap).

### Drum Feeder TAL

Double grippers pick up horizontally loaded signatures. The signatures may be vacuum or gripper opened (either forward or reverse lap).

### Roller Feeder WAL

Difficult or sensitive signatures are separated by the unique roll-off principle preventing marking. The signatures may be opened by suckers or grippers (either forward or reverse lap).

### Cover Folder Feeder

The cover folder feeder helps to save valuable production time normally spent in folding department. Inner and outer scoring is carried out according to the cover quality. Change over of the scoring type and the cover format requires only a few adjustments. One particular advantage of the ST 300 is that the cover folder feeders can be used placed in tandem within one system. Interconnected stations are not required.

### Equipment for All Feeders

The standard equipment for all feeders includes an air blowing attachment, a cascade inspector to connect or disconnect the infeed or the exit of the system, signature pick-up inspectors and signature position inspectors.

### Stitcher

Standard with two stitching heads for the 14 mm standard stitching. The stitcher can accommodate up to six standard or four loop stitching heads. The signature length inspector, the jam detection and the book thickness inspector are standard. To ensure perfect stitching, the products are completely stationary during the stitching sequence. Incomplete signatures are ejected unstitched.

### Trimmer

The principal feature of the new trimmer is that the main drive with compact gearing runs in an oil bath. The trimmer is of a heavy and solid construction. Product trimming is carried out with the transfer elements completely stationary. The trim sequence is fore-edge first, then head and tail simultaneously to a maximum trim-off width of up to 50 mm on all three sides. Marking is largely avoided. The trimmer is prepared for a quick and easy fitting of optional attachments such as the center cut attachment, the triple cut attachment and the hole-punching attachment. The trim waste is removed from the trimmer on a wide collecting belt by the standard waste chip removal device.

### Deliveries

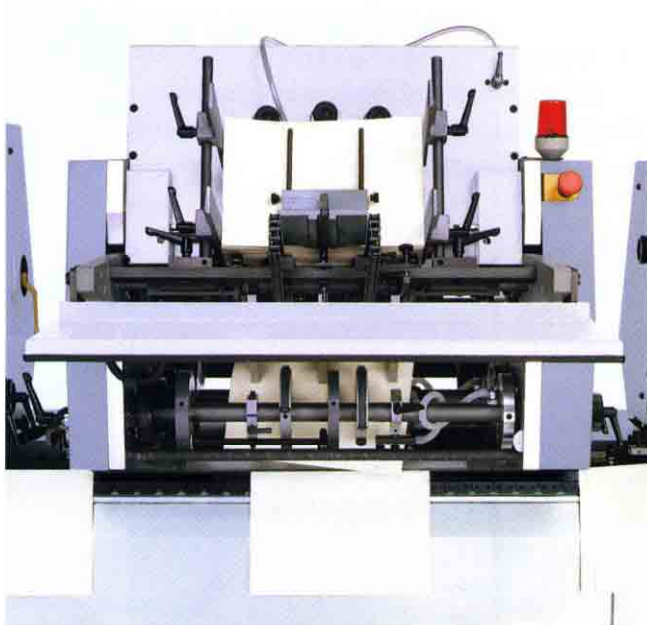
The delivery is offered according to the product structure, for example a compensating stacker, a stream delivery or Heidelberg Finishing delivery systems.

#### Stitchmaster ST 300

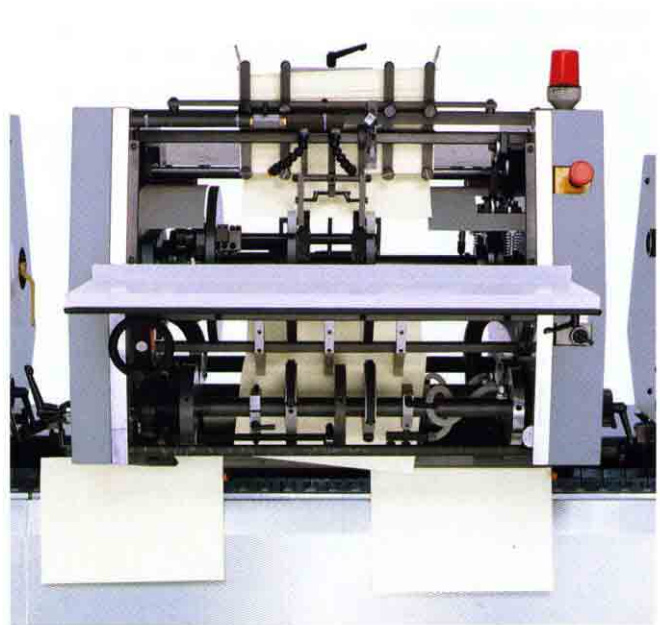
- Output max. 13,000 cycles/h
- Product thickness max. 12 mm
- A total of 16 feeders
- Great variety of feeders
- Swing up feeder heads
- Cascade function with series feed control
- Easy attachment of card gluers
- Menu-driven setup
- Quick make-ready
- Economic trimming and punching attachments in the trimmer
- High production safety
- Maximum flexibility

# Four Feeder Variants – Exclusive for Heidelberg Finishing

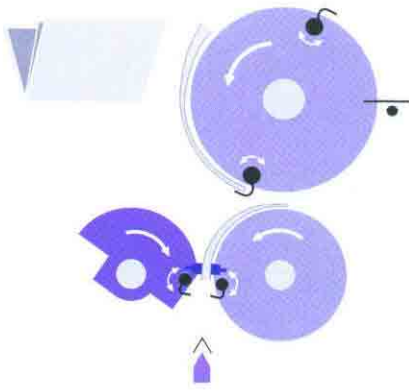
The variety of feeders available for the Stitchmaster ST 300 is designed to satisfy ever-changing high standards.



**Drum Feeder TAS, vertical signatures**  
Double grippers pick up vertically loaded signatures. The signatures may be vacuum- or gripper-opened (either forward or reverse lap).

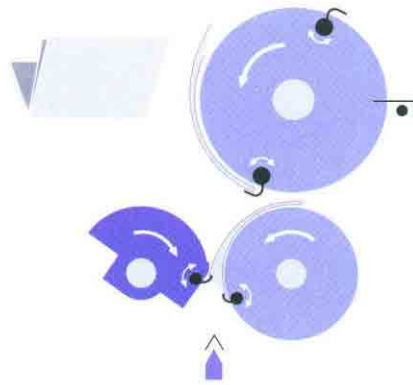


**Drum Feeder TAL, flat-lying signatures**  
Double grippers pick up horizontally loaded signatures. The signatures may be vacuum- or gripper-opened (either forward or reverse lap).



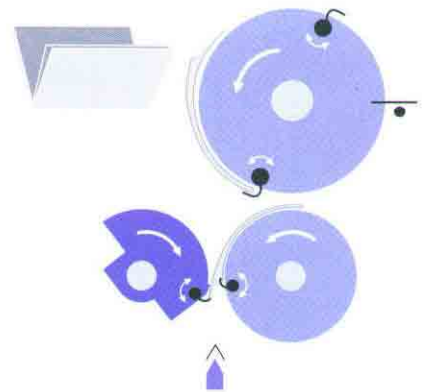
**Vacuum Opening**

Signatures with closed head or tail are reliably opened by suckers.



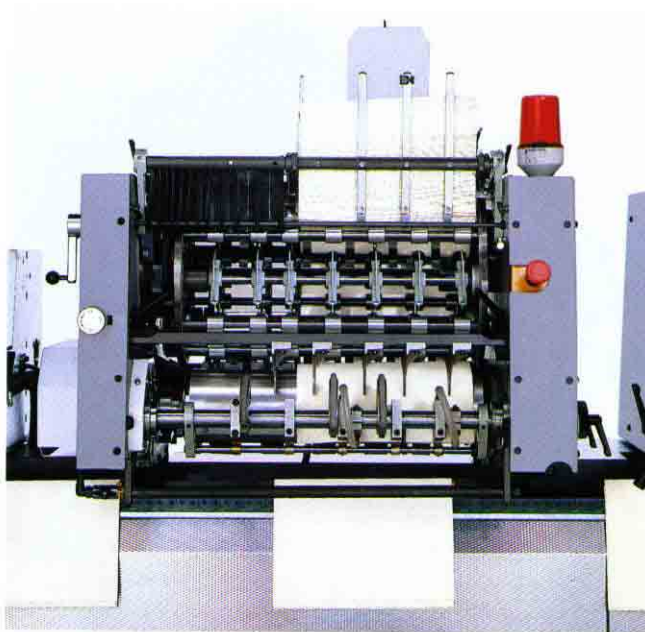
**High Folio Opening**

Signatures with high folio lip (min. 6 mm) are processed.



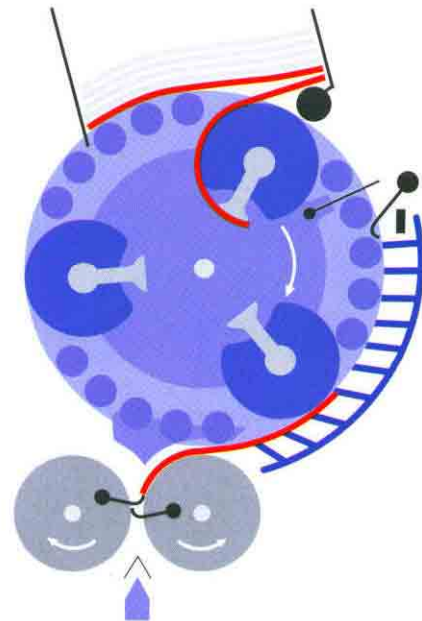
**Low Folio Opening**

Signatures with low folio lip (min. 8 mm) are processed.



**Roller Feeder**

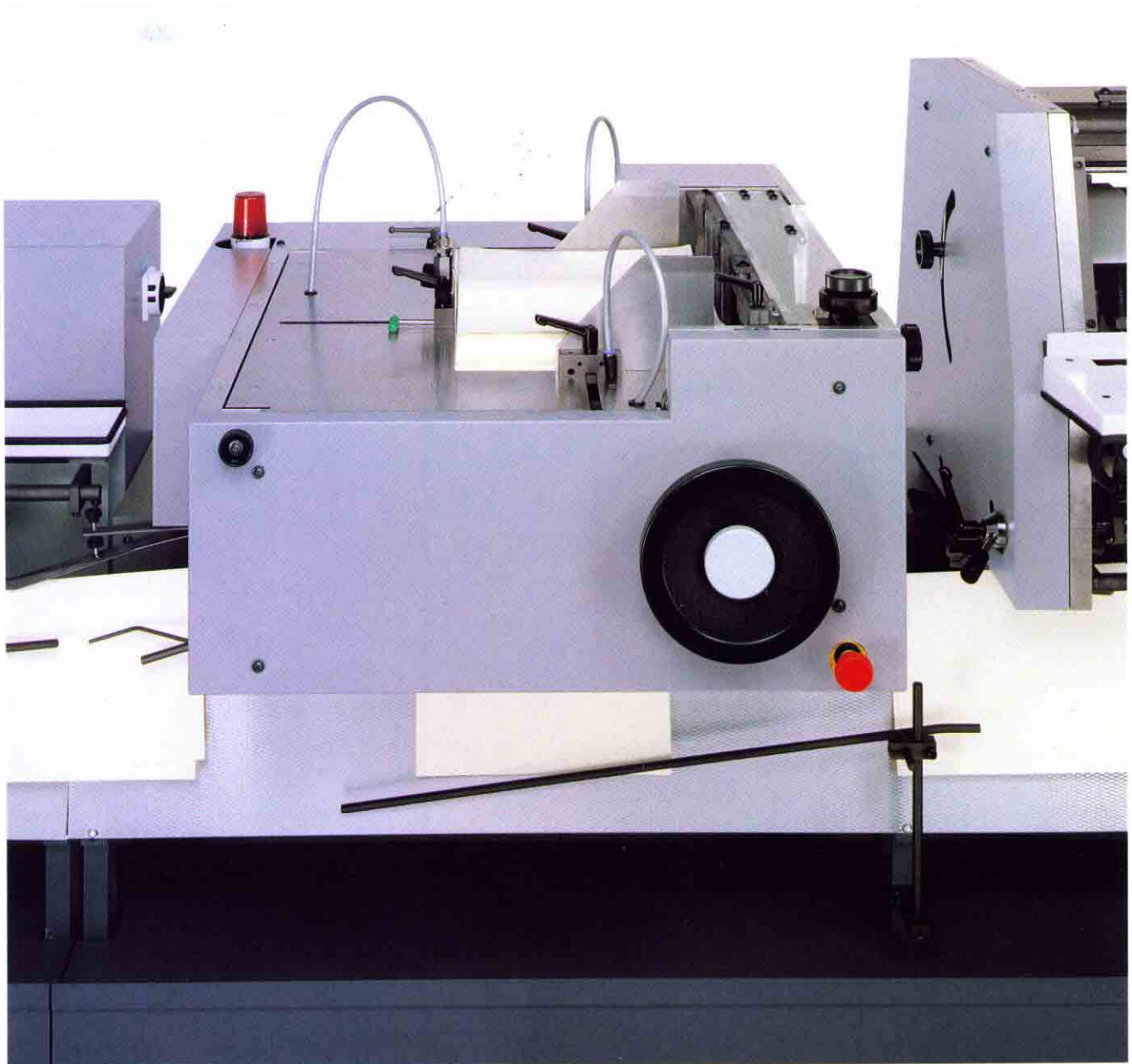
The signatures are separated by the roller feeder independent of the pile weight thereby providing reliable processing of most difficult paper types, extreme formats and unusual sheet types. This feeder is a superior solution for the mark-free processing of freshly printed material.



**Roller Feeder Operating Mode**

One of the three rotating vacuum shafts respectively separates the signature without friction from the pile. Once the signature has reached the register back stop, it is picked up from the opening shafts by either vacuum or gripper, opened and placed onto the gathering chain.

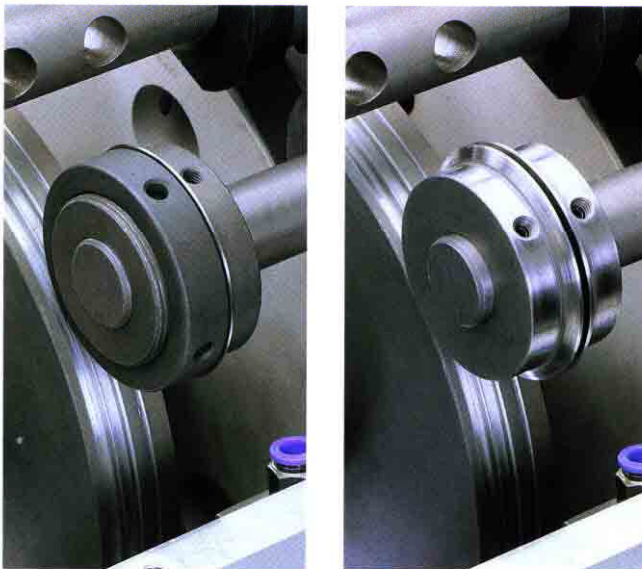
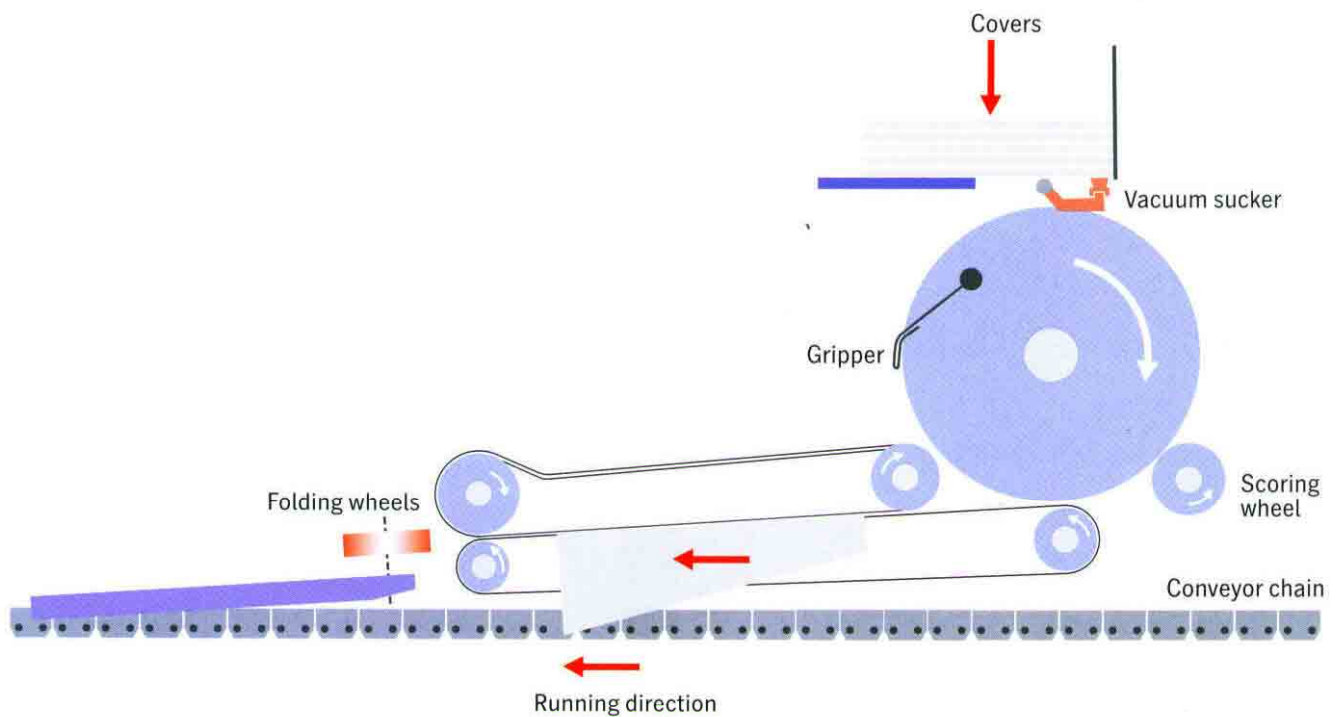




Relevant functions of the ST 300 cover folder feeder can be adjusted during the production run.

### **Cover Folder Feeder**

Integrated scoring of the covers eliminates the folding of the covers before gathering. Two possible types of scoring are easy to change over guaranteeing optimum adjustment to the cover and the paper grain direction. Precise and reliable folding and feeding of the covers is carried out up to the maximum cycle time.



### Two Types of Scoring in One Component

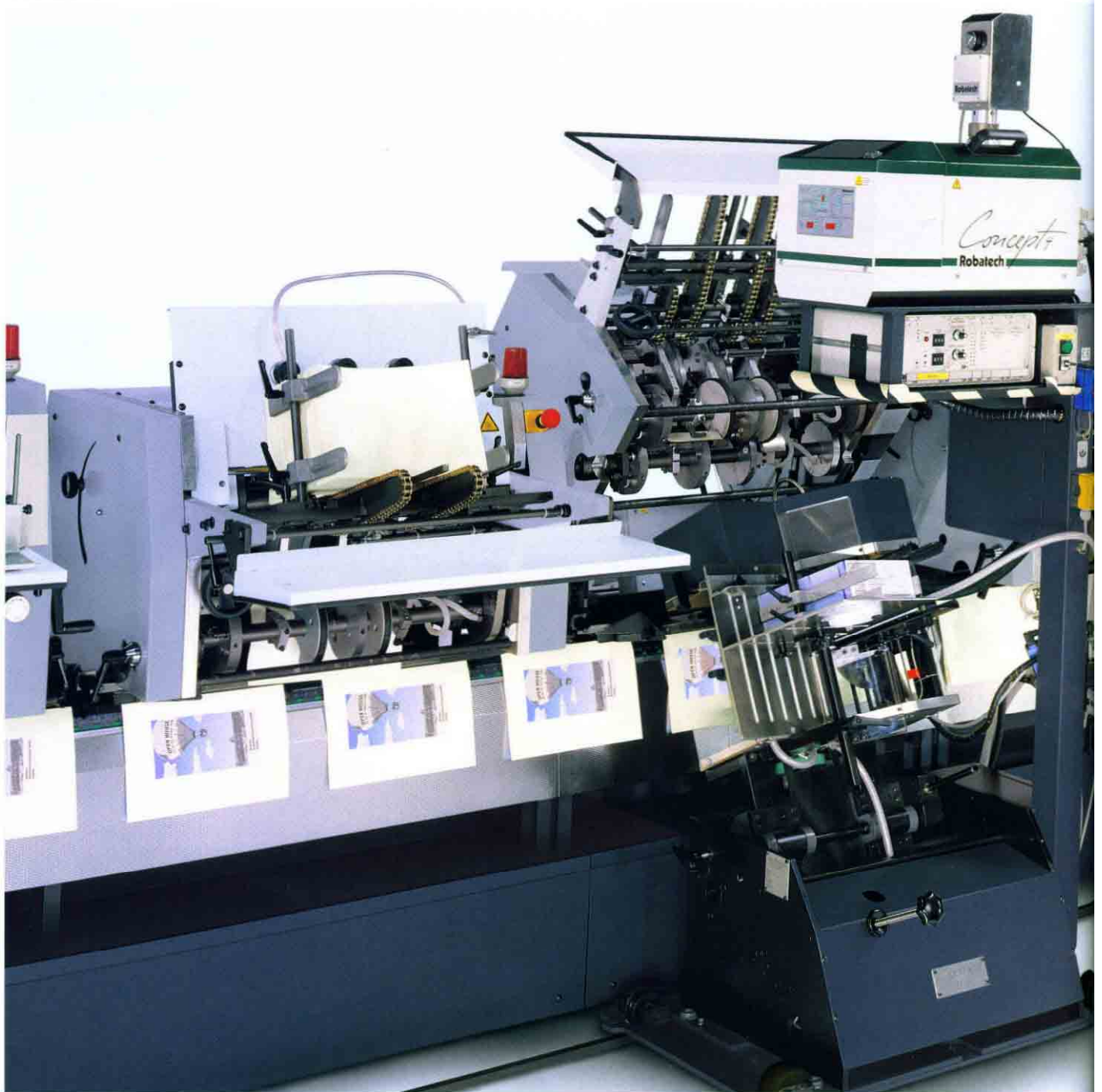
Change over of the scoring type according to the cover quality or the paper grain direction requires only a few adjustments.

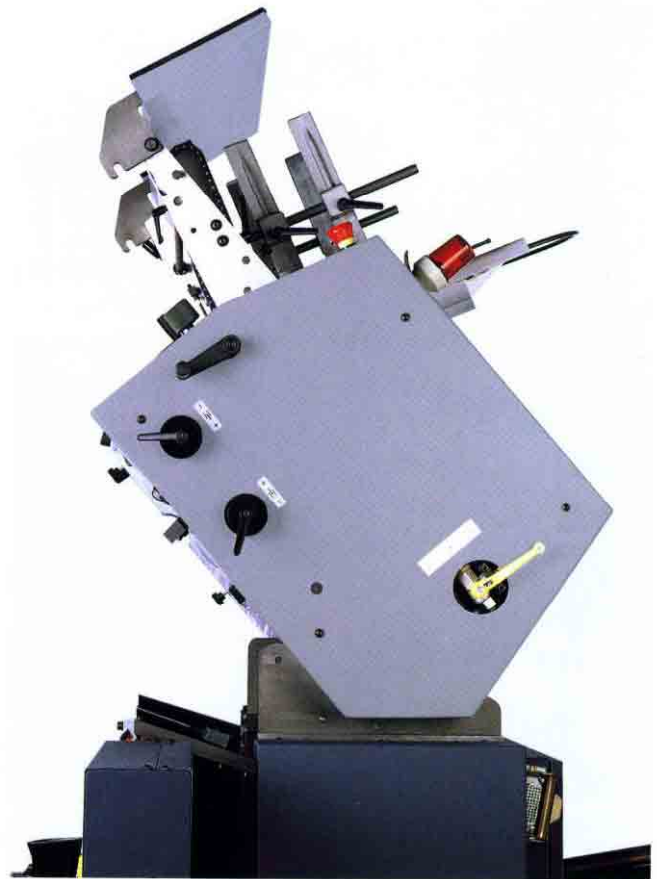
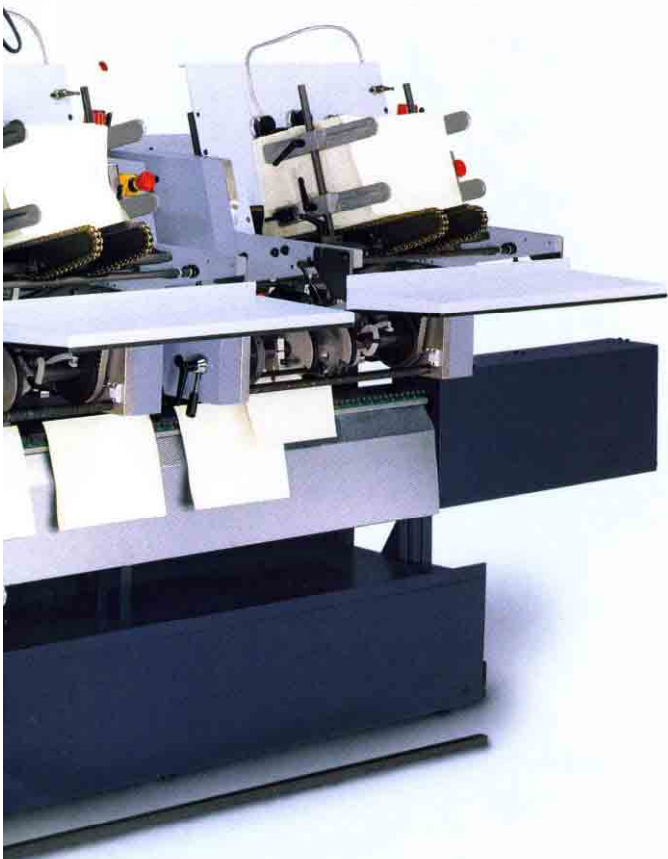
#### Advantages of the Cover Folder Feeder

- Reversible scoring according to cover quality and paper grain direction integrated in one component
- Fold position, signature skew, scoring, suction and air supply can be adjusted during the production run
- Accurate folding by optimised folding mechanism
- Double sheet detector with quick setting

# Swing-up Feeders • Simple swing up of the signature feeder heads considerably facilitates the use of card gluers.

Card gluers can be easily attached at any feeder position.





The feeder head is quick and easy to swing up.

#### Swing-up Signature Feeders

- Movable to any position
- Simple to swing up
- Quick and easy cardgluing
- Accessory hand feed
- Sequential feeder monitoring

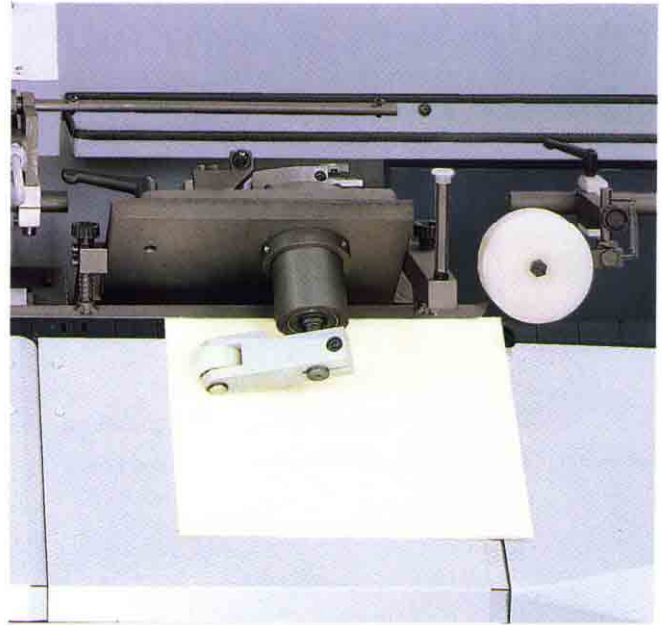
# Perfect Stitching • Standard or loop stitching heads are used for the perfect and stationary stitching of the collect-run product independent of the production speed.

Stationary stitching provides reliable book precision, even for difficult collect-run products.



## Stitcher

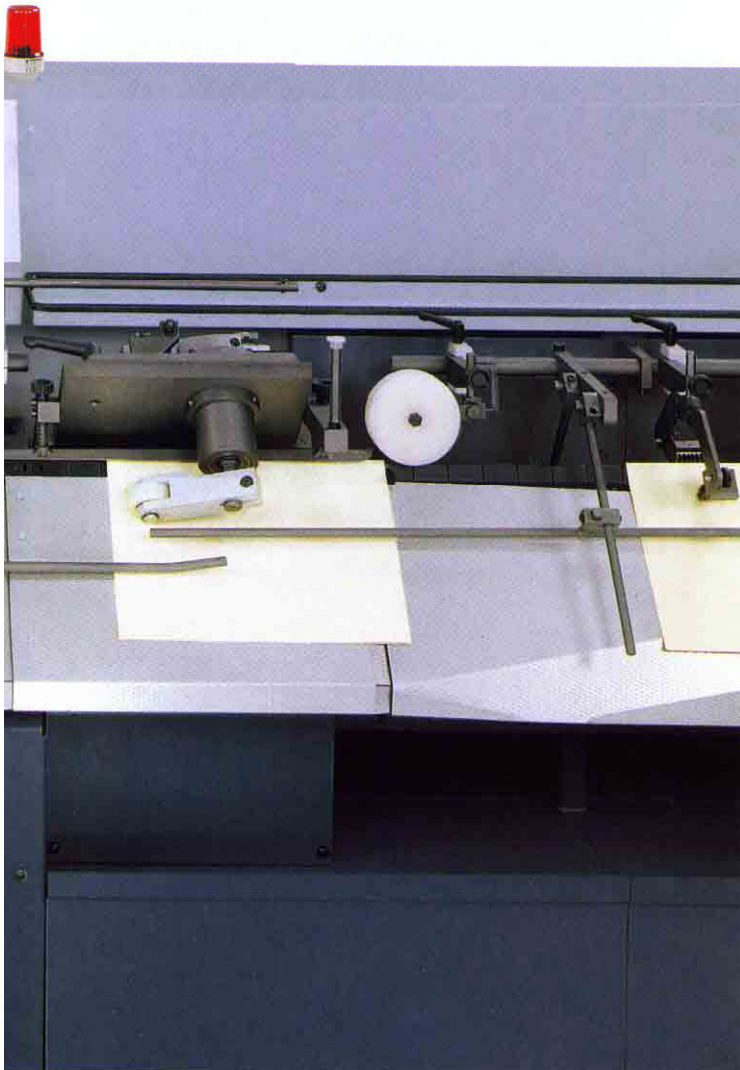
The solid construction low-vibration design allows for smooth product transfer even at permanently high speeds. To ensure perfect stitching, the products are held in place during the stitching sequence. The sharp-cornered angle precision gathering chain guarantees the reliable transfer of complicated signatures. The central book thickness caliper adjustment automatically sets the stitching wire length. The Stitchmaster ST 300 comes with spool holders for two large spools.



The product thickness inspector ensures that faulty collect-run products are ejected unstitched.

## Operator-friendly Product Thickness Inspector

The side-mounted product thickness inspector can be set to any value between head and tail of the signature, any faulty product is ejected unstitched.



## Central Monitoring and Controlling

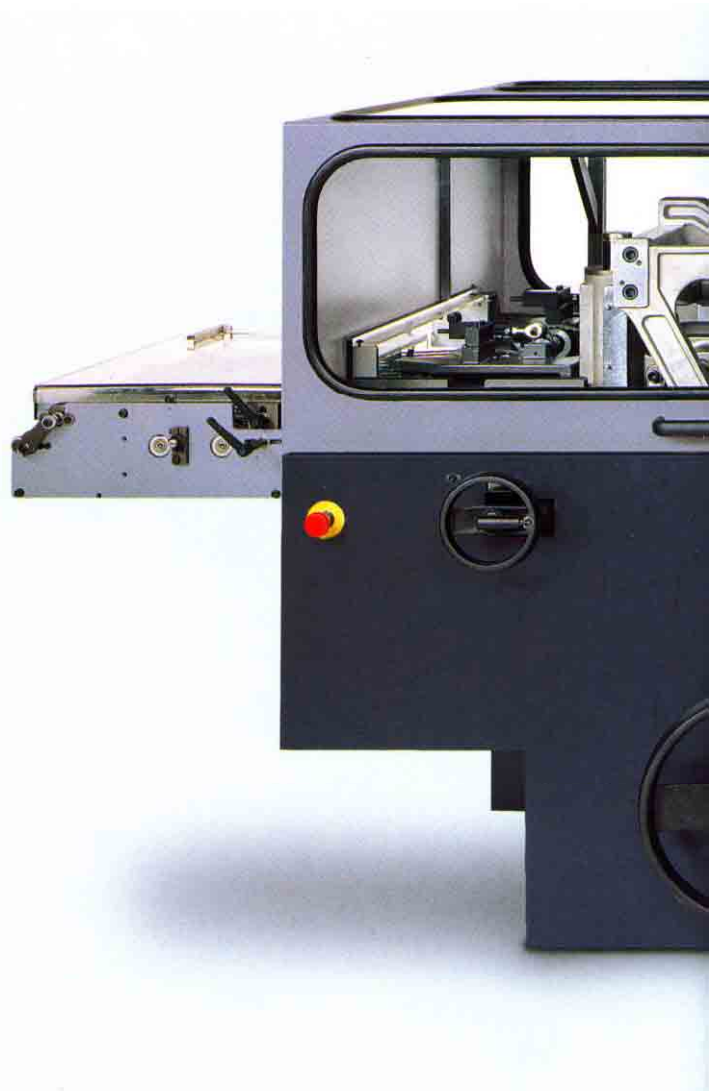
Operator-friendly arrangement of the main operating panel for the complete system. Controlling of the saddle stitcher is effected via the SPS digital control system with diagnosis of errors. Plain text display for communication with the operator and current production data display.

The Universal Trimmer • Upon precise trimming of the stitched products the trimmer allows for integrating additional activities in the production flow.



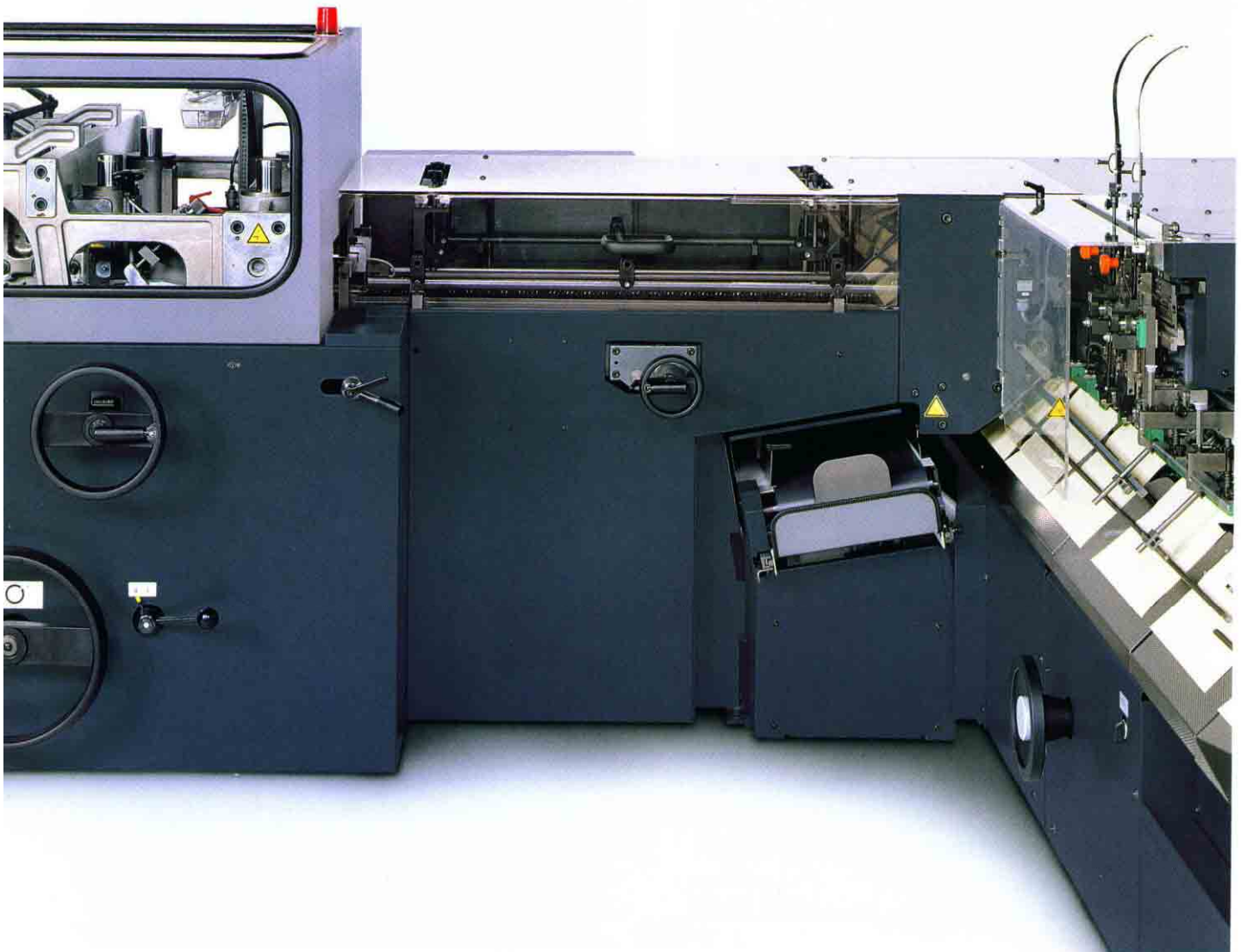
Heavy and solid construction providing permanent trim quality for foredge, head and tail.

The ST 300 trimmer unit is easily accessible thanks to the low construction.



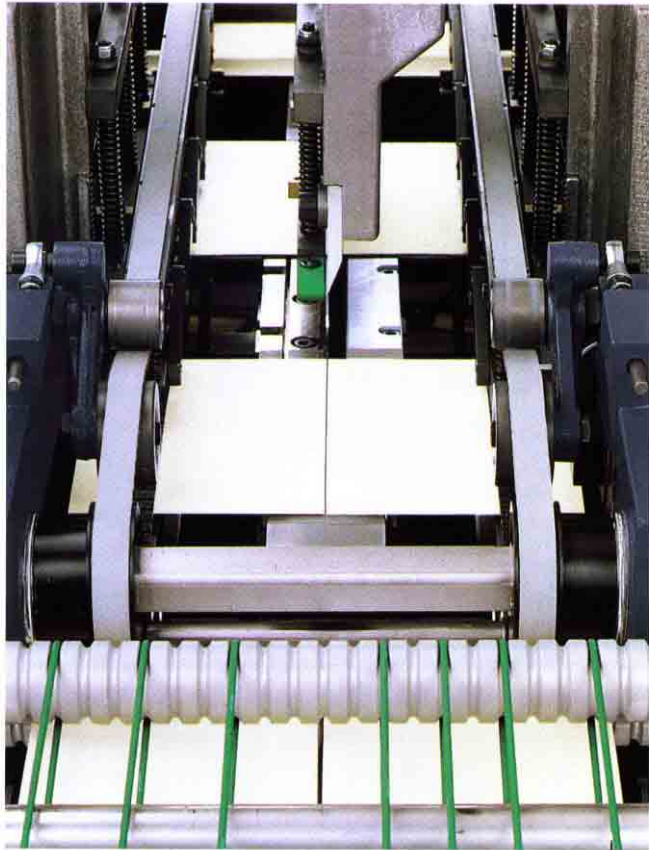
#### Trimmer

- Clearly laid out, easily accessible
- No tools required for adjusting
- Precise product aligning and exact guide during trimming operations
- Conveyor belts are completely stationary, therefore minimising marking
- Festa quick setting of the product thickness





# Separating, Punching, Small Formats • Proven functions and accessory attachments help increase the production effectiveness.



## Parting Cut and Punch Cut (Option)

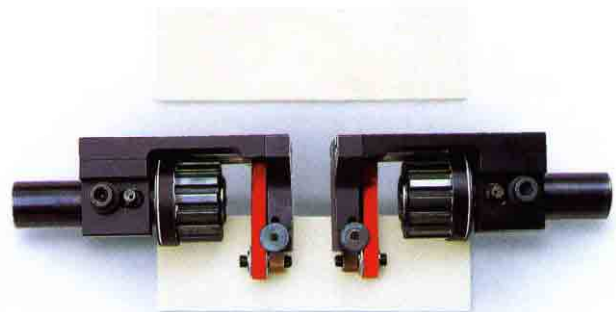
The center cut attachment with fourth and fifth knife for two up products does not require any additional transfer chain or transfer belts. For quick and easy use.



### Two Up Production Parting Cut

Face x spine

- Maximum twice 305 x 237 mm
- Minimum twice 89 x 100 mm
- Product thickness max. 10 mm



## Small Book Transfer Device (Option)

Face x spine

Single up minimum 64 x 200 mm

Double up minimum twice 64 x 100 mm

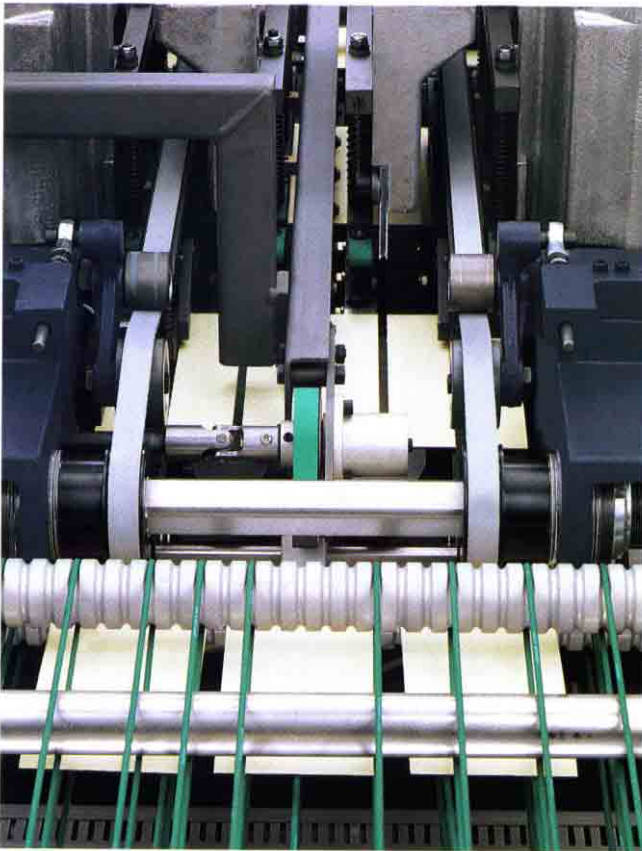
Triple up minimum three times 64 x 100 mm



### Two Up Production Punch Cut

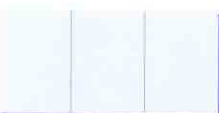
- Product thickness max. reduced by the half punching knife width
- Formats see parting cut
- Spine length reduced by the half punching knife width

## Triple Trim, Hole-punching • Integration of separate operating cycles helps reduce production cost and processing time.



### Triple Trim Attachment

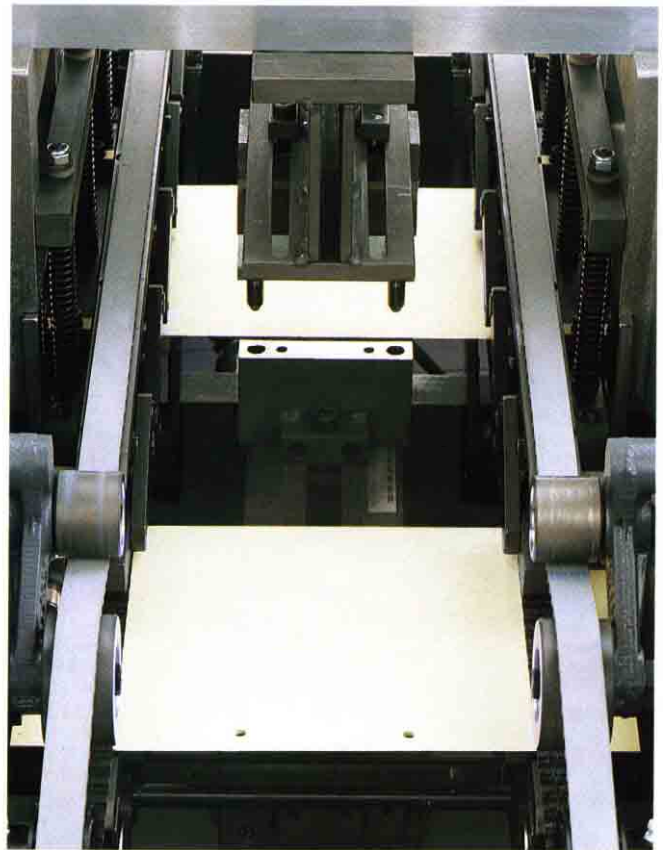
Heidelberg Finishing is the only supplier for three up production in the trimmer by parting cut or punch cut.



### Three Up Production Parting Cut

Face x spine

- Maximum three times 305 x 158 mm
- Minimum three times 89 x 100 mm
- Product thickness max. 5 mm



### Hole-punch Attachment in the Trimmer

Two-hole, three-hole, four-hole punching; calendar hole-punching attachment at the face trim.



### Three Up Production Punch Cut

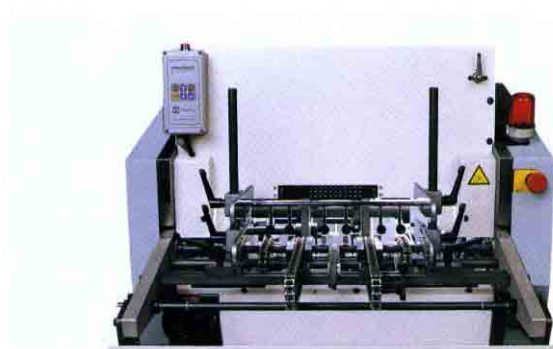
- Formats see parting cut
- Spine length reduced by the half punching knife width
- Product thickness max. 3 mm

## Options • Help to integrate separate operating cycles, to increase the productivity and to assist the workflow and the operator.



### Cloutier Section Feeder

The Cloutier section feeder serves for an automatic feeding of logged signatures when processing larger volumes. It is used in connection with the drum feeder TAS. When using this feeder it is recommended to provide an empty station after each second Cloutier feeder for more comfortable accessibility.



### Signature Recognition System

Opticontrol is a system for the reliable recognition of blank sheets and print quality. Each drum feeder is equipped with one sensor optically scanning an area of approx. 20 cm<sup>2</sup>.



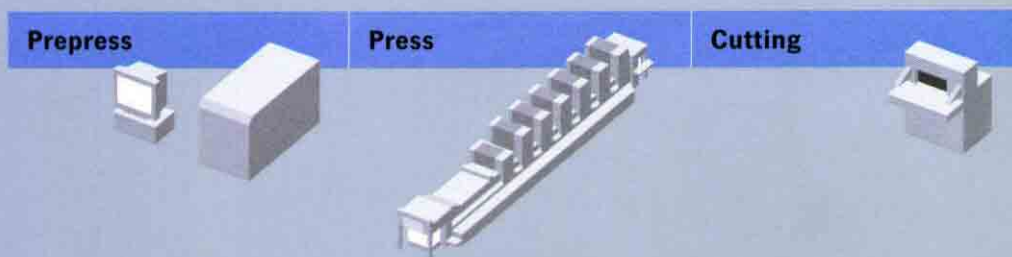
### Chip Transfer Belt

For fast and clean removal of waste paper chips into waste container. High-quality steel frame construction with independent electrical drive, conveyor heights available: 110 and 145 cm.

# Modular Solutions from Heidelberg

Production routines are growing more complex and demanding. No two jobs are alike anymore. Customers are demanding better quality and more value. These are the reasons Heidelberg is committed to a modular solutions concept: from prepress to finishing, and from individual products to complex workflows.

The goal is to deliver solutions tailored to each customer's unique challenges and markets. Solutions are the concept, and customer focus is the guiding principle.



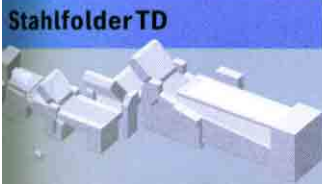
## Technical Data ST 300

Output		
mechanical	max.	13,000 cycles/h
	min.	1,500 cycles/h
Formats		Face x spine
untrimmed	max.	320 x 480 mm
	min.	92 x 128 mm
trimmed	max.	305 x 474 mm
	min.	89 x 120 mm

Product thickness	
max.	12 mm
Stitching heads	
max.	6 standard or 4 loop stitching heads

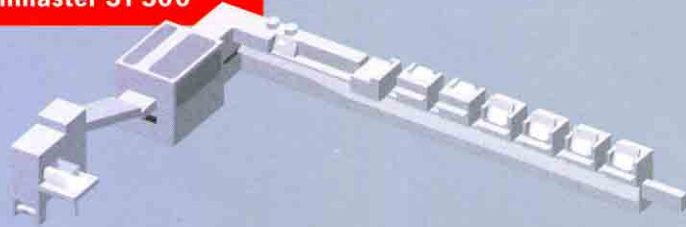


**Stahlfolder KD**



**Stahlfolder TD**

**Stitchmaster ST 300**



**Opening methods**

Gripper opening	with low folio lip	min. 8 mm
	with high folio lip	min. 6 mm
Vacuum opening		

**Weights**

Signature feeder TAL	300 kg
Signature feeder TAS	300 kg
Roller feeder WAL	350 kg
Cover folder feeder	300 kg
Stitcher	1,630 kg
Trimmer	1,950 kg