ZU

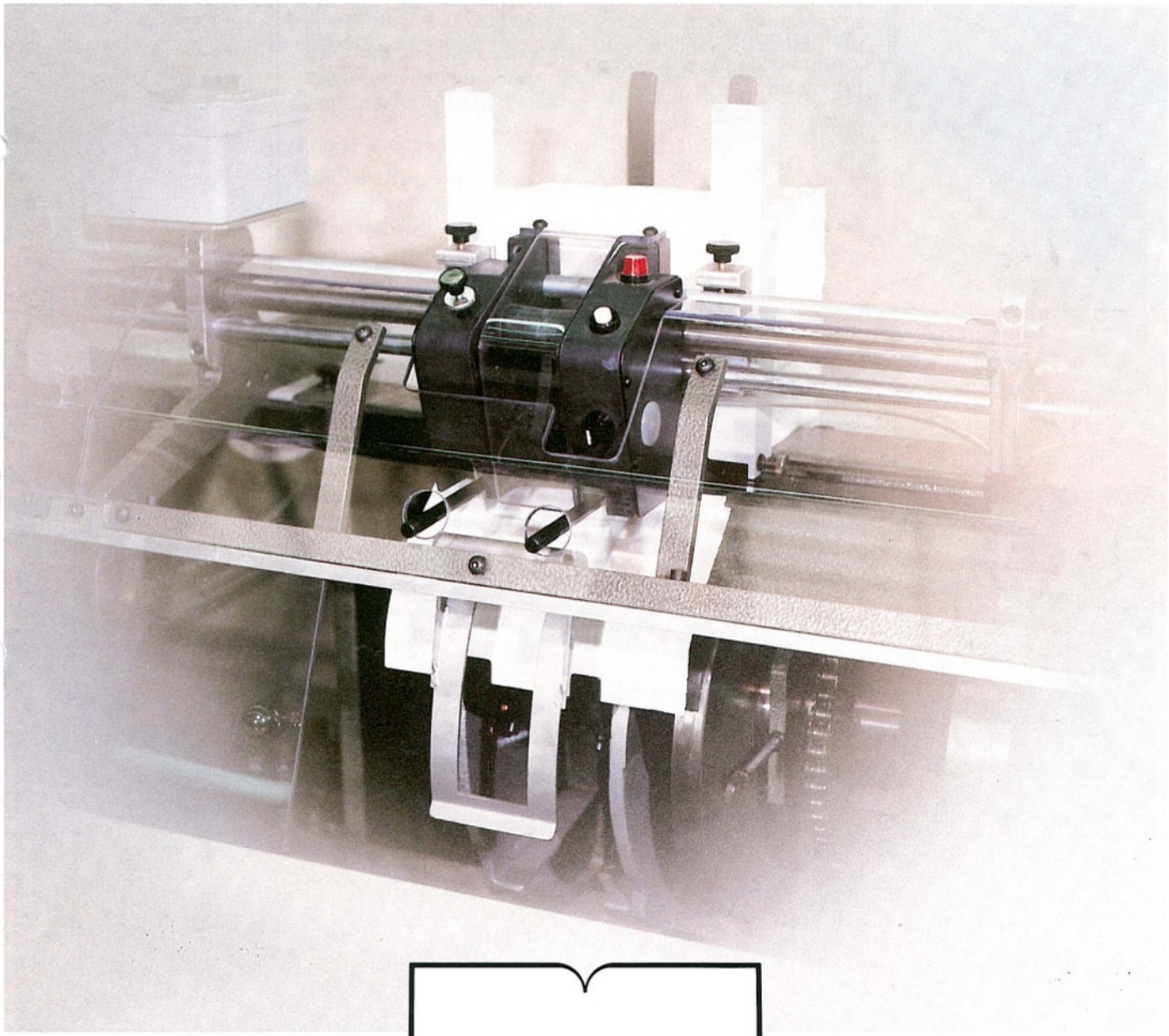
Gathering machines

Drum principle

6,000 / 10,000 cycles/h.

Single machine or

linked with adhesive binders

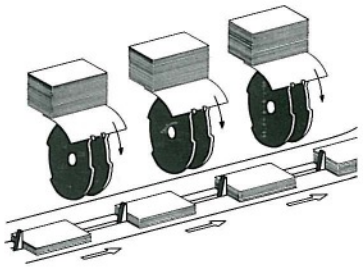


KOLBUS

– Bound for the Future

Kolbus gathering machines

A versatile gathering machine range for individual operation or in-line with adhesive binders. Multiple application possibilities with high efficiency.

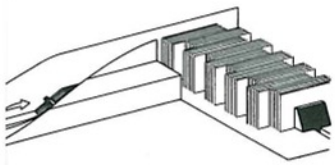


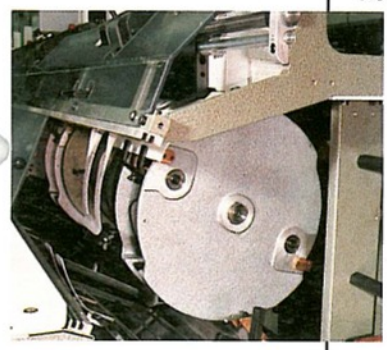
Mode of operation:

- The sections are either manually stacked in the magazines or by pre-connected hopper loaders.
- Suckers grip the bottom section and bend the sheet edge downward.
- The grippers on the rotating drum take the separated section, pull it out of the stack and deposit it on the catcher plates in the transport channel.
- Chain transport fingers collect the laid down sections and guide them
  a) to the left into the connecting unit, for versions coupled with an adhesive binder.
  b) to the right into the corresponding delivery, when used as an individual machine.
- Infeed of pre-gathered sections is possible directly of the manual feeding station or by means of an infeed conveyor. However, the maximum clearance height in the transport channel of 85 mm must be observed.

ZU in-line with the Kolbus Ratiobinder, basic module for in-line production of adhesive bound products

Technical details





Big drum with
two pairs of grippers

1. The modular design permits a solution matched to the individual application. The basic unit consists of 8 feeder stations, offering extension possibilities in groups of 4 stations up to a max. of 32.

2. Short make-ready time without tools.

3. The construction height enables convenient magazine feeding from both sides.

4. The large drum diameter permits the sections to be feed from the stack without severe bending.

5. The drums are equipped with two opposite pairs of grippers. Thus, the drum speed is reduced by 50 % and the production reliability enhanced.

6. An air blast system simplifies the separation of the bottom sections.

7. Improved suction-gripper system with direct motion transmission. Gentle gripper contact through computer designed cams. The grippers automatically adapt to the individual section thickness.

8. Metering of missing sections via photocells. Eletronically controlled double section metering.

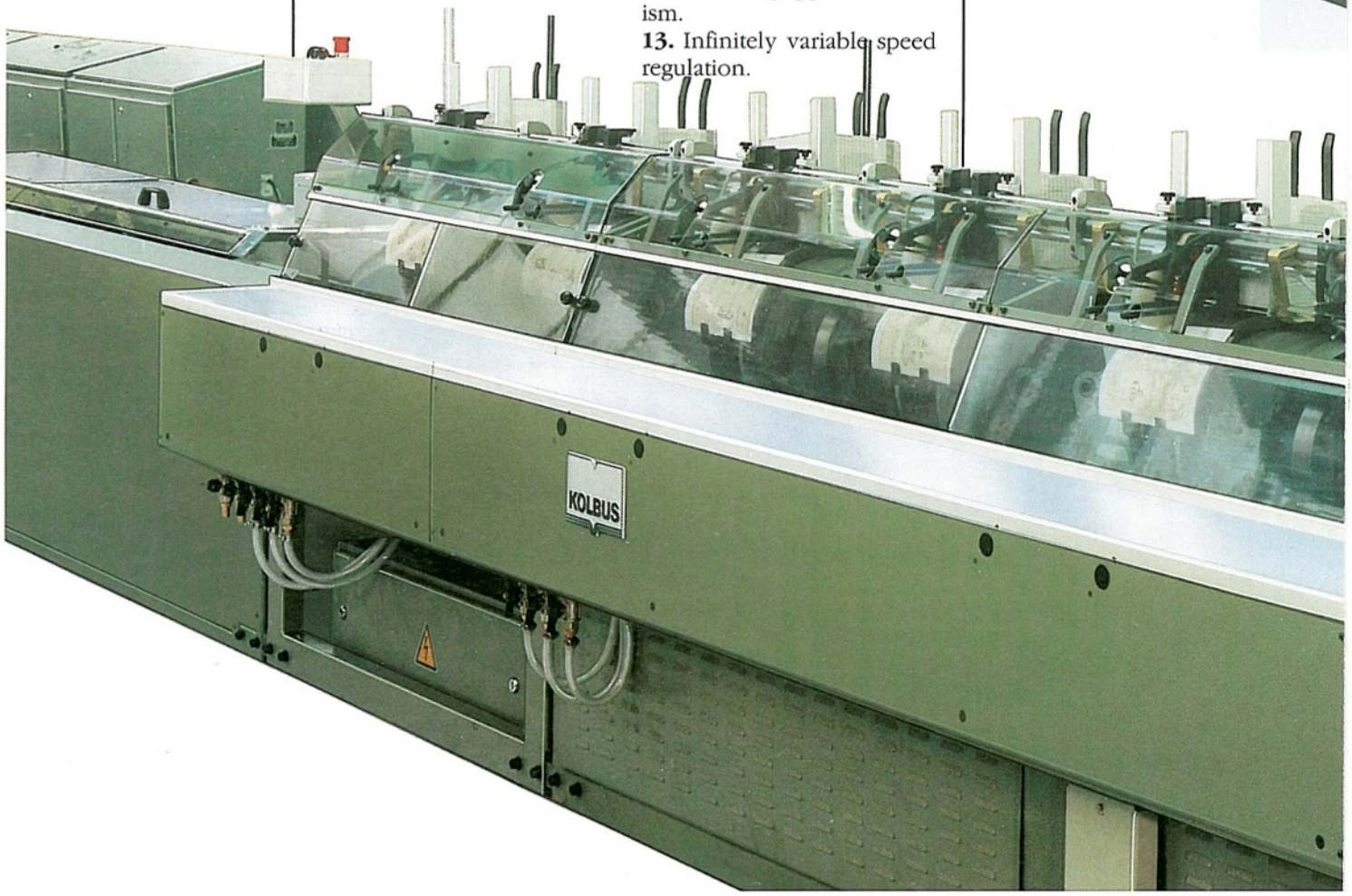
9. Signal lamps display the malfunction location.

10. Flat transport channel for secure gathering.

11. Air blast and special transport plates are standard equipment and reduce the friction in the transport channel. This is particularly important for sensitive material.

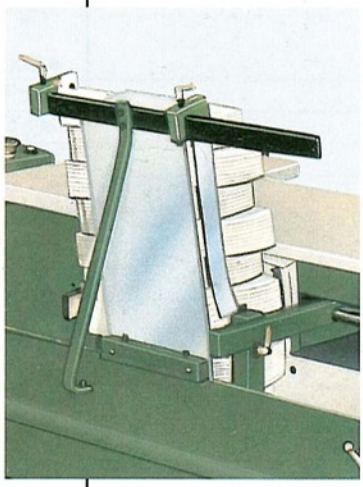
12. The machine is prevented from running totally empty in any of the feeding magazines. This protects the operator from the gripper mechanism.

13. Infinitely variable speed regulation.



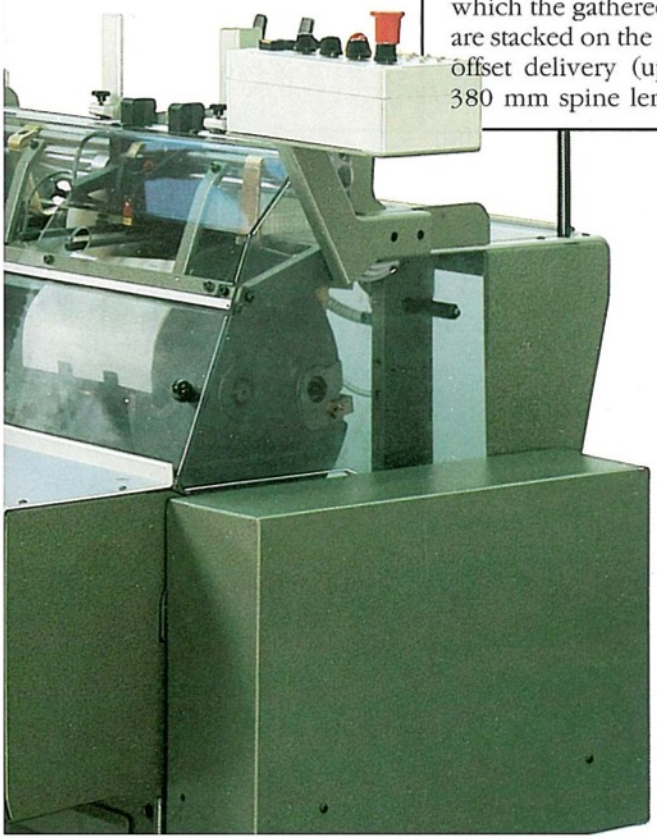
Additional equipment

1. Connecting unit with controls for in-line operation with an adhesive binder.
2. Jogging station in the upright channel.
3. Manual feeding device in which previously gathered block parts can be inserted manually.
4. Infeed conveyor for cycle independent feeding of presewn blocks or preglued block parts.
5. Disconnecting stations when not in use (two stations each).
6. Quick adjustment of catcher plate when changing direction.
7. Hopper loader for automatic feeding of sections from parcel bundles.
8. Cascade control with reject discharge unit.
9. Belt delivery for sensitive products in single delivery or stream flow.
10. Cross stack delivery, in which the gathered products are stacked on the spine. The offset delivery (up to max. 380 mm spine length), simplifies gripping when removing.
11. Vertical stack delivery, in which the gathered products lie flat and are stacked offset on top of each other and can be removed independent of the cycle. (Short delivery).
12. Device for processing small format products down to min. 105 x 75 mm, such as pocket diaries or similar (only possible with non offset cross stack delivery).



Vertical stack delivery

Cross stack delivery



Advantages

- ***Versatile adaptability to product and operation.***
- ***Versatile equipment possibilities for increased reliability and performance during production.***
- ***Smooth transfer to the adhesive binder with combination possibilities through clockwise or counter-clockwise run.***
- ***The construction height simplifies feeding from both sides.***
- ***2 pairs of grippers on the drum reduce the drum speed by 50 %.***
- ***Grippers automatically adapt to the section thickness.***
- ***The large drum diameter permits a flat removal of sections without severely bending them.***
- ***Disconnect possibility for non-required stations.***
- ***Special sheet quality, as well as, air blast in the transport channel, as standard equipment for "friction free" transport of delicate material.***

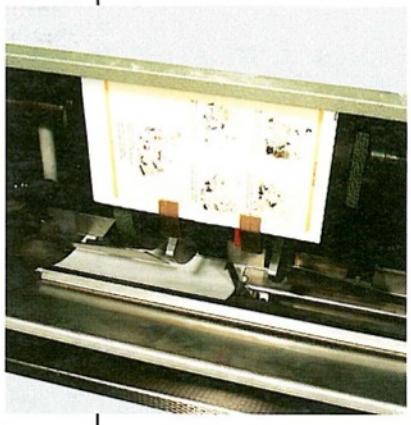
ZU 816 with 10,000 cycles/h
Special features

Highlights:

- Secure gripping when gripper is stationary – accurate lay-down by stationary gripper.
- Controlled acceleration in channel and secure onward support.
- Automatic section thickness adjustment and control.
- Section detection upon request.

Further details:

- In order to reduce vibrations to a minimum each two stations run in a staggered sequence.
- The gripper takes hold of the section when stationary – smoothly and securely.
- The section is drawn smoothly and – again when the gripper is stationary – accurately deposited in the channel, an important prerequisite for secure transport.
- Due to cam controlled movements the transport fingers make contact with the sections only at medium speed and are subsequently accelerated. This prevents the sections from jamming or shooting forward. Guide rails and plates additionally ensure good section guidance.
- A combined jam and missing sheet control is located at the lay-down.
- The transport channel can be height adjusted in order to keep the drop height of the section as low as possible.
- The section thickness control is adjusted automatically. For sections of differing thicknesses (e. g. missing or double inserted sheets), the machine is stopped or the sections are removed automatically.
- A section recognition system prevents gathering of incorrect sections.



Secure gripping by a pair of grippers

Technical Data

Construction series		800			810		
Type		801	802	803	811	813	816
Max. performance/h.		6000	6000	6000	7000	7000	10000
Formats (mm)	min.	100 x 125 (3 15/16" x 4 59/64")					
	max.	310 x 460 (12 13/64" x 18 7/64")			310 x 510 (12 13/64" x 20 5/64")		
Max. stack height (mm)	Magazine	240 (9 29/64")					
	Transport channel	80 (3 5/32")					
Number of stations	min.	8					
	max.	32					
	per element	4					
Feeding height (mm)		1032 (3'4 5/8")					1038 (3'4 7/8")
Transport	Cycle spacing (mm)	609,6 (2')			685,8 (2'3")		
	Direction left	x		x	x	x	x
	to the binder right		x	x		x	
Single machine			x				
Coupling with	Ratiobinder	x		x			
	Systembinder				x	x	x
Construction height (mm)		1277 (4' 2 1/4")					1283 (4' 2 1/2")
Construction length (mm)	4 section unit	2448 (8')			2753 (9')		2853 (9'4 5/16")
	Upright channel	2890 9' 5 3/4"		2890 9' 5 3/4"	4000 (13' 1 1/2")		
Floor load (N/m²)		4930					
Additional equipment							
Extension by 4 stations		x	x	x	x	x	x
Disconnecting of 2 stations each		x	x	x	x	x	x
Adjustable catcher plates		x	x	x	x	x	x
Jogging station in the upright channel		x		x	x	x	x
Cross stack delivery				x		x	
Vertical stack delivery				x		x	
Belt delivery				x		x	
Hopper loaders		x	x	x	x	x	x
Cascade control		x	x	x	x	x	x
Reject system		x		x	x	x	x

Design changes reserved.

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