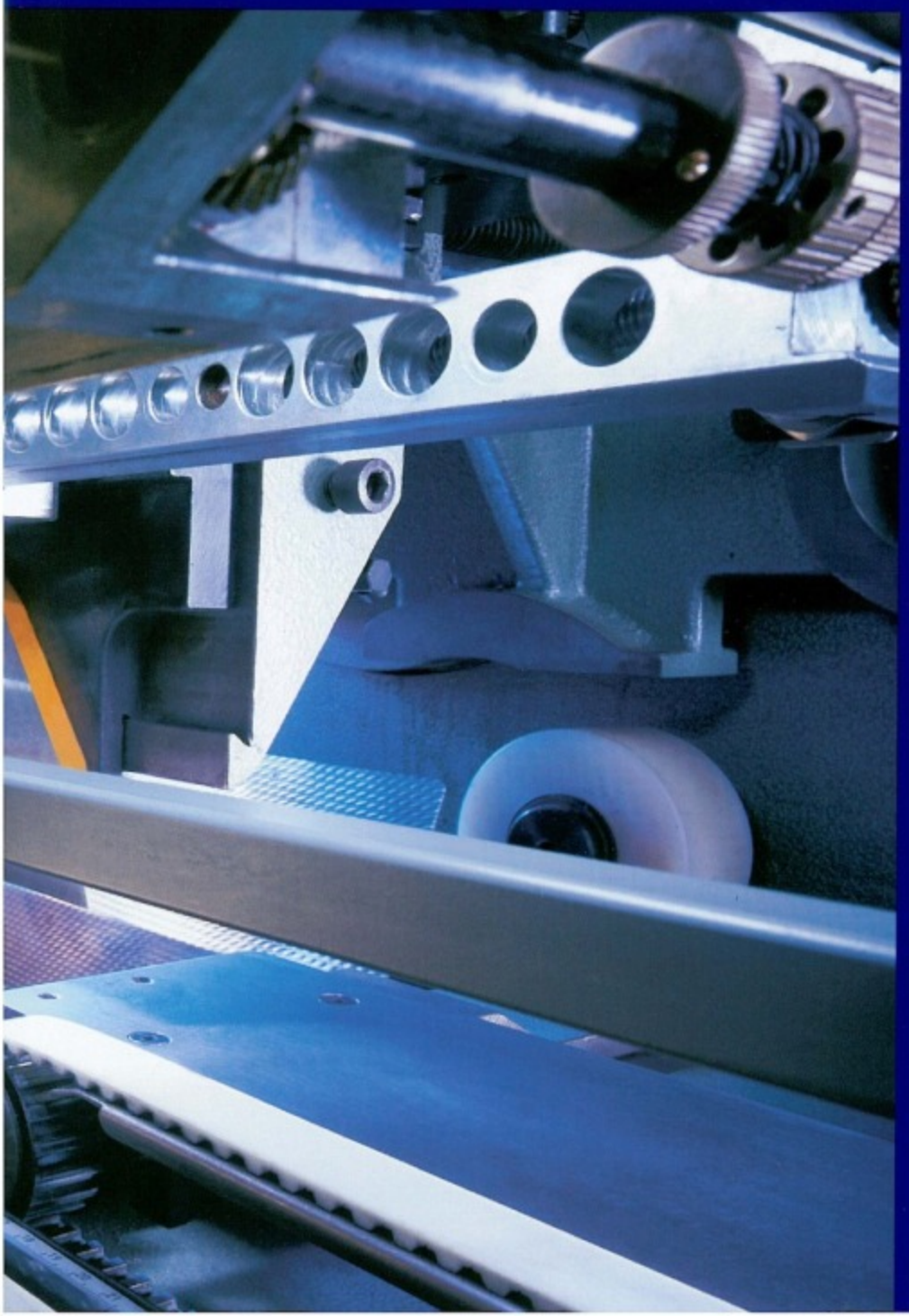
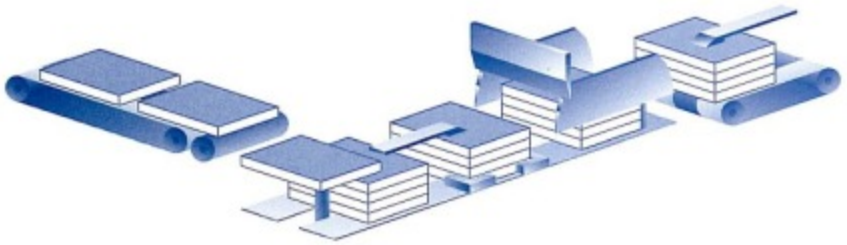
→ High capacity automatic three knife trimmers Pegasus **HD 151.P** and **HD 150.B**





HD 151.P | 110 cycles/min

→ Infeed

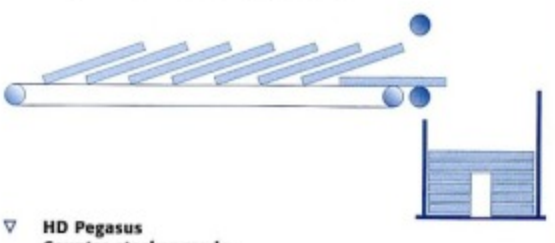
The transport belt feeds the individual brochures to the pile magazine. Depending on the machine configuration, feeding is either in form of shingles or as individual products. The machine speed automatically adapts itself to the product flow arriving from the upstream machine and remains in a waiting status, should the product supply be interrupted. In this manner, idle cuts are avoided, cutting sticks subjected to less wear and the blade operating life is increased.

→ Magazine operation

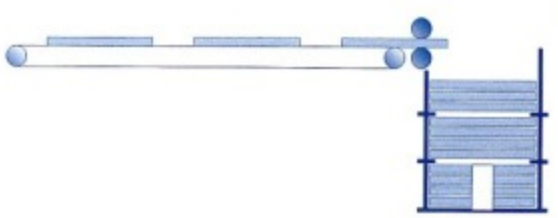
The products arriving are pushed out of the magazine into the register station by means of a pusher. This pusher can be adjusted to the individual pile height, so that the desired number of products can be set and pushed out.

▽ **HD Pegasus**
Magazine operation

▽ **HD Pegasus**
Magazine operation/shingled infeed



▽ **HD Pegasus**
Counter-stacker mode



→ Counter-stacker mode

Products thinner than 5 mm, but thicker than 2 mm, as well as delicate products, are electronically counted and stacked in the counter-stacker. Once the pre-selected number of products is reached, the pile is deposited in the magazine below. Subsequently the pile is transported into the register station by means of the feeder.

There are no format restrictions for use of the counter-stacker.

→ Alignment

The product pile is aligned upstream of the cutting area when it is still in the feed channel. This design feature allows an especially precise alignment of all piles, because, unlike other systems where the alignment takes place directly in the cutting area, more time is available for this important production step, contributing to an enhanced quality.

△ **Infeed/ counter-stacker mode**

The precisely aligned piles are then lifted by a clamp, designed for gentle product treatment, and transported into the cutting station spine first.

→ Cutting station

The piles are positioned in the cutting station using the spine supports, then pressed and trimmed.

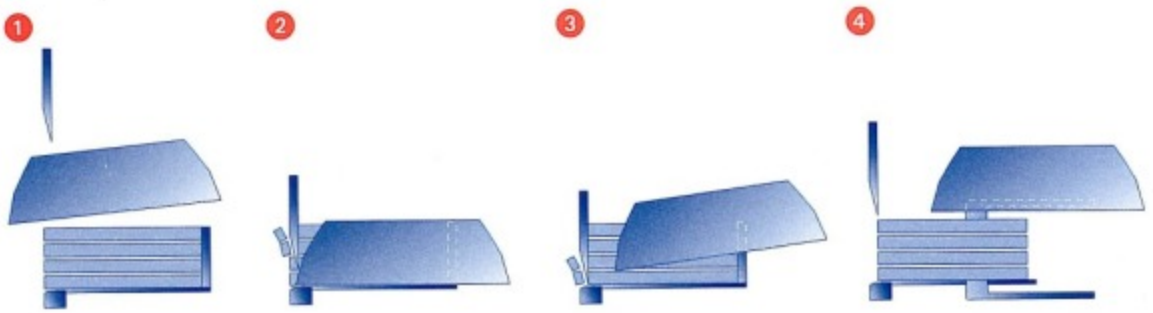
Cutting sequence: Side cuts first, followed by the front cut. All cuts are performed almost simultaneously to gain time for careful placing on the cutting table and a smooth ongoing transport. The pressing block movement programming is such that it gently lowers onto the product to be cut. Height adjustment of the pressing block is by a servo-motor. In addition, the pressing block can be manually adjusted, e. g. for very sensitive products. In the event of an error, the machine stops and the error is graphically displayed on the screen.

An important design feature is the hypocycloidal movement of the side blades which in this manner avoid the front blade which almost simultaneously starts its cutting movement. The noise level inherent to conventional three-knife trimmers is drastically reduced, the HD 151.P operation is particularly smooth and the product is treated with care. No stamping noise – the machine runs sweetly at a high level of efficiency.

Air jet nozzles at the blade holders, off-cut ducts, delivery clamp and the efficient waste extraction system prevent off-cuts from reaching the delivery or any other downstream machine.

Two spine supports moving against the spine, according to the production cycle, prevent crease formation and tears of the fresh products. This being a highly effective contribution to good product quality.

Fine adjustments and changing of all blades is easy and fast. All knives can be individually replaced.

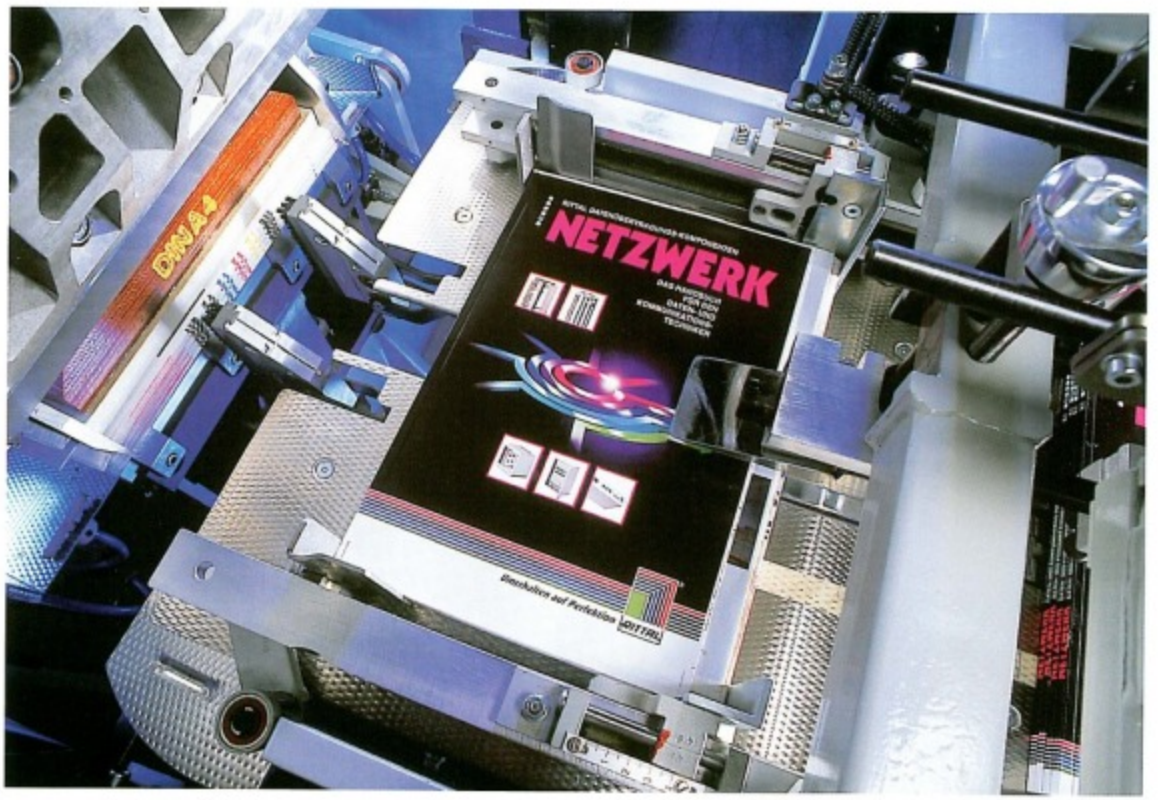


△ **HD Pegasus – knife motion**
❶ **Starting position of side knives/front knife**
❷❸ **1st cut: side knives**
2nd cut: front knife
❹ **Delivery by a clamp**

▷ **Aligning station with cutting area**

▽ **Knife setting gauge**

▽▽ **One-piece table**

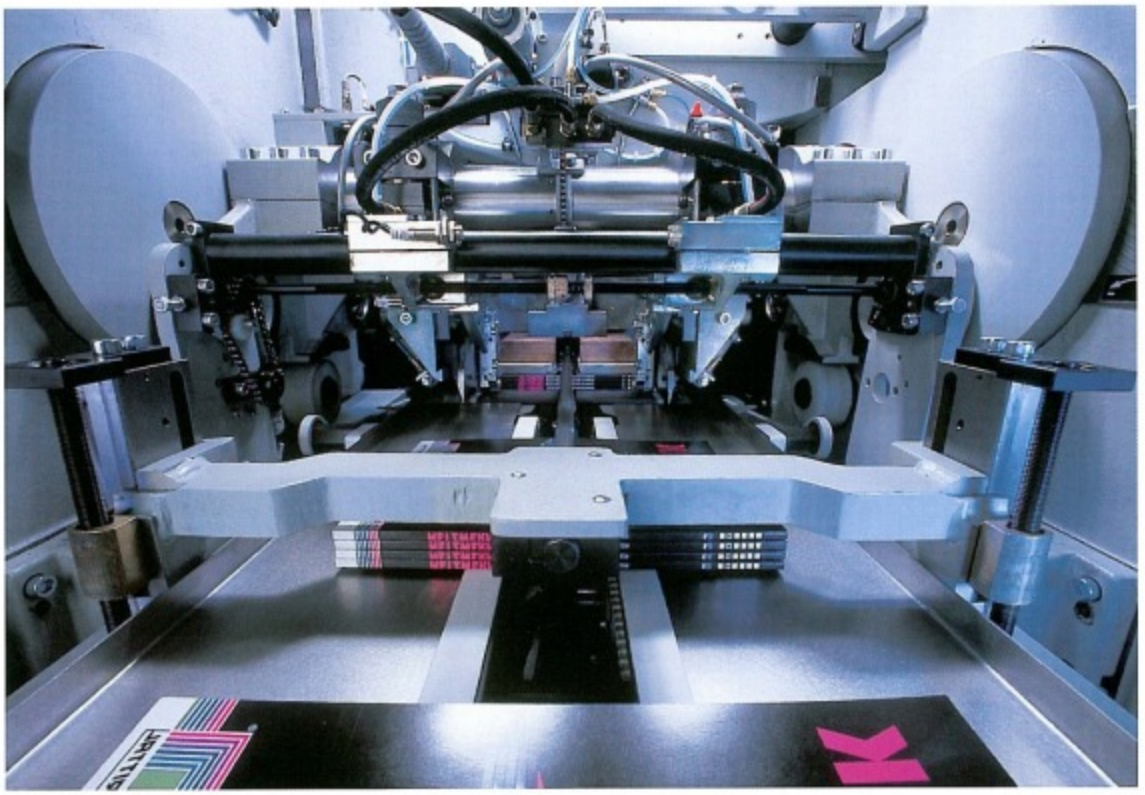


→ Delivery

To prevent marking, the product piles are lifted by the delivery clamp and delivered onto the transport belt, the speed of which automatically adjusts to the machine speed.

→ Maintenance

The function of the automatic central lubrication system for all drive wheels and cams means the machine is nearly maintenance-free.



KOLBUS Copilot®-Technology

There is no book production which does not need a three knife trimmer. Therefore, short make-ready times and simple operation are of special importance.

To cope with this daily challenge, the KOLBUS Copilot® system makes a decisive contribution: The combined use of PC and programmable logical control system guarantees an error-free operation with easy mastering of the controls. In addition, the Copilot® system allows inter-machine data exchange as well as automatic machine settings.

→ Operating concept

Operator guidance is straight through the operating sequence by targeted menu-controlled questions. Information and feedback are given through 3D colour graphics and realistic pictures. Operations are performed through the swivel-mounted, central operating unit, consisting of a keyboard and a screen. This design allows easy access from any position on the machine.

All book block dimensions entered are double-checked by the Copilot®. Entries of illogical values are rejected with a warning, e.g. excessive trim, too many blocks in the pile. After each incorrect value entry, the operator is informed of the admissible min./max. dimensions, accompanied by further helpful data.

◁ **Delivery**

◁ **Spine support unit**

▷ **Entry and operating unit**

Possible interruptions of the material flow or malfunctions of the machine are immediately signalled by means of graphic displays, indicating location and cause of the fault. This helps to quickly identify and remedy malfunctions without lengthy troubleshooting and loss of time.

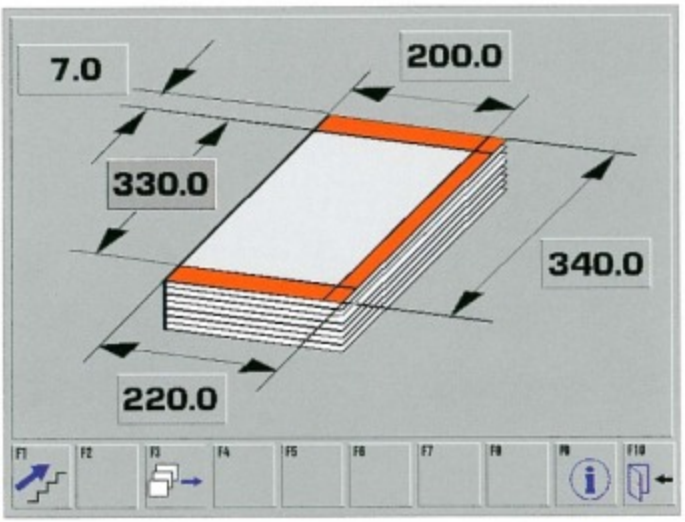
Furthermore, an information key allows data and information to be accessed from the operating instructions, in any operating mode.

→ Automatic adjustment / format change

Once the dimensions are put in, the axes move automatically to their programmed positions. Clamping and adjustment of the side knives, of the pressing block and of the cutting table are also fully automatic.

All exchange parts required for the format change are graphically displayed. Once installed, the machine moves automatically to its change position after having been released by the operator pushing a button. The replacement of the exchange parts is acknowledged. Another advantage of the **KOLBUS** Copilot® system: the exchange parts for the next production job can be accessed while the production of the current job is still running.

To assist the operation, all required manual adjustments are displayed.

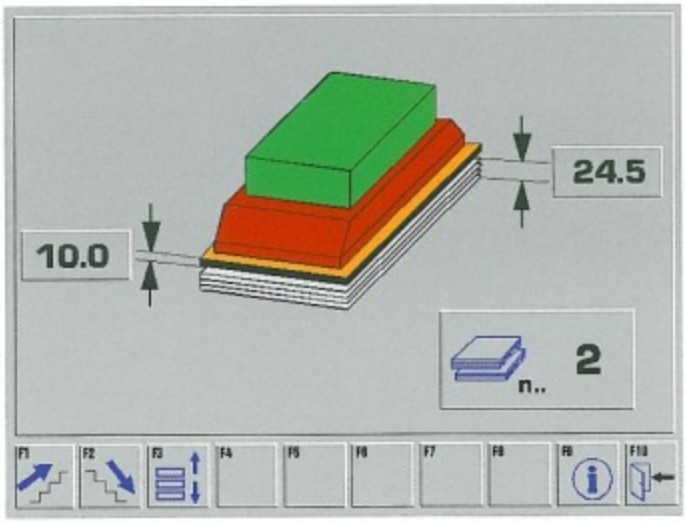


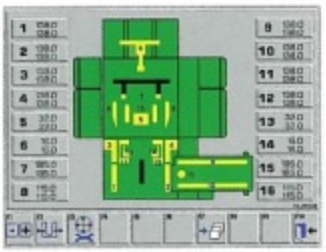
◁ **Screens:**
›Entry of block sizes‹

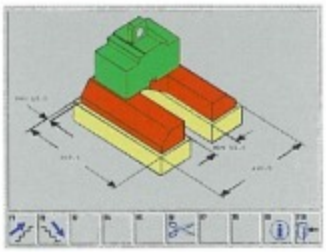
›Entry of block thickness, matrix thickness and pile height‹

▽ **Screens:**
›Nominal and actual values/ 14 adjustment axes‹

›Matrix change‹



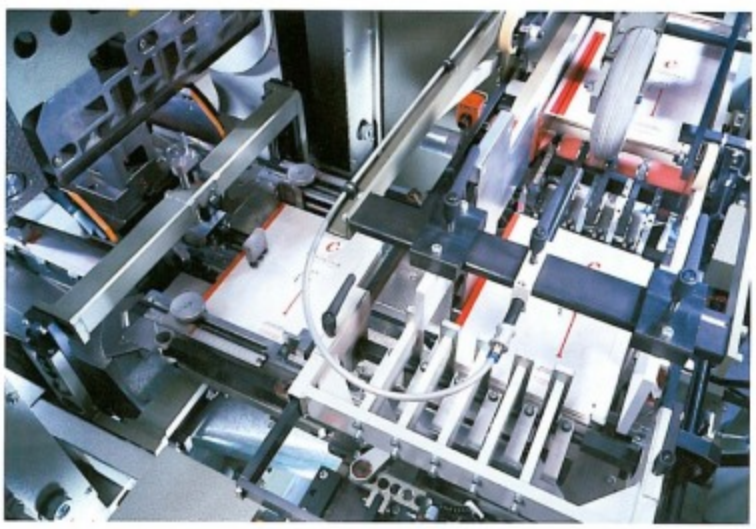




Pegasus, Type HD 150.B – 100 cycles/min

The modern Copilot® system with its convenience and range of possibilities is an indispensable aid to most users.

There are companies, however, which prefer the lower priced alternative without Copilot – the high capacity automatic three knife trimmer Pegasus, type HD 150.B, which went into production in October 1998. From a mechanical viewpoint, this automatic three knife trimmer is identical to the version with Copilot or its proven predecessor. Its improvements predominantly reside in the simplified make-ready handling. In addition, the technical design in terms of alignment, cutting and delivery zones has been adapted to the recent further development (HD 151.P). Model HD 150.B comprises a separately placed control cabinet, as the machine is not equipped with a PLC, but instead with conventional technical control components.



△ **Pegasus HD 150.B**

◁ **Infeed**

▽ **Delivery**