

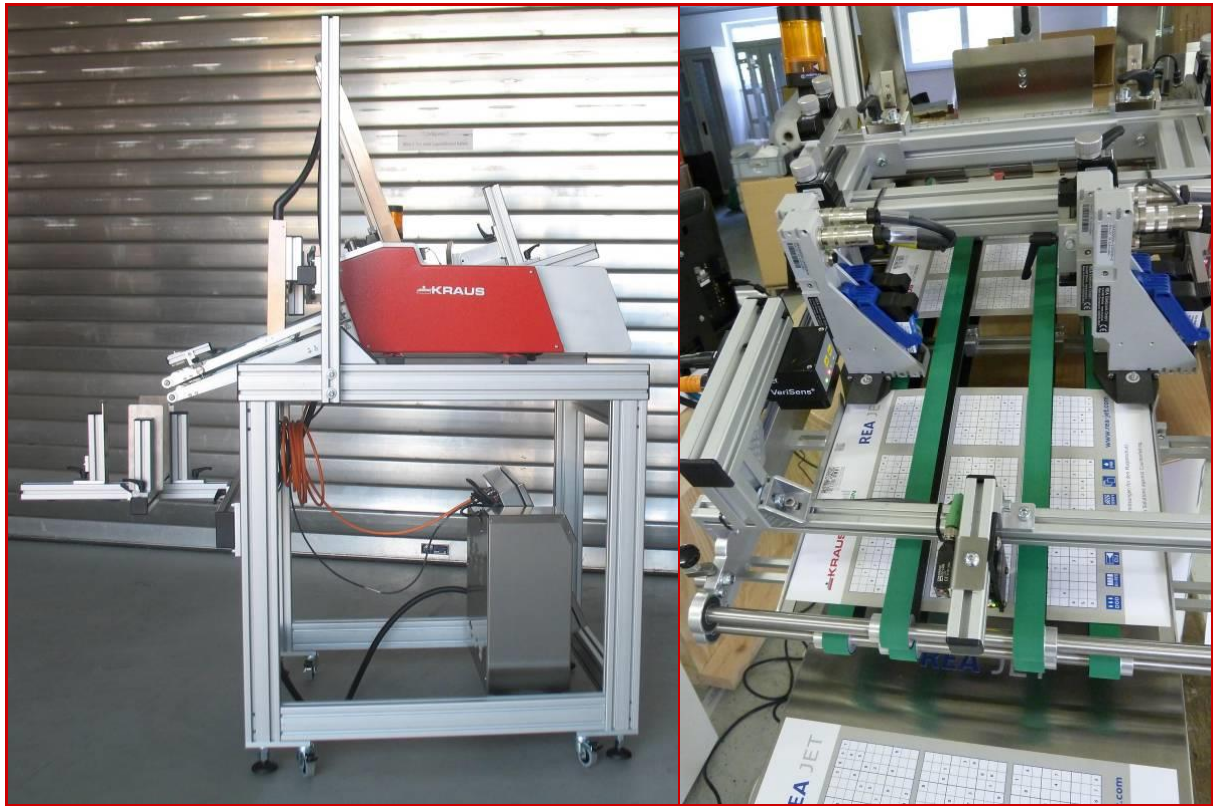
Printing of folding boxes or similar products directly in the feeder.

The product already lies separated in the feeder's exit extension. Using an ink jet system, a labelling machine, a thermal transfer printer or a similar finishing system, finishing can take place inline in the feeder's special run-out to the processing machine or offline as an independent module. The entire system can be used as a mobile unit which saves space and costs on account of the short tooling times.



The feeder separates the blister cards or folding boxes reliably. The product is printed by the ink jet printer in the exit extension as it runs through. The exit extension is specially designed for the straightforward integration of a range of ink jet systems. The separated top belt allows product to be labeled wherever desired without the need for a costly vacuum conveyor. Printed product is transferred to a stacking element or to a shingle outfeed conveyor from where it can be removed manually. With the realized solution, economic product finishing is possible in offline mode with ease. Camera or labelling systems can also be integrated in place of the ink jet system.

COMPACT AND MOBILE PRINTING SYSTEM



Options

Additional camera systems or scanners can also easily be integrated



Special designs

We are happy to work out for you the right concept and offer the appropriate solution for you. Please talk to our project department about the possibilities.

Tablet blister packs are coded in the separated exit extension with an inkjet-system.

The machine's short tooling times and modular design make it versatile and economic to use. The tablet blister packs are printed as they run through the feeder's separated run-out extension, where different printing and labelling systems can be used. Blister packs can be printed either on the tablet side or on the aluminium foil side. Printed blister packs are then transferred to a segment conveyor where products are stacked respectively. The number of units per product stack can be set using the control system. This ensures that stacks can be removed easily.

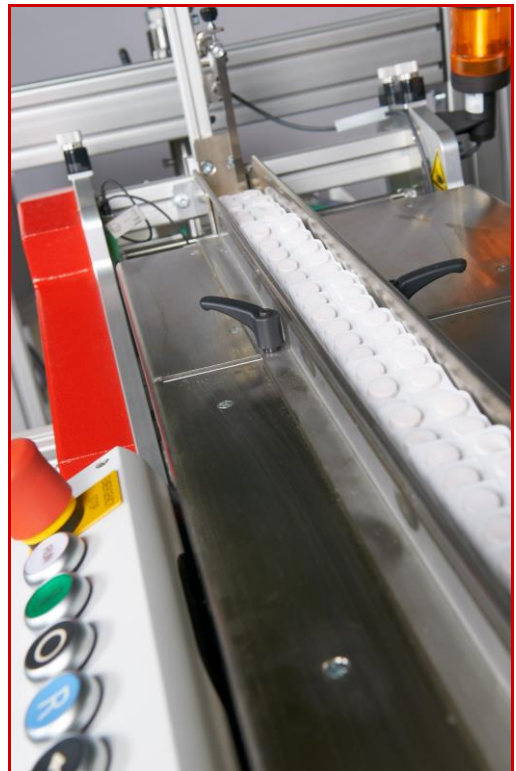


Run-out with ink jet and separated top belts



Tablet blister packs are placed on the scaled feed belt. Inline transfer from another machine, positioned upstream, is also possible. A special separator then reliably separates the blister packs – both directions of travel are possible – tablet top side or bottom side. These are then printed as they run through the separated run-out extension. Printed blister packs are then transferred to a segment conveyor where they can be removed manually. If blister packs are not removed, a fill-level sensor stops the machine automatically as soon as the conveyor is full.

- Sizes: min. 30x 60 mm, max. 200 x 150 mm
- Speed when printing 60m/min
- Cycled or continuous operation possible
- PLC control system with appropriate interfaces



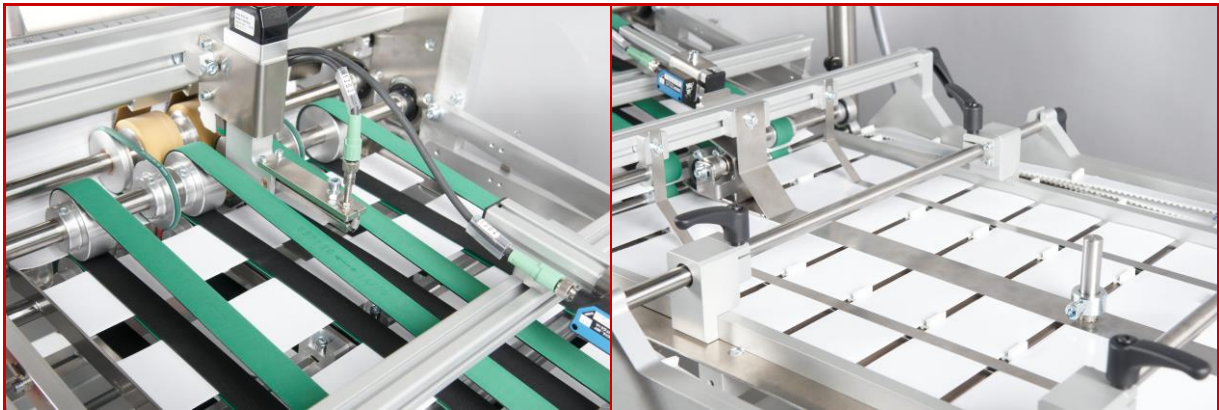
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Synchronous, precise angled feed of booklets in label printing and label laminating machines

Due to short fitting times and its modular design, the machine can also be used economically for jobs with smaller and medium-sized batches. Due to modern control engineering, high precision is achieved even at high outputs, thereby allowing very narrow separation spacings to be run. With the innovative belt tensioning system it is possible to accommodate belt lengths from 1410 mm – 1600 mm; the spacings can be accordingly selected on the respective booklets.



The booklets are inserted into the vertical cartridge of the servo feeder. On the face side, the JoKer Servo friction feeder feeds the products continuously and reliably to the studded conveyor belt (booklet module). The products, e.g. booklets, lenticular foils, blanks, etc. are aligned with angular precision there. Separation of the studded belts is adjusted to the respective length of the product. The innovative belt tensioning system allows for almost all separation spacings. The studded conveyor belt is equipped with a knife-edge transfer system, allowing the products to be precisely transferred onto the carrier web. A product-detection sensor or a camera for booklet inspection can also be attached to the studded conveyor belt. Finishing processes such as inkjet or Braille printing are also possible.



Electromechanical double sheet detection

Special transfer

Machine characteristics

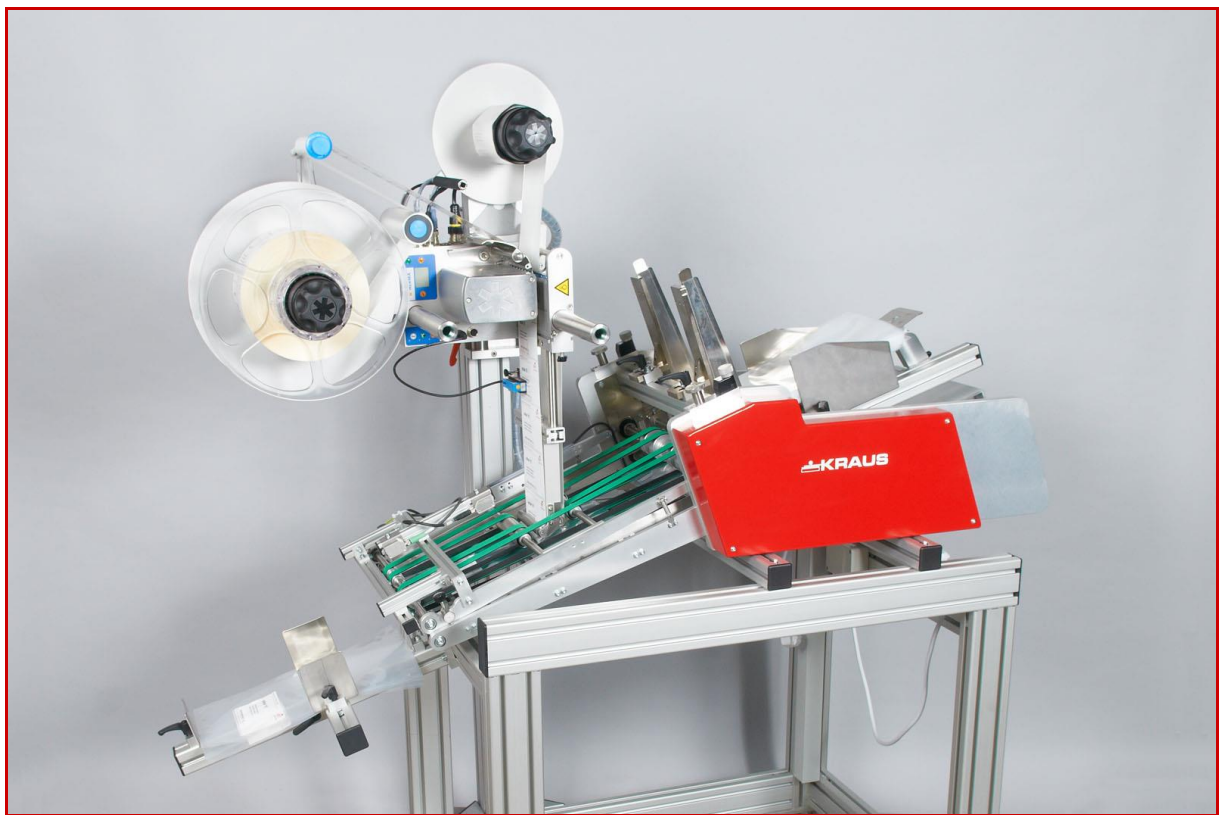
- Sizes: min. 100 x 30 mm, max. 320 x 350 mm
- Speed up to 80m/min
- Continuous operation
- New, improved PLC control system with appropriate interfaces
- Dynamic servo drives in the feeder and booklet module
- Sensor system and wiring using a central plug
- Visual display of faults on the touchscreen

Special designs

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Labelling or marking in the friction feeder's exit extension.

With the feeder's special design, using an ink jet system, a labelling machine, a thermal transfer printer or a similar finishing system, finishing can take place inline in the feeder's run-out extension to the processing machine, where the product has already been separated and available, or offline as an independent module.



Additional camera or scanner systems can also easily be integrated.

The feeder separates the blister cards or folding boxes reliably. The labelling machine labels the product in the exit extension as it runs through. The run-out extension is specially designed to allow it to be integrated into the labelling machine with ease. Because of the separated top belt, product can be marked wherever desired without the use of a costly vacuum conveyor. Labelled product is transferred to the scaled run-out conveyor and can then be removed manually. With the realized solution, economic product finishing is possible with ease in offline mode. An ink jet system can also be integrated in place of the labelling machine.



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Folding boxes are coded and labeled with a unique code by an ink jet system. The machine was configured with a package designed especially for use with pharmaceuticals.

The machine's short tooling times and modular design make it versatile and economic to use with a variety of labeling methods. The printing line, with easily adjusted suction tracks, can cover a wide range of formats.



FK Codingline consisting of: friction feeder, vacuum conveyor, rejection unit with catch box and integrated shingle outfeed conveyor

The JoKer friction feeder, located on the face side, feeds the products reliably onto the suction conveyor. There, the vacuum conveyor conveys the carton boxes, either flat and open or already glued. The vacuum system allows the products to lie freely on the conveyor from where they can be printed or labeled wherever desired. The printing system then labels the folded boxes. A camera system is used to check the code and manage it in the database. If the camera does not read the product as "correct", an impulse is issued to the automatic rejection unit and the defective product is discharged downward to a special catch box. Good products are transferred to the shingle outfeed conveyor, from where they can be removed manually.

- Sizes: min. 80 x 100 mm, max. 500 x 350 mm
- Speed when printing 60m/min without printing 150m/min
- Cycled or continuous operation possible
- High precision servo motor drive
- PLC control system with appropriate interfaces

- The suction conveyor can be equipped with an optional electric height adjuster.
- A stacking unit is also possible downstream from the discharge.
- Double sheet control: electro-mechanical design or with ultrasonic
- Autoloader: 500 mm - 3000 mm in 500 mm sections with or without a vertical magazine
- Displays/lamps: optical display with various color or acoustic signal

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The robust, single-sided design makes it possible to position the feeder exactly above almost every folding gluing machine. The "flying" exit extensions hardly disturb the FKM's top belts, and the feeder can be used flexibly and in this way feed onto almost every section of the folding box.

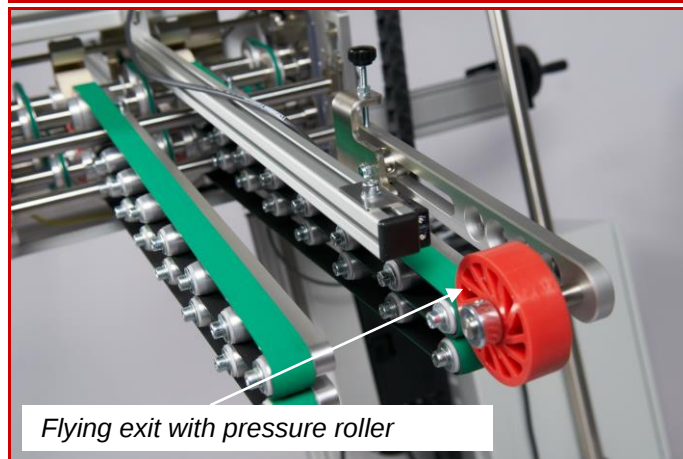
The feeder's side supports make it possible to position it exactly from the side using a hand-wheel so as to facilitate the precise positioning of even very small products such as booklets, inserts, etc. The high-quality linear guide makes exact positioning possible and, using a second hand wheel, the feeder's angle, i.e. feeding angle, remains adjustable. Using the small product package, even the smallest enclosures (e.g. 30 x 40mm) can be reliably separated.

Separate start panel



The feeder module can be used at almost every position with the existing machine. This also provides many possibilities for other processing machines.

The frame can be equipped with a simple control system or programmable control system above the electric lifting columns, i.e. 6 positions can be programmed. These can then be moved to the saved position with a simple press of the button. The complete unit is mobile and can be used easily with a variety of machines. With the use of cable track, the entire unit is clearly laid out and orderly.



Optionally, our control system can also control a hot glue machine with up to 2 glue nozzles, which makes an investment in a gluing machine unnecessary.

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Manufacture of a safely transportable package for 3-D products.

Automation can significantly rationalize the entire packaging process and also minimize packaging costs. Sleeved and shrunk products are protected for transportation in the best possible way and require no further packing or filling material. Even breakable goods such as bottles, electronic components and medicines are ideally protected and delivered to the customer intact.

Internet chemist



Automatic folding of the box and printing of the barcode with an ink jet printer



The JoKer friction feeder, located on the face side, feeds the cardboard packaging reliably onto the collator's studded conveyor belt. The carrier boxes are now fitted with the package contents, such as boxes for medicines, bottles, books, spare parts, machine components etc. and are transferred to the foil packaging machine. There, the products are wrapped in a foil sleeve and then shrunk in a shrink tunnel creating a secure package. The cardboard packaging with the shrunk products is then taken by a further studded conveyor belt and transported to the transfer unit. There, the cardboard packaging is folded and automatically pressed into the box moving past at a 90° angle. The barcode on the cardboard packaging and on the transport box can be verified before transfer.



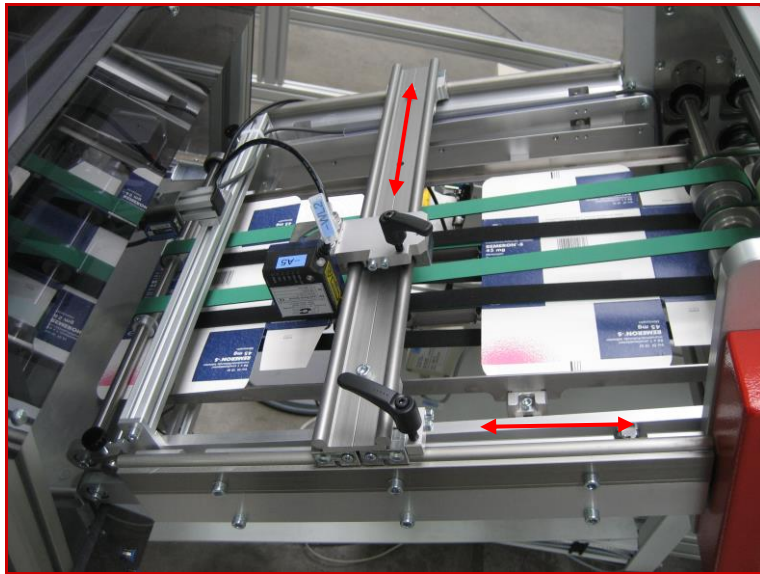
- Sizes: 650 x 225 mm
- Speed between 10-20 cycles/min depending on packing stations
- 4 packing stations, expandable almost without limitation

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Folding boxes and enclosures are checked offline to ensure that they are of the same type and correct

The machine's short tooling times and mobile design make it versatile and suitable for use at various stations. The integrated pharmaceutical scan and the pneumatic discharge provide the system with maximum reliability. This is particularly in connection with hand packing places a meaningful and important addition for the "doublecheck".





Because of the special holder, the reading head can be moved easily without tools to every position above the product. The head can also be pivoted 90° so that even longitudinally-oriented codes can be read.

The feeder separates the product reliably. A sensor then opens the reading gate for the scanner, and the product is checked. Work is undertaken in accordance with the pharmaceutical principle. Every product is initially a bad product and must to be read as correct. Good products are then taken from the transfer conveyor and transferred onto the shingle outfeed conveyor. Scaling and scale separation can then be set from 1-100 units. Bad products are discharged underneath via the pneumatic gate. A sensor is also installed in the gate as a countercheck.

- Sizes: min. 60 x 60 mm, max. 300 x 350 mm (depending on the feeder width)
- Max. speed 200 cycles/min (depending on the product)
- Cycled or continuous operation possible
- PLC control system with appropriate interfaces
- Ink jet system integration possible

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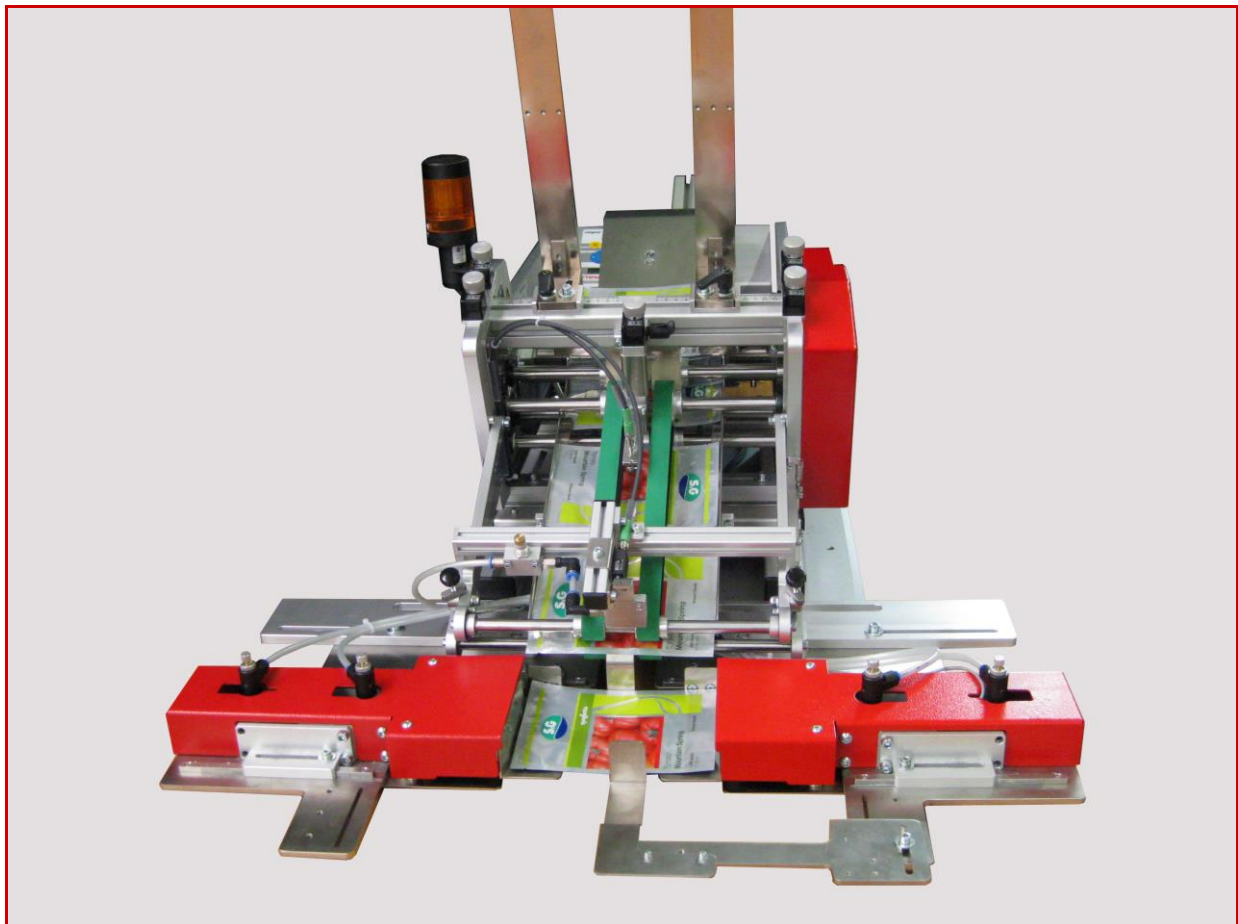
PNEUMATIC COLLECTION STATION (BUFFER RAKE)

Application

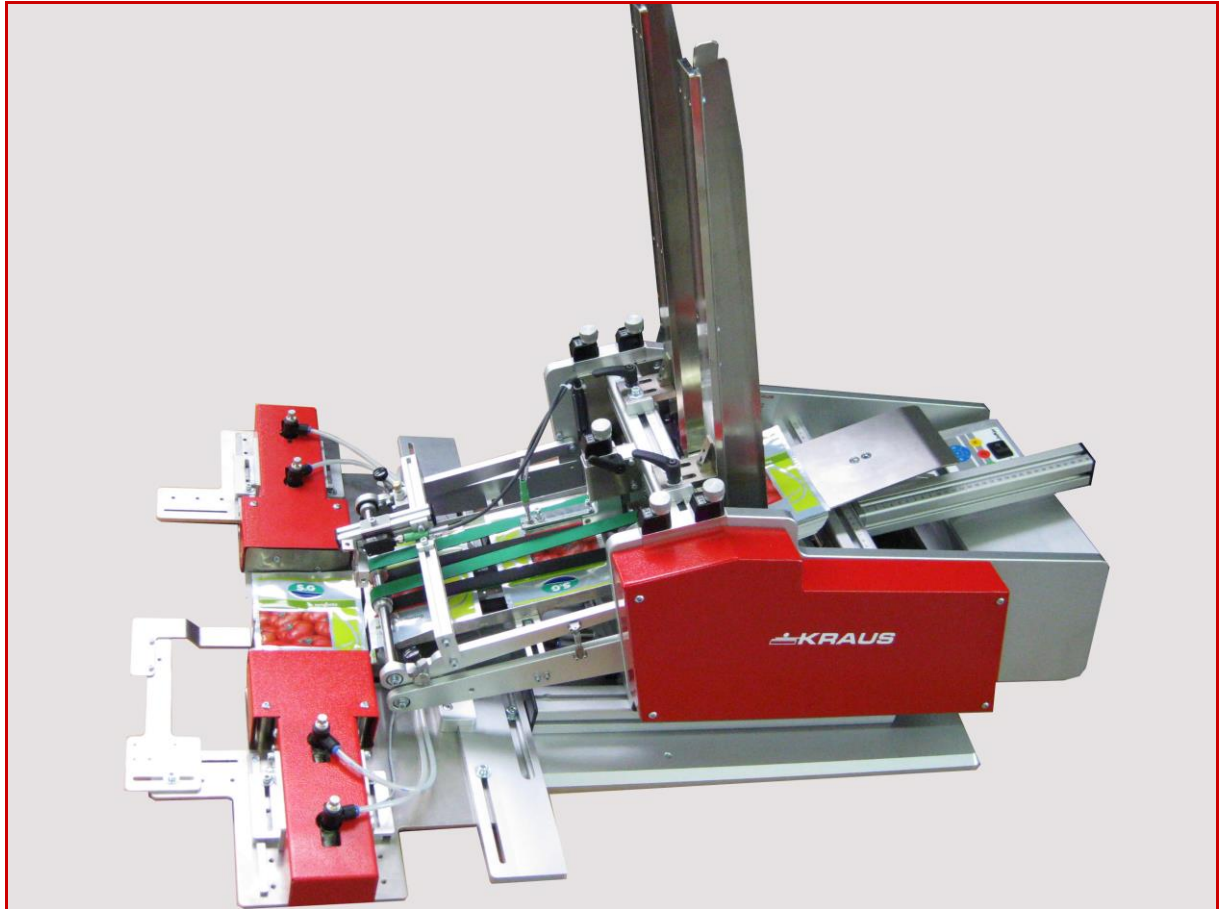
The products are safely isolated from the feeder. Then they are passed in the exact quantity to the pneumatic collection area in front of the feeder. The product stack is discharged downwards once the quantity has been reached.

Advantage

As the shelf's sides are open on both sides, the stack falls vertically and does not tip over onto one side. This makes it possible to realize short switch/cycle times and increases the system's output accordingly. The compact design also allowed further significant reduction in the product's drop height on the processing line. In the new control system design, the collection function is only realized in one control system. The collection function can also be deactivated which allows a single sheet feed without collection station.



The cut outs are fed into the feeder's vertical magazine. Product is scattered reliably in the feeder and conveyed to the collection station. The desired quantity of product to be counted in a stack is set in the control system. A discharge impulse is then usually generated by the main machine.



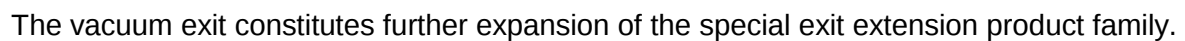
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Inspection or printing of products.

The product is separated over the friction belt and friction roll and transferred to the vacuum exit extension. There, the product lies completely freely and can be checked or finished as necessary. This provides for compact and easy product finishing or checking.



The feeder separates the product reliably. The product then lies completely freely on the vacuum exit extension. Using accessory components such as an ink jet system, a camera system or a labelling system, the entire product can be inspected or labelled. Finished product is transferred inline directly to the processing machine. The machine can also be used offline. In this case, product is transferred to a stacking element or to a scaled shingle outfeed conveyor from where it can be removed manually.



Additional camera or scanner systems can also be easily integrated.

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SMALLEST FEEDER MODEL

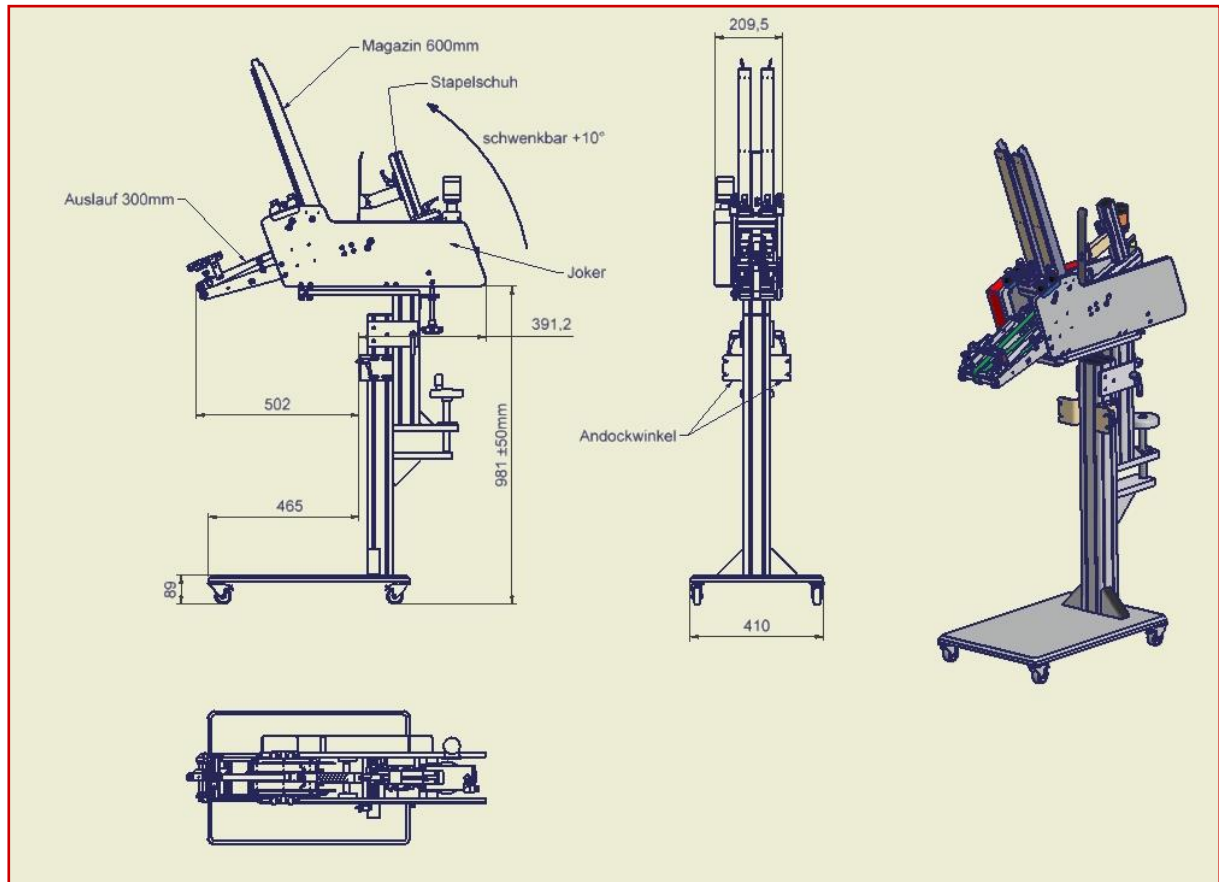
Application

The feeder was designed for a packaging machine used in the tobacco industry which could only be accessed with difficulty.

Advantage

The small design makes it possible to integrate the feeder into machines which, due to the limited space available, cannot accommodate auxiliary modules. This provides existing lines in particular with appropriate possibilities. The special frame allows the feed angle and feed height of the feeder to be adjusted.





The feeder is equipped with a separator especially adapted for small products such as enclosures and leaflets.

The feeder can also be supported on the side plate and, as with the labelling machine, "suspended" in the main machine.

Special designs

We are happy to work out for you the right concept and offer the appropriate solution for you. Talk to our design department of the possibilities.

2 IN 1 MACHINES - VACUUM SUCTION CONVEYOR AND COLLATING MACHINE

Application

Feeding of carrier product onto the suction conveyor while an additional product is fed precisely by a second servo feeder.

Advantage

Using electric lifting columns, both the feeder and the suction conveyor can be set to almost any desired and ergonomically reasonable working height. This allows the suction conveyor to be set up inline with any desired machine positioned upstream. The easy belt replacement makes it possible to quickly replace the vacuum conveyor with a studded conveyor for precise product angle alignment. The conveyors are easily adjusted from the side and can be set to various product formats. Resetting from one belt pitch to another can also be done quickly.



Full view



Suction tracks can be regulated and opened and closed individually with special shut-off valves. The vacuum pump is equipped with a sound suppressor. Servo friction feeders are designed as independent modules so that they can be used with various systems.

Suction - stud track detail

Description of function

The JoKer servo, located on the face side, feeds the packaging products reliably onto the vacuum conveyor as it runs through. These can be magazines, cardboard boxes and a variety of printing and folding products. Gluing takes place over a hot gluing system. A second JoKer servo then feeds a further product precisely as it runs through. A rotary encoder synchronizes the speeds. The glued product can then be transferred to a processing line or stored on a outfeed conveyor.

Machine characteristics

- Sizes: min. 60 x 60 mm, max. 300 x 350 mm (depending on the feeder width)
- Effective width of the vacuum belt 500 mm
- Max. speed 150m/min depending on the product
- Cycled or continuous operation possible
- PLC control system with appropriate interfaces
- 2-3 feeder stations, expandable almost without limitation
- Hot glue systems, labelling systems, ink jet systems or similar systems can be easily integrated

Special designs

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FEEDER WITH STUDDED CONVEYOR

Application

Feeding folding boxes onto a compact studded conveyor. Products are then aligned at the required angle on the studded conveyor and can be labelled or printed precisely.

Advantage

The studded conveyor angles the sections to be labelled with a high degree of accuracy which allows them to be labelled precisely.



Studded conveyor system with lateral guides



Description of function

The JoKer friction feeder, located on the face side, feeds the products reliably onto the studded conveyor. Products, which might include folding box sections, postcards, envelopes, mailings, etc., are conveyed there by the studded conveyor. Belt rails brake the product which is then transported by the stud conveyors. This ensures that product lies on the studs exactly and is aligned at precisely the required angle. The product is then printed by the continuous ink jet system as it runs through.

The printed product can then be transferred to a shingle outfeed conveyor or to a collection device.

Machine characteristics

- Sizes: min. 100 x 150 mm, max. 500 x 350 mm
- Speed when printing 60m/min
- Cycled or continuous operation possible
- PLC control system with appropriate interfaces

Special designs

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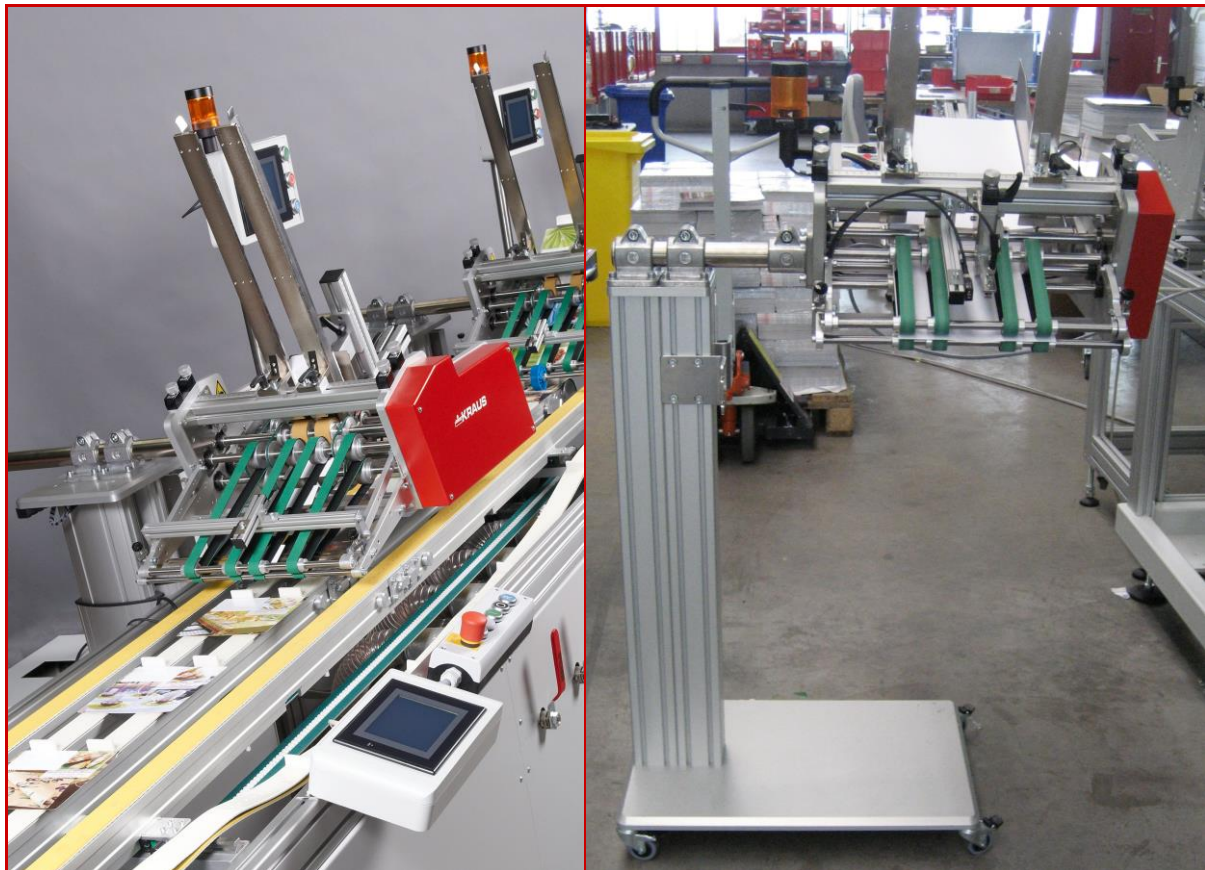
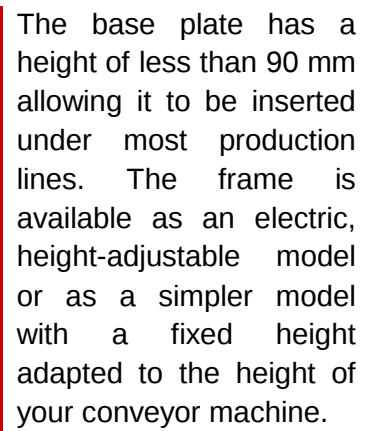
The one-sided design makes it possible to insert the feeder over almost every contiguous carrier line or processing line.

Due to its solid and high-quality design, the feeder can be laterally flanged which only allows the feeder to be supported on one side plate. This facilitates the universal use of the feeder on almost all production lines. The electric column lifts allows for seamless adjustment of the production line's conveyor height.



The feeder's robust design makes it possible to incorporate it by its sides and insert it, like a labelling machine, over the production line. This also provides a range of possibilities for other processing machines.

The frame can be equipped as an electric, height-adjustable model with a simple control system or even with a programmable control system, i.e. 6 positions can be programmed. These can then be moved to the saved position with the simple push of a button.



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Magazines or similar products are addressed on a suction table using a DOD printer, monitored and sorted by a camera system for bundling.

The machine's short tooling times and modular design make it versatile and economic to use. The printing line, with easily adjusted suction tracks, can cover a broad range of formats. DOD printers can also print high-gloss and difficult surfaces in high resolution. The LED-UV dryer allows the entire unit to remain relatively compact.



Full view with scaled system positioned to the side

The JoKer-mailing friction feeder (product thickness 0-30 mm), located on the face side, feeds the products reliably onto the suction belt. Products, which might include magazines, postcards, envelopes, mailings, etc., are conveyed there by the vacuum conveyor. The vacuum system allows the product to lie freely on the conveyors, from where they can be labelled as desired. The DOD printer then prints the respective data. In this case, there are two printheads for the printing of the address field and a 2D code. Print data is then read out by a camera, and the control system then forms bundles for later stacking. An LED-UV dryer for the print colour is integrated downstream from the camera. The product is then stacked at the end of the line and can be removed manually.



- Sizes: min. 100 x 150 mm, max. 500 x 350 mm
- Speed when printing 60m/min
- Cycled or continuous operation possible
- PLC control system with appropriate interfaces

The vacuum table can be equipped with an optional electric height adjuster.

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Collating of various products and inline transfer to the foil packaging machine.

The machine's short tooling times and modular design make it versatile and economic to use. The contiguous carrier line can be extended and also equipped with several feeders and processing machines (such as labelling machines). Thanks to a special frame, the feeder at station 2 can be moved to any desired position directly above the line.





The feeder's robust design makes it possible to lift it by its sides and push it, like a labelling machine, over the collator. This also provides many possibilities for other processing machines.

The frame is also available in an electric height-adjustable mode.

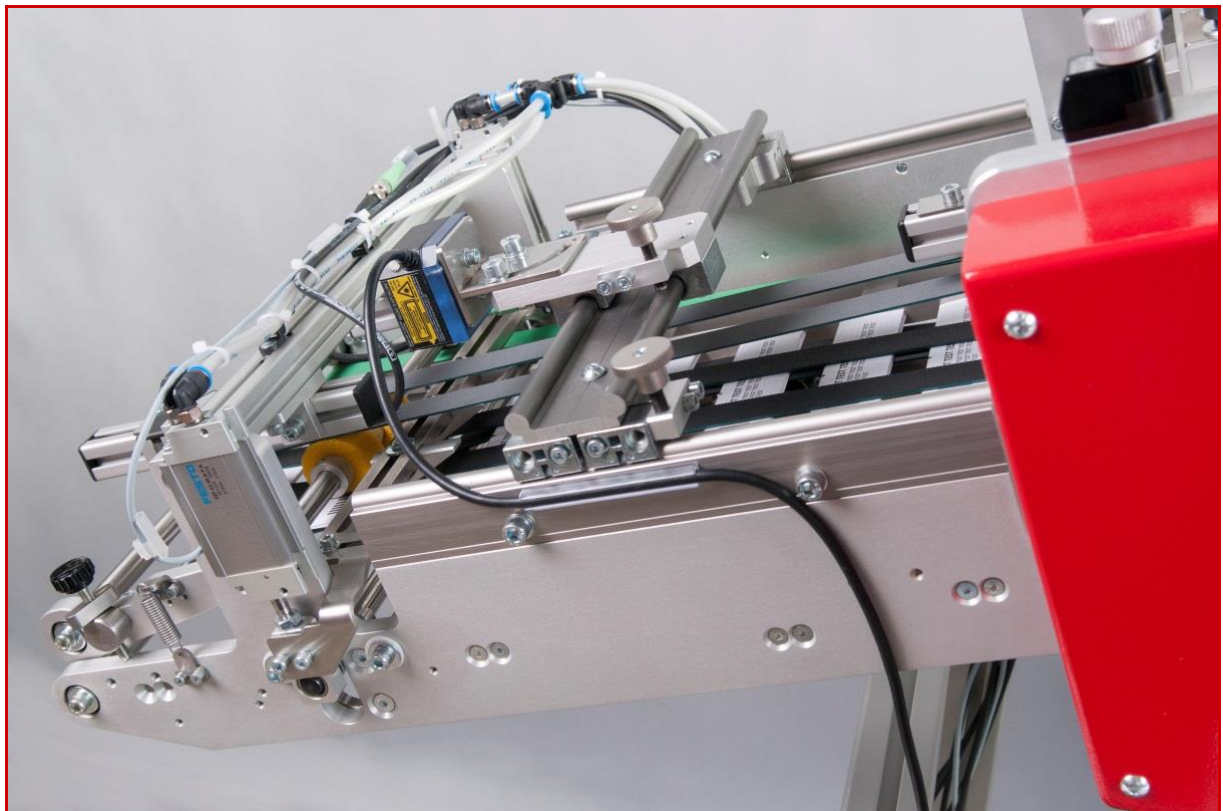
The JoKer-slide feeder, located on the face side, feeds the products reliably onto the collator's studded conveyor. The products, such as folding boxes, print products, books, magazines and other flat products, are aligned at precisely the required angle. The collator can work both in cycle mode and in continuous mode. An address sheet is fed onto the magazine over the Joker friction feeder at the second station.

- Sizes: min. 100 x 150 mm, max. 300 x 350 mm
- Max. speed 120 cycles/min with A4
- Cycled or continuous operation possible
- PLC control system with appropriate interfaces
- 3-4 feeder stations, expandable almost without limitation

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Inline dispensing of booklets and inserts with scanner or camera control. With the pneumatic reject separator, defective products are reliably rejected.

Within the dispensing extension of the feed unit, the integrated rejection ensures that only products checked 100 % are forwarded to the next process. The products are rejected downwards during the dispensing process and the integrated rejection bin ensures that no defective products can get into the process chain. This way, optimum machine availability is guaranteed.



The feeder reliably and flexibly separates the package inserts, booklets or inserts. Within the discharge extension, the product is checked by the scanner/camera during running operation. If a product is defective, it is automatically rejected. The rejected product is then transferred to the rejection bin. If the scanner/camera reads the product as good, it is dispensed to the processing machine. This ensures that only good products that have been checked 100 % make their way into the production process.



Feeding performance:	150 m / min.
Power input:	230 V / 50/60 Hz
Control box:	PLC control
Maximum product thickness:	0-10 mm standard
Size of product:	min. 30 x 50 mm, max. 150 x 200 mm
Product magazine:	600 mm

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For collating various booklets, leaflets or similar products with subsequent closure labelling. Chiefly used where multiple products in different languages have to be assembled.

The ingenious retainer system makes it possible to achieve taut lateral labelling even on thick outserts. Thanks to the precise guidance and associated adjustment options, the product stack is precisely aligned. The closure mechanism draws the labels around the edges of the product, precisely connecting the product stack. After each feeder, the product is checked by a corresponding camera and can be reliably ejected at the end of the line by the integrated rejection station, by way of the shift register.



COLLATOR FOR CLOSURE LABELLING

Description of function

The feeders reliably feed the booklets into the studded conveyor belt of the collator. After each feeder, there is a corresponding camera system, which checks the code on the product. The collated product stack is then transferred to the labelling area and provided with a label on its left and right sides in the running direction, as it passes. The special closing stations then lead the labels around the edges of the product and press them on, producing a precise package for handover to the delivery device.



Machine characteristics:

- Formats: min. 30 x 45 mm, max. 150 x 150 mm, other formats upon request
- Speed 200 cycles per minute for a moderate-sized format
- Continuous operation
- PLC control system with appropriate interfaces
- 2 - 4 feeder stations
- Integrated rejection station
- Camera system for code recognition
- 2 labelling systems
- Optional cold or hot gluing system (Piggyback)
- Optional automatic stacking



Special versions

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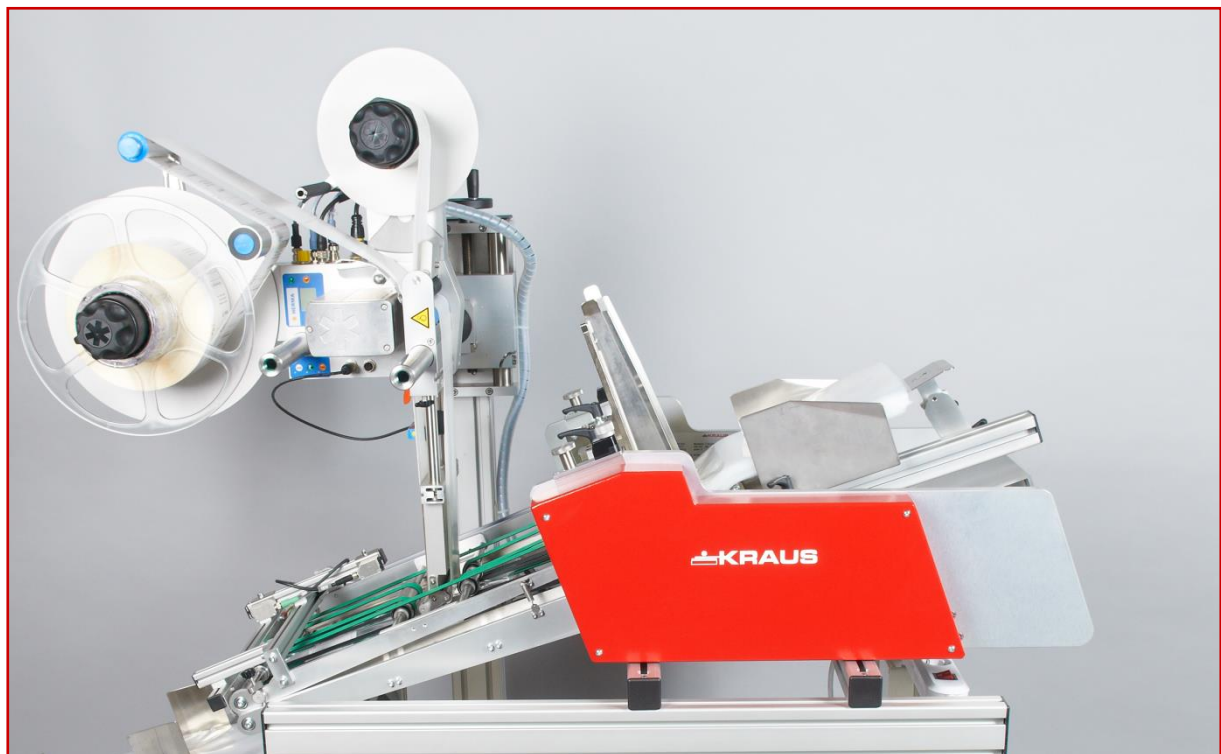
SEALING LABEL APPLICATION IN THE FEEDER

Application

Booklets, leaflets and outserts are separated by the feeder and are furnished with a sealing label whilst running through the discharge extension.

Benefit

Thanks to the new technology, the sealing labels can be applied around the product at the front and need not be sealed from the back with a kicker. This ensures that the labelling can be applied without damage and without marks. Speeds of over 200 cycles per minute can be achieved due to the integrated discharge. The system can be used both as a standalone offline system and as an inline system linked to an outsert machine.



Options

- Shingling outfeed conveyor for user-friendly handling
- Shingling feed conveyor for increased automation and for possible inline linking.

Description of function

The feeder separates the leaflets with the open side to the front. The label is applied by the labelling unit in the discharge extension. The label is applied around the product edges and then pressed again via the special sealing technology. Thanks to the special integration, narrow products, where the label is close to the size of the booklet, can also be labelled reliably. The solution realised here enables a compact unit to seal the products economically and reliably in the high speed area.

**Special versions**

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FEEDER WITH LOWERING STACKER

Application

Automatic stacking of products after labelling on the friction feeder

Benefit

The standalone offline module can be used as a mobile unit, saving space through its compact construction. The products are aligned precisely after stacking. Quantities can be set via the pre-selection counter, enabling user-friendly stacks to be formed. The module is ideally suited to large-format products. Changes to the format can be implemented without tools.

Description of function

The products are fed to the feeder's vertical magazine. Product is separated reliably in the feeder and labelled in the discharge extension. After labelling, the products are checked via a camera system and stacked in the stacker.



Integrated labelling system in the friction feeder's discharge extension

**Machine characteristics:**

- Formats: min. 80 x 140 mm, max. 600 x 700 mm
- Products thickness: 0 – 20 mm
- Quantities can be set via pre-selection counter
- Max. stack height 500 mm

Special versions

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TE GLUELINE

Application

Folding boxes are provided with tamper evident features in accordance with EU Directive 2011/62/EU and DIN EN 16679 via a gluing system. A special machine concept for the pharmaceutical industry was designed for this purpose, which is ideal for manual work stations, clinical trials and small lots.

Advantage

The machine's short tooling times and modular design make it versatile and economic to use. The combination of hot and cold glue achieves an irreversible join that prevents the folding box being opened without destroying this. The strap monitoring and automatic rejection gate guarantee a reliable production process.



Full view comprising: Manual insertion, conveyor belt with flap closing system and hot glue system, rejection device with rejection bin.

**Description of function**

The filled and erected box is inserted on the finger conveyor on the front. The glue is applied while the box passes through. The special sensors that are integrated check whether the glue was actually applied. The TE straps are then wrapped around using the closing deflector system on both sides. This is checked again using special sensors. If something did not work when applying the glue or wrapping the TE closing straps around, the box is automatically rejected. The box is then pushed out into a rejection bin provided for this purpose. The sealed boxes are then transferred to the downstream system.

Machine characteristics:

- Formats: min. 30x30x60 mm, max. 200x300x350 mm
- Speeds of up to 20 cycles per minute are possible
- High precision servo motor drive
- PLC control system with appropriate interfaces
- CRF 21 Part 11 functions

- Printing systems can be integrated for serialisation
- Camera systems can be integrated
- Automatic product feeding with corresponding autonomy is possible
- Validation documents can be supplied
- Displays/lights: optical display with various colours or audible signal

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