

KRONES Variopac Pro
The automatic all-round packer



The freedom of packing

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The fully-automatic packer Variopac Pro easily adapts to all well-proven and new packaging trends. Packaging in pads, trays, or wrap-around cartons, be it with, without or “only” shrink-wrapped – together, the different models of the Variopac Pro cover all packer variations. Of course, several different packaging variants can be realised on one and the same machine. The Variopac Pro is easy to retrofit or expand because we want to keep all opportunities open for the future.

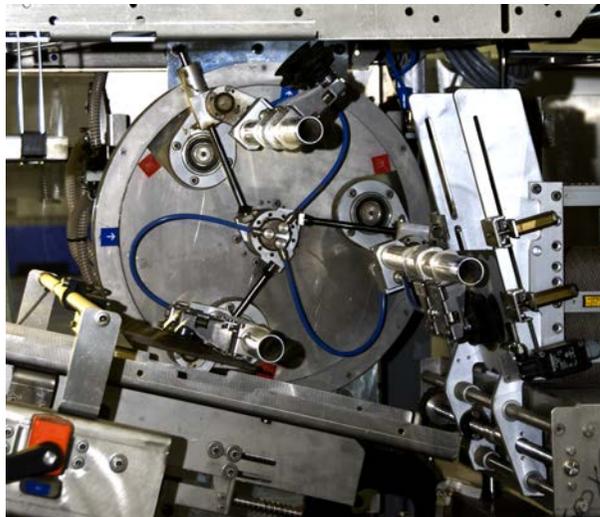


Method of operation

In the infeed, vibrating guide plates guide the containers or packs to the lanes. The coating of the plates and a function-optimised feed software provide gentle conveyance of the goods to be packed to the spacer. The spacer separates the goods to be packed according to the desired formation. Afterwards, push bars take over the containers in formation.



The carton blanks are below the container infeed. Vacuum grippers remove the first blank from the magazine and transfer it to the blanks feed. The reliable separation and the conveyance of the carton blanks are performed via pivoting, cycloidal or roller separators and wide carton flights.



The blanks are transported beneath the container groups and folded at the sides. A flap closer folds the lateral flaps which are then glued. On wrap-around cartons the cover is folded and glued afterwards. Circulating sealing chains press on the cover and bottom flaps and guide the finished pack through the machine.



The shrink sleeve is fed air-supported so that the cutting module can process it without wrinkling. The belt conveyor in the film wrapping module and the compensating conveyor to the shrinking tunnel are equipped with an active conveyor controller and return device with rollers. The precisely tempered hot air flow in the shrinking tunnel results in optimal shrinking. Thanks to the optimised temperature control with highly sensitive probes even thin film qualities can be processed without problems.



Design features

- Modular design comprising main machine, blanks magazine, blanks feed, pack formation unit, film wrapping module and shrinking tunnel
- Maintenance-free servo drive technology in all machine areas
- Easy access due to slim and high design and large sliding doors
- Operator and service sides are separated
- Reduced spare parts inventory thanks to standardised components
- Automatic chain lubrication and lifetime-lubricated bearings

Additional equipment

- Individual drive with separate back-up pressure control for each conveyor lane
- Register mark control for printed films
- Automatic film splicing
- Controlled mesh change-over with position display
- Stack preparation system in the carton feed with increased capacity
- Raised feed level for carton feed to ergonomic measurement of 800 mm
- Energy-saving function for shrinking tunnel
- Module for shrink-sleeve perforation
- Module for processing U-pads
- Module for processing dividers with up to 80 cycles
- Module for stacking packs
- Integrated handle applicator

Overview: field of application and performance

Cycles per minute*	Model							
30	T	FS	PFS	TFS	W	WT	WTS	WT-FS
45	T	FS	PFS	TFS	W	WT	WTS	WT-FS
60	T	FS	PFS	TFS	W	WT	WTS	WT-FS
70	T	FS	PFS	TFS	W	WT	WTS	WT-FS
80	T	FS	PFS	TFS	W	WT	WTS	WT-FS
90	T	FS	PFS	TFS				
100	T	FS	PFS	TFS				
120		FS						
For packing loose containers or packs in								
Film		FS	PFS	TFS				WT-FS
Film with pad			PFS	TFS				WT-FS
Trays with film				TFS			WTS	WT-FS
Trays	T			TFS		WT	WTS	WT-FS
Wrap-around cartons					W	WT	WTS	WT-FS

* The maximum output depends on the pack's type and dimension.

Operation

- 15 inch touch-screen
- Well-arranged visualisation of production data, operating functions, help texts, diagnostic tools, as well as graphical status and malfunction displays
- Text displayed in the selected language



Easy touch-screen operation

Change-over

- All production parameters for container feed, main machine, and shrinking tunnel are selected centrally via touch-screen.
- Change-overs to other containers and packaging variants can be carried out within just a few minutes and without tools.
- All container guides feature stepless adjustment with hand cranks and counters enabling reproductions which are precise to the millimetre of any desired setting.



Quick-change system

- Optional digital position display with actual and set-point value information and coloured LED signal
- Operator-controlled format change-over
- Integration on container infeed, on the packer and on the shrinking tunnel



Crank for infinite adjustments (illustration above)

Digital position display (illustration below)

- Vibrating guide plates with moveable starter tips guide the containers to the individual lanes.
- Spacing fingers coming from below bring the containers into their correct formation.
- The infeeding speed is automatically controlled by means of sensors and via the signal transmission with the machine.
- To be able to process different container diameters safely, several individual lanes can be combined to form one conveyor.

Change-over

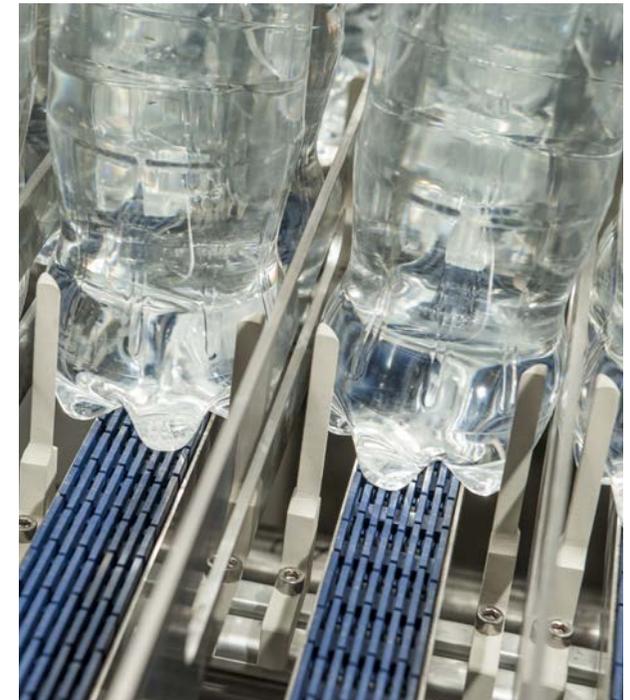
- Container feed controlled on the touch-screen via the controlled feed unit.
- Lane guides can be adjusted infinitely to other container diameters via clamping lever. Here, change parts are not required at all.
- The clamping lever adjustment with eight pre-adjusted sizes makes time-consuming fine adjustments during size change-overs no longer necessary.
- The bars with spacing fingers are fastened with clamping locks and can also be replaced easily.

Additional equipment

To be able to transport also soft or light-weight containers as gently as possible, each conveyor lane can be equipped with its own drive including a separate back-up pressure controller.



Variable lanes at machine infeed



Spacing finger

Carton feed with models W, WT, WTS and WT-FS

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- The carton feed has its own servodrive for optimum carton conveyance.
- A high-performance roller separator with chain drive removes the cartons from the magazine on a pressureless basis from above regardless of the carton thickness.
- Wide contact surfaces and closed guides convey the cartons safely to the fold-up area.
- The entire conveyor section is optimally accessible via hinged guides.

Additional equipment

- For more ergonomic working, the Variopac Pro can be equipped with a flat magazine which is comfortably fed at a height of 800 mm.
- Divider inserter for up to 80 cycles per minute

Pack forming unit

- Wrap-around cartons are processed short-side leading, and trays are processed long-side leading.
- Long, stable folding and press-on bars enable high-precision folding of cartons and trays.
- A horizontal wrapping rod folds the pack's side flaps. Thanks to the rod's V-shape, this is done with minimum travel movement.
- Cover and side flap of the wrap-around cartons are closed by a pneumatically actuated or motorised folding unit.
- A separate tray forming unit takes over the precise and safe folding of the tray blanks.
- Thanks to drive synchronisation of the upper and bottom pack formation unit, the pack forming process is precisely adjusted to the carton dimensions and to the conveying speed.

Roller separator feeding the separated cartons



Conveyor and chain of pack forming unit



- Servodrives provide a highly-dynamic film transfer and precisely cut films.
- The film is transported via rollers with section structure allowing safe processing of printed films.
- The film wrapping module uses a moving section calculated online so that the wrapping rod can always keep the optimal distance to the pack.
- Up to three ionisation bars remove static charge from the film.
- To ensure the stability of the packs, the ends of the films overlap at the bottom of the packs.
- Profiled rollers at the cutting module minimise wrinkling and prevent printed films leaving colour on the roller.
- A height-adjustable wrapping module enables processing of different product sizes.
- A servomotor-controlled knife-edge conveyor transports the packs gently further to the shrinking tunnel.

Additional equipment

Using an automatic film splicing unit, film reels can be changed “on-the-fly” during operation.



Automatic film splicing unit



Film wrapping module

Shrinking tunnel

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- Speed as well as temperature can be adjusted infinitely and precisely to the pack.
- To achieve an even shrinking result, hot air flows around the packs from all sides.
- Ventilators cool the packs at the tunnel discharge thus hardening the shrink sleeve.

Change-over

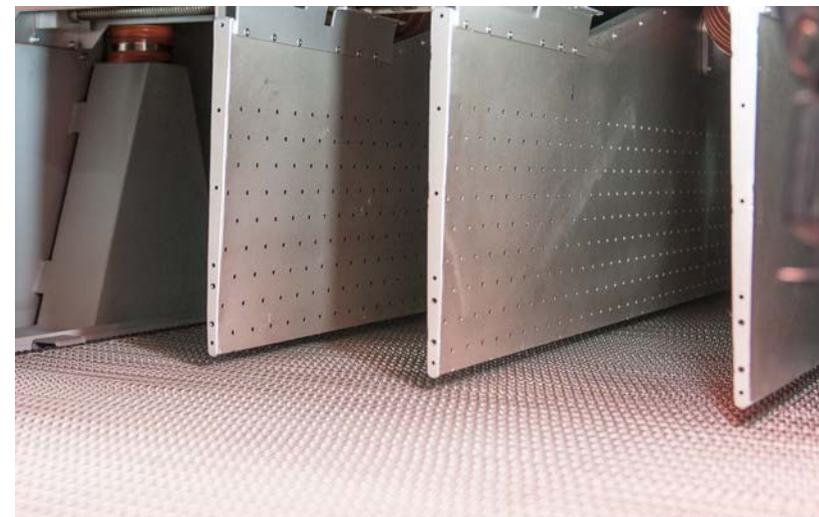
Nozzles adjustable from outside enable defined air guidance in the tunnel to the different pack types and sizes.

Depending on the area of application, the shrinking tunnel can be equipped with different conveyors:

- Net-grid conveyor for “film only” packs or pad-film packs
- Flight-bar conveyor with silicon-coated conveyor rollers for tray-film packs



Easy adjustment of the air nozzles



V-shaped duct walls provide optimal shrinking results

■ Flexibility and efficiency

Variopac Pro gives you the freedom to react flexibly to most different packaging trends. The different packing modules cover all packing variations. If required, your Variopac Pro can be retrofitted or expanded easily at a later point as well.

■ Quick and easy size change-over

The change-over work at size changes takes only a few minutes and is performed without the use of any tools. Using cranks and counters, any adjustment can be reproduced exactly.

■ Malfunction-free container infeed

The speed of the infeed conveyor is automatically regulated via sensors and signal transmission with the conveyor system. Thus the containers and packs enter the machine gently and without problems.

■ Ergonomic design

The high machine frame, the large-surface sliding doors, and the separation of the operating and service side enable ergonomic and efficient working with the Variopac Pro.

■ High operational reliability

Equipping each machine area with its own separate servo drive provides the packer with best possible operation reliability.



We do more.



IT solutions

The SitePilot modular system includes IT solutions which we developed especially for the beverage and food industry. Whether you want to increase the utilisation of your line capacity, monitor product quality, or make spare parts handling more efficient: With SitePilot, you will always get the best result.

enviro

High-performance technology with low consumption of resources offering safety for humans and the environment – this is all guaranteed by the enviro sign. TÜV SÜD (technical control board) as an impartial assessor has confirmed, that the enviro method leads to energy- and media-efficient and environment-compatible machines and lines.

Lifecycle Service

Your company is unique – why be satisfied with conventional solutions? The KRONES Lifecycle Service will support you and your production also after the purchase of new machines. These are services which are individually tailor-made to suit your products and location.

KRONES Academy

Make your colleagues high performers: The training of KRONES Academy provides first-hand trade information proven in field. You will find the suitable know-how package for almost any field and hierarchy level ranging from technical courses to management training.

KRONES Service Line

You need support with a technical problem? Or you have an urgent question about your line? No problem: We are just a call away from you. Dial +49 9401 708090 to get quick and straightforward assistance – in several languages around the clock!

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