



Linapac II

All-rounder for packing and unpacking



 **KRONES**

High output and flexibility are key qualifications



The packing and unpacking process in a beverage plant must run like clockwork. Fast and gentle container handling and high flexibility to suit a wide variety of containers are the basic pre-requisites. On top of that, a packing and unpacking machine should be easily integrated into operational sequences and smoothly fit into the line layout. The Linapac II fully meets these requirements. Last but not least: sorting systems, as well, benefit from its high-performance technology.

At a glance

- Intermittent packer for
 - cylindrical and specially shaped containers made of glass or plastic
 - multi packs
- Processing of pack block lengths ranging from 1,600 to 3,315 millimetres
- For packing and unpacking of packs which are open at top side
- Integration in empties sorting systems



Method of operation



Packers operating in cycles for flexible mastering of packing and unpacking tasks

Packing

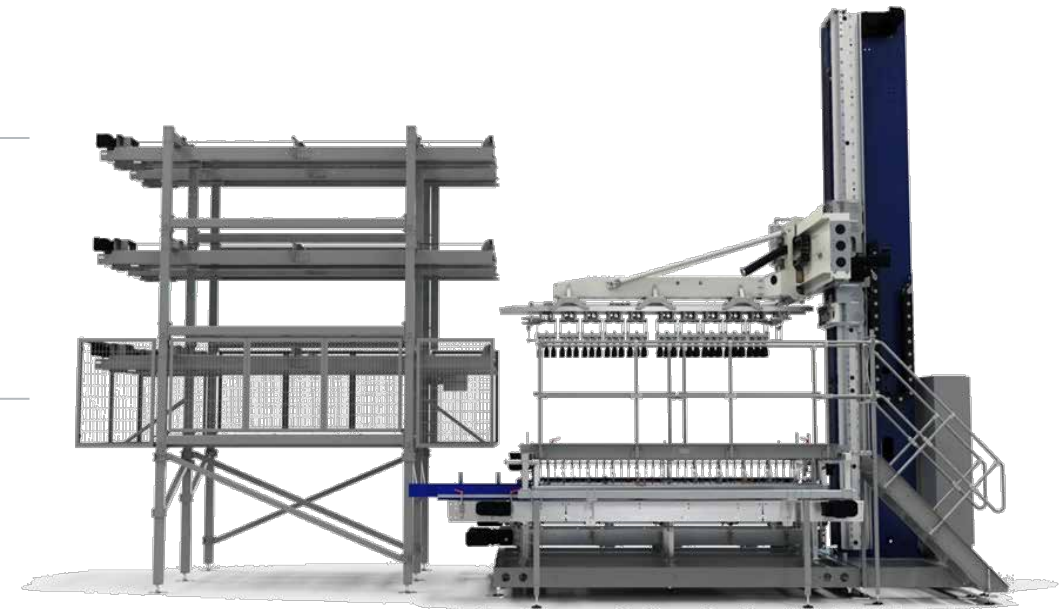
- The bottles on the container table are grouped onto lanes
- The pre-positioned containers are picked up using gripper units and set into the fed empty packs

Unpacking

- The filled packs are fed to the unloading position on the conveyor
- Gripper unit lowering and container pick-up from the pack, and container positioning on the container table

Packing curve

- Freely programmable packing curve with independent control of the drives of lifting column and horizontal axis
- Various positions can be approached within the operating range
- Precision control system to ensure accuracy of movement to the nearest millimetre as well as gentle start-up and braking



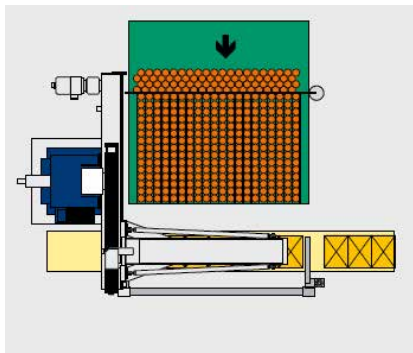
Technical features



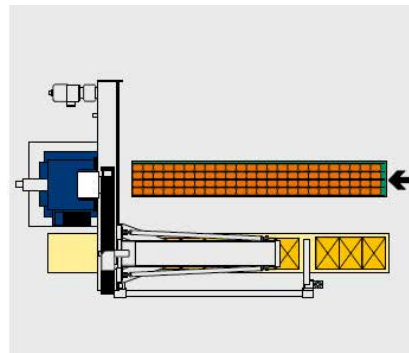
Various sizes allow an optimum integration of the Linapac II in many different line layouts. The models vary regarding the container table width and pack conveyor length, which makes the Linapac II a perfect partner for individual packing processes.

Layout configurations

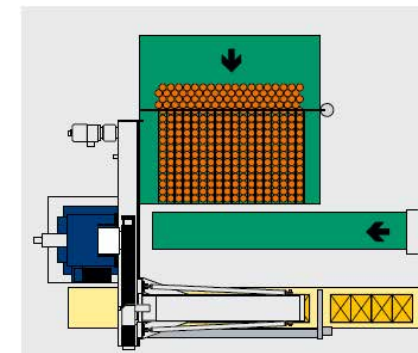
- T design for cylindrical containers
- H design for cylindrical containers and multipacks
- HT design for cylindrical containers or multipacks as an option



T configuration



H configuration



HT configuration

Technical details



Design features

- Modular design
- Single-lane or double-lane pack conveyor
- Lifting unit and transverse travel station with maintenance-free toothed belt drive
- Easy to replace plastic roller guides at the lifting unit and transverse travel station
- Integral safety stop feature
- Driven by servo-controlled motors
- Stand-alone operator panel with touch-screen
- Machine guards with fence guarding and sliding door



Size	Pack block length (mm)	Speed, single-lane (max. cycles per hour)			Speed, two-lane (max. cycles per hour)		
		Unpacker Packer		Unpacker Packer		Cartons	
		Plastic crates	Cartons	Plastic crates	Cartons		
1600	1600	560	520	460	460	440	380
1800	1870	550	510	440	---	---	---
2200	2210	540	490	420	430	410	360
2500	2550	510	460	400	---	---	---
2900	2975	480	430	380	390	370	340
3300	3315	440	390	350	360	---	---

Assemblies

Container and pack feed system



Container infeed and discharge

- Conveyance of the containers optionally via plastic flush-grid belt or steel flat-top chain
- Infeed driven by three-phase motor with separate frequency inverter for infinitely adjustable feed speed
- **For T configuration:**
 - Container table with stop bar, vibrator beam and completeness monitoring unit
 - Transfer at container conveyor with transfer plate or as free flow transfer

Pack guide

- Robust steel flat-top chain
- Infeed and pack stopper for gentle pack stopping and pack spacing stopper for safe pack guidance
- Thanks to a crank, the height of the infeed stopper can be easily changed
- Frequency-controlled drive for infinite speed adjustment
- Manual rail adjustment
- Pack spacing from above for plastic crates or from below when handling cartons

Assemblies

Gripper units and gripping devices



Gripper heads

- Rigid gripper unit for unpacking
- Gripper unit with one-dimensional or two-dimensional movement for packing
- Spindle-adjustable gripper unit for handling different container diameters
- Special gripper unit with container orientation function

Gripping devices

- Standard gripper cup for handling containers of different sizes and contours
- Long-life gripper for handling containers with crowns
- Gripper cups for PET containers with centring function using the moveable outer sleeve and with mechanical hook gripper
- Special grippers with suction cups or mechanical gripping devices for multipacks or specially shaped containers
- Individually driven gripper cups for label orientation



Rigid gripper unit for pick-up of glass bottles from returnable packs



One-dimensional, flexible gripper unit for precise insertion into packs



Orientation gripper unit for swing-stopper bottles



Gripper unit with adjusting spindle

Linapac II in daily operation



Operation

- Connected HMI operator panel
- Clear display of operating data, operator control functions, graphical status display, help texts and diagnostic tools
- The texts are displayed in the selected language
- Password-protected access
- Fully automatic handling parts change-over with electromotive disconnection without operator intervention
- Handling parts storage in the shelf magazine

Principle of operation of the automatic change-over

- Automatic release of the handling parts locking device
- Automatic positioning of the gripper unit carrier in front of an empty handling parts storage position
- Motorised transfer of the handling parts into the storage area
- Automatic transfer of gripper unit carrier to the position of the new handling part
- Motorised moving of the new handling part to the carrier



Options



- Fully automatic handling parts change-over with connected shelf magazine for handling parts storage and removal
- Bottle orientation for promotionally effective label positioning
- Selective unpacking of multiple products
- Service trolley for simple handling parts maintenance
- Gripper heads that can be moved one or two-dimensionally (automatic/manual)
- Motorised adjustment of the guide plates in the container feed
- Free flow transfer at the feed table of T-tables



Benefits to you



Flexible application options

The versatile Linapac II can be used for both packing and unpacking containers. It can also handle combined packing and unpacking as well as sorting tasks with ease.

High functional reliability

The robust design of all assemblies and components ensures safe, trouble-free operation of the packer.

Low space requirements

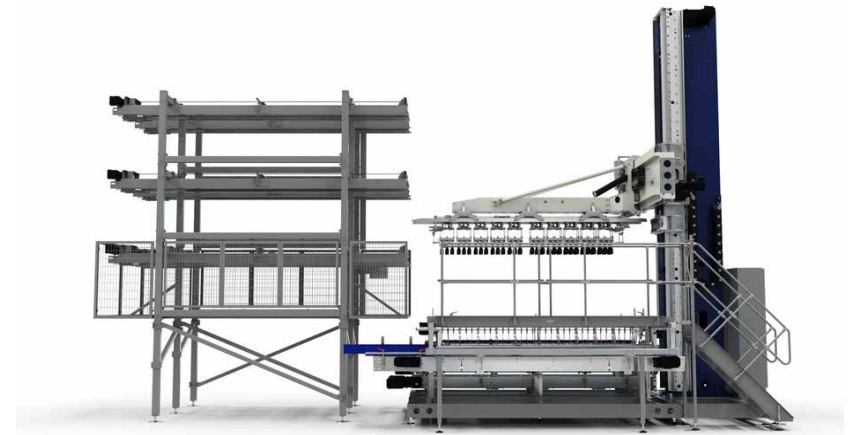
Thanks to its small dimensions, the Linapac II has room even on small surfaces. The handling parts can also be stored in the shelf magazine at higher positions to save space.

Large processing range

The wide variety of gripper units available means many different container types can be processed both gently and safely.

Quick change-over

Due to the high degree of automation, it is possible to change over to other formats with just minor operator intervention. As an option, the packer can be equipped for fully automatic handling parts change-over.



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The multifaceted offer by the Krones Academy ranges from operation, servicing and maintenance courses through to management training. We will gladly also create your individual training programme.

KIC Krones cleaning agents make your machine shine

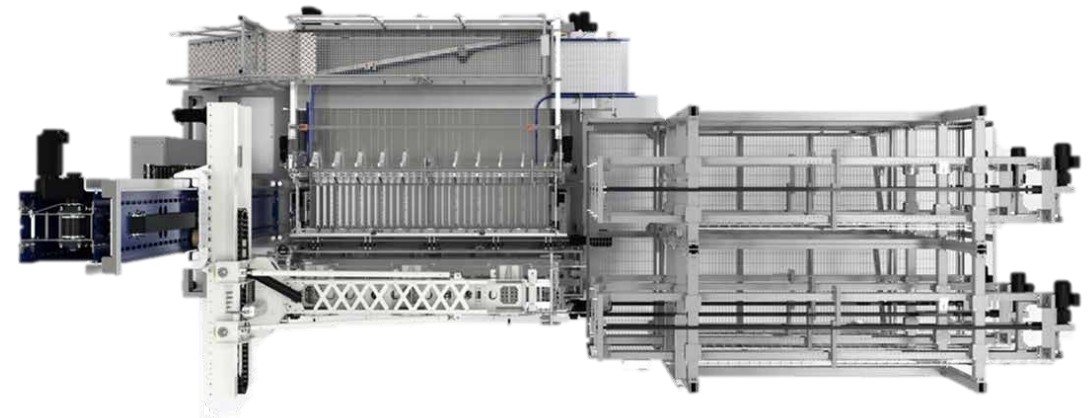
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KIC Krones lubricants for each production step

Whether for gears, chains or central lubrication systems – our greases and oils are true all-round talents. They can reach every lubrication point, protect your line and ensure gentle treatment for your products thanks to their food-grade quality.

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