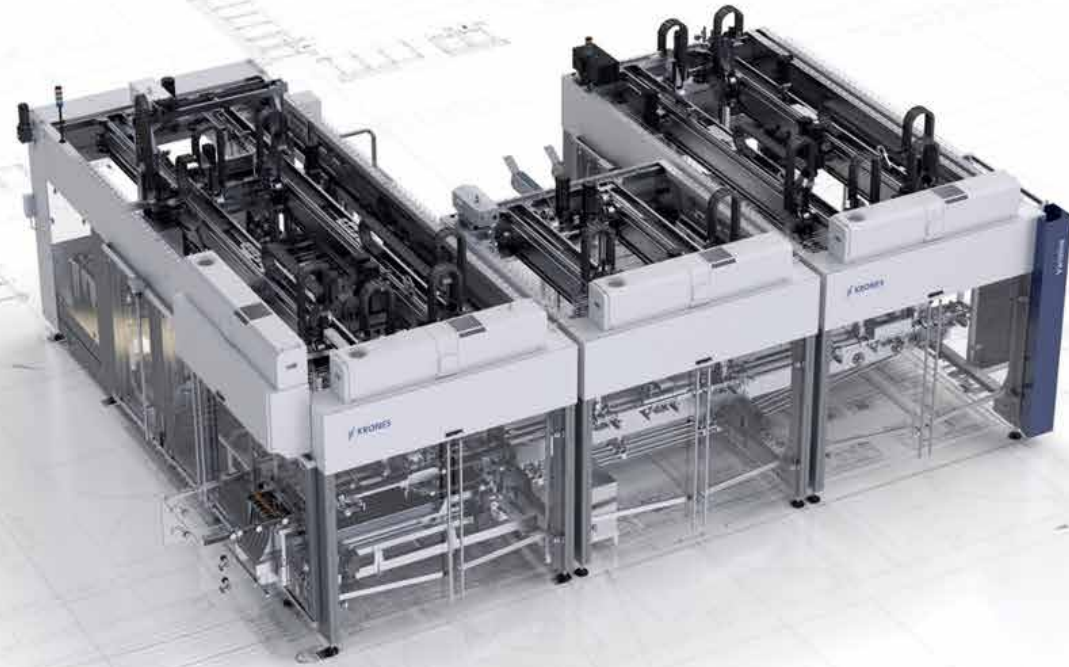




Varioline

Packaging line for maximum flexibility



 **KRONES**

Maximum flexibility for secondary and tertiary packagings



The infinitely variable packaging line: KRONES Varioline. This flexible system processes more than 20 packaging combinations in one machine and therefore it meets the demands of the beverage and food producers with regards to a versatile and individual production. Since 2012, there are now more than 100 Varioline machines successfully in use worldwide.*

At a glance

- Top priorities: Definition of the packaging requirements
- Modular machine configuration based on the desired packaging formats
- Modular concept with three variants:
 - Module for handling multipacks
 - Module for handling carton sleeves and trays
 - Universally applicable module for a range of functions
- Combined handling of non-returnable and returnable packs
- Output: Up to 100,000 containers per hour – depending on the packaging type

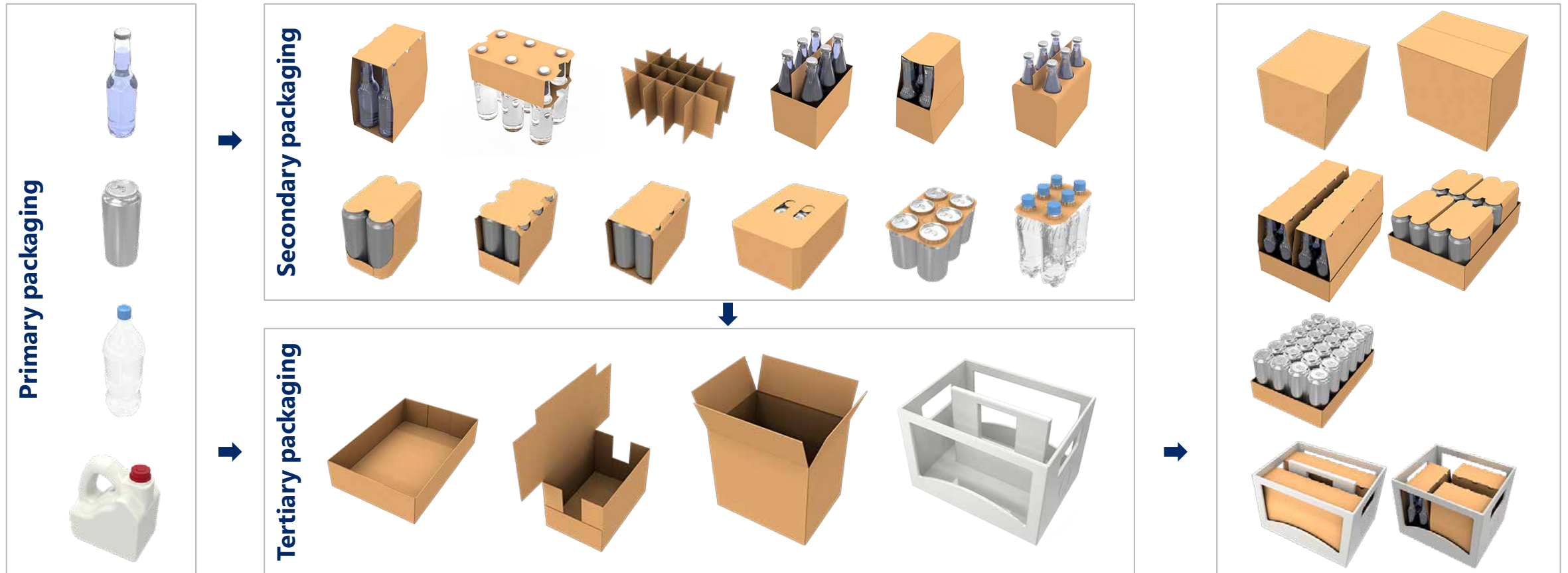
* As of 01/2022



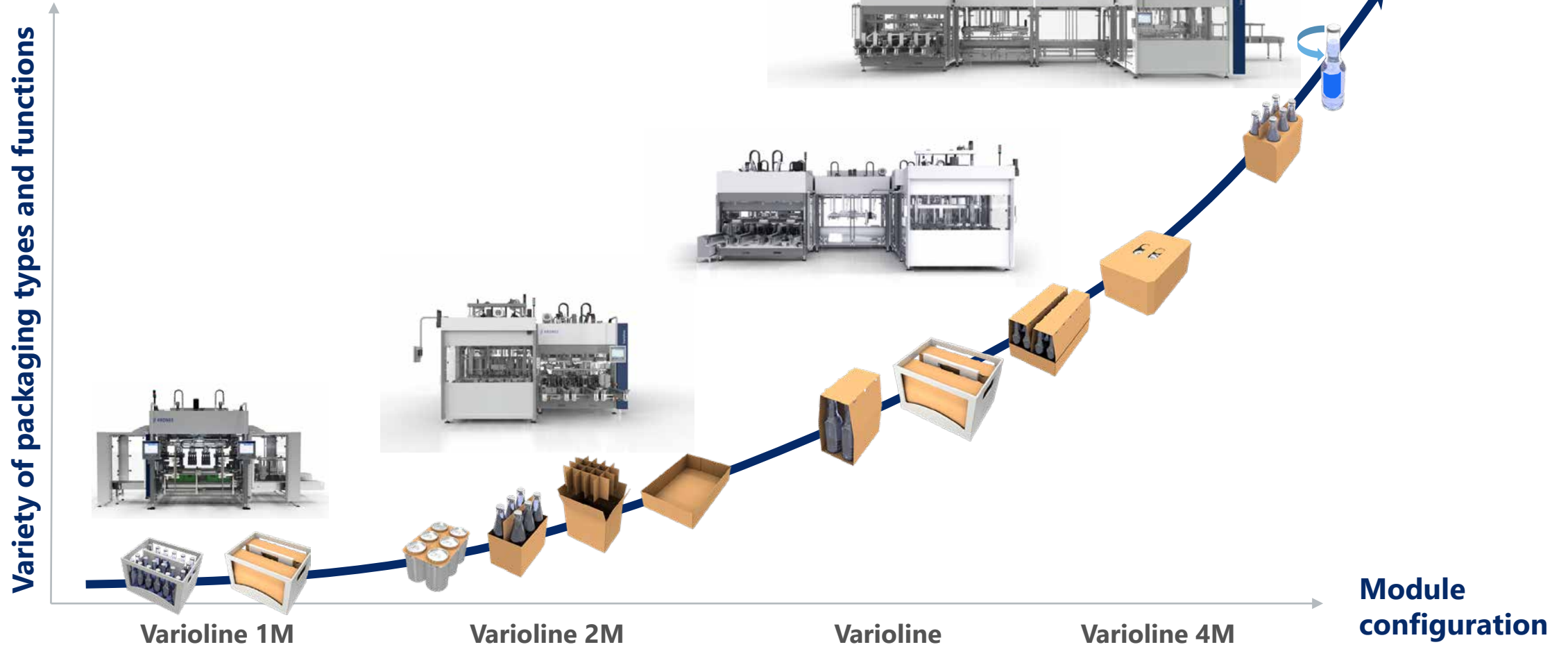
Flexible combination of secondary and tertiary packagings



The combination of different packaging types on the Varioline has no limits.



Modular design for individual applications

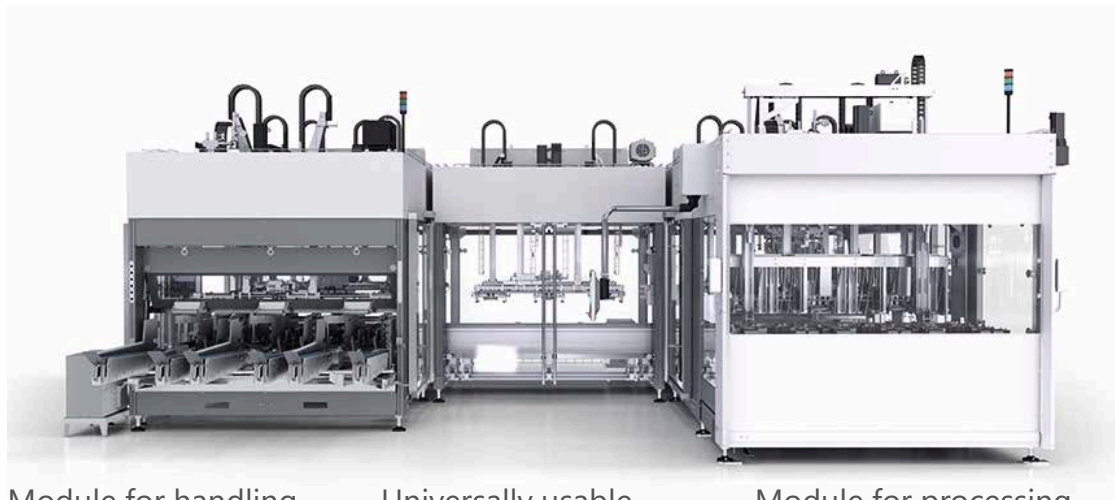


Three modules

Numerous packaging options



The highlight of the new packaging line is its modular concept: It is based on three different modules which can be combined depending on the desired packaging type:



Module for handling carton sleeves and trays

Universally usable module

Module for processing multipacks

Module for handling carton sleeves and trays

- Freely accessible magazine conveyors for a storage capacity of up to 4.5 metres
- Processes upright carton sleeves (RSC) or trays.
- Conventional carton erector and carton sealer integrated

Universally usable module

- Single module for special functions (e.g. orientation or sealing of packages)
- It can be equipped with a gluing unit or a separate container infeed

Module for handling multipacks

- Exchangeable carton magazine for a maximum of packaging variants in flat initial states
- Continuous container infeed usually as an integral component

Module for handling multipacks



The module for processing multipacks and flat blanks provides maximum flexibility to the Varioline system. A new pack format can already be prepared via an exchangeable magazine while another one is still in operation. Feeding of the blanks is performed within a defined safety zone – even when the machine is in operation.

-
- The module for handling multipacks enables maximum flexibility
 - Can be used individually (Varioline 1M) or in combination with other modules
 - Continuous container infeed as an integrated component of the module
 - Adjustable handling and replacement parts for a minimum effort on change-over times
 - Handling of kraft board and corrugated cardboard possible
 - It replaces up to three conventional functions



Varioline 1M for handling multipacks

Continuous container infeed

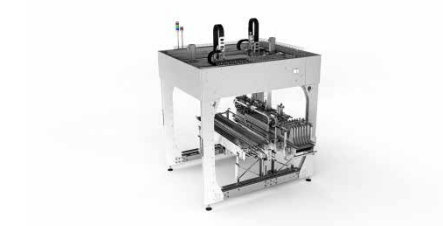
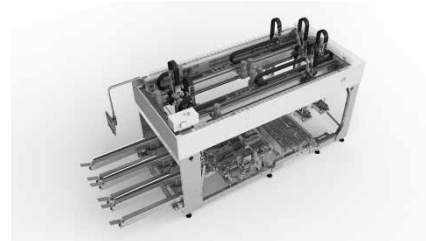
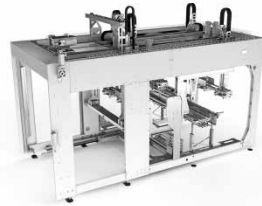


Thanks to a continuous container infeed, the Varioline positions the containers especially gently into end-of-line packaging. Most of the times, four lanes in the infeed are sufficient for handling glass bottles. Varioline is the only machine where this innovative container infeed is used.

- Pressureless container flow without any gaps
- Synchronisation of the gripper system with the speed of the container flow
- Reduced bottle scuffing
- Handling of glass containers and soft (PET, HDPE) or specially shaped containers and cans



Technical details



	Module for handling multipacks	Module for processing carton sleeves and trays	Module for individual functions
Carton processing	●	●	●
Primary packaging (feed)			
Glass containers/cans/soft or specially-shaped containers	●	●	●
Secondary packaging			
Multipacks (see overview page 3)	●	●	●
Tertiary packaging			
Wraparound carton/tray	● / ●	● / ●	Not applicable
Carton with cover flaps	●	●	●
Returnable crate	●	Not applicable	●
Services			
Container handling	Up to 950 containers per minute	Not applicable	Not applicable
Carton handling	Up to 216 multipacks per minute	Up to 36 packs per minute	Not applicable

● Included in the standard design ● Optional ● Not possible

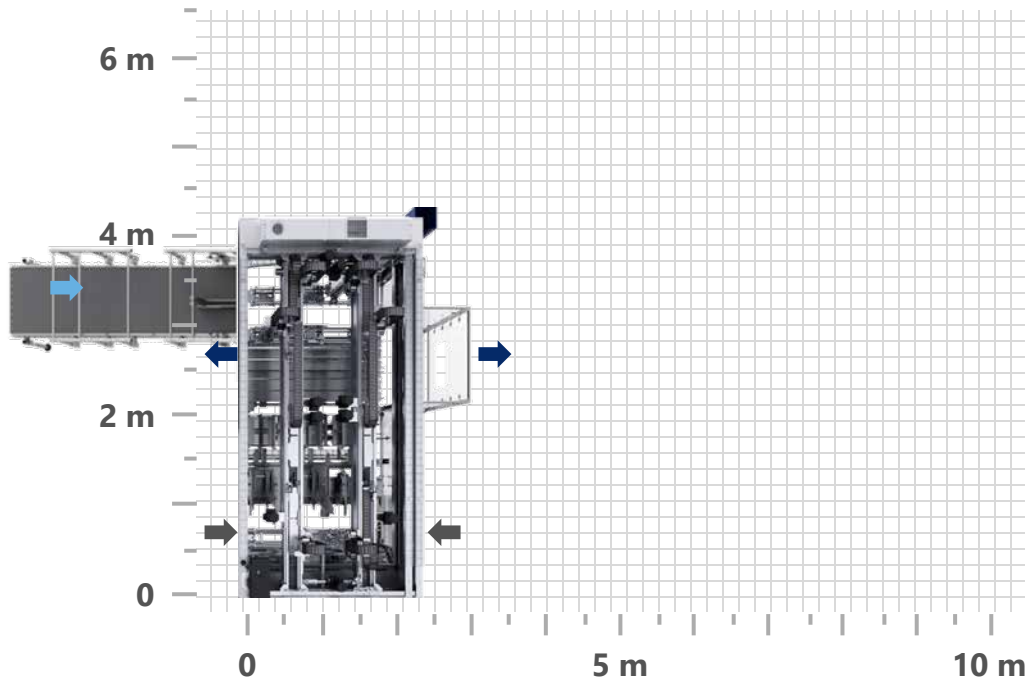
Configuration options

Varioline 1M



Flexible packer for lines with returnables, up to 600 packs per hour*

Space requirements



* Depending on the type of tertiary packaging and machine configuration | ** Externally fed

➡ Container infeed ➡ Empty pack infeed: Infeed side freely selectable ➡ Pack discharge: Discharge side freely selectable

Optional combinations

					Tertiary packaging**	
		✓	✓	✓		Primary/secondary packaging
		✓	✓	✓	**	
		✓	✓	✓	**	
		✓	✓	✓	**	
		✓	✓	✓	**	
						Primary/secondary packaging
		✓		✓		

Varioline 1M



Flexible packer for returnables lines with up to 600 packs per hour*

Field of application

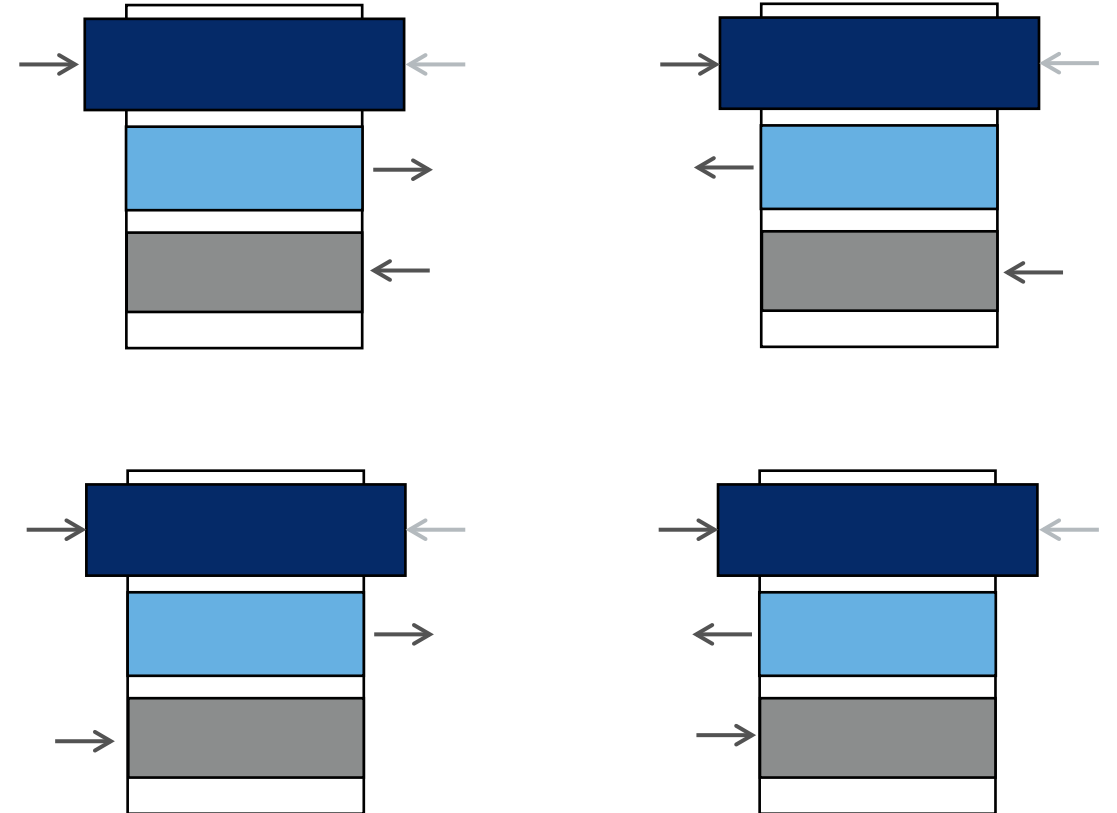
- Varioline 1M as an alternative to conventional packers
- Continuous feed for:
 - Loose containers and multipacks
 - Returnable crate
- In combination with upstream multipack machine
- Used in lines for returnables with complex layout configurations

Benefits to you

- Continuous machine infeed ensures:
 - reduced noise emission (container and returnable crate)
 - reduced friction and collision
- Optimised cam control: Outputs of up to 600 packs per hour**
- Flexible layout: Almost any freely selectable interface of infeed and conveyors

* Depending on the type of tertiary packaging and machine configuration | ** Depending on the tertiary packaging and machine configuration

■ Infeed of bottles or packs ■ Discharge of full crates ■ Infeed of empty crates ◀ Alternatively



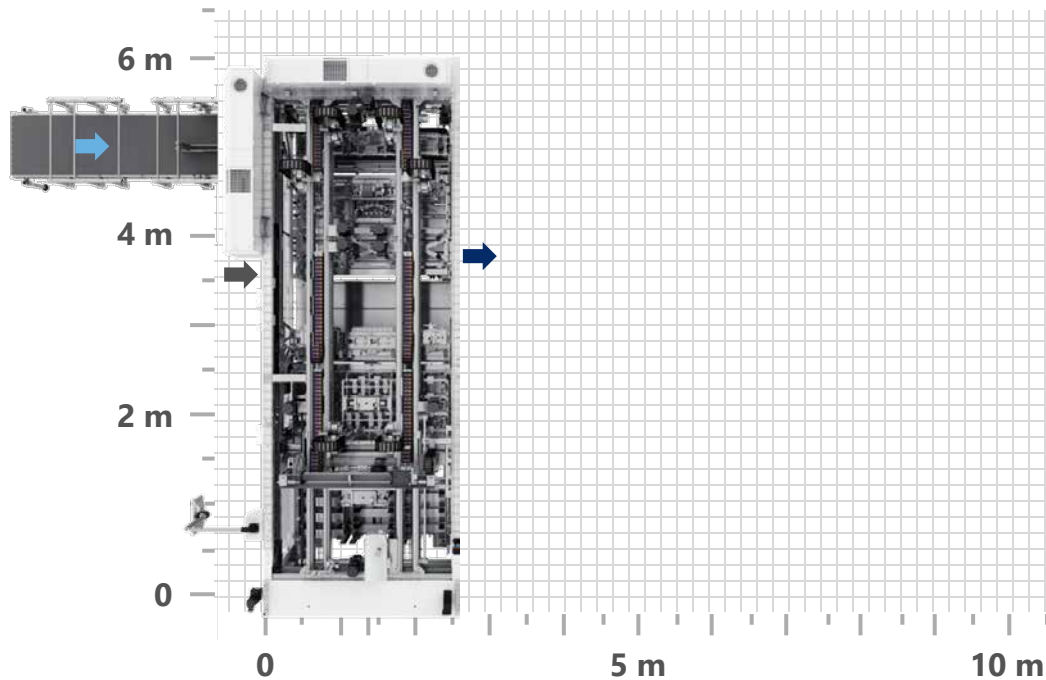
Configuration options

Varioline 1M



Packer for lines with returnables incl. carton magazine for secondary packs

Space requirements



* Externally fed

➡ Container infeed ➡ Empty pack infeed: Infeed side freely selectable ➡ Pack discharge: Discharge side freely selectable

Optional combinations

Only secondary packaging					Tertiary packaging*
		✓	✓	✓	
✓		✓	✓	✓	
✓		✓	✓	✓	
		✓		✓	
		✓		✓	

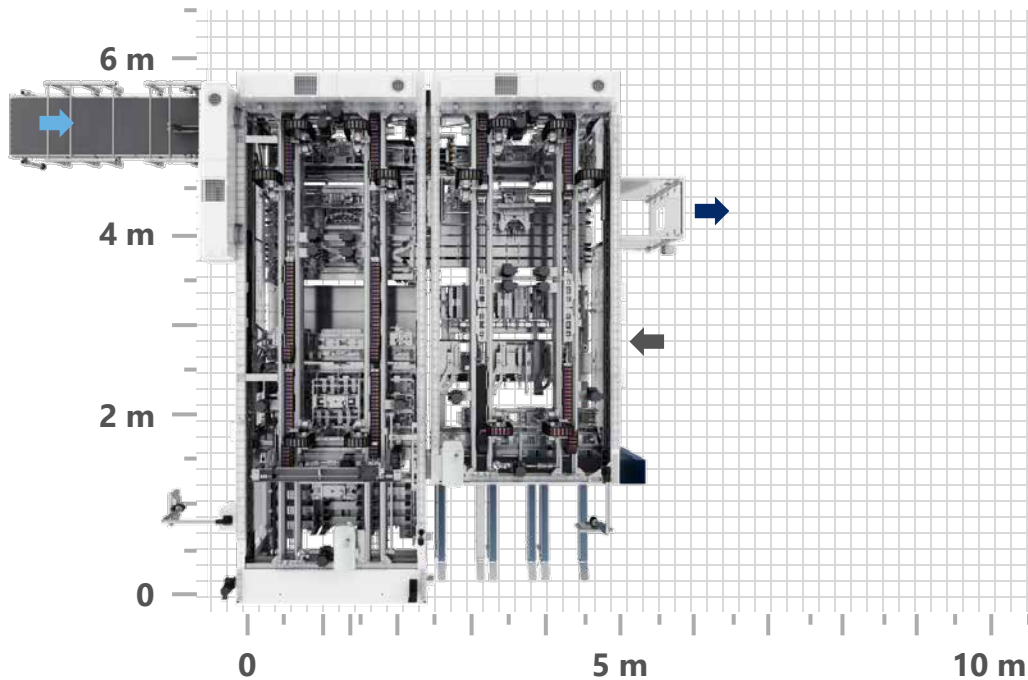
Primary/secondary packaging

Configuration options

Varioline 2M



Space requirements



* Externally fed

➡ Container infeed ➡ Empty pack infeed: Infeed side freely selectable ➡ Pack discharge: Discharge side freely selectable

Optional combinations

Only secondary packaging			*		Tertiary packaging	
	✓	✓	✓	✓		Primary/secondary packaging
✓		✓	✓	✓		
✓		✓	✓	✓		
		✓		✓		
	✓	✓		✓		Primary/secondary packaging

Configuration options

Varioline 2M – LitePac Top for cans



Packs

- Pack formations: 2 x 2, 3 x 2, 4 x 2
- Of renewable raw materials
- Free from plastics and adhesives
- Minimal use of packaging material
- Fully recyclable
- Easy to open and comfortable to carry



The machine

- Can orientation possible
- Scalable output of up to 108,000 cans per hour*
- High output at minimum space requirements
- Easy to operate

* Depending on the pack formation

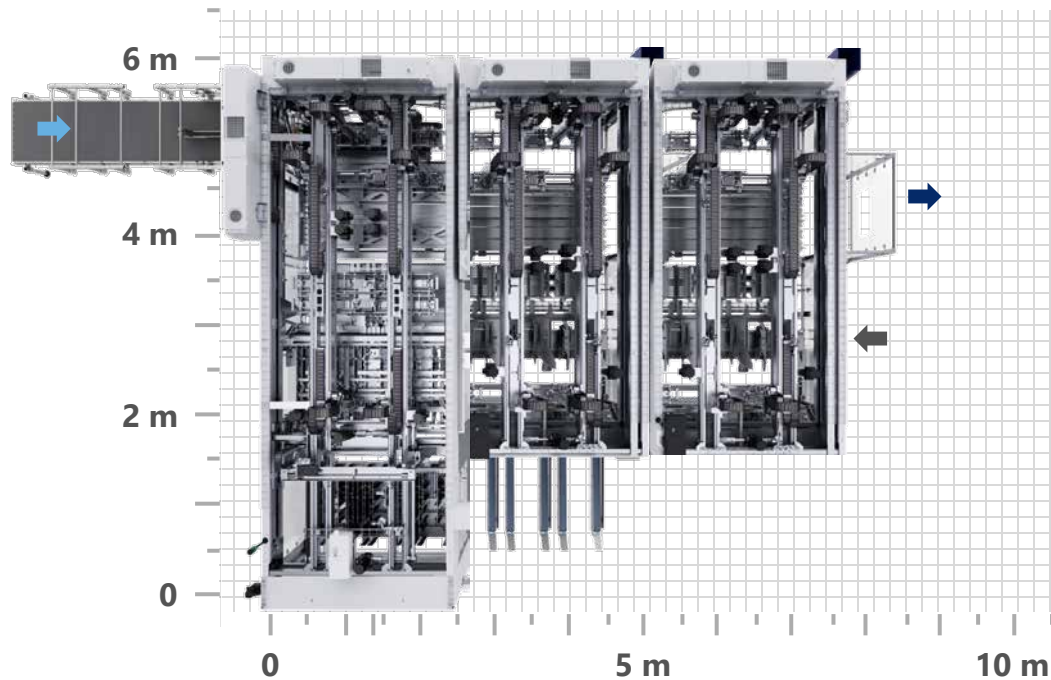


Configuration options

Varioline 3M (especially for RSC)



Space requirements



* Externally fed

➡ Container infeed ➡ Empty pack infeed: Infeed side freely selectable ➡ Pack discharge: Discharge side freely selectable

Optional combinations

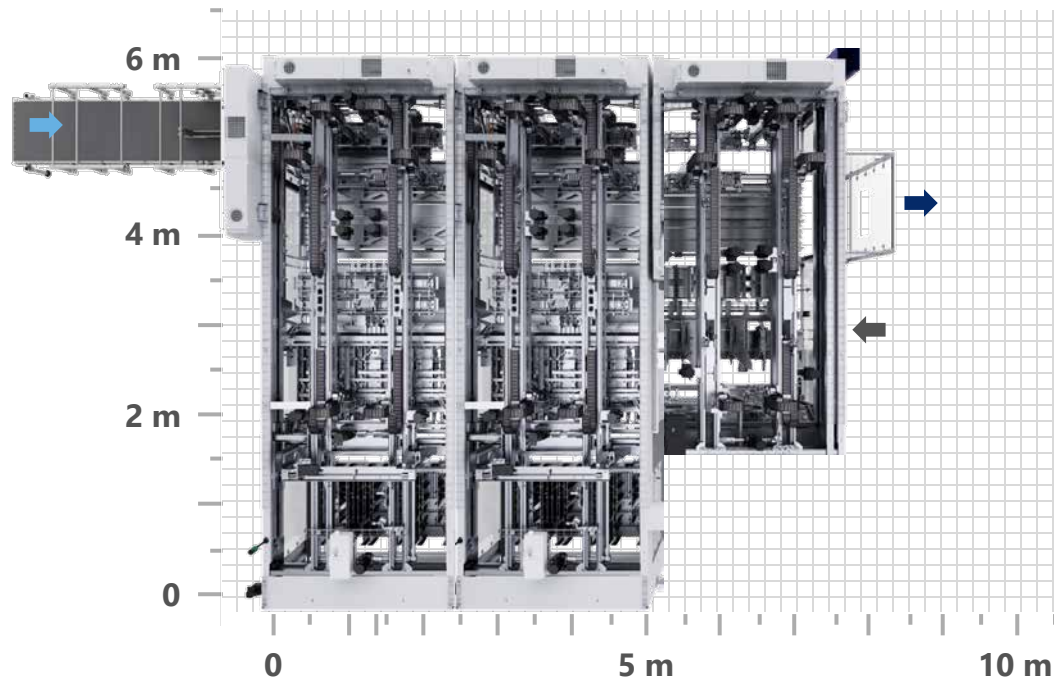
Only secondary packaging			*		Tertiary packaging	
	✓	✓	✓	✓		Primary/secondary packaging
✓		✓	✓	✓		
		✓	✓	✓		
✓		✓	✓	✓		
		✓		✓		
	✓	✓		✓		
		✓		✓		
		✓		✓		

Configuration options

Varioline 3M (especially for wrap-around packs)



Space requirements



* Externally fed

➡ Container infeed ➡ Empty pack infeed: Infeed side freely selectable ➡ Pack discharge: Discharge side freely selectable

Optional combinations

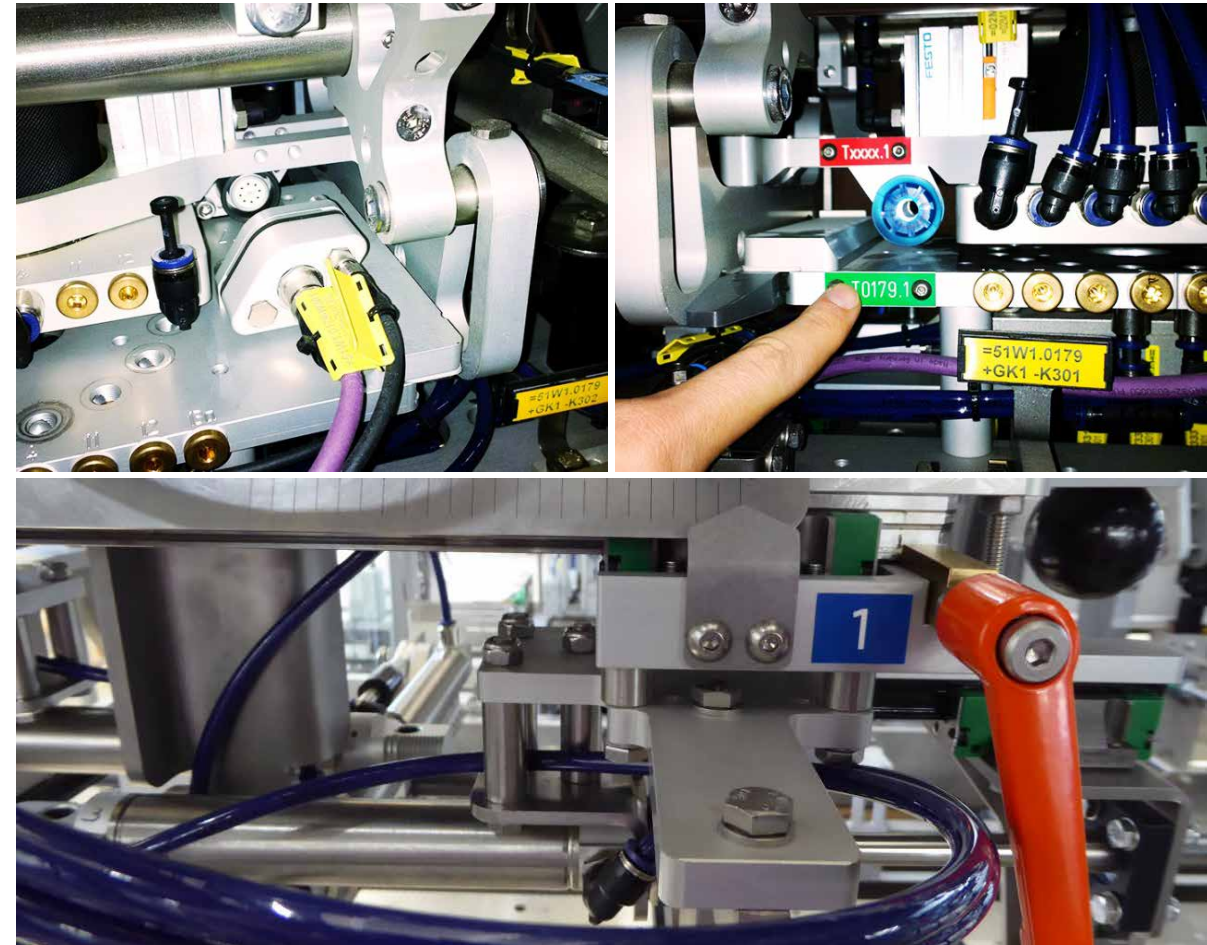
Only secondary packaging			*		Tertiary packaging	
		✓	✓			Primary/secondary packaging
✓	✓	✓	✓			
✓	✓	✓	✓			
	✓	✓				
	✓	✓				
	✓	✓				
	✓	✓				

Quick and easy change-over



In order not to lose time during the change-over, most of the change parts can be easily adjusted to the new formats.

- Ergonomic design: Adjustment of the handling and change parts via quick-release lever and scale
- Change-over without external aids or operators
- Semi-automatic change-over of different packaging format via touch-screen
- Automatic detection of change parts with the machine controller
- Detailed change-over instruction included

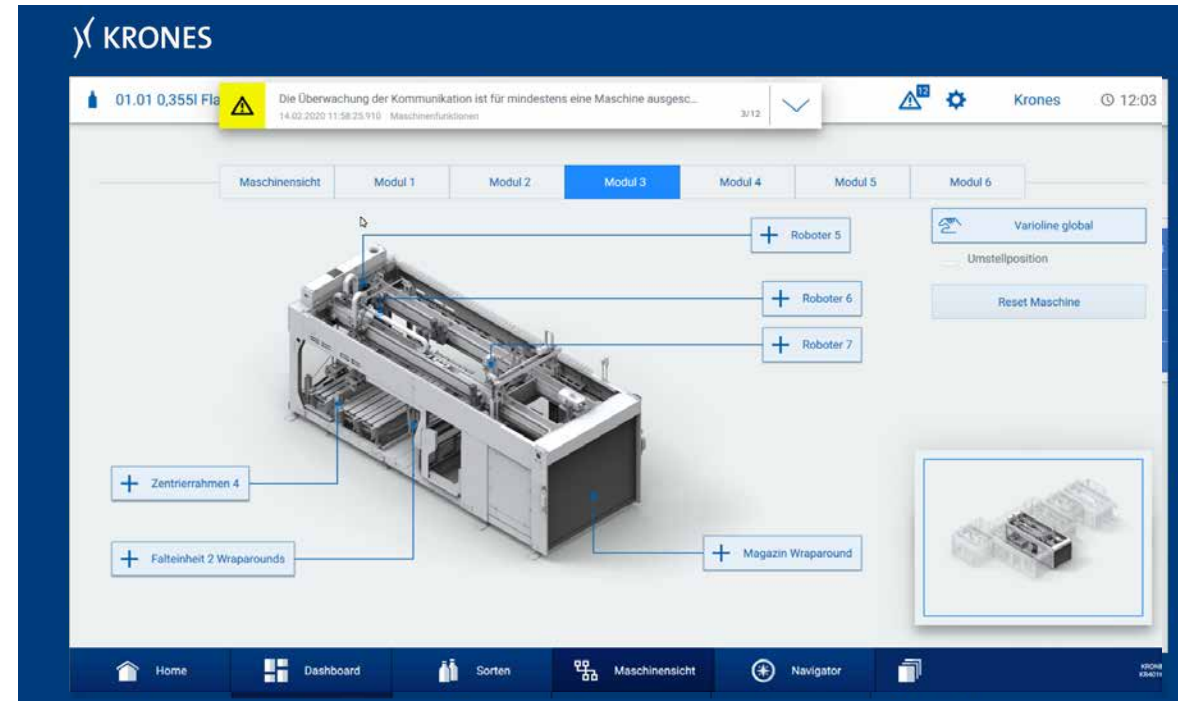


Maintenance



In order to detect possible sources for production interruption or even standstills at an early point and to be able to guarantee trouble-free operation, an optimal and foresighted maintenance is very important.

- Independent distance measurement of the portal system
- Early indication of pending maintenance and signal output via the touch-screen
- Graphical visualisation of maintenance points in the machine
- Guided troubleshooting
- Fault reports
- Detailed chapters for maintenance and user instructions



Benefits to you



Combination of secondary and tertiary packagings

The Varioline combines up to six machines and it combines different returnable and non-returnable packaging variants.

Modular design

We will already define possible packaging combinations with you beforehand. This way, you will get exactly that machine from our modular Varioline component system that is tailored to your needs.

Continuous container infeed

The synchronous movement of the gripper system and the container flow significantly reduce the strain acting on the product. Thanks to its continuous movement, the infeed system enables processing of soft and glass containers without any pressure and gaps.

* As of 01/2022

Everything from a single source

Krones develops and manufactures all components integrated in the packaging line. This way, all modules and components operate without any interfaces. The machine is also ideally customised for use in the dry end.

More than 100 references

The Varioline is available on the market since 2012 with great success: Already in use on more than 100* machines worldwide.

Requesting a new machine

You can easily send a request for a non-binding quotation in our Krones.shop. 

Certified ecological efficiency

Machines with enviro seal



At Krones, the enviro label stands for excellent ecological efficiency. Products that bear the enviro label have proven in an objective test procedure that they efficiently use energy and media, and that they produce in an environmentally-friendly way. The requirements are defined by the EME standard that has been developed by the TÜV SÜD (technical inspection authority) for assessing production plants. The enviro test procedure has also been certified by TÜV SÜD as an independent expert. Therefore, you can be sure that: an enviro label stands for ecological efficiency.

This is why the Varioline is enviro-classified:

- Servo-controlled drives with IE4 energy efficiency class
- Use of fixed-mounted motors in the robot to reduce the moved mass
- Modular ACOPOS multi drive system from B&R where all the braking energy is lead back to an intermediate circuit for re-use at the acceleration process (with all drives)
- Energy measurement (optional): using an ammeter
- Energy measurement package (optional): Flow meter for compressed air consumption and leakage detection
- Electrical vacuum pump
- Use of enclosed lifetime-lubricated bearings
- Use of H1-greases and lubricants



Everything from a single source



Training sessions at the Krones Academy – trained personnel for an increased efficiency of your line

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 adhesives – the all-rounder for a strong hold

Regardless if PET or glass, plastic or paper, labels or packagings – at KIC Krones, you will find your ideal adhesives for a high-quality product presentation.

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.



**SOLUTIONS
BEYOND
TOMORROW**

