Varioline
Packaging line for maximum flexibility
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 70 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 processing multipacks
  - Module for processing carton sleeves and trays
  - Universally usable module for different functions
- Combined processing of non-returnable and returnable packs
- Output of up to 100,000 containers per hour – depending on the packaging type

* As of 12/2019
Flexible combination of secondary and tertiary packagings

The combination of different packaging types on the Varioline seems to have not limits set.
Modular design for individual applications

Variety of packaging types and functions

Varioline 1M  Varioline 2M  Varioline 3M  Varioline 4M
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 processing 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 processing multipacks**
  - Exchangeable carton magazine for a maximum of packaging variants in flat initial states
  - Continuous container infeed usually as an integral component
Module for processing 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 the processing of multipacks enables maximum flexibility
- Continuous container infeed as an integrated component of the module
- Adjustable handling and replacement parts for a minimum effort on change-over times
- Processing of kraft board and corrugated cardboard possible
- It replaces up to three conventional functions
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 processing 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
- Processing of glass containers as well as soft (PET, HDPE) or specially shaped containers and cans
### Technical details

<table>
<thead>
<tr>
<th></th>
<th>Module for processing multipacks</th>
<th>Module for processing carton sleeves and trays</th>
<th>Module for individual functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carton processing</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Primary packaging (feed)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass containers/cans/soft or specially-shaped containers</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Secondary packaging</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multipacks (see Overview page 3)</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Tertiary packaging</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wraparound carton/tray</td>
<td>● / ●</td>
<td>● / ●</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Carton with cover flaps</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Returnable crate</td>
<td>●</td>
<td>Not applicable</td>
<td>●</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Container handling</td>
<td>Up to 950 containers/min.</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Carton handling</td>
<td>Up to 216 multipacks/min.</td>
<td>Up to 36 packs/min.</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

- ● Included by standard
- ○ Optional
- ◀ Not possible
Optional configurations:
KRONES Varioline 1M – continuous packaging

Module for processing multipacks
Module for processing cartons
Module for individual functions

Space requirements

Optional combinations

Tertiary packaging

Primary/secondary packaging

✓ Can be realised with the shown configuration
✓ Can be realised with another configuration
Optional configurations:
KRONES Varioline 1M – packaging in cycles

Module for processing multipacks
Module for processing cartons
Module for individual functions

Space requirements

Optional combinations

Tertiary packaging

Primary/secondary packaging

✓ Can be realised with the shown configuration
✓ Can be realised with another configuration
Optional configurations:
KRONES Varioline 1M

- Module for processing multipacks
- Module for processing cartons
- Module for individual functions

Space requirements

Optional combinations

- Can be realised with the shown configuration
- Can be realised with another configuration
Optional configurations:
KRONES Varioline 2M

Space requirements

Optional combinations

Module for processing multipacks
Module for processing cartons
Module for individual functions

Primary/secondary packaging
Tertiary packaging

-only secondary

Can be realised with the shown configuration
Can be realised with another configuration
Optional configurations:
KRONES Varioline 3M

Module for processing multipacks

Module for processing cartons

Module for individual functions

Space requirements

Optional combinations

Tertiary packaging

Primary/secondary packaging

✓ Can be realised with the shown configuration
✓ Can be realised with another configuration
Optional configurations:
KRONES Varioline 4M

Module for processing multipacks

Module for processing cartons

Module for individual functions

Space requirements

Optional combinations

Can be realised with the shown configuration
Can be realised with another configuration
Optional configurations:
KRONES 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
– Minimum use of packaging material
– Fully recyclable
– Easy to open and comfortable to carry

The machine
– Targeted can orientation possible
– Scalable output of up to 108,000 cans per hour
– High output at minimum space requirements
– Easy to operate
Optional configurations:
KRONES Varioline 2M – LitePac Top for cans

Module for processing multipacks

Module for processing cartons

Module for individual functions

Space requirements

Optional combinations

Secondary packaging only

Tertiary packaging

Primary/secondary packaging

Possible with configuration shown
Possible with different configuration
Quick and easy change-over

In order not to lose unnecessary 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

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.

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 70 references
The Varioline is available on the market since 2012 with great success: More than 70* customers use the Varioline for packaging.

* As of: 12/2019
Sustainable, efficient, eco-friendly

- **Energy efficiency**
  - Servo-motor-controlled drives, which meet the efficiency of energy efficiency class IE4
  - Use of fixed mounting motors in the robot which reduces the portion of the moving compounds
  - 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

- **Media efficiency**
  - Energy measurement package (optional): Flow meter for compressed air consumption and leakage detection
  - Electrical vacuum pump

- **Environmental compatibility**
  - Use of enclosed lifetime-lubricated bearings
  - Use of H1-greases and lubricants
Everything from a single source

**Trainings at the KRONES Academy – trained personnel will increase your line efficiency**
The versatile offered training programme of the KRONES Academyranges from operation, servicing and maintenance to management training. We will also gladly establish your individual training programme.

**KIC KRONES adhesives – the all-rounder for a strong grip**
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.

**Lubricants from KIC KRONES for every productions step**
Whether for gears, chains or central lubrication systems – our greases and oils are true all-round talents. You can reach every lubrication point, protect your line and provide gentle treatment for your product thanks to our products' suitability for food.
Digitalisation
Process technology
Bottling and packaging equipment
Intralogistics
Lifecycle Service

We do more.