Decoration Possibilities

Whether on glass, plastic or metal containers, wrap-around labels offer more space for all kinds of advertising and consumer information. The Contiroll automatically applies wrap-around labels to round, oval, rectangular, square and polygon containers. The Contiroll is mainly used for the fully-automatic labelling with different film types and paper labels. Reverse-printed transparent film labels are processed with the same precision as coloured film labels. As part of KRONES’ modular component system the Contiroll can also be equipped with additional labelling stations. Thus, creativity for labelling is almost unlimited.
Wrap-Around Labelling with Hotmelt or Cold Glue

Special requirements demand special solutions, especially with reel-fed labelling. The Contiroll labellers were designed as rotary-type machines and are equipped with an extremely precise labelling station which cuts the labels and applies them to the container. A computer-controlled feed roller and rotating cutters provide a clean and accurate cut. Hotmelt or cold glue is used depending on the type of label.

A variety of machine sizes and versions enable the Contiroll to handle outputs ranging from 3,000 to 80,000 containers per hour. The machine is in ergonomic design, easy to operate and maintain. More than 1,500 machines installed worldwide are proof of the reliability of this labeller.

System Advantages:
- Precise labelling guaranteed by positive container positioning via centring bell and centring plate
- Low glue consumption
- Large capacity label reels minimise the operator workload
- Automatic splicing of reel ends
- Short change-over times for different containers or labels
- Conversion and retrofitting possible even after many years
Method of Operation

The containers are picked up by the infeed starwheel and transferred to the container table. The container rotation begins when they are positioned between container plates and centring bells. The speed of the feed roller is adjusted to the required label length for continuous web tension. A standard threading unit ensures optimal film feed. In the cutting unit, the labels are precisely cut while a computer and servo-motor provide an exact cut-off point.

Two narrow strips of hotmelt glue the labels together, which are applied by a heated glue roller to the leading and trailing label edges. The label with the glue strip on its leading edge is transferred to the container. This glue strip ensures an exact label positioning and a positive bond. As the container is rotated during label transfer, labels are applied tightly. Gluing of the trailing edge ensures proper bonding.
Types of Gluing

**Leading and Trailing Edge Gluing with Hotmelt**
This standard Contiroll gluing method minimises glue consumption as only a narrow strip of glue is applied to the leading and trailing edges. A large glue bowl ensures an ample glue supply.

**Full Surface Gluing with Cold Glue**
For labelling paper labels full-surface gluing with cold glue has proven its efficiency. Labels can be applied to the containers with or without overlap.

1. Hotmelt unit
2. Leading edge gluing
3. Trailing edge gluing

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Leading and trailing edge gluing with hotmelt for reduced glue consumption.

Label gluing with hotmelt.
The Contiroll labelling station incorporates a label feed roller with cut control, cutting unit, gluing unit, and a vacuum-assisted gripper cylinder for the label transfer to the container. The label feed roller, as well as the gluing unit and vacuum-assisted gripper cylinder are driven by computer-controlled servo-motors. The gluing station can be exchanged enabling the use of different hot-melt types which are adjusted to the respective label material. The entire labelling station is designed to allow easy access from all sides. Large-capacity label reels minimise the operator workload significantly. Without a machine stop, the operator splices the end of the first reel with the beginning of the new reel. Thus, the need to thread the label web into the machine is eliminated. A cutting table is mounted at the labelling station to facilitate this task.

With an additional unit the reel change-over can be effected fully automatically. With a slightly reduced machine speed, the end of the first reel is spliced with the end of the second reel.
Contiroll HS – High Speed

In the Contiroll HS labelling station, servo-motors drive the feed roller for the label web, the cutting unit, the vacuum-assisted gripper cylinder, the gluing unit and the two reel holders. Thanks to the servo-drives, the labelling station pitch can be adjusted to the respective label length – thus, different label lengths and output ranges can be covered with the same labelling station. The gluing unit of the standard Contiroll version is exchangeable.

In addition to its conventional container guidance, the infeed and discharge starwheel can be provided with a neck-handling guide that is very advantageous for labelling empty PET bottles. In this case, an air conveyor or buffer system transfers the bottles to a neck-handling starwheel in the machine infeed where they are transferred to the container table and positively clamped between the centring bells and centring plates. A height-adjustable container plate is not required for this transfer.

BLOC Arrangements

The Contiroll HS can be coupled with other machines of a bottling line. Via a dynamic buffer system, the PET bottles from the stretch blow moulder can be transferred directly to a neck-handling infeed starwheel of the Contiroll HS. If a pitch is not fed with a PET bottle, it will have no negative effect on the machine. This pitch will not be provided with a label or hotmelt. The next PET bottle is labelled as usual without any delay. In another Bloc arrangement, the Contiroll HS is connected with the rinser. First, empty bottles are labelled and subsequently they are cleaned, filled and capped.

The discharge starwheel takes over the bottles with neck-handling clamps transferring them directly to the filler or an air conveyor. The neck-handling starwheels provide controlled mechanical container guidance with secure transfers. They are suitable for different container sizes when the neck finish diameter remains the same. Therefore, with most of the type change-overs there is no need to exchange them which drastically reduces the time for conversion.

Gluing of the label web during reel change-over is fully automatically. In its version with one labelling station, the Contiroll HS achieves speeds up to 66,000 cph, and up to 80,000 cph with two labelling stations.

Vacuum-assisted gripper cylinder without gripper fingers

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Container Table

Servo-Controlled Container Table for Special Decorations
For special labelling processes, the containers have to be aligned e.g. with the can seam or glass seal to provide accurate label positioning. KRONES has developed a container table especially for these decorations. The individual bottle plates are rotated by a computer-controlled servomotor. The containers are photoelectrically positioned and placed at the correct labelling position via additional rotation.

Mechanically Controlled Container Table for Special-Shaped Containers
In addition to exact centring, the labelling of special-shaped containers requires container-specific control of the centring plate rotation to guarantee proper label placement. To ensure absolute precision, bottle plates with turnstiles and exchangeable cam segments are used.

Container rotation via servo-motor and toothed belts (left picture)
Exchangeable cam segment for processing special-shaped containers (right picture)

Container Table for Round Containers
The Contiroll is equipped with the same bottle table in spoked-wheel design that has proven its effectiveness on all other KRONES rotary-type labellers. When round containers are to be processed, the plates are driven by a servo-motor via toothed belts. In case of container diameter changes, the speed of the belt can be easily adjusted via touch-screen. The container plates are adjusted to the container base. Type change-overs can take place without using any tools.

Container rotation via bottle plates with servo-motors
Ergonomic operation
via touch-screen

Screen
- Colour touch-screen
- Well-arranged menu guidance in the operator programme
- Access to the user interface via individual passwords
- Display of the current production data
- Malfunction display in plain text and graphical display
- Text displayed in the set language
- Interface to superordinated systems like LDS (Line Data Storage System) or LMS (Line Management System)
- Remote maintenance via telemaintenance possible

Change-Over
With type change-overs, the new type is first selected via the touch-screen. When new containers or labels are to be processed for the first time, all label parameters can be programmed and stored menu-assisted. The entire labelling station can be height-adjusted horizontally or vertically. All the adjustments are performed with cranks and counters and are therefore precisely reproducible. All handling parts of one set are marked. The machine head height is electrically adjusted and automatically locked in place. Centring bells and container plates are equipped with single-hand fasteners. As a result, change-over times are reduced significantly.

Layout
The Contiroll can be arranged in different ways. This way, it can be adjusted ideally to the respective space conditions. Possible options are the linear, parallel, and angular arrangements.
**Additional Equipment**

**“Roll-On Shrink-On” System**
- Shrinking of film labels onto convex or concave container contours
- Quick curing of adhesive via radiation in a UV tunnel
- Film shrinking in a hot air tunnel or steam tunnel
- Quick labelling station change-over via exchangeable gluing unit

**Inflating Device**
- Stabilising empty containers with compressed air when labelling before filling
- Employment of special centring bells

**Clamping Starwheel**
- Application as infeed, discharge, and distribution starwheels
- No centre guides required
- Employment of the starwheels for several container types that do not differ in their diameter by more than 20 mm
- Employment as rejection system after label inspection possible

**Hotmelt unit**
with container for adhesive that can be UV cross-linked

**Stabilisation of the containers with compressed air**

**Inflating Device**

**Clamping starwheels at the infeed and discharge**
**Labelling Station for Self-Adhesive Labels**

- Installation of an Autocol label applicator for self-adhesive labels possible in the Contiroll
- Precise positioning of additional labels, e.g., tamper-evident seals, lid labels, campaign stickers

**KRONES Garantomat**

- Application of shrink sleeves as tamper-evident seals
- Additional labelling station above the Contiroll infeed or discharge
- Unwinding of the sleeve from a reel; cutting of shrink sleeve in the labelling station

**KRONES Checkmat**

- Monitoring of the correct label position
- Identification of labels
- Checking of printed data (plain writing recognition via OCR/OCV)
- Bar code detection
- Fill level and container cap inspection
- Rejection of faulty containers by means of retaining starwheel, clamping starwheel, or pusher
Optional Equipment:
- Container orientation with spotting bars at the container table
- Handle orientation at the bottle table
- Pressure-reduction unit at the machine infeed
- Ink-jet or laser date-coding unit for printing the label front
- Electronic container counter
- Additional container and label handling parts
- Operator-friendly handling parts trolley
- Handling parts cabinet for storage of machine accessories
- Central lubrication system

Design Features:
- Electronic cap inspection and gap detection at machine infeed
- Single-hand fasteners for quick change-over of the centring bells and bottle plates
- Entire cutting unit can be removed for maintenance
- Quick-exchange cutters in the cutting unit of the Contiroll HS
- Exchangeable hotmelt unit
- Integral control cabinet, ready for connection
- Guards consisting of see-through panels that open upward, optional hinged doors
- Central lubrication points
- Contiroll HS: Bloc arrangement with stretch blow moulder or rinser possible

Service
Thanks to a worldwide network of sales offices and services in conjunction with the KRONES teleservice, we are able to provide optimum support even after your equipment has been installed. We guarantee that we can supply you with original spare parts for decades. Our modern storage system allows us to supply spare parts immediately if required. Our qualified specialists handle maintenance and servicing of your line quickly and efficiently.