



Handling parts for the can line

Krones Lifecycle Service



Top performance together



What do you expect from a partner?

That he exactly knows your requirements and needs and has the appropriate solutions down pat? That you understand each other without words and can rely on each other? That you achieve top outputs as a team? The Krones Lifecycle Service fulfils all of these requirements.

Krones is not only a service provider but also your partner who supports you even after the purchase of a new machine.

Flexible with Krones handling parts

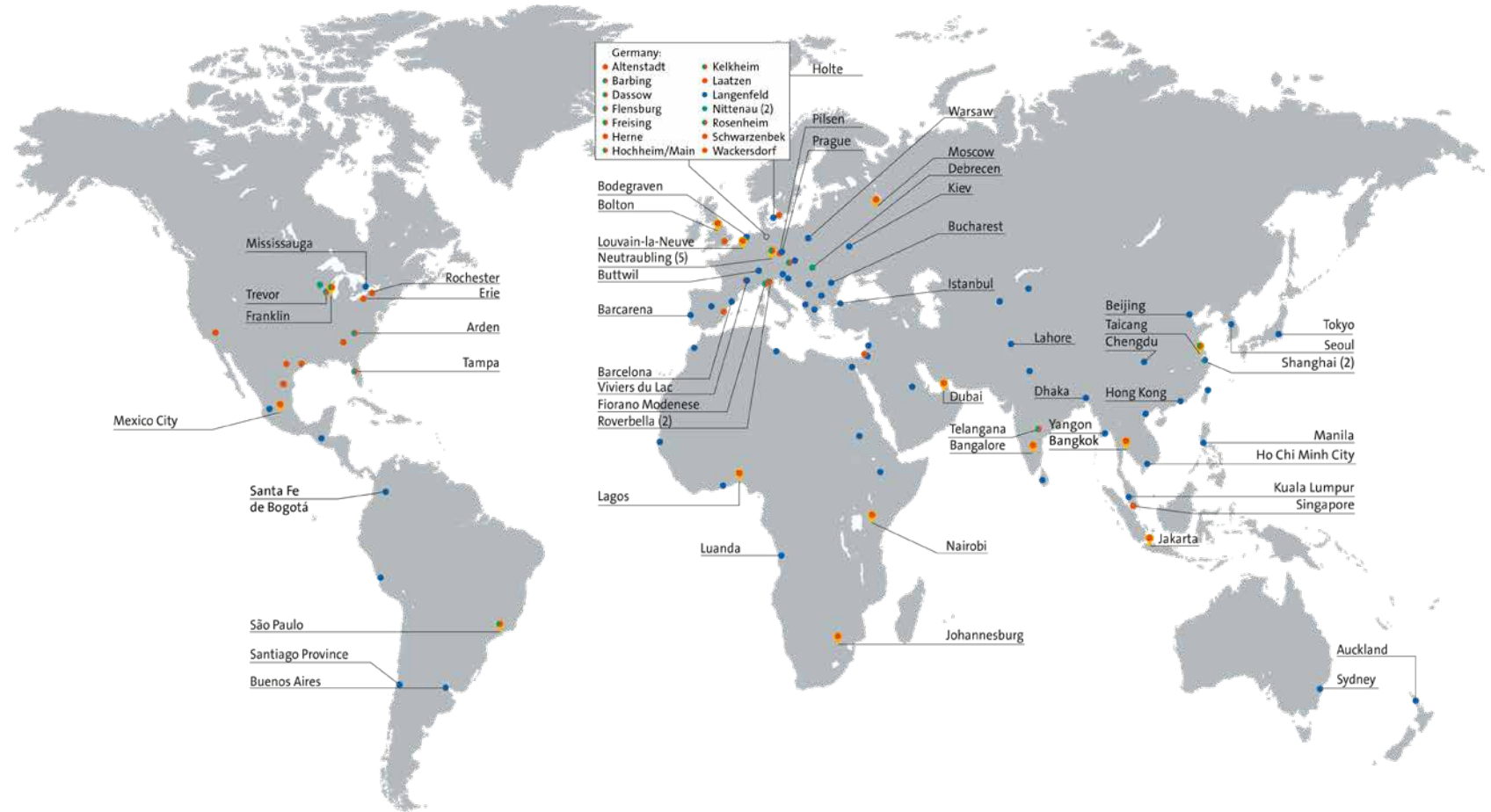
Handling parts are the perfect solution to adjust your existing line to new ideas: individual components are quickly and systematically removed and replaced in no time.



The world as we see it



To provide you with even better support, we have set up Krones centres at various locations all round the world. Each of these »service nodes« is responsible for a separate set of countries and subsidiaries. This makes it possible for us to serve you quickly and systematically and provide exactly the services you need.



- Centre
- Engineering sites
- Production sites
- Krones subsidiaries and representative offices

The Krones handling parts business

Your benefits



Equipped for the future

- Tailor-made upgrades for your lines, e.g. to relieve the operator or save resources

Reliable and safe during production

- Documentation of conversion measures for a holistic overhaul
- Administration of master data
- Creation of processing documents for each process step
- Guaranteed quality due to precise functional tests before delivery

Economical with resources

- Checking existing handling parts for reusability



Individual complete solutions

- View of the complete line including third-party machines
- Consulting with know-how
- Experienced engineering team for retrofitting
- Service engineers available all over the world
- Sophisticated colour and labelling concepts for marking handling parts

Top performance all along the line

- Checking individual machines and the complete line for the required output
- Planning of conversion measures if required
- Testing new container and pack types for processibility in the complete line
- Fast change-over of the required handling parts

The KRONES handling parts business

Our principles



- 1** We consider the complete line.
- 2** We find the proper concept for you.
- 3** We check your parts for reusability.
- 4** We offer special identification marks.
- 5** We test your handling parts for functionality.
- 6** We inform you about our latest upgrades.



The KRONES handling parts business – our principles



1 We consider the complete line.

The whole is always more than the mere sum of its parts: We therefore do not only consider each individual machine but check the complete line for its performance and for processability of the container and pack types.

Our experts check ...

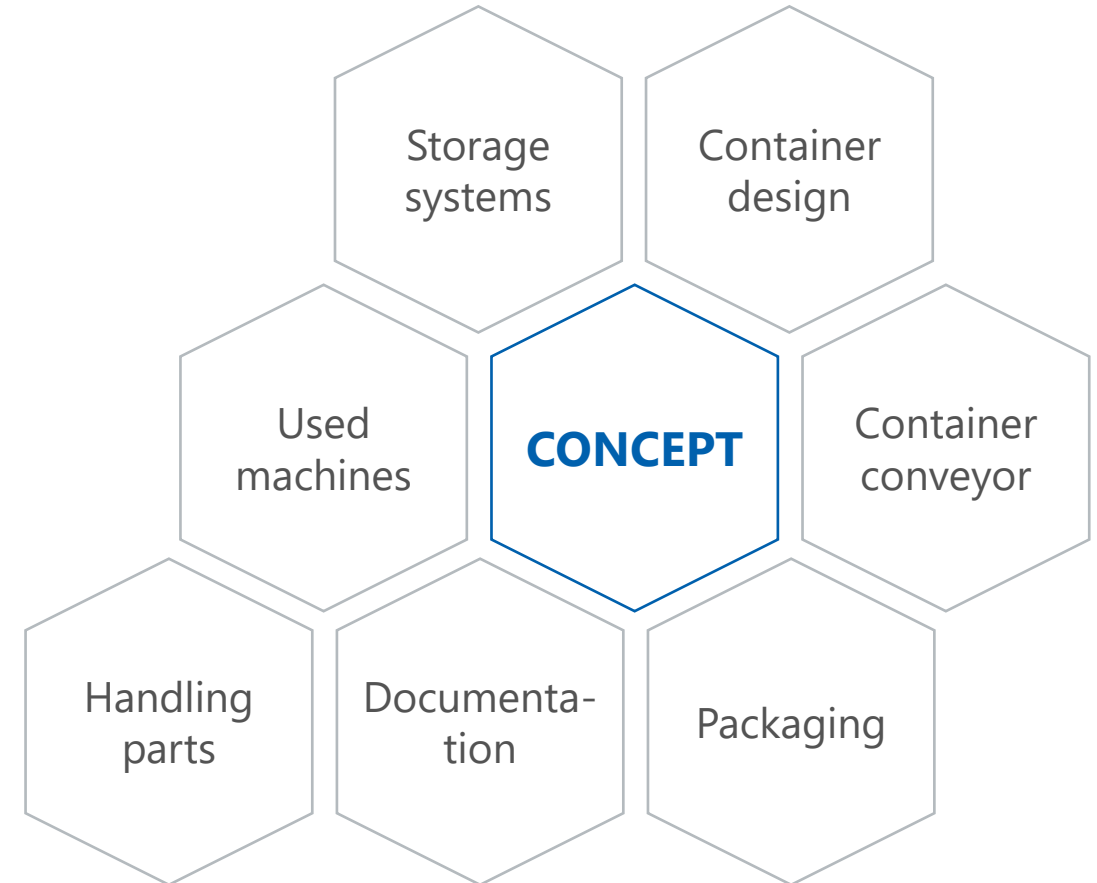
- the container including the preform, cap and pack type, and whether it can be processed in the complete line.
- all customer objects for the complete line.
- the existing parts for reusability.
- important parameters, such as height, diameter, shape, neck radius, neck finish, cap and container contour.



The Krones handling parts business – our principles

2 We find the proper concept for you.

We contribute our ideas – in all possible directions. This means that we do not only design a tailor-made concept for a new container, but provide for all contingencies and adjoining process steps in our concept.



The Krones handling parts business – our principles

3 We check your parts for reusability.

Based on our available data, we can check already while preparing the quotation whether existing handling parts from your line can be reused. It goes without saying that we will assist you in this process.

It is our target to quickly implement your ideas in order to prevent unnecessary extra costs for you.



The Krones handling parts business – our principles

4 We offer special identification marks.

We do not only enhance your machines to achieve top performance but contribute towards relieving your employees' day to day work. For quick and easy identification of the currently required handling parts, we offer special identification variants:

Standard solutions

- Labelling and numbering
- Coloured marks, such as identification plates and circular blanks

Optional

Completely coloured handling parts



The Krones handling parts business – our principles

5 We test your handling parts for functionality.



A matter of course for us: Prior to handling parts being delivered to our customers, they are subjected to comprehensive quality tests at Krones.

Measures

- Exact adjustment to customer objects
- Quality assurance in design and manufacturing
- Test set-up for all container handling parts
- Functional tests
- Outgoing goods inspection



The Krones handling parts business – our principles

6 We inform you about our latest upgrades.



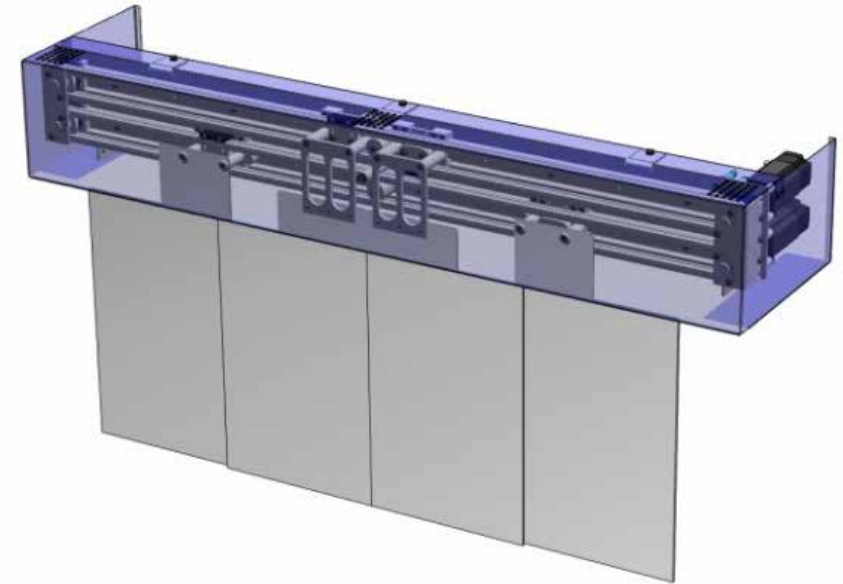
It is quite important to us, as an innovative company, to keep your machines and technologies up to date and to continuously improve them, even after the purchase. We therefore offer our tailor-made upgrades.

Improvements

- More efficiency of your machines
- Reduced consumption of energy and media
- Easier operation and high operational safety
- Higher product quality
- Improved hygiene standards

My upgrades

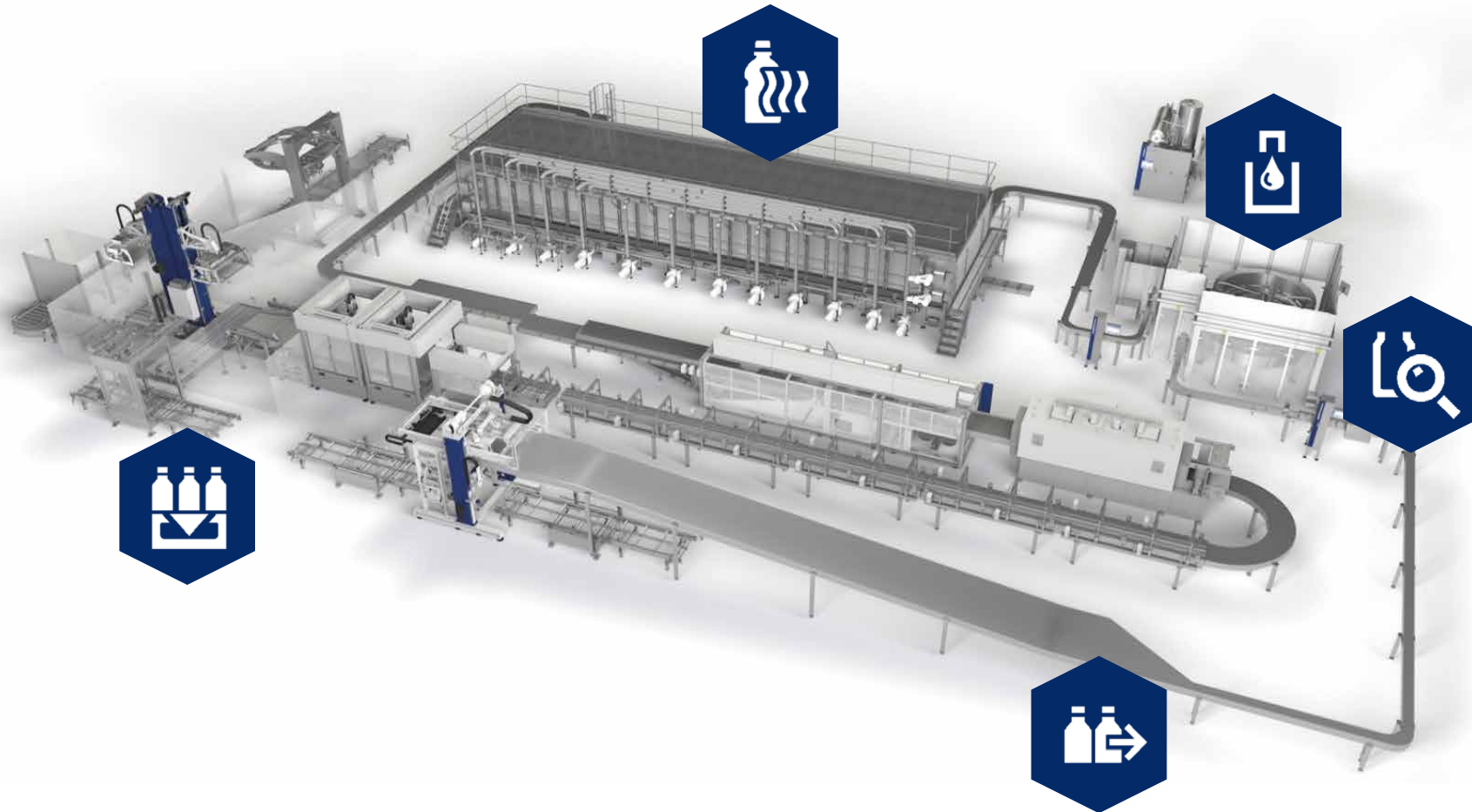
For a personalised overview, customised to suit your line's requirements, see the Krones.shop in "Product Upgrades" in your user account.



Example:

Conversion measures at the shrinking tunnel for the upgrade of the energy saving kit (automatic airlock)

Handling parts for your can line



-  Storage
-  Inspection technology
-  Filling technology
-  Product treatment technology
-  Packaging and Palletising Technology
-  Conveyor technology

Storage of handling parts



Keeps production organised: Our specially developed carriages store your handling parts properly and optimally accessible for the operators.

Handling parts trolley

- Professional storage of unused handling parts
- Safe and ergonomic delivery and return during change-over
- Protection from damage
- Reduced change-over times due to format-specific storage



Design for the Variopac



Inspection technology

Our service



Checking the cans for processability and parameterisation

Checking the empty can inspector for

- Dimensions
- Output

Adjustment work at the empty can inspector on site

- Creating new types
- Machine parameterisation



Filling technology

Our service



Checking of can type, lid and filling medium

- Verification of type changes, already in the run-up using prototype containers:
 - Filling tests
 - Capping tests
- Checking the flow characteristics on the basis of the neck finish contour
- Checking the lids on the basis of different parameters such as dimensioning, contour and seaming behaviour



Krones filling laboratory

Filling technology

Handling parts



Handling parts for the can filler



Infeed worm with guide

Can bypass

Container handling parts

Filling technology

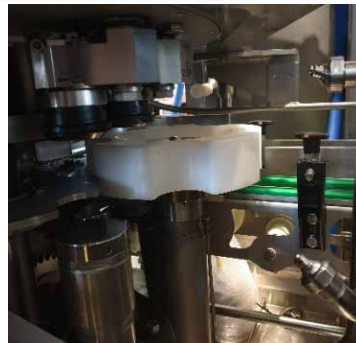
Handling parts



Handling parts for the can seamer



Seaming rolls and handling parts



Can guides



Seaming rolls for new can lids

Filling technology

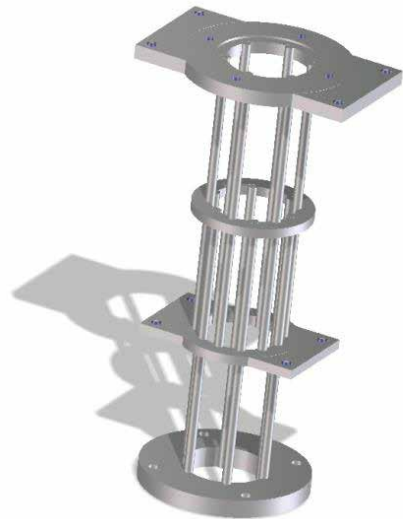
Handling parts



Handling parts for the can lid feed unit



Gap detector



Can height compensation



Quick-change device for gap detector



Product treatment technology

Our service



Checking containers and filling medium

- Analysing can and filling medium by means of mini pasteuriser in the Krones technical centre
- Determining the necessary heat transfer coefficient
- Significant reduction of installation works at the pasteuriser on site thanks to previous product test
- Checking can and filling medium for processability in the tunnel pasteuriser (performance, flushing temperatures)



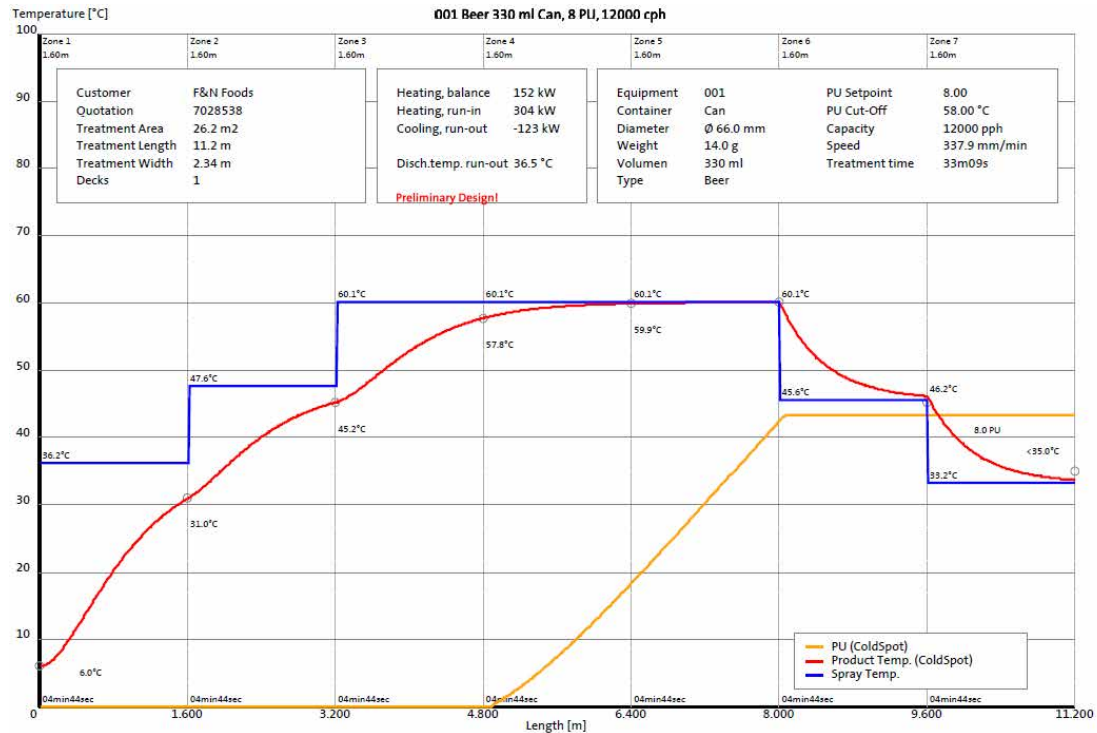
Krones mini pasteuriser

Product treatment technology

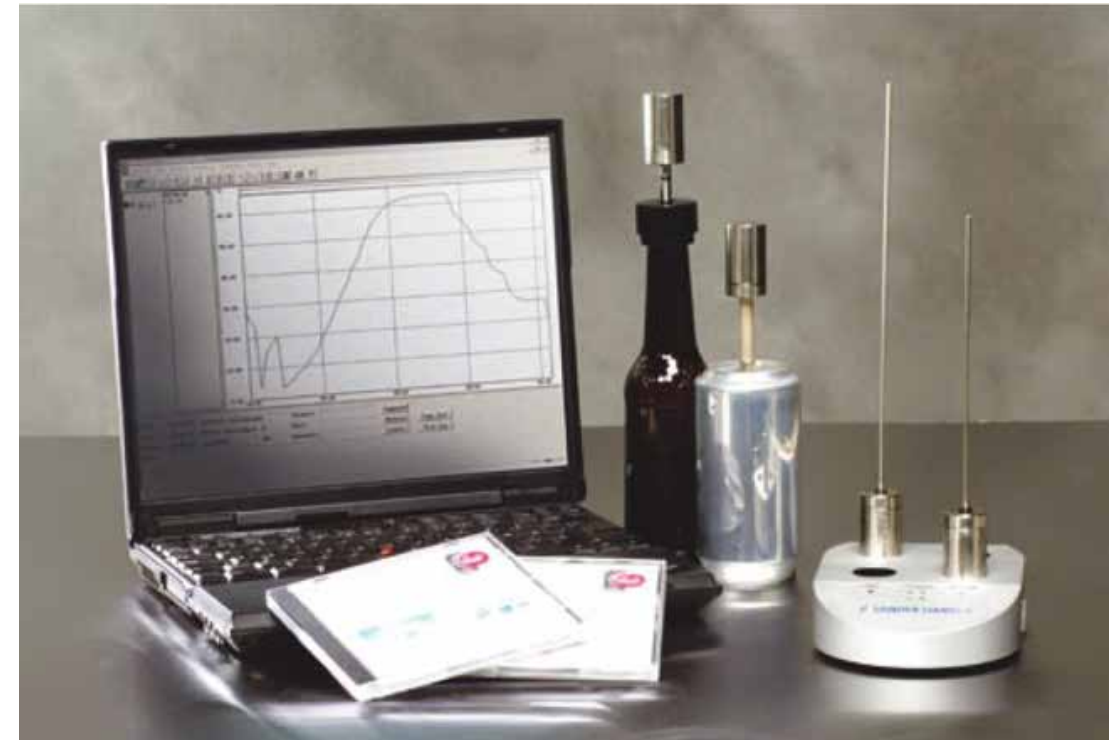
Our service



Creating and checking new product types



Measuring and validation with Krones upgrade PU recorder



Packing and palletising technology

Our service



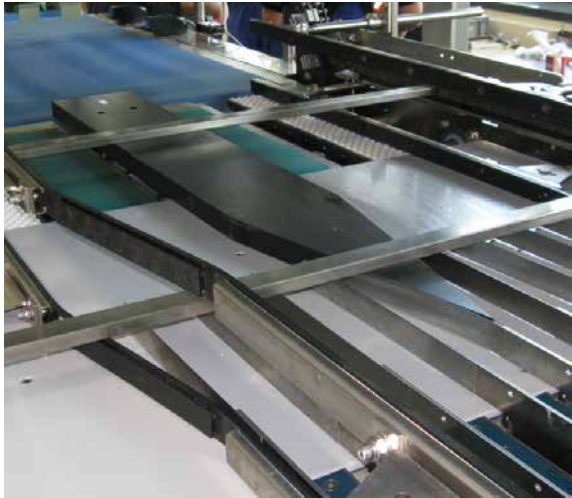
Packaging

- Simulations of
 - film wrapping
 - horizontal folding (wrap-around processing)
- Film analysis
- Creation of drawings with suggestions (in the case of an order) and checking of customer specifications for:
 - film, wrap-around, tray and pad blanks
 - integrated handle applicators and pre-shrink adhesive tapes for Variostick



Packing and palletising technology

Handling parts



Item separation and guidance



Type expansion



Handling parts for the container infeed



Spacing bars with spacing devices

Packing and palletising technology

Our service



Depalletising

- Elaboration of plans for container arrangement
- Consulting with regard to customer's suggested arrangement plans



Palletising

- Development of suggestions for layer patterns
- Consulting with regard to customer's suggested layer patterns
- Checking and adjustment at the stretch wrapper on the basis of layer pattern, size and type of the pallets

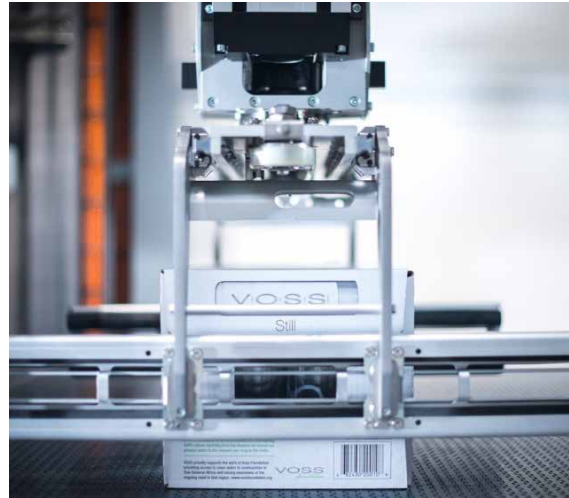


Packing and palletising technology

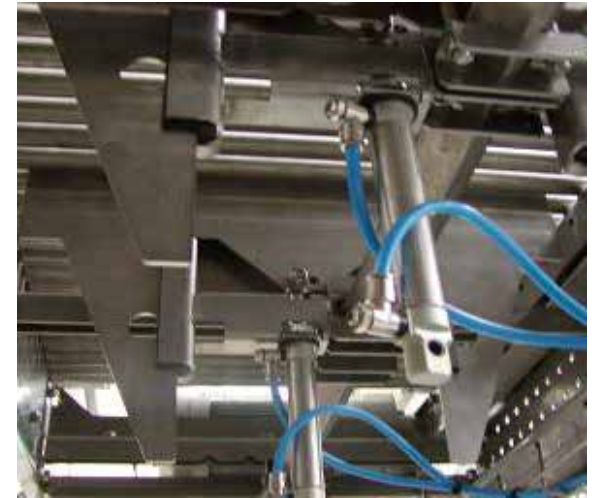
Handling parts



Clamping plates for gripper units of Robobox and Tripod



Type expansion



Spacing devices from bottom (90° grouping station)

Conveyor technology

Our service

The settings and parameters of the conveyors are compared to the characteristics of new customer objects and modified in such a way that they ensure optimum processing.

Container conveyors

Possible modifications:

- Conversion to an adjustable rail (longer locking pins or set collars)
- Adjustment of the wear strip to protect the can
- Rail adjustment depending on the container shape and size
- Expansion and conversion of integrated assemblies (vacuum-assisted conveyor, rinser, can inverter) to handle new formats



Conveyor technology

Our service



Pack conveyor

Possible modifications:

- Conversion to an adjustable rail (longer locking pins or set collars)
- New pointers and colour charts for new pack dimensions

Pallet conveyor

Possible modifications:

- Conversion to an adjustable rail (longer locking pins or set collars)
- Adjustment or conversion of the functional groups (stopper, centring unit, pallet magazine, pallet inspection unit)
- Rail adjustment depending on the pallet characteristics



**SOLUTIONS
BEYOND
TOMORROW**

