

LinaFlex Compact

Tunnel pasteuriser in compact design



Effective pasteurisation in just a small space

Product safety is a key issue when it comes to marketing beverages. Pasteurisation is very often procedure number one when it comes to preservation of the just filled products. The LinaFlex tunnel pasteuriser offers a pasteurisation process with precise PU control and efficient use of resources – in what is now an even more compact design.

At a glance

- Compact machine design with precise PU control
- Main conveyors are exactly adjusted to suit the container characteristics and production conditions
- Installed, cabled and tested in the Flensburg plant
- Quick installation
- Integration of long-lasting components



LinaFlex Compact tunnel pasteuriser



The concept

- Compact machine – delivered in one piece
- Installed, cabled and tested in the KRONES plant
- PUC³ real-time control of PU values
- "Plug and Play" principle
 - Quick installation
 - Simple start-up
- Central heat supply to the individual zones with the CHES^S* heating system
- Even the small variant provides the highest level of quality
- Long-lasting Marathon Belt and Ironman Belt main conveyors
- Two machine sizes:
 - Treatment area measuring 9.6 metres
 - Treatment area measuring 11.2 metres



LinaFlex Compact with integrated CHES^S heating system and control cabinets

* Central heat exchange supply system



The design





Technical details

- Two possible treatment areas:
 - 23 m² with a length of 9.6 m and width of 2.4 m
 - 27 m² with a length of 11.2 m and width of 2.4 m
- Low infeed and discharge height (1.2 m each)

Compact machine design

- Total length: 13.1 m
- Total width: 3.55 m
- Overall height: 2.1 m
- Empty weight: 8,500 kg

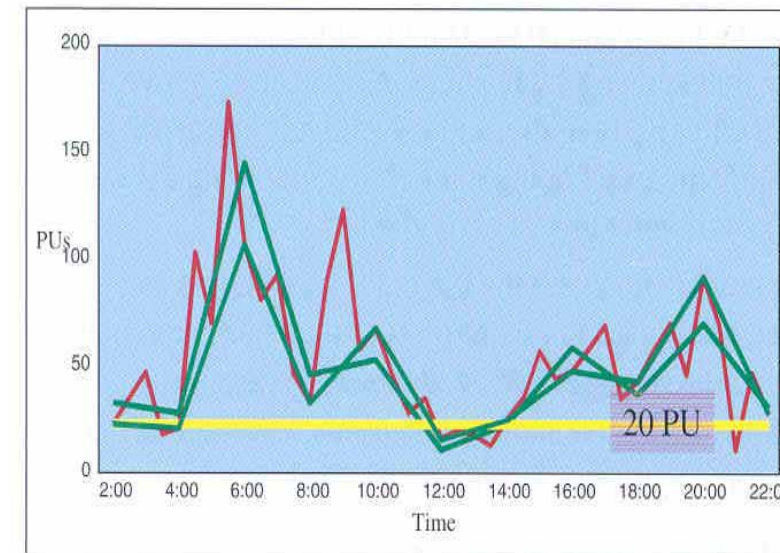




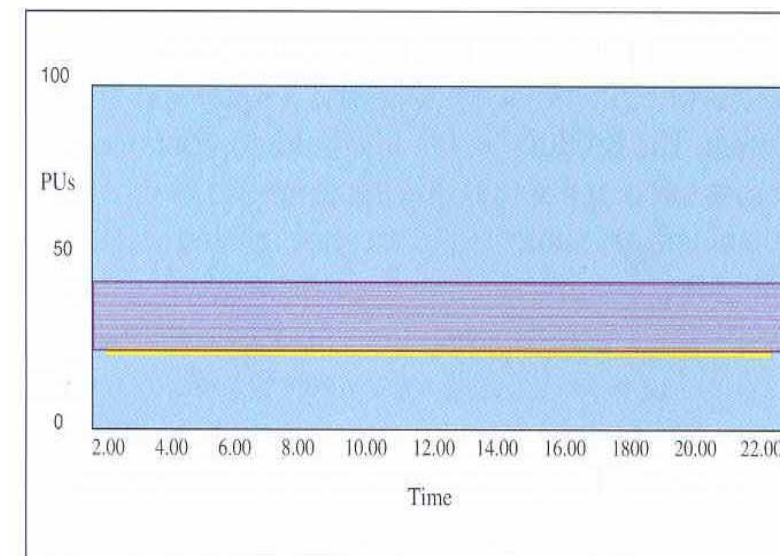
Technical details

PU controller PUC³

- All product, treatment and operating parameters are precisely acquired and controlled which ensures a high product quality
- Exact calculation of the product temperature and the resulting PUs for each container series
- Dynamic adjustment of the spraying temperature based on the PUs requested and those already reached
- No underpasteurisation and only a low deviation from the set-point value thanks to provident algorithms and intelligent control throughout the complete process
- Uniform PU intake is ensured even during interruptions and stops
- Minimum energy requirement as the controller optimally reacts to changes in the line operating conditions



Pasteurisation result without PUC³ ...



... and with PUC³



Technical details

Conveyors with long service life

- Minimum friction through powerful plastic rollers on the underside of the conveyor: Reduced load for gears and shafts
- Maintenance-free conveyor substructure without centre bearings and wear strips
- No elongation of the conveyor thanks to a four times increased tensile strength
- Service life of 20 years and more

Marathon Belt

- For glass, cans and PET
- Stable and robust structure thanks to its stainless steel frame
- Plastic body for optimum stability and transfer properties

Ironman Belt

- Developed especially for processing glass bottles
- Used in areas where glass is more likely to break
- Completely made of stainless steel



Underside of the Marathon Belt



Ironman Belt with transfer



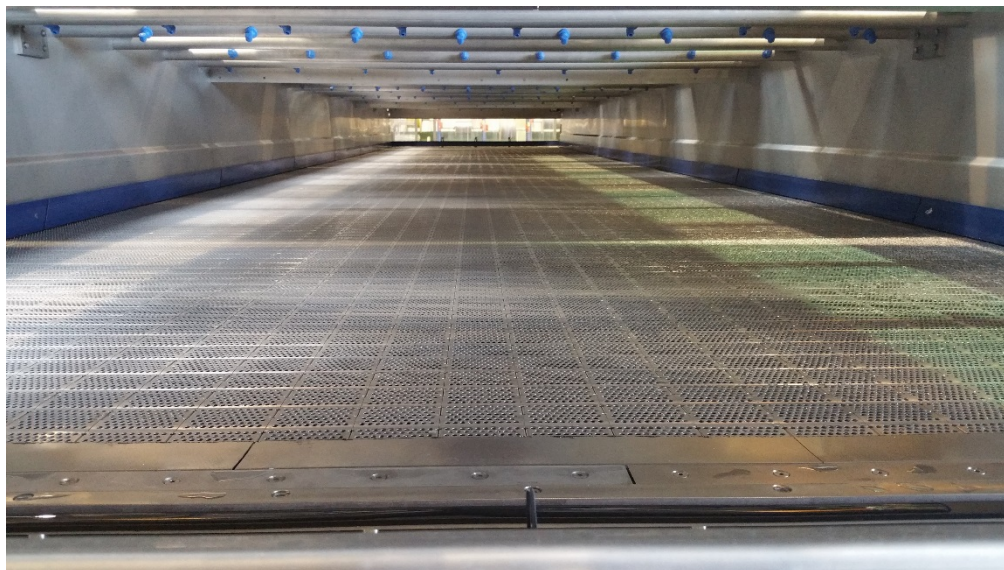
Technical details

Compact machine design

- Self-contained housing structure
- No columns, straight side walls
- Machine in stainless steel design (AISI 304), 316L optional
- Free of any residual water after emptying – thanks to sloping collecting pans

Quick installation

- "Plug and Play" principle
- Installed, cabled and electrically tested in the KRONES plant
- Optimised for a quick production start





Technical details

Easy maintenance and service

- Optimum accessibility
- Detachable double sieves for pump protection
- Manholes in each zone tank
- Spray pipes with cleaning openings

User-friendly design

- Easy opening of the roof cover, supported by a gas pressure cylinder
- Optimum accessibility





Technical details

High energy efficiency

- Spraying system with low pressure
- Low energy consumption of approx. 12 kW
- Optional: Insulation of the hot zones



Highly efficient heating system - CHESS

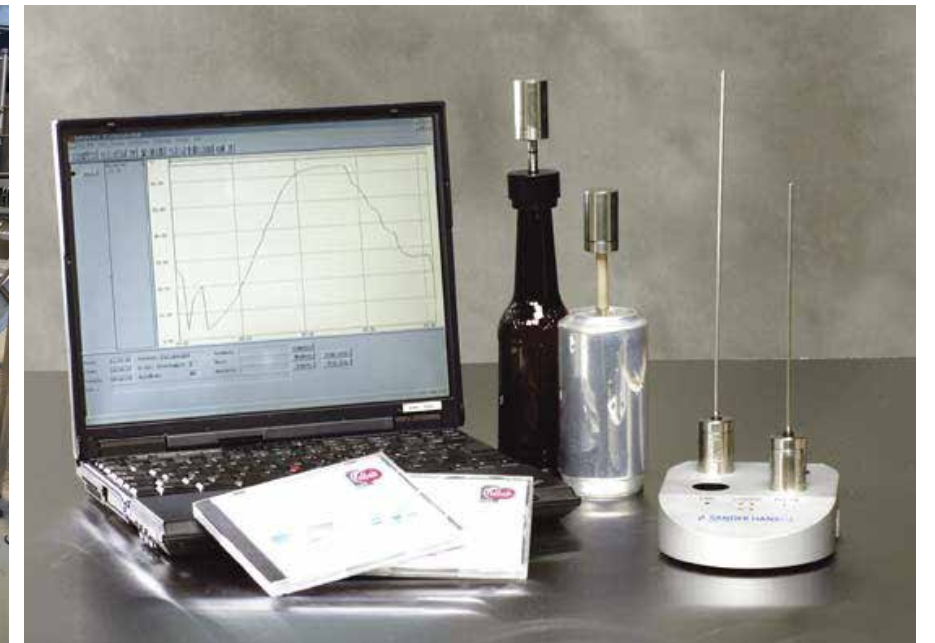
- Integrated in the machine design
- Heating in under 15 minutes
- Insulation of the steam and hot water piping





Additional equipment

- Airknife above the entire machine width
- Insulation of the hot zones (at side panels and roof)
- Housing in stainless steel, AISI 316L
- Consumption measurements and displays:
 - Water
 - Heat
 - Electricity
 - Compressed air
- Time-controlled dosing for the disinfection of the treatment water
- Quantity-controlled dosing for treatment of the fresh water (scale inhibitor)
- ClO₂ dosing system
- Water pressure reducer
- PU recorder
- PU editor for manual changes in PU and output





Benefits

Maximum product safety

The third-generation PU control system ensures maximum product safety and a constant product quality dynamically and in real time.

Best hygiene conditions

The clean design enables optimum cleaning with minimum personal requirement.

High resource efficiency

The LinaFlex excels thanks to numerous energy-saving benefits:

- Optimised water volumes thanks to integrated zone tanks
- Up to 20 % reduced energy consumption during heating
- Low consumption of chemicals and energy
- Insulation as an option for a reduction in radiation losses by up to 60 %

Low maintenance required

Maintenance and service costs are reduced as readjusting the tension and replacement of wear strips are no longer required.

Conveyors with a long service life

The conveyors have an efficiency of at least 98 % and a service life of up to 20 years. Thanks to a four times increased service life, up to 25,000 euros a year can be saved.

Fully automatic product change-over

The product change-over with sweeper is performed automatically and includes an automatically adjustable blower as an option. Thereby, the machine can be changed over to handle new types in less than 10 minutes*.

** Depending on the zone configuration*



Everything from a single source

Training sessions at the KRONES Academy – trained personnel increases your line efficiency

The versatile training offer ranges from operation, servicing and maintenance to management training. We will gladly also establish your individual training programme.

KIC KRONES cleaning agents make your machine shine

Only if the production environment is immaculate, can your product be brilliant. KIC KRONES provides you with the optimum cleaning agents and disinfectants for each individual production step.

Lubricants from KIC KRONES for every 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.

KRONES Lifecycle Service – partner for performance

Also after having purchased a new machine, KRONES will take care of your line; the LCS experts are always ready to consult you and translate your goals and wishes into optimal LCS solutions.

EVOGUARD – excellent valve technology all along the line

The valve series of EVOGUARD comprises a modular system with hygienic and aseptic components which contributes to every point of the production line with increased performance and which has the perfect solution for every process step.



Digitalisation



Process
technology



Bottling and
packaging equipment



Intralogistics



Lifecycle
Service

We do more.

 **KRONES**