

LinaCool

Chiller for Hotfill lines



The Clean Design chiller



What do people playing sports and hot-filled beverages have in common? Both appreciate a welcome cool-down. The latter, at least, can rely on the Krones LinaCool to provide just that: With its sophisticated spraying nozzle system, it cools all products gently down to ambient temperature, in order to avoid distorting their taste or colour.

At a glance

- Spraying nozzle system for quick and defined bottle treatment
- For cans, glass bottles and PET containers
- Stainless steel pumps and conveyors and housing, and the conveyors either of plastic (Marathon Belt) or stainless steel (Ironman Belt), depending on the container type.
- Low infeed height of 1,200 millimetres: easily connected to the line



Facts and figures

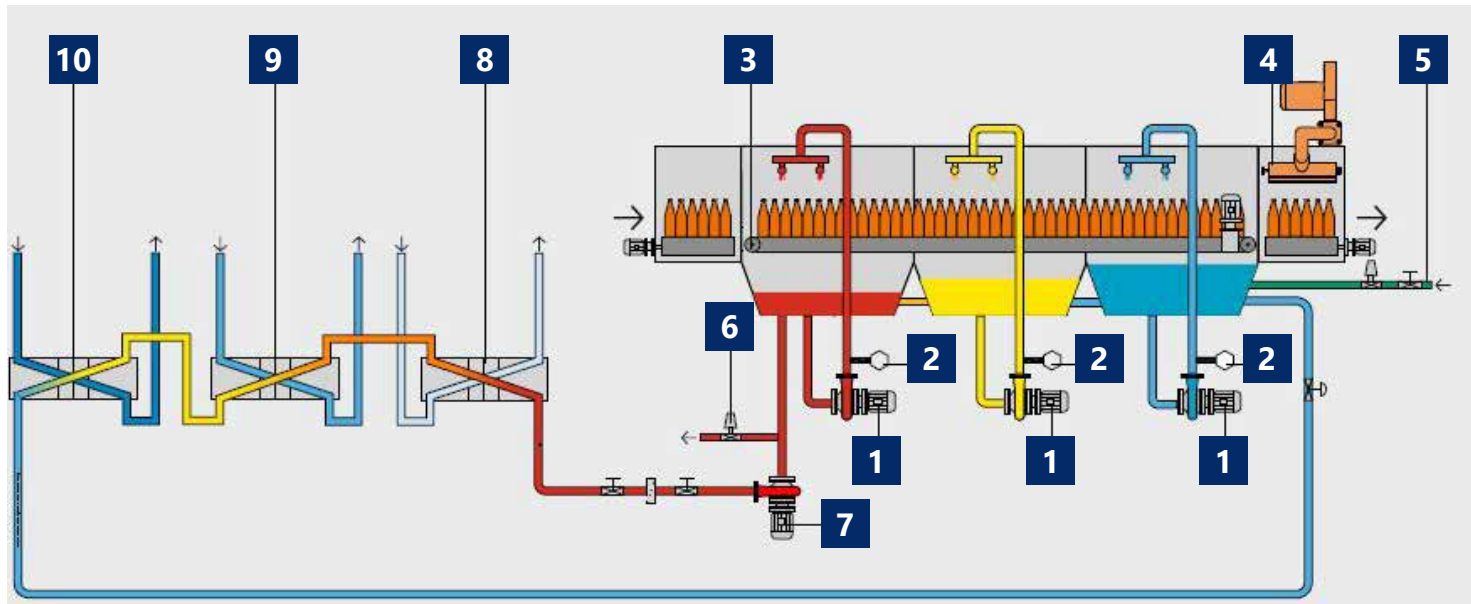


Field of applications

Cooling of all products in glass bottles, PET containers and cans

Output

10,000 to 90,000 containers per hour



- 1** Zone pump
- 2** Temperature sensor
- 3** Krones conveyor
 - Marathon Belt
 - Ironman Belt
- 4** Optional: Blower
- 5** Fresh water pipe
- 6** Automatic draining
- 7** Cooling water pump
- 8** Optional: Heat exchanger for pre-heating of juice (thermal heat recovery of at least 50 percent)
- 9** Optional: Heat exchanger for the cooling tower
- 10** Optional: Heat exchanger for refrigeration system

Technical details



Spraying nozzle system

- Snap-in spraying nozzles
- Quick access for maintenance jobs
- Cleaning of spraying nozzle without removal of spraying pipes

Marathon Belt

- Patented roller conveyor of stainless steel and plastic bodies
- Suitable for all container types
- Long service life and low-maintenance due to minimum friction
- Short transfer section for gentle product change-over
- Idle end with welded profiles, no turning shaft

Ironman Belt

- Stainless steel roller conveyor
- Special further development of the well-proven Marathon Belt
- Used in areas where the glass is more likely to break



Technical details



Machine design

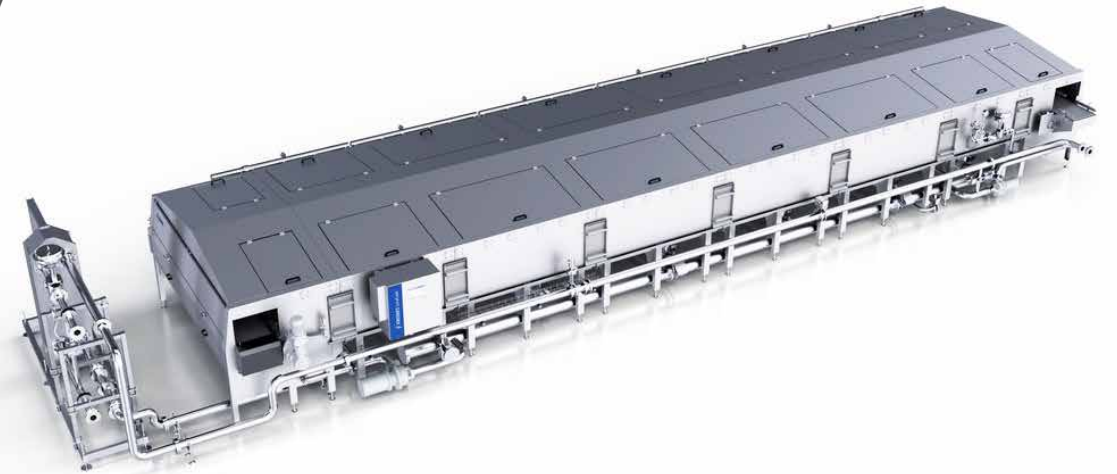
- Multi-part, modular machine concept with infeed and discharge heights of 1,200 millimetres each
- Frequency-controlled drives
- Detachable sieve system for pumps and spraying nozzles protection
- Infeed and discharge with stainless steel doors for optimal protection and accessibility
- Level switch for automatic refilling of fresh water

Hygiene concept

- Clean Design with centralised draining and inclined drip pans
- Optional: Boiling function for optimum cleaning with the minimum number of staff

Controller

- Operation via touch-screen with display of the operating status
- Automatic filling
- Change-over to another product within minutes
- Type management
- Optional: dynamic control of the cooling capacity with CPC



Additional equipment

- System for recovery of the process heat
Cooling Performance Control (CPC)
- Dosing system for water treatment
- Measuring system for media consumptions
- Rotary sweeper for automatic feeding of containers in the transfer area
- Automatic interior cleaning system
- Heat retention in zones according to customers' specifications
- Cooling already at the infeed conveyor
- Dew point control
- Cooling system with chiller (cold water)
- Cooling system with cooling tower



Heat recovery

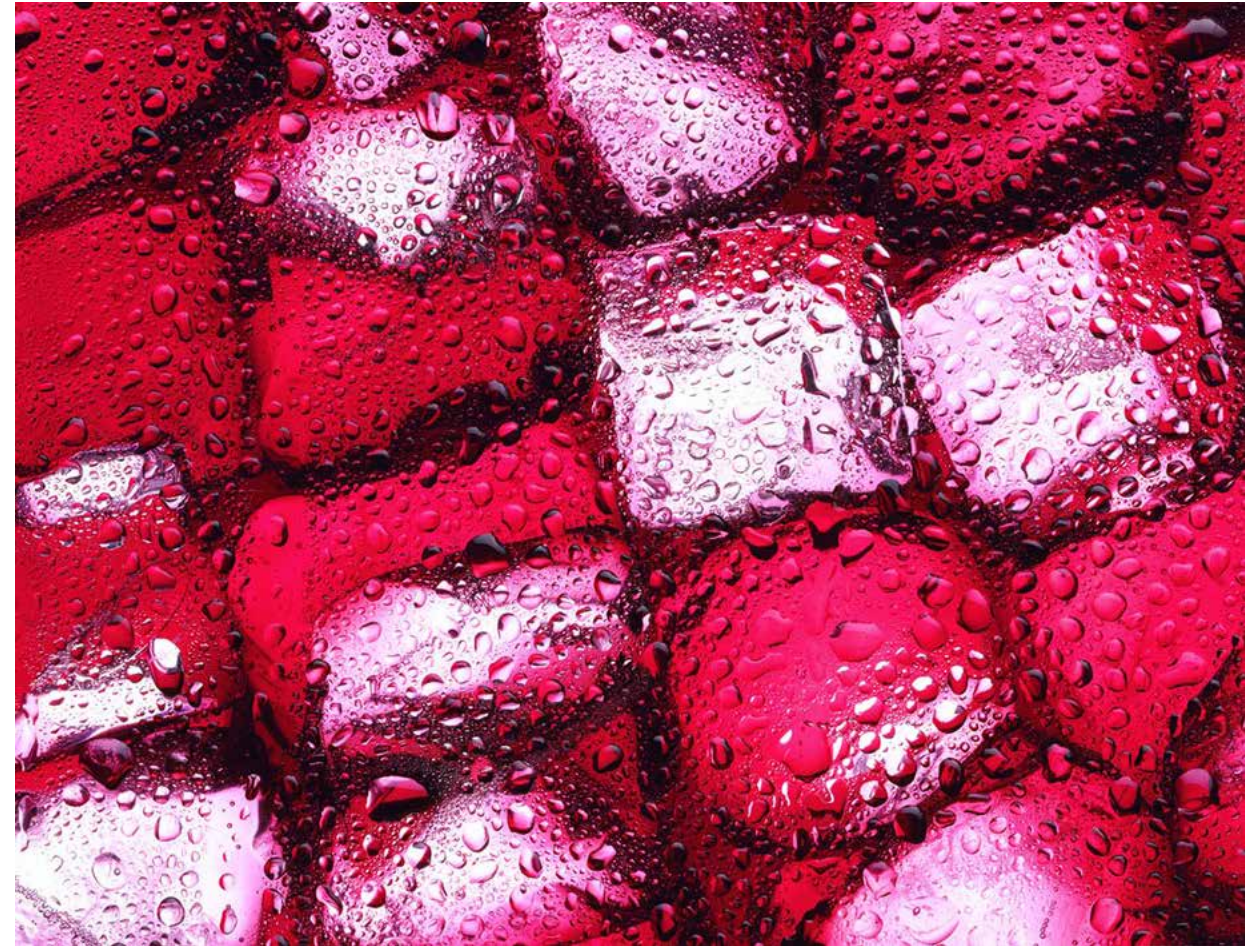
With Cooling Performance Control and EquiTherm Hotfill



Cooling Performance Control (CPC) is a control and regulating system to precisely adjust the cooling capacity of the chiller in Kronos Hotfill systems to the production conditions. Connecting to the flash pasteuriser allows the heat which escapes from the products to be reused there.

The concept

- Intelligent control of the chiller's cooling capacity
- Recirculation of the coolant between the chiller and the heat exchanger upstream from the flash pasteuriser
- Efficient use of the existing cooling energy
- Guidance of the heating energy for flash pasteurising and inclusion in the product pre-heating system
- Adjustment of the cooling capacity if production is stopped or if there are gaps in the product flow



Heat recovery with EquiTherm Hotfill

System overview



Saving thermal energy

The thermal energy removed in the LinaCool is supplied to the flash pasteuriser for product reheating.

The cooled medium is supplied to the cooling tower, cooled down and then used in the LinaCool.
The CPC dynamically adjusts the cooling capacity to the current situation.

Cooling energy saving:



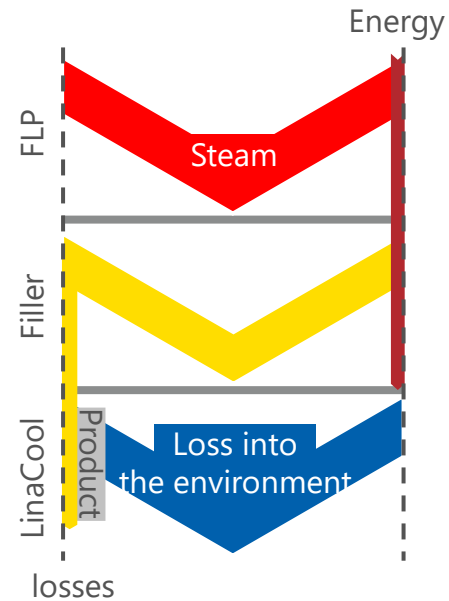
Heat recovery with EquiTherm Hotfill

Method of operation

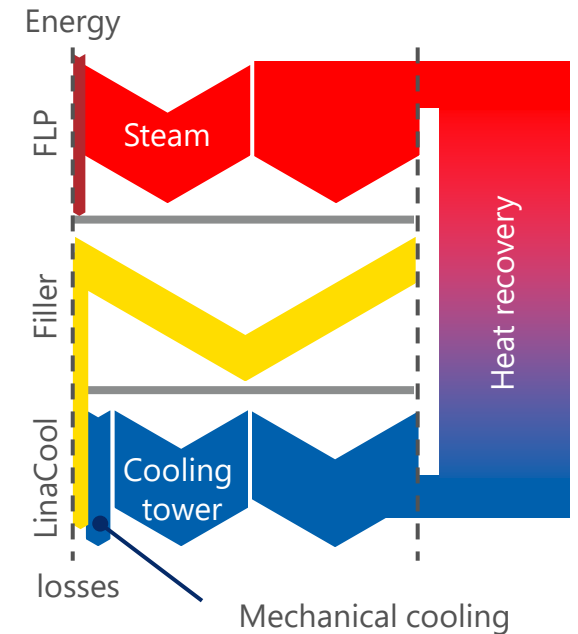


- Return of the removed thermal energy from the LinaCool to the VarioFlash flash pasteuriser
- Pre-heating of the product through one of the heat exchangers upstream from the flash pasteuriser with heat loss from the tunnel cooler
- Less steam required in the flash pasteuriser as the product is already preheated
- Return of the chilled coolant from the flash pasteuriser to the tunnel cooler

Energy flow without recovery



Energy flow with recovery



Benefits to you



Optimal control of the cooling capacity

Temperatures and volume flow rate can be dynamically controlled in the LinaCool. The benefits are plain to see: A very low energy consumption with maximum process reliability and the highest product quality. When activated, a Cooling Performance Control, for example, reduces the required cooling energy by 10 percent at a consistent discharge temperature.

Highest hygiene standard

The Clean Design with inclined drip pans and centralised draining provides ideal hygienic conditions and guarantees that no water remains in the machine.

Conveyors with long service life

In order to transport all containers safely, the LinaCool counts on plastic conveyors (Marathon Belt) or stainless steel conveyors (Ironman Belt). Thanks to their minimal friction, they are resistant to wear and provide a long service life of up to 20 years.

Modular machine concept and high-quality design

The LinaCool consists of multiple modules which are pre-assembled and tested prior to shipping. This significantly reduces the installation time on site by up to 50 percent.

Requesting a new machine

You can easily send a request for a non-binding quotation in our [Krones.shop](#).



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 cleaning agents and disinfectants make your machine shine

An immaculate production environment is essential if your product is to shine. KIC Krones provides you with the optimum cleaning agents and disinfectants for each individual production step.

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.

Krones Lifecycle Service – Partner for Performance

It goes without saying that also after the purchase of new machines, Krones takes care of your lines: The Krones LCS experts are always there to help you reaching your goals and turn your wishes into optimal LCS solutions.

Evoguard – excellent valve technology all along the line

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

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BEYOND
TOMORROW**

