Contipure
AseptBloc E
New approaches in the sterilisation technology
In the beverage industry, aseptic systems are dominated by chemical processes. However, there are alternatives: When it comes to the sterilisation of preforms, the Contipure AseptBloc E relies on the force of physics and kills germs with electron beams. An innovative method with two advantages: Firstly, it is particularly effective with a reduction rate of log 6 and secondly, it places very low demands on the supply systems: Simply plug in the power cable and start!

At a glance
- Function: aseptic block for
  - Stretch blow moulding
  - Filling
  - Capping
- Suitable for:
  - Low-acid and high-acid products
  - Cylindrical and square PET containers
  - Standard and lightweight containers
- Output: up to 24,000 containers per hour
- Technical highlight: Preform sterilisation with electron beams
The design

1. Preform roller sorter
2. Infrared oven
3. Preform sterilisation module
4. Aseptic blowing module
5. Aseptic filler
6. Cap sterilisation module
7. Aseptic capper
Preform sterilisation module

- High-performance sterilisation with electron beams
  - up to log 6
  - microorganisms detrimental to beverages
- Position in the block between the infrared oven and the blowing module
- Treatment of the outer preform surface with surface emitter (3.5 kW)
- Treatment of the inner preform surface with immersing finger emitter (22 W)
Aseptic blowing module

- The sterilised preform is transferred to the aseptic blowing module.
- The bottle is now only blow-moulded under aseptic conditions.
- The blowing wheel is protected from the environment with a liquid barrier.
- During the entire blow moulding process, the stretching rod never leaves the sterile zone.
- All components involved in the blowing process can be completely sterilised.

Air guidance

- The clean room housing air is treated with overpressure
- which prevents condensation in the blowing wheel.
Aseptic filler

- The sterile bottles reach the filler via a safe transfer area.
- The product is fed from top via a media distributor with axial face seal and integrated condensate barrier.

The filling valve
- Thanks to the double-stroke seat valve it implements two different filling speeds.
- It is also suitable for beverages with (fruit) pieces of a size of up to 10 x 10 x 10 millimetres.

Cleaning and change-over
- The filler is equipped with its own CIP module.
- The filling valves are sterilised with steam.
- The clean room housing is sterilised with gaseous \( \text{H}_2\text{O}_2 \) – a completely dry method.
- The handling parts can be adjusted fully automatically up to a defined speed.
Cap sterilisation module

**Sorting and buffering**
- Cap sorting is performed with double sorting units.
- A camera inspects the caps after they have been sorted.
- The cap buffer ensures sufficient buffer capacity, if, for example, the block has to be emptied.

**Sterilisation**
- This process is performed with gaseous H$_2$O$_2$.

Different caps can be processed with the same handling parts.
Aseptic capper

- Every capping head has its own separate servo drive.
- Lowering the closed bottle is done up to a defined speed via a height-adjustable discharge conveyor.
- The bottles leave the block via a transfer tunnel.

Hygiene

- The new KRONES aseptic capper is always constructed in the hygienic design and meets even the most difficult hygiene requirements.
- All drives are outside the clean room housing.
- A liquid lock seals all rotation movements of the capper carrousel.
- The movements of the capping head are sealed with bellows.
- Both, a cone capper and a gripper capper are available.

Cleaning and change-over

- Thanks to its open design, the cap retainer can be easily cleaned.
- The handling parts adjustment system operates fully automatically up to a defined speed.
Benefits to you

**Powerful sterilisation technology**
Using the electron beam process, a high reduction rate of log 6 can be achieved for all beverage-relevant microorganisms.

**Energy and media efficiency**
Contipure AseptBloc E uses a purely physical process for sterilisation. This reduces the consumption of water, chemicals and evaporation energy to a minimum when compared with conventional aseptic systems.

**High availability**
The entire block is in production for 168 hours non-stop. Ready for use only two hours after change-overs.

**Microbiological safety**
The system does not consume any water during operation. Therefore, there is no living space at all for microbiological organisms.

**Slim peripherals**
The block neither needs any sterile UHT nor a hygiene centre.

**Pinpoint production**
Filling to the last drop: The system uses the remaining product quantity in order to calculate exactly how many more PET containers and caps are still to be sterilised.

**Fully-automatic change-over**
Handling parts change-over at the filler and the capper can be performed up to a defined output without any manual interference.
Certified ecological efficiency: machines with enviro label

At KRONES, the blue enviro label stands for excellent ecological efficiency. Products that bear the enviro label have proven in an objective test procedure that they efficiently use energy and media, and that they produce in an environmentally-friendly way. The requirements are defined by the EME standard that has been developed by the TÜV SÜD (technical inspection authority) for assessing production plants. The enviro test procedure has also been certified by TÜV SÜD as an independent expert. Therefore, you can be sure that an enviro label stands for ecological efficiency.

This is why the Contipure AseptBloc E is enviro-classified:

Energy efficiency
- Use of efficient servo drive technology

Media efficiency
- No use of chemicals and no tempering during production
- Least-possible water consumption during production
- Small installation space: low air consumption for maintaining the overpressure on the clean room housing (module)

Environmental compatibility
- Omission of chemicals for sterilising the packing materials (preforms)
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. You can reach every lubrication point, protect your line and provide gentle treatment for your product thanks to our products’ suitability for food.

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.

EVOGUARD – pumps for absolute process safety
In addition to the separation and locking of a line, one thing is particularly important - and that is the reliable conveyance of your product. This is why EVOGUARD also offers innovative centrifugal pumps in addition to high-quality valves.
We do more.