Contipure
AseptBloc DN
Aseptic block for low-acid products
A protected atmosphere for your product

The KRONES aseptic systems family includes experts for all kinds of different sterilisation methods and products to be filled. One of them is the Contipure AseptBloc DN, which is specialised on low-acid products and fully meets their requirements. Regardless of whether you are blow moulding, filling or capping, with the Contipure AseptBloc DN every production step is safely included in an aseptic processing chain.

At a glance

- Design:
  - Preform sterilisation module
  - Aseptic blow moulder
  - Aseptic filler and capper
- Suitable for:
  - Low-acid products
  - Cylindrical and square PET containers
  - Standard and lightweight containers
- Output: up to 55,200 containers per hour
- Only one sterilising medium: gaseous hydrogen peroxide (H₂O₂)

DN = dry, neutral
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

The Contipure D module is positioned between the oven and the blow moulder blowing module.

In front of the module

- The preforms are rinsed with ionised air and transferred to the infrared oven of the blow moulder.
- The application of an individual temperature profile prepares the preforms for both, the blow-moulding process and the dry sterilisation.
Preform sterilisation module

**Inside the module**

- Special nozzles fill the inside of the preforms with gaseous hydrogen peroxide (H₂O₂).
- At the same time, the exterior of the preform is sterilised through the H₂O₂ atmosphere in the module.
- The closed design of the module and the systematic ventilation and deaeration prevent the sterilisation media from entering the blow moulder.
Aseptic blowing module

- The sterilised preforms are transferred to the blowing module and processed into bottles under aseptic conditions.
- The blowing wheel is protected from the environment with a liquid lock.
- 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.
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 H₂O₂ – a fully dry method.
- The handling parts can be adjusted fully automatically up to a defined speed.
Cap sterilisation module

Sorting and buffering
- The standard cap sorting system uses a disk sorter.
- 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
- It is performed with gaseous $\text{H}_2\text{O}_2$

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.
The periphery: Air handling unit

In the new KRONES air handling unit, the entire air treatment system has been combined to one single functional unit. This way, it is no longer necessary to work with a large number of filter fan units which are placed on the machine housing.

- All filters and ventilators in one unit
- Piping as integrated component of the air handling unit
- Centralised exhaust air pipe system
- Direct air guidance – no pressure cascade required

Benefits to you
- Optimum accessibility
- Time savings of up to 90 percent during filter replacement
- Time savings of up to 90 percent during restart
- Material savings of up to 45 percent
The peripherals: Standard CIP module without tank

The Contipure AseptBloc DN is equipped with its own CIP module for cleaning. Special features: It works without any CIP buffer tank because the machine housing also buffers the CIP fluid.

Benefits to you
− Thanks to the omission of the buffer tank, about 85 percent of the installation surface and 40 percent of space-consuming volume can be saved.
− No separate valve manifold is required for the CIP return flow.
− All media are provided just in time.

Dimensions: 3.10 m x 1.70 m x 2.60 m [L x B x H]
The peripherals: Sterile water UHT

- Depending on the requirement, it provides 5 to 12 m³ of sterile water per hour
- Kills germs by means of thermal treatment
- Enables quick chilling of the bottling system after steam sterilisation to production temperature such as for CSD or cold chain products

Benefits to you

- The well thought out unit arrangement reduces the installation surface by 45 percent and the space-consuming volume by even 60 percent.
- The thermal treatment guarantees a safe sterile water production with low running costs.

Dimensions: 2.40 m x 2.40 m x 2.70 m [L x B x H]
Benefits to you

**Triple protection**
The all-round treatment with gaseous H₂O₂ sterilises the entire preform surface at once, both the inside and the neck area on the outside.

**Gentle preform treatment**
The sterilisation of the preforms hardly leaves any residues: This is because the surface enlarges by many times and the residues of the sterilisation medium are diluted accordingly.

**High availability**
The entire block is in production for 168 hours non-stop and only two and a half hours later is ready to start again.

**Proof of safety**
In the proof of concept, the AseptBloc DN has proven that it meets the requirements of the FDA criteria for filling low-acid products.

**Microbiological safety**
During the operation, the system does not consume any water. Therefore, microbiological organisms have no living space whatsoever.

**Slim peripherals**
The block does not need 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.
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.