

GEA MODULBLOC ASEPTIC FILLING SYSTEM

Aseptic filling bloc featuring PAA-based
bottle sterilization, for low-medium speed
lines.



ASEPTIC LOW-MEDIUM SPEED FILLING BLOC

Would you like to bottle sensitive, high acid or low acid beverages, shelf stable with no preservatives? Enrich the quality and ensure the safety of your products using GEA aseptic filling technology.

A smart solution for low/medium speed

GEA PAA aseptic technology is a smart solution for low/medium speed filling lines. Its compact design makes the Modulbloc the right choice even when limited space is available. GEA Modulbloc includes a bottle sterilizer carousel, a rinser carousel, a filler and capper carousels all on a single base frame. It includes also an ancillary module for the aseptic process fluids preparation and the cap sterilizing module.

Microbiological isolator

The machines are enclosed in a microbiological isolator and the environment is sterilized before starting production with a liquid solution of Peracetic Acid (PAA). The sterility of the isolator is then maintained with an overpressure of sterile air (class 100) supplied by active filtration stations equipped with HEPA filters. PET bottles and closures are treated with a Peracetic Acid-based solution with given concentration, temperature and pressure.

Optimized rinser and sterilizer

Once the bottle is sterilized externally and internally it is rinsed with sterile water. GEA rinser is equipped with dedicated nozzle design solution which dramatically reduce the rinsing time and water consumption. Both rinser and sterilizer have been specifically designed to minimize the number of wear and tear parts for easy maintenance. Closures are treated by spraying with the same PAA-based solution and rinsed with sterile water.

Bottle filling

Bottles are transferred to the aseptic filling module that can fill a wide variety of drinks, including high and low acid, still and carbonated beverages, with and without pulps, fibers or pieces.

The product tank is positioned on top of the filling machine in order to reduce product scraps during start up cycle, change product and end of production phases.

Sustainable solution.

GEA rinsing nozzles design dramatically reduce the rinsing time and water consumption.



Filling flexibility.

A variety of drinks can be filled, including HA, LA, still, carbonated, clear or with pulps or pieces.



GEA Sterilcap L

Low-speed cap sterilization unit integrated into the Modulbloc.



Its compact design makes the Modulbloc the right choice even when limited space is available.

One concept, different configurations

Thanks to high modularity architecture, different configurations of sterilizer, rinser, filler and capper allow to achieve different machine speeds suitable for small batch productions for investigating new products to medium production commercial capacity.



Modulbloc is the best solution for relatively small-medium capacity productions that require the latest in aseptic filling technology

Features

- Bottle feed flexibility: from depal to integrated blow-fill system
- Over 6 Log reduction for internal bottle and cap sterilization
- Aseptic stand by mode available
- Up to 216 hours of continuous production time in high acid (HA) condition
- Up to 216 hours of continuous production time in low acid (LA) condition
- <0,25 ppm of total peroxide residuals in the final product
- FDA approved technology



Up to

216 h

for HA operations



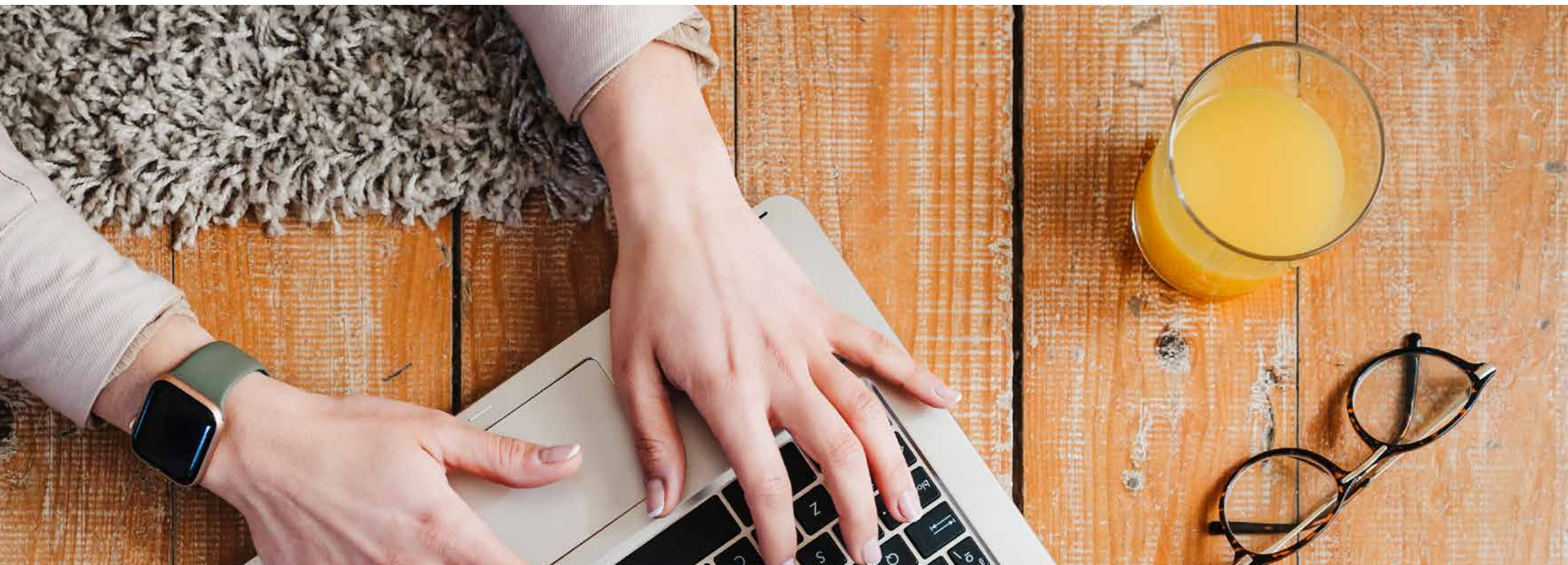
Up to

216 h

for LA operations

SOP

No intermediate SOP
during production





Modulbloc for ESL applications

Even if Modulbloc's technology concept has been intended for aseptic filling operations, it is also ideal for ESL production of sensitive beverages.

ESL (extended shelf life) products are filled in a clean environment at a temperature between 0 and 4°C with no preservatives; they are distributed using a refrigerated supply chain (4° - 8°C). Modulbloc easily meets these requirements with a small footprint and easy operation.

Containers and caps are treated with liquid Peracetic Acid solution. PAA concentration, temperature and spraying time are continuously monitored to achieve a minimum of 3 log

reduction. After the sterilization step, bottles and caps are rinsed with sterile water; bottles are then filled using the complete range of filling valves suitable for all categories of sensitive products, with or without fibers or particles.

Once the bottle is filled, it is capped using a capping machine enclosed, together with the filler module, within a controlled environment which is automatically cleaned and sanitized before starting production operations.



Production rate of both aseptic & ESL
Modulbloc configurations:

- up to 22.000 bph on single serve bottle size
- up to 15.000 bph on multi serve bottle size

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