

## One concept, different configurations

By assembling nozzles in different configurations in the sterilizer, rinser, filler and capper it is possible to achieve different machine speeds, starting from the M.3 (pilot plant) to the M.33.33 (higher speed).



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GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.

### GEA Process Engineering

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### GEA Procomac Modulbloc PAA

Aseptic and ESL filling bloc for low-medium speed lines

engineering for a better world



# Aseptic and ESL filling bloc for low-medium speed lines



Rinser carousel detail



Filling carousel detail



## A smart solution for low/medium speed

GEA Procomac 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 Procomac Modulbloc includes a sterilizer carousel, a rinser carousel, a filler and capper carousels all on a single base frame. The ancillaries aseptic process units and the cap sterilizing machine are located on top of the machine.

## Microbiological Isolator

The machines are enclosed in a *Microbiological Isolator* and the environment is sterilized before starting production with a spray solution of *Peracetic Acid (PAA)*. The sterility 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.



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 Procomac aseptic filling technology.

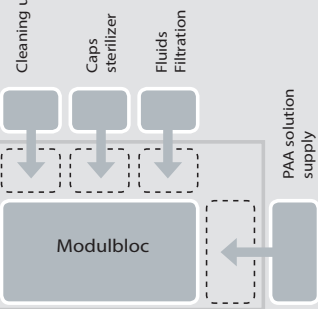
## Modulbloc in depth

### Compact Design

The compact design of Modulbloc is achieved by positioning the following units on top of the machine:

- Cleaning unit;
- Sterilcap for cap sterilization;
- Ecoflux for sterile fluids filtration.

Beside the Modulbloc it is placed the Ecodox unit to supply the PAA solution while maintaining its temperature, concentration and pressure.



### Optimized rinser and sterilizer

Once the bottle is sterilized externally and internally it is rinsed with sterile water. GEA Procomac rinsers are equipped with newly designed nozzles which dramatically reduce the rinsing time and use very little water. 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 filler and filled using the most flexible GEA Procomac filling technology:

- GEA Procomac FX range valves to fill still products with or without fibers, particles or pieces;
- GEA Procomac CX range valves to fill carbonated products;
- GEA Procomac Aseptic Piston doser to fill pieces up to 10x10x10 mm.

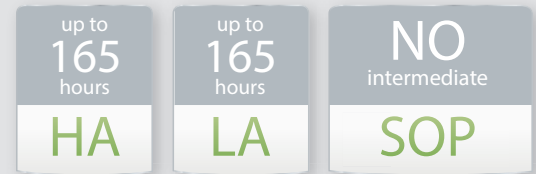
The product tank is positioned on top of the filling machine.



## Modulbloc features

- Bottle feed flexibility: from depal to integrated blow-fill system
- Up to 6 Log reduction
- Aseptic stand by mode available
- Up to 165 hours of continuous production time in HA condition
- Up to 165 hours of continuous production time in LA condition
- < 0,5 ppm of total peroxide in the final product.
- Water consumption: <1 m<sup>3</sup>/hour.

GEA Procomac Modulbloc is the best solution for relatively small beverage producers that require the latest in aseptic filling technology.



## Modulbloc in ESL version



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).

GEA Procomac Modulbloc ESL version easily meets these requirements with a **small footprint and easy operation**. Containers and caps are treated with spray Peracetic Acid solution. PAA concentration, temperature and spraying time are continuously monitored to achieve a minimum of **3 log reduction** on specific microorganism. After sterilization step, bottles and caps are rinsed with sterile water, obtained by **micro-filtration**; they can then be filled using the complete GEA Procomac FX range of valves to fill still products with or without fibers or particles.

Once the bottle is filled, it is capped using a capping machine in **ultraclean version**. The machines are enclosed within a separate, clean environment protected by **overpressure micro-filtered air**. The environment is automatically cleaned and sanitized before starting production operations.

## Aseptic & ESL Modulbloc production rate

### Modulbloc speed

- up to 18.000 bph on single serve bottle size.
- up to 12.000 on multi serve bottle size

### Modulbloc

a robust, proven and reliable aseptic technology for low to medium speed range and long term protection.