

## Modulbloc

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



*By joining GEA Group Process Engineering division, Procomac S.p.A. adds its core competences to the outstanding liquid process engineering capabilities of GEA Group to offer cutting-edge turnkey project capabilities from raw materials up to packaged product.*

*GEA Procomac S.p.A. specializes in development, manufacture and engineering of cutting-edge bottling and packaging technology for a variety of products, formats and containers.*



# Modulbloc in aseptic version



**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.**

GEA Procomac PAA aseptic technology is a smart solution for low/medium speed filling lines. Its compact design makes the Modulbloc the right choice for every kind of facility even when limited space is available. GEA Procomac Modulbloc includes a sterilizer carousel, a rinser carousel, a filler carousel and a capper all on a single base frame. All the necessary ancillaries and the cap sterilizer/rinser are located over the machine. The machines are enclosed in a Microbiological Isolator and the environment is sterilized at the beginning of the 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. 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. 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 particles up to 10x10x10 mm.

The product tank is positioned on top of the filling machine. GEA Procomac Modulbloc is equipped with a brushless capper, featuring the patented GEA Procomac thermal barrier. The compact design of Modulbloc is achieved by positioning the following above the unit:

- Cleaning unit;
- Sterilcap to treat and rinse caps;
- Ecoflux for sterile fluids filtration;
- Ecodox to restore and reuse the PAA solution while maintaining its temperature, concentration and pressure.

## Modulbloc in ESL version

ESL (extended shelf life) products are filled in a clean environment at a temperature between 4 and 8°C with no preservatives; they are distributed using a refrigerated supply chain. GEA Procomac Modulbloc ESL version easily meets these requirements with a small footprint and easy operation. Containers and caps are sterilized with sprayed Peracetic Acid. 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 microfiltration; 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 an ultra clean capping machine. 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.

### 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).

### Modulbloc features

- Bottle feed flexibility: from depal to integrated blow-fill system
- Up to 6 Log reduction
- Aseptic stand by mode available
- Up to 120 hours of continuous production time in HA condition
- Up to 72 hours of continuous production time in LA condition
- < 0,5 ppm of total peroxide in the final product

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

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



*ESL, Dairy application*

## Aseptic & ESL Modulbloc production rate

	Production rate
200 ml	Up to 17.600 bph
500 ml	Up to 16.000 bph
1000 ml	Up to 13.000 bph
1500 ml	Up to 9.000 bph
2000 ml	Up to 6.500 bph