

Europa WM
Eurotronica FM-S

**Solutions for filling still products
in PET bottles**





We meet your

The choice of the best filling method depends mainly on the specific properties of the product to be handled. The Europa WM and Eurotronica FM-S are ideal for packaging mineral water or water-based beverages. A highly hygienic filling environment ensures that products for distribution at ambient temperature can be handled.

The Europa WM and Eurotronica FM-S are available as standalone units (filler-capper monoblock) or in a Combi configuration (combined solution for blowing, filling and capping).



STILL MINERAL WATER

PURIFIED WATER

SIDEL OFFERS TWO SOLUTIONS TO MEET YOUR SPECIFIC REQUIREMENTS FOR STILL PRODUCTS IN PET BOTTLES, BASED ON TWO DIFFERENT TECHNOLOGIES: THE EUROPA WM, A GRAVIMETRIC FILLER, AND THE EUROTRONICA FM-S, A VOLUMETRIC FILLER WITH FLOWMETERS.

requirements

Product	Shelf life	Distribution	Packaging	Technology	Solution
Still water	1-2 years	Ambient temperature	PET	Gravity Flowmeter	Europa WM, Eurotronica FM-S
Non-carbonated beverages with preservatives	6 months	Ambient temperature	PET	Flowmeter	Eurotronica FM-S
Flavored water with preservatives	6 months	Ambient temperature	PET	Flowmeter	Eurotronica FM-S



FLAVORED WATER



OZONATED WATER



STILL BEVERAGES WITH PRESERVATIVES

Two systems for filling water

Gravimetric technology

Gravimetric technology, also known as “level-filling technology”, is ideal for non-carbonated beverages filled at ambient temperature. The right quantity of product is determined by the level in the bottle: filling stops when the product reaches the air vent level tube.

MINIMAL PRODUCT LOSS DURING BOTTLING

Bottles are transferred by neck-gripping starwheels and inserted on the filling valve support and lifting device.

The bottle is then raised by a cam and sealed by the filling valve finish seal. In the last stage of this vertical movement, after contact with the seal, the elastic membrane is compressed, causing the valve to open and allowing filling to begin.

The membrane is a key part of the valve, since it provides the necessary pressure to keep the system closed and hydraulically sealed with no bottle, and ensures the internal circuits of the valve are very hygienic. In the Europa WM gravimetric system, there are no springs, sliding seals or closed grooves in the product circuit.

During the bottle filling cycle, evacuated air is discharged by the central hole in the filling nozzle. The air vent tube is fitted with a steel ball: when the rising product level

reaches the ball, it closes the air vent thus stopping filling. This system minimizes product loss at the end of filling, especially if the same machine is handling bottles with different capacities at the same speed (Combi system), and guarantees great precision and constantly repeatable levels in the bottles.



MAIN BENEFITS

- The Europa WM design and mechanics guarantee great reliability and user-friendliness
- Format changeovers are extremely fast due to the bottleneck transfer system and the simple tool changeovers
- With no springs, gliding parts and grooves, the filling nozzle is highly hygienic and easy to maintain
- All moving parts are positioned below the bottleneck in order to minimize any risks of accidental contamination of the product
- The design of the components (sloping frame, product tank, nozzle, etc.) makes the filling process extremely hygienic and machine cleaning operations very easy
- All parts in contact with the product are made of passivated AISI 316 L stainless steel or a food-safe elastomer.



Two systems for filling water

Volumetric technology

Volumetric technology is the ideal solution for filling low-viscosity beverages. The volume to be filled is measured by a flowmeter, which controls the opening and closing of the filling valves electro-pneumatically.

A SELF-TUNING VOLUMETRIC DOSING SYSTEM

The valve movements are worked directly by a magnetic flowmeter, which controls an electro-pneumatic actuator in the filling head. Thanks to this system, any variations in the filling tank or in the mechanical behavior of the valves are automatically compensated by the algorithm in

the flowmeter, which regulates the opening time to match the target volume. In this way, there is no need to reset the flowmeter for variations occurring during normal machine life.

The system fills the product with no contact between the valve and bottle, which stays at the same height during the filling cycle, thus reducing the number of parts subject to wear.

The valve has two filling speeds to guarantee greater precision and less risk of foaming.

The valve has been designed to avoid contamination, and a special feature allows it to fill pulpy products.



MAIN BENEFITS

- Optimal hygiene thanks to improvements belonging from aseptic design:

- *controlled compression static seals*
- *no seals in closed grooves*
- *no product retention points*
- *only high-quality material in contact with products*
- *automatic dummy bottles*
- *no bottle-valve contact.*

- Faster maintenance, great dosing precision and minimal product loss
- Minimal risk of forming
- Pulpy products can be filled.



Common features on the two machines

Although different in terms of technology and technical features, the two machines have a number of elements in common.

Sloping base

The base holding the bottle transfer starwheels and the capping tower have sloping surfaces, preventing any stagnation of water and the consequent risk of bacterial proliferation. The base can also be equipped with a perimeter recovery tube and a centralized reflux liquid discharge, thus further guaranteeing optimal hygiene.

Drives

The filling carousel and the bottle transfer starwheels are driven by a main asynchronous motor which is mechanically very simple and highly reliable. The starwheels are also fitted with drive gears that are the equivalent size of the starwheel diameter.

Product infeed

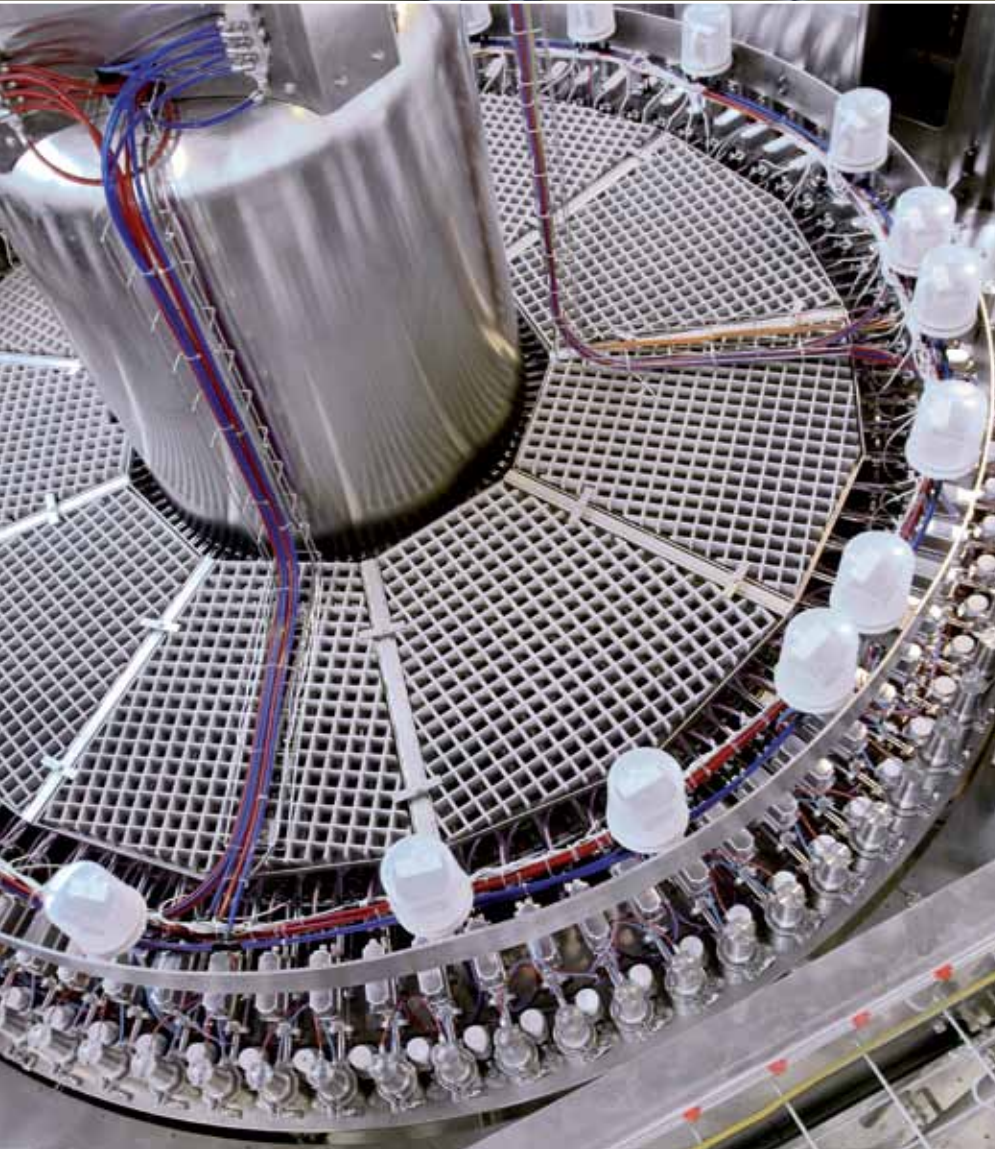
Each valve is fed with product individually by a tube connecting it to the central product tank. This system simplifies maintenance operations and makes the product circuit extremely hygienic thanks to the use of compression seals.

Filling area with reduced enclosure

The filling areas of the Europa WM and the Eurotronica FM-S can be configured with an enclosure at dynamic positive pressure. On request, the size of the area can be reduced by up to 80%: a smaller filling volume means the pressurization of the area under the lower part of the nozzles can be limited. In this way, energy consumption is minimized, and the hygienic conditions of packaging optimized, doubling the percentage of exchanged air.

1	2
3	4

- 1 - Sloping base
- 2 - Drives
- 3 - Product infeed to valves
- 4 - Filling area with reduced enclosure



Europa WM

The Europa WM is a simple and reliable filler. Its proven technology guarantees higher levels of hygiene and makes it very user-friendly.

- 100% stainless steel base with sloping surfaces
- Automatic product level control in the central tank by means of an inductive probe
- Gravity filling valve with piping separated from the air return and with an elastic membrane combining the functions of 'seal' and 'spring'.

FLEXIBILITY

- Bottle neck gripping
- Positive transfer
- No screw feeder
- Fast format changeovers.

EFFICIENCY

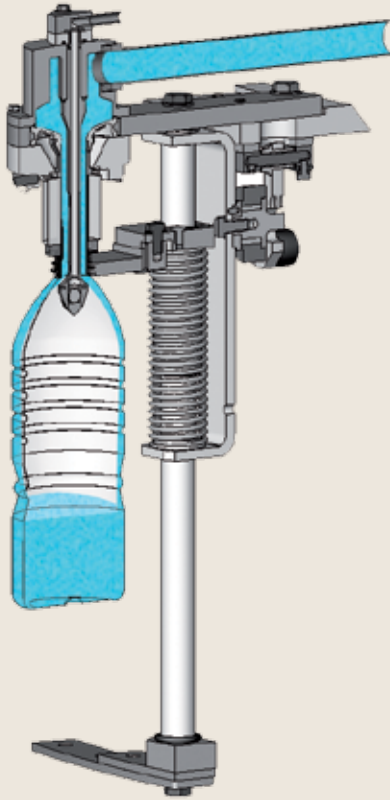
- Reduced maintenance
- Completely automated system controlled from operator panel
- Highly reliable system.

HYGIENE

- Membrane technology
- CIP ≤ 95 °C
- Counter-flow washing
- Valves with no springs
- 100% stainless steel self-draining base
- Can be integrated with CIP system (ICS version)
- Sterile air blown over product tank
- Protection with positive-pressure air (optional)
- Positive transfer

- Protection of the filling area in a reduced enclosure.





Technical data	
Products handled	Still water
Containers	PET bottles
Filling system	Gravity filling
Output	Up to 78,000 bph for 0.5 L
Range	From 36 to 168 valves
Capping unit range	From 8 to 36 valves



Eurotronica FM-S

The Eurotronica FM-S has been designed for a specific aim: to provide the greatest flexibility with improved hygiene. The result is a solution for filling still or flavored water with all the features and latest developments typical of aseptic machines.

FLEXIBILITY

- Bottle neck gripping
- Containers transferred with no guides; no change of guides required for bottles with different diameters.

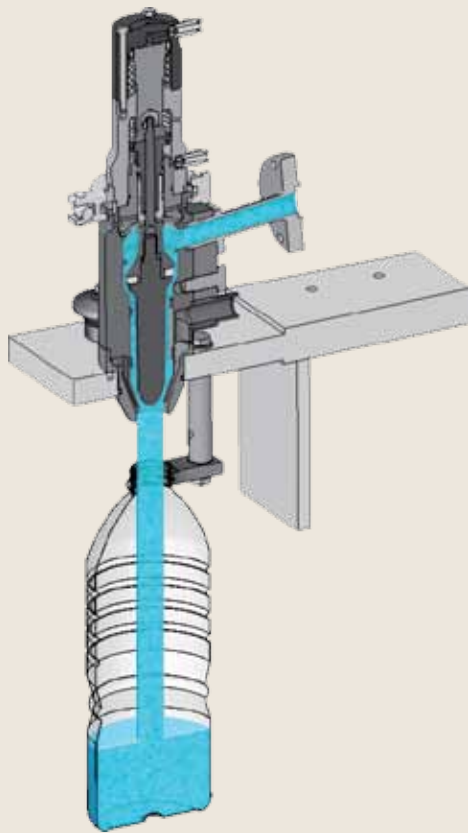
EFFICIENCY

- Completely automated system controlled from operator panel
- Automatic fill level adjustment
- Highly reliable system
- No electronic cards in electric panel on the rotating part of the machine.

HYGIENE

- Filling with no bottle-valve contact
- Minimal number of seals in valve
- System with reduced filling enclosure for complete isolation of the filling area from the mechanically-worked components (optional)
- Automatic dummy bottles (optional)
- Easy internal and external cleaning
- 100% stainless steel self-draining base
- All draining points are positioned in the same area of the machine. On request, they can be concentrated in a single point.





Technical data	
Products handled	Non-carbonated clear and pulpy products * (conductibility >20 μ S/cm)
Containers	PET bottles
Filling system	Electronic volumetric filling
Output	Up to 78,000 bph for 0.5 L
Range	From 36 to 192 valves
Capping unit range	From 8 to 36 valves

* Maximum pulp diameter = 0.5 mm; maximum pulp length = 5 mm



Combi

three machines in one

The Europa WM and the Eurotronica FM-S are also available in a Combi version, i.e. in a solution combining in a single machine the blowing, filling and capping functions for all formats up to 3 L.

Sidel has installed over 300 Combis worldwide, including 200 for water.



SUSTAINABLE AND LIGHTER WEIGHT

- Less machine means less consumption
- Thanks to the positive bottle transfer between blower and filler, the Combi unit offers new possibilities for bottle lightweighting and the development of new formats.

HYGIENE

The environment is controlled right from the preform infeed.

EFFICIENCY

This integrated solution for blowing, filling and capping eliminates transport, accumulation and storing during the production process, thus reducing the number of machines involved and making production more reliable.

SAVINGS AND BETTER ROI

- Operator costs can be cut thanks to the overall efficiency of the Combi, its compact and ergonomic design, easy maintenance and low energy consumption
- The high efficiency and output of the Combi (thanks to faster format changeovers and less maintenance) cuts TCO and thus increases ROI.

SMALL FOOTPRINT

With fewer machines and a smaller footprint, overall investment is reduced, while the potential for different layouts is increased.

Cap infeed and orientation



Europa WM



Eurotronica FM-S



