





Today's fast evolving beverage market requires high performance and versatile filling solutions. In this scenario, SIPA is a reliable partner with a sound expertise and a **wide range of rinsing, filling and capping monoblocs**, up to **180** valves and an output up to **84,000** bph, that meet the most varied requirements and guarantee the **highest quality standards, extreme sanitizability** and **reduction of running costs**, in terms of both consumption and normal operations.

THE FULL FILLING TECHNOLOGIES

- **FLEXTRONIC**: extremely innovative and flexible platform of electronic volumetric fillers suitable to handle to still or carbonated, clear or pulpy and hot or cold-fill products, and weight filling.
- BIGFILL: volumetric gravity filling monobloc for large size containers.
- ISOFILL: isobaric mechanical filler suitable to fill CSD, still and carbonated water.
- STILLFILL EVO: gravity mechanical filler suitable to cold fill still water and not carbonated products.
- **ISOTRONIC G**: electro-pneumatic level filler for carbonated and still products in Glass, PET and RefPet bottles.

A COMPLETE AND VERSATILE RANGE IN TERMS OF BOTH PRODUCTIVITY AND PRODUCTS TO PROCESS

FILLING PRODUCT	Non- carbonated mineral water	Carbonated mineral water	Carbonated beverages	Clear juice	Juice with fibers or pulps	Isotonic and sport drinks	Теа	Hot filled products	Milk and dairy products	Alcoholic beverages	Edible oil	Liquid food	Detergents
STILLFILL EVO S													
STILLFILL EVO HR													
ISOFILL													
FLEXTRONIC C													
FLEXTRONIC S													
FLEXTRONIC SC													
FLEXTRONIC SE													
FLEXTRONIC W													
BIGFILL													
ISOTRONIC G													

FILLING RANGE KEY VALUES



MODULARITY

Modular design with output from 4,000 up to 84,000 bph.



HYGIENE

Extremely clean valve design for cold filling of sensitive products.



FLEXIBILITY

Multiproduct valves capable to fill a wide range of beverages on the same filler.



ACCURACY

and smooth product handling.



EASE OF USE

Simple operator interface and **fully automatic configuration** of work process flows.



EFFICIENCY

Quick change-over for different product, bottle and neck size, easy maintenance.



FLEXTRONIC: THE TRUE ESSENCE OF FLEXIBILITY

MODULAR RANGE OF ELECTRONIC, VOLUMETRIC FILLING MONOBLOCS

Extremely innovative and flexible platform, which takes the standard SIPA technologies to the highest level currently available on the market. By taking advantage of the **modular nature of all the elements of the platform**, and choosing the most suitable filling valve, it is possible to create solutions for a **wide range of bottling needs**. In particular, the possibility the possibility of filling several products on the same production line was one of our main aims when designing the FLEXTRONIC platform. **The filling valves** are perfectly integrated and interchangeable as part of this new platform.

The range can be equipped with various different feeding solutions:

The range can be equipped with various different feeding solutions: from mixer/carbonator, from pasteurizer, from external tank and from central tank on board.

PROCESSED PRODUCTS

- Carbonated mineral water and CSDs
- Still water
- Clear and pulpy juices (also with big dimension pulps)
- Sensitive products (fresh or micro-filtered milk, drinking yoghurt etc.)
- Liquid food
- Alcoholic beverages

MAIN FEATURES

- Central tank with stirrer (in case of pulpy products)
- Valve with magnetic flow meter for product dosing in each bottle
- Entirely stainless steel (grade 304) draining base
- No vent tube
- Reduced changeover down-times
- Simple to operate and great flexibility with selection of the various products/formats directly from the operator panel
- PET bottle transfer neck-handling with no need for monobloc height adjustment
- User-friendly touchscreen HMI

XFILL

Fillers in the **FLEXTRONIC - C range** are designed to be **configured in XFILL version**: this means that the carbonating or mixing unit tank will be used as a buffer tank for the filler, which no longer has the product tank on board. A pump sends the product to a ring-shaped manifold in order to ensure the product feeding into the filling valve correctly.

ADDED VALUES

- Flexible product deflection without deflector (swirl device without format change) for version with contact between bottle and valve
- Accurate volumetric dosing (no change-over)
- Filling speed adjustment to handle foaming products
- Automatically engaged dummy bottles
- Bottle snifting into a separate collector
- The air in the bottle does not come into contact with the product feeding circuit
- All parts in contact with the product are made of stainless steel AISI 316L as option
- Quick changeover for bottles and necks with different diameters
- "Dry" pressurization
- Simplified access for maintenance of the motor and the manifold
- Modular element guards

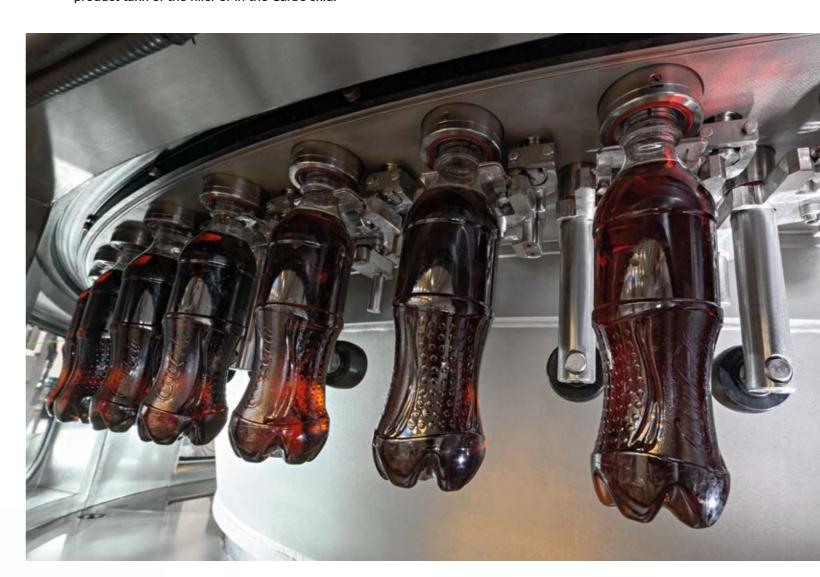
HYGIENE

The sanitation phase is very simple and is fully automatic and controlled by the filler supervision: the machine prepares itself for the electro-pneumatic control of all the on-off valves. The sanitation cycle is carried out in such a way that all the product path is completely cleaned both in equicurrent and countercurrent. In some specific water lines the CIP system can be integrated on the external product tank of the filler or in the Carbo skid.

AUTOMATIC DUMMY BOTTLES

Thanks to the configuration of the filling valve, the filler features an automatic engagement/disengagement system with extremely simple and functional electro-pneumatic control, avoiding any contact between operator and machine.

Circuit preset for CIP and SIP up to 100°C.



ADDED VALUES

- Reduction in product loss <100 L (for flavour change)
- The integration of the mixing and filling units produces a higher-quality and more stable final product, resulting in an improved filling process
- Reduction of product change-over downtime: target <15 min with water rinsing
- Lower electrical power consumption thanks to the lightweight design
- Lower consumption of carbon dioxide -10%
- Lower product losses from snift circuit <0,1%
- Better performances at the filler start up, able to increase the total Sincro efficiency

FLEXTRONIC

MODELS IN THE VOLUMETRIC RANGE

The range has been designed with a **modular** project sharing the structural elements between the different models. As a result, the filling valves and the elements necessary to process a specific range of products are highly interchangeable, even for future use.

Within the FLEXTRONIC range, although all products have the same general characteristics, we have identified four main configurations, which are optimized for specific applications.



FLEXTRONIC (C)

Electronic volumetric isobaric filler for bottling carbonated and noncarbonated beverages in PET bottles.

This is the most comprehensive configuration, equipped with an extremely flexible "multiproduct" contact valve: the same production line can deal with still, carbonated and hot fill products. The filling speed can be adjusted according to the product being processed. The configuration of the valve makes it suitable for processing products containing pulp and fibre, also with big dimension pulps.

OUTPUT

Filler from 30 to 180 valves from 10,000 to 40,000 b/hour based on 1.5 litres with CSD (18°C).



Electronic volumetric gravity filler for PET bottles, equipped with an extremely simple, clean and fast filling valve with no contact between valve and bottle, with a membrane valve to control the double filling speed. This solution guarantees high flow performance. Ideal for water, milk, homogenized juices and clear products. The machine can be configured with mass flow meters, for filling of low conductivity products, such as edible oil or demineralized water.

OUTPUT

Filler from 20 to 160 valves from 8,000 to 72,000 b/hour based on 1.5 litres with water (ambient temperature).



FLEXTRONIC SC

Electronic, volumetric gravity filler for PET bottles, equipped with a shuttered filling valve with contact between the valve and the bottle, and double speed filling. This is an extremely versatile valve for hot and cold filling of both smooth and pulpy beverages (also with big dimension pulps).

This solution guarantees an optimization of the filling cycle and of the "brimful" filling.

OUTPUT

Filler from 30 to 160 valves from 10,000 to 53,000 b/hour based on 1.5 litres with fruit juice (85°C).



FLEXTRONIC SE

Electronic volumetric gravity filler for PET bottles, equipped with "no contact", double speed, shuttered filling valves. Designed for HF applications in Ultra Clean configurations. The valve-cleaning characteristics and the configuration of the

monobloc make it particularly suitable for hot and cold filling of sensitive products such as premium fruit juices with pulps (nonhomogenized).

OUTPUT

Filler from 30 to 160 valves from 10,000 to 40,000 b/hour based on 1.5 litres with CSD (18°C).

MULTI-PRODUCT AND ULTRA CLEAN LINES

The high operational flexibility of the filling valves allows the design of multi-product lines, such as CSD./hot filling. Moreover, these extremely clean valves are ideal for the configuration of monoblocs for cold filling of sensitive products such as juice and CSD, without preservatives, milk, milk-based products and much more. In this case, the monobloc will be equipped with an ISO 7 microbiological isolator, thus reducing the clean environment area around the bottle filling phase, as well as with an automatic surfaces cleaning COP, HEPA filters, a cap sterilization system and a container sterilizer for non SINCRO BLOC solutions.







Carbonated



Carbonated













Milk and

FLEXTRONIC W: **HIGH PRECISION WITHOUT COMPROMISE**

ELECTRONIC WEIGHT FILLER

This electronic weight filler is designed for high added value products in PET bottles.

This version is equipped with an extremely accurate, precise, clean and fast filling valve with no contact between valve and bottle. Weight filling technology is the most reliable and precise system for filling bottles with highvalue products such as edible oil, milk and dairy, premium clear juices, liquid food home and personal care products.

PROCESSED PRODUCTS

- Edible oil.
- Liquid food, dressing and sauces.
- Detergents and personal care.

MAIN FEATURES

- Central tank.
- Entirely stainless steel (grade 304) draining frame
- Reduced changeover down-times.
- Simple to operate and great flexibility with selection of the various products/formats directly from the operator
- PET bottle transfer neck-handling with no need for monobloc height adjustment.
- User-friendly touchscreen HMI.
- Very innovative and performing software to manage product dosing.
- Ultra clean configuration available as option.
- Pressurized tank and nitrogen flushing are available as
- Complete product recovery at the end of production and product change under the valves.
- Recovery tray of rinse or cleaning oil with automatic insertion underneath the filling nozzles.

OUTPUT

Fillers with from 20 to 96 valves, from 6,000 to 36,000 b/ hour on 1.5 litres with edible oil

ADDED VALUES

- Extremely accurate and precise product dosing, with automatic change-over.
- Double filling speed to handle foaming products and for a fine dosing at the end of filling.
- Automatically engaged dummy bottles, available
- All parts in contact with the product are made of stainless steel AISI 316L as option.
- Quick changeover for bottles and necks with different diameters.
- Simplified access for maintenance.
- Very simple valve "ultraclean" design, with best-in class hygiene.





The sanitation phase is very simple, fully automatic and controlled by the filler supervision: the machine prepares itself for the electro-pneumatic control of all the on-off valves. The sanitation cycle is carried out in such a way that all the product path is completely cleaned both in equicurrent and countercurrent.

Automatic dummy bottles available on request. Circuit preset for CIP and SIP up to 100°C.

ATEX COMPLIANCE

A special configuration is available for filling liquid or gel product with an alcohol content equal to or greater than 70%. The filling monobloc is equipped with several solutions and suitable materials in order to avoid any potential risks of use of equipment in an explosive atmosphere due to the presence of explosive gases and vapors. For example a specific design to avoid any possible mechanical or electric ignition source, and the use of micro isolator around filling valves, to reduce the potential risky area, featuring ventilation and aspiration.



- Extremely simple, clean and fast "no contact" diaphragm valve, with a 3 configurations featuring double speed.
- The valve nozzle, without any vent tube, features a special design to create high flow without foam and dripping, perfectly suitable for no contact valve. This solution guarantees high flow performance and an easy handling of foaming products.
- Filling system with load cell for an extremely accurate, precise product dosing in each bottle.





BIGFILL: THE KEY TO THINKING BIG

VOLUMETRIC GRAVITY FILLING MONOBLOC FOR LARGE SIZE CONTAINERS

BIGFILL is the **electronic rotary volumetric no contact filler** for bottling **still liquid products in large PET bottles**, optimized for moving and filling large formats **up to 20 litres**.

PROCESSED PRODUCTS

- Still water.
- Demineralized water (version with mass flow meter).
- Edible oil (version with mass flow meter).

MAIN FEATURES

- External tank.
- Valve with magnetic flow meter for definition of the content in the bottle.
- Designed for filling large formats (from 3 to 20 litres)
- No contact valve without vent tube.
- During filling, the bottle is kept in position by a mechanical gripper.
- User-friendly touchscreen HMI, with menu-based interface.
- Simple to operate with selection of the various formats directly from the operator panel.



FILLING SPEED MODULATION

Double speed filling with final slow speed phase is obtained by means of a 3-positions actuator. The duration of the slow speed phase is automatically adjusted according to the format to produce, in order to reach the highest production efficiency and prevent product leak ("splash out").

OUTPUT

Fillers with from 12 to 36 valves, from 2,800 to 18,000 b/hour on 5 litres with water.

ADDED VALUES

- Extremely clean filling: no contact between valve and bottle.
- High filling speed.
- High flow performance and filling speed modulation to optimize the large size filling process.
- High bottle product precision.
- The air in the bottle does not come into contact with the product feeding circuit.
- Automatically engaged dummy bottles.
- Valves made entirely of stainless steel AISI 316L.









HYGIENE

Extreme sanitizability is one of the most important elements of this valve, characterized by a limited number of components and of moving parts. The sanitation phase is very simple and is managed fully automatically through a control on the communication keyboard: the cycle is carried out in such a way that the solution laps against all the internal areas of the filler with forced flows. The dummy bottles are loaded automatically. Circuit preset for CIP and SIP up to 100°C.

FILLING VALVE

- No contact electronic valve with volumetric filling controlled by a magnetic flow meter.
- The version with mass flow meter is ideal for low conductivity products, such as edible oil, demineralized water, etc.
- The final slow fill phase allows the foam to collapse before closing.
- The nozzle with wide pass-through sections is designed to obtain the highest flow through the the bottle neck and to minimize the turbulence of the product.

ISOFILL: RELIABILITY TO THE LAST DROP

ISOBARIC FILLING MONOBLOC

Mechanical level filler for carbonated products in PET bottles, designed adopting advanced technologies. ISOFILL has an innovative design and is equipped with special features for both filling and moving the bottles, which guarantee great advantages in terms of performance and operating flexibility. The valve is also able to fill non-carbonated products.

PROCESSED PRODUCTS

- Carbonated mineral water and CSDs.
- Still water.

MAIN FEATURES

- Central tank
- Entirely stainless steel (grade 304) draining base
- Valve with height adjustable moving filling tube to define the level in the bottle
- Reliable, simple and easily sanitized valve
- Reduced changeover down-times
- PET bottle transfer neck-handling with no need for monobloc height adjustment
- SINCRO BLOC configuration available for an integrated blowing-filling-capping solution
- Controlled contamination cabin and cap sterilizing unit available in option in order to enhance hygienic standards
- User-friendly touchscreen HMI, with menu-based interface.

SWIRL

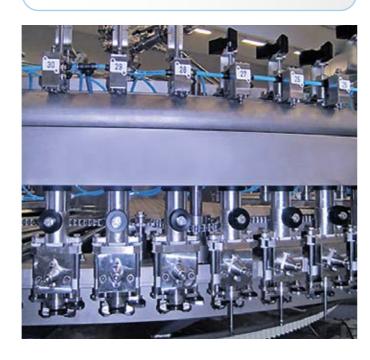
For a long time, we have been making an innovative "internal deflection" system standard on our PET fillers so avoiding the deflector on the filling tube. Therefore, there is no need for adaptation of the filling tube to the inside of the bottle neck during a format change. A homogeneous film of product is deflected inside the container without turbulence or foam regardless of the shape, design, size or weight of the bottle.

OUTPUT

Fillers with from 20 to 140 valves, from 3,900 to 30,000 b/ hour on 1.5 litres with CSD (13°C).

ADDED VALUES

- Flexible product deflection (swirling device without format change)
- A single filling tube for all the bottle sizes
- Automatically engaged dummy bottles
- Collectorized decompression carried out with the filling tube raised
- Quick changeover for packages with different neck and bottle diameters





Non-carbonated mineral water



mineral water

Carbonated

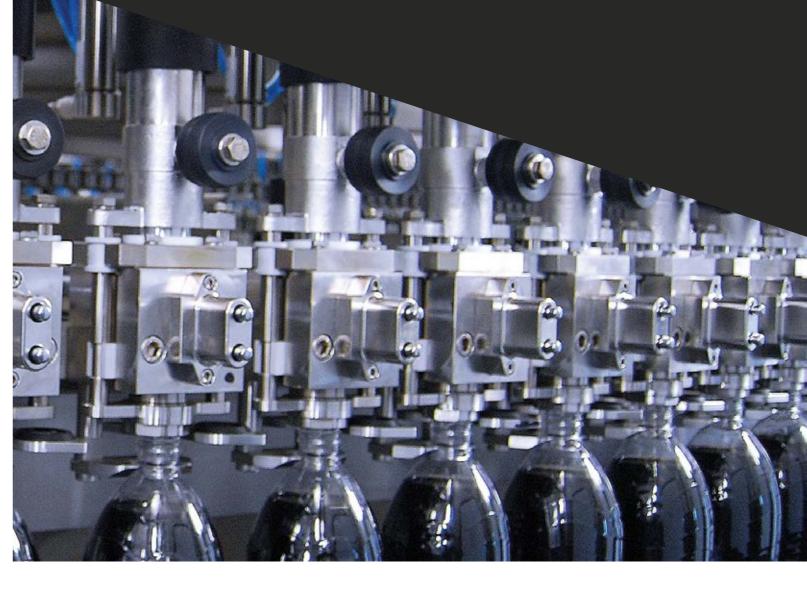






Isotonic and Sport drinks





HYGIENE

The sanitation phase is very simple and is fully automatic, by means of a control on the operator panel: the machine prepares itself for the electro-pneumatic control of all the on-off valves. The sanitation cycle is carried out in such a way that the solution laps against all the internal areas of the filler with forced flows.



AUTOMATIC DUMMY BOTTLES

Thanks to the moving filling tube that characterizes the filling valve, it was possible to make an engagement/ disengagement system of the dummy bottles with extremely simple and functional electro-pneumatic control, avoiding any contact between operator and machine.

FILLING VALVE

- A mechanical level valve with extremely reliable and sturdy moving filling tube, which requires very little maintenance
- Designed with a limited number of components for a complete sanitization, to avoid every possible area of product stagnation
- Extremely versatile to allow different containers to be handled without format change parts
- Centralized illing tube height adjustment for all the
- Decompression button with collectorized snift.
- Available in option a second circuit for bottle fluxing and pre-evacuation

STILLFILL EVO: EASE MAKES A DIFFERENCE

GRAVITY FILLING MONOBLOC

Mechanical gravity filling machine for PET bottles, **designed for cold and hot filling of non-carbonated products**, is **available in two configurations** with most of the same features and advantages:

- STILLFILL S EVO for cold filled non-carbonated water and clear juices.
- STILLFILL HR EVO for hot fill (up to 95°C) and all non-carbonated beverages requiring filling with recirculation.

The only difference between the S and HR configurations is a simple **hot-fill kit**, including: a pneumatic valve within the filling valves for product recirculation, a rotating manifold for product recirculation and an external tank for recovery of the recycled product and pumping back to the pasteurizer.

PROCESSED PRODUCTS

STILLFILL S EVO

• Non-carbonated mineral water and beverages.

STILLFILL HR EVO

- Tea.
- Fruit juice (with or without pulp).
- Isotonic drinks and functional beverages.

MAIN FEATURES

- Central tank, with product feeding form the bottom of the rotating manifold.
- Entirely stainless steel (grade 304) draining base.
- Reliable, simple and easily sanitized valve.
- Reduced changeover down-times.
- "No bottle no fill", no electronics in the machine.
- PET bottle transfer neck-handling with no need for monobloc height adjustment.
- Possibility of installing a level control system.
- User-friendly touchscreen HMI.
- Controlled contamination cabin, micro isolator and cap sterilizing unit available in option in order to enhance hygienic standards.

OUTPUT

Fillers with from 20 to 140 valves:

- from 4,800 to 60,000 b/hour on 1.5 litres with still water.
- from 4,700 to 50,000 b/hour on 1.5 litres with fruit juice.

ADDED VALUES

- Centralized level adjustment, with only one intervention point.
- Flexible product deflection (swirl device without format change).
- No dynamic gaskets in contact with the product: the shutter is sealed by a simple membrane, protecting the movement form contamination.
- Separate air return to prevent possible contamination of the product tank.
- Automatically engaged dummy bottles as option.
- Valves made entirely of stainless steel AISI 316L.
- Quick changeover for packages with different diameters.

HR VERSION

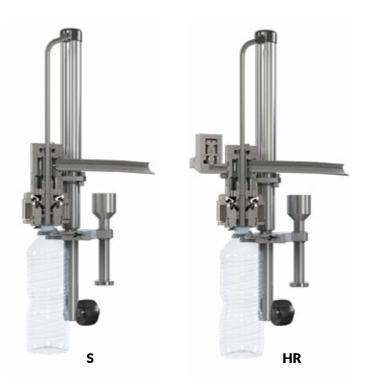
- Possibility of managing pulp up to 2 mm in diameter and 10 mm in length.
- Constant and controlled recirculation in bottle.





HYGIENE

Sensitive products must be protected from possible contaminations. To create the suitable environment for processing these products, the filling valve must be extremely simple and sanitizable; the monobloc has to be configured either with microbiologic isolator or laminar flow cabinets ISO 7, and with specific sterilization treatments on containers and caps.



- No dynamic gaskets in contact with the product and small number of static gaskets.
- No wells or dead areas inside in order to prevent possible stagnation of product and increase efficiency of washing cycles.
- The fixed valve with bottle lifting jack allows the use of the microbiologic isolator (ISO 7) to protect the filling valve area.

SANITATION CYCLE WITH THE USE OF DUMMY BOTTLES

Fitting and removal of dummy bottles takes place in an extremely simple and functional way by means of a special bayonet connection to avoid direct contact between operator and valve, as an option, it is now available the automatic engagement of the dummy bottles. Circuit preset for high temperature CIP.

FILLING VALVE

Extremely fast, simple and reliable mechanical valve, featuring "no bottle no fill" without any electronic. In the HR variant the valve allows filling with products containing of pulp and fibre.

Possibility of filling "to brim".

The filling process has been designed to maintain the temperature of the whole circuit (valves, tanks, pipes) even in the event of long stops by means of product recirculation both in valve and in bottle.

ISOTRONIC G: FLEXIBLE FILLING FOR DIFFERENT CONTAINERS

ISOBARIC FILLING MONOBLOC FOR GLASS BOTTLE

Electro-pneumatic level filler for carbonated and still products in Glass, PET and RefPet bottles ISOTRONIC G has an innovative design and is equipped with special features for bottles filling and handling, which guarantee great advantages in terms of performance and operating flexibility. The valve is also able to fill non-carbonated products.

PROCESSED PRODUCTS

- Carbonated mineral water and CSDs.
- Still water and juices.

MAIN FEATURES

- Central tank
- Entirely stainless steel (grade 304 sloped base with collected draining points
- Filling valve with mobile vent tube and centering cup without any movement bottle in height
- Reliable, simple and easily sanitized valve
- Reduced changeover down-times for different neck and bottle size, even from Glass to PET.
- PET bottle transfer neck-handling with no need for monobloc height adjustment
- User-friendly touchscreen HMI.
- CIP integrated in the carbo/mixer (in option)

OUTPUT

Fillers with from 20 to 100 valves, up to 50,000 b/hour.

ADDED VALUES

- Extremely flexible solution Glass, PET and RefPET with the same machine
- Quick changeover for packages with different neck and bottle diameters with centralized filling level adjustment (no need to replace the vent tubes)
- Flexible product deflection without deflector (swirling device without format change)
- Automatically engaged dummy bottles
- Extremely low foam production (snifting with vent tube raised inside the valve)
- Separate air return circuit
- Valve protection solutions against accidental bottle burst
- Low maintenance thanks to the absence of a pneumatic lifting cylinder

SWIRL

The deflection of the product on the walls of the bottle is performed through an helix system inside the valve (swirl device): an homogeneous film of product is deflected inside the container without turbulence or foam.

By not having the deflector on the vent tube there is no needs of any adaptation/replacement during the bottle change over. The position inside the valve allows the swirl to be protected from any bottle explosions (unlike the spreader).





HYGIENE

The sanitation phase is very simple and is fully automatic, by means of a control on the operator panel: the machine prepares itself for the electro-pneumatic control of all the on-off valves. The sanitation cycle is carried out in such a way that the solution flows through against all the internal areas of the filler with forced flows.



AUTOMATIC DUMMY BOTTLES

Thanks to the moving filling tube that characterizes the filling valve, it is possible to make an engagement/ disengagement system of the dummy bottles with extremely simple and functional -pneumatic control, avoiding any contact between operator and machine. In the rest position, dummy bottles are protected by a special cover that prevents them from being hit by any glass fragments (in case of bottle explosion).

FILLING VALVE

- A mechanical level valve with extremely reliable and sturdy moving filling tube and centering cup: allows the positioning of the bottle without any movement in height
- Designed with a limited number of components for a complete cleaning, to avoid every possible area of product stagnation
- The pressurization of the bottle takes place through a dedicated circuit free of liquid particles (dry pressurization), this guarantees less foaming during filling of CSD
- Inside the valve, the product circuit is isolated from the outside "control circuit" through a membrane with a total absence of sliding gaskets
- The air returning from the bottle never comes into contact with the product inside the tank
- Centralized control for the simultaneous height adjustment of the filling tube for all the valves
- The decompression phase (Snift) takes place with the vent tube raised, reducing foaming and product loss.
 The residue is collected and discharged.

CONFIGURATION OPTIONS

FULL CUSTOMIZATION AT YOUR REACH

A careful study of plant engineering, the ergonomic design, a complete and simple operator interface and a fully automatic configuration of process flows make these solutions easy to use and manage. Filing monobloc can be customized according to every production needs.

INTEGRATED CIP

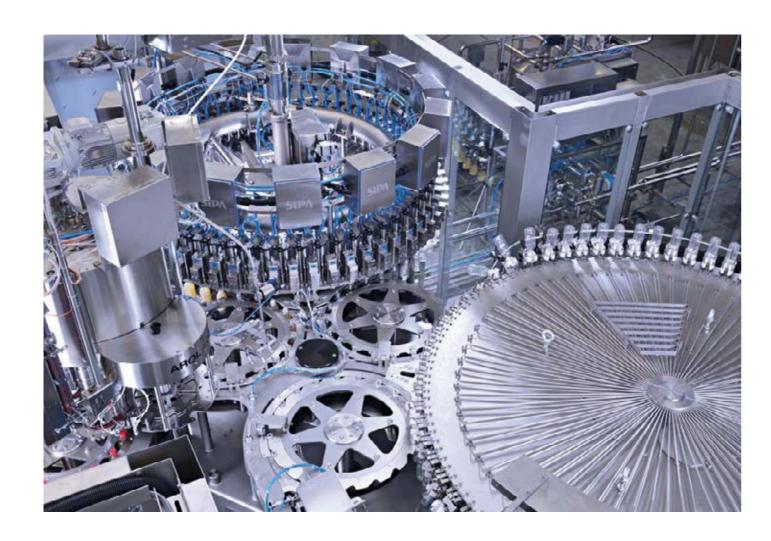
For water fillers it is possible to integrate the CIP unit on the external product tank of the filler (SMW) or on the Carbo (CMW). This bring several advantages:

- Reduced footprint.
- Elimination of a machine that works "a few" hours a week.
- Lower energy consumption.
- Capex reduction.
- Electric heating, no need of boiler in the plant which require specific user license.

FILLING MONOBLOC, MORE THAN A FILLER

The various types of filler can be coupled in **Sincro Bloc** with SIPA rotary and linear blowers, for an integrated blowing - filling - capping solution.

The monobloc can be also completed with the addition of mechanical and electronic **rinsers**, equipped with various types of treatment according to the different applications, and also supplied with **cappers** for plastic, aluminum, twist-off caps and other types, including caps decontamination.



FILLING ENVIRONMENT UNDER CONTROL

To guarantee the **maximum hygiene of bottles**, several solutions can be integrated in order to keep under control the filling environment, and meet the most stringent requirements

Our standard starts with ISO class 7 but according to the hygiene level required by the customer, this level can be increased up to ISO class 5.

Overpressure sterile air cabins with contamination control equipped with HEPA filters.



Filling area protected by a Mini-Enclosure (isolator technology) for sensitive product handling. This solution ensures a drastic reduction of the area to be controlled, allowing extremely effective sanitizing actions with reduced cost.





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