



SINCRO BLOC

Integrated
Blowing / Filling / Capping System



Sincro Bloc

Sincro Bloc combines the highest output today in the market with the maximum container quality keeping reduced footprint, simplicity and hygiene.

Sincro Bloc is a compact integrated system for high speed blowing/filling/capping. The system guarantees high quality standard and output up to 54,000 bottles/hour.

Advantages

Costs reduction:

- Reduced operators number.
- Reduced consumption.
- No air conveyors: less energy consumption and no filter costs.
- No rinser: less water and energy consumption.
- Elimination of maintenance costs and change over times for the air conveyors.

Efficiency: the blow moulding machine and the filler are electronically coupled and special transferring systems are foreseen to reduce the stumblings. The integrated design of the system ensure an high efficiency of the overall platform.

Lightweight: Sincro Bloc is the most suitable solution for the treatment of extreme lightweight bottles.

Hygiene: a preform treatment system, the short connection between blowing and filling, the

over-pressured environment are guarantee of high hygiene level.

Extreme operating flexibility: it can handle a wide range of bottles, necks and caps sizes (both flat and sport). Several technical innovations installed allow for a short change-over times: one of the fastest available today on the market!

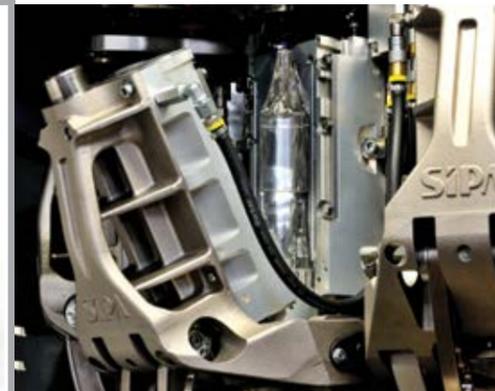
Space saving and ergonomics: Sincro Bloc is the ideal solution for operations where reduced square footage is the primary requirement thanks to its extreme compactness and small overall dimensions. Only one operator controls the whole system.

Wide application range: the innovative features of Sipa blowers and fillers combined with the "hygiene" concept of Sincro Bloc, make this solution perfectly suitable for all kinds of products: still and carbonated, cold fill and hot fill, with and without pulps, sensitive products (including C.S.D. without preservatives) and those which require weight filling.

Cost effective investment: all these features and advantages make Sincro Bloc one of the best solutions both in terms of capex and as a guarantee of general TCO reduction.



Non-Carbonated water
Carbonated water
CSD
Clear juice
Juice with fibers or pulps
Isotonic and sport drinks
Tea
Hot filled products
Fresh milk
Edible Oil
Detergents



Bottle blowing



Bottle transfer



Filling/Capping machine



Bottle Blowing

SFR EVO³: features and advantages

Preform transport system

- Simple chain in special plastic material (SIPA patent). No maintenance cost and time.
- No rotation of chain around its axis and no movement up and down to collect the preform.
- Dry operation (no grease).
- Pitch = 45 mm: better efficiency of heating, shorter oven and possibility to blow up to 43 mm neck finish.
- Quick tool-free spindle changeover when handling different preform neck.
- Very low maintenance cost.

Heating Oven

- Modular oven completely made in aluminum.
- Fresh air is blown through the preforms perpendicularly and uniformly.
- Innovative ventilation through the lamps to maximize heat transfer by radiation (convection minimization).
- Neck ventilation inside heating oven for light-weight effective neck cooling.
- Low thermal inertia: heat process consistency and quick cold start-up.
- Laminar ventilation: better process stability (SIPA patent).
- Low oven temperature: low consumption.
- Heating process less sensitive to frequent start & stops of filling lines or ambient temperature variations.

Bottle Blowing

- Reduced pitch between molds.
- Significant space saving (20% to 30%) for the blowing wheel compared to equivalent machines.
- Centrifugal forces on preforms & bottles are very low, so grippers do not need to hold necks tightly to keep them straight.
- Simplified transfer wheels with small diameters and lower peripheral speeds.
- Easier to maintain, thanks to accessibility of key elements.

Power and Flexibility

- Models available with 6, 8, 10, 12, 16, 20, and 24 cavities.
- Cutting-edge technology incorporated into new press and cam designs.
- Higher outputs: 2250 bottles per hour per cavity.
- With a simple conversion, the same unit can produce standard and hot fill containers.
- System handles very light neck finishes and neck diameters up to 43 mm.

Reduced Total Cost of Ownership

- Compact new blowing valve block with mechanical compensation cuts air consumption by up to 25%.
- Improved oven efficiency, special reflector and lamps, reduce oven energy consumption by 40% compared to previous models.
- With SIPA's exclusive and patented ARS Plus system: compressed air total savings up to 50%.
- Possibility of reducing the size of the compressor by up to 45%.
- Special mold design to reduce blowing pressure.

Electrical Stretching

- Electrically-driven stretching rods provide extra versatility in process fine-tuning.
- Timing, speed, acceleration and distance all controlled with ease from the HMI.
- Electric drives facilitate synchronization of blowing operation to different filler speeds.
- No rod decelerator, no cams to change during product change-overs.
- "Smart" self-learning procedure identifies preform/bottle dimensions.

User-friendly molds

- Effective cooling system for bottle neck and aluminium mold base.
- New standard mold changeover system is quick and easy to use:
 - New slides to allow the rotation and simple extraction of the cavity.
 - Easy lock system for shells for quick changeover (only one side to loosen).
- Optional Quick bottom mould change over.
- Simplified conversion from production of hot-fill to cold-fill containers, with cooling circuit built into the cavity-shell holders remain in place.

Preform hygiene control:

- Preform hopper, elevator and chute are completely covered and equipped with an overpressure module.
- Preform decontamination process (UV lamps or pulsed light)
- Blowing with ionized air and dust suction
- Oven aspiration system equipped with special filters





Connection

Transfer module

The blowmolder and filler are electronically synchronized and physically connected by a transfer module.

The latter is composed of transfer starwheels with grippers which transport the bottles by the neck to the filling monoblock.

This solution offers the following main advantages:

- Extreme reliability: no hitches.
- Great flexibility: it can handle bottles of all shapes.
- Body guides are no longer necessary meaning a drastic reduction in change-over downtimes.

In order to keep bottle hygiene, the transfer module is equipped with a stainless steel fully draining basement and surrounded by guards and, fitted with an overpressure system, the separation between the dry zone air (blowmolder) and wet zone air (filler) is assured.

Optional elements

To satisfy particular production needs, the module can be completed with a number of additional solutions, including:

Quick changeover

The starwheels can be equipped with a rapid size change-over system which allows the handling of different diameter necks without the need for any tools: e.g. 28 - 38 mm.

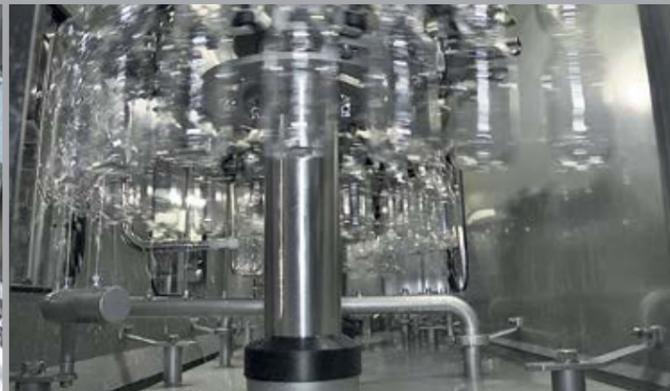
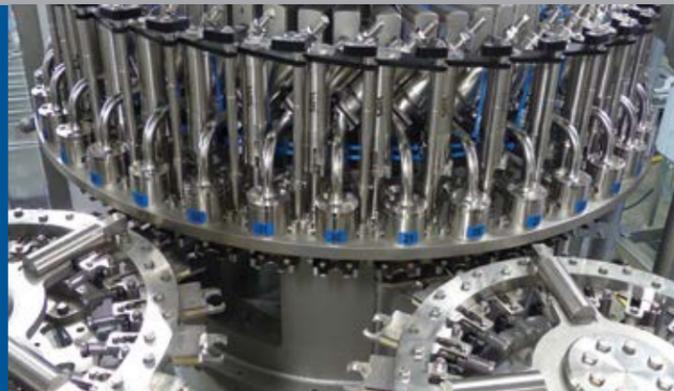
Bottle base cooling

In case of filling of carbonated or pressurized products, a spray nozzle system can be installed to cool the bottom of the bottle. In order to reduce the costs of this application, the solution is fitted with a collection channel and water recirculation system (optional).

"Lightweight" bottles

Sincro Bloc, thanks to its direct connection between bottle blowing and filling, is the perfect solution in case of lightweighting necks and bottles.

The lack of air conveyors, in fact, eliminates any potential risk of bottle jams or damage.





Filling

Flexibility

Sincro Bloc is extremely versatile in this process phase: the choice of filler, in fact, simply depends on the type of product to be filled. The complete range of fillers can be matched with the rotary blowmolder: isobaric fillers, gravity fillers and hot fillers, both mechanical level and electronic volumetric versions, including the weight filling solution.

The Sincro Bloc project has recently been updated in order to fit perfectly with the Flextronic platform: the new, extremely innovative and flexible platform of electronic volumetric fillers, 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 bespoke solutions for a wide range of bottling needs. In particular, the possibility of being able to fill several products on the same production line was one of our main aims when designing the Flextronic platform.

The fillers in the Flextronic range can 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. This innovative solution ensures many operating advantages and a significant reduction in running costs.

Change-over

All fillers can also be equipped with an innovative quick-change system to handle bottles with different neck diameters.

Hygiene

The possibility to keep the bottle clean after blowing is an extremely important element. Bearing this in mind several solutions can be integrated in order to keep under control the filling environment:

- Overpressure sterile air cabins with contamination control equipped with HEPA filters. 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.
- The transfer module and filler are pre-set for CIP/COP/SIP operations: a guarantee of the highest hygiene standards.
- Solutions for the contamination reduction of preforms and caps.
- 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.



FILLING PRODUCT

	Non-carbonated mineral water	Carbonated mineral water	Carbonated beverages	Clear juice	Juice with fibers or pulps	Isotonic and Sport drinks	Tea	Hot filled products	Milk and dairy products	Beer	Alcoholic beverages	Edible Oil	Detergents
Stillfill S	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		
Stillfill HR	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		
Isofill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>			
Flextronic C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Flextronic S	<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>				
Flextronic SC				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Flextronic SE	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Flextronic W	<input type="checkbox"/>			<input type="checkbox"/>					<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
Bigfill	<input type="checkbox"/>												





Cap handling solutions

Special configuration composed of Capstream, a cap quality check device and oriented cap horizontal buffering system up to the pick and place feeding channels.

The last element in the process is the capping machine, which, synchronized with the filler, closes the bottles prior to outfeed. The management and correct feed of caps in the pick and place area is one of the most sensitive phases in the whole process in terms of risk of blockage on the descent channel. Since the whole process is fully synchronized we have designed several solutions to avoid stoppages on the Sincro Bloc caused by cap feed problems. Both automatic back up and buffering solutions are available: with the second option, in the event of a cap blockage, a signal blocks the preform feed and a special buffer empties the whole system without any bottle wastage.

Depending on the different operating conditions, we have designed different solutions:

Capstream

It is a gravitational cap feeding system designed to guarantee the highest efficiency of the Sincro Bloc versions, according to the most advanced state-of-the-art. The caps arrive already oriented to the top of the feeder and descent by simple gravity to cap chutes, without compressed air (clean feeding). Completely manufactured in SS Aisi 304 it could be arranged to handle different caps with an easy change-over.

Twin or Single Hopper

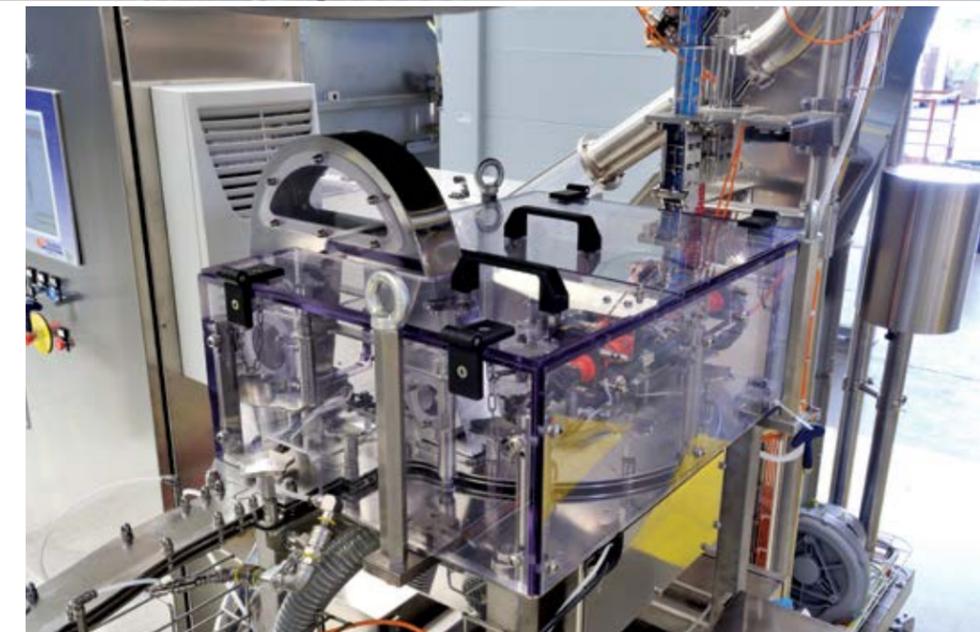
The Twin Hopper is composed of two cap hoppers and relevant descent channel to the pick and place. In the event of a blockage on the first, the system passes automatically to the second, allowing the operator to remove the blockage without stopping the capping operations until the machine is empty.

When using a single type of cap the single hopper solution is available. This features reverse-rotation of the hopper and two exit channels: a jam in one of these channels automatically activates reverse-rotation of the hopper and the cap sorting on the other channel, allowing the cap feeding without interruption.

Flat Buffer

This is a dynamic buffer, positioned between the hopper and the pick and place, and is composed of an horizontal rotating disk where a sufficient number of oriented caps is held to guarantee an accumulation that allows the operator to clear the blockage and completely empty the system.

As far as the cap cleaning systems along the descent channel are concerned, different elements can be positioned such as the UV lamp system, blowing with ionized air and dust suction, up to washing tunnels using disinfectants (such as ozone or peroxide).



Some cap feeding solutions can be fitted with a cap quality check device, which selects the caps according to different parameters.

Capstream

Twin Hopper

Flat Buffer



SINCRO BLOC

Integrated Blowing / Filling / Capping System

SIPA S.p.A.

Via Caduti del Lavoro, 3
31029 Vittorio Veneto (TV) - ITALY
Tel: +39 0438 911511
Fax: +39 0438 912273
E-mail: sipa@zoppas.com
Website: www.sipa.it

SIPA FILLING & PACKAGING DIVISION

Via Provinciale, 36
43038 Sala Baganza (PR) - ITALY
Tel: +39 0521 548111
Fax: +39 0521 548112
E-mail: sipa@zoppas.com
Website: www.sipa.it

SIPA NORTH AMERICA

4341 International Parkway
Suite 110
Atlanta, Georgia 30354 - U.S.A.
Tel: +1 404 3493966
Fax: +1 404 5745568
E-mail: sales.northamerica@zoppas.com

SIPAMERICAN INDUSTRIES

ZOPPAS TOOLS & MACHINERY S.A. DE C.V.
Circuito Mexico 120
Parque Industrial Tres Naciones
San Luis Potosi S.L.P. CP 78395 - MEXICO
Tel: +52 444 8047400
Fax: +52 444 8047499
E-mail: sipamerican.industries@zoppas.com

SIPA ANDINA Ltda

Avenida El Dorado 68 C 61
Oficina 628, Piso 6
Bogota - COLOMBIA
Tel: +571 479 5252
Fax: +571 476 3444
E-mail: sipa.andina@zoppas.com

SIPA SUL AMERICA Ltda

Estrada Dr. Cicero Borges de Morais,
584 - Vila Universal Cep. 06407-900 - Barueri - SP
Tel: +55 11 47728300
Fax: +55 11 47728301
E-mail: sipa.sulamerica@zoppas.com

SIPA LUXEMBOURG S.A.

5, rue Geespelt
3378 LIVANGE
Luxembourg
Tel: +352 26 55 16 89
Fax: +352 26 55 09 60
Email: sipa@zoppas.com

SC SIPA ENGINEERING ROMANIA S.r.l.

Str. Mangalia, 61
300186 Timisoara - ROMANIA
Tel: +40 356 434200
Fax: +40 356 434280
E-mail: sipa.romania@zoppas.com

SIPA TURKEY - SİPET A.Ş.

SITKI BEY PLAZA - Atatürk Caddesi No: 82/1
19 Mayıs Mahallesi - Kat: 13 Daire: 34 34736
Kozyatağı Kadıköy - Istanbul
Tel: +90 216 474 9780
Fax: +90 216 474 9779
E-mail: SipaSalesTr@zoppas.com

SIPA UKRAINE

Office 37, 9 Turovs'ka St., Kyiv
04080 Kiev - UKRAINE
Tel: +380 (44) 4636645
Fax: +380 (44) 4257275
E-mail: office@sipa.kiev.ua

SIPA RUSSIA

Varshavskoe shosse 1 str. 6,
office A425 - 117105 Moscow
Tel: +7495 269 41 91
Fax: +7495 269 41 90
E-mail: siparussia.office@zoppas.com

SIPA SOUTH AFRICA

Zoppas Industries South Africa (pty) Ltd
Suite 2, office 602 - 6th Floor
The Point Centre,
76 Regent Road, Sea Point
Cape Town 8005 - SOUTH AFRICA
Tel: +27 (0) 214182750
E-mail: sipa.southafrica@zoppas.com

SIPA MIDDLE EAST LLC

Office n. 807 - Arenco Tower
P.O. Box 214525, Dubai Media City
Dubai U.A.E.
Tel: +971 4 3754607
Fax: +971 4 4230636
E-mail: SipaME@zoppas.com

SIPA INDIA

B 101, Mangalya
Off Marol Maroshi Road
Marol, Andheri (East)
Mumbai - INDIA 400 059
Tel: +91 22 29201785
Fax: +91 22 29201795
E-mail: sipa.india@zoppas.com

SIPA THAILAND

3rd Floor, MSC Building, 571, Sukhumvit 71 Rd.,
Klongton - Nua, Vadhana
Bangkok 10110 - THAILAND
Tel: +662 713 0973-5
Fax: +662 713 0976
E-mail: sipa.fareast@zoppas.com

SIPA MACHINERY HANGZHOU

3 Road 14, Economic & Technology Development
Zone
310018 Hang Zhou, Zhejiang province - CHINA
Tel: +86 571 28978501
Fax: +86 571 28978599
E-mail: smh@zoppas.com

SIPA JAPAN Ltd.

Cent-Urban Bldg. 604, 3-23-15, Nishinakajima,
Yodogawa-ku, Osaka 532-0011 - Japan
Tel: +81 6 4862 4801
Fax: +81 6 4862 4803
E-mail: tanigaki@sipajapan.com

SIPA

Zoppas Industries