



Filled with advantages: *combisafe*



SIG Combibloc

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Unlimited packaging possibilities.

SIG Combibloc is one of the world's leading systems suppliers of carton packaging and filling systems for foods and beverages. We offer our customers a complete system that is geared for success – from pre-sales service such as support for market research, developing packaging designs and optimising logistics features, through to the delivery of complete packaging systems with materials and machines, backed by solid after-sales service. Our aim is to share success with our customers.

Our customers also value us as partners when it comes to marketing and product development, because we constantly break new ground in carton-filling technology. One of our innovations is *combisafe* – a new packaging system that is practical, easy to handle, and has a wide range of uses and flexible applications. With *combisafe* food manufacturers have every possibility at their disposal, because the special filling process makes it possible to fill cartons with chunky foodstuffs. This means that it is ideal for packaging items like fruit and vegetable products, pre-prepared foods and stews.

The new system builds on the tried-and-tested basic packaging system from SIG Combibloc. The heat-resistant cardboard foundation makes it possible for *combisafe* cartons to be heat-treated in an autoclave after the filling process, so that the final product is completely sterilised and has a long shelf life.



Anything is possible with *combisafe*: this new packaging system can be used for almost any type of foodstuffs – and it features all the proven advantages of carton packaging.



Safe and diverse.

***combisafe*.**

A desire for diversity

Liquid foodstuffs such as milk and juices are among the products that have traditionally been packed to best advantage in beverage cartons. But SIG Combibloc was also quick off the mark to think about new applications for carton packaging, to open more market opportunities for the food industry.

Now, to serve our customers even better – and to extend the possibilities for cardboard packaging – we have developed *combisafe*.

New *combisafe* makes it possible to fill cartons with particularly chunky products, such as fruit and vegetables, pre-prepared foods or stews. Not only is *combisafe* extremely easy to handle and flexible in its range of uses, it also features all the advantages of the tried-and-tested SIG Combibloc carton packaging system.

Our experience gives you a head start

When it comes to packaging chunky foods, manufacturers can rely on working with SIG Combibloc. In developing *combisafe*, we have taken our many years of experience in aseptic filling and handling of foodstuffs and applied them to the new field of autoclave-sterilised cartons. New *combisafe* builds on the basic SIG Combibloc system – proved successfully billions of times over – through advanced ultrasonic sealing technology.

The unique experience we have acquired over decades with our core system – plus our cooperation with experienced third-party suppliers of specialist components – guarantees flawless operation of our filling process.



Food retortable



SIG Combibloc

Food retortable

There are so many advantages to *combisafe* – and they all add up to making food more enjoyable. Which makes *combisafe* much more than a packaging alternative to glass or cans.



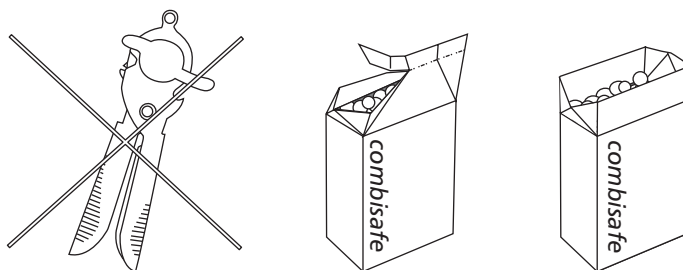
A host of benefits for the consumer.

The *combisafe* system.

Big on content, small on packaging

combisafe offers a wide range of benefits for the consumer. The new cartons feature perforation for convenient opening, making *combisafe* safe and easy to handle, open and empty. Using *combisafe* is literally child's play. After the carton has been opened, the top can be easily folded back again – ensuring the best possible protection for the rest of the product, and preventing odours from developing in the refrigerator. Broken glass is no longer an issue, because *combisafe* is made from robust carton that can be transported without any danger of breakage. What is more, the lightness of *combisafe* means that you are transporting the weight of the contents, not the packaging. The simple, user-friendly handling features of *combisafe* reflect its up-to-the-minute character, making glass and cans outdated.

When it is empty, a *combisafe* pack is environmentally-friendly. The carton packaging is easy to dispose of and takes up little space in the waste container. That is valued by consumers who understand the importance of sensible waste disposal.



Advanced *combisafe* filling technology offers food manufacturers a wide and flexible range of products. For wholesaler, retailer and customer, it means greater freedom of choice at the point of sale.



Commercial advantages.

Opening up new areas of business.

Advantages for the manufacturer

For food manufacturers, the *combisafe* packaging system is packed with advantages: because it can open up new fields of business very simply and requires only a manageable volume of investment. Thanks to the range's modular structure, manufacturers can run from one to four filling machine lanes, depending on workload, so they keep tighter control. More filling machines can be added to the line to increase output. With *combisafe*, output can be altered simply, quickly and flexibly to meet productivity requirements. The filling machines' advanced technology offers the highest degree of flexibility in every respect: changing the volume without altering the base profile can be done with unbeatable speed; changing the packaging exterior design is just as simple and quick. The technology will adopt the most suitable filling method for each different product requirement. So one machine can be used to fill cartons with a wide range of products – and there are almost no limits to the size or proportion of chunky components.

Practical and attractive. Logistical benefits for manufacturers and sales outlets

New *combisafe* offers valuable logistical benefits for manufacturers and suppliers: with *combisafe*, the costs of labour, transport and warehousing are much lower than with other types of packaging. The carton packaging, folded flat, arrives at the fillers and has utilised the loading capacity of a truck to its fullest. However, also a truck loaded with filled cartons is full of advantages: Up to 2,160 cartons with a volume of 400 ml can be simply and safely stacked on a single Europalette without damaging the filling product. So trucks can carry more goods in a single load, thanks to lighter packaging and the easy-stack rectangular shape. For retailers or wholesalers, the pay-off is more efficient use of shelf space, and easy stacking and storage. The rectangular shape can accommodate a large number of design elements, as well as full product information. The excellent display qualities of *combisafe* will distinguish your product from the competition, giving it a higher profile at the point of sale.



SIG
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Food
retortable

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retortable

The design features of *combisafe's* composite material allow for autoclave sterilisation. So foodstuffs stay fresher and last longer.



Always perfectly protected.

A tried and tested system.

***combisafe* cardboard composite**

The special *combisafe* sterilisation process means that a product can be stored in an ordinary unrefrigerated cupboard for up to two years without preservatives and without loss of quality. The carton composite is made of several materials, primarily cardboard, polypropylene and aluminium. Each plays an important role in protecting the contents. The inner polypropylene lining forms a liquid barrier for the product, and serves to seal the entire package. The outer polypropylene coating, in combination with the special printing process, is particularly suited to high temperatures and humidity in the autoclave. Cardboard and aluminium add structural strength to the package, and protect the contents from light, extraneous odours and the negative effects of oxygen. The composite consists of 75% renewable materials and can be recycled, helping to protect our environment.

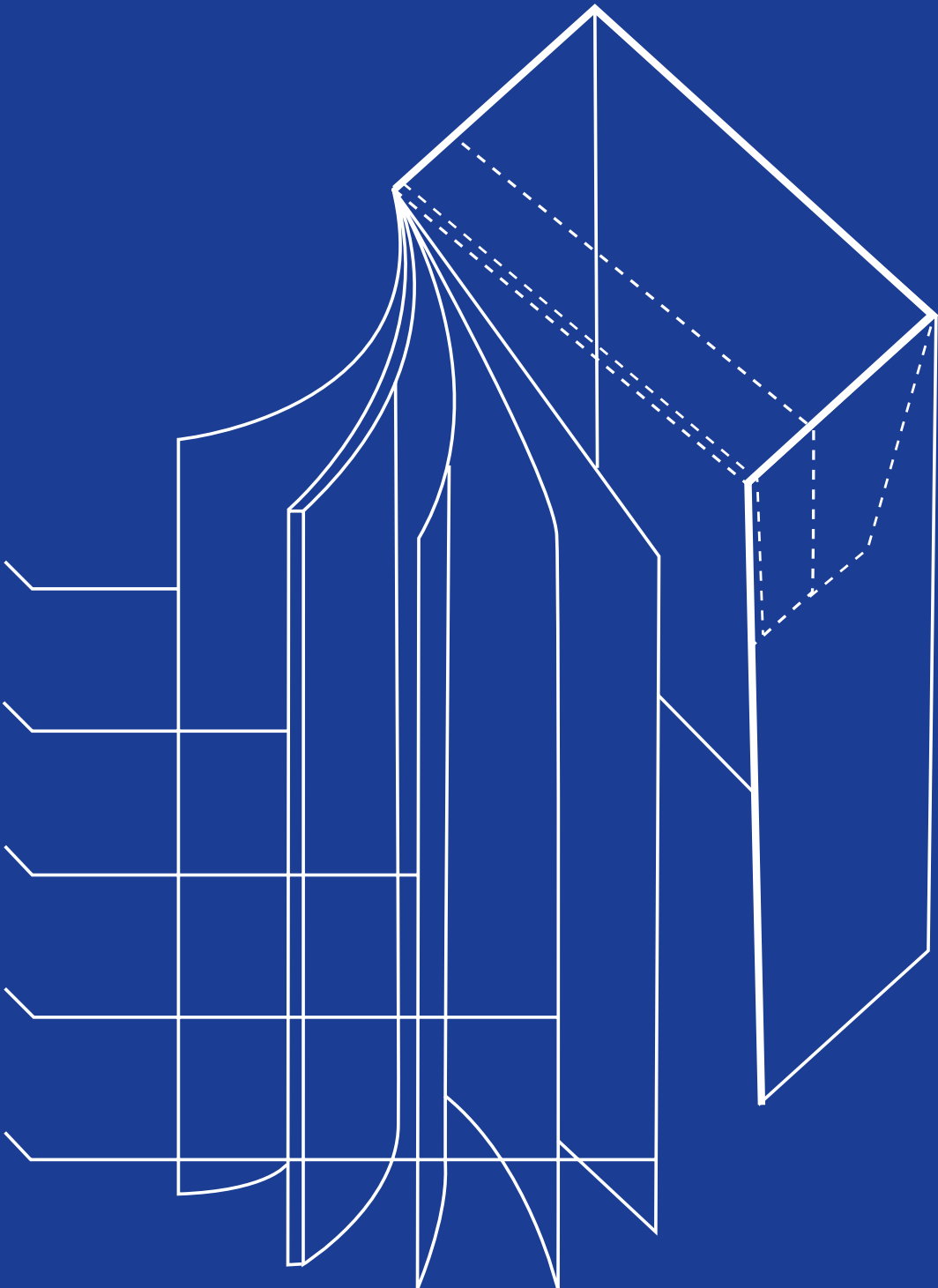
outer polypropylene coating

cardboard

middle polypropylene coating

aluminium

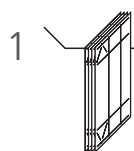
inner polypropylene coating



Simple, reliable and economical – proven technology, plus many years of experience, are combined in *combisafe* filling machines, to create a novel solution.

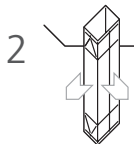


Technology that's hard to beat.



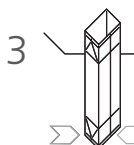
1 Sleeve magazine

The magazine holds the sleeves. It is filled by the machine operator or the optional CAM module



2 Removing and forming sleeves

Sleeves are removed one at a time by suction devices; each is then formed into a square and pushed onto a mandrel, ensuring that the guide that makes the base is stable.



3 Activating the bottom

Areas of the packaging base to be sealed are activated by hot air at two stations.



4 Folding the bottom

While the mandrel wheel carries the sleeve to the bottom-pressing station, the bottom of the package is formed by rotating diagonal folds and a longitudinal fold.



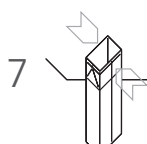
5 Bottom-pressing station

The bottom-pressing stamp and the front end of the mandrel completely press and seal the package bottom. This also creates the unique patented concave-shaped bottom, which makes the package especially stable.



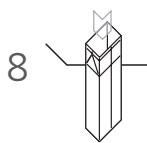
6 Transfer station

The package is pulled off the mandrel and inserted into a cell that transports it along subsequent stations in the chain section, up to the off-conveyor.



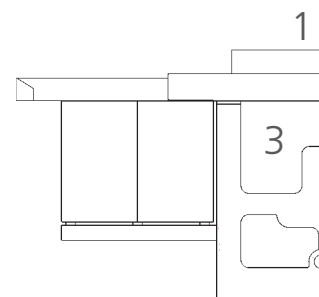
7 Prefolding the top

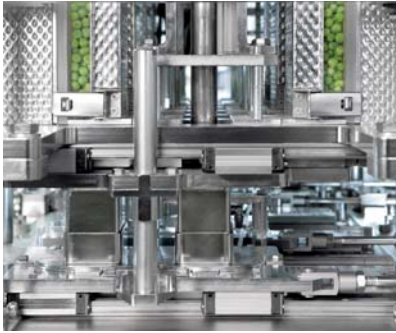
The top is folded precisely along its grooves, ensuring a perfect closure after filling.



8 Filling area

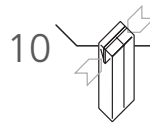
The filling area comprises the product feeder (8a) and dosing area (8b). Filling is done in several stages: Three stages can be chosen and combined. In the first stage, products that can be pumped are filled, while the second deals with pourable products. In the third stage, the package is topped up with an infusion that, depending on product, can range from pure water to tomato sauce. This filling process is not sterile; sterilisation takes place later, in the autoclave.





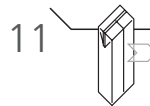
9 Ultrasonically sealing the top

The package top is folded using ultrasonic equipment and sealed above the content level. Before sealing, the package is injected with steam so that the space above the contents is reduced to a minimum after cooling. A nitrogen injection is available as an option.



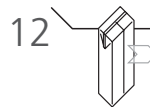
10 Top-forming station

The polypropylene is heated by hot air at the top triangles and on the narrow side of the package; then the top triangles are folded down and attached to the package.



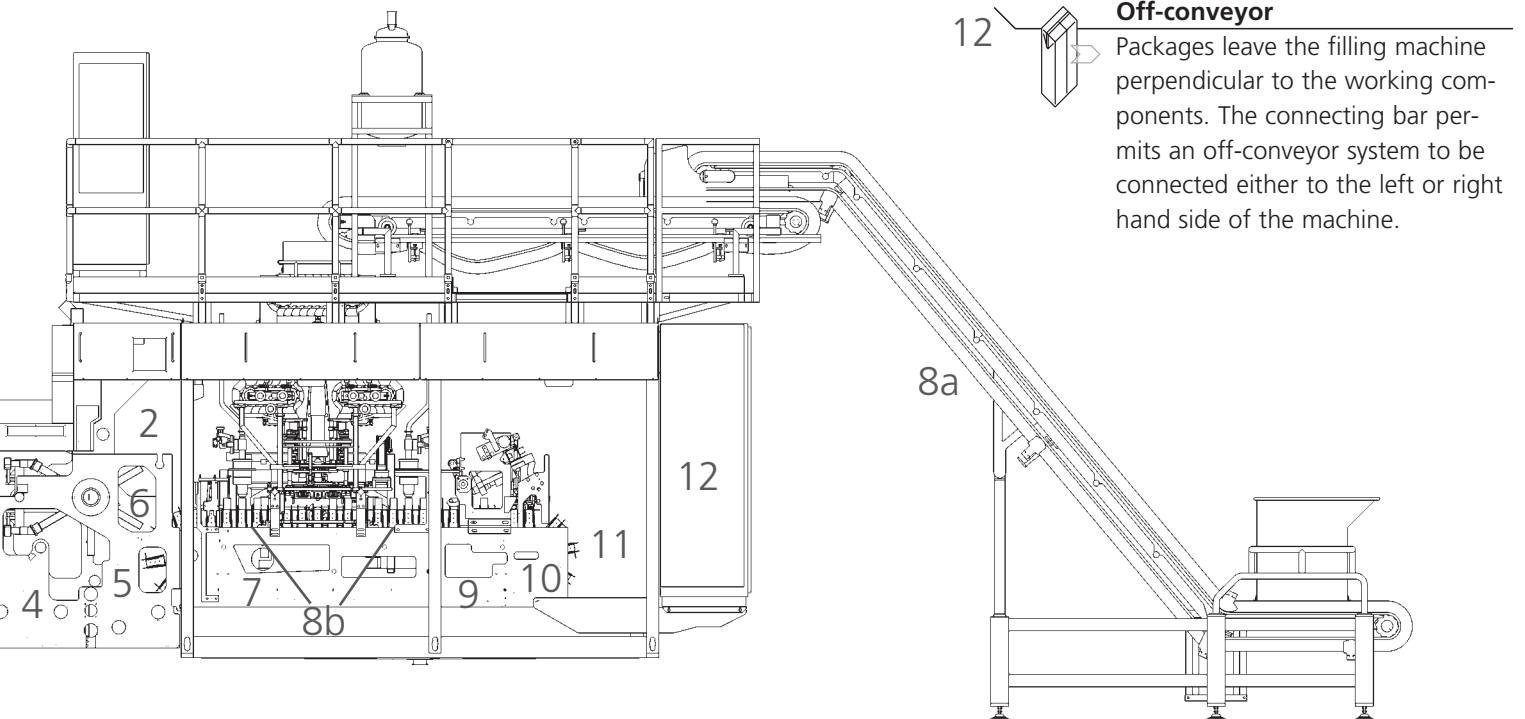
11 Ejector and discharge station

The package is ejected from the cell, raised and placed on the off-conveyor.

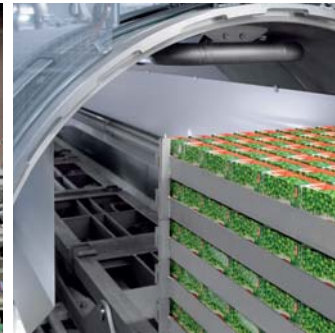


12 Off-conveyor

Packages leave the filling machine perpendicular to the working components. The connecting bar permits an off-conveyor system to be connected either to the left or right hand side of the machine.

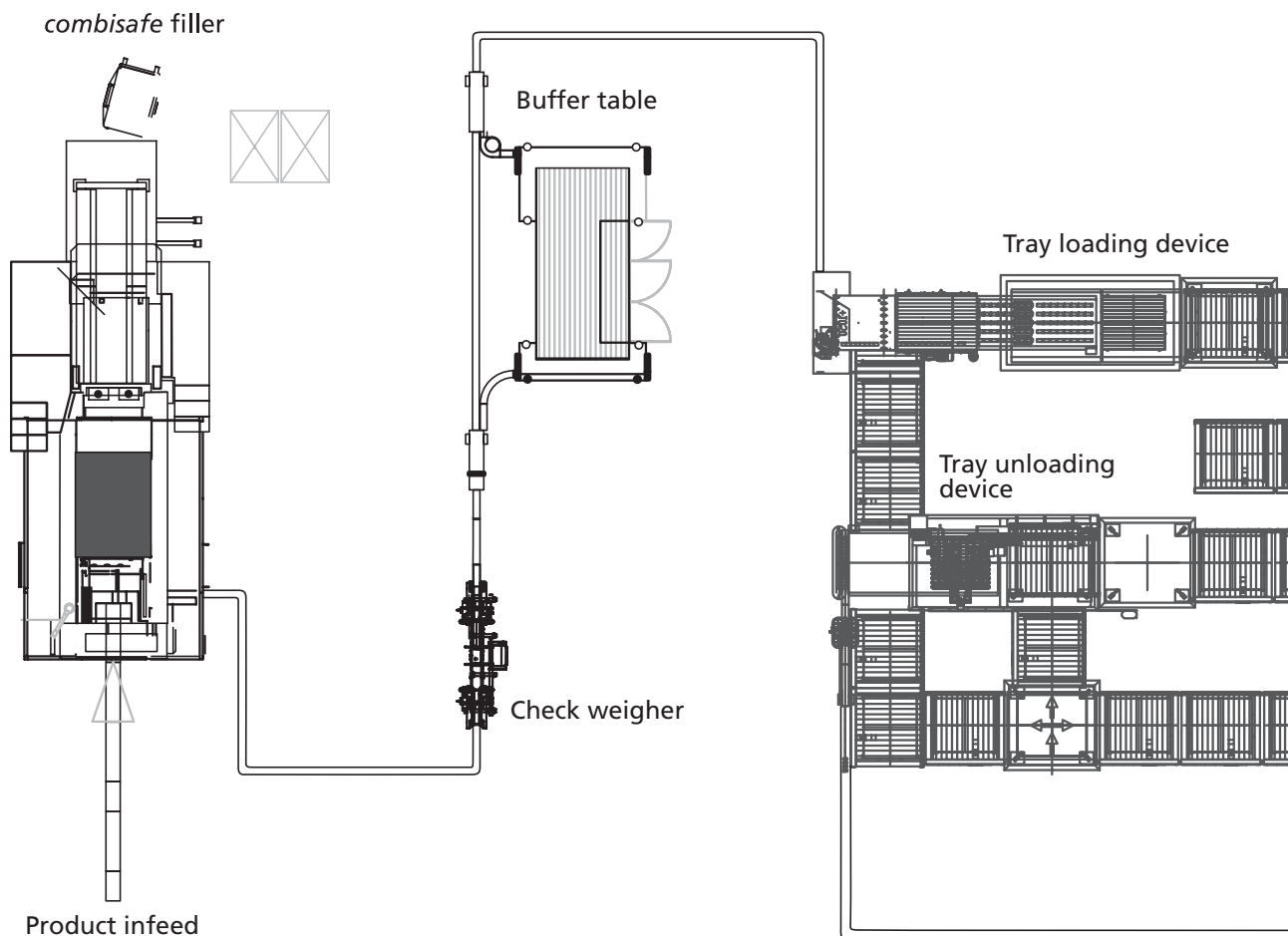


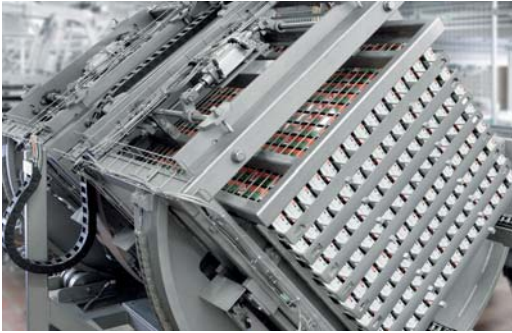
The *combisafe* packaging assembly line flawlessly manufactures hygienic products that have a long shelf life. The compact layout of the components just need 500 m² for an output of 12,000 packages per hour.



Non-stop success.

Perfect interaction.
The *combisafe* filling line.

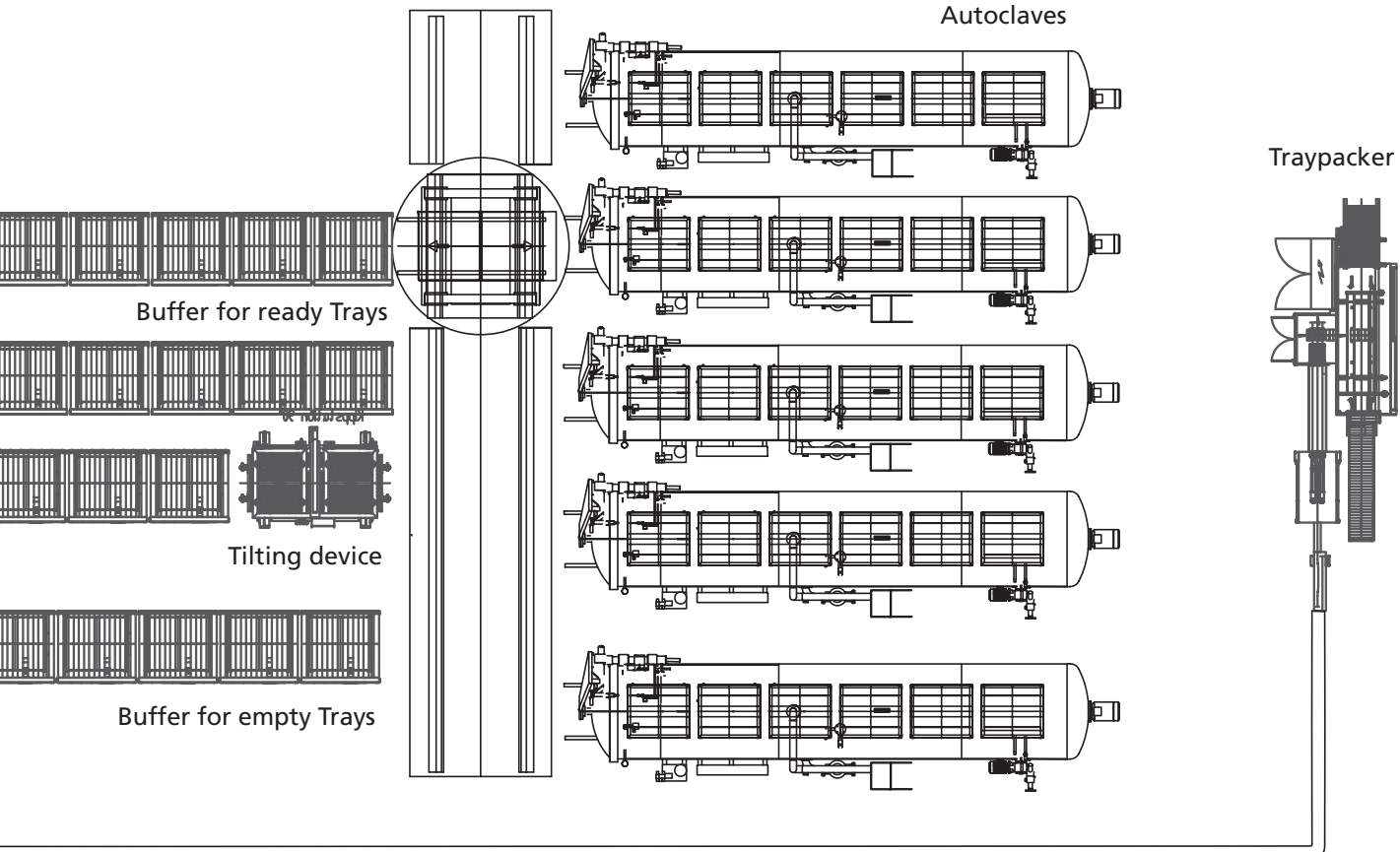


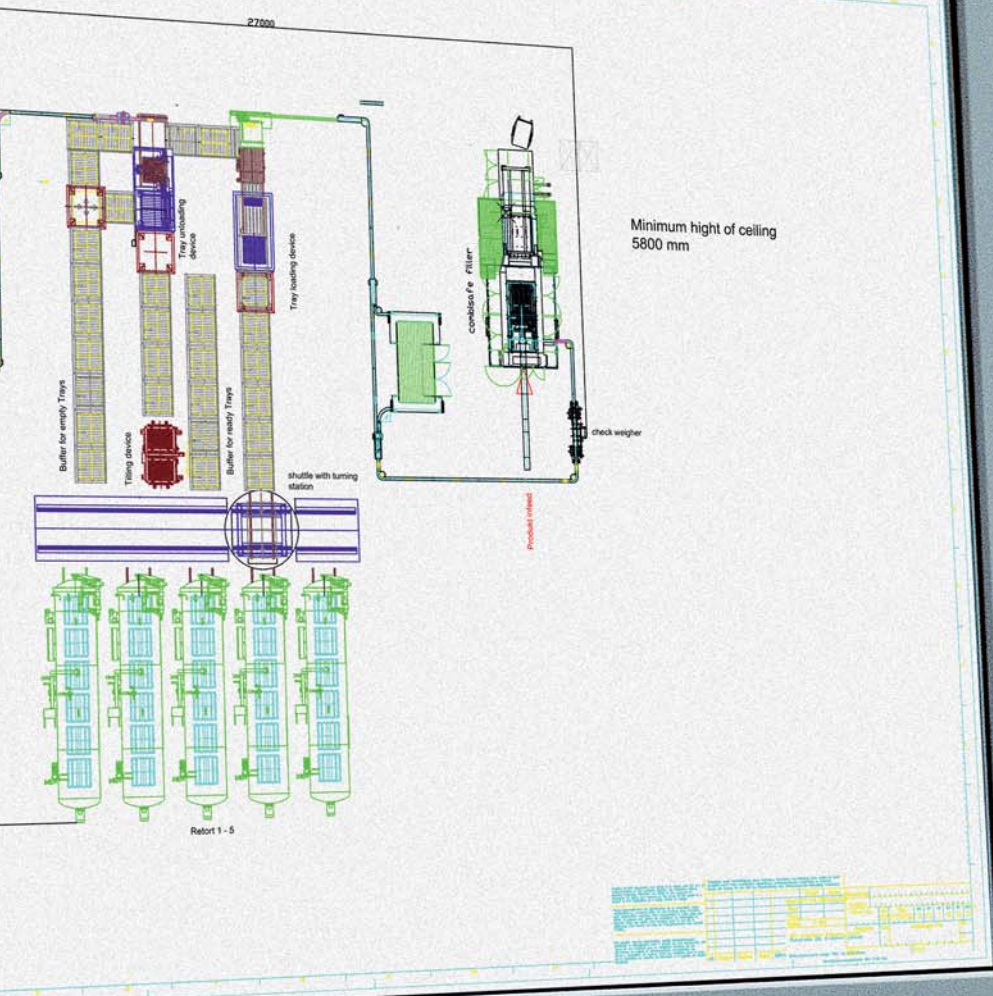


Shuttle with turning station

Autoclaves

Traypacker





EXIT CONTROL ADJUST NEXT/INPUT RESET



To make sure that everything runs smoothly, we support every customer with our experience and first-class service.



All-round superior advice.

Everything from a single source.

The *combisafe* complete system

At SIG Combibloc, we offer our customers the complete service – from planning to production to marketing. We stay with you, during each phase in the process. SIG Combibloc will rapidly, reliably and expertly meet all your requirements for the filling process.

Closer to the consumer.

Market analysis and observation

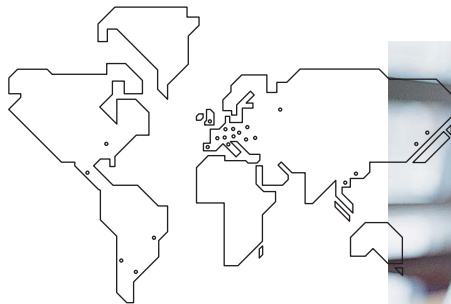
As a global enterprise, we know about international markets – and we support our customers not just with a complete packaging system. We also supply information on trends and developments in the packaging marketplace.

In product development, too, we are here to help with innovative packaging solutions – we even run experimental fillings.

To judge the future market success of a packaging system, we conduct regular surveys with core target groups for specific products.

Through all these comprehensive services, we offer a packaging and filling machine solution that is tailored to the needs of each manufacturer.

Find out right away how you can benefit from *combisafe*.
Send us an e-mail or fax. Or better still – give us a call!



The direct connection.

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