



Your product. Your packaging. Your future.

Beverages in *combibloc* and *combifit*



SIG Combibloc

You want the best for your products. We do too.

Every day, millions of people all over the world buy food and beverages packaged in *combibloc* and *combifit* carton packs from SIG Combibloc. They are making a great choice, because in our carton packs, foods and beverages are perfectly protected and retain their high quality. If left unopened, drinks in *combibloc* and *combifit* can be stored for prolonged periods without refrigeration. And because the carton is lightweight, unbreakable and easy to transport, beverages packaged in carton packs are enormously convenient – at home or on the go.

In this brochure, we will show you how we can help you package your beverages to make them sell well, and bring in a healthy profit – today, and tomorrow. Especially in view of changing trends and dynamic consumer behaviour, aspects such as consistently high product quality, modern design and market-oriented flexibility play a key role. And for today and tomorrow, the environmental performance of a packaging is an important criterion for any product that hopes to survive in the competitive environment. In this respect, carton packs lead the way, as they are among the most environmentally friendly packaging forms there is for long-life foods.

The filling machine system from SIG Combibloc offers low overall system costs, flexible carton filling options, high performance and low wastage rates. Technologically cutting-edge and designed with the future in mind, it helps your bottom line to continue to look good.

Markus Boehm
CMO SIG Combibloc



Welcome to SIG Combibloc

SIG Combibloc supports its customers with more than 35 years of experience in the field of filling food and beverages in aseptic carton packs. Part of the Rank Group of New Zealand, the company is one of the world's leading systems manufacturers of carton packs and filling machines for foods and beverages. Worldwide, more than 4,600 employees are involved in looking after our customers. Packaging plants and offices in more than 40 countries enable us to be quickly on the spot, systematically develop optimal solutions, and work with our customers to implement them.

P. 8: It has to sell – today, and tomorrow

For food and beverage manufacturers, it is essential to create products that sell. Premium quality beverages that are on trend have the potential to do this. The packaging you use can play a key role in sales success, if it protects the product, is practical and attractive, and ticks all the 'green' boxes as well.

P. 12: Design sells

No matter how good the quality is, a product will only sell if consumers notice it in the first place. With an attractive package design that fits the product, catches the consumer's eye and matches the tastes of the target audience, a product concept can become an all-round success. Our *combibloc* and *combifit* carton packs, with their four sides fully useable for the package design, are the ideal ambassador for your brands and products.

P. 18: 'Green' sells

Without sustainable manufacturing processes and products today, there can be no sales success tomorrow. Certified, traceable and originating from responsible cultivation: what many people expect from the food they buy is also true for our beverage cartons. All our production sites and sales organisations worldwide are FSC®-certified. We manufacture our carton packs using only wood fibres originating from controlled, responsibly managed sources. It is wonderful when product and packaging go together so perfectly!

P. 10: Quality sells

For a product to sell well, the quality has to be right. With their special composite structure and the properties this provides, cartons are the perfect packaging to preserve this quality. The flavours, colours, nutrients and vitamins in foods are perfectly protected in a carton pack. These characteristics, along with the gentle aseptic technique used to process the product, are the reason why beverages filled in carton packs retain their high quality and will keep for a prolonged period – without refrigeration and with no preservatives.

P. 14: Convenience sells

Make it really convenient, please! When it comes to the retail market and consumers, packaging just cannot be practical enough. Our carton packs tick all the boxes when it comes to making the consumer's everyday life easier: lightweight and easy to handle, space-saving, stackable, unbreakable, and with opening solutions and closures, very convenient.

P. 22: Be able to do today, what will be needed tomorrow

In the fast-moving beverage industry, it is essential to start preparing for the future today. First and foremost, this means being flexible and being able to use your packaging system to make changes to the product portfolio quickly and cost-effectively, while maintaining high production efficiency and competitive manufacturing costs. With the unique format, volume, decor and product flexibility of the packaging system for *combibloc* and *combifit*, you can really make your mark.



P. 28: It has to make a profit – today, and tomorrow

Your products have to do more than just keep selling; they also have to make a good financial return. Efficiency and flexibility are the key factors for cost-effective beverage manufacture that will take you into the future. With the filling machines for *combibloc* and *combifit*, you get both in a single package.

P. 30: Count on our efficiency

You cannot judge the performance of your equipment by its speed alone. The correlation between speed and actual output is the measure of the cost-effectiveness of an overall system. High-performance filling machines from SIG Combibloc, with long lifespans, high speed and consistently low wastage rates, are second to none.

P. 34: Count on our flexibility

It pays to be flexible. For our customers all over the world, we have put together an unrivalled package of flexible options. Alongside a raft of different packaging solutions, the format, volume, product and decor flexibility of our filling machines enables food and beverage manufacturers to keep production extremely flexible and cost-effective.

**P. 40: At a glance:
our filling system,
your peace of mind**

**P. 42: At a glance:
our portfolio, your options**

It has to sell – today, and tomorrow

The packaging has to do more than convey your product safely from the filling plant to the consumer's table. It should help sell your product.

No question: If it does not taste good, it will not make a second appearance in the shopping basket. So first and foremost, the quality has to be right. Filling processes and packaging solutions that are gentle on the product really help to protect the high quality of your beverages and ensure consistent great taste.

But no matter how great the product tastes, it will not sell if it gets lost in the multitude of products on offer and consumers just do not notice it. So if you want your product to sell, it must not only hit the spot in terms of flavour and quality – it also needs to be visually attractive to consumers. The design and look of the packaging is one of the keys to reaching consumers, grabbing their attention and engaging them.

Just as crucial is how easy your product is to handle. To sell well, packages have to be convenient to use – both at home and when out and about. And they have to be easy on the environment and stand for responsible, sustainable consumption.

The choice of a packaging system for your products is an investment in the future – an investment in the sales success of tomorrow. Alongside efficiency, robustness and longevity, flexibility is a crucial parameter for a future-proof filling plant. The unique format, volume, decor and product flexibility of the SIG Combibloc packaging system enables you to introduce changes quickly and cost-effectively, giving you new options for your product portfolio.





Quality sells

A good packaging fulfills a number of functions. One of the most important jobs of any packaging is protecting the food and, linked to this, safeguarding the quality of the product. Quality refers here not only to the first-class taste and the appetising appearance of a beverage. Quality is also determined to a significant degree by the nutrient and vitamin content.

In this respect, our aseptic carton packs really come into their own. In *combibloc* and *combifit*, beverages are hygienically and securely protected from light and air, and therefore the flavour, aroma, colour, nutrients and vitamins in the products are retained over an extended period – even without refrigeration and with no preservatives.

The aseptic filling process and the special composite structure of the carton are important conditions for safeguarding product quality. The carton pack is composed primarily of raw paperboard and polymers. At around 75 per cent, cardboard is the main material, and gives the package its stability. The inner polymer layers form

a liquid barrier for the beverage; the outer layer keeps moisture out. Added to this is a razor-thin aluminium layer, which protects the food from light, oxygen and external odours.

Each year, SIG Combibloc's production plants manufacture packaging material for more than 20 billion carton packs. Our customers receive the packaging material as flat pre-fabricated sleeves, printed with the required design, precisely marked with fold lines and pre-sealed. This means we have already sealed the longitudinal seam: a production step you do not need to worry about and additional aseptic safety for you.

At our customers' premises, each carton pack is shaped and the base sealed inside the SIG Combibloc filling machines. The product, which has already been sterilised using UHT equipment, is then filled into the sterilised carton packs in the aseptic zone of the filling machine. After the filling process, the cartons are ultrasonically sealed above the fill level, and not through the product. This too has crucial benefits for protecting the food and its quality, as it prevents product ingredients from getting caught in the sealed seam. Once the carton pack has been sealed, optional closures may be applied to the packaging externally – another plus for aseptic safety.

Design sells

Offering top-quality foods is an essential requirement for engaging consumers on a sustained basis. But by itself, quality does not turn a product into a bestseller. A product can be transformed into a sought-after commodity by attractive and functional packaging that goes with the item, catches the consumer's eye and is in line with the tastes of the target audience.

Particularly when it comes to the possibilities for packaging design, carton packs are clearly ahead of other packaging forms. Rather than narrow labels

or banderoles, our *combibloc* and *combifit* carton packs have fully printable display surfaces, giving plenty of space for your branding and artwork. The four sides, all fully useable for the package design, are perfect not only for conveying information, but also for attracting consumers' attention, communicating with them, and making a positive impression on them.

With our experience, we support you in turning your products into top-sellers through perfectly designed packaging. Because packaging is much more than just a protective casing or a simple shipping unit. It is

your brand spokesperson at the point of sale. With our *combibloc* and *combifit* carton packs, you have maximum room for your branding.

The right printing technique will really emphasise your design. At SIG Combibloc, we mainly use the high-quality gravure printing system. With this process, the cardboard is printed with up to six colours. The printing technology gives vibrant colours and makes it possible to create innovative visual effects.

Convenience sells

Make it really convenient, please! When it comes to the retail market and consumers, packaging just cannot be practical enough. Consumers are looking for easy and convenient handling in everyday use. For retailers, what also counts is criteria such as space-saving logistics and long life without refrigeration.

With *combibloc* and *combifit*, your products are always conveniently packaged. The cartons are lightweight, unbreakable, easy to stack and can be transported securely. The closures and perforations, specially developed to make opening easier, make SIG Combibloc carton packs convenient and handy to use – the perfect answer to consumers' demand for convenience.

The right turn: single action

When it comes to closures, SIG Combibloc is the global pioneer. In 1993, we launched the world's first closure on an aseptic carton pack. Since then, numerous handy opening solutions made from high-grade, recyclable plastics have been added to our range. Examples of these are the modern *combiSmart* and *combiSwift* screw caps, which can be opened effortlessly with a single twist.

Lightweight and easy to open: *combiSwift*

The *combiSwift* screw cap can be applied to various *combibloc* and *combifit* carton packs. With an overall height of 12.6 mm and weighing just 2.7 grammes, the closure is exceptionally lightweight, and extremely easy to open. The convenient opening behaviour is due to the closure being applied over a laminated hole punched in the cardboard layer, and on first opening it needs to pierce only razor-thin layers of aluminium and polymer. To make this technique work, holes of the correct size are punched in the unprocessed cardboard at the SIG Combibloc production plants, and these holes are then laminated with aluminium and polymers.

At our customers' premises, after the product has been aseptically filled and the carton sealed inside the filling machine, the three-part closure is applied to the beverage carton from the outside. It consists of a flange with integrated cutting ring and screw cap. The ring integrated into the flange slices through the thin layers cleanly and effortlessly with a single twist.



**Small and convenient:
combiSmart**

Small, handy and unbreakable carton packs that are fitted with the combiSmart screw cap are hugely practical for pouring out products such as evaporated milk or cream. The products can be measured out cleanly and accurately.

And when you are on the move, handy carton packs with combiSmart are the perfect companion: they are ideal for drinking directly from the package when you are on the go. After you have taken a sip, the carton pack can be tightly reclosed and securely carried around with you.

The three-part combiSmart consists of a flange, integrated cutting ring and a screw cap. After the aseptic filling

process has taken place, the closure is applied to the sealed carton pack using an applicator. There is no need to pre-perforate the cardboard – the cutting ring in the flange effortlessly slices through the laminated cardboard with a single twist.

The little combiSmart screw cap has a special plus: 'wings' on the sides, which add to the cap's positive opening characteristics. The wings make it easy to grip and turn the cap. The integrity of three tiny bars on the outer edge of the closure provides a visible indication that the packaging still has its original seal.





'Green' sells

Without sustainable manufacturing processes and products today, there can be no sales success tomorrow. This also applies to the packaging that is selected to protect, distribute and market the products inside. With the packaging system you choose, you as a beverage manufacturer can have a hand in improving the environmental performance of your products and processes.

The *combibloc* and *combifit* carton packs, which together with the SIG Combibloc closures are fully recyclable and are suitable for all local and national recycling and waste management options, have been proven to be among the most environmentally friendly packaging forms for long-life foods and beverages.

A Europe-wide, independently verified and ISO-compliant life-cycle assessment conducted in 2011 has shown that the carton pack has the best environmental performance

in virtually all environmental impact categories. The Institute for Energy and Environmental Research (IFEU) compared disposable PET and glass bottles and carton packs for non-carbonated soft drinks. The study sees the material and the quantity of material used as primary factors in determining what impacts a packaging has on the environment during its product life-cycle. In all three packaging sizes evaluated (200–250 ml, 1,000 ml and 1,500 ml), the carton shows significant benefits in the key categories 'CO₂ emissions/climate change' (up to 64% compared to PET) and 'Fossil resource consumption' (up to 75% compared to PET). The reasons for this are, primarily, the low weight of the packaging and the resource-efficient application of the materials used. In the manufacture of the raw paperboard, moreover, up to 90% renewable energy is used.

Renewable, certified and originating from responsible forestry

For food and beverage manufacturers, it is a given that many of the ingredients for their products come from controlled cultivation and can be traced back to their source. And what applies for the valuable products packaged in our carton packs is also true for *combibloc* and *combifit*: Our carton packs are manufactured using only wood fibres from controlled, responsibly managed forests. It is wonderful when product and packaging go together so perfectly.

To ensure that all the wood fibres originate from controlled, responsibly managed forests, we have had our production sites and sales organisations worldwide certified in accordance with the internationally binding criteria of the Forest Stewardship Council® (FSC®) for a continuous product chain of custody. All our suppliers of raw paperboard are also certified in line with the

FSC's chain of custody standard. This means we are able to offer our customers worldwide carton packs displaying the FSC label. The label guarantees that appropriate quantities of wood originating from responsibly managed, FSC-certified forests were used to manufacture the raw paperboard.

Treating valuable resources with care

We have already developed and launched product ideas that can be even more effective in helping you reduce the impact your products have on the environment. One example of this is the *combibloc EcoPlus*. This is an aseptic carton which, thanks to a special new cardboard composite, generates 28 per cent less CO₂ compared to the 1-litre *combibloc Slimline* carton pack of the same format. In the *combibloc EcoPlus*, the content of wood pulp, obtained from the renewable raw material wood, is more than 80 per cent.



Be able to do today, what will be needed tomorrow

When it comes to using a packaging system which enables you to make changes to your product portfolio, now and in the future, flexibility is what you need. The filling machine system from SIG Combibloc gives you a vast range of options to offer existing and new products in modern and practical packages – quickly, safely, very efficiently, and cost-effectively as well.



One machine – two formats

Using a single filling machine, it is possible to fill carton packs in *combibloc* and *combifit* formats if the formats have the same base dimensions. And this can be done in a range of different volumes and with any design required. This enables you to position products optimally, in exactly the right way to suit the market and the target group in each case.

For instance: you want to differentiate your range of 100% juices from your range of juice drinks? With *combibloc* and *combifit*, you have the perfect solution. Both formats can be filled on the same machine, and your two product categories will be clearly differentiated.

With the flexible filling machines from SIG Combibloc, switching the format from *combibloc* to *combifit* and vice versa takes no time at all.



One machine – volume change in an instant

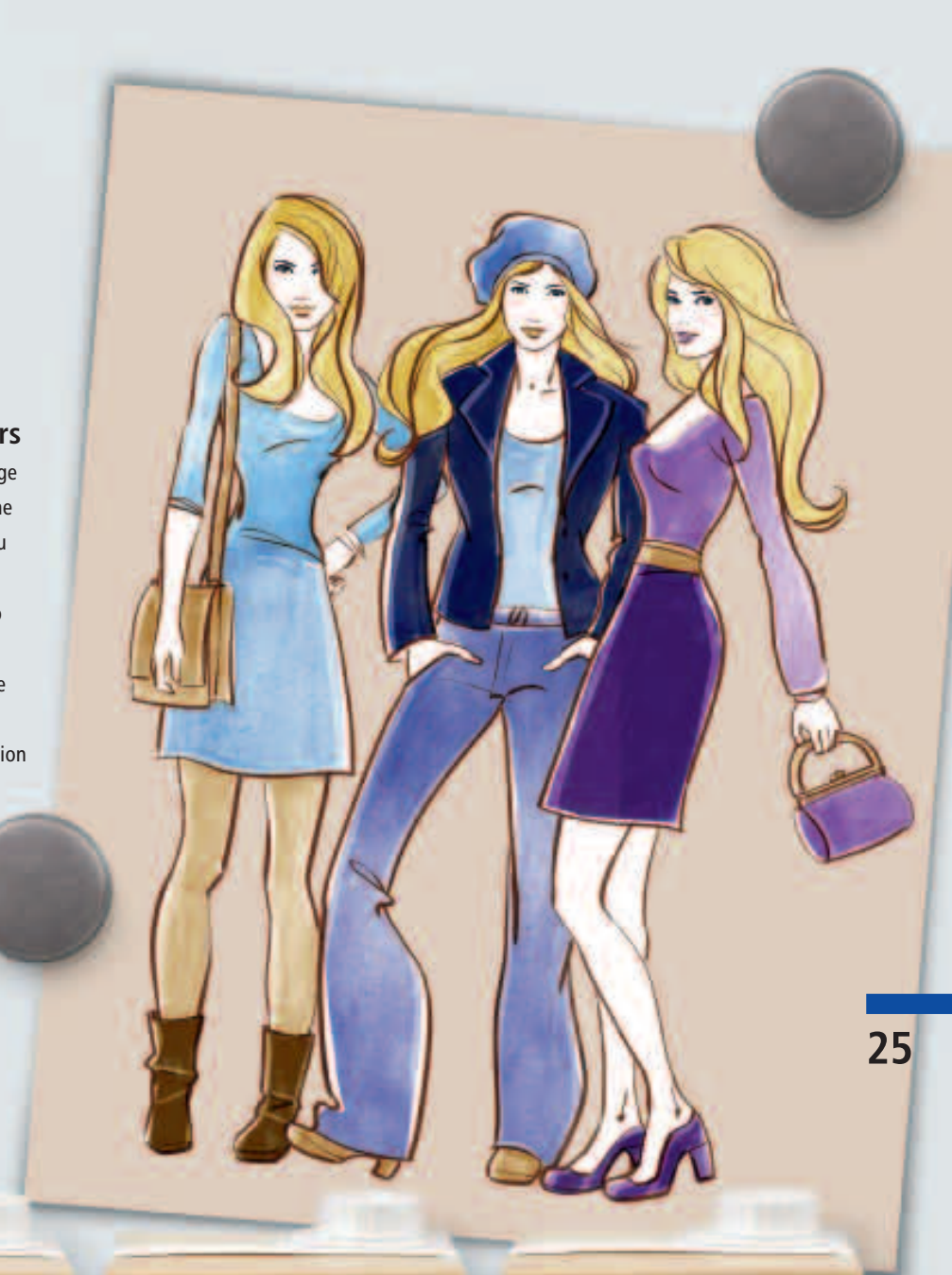
For all *combibloc* and *combifit* formats with the same base dimensions, switching between different fill volumes takes just a few minutes. The rapid volume change offers a whole raft of possibilities for positioning products so that they are tailored to specific target groups. With a single filling machine, up to seven different volumes can be filled.

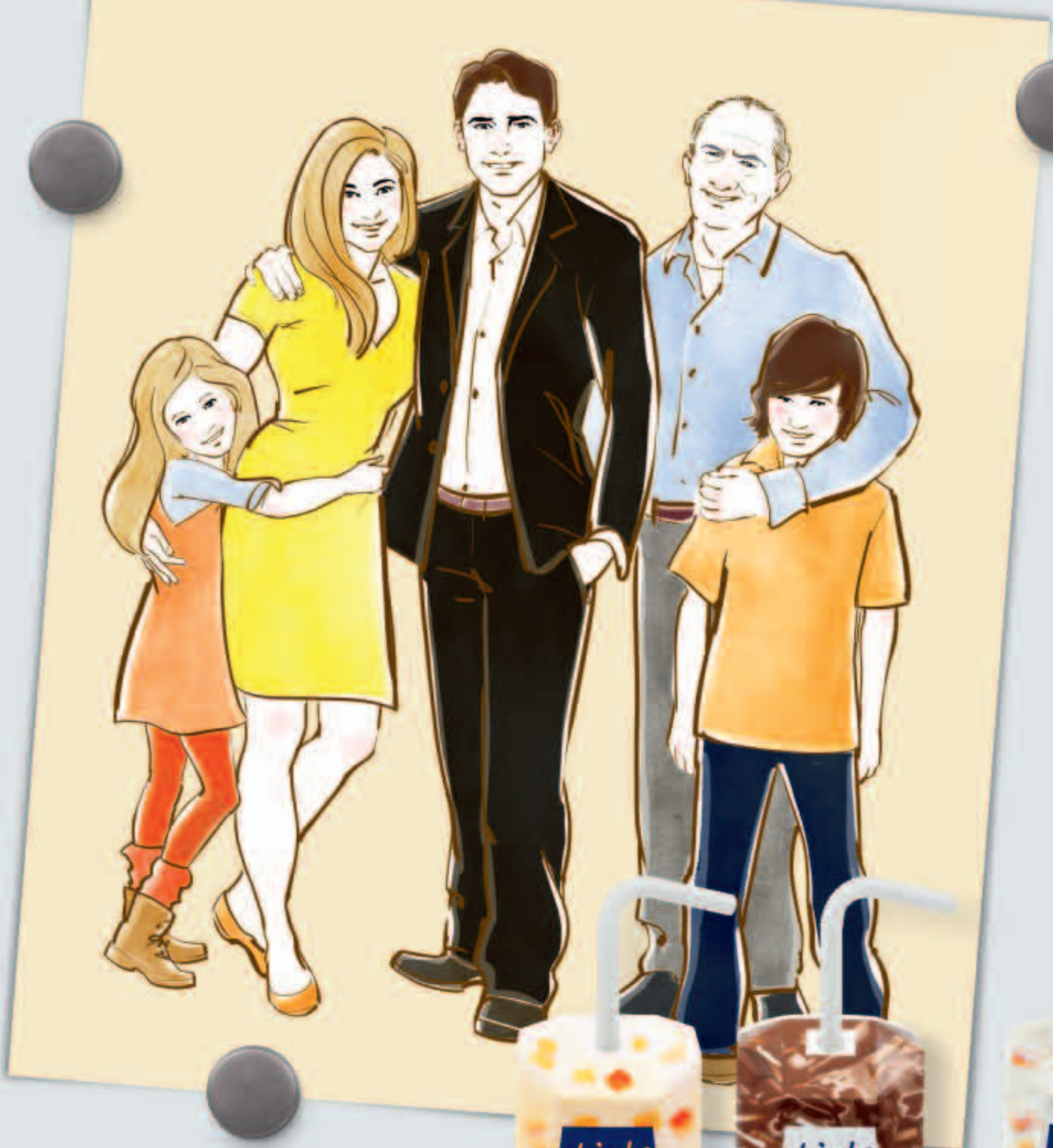
An example: two age groups, two formulations, two volumes. A top-selling milk mix drink for children, with a special formulation and a volume matched to the age group, is supplemented with a variant for teenagers, requiring a carton pack that holds more product. Or think perhaps of special seasonal products or functional premium drinks that are normally consumed in smaller quantities than conventional juice classics or milk. With the flexibility of the *combibloc* and *combifit* filling machines, you have total control when it comes to determining the right format and the ideal volume for each product.



One machine – any number of decors

With the filling machines from SIG Combibloc, a change of design can be implemented without interrupting the production process and with no wastage at all. All you need to do is switch the carton sleeves in the filling machine magazine. This flexibility makes it possible to fill a product in carton packs with a range of different designs, for instance, for various brands or for a range of language versions for different regions. This means maximum accuracy of fit for the markets and distribution channels you will be dealing with in each case.





One machine – unique product flexibility

The filling flexibility of machines from SIG Combibloc makes it possible to fill a huge variety of products. Using the SIG Combibloc filling machines for non-carbonated soft drinks (NCSD) and liquid dairy products, low-viscosity products and more viscous products such as smoothies or dessert sauces can be filled.

And there is more: products with 'perceptible' added benefits, for instance, in the form of pieces of real fruit, vegetables or cereal grains, are also perfectly feasible – and they can be filled using standard filling machines. This innovation is based on the drinksplus concept from SIG Combibloc, a system that opens up rapid and cost-

effective entry to new product categories that are right in line with the prevailing 'Health and Wellness' trend. Beverages containing up to ten per cent natural pieces can be aseptically filled in carton packs. The drinking straws for drinksplus can have a diameter of more than seven millimetres, so the new products can be conveniently drunk straight from the carton pack. These innovative drinks containing natural bits thus create a completely new drinking experience.

This offers you as a manufacturer clear additional benefits that you can exploit to take advantage of new market opportunities. The filling flexibility offered by SIG Combibloc enables you to launch innovative beverage concepts without the need to invest in new filling machines.



It has to make a profit – today, and tomorrow



Food and beverage manufacturers face significant challenges when it comes to positioning themselves for long-term success in a dynamic industry with steadily increasing competition and growing internationalisation and consolidation. Identifying trends and bringing out appropriate, value-added products is one of these challenges. But it is also essential to keep system costs under control and to manage your business in such a way that, ultimately, it makes a profit – today, and tomorrow.

As a beverage manufacturer, you need high-performance equipment that is robust, flexible and efficient, and at the same time offers competitive system costs. In light of this,

for us as a systems manufacturer of carton packs and filling machines, one of our top priorities when developing new machine systems is reducing the overall system costs per manufactured unit.

The filling machines for *combibloc* and *combifit* are dependable mainstays in day-to-day production that can make an important contribution to your market success because high quality, high flexibility and high output are paired with low investment and low system costs. In all format sizes, speed and flexibility are not mutually exclusive – another profitable benefit for you.

Count on our efficiency

Above all, a packaging system that is intended to be profitable over the long term has to be efficient. When developing our high speed filling machines, we focus on high performance and low overall system costs.

In the large-size format, our machines are impressive enough, filling 9,000 carton packs per hour. In the medium-size format, our ultra-modern filling machines achieve an output of up to 12,000 carton packs per hour. And for small carton sizes, we have developed two high-speed filling machines, the CFA 124 and CFA 724, which are capable of filling 24,000 packs per hour.

This speed, combined with unrivalled low wastage rates and unique flexibility in format, volume, decor and products, will definitely pay off. Thanks to their robust, well-engineered construction, you can be sure that the machines will continue to run reliably for many years.

Fast and efficient

But the speed of a filling machine is not the sole determining factor in the overall efficiency of the filling line. The actual output quantities are what really counts, and closely linked to this, the real wastage rates. The correlation between speed and output is the measure of

the equipment's operating efficiency. In this respect, on one hand it is important to comply with stringent quality standards as far as the products are concerned. On the other hand, alongside greater speed, it is crucial to keep wastage as low as possible and maintain continuous, robust, smooth production – and this needs to be sustained over a long lifespan.

Against this background, the filling machine should be viewed not as a stand-alone unit but as part of a system of integrated components that must be precisely matched to one another in order to work with maximum efficiency. The operating costs of the overall system have to be factored into the equation to be able to determine its profitability as a whole. With high speeds, consistently low wastage and a long lifespan, filling machines from SIG Combibloc really set the standard. The same applies for the applicators we manufacture to apply closures and to shape the *combifit* carton packs, which are part of our scope of supply. Furthermore, we are on hand to advise our customers in the selection of all other filling line components, to ensure everything is perfectly harmonised, guaranteeing a high level of efficiency in the entire production and filling process.





Our service for your efficiency

To make sure your production processes run smoothly and efficiently, we give you a wide-ranging service offer. With our experienced Technical Services Team, a network of experts located right around the globe, we support our customers from the beginning as part of a close, reliable and tailored partnership: from installation and commissioning to support with production, plant maintenance and a spare parts service, through to technical upgrades for the installed filling machines.

Our services ensure that right from the outset, you are assured of a reliable, efficient start to production, that the filling lines run continuously with a high level of efficiency, and that you get the best out of the equipment installed at your premises. So you can take full advantage of all the benefits of the filling machine system from SIG Combibloc, and continue to grow your profits tomorrow as well.

Our service philosophy goes beyond just technical support with the installation and operation of the filling machines that you as a customer would expect as a mat-

ter of course. Our service portfolio is supplemented by a comprehensive range of added-value services providing an individual package of services for every customer, covering the entire lifetime of the filling equipment.

Because we know that there is nothing that cannot be done even better, we offer our customers targeted services that directly contribute to the improvement of SIG Combibloc's machines and further training offers for employees who are already familiar with the SIG Combibloc packaging system and are now being given more detailed training in specific areas.

Our Operational Excellence Consulting has the goal of improving performance and thus reducing production costs. This is an area in which we let our many years of experience with production processes for our international customers and best-practice examples play their part. From these, we develop individual ideas and solutions so as to increase efficiency in our customers' plants even further.

Count on our flexibility

In order to ensure that an investment you make today continues to bring in a profit tomorrow, you need to be able to build flexibility into your corporate planning strategy. With the carton packs and the filling machine system from SIG Combibloc, we have put together a package of flexible options that is unequalled worldwide. In addition to a multitude of different packaging solutions, we also offer you unrivalled flexibility in terms of format, volumes

and products – a versatile system that can be quickly modified, enabling you to keep your production processes flexible and cost-efficient.

The carton decor can be switched without interrupting the production process and without any wastage. Simply insert the required carton sleeves into the filling machine magazine – and you are done.

One machine – two formats

Need a change in format? No problem with the filling machines from SIG Combibloc. The aseptic filling process is exactly the same for *combibloc* and *combifit* – all that needs to be done is change over the carton sleeves in the filling machine magazine. The carton sleeves for different formats are marked with specific crease patterns, which give each carton its particular shape. The switch between

a *combibloc* and a *combifit* format with the same base dimensions takes just a few minutes. No machine parts need to be replaced. The *combifit* carton packs are shaped into their final form, and optional closures are applied, only after the aseptic filling process has taken place and the carton pack has been sealed.

combifit ← → *combibloc*





One machine – a range of volumes

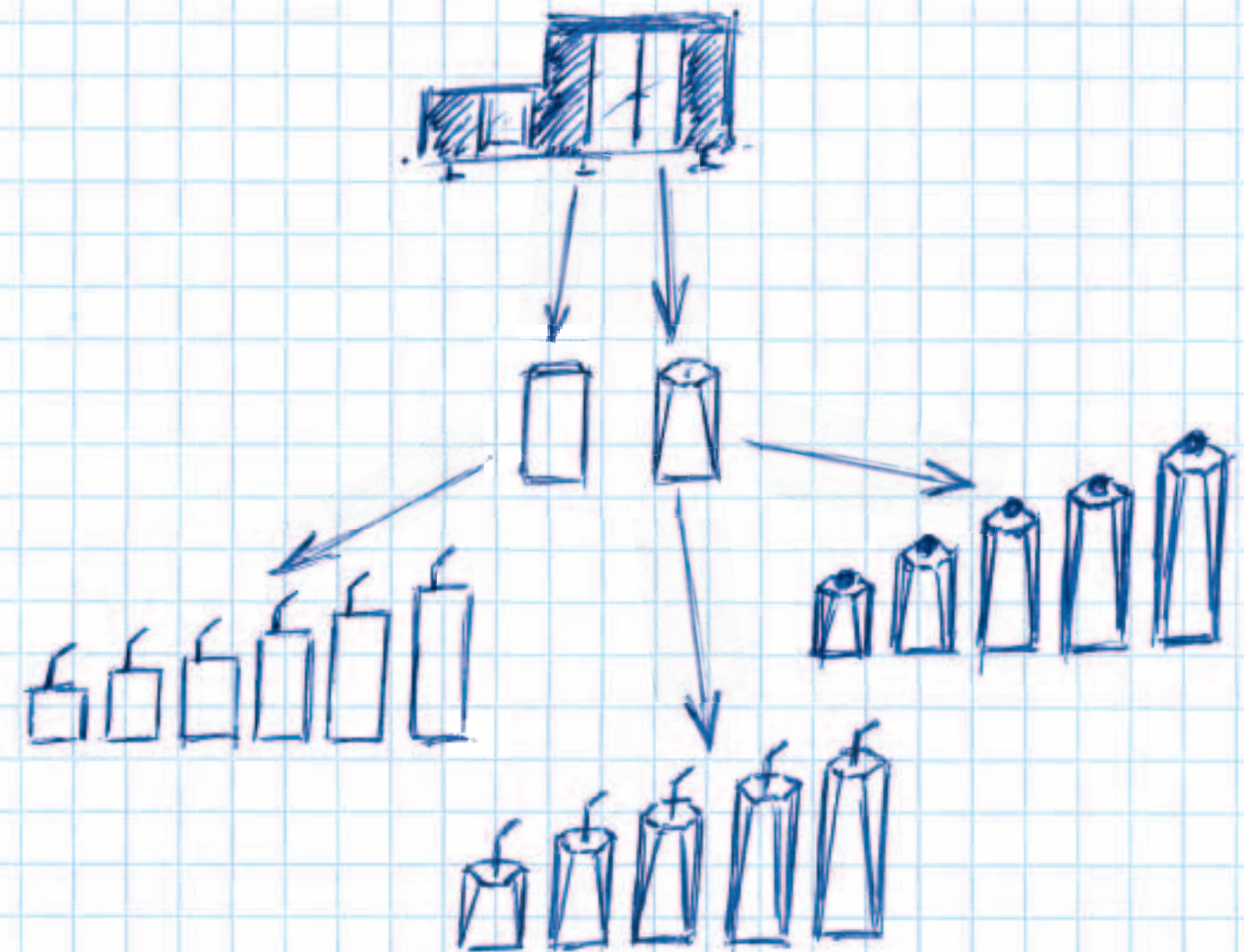
It is not just in respect of the *combibloc* and *combitfit* formats that SIG Combibloc filling machines offer smooth, fast and easily managed flexibility. When it comes to volumes, there is a complete range of options for *combibloc* and *combitfit* carton packs with the same base dimensions. In just a few steps, all SIG Combibloc filling machines can be adjusted for a specific volume, and set via a touch-screen monitor. There is no need to resterilise the machine or replace machine parts when changing the volume either.

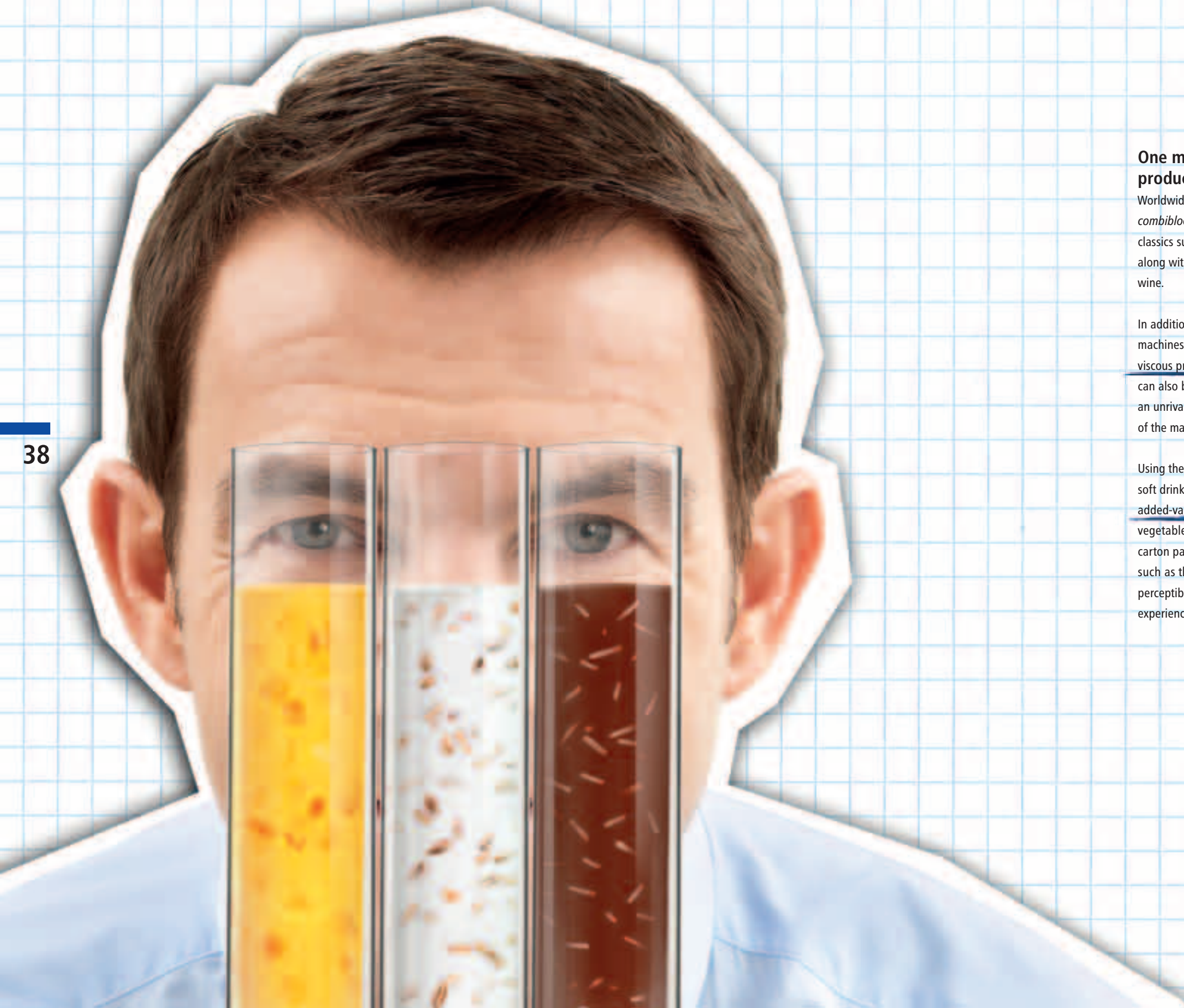
One machine – up to 16 different packages

For instance, with the CFA 712 filling machine, both the *combiblocSmall* format in a total of six different volumes and the *combitfitSmall* format in five different volumes can be filled. All volumes can be offered with drinking straws.

On *combitfitSmall*, you also have the option of applying the handy *combiSmart* screw cap for small carton sizes – perfect for drinking straight from the carton, or for pouring out just the right amount of product.

That makes 16 different packages altogether – and all with just a single filling machine. There is no faster or more efficient way to adapt your product portfolio to market requirements.





One machine – unique product flexibility

Worldwide, a vast range of beverages is offered in *combibloc* and *combifit* carton packs. The range includes classics such as milk, juices, nectars and juice drinks, along with teas, wellness drinks, isotonic beverages and wine.

In addition to liquid products, with the standard filling machines from SIG Combibloc for beverages, more viscous products, such as smoothies or dessert sauces, can also be filled in carton packs. The key to filling such an unrivalled wealth of product ranges is the flexibility of the machines from SIG Combibloc.

Using these machines, for instance, non-carbonated soft drinks (NCSD) and liquid dairy products containing added-value particulates such as pieces of real fruit or vegetables, grains, cereals or nuts can be filled in aseptic carton packs. Creative *drinksplus* product concepts such as these pave the way for beverages that offer perceptible added value and create entirely new taste experiences.

They can contain up to ten per cent natural particulates. Individual bits can be up to six millimetres in length and width. The key factor here is that each carton sleeve is individually shaped, and its base sealed, inside the SIG Combibloc filling machines. The product is then filled into the open carton pack, which is sealed above the fill level. This ensures that no product ingredients are caught in the sealed seam.

The SIG Combibloc standard filling machines for liquid dairy and NCSD products can be retrofitted to fill products containing value-added particulates. Just using an easy-to-install *drinksplus* upgrade kit provides for an optimal product flow when filling innovative drinks containing particulates.

Perfectly equipped for the future

Investing in filling technology from SIG Combibloc opens up many options for expanding your product portfolio. The system's flexibility guarantees smooth production processes, optimal machine capacity utilisation, minimal machine downtimes and reduced requirement for space and personnel in the manufacturing process. So it pays off for you – today, and tomorrow.



At a glance: our filling system, your peace of mind



1 **Magazine**
The magazine holds the sleeves. The magazine is filled with sleeves by the machine operator or by an optional CAM module (Combibloc Automatic Magazine).

2 **Sleeve extraction and opening up of sleeve**
The individual sleeves are extracted by a suction mechanism, opened up into rectangles and placed on a mandrel. This ensures the correct position for the base sealing process.

3 **Base activation**
At two stations, hot air activates the areas of the carton base that are to be sealed.

4 **Base folding**
While the mandrel conveys the sleeve to the base-pressing station, rotating lateral folding arms and a longitudinal folder pre-fold the carton base.

5 **Base-pressing station**
Base-pressing dies and the front face of the mandrel press and seal the carton base. The special design of the pressing elements gives the carton pack a concave base – a technique that gives the package particularly good stability.

6 **Pre-folding of carton top**
The top of the carton is pre-folded precisely along the grooves, to ensure the correct top shape after filling.



7 **Aseptic zone**
The aseptic zone consists of areas for sterilising with hydrogen peroxide (H₂O₂), drying with heated sterile air and filling the package with the sterile product in two stages.

8 **Ultrasonic sealing of carton top**
The carton top is folded and sealed above the fill level. Before it is ultrasonically sealed, steam is injected into the carton pack, which reduces to a minimum the head space volume after cooling. If required, the package may also be injected with nitrogen.

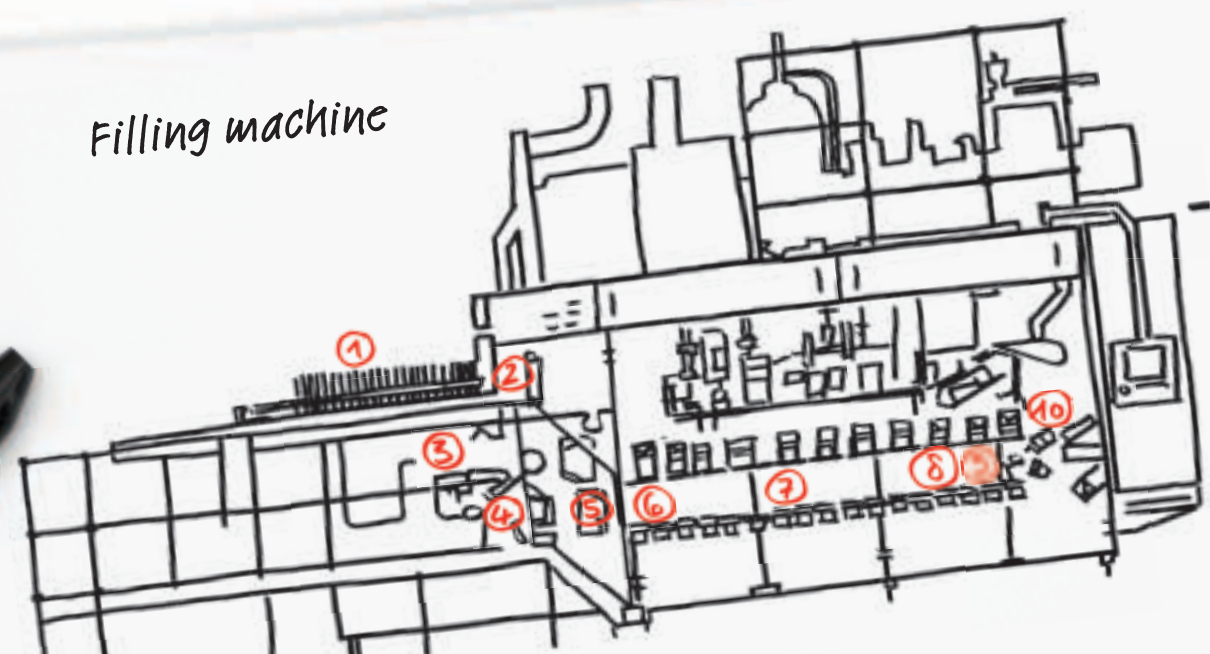
9 **Top-forming station**
Hot air is used to heat the polymers at the top triangles and the narrow side of the carton pack. The top triangles are folded down and sealed to the carton.

10 **Ejector and discharge station**
The carton pack is ejected from the cell, placed upright and moved onto the discharge conveyor.

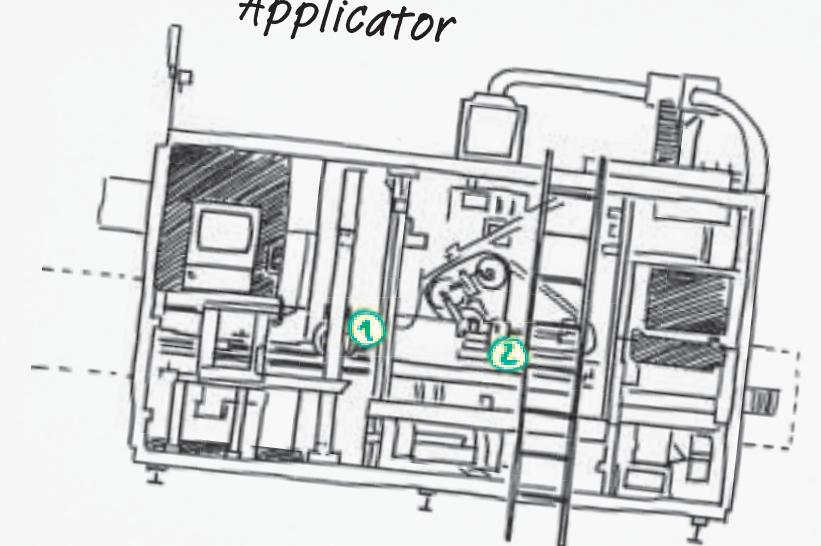
11 **Forming station**
If *combifit* packages are filled, the typical slanted top of the carton is formed.

12 **Application unit**
The closure is applied to the carton pack.

Filling machine



Applicator



At a glance: our portfolio, your options

		Filling machine	Base area	Openings	Output (packs/h)
combiblocXSlim*		CFA 1224 - 36	47 x 32.5 mm	straw	24,000
combiblocMini		CFA 112 - 32 CFA 124 - 36	51 x 37 mm	straw	12,000 24,000
combiblocSmall		CFA 712 - 32 CFA 724 - 36	63 x 40 mm	straw	12,000 24,000
combifitSmall		CFA 712 - 32	63 x 40 mm	straw combiSmart	12,000
combiblocCompact		CFA 612 - 35	76 x 47.5 mm	straw combiSmart	12,000
combiblocStandard		CFA 512 - 35	95 x 63 mm	combiLift combiTwist combiSwift	12,000
combiblocSlimline		CFA 312 - 35	90 x 59 mm	combiLift combiTwist combiSwift	12,000
combiblocMidi		CFA 812 - 35	72 x 70 mm	combiLift combiTwist combiSwift	12,000
combifitMidi		CFA 812 - 35	72 x 70 mm	combiTwist combiSwift	12,000
combiblocPremium		CFA 209 - 32	70 x 61 mm	combiLift combiTwist combiSwift	9,000
combifitPremium		CFA 209 - 32	70 x 61 mm	combiTwist combiSwift	9,000
combiblocMagnum		CFA 909 - 32	95 x 70 mm	combiLift combiTwist combiSwift	9,000
combifitMagnum		CFA 909 - 32	95 x 70 mm	combiTwist combiSwift	9,000
combiblocMaxi		CFA 406 - 32	114 x 74 mm	combiLift combiTwist combiSwift	6,000

*available from 2013 on

For any further questions or comments,
please contact info@sig.biz

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