

# VETRO TIME

**FRIENDS OF GLASS**  
Talking bottles

**ART**  
Fascinating and  
curious facts

**MARKET**  
Summer fun fresh  
from the glass





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### Dear readers,

Summer is finally here – time for “Ferragosto”, as our friends and colleagues in Italy say. Summertime and holidays are very important for our industry. This is not just because most of us like to spend a few days relaxing and unwinding, but also – and much more significantly – because consumer behaviour changes during this time: people are ready to go out and enjoy themselves and the warm weather encourages this. Refreshing drinks, served ice-cold in glass bottles, is what summer is all about as far as I’m concerned! Of course, cool beverages can be served in glasses too, depending on the occasion and the setting. If you are in a particularly celebratory mood, Sekt and sparkling wine are the order of the day, but the trend at the moment is for drinking fizzy cider. Incidentally, did you know that heavy bottles not only provide safe packaging, but also say a lot about what’s inside them? After all, high-quality content needs a bottle that carries some weight – in the truest sense of the word. You can find out more about this on the pages to follow, which also feature a variety of our latest products.



One thing I would particularly like to draw attention to is the new website for the European Container Glass Federation (FEVE). At [feve.org](http://feve.org), you will discover important information about glass and the benefits it offers. Health and the environment, for instance, are just two of the key areas in which these advantages can really come into their own. The website has a fresh new design with a clear layout. We, too, are in the process of revamping our online profile and making our website “responsive”. This means that the site will be even more like us. Just as we have always made an effort to respond to our customers and partners, it will cater to all commonly used end devices in future – from computers to tablets and smartphones. I’m looking forward to reveal more about this soon. For now, however, let’s move away from the digital world and back to the printed word: I hope you enjoy reading this magazine, preferably somewhere in the shade with a cool drink to hand!

Best regards,

  
Claude R. Cornaz

## FULL FLAVOUR

## Summer in a glass

*Summer is the time for harvesting crops and enjoying them. Fruit and vegetables have ripened and developed their full flavour. That makes for sheer enjoyment – which includes having a refreshing drink, with or without alcohol, after work. And nothing preserves the taste of summer like glass packaging.*



Summer days are perfect for enjoying a sparkling, refreshing drink. But you may find you are spoilt for choice: there is no shortage of “in” drinks this summer. The by now classic mixed drinks such as Aperol Spritz, Hugo, Helga and Inge have now been joined by Franz and Frosé, for example. And then there are the tried and tested summer drinks, including light white wines, neat or with soda, rosé wines, mineral water – sometimes flavoured – lemonade, juices and iced tea. Not to mention beer and beer-based mixed drinks. For some time now, low-alcohol apple wine and cider have also been very trendy, with their slight differences in flavour from one region to another.

### Franz and Hugo’s sisters

But back to Franz. What makes this light and refreshing summer drink so special is the combination of gin, ginger liqueur, elderflower tonic water and apple juice. It was invented by the Austrian Bartender of the Year, Stefan Bauer, and first served at the Park Hyatt Hotel in Vienna. Prosecco (or white wine), soda, lemon balm or elderflower syrup and mint – that’s a Hugo. For Helga, you use raspberry syrup, and for Inge, ginger syrup.

### Frozen rosé wine

Frozen rosé, or Frosé for short, reached Europe from New York this year and has become a big hit. It is no more or less



than iced rosé wine, mixed (puréed) with fresh chopped fruit, sugar, lemon juice and extra crushed ice to make a creamy mixture. Some people even call it an alcoholic smoothie.

### Light wines – perfect for summer drinking

Chilled white and rosé wines are not only excellent ingredients in trendy drinks but also one of the real joys of summer, whether you drink them straight or mixed with soda or mineral water, or, if you have a sweet tooth, with lemonade.

### That tingling sensation

You have to celebrate when you get the chance. Summer is a great time to reach for the champagne or sparkling wine. Most of the fizzy favourites are white or rosé wines.

### Beer and Co.

For decades, beer, shandy and the like have been among the most popular summer drinks. There is an almost limitless choice. Beer-based mixed drinks are the latest thing. The most well-known are of course shandy (beer and lemonade) and the Berliner Weisse (white beer brewed in Berlin and mixed with raspberry or woodruff syrup), to name just two. Flavoured beers are becoming more and more popular, with flavours ranging from cherry and redcurrant to raspberry and strawberry.

### Alcohol-free, please

Alcohol-free beer and still or sparkling mineral water, with or without fruit flavouring, are perfect for quenching the thirst in summer, as are the numerous fruit- and syrup-based juices. The latter not only add an explosion of flavour to summer cocktails but are also delicious when diluted with water.

### Preserving the taste of summer

Summer specialities are not confined to drinks. Fruit and vegetables are ready for harvesting and the food industry uses them in all kinds of different ways. For example, the flavour and aroma of sun-ripened tomatoes can be captured, preserved and enjoyed in the form of a tomato sauce in a jar – even when it is snowing outside.



### Spreading the taste of summer

If you're an impatient person, you don't have to wait until winter. Summer can be brought to the breakfast table immediately – whatever the weather – in the form of summer fruit jams. You can get combinations of strawberries, limes and coconut or other summer fruits. There are other seasonal alternatives for spring, autumn and winter.

### Glass – your perfect summer companion

Whenever you feel like quenching your summer thirst, or drinking a toast to the joy of being alive, glass is the ideal packaging. This is because glass is able to withstand the

sunlight and heat that can affect the natural, fresh flavours of food and drink. That is why it is worth paying special attention to packaging, particularly in summer.

Staying fresh to the last drop, the last mouthful

Glass preserves the original flavour of its contents. The flavours, vitamins and freshness of high-quality food and drinks are preserved, unadulterated, for long periods of time. Nothing passes from the glass into the product, nothing makes its way from outside through the glass into the product and nothing escapes outside. That is particularly important in summer, so that, as temperatures rise, nothing spoils your refreshing, tasty enjoyment.





PLASTO ISPACK 2016

## Vetropack makes its debut in Israel

*Vetropack Moravia Glass has taken part in the Plasto Ispack exhibition for the first time. The Czech Republic-based Vetropack plant presented its glass containers at a large stand run by the company Archem, which also featured other exhibitors. This packaging fair is held in Tel Aviv, Israel, every three years.*

Plasto Ispack is the largest exhibition in Israel and provides a showcase for the latest innovations from the local and international packaging industry. As the only producer of glass containers there, Vetropack's Czech plant was representing the glass sector. Along with 18 other exhibitors, Vetropack



Moravia Glass was allocated a section of the large Archem stand for presenting its glass bottles and jars. Archem was founded in 1967 and is one of the largest and most prominent suppliers in Israel's food and drinks industry.

AZERBAIJAN

## Huge showcase

*In May 2016, the 22<sup>nd</sup> WorldFood Exhibition was held in Baku, the capital of Azerbaijan. At this international show, Vetropack Gostomel presented a wide selection of goods from its product range.*

"WorldFood Azerbaijan" is one of the leading events for the food industry. This was demonstrated by the presence of the Minister of Agriculture Heydar Asadov at the opening ceremony on 19 May 2016. He acknowledged the importance of agriculture as a non-oil-dependent sector of the economy and said he was delighted to be able to welcome visitors from around the world.

Vetropack Gostomel used this exhibition to introduce some newly developed glass containers alongside its standard products. The spectrum ranged from bottles for wines and

spirits to milk and juice bottles and jars for jam, fruit and vegetables. Visitors loved both the attractively simple yet elegant designs and the deliberately chosen traditional shapes. Some "heavy" packaging glass that gave added weight and therefore prestige to the image of its contents was especially popular.

A total of 126 companies from 23 countries exhibited at "WorldFood Azerbaijan 2016". Visitors could see the enormous diversity of the food and beverages industry and also of the packaging sector.

## UKRAINIAN PACKAGING STAR

## A clear winner

The Ukrainian packaging competition "Ukrainian Packaging Star" was held this year for the 18<sup>th</sup> time. Vetropack Gostomel won its 12<sup>th</sup> star with its 0.5 litre bottle for Myakush vodka.

At the "Pack Expo" show in Kiev in April, the prizes were awarded in the "Ukrainian Packaging Star" competition. The jury in the glass packaging category was impressed by the flint glass bottle made for Ukrainian Myakush vodka by the Vetropack plant in Ukraine. It is produced using the classic blow-and-blow process.

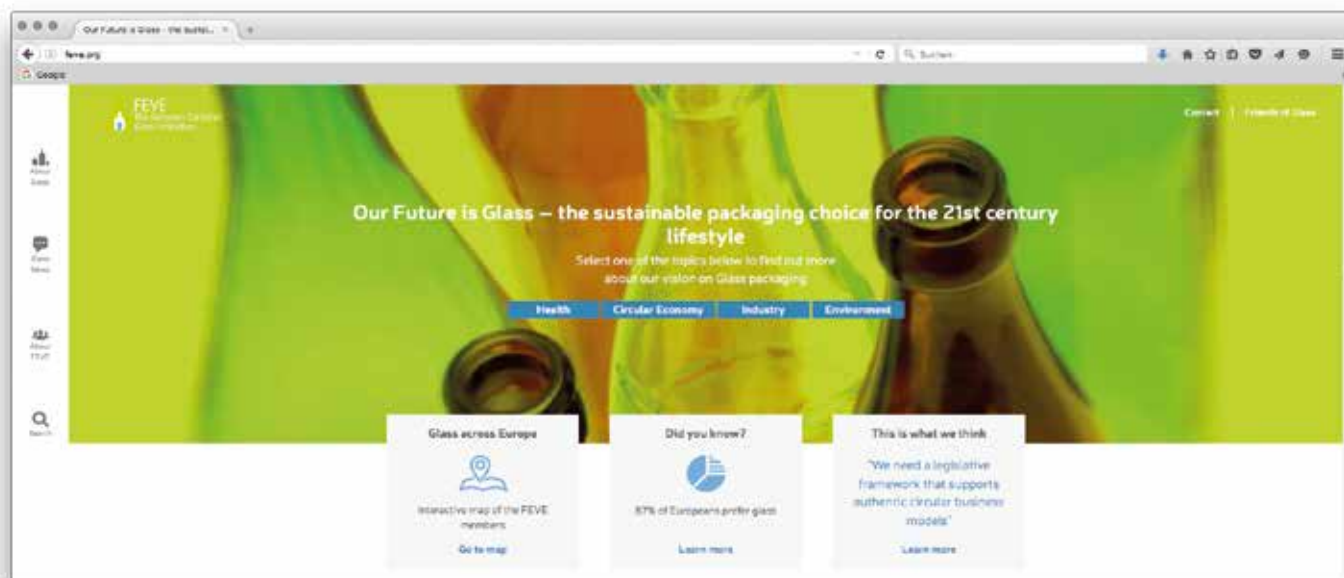
The surface of the bottle features a decorative rippling pattern that creates an evocative overall impression.



The 0.5 litre bottle has a stopper to ensure that the quality of the vodka is preserved after opening. The smoothly rounded shoulders and slightly curved shape make this a lovely bottle to hold.

## FEVE

## A new online look



The European Container Glass Federation (FEVE) has launched a brand new website. It is a real pleasure to discover all the information it has to offer about glass and its benefits.

The new website is clearly structured, highly informative and boasts a fresh new design. It does not fall short when it comes to providing background information either, with all you need

to know about glass, health and the environment presented in an appealing, journalistic style with plenty of illustrations. Enlightening graphics and simple, unostentatious eye-catching features supplement the wide range of information on offer. Individual FEVE members can be located on an interactive map of Europe. Visit feve.org yourself when you get the chance and form your own impressions of the new website.

## A JOURNEY OF DISCOVERY

## The “Les Fils Maye” winery – where traditional meets modern

*The “Les Fils Maye SA” winery in Riddes in the canton of Valais is an innovative, dynamic business that is not afraid to embrace change. Yet in spite of this – or perhaps because of it – it is dedicated to maintaining high standards. The fact that the wines from this gem of a winery are packaged exclusively in Vetropack bottles attests to this commitment to quality.*



“Les Fils Maye”, a family business founded in 1889, runs one of the oldest and best-known wine-growing estates in Valais. With its sun-drenched hillsides, the region straddling the River Rhône is perfect for producing excellent wines which are a delight to the palate and to the nose. One of the big names is the “Clos de Balavaud”, which owes this title to the exceptional secluded location of its vineyard (“clos” being a French word for “enclosed”). Lovingly nurtured, it develops a character that strikes a fine balance between body and structure, with subtle flavours just waiting to be discovered.

### Wine with a zest for life

For 125 years, a dedicated team – made up of both family members and passionate employees and ranging from wine-growers and oenologists to accountants – has been putting its heart and soul into ensuring maximum enjoyment and commercial success. The wines produced by “Les Fils Maye” are “wines made by craftsmen for connoisseurs, by aficionados for aficionados”. This applies to all the wines it makes. After all, they are the product not only of the estate’s own harvest, but also of grapes delivered to the winery

by around 300 suppliers and pressed here. The “Les Fils Maye” vineyards cover some 30 hectares, including the famous “Clos de Balavaud” terraces in Vétroz.

### New bottling line guarantees top-quality wine

Just over a year ago, “Les Fils Maye” invested in a new bottling line capable of processing more than four million bottles a year. “A special bottle ventilation system helps to maintain the flavours,” explains Michel Duc, director of the winery. The system uses cutting-edge technology to remove air from the empty bottles and pre-fill them with nitrogen, guaranteeing the same level of quality in the bottle as you would find in the barrel and ensuring that the careful work of the wine-growers and oenologists is preserved.

This is a good reason why “Les Fils Maye” uses exclusively Vetropack bottles for its wines: the winery and Vetropack Switzerland have enjoyed a trusting working relationship for years. Vetropack’s glassworks is not far away and its customer service doesn’t end when the bottles are delivered. In fact, whenever any questions arise relating to bottling,



Vetropack's technical customer service team is always on hand to provide support and advice. "That's good to know," says an impressed Michel Duc, "although we rarely have to make use of this service because everything goes so smoothly."

### More than just wine – Le Verre Maye

The "Les Fils Maye" wine centre is a real gem. Open seven days a week, visitors can come here to enjoy a glass of wine and other local delicacies. Of course, wines are available to buy here too, and it is also possible to go on a guided tour in one of three languages to find out about all the stages involved in winemaking. Anyone keen to discover more about the local region is sure to strike lucky with the winery's tourism packages. There are plenty of sights to see, from museums and thermal baths through to hydropower plants and – it goes without saying – the vineyards themselves.

### Even more fresh ideas

"Les Fils Maye" has recently put together a series of wines aimed at specific target groups. There are three exclusive lines available: gold, silver and bronze. The "gold" version focuses on the showpieces of the local terroir (e.g. "Clos de Balavaud"), while the "silver" selection is geared towards discerning connoisseurs and the "bronze" one is reserved for members of the hotel and catering industry.

When the winery decided to restructure its marketing communications, it also took the opportunity to redesign its label concept. The labels had previously featured small samples of works of art by the well-known Valais-born painter and graphic designer Robert Héritier (1926–1991). Although these illustrations depicting wine-related scenes are timeless in their richly detailed beauty, they no longer fit in with the simple, clean-cut style favoured today – a style that is comprehensible to everyone. Nevertheless, they are still very much part of the winery's history, not least because Robert Héritier produced his first label for "Les Fils Maye" back in 1958. His designs will therefore always remain a valuable chronicle of the estate's development over the years.

### Less is more

The new labels are very pared-down in terms of their visual appearance. They follow a specific colour code and pick up Héritier's stylistic elements and figures, albeit in an updated form. They are always featured on the shrink cap, which bears the "Les Fils Maye" winery logo, and sometimes on the labels too.





#### A FAMOUS NAME

## Awakening anticipation, promising pleasure

*Top-quality cognac in top-quality bottles: the Odessa Cognac Factory presents its Shustoff cognac in flint glass bottles specially created for this brand by the Ukrainian Vetropack glassworks in Gostomel.*

When shape, contents and brand are combined in perfect harmony, the ultimate goals of marketing have been achieved: recognisability and authenticity. With the new shape of the Shustoff cognac bottle, this has been entirely successful. The 0.375 litre bottle is in the shape of a bell. A bell is also part of the producer's logo, which appears on the bottle as well. The curving lines of the flint glass bottle, the muted dark-red of the label and shrink capsule that surrounds the natural cork, the gold lettering and the glowing amber of the contents make you look forward to the velvety flavour and the pleasure that is to come. Glass packaging also ensures that you can savour this all-round enjoyment to the very last drop.

#### FRUITY

## Fresh from the glass

*FRUXI's fruit- and vegetable-based beverages reflect the true flavours of nature. They are packaged in green glass bottles made at Vetropack's Slovakian plant.*

FRUXI fruit and vegetable juices offer a pure, unadulterated taste of nature. There are no additives in these fruity drinks, which are made simply by cold-pressing fruit and vegetables without adding any water or sugar.

Such high-quality content deserves packaging that provides reliable protection – something which is guaranteed by the 0.75 litre bottles from Vetropack Nemšová. This is the second time that the Slovakian plant has developed glass bottles for the FRUXI range. The green containers with a twist-off closure feature two parallel rings enveloping the neck area, swelling outwards with the shape of the bottle. The large label makes it clear to consumers right from the first glance what fruits the drink contains and that it is made from purely natural ingredients. The bottles are produced using narrow neck press and blow technology, which ensures even thickness around the bottle walls.







#### LIGHTWEIGHT GLASS

## Health in a bottle

*The fruit, vegetable and berry directly expressed juices under the brand name Galicia are produced from high-quality Ukrainian raw materials; and comes in 0.3 litre bottles made by Vetropack Gostomel.*

Galicia gained a leading position in the directly expressed juices market in Ukraine. Due to high quality raw naturalness of the product as well as manufacturing juices without concentrate, sugar, water, flavourings and preservatives. Success of the brand contributed to the fact that Galicia juices bottled in 0.3 liters glass bottle which is convenient for the consumer.

Vetropack Gostomel in Ukraine uses the narrow neck press and blow process to make a 0.3 litre flint glass bottle. Thanks to this process, the Galicia bottle weighs only 180 grams, without losing any of its stability or other outstanding qualities. It keeps its contents in perfect condition and the screw cap makes it quick and easy to open.

#### TRADITIONAL DRINK

## Glass bottles for “liquid wheat”

*The Ukrainian vodka Klibnyi Dar is one of the most popular drinks worldwide to come out of Ukraine. Vetropack Gostomel has started production of the bottles for this national drink.*

It is only 14 years since Klibnyi Dar vodka was first launched on the market, but the spirit has already become one of the leading traditional brands in Ukraine – and all over the world. In 2011, for example, it was ranked 3<sup>rd</sup> among best-selling vodkas internationally.

The oval, 1 litre flint glass bottle with bevelled sides reflects the character and strength, clarity and simplicity of a grain of wheat. There's nothing to hide and nothing needs to be concealed. The engraving on the front shows that Klibnyi Dar is distilled from cereal grains. The back is plain. The neck is slightly elongated. The transparent label is anything but wordy. On the back, it features grains of wheat, while on the front it highlights the premium quality of the product, attributed to the golden sun shining on Ukrainian fields.



**SPARKLING**

## Spring water from Zurich's local mountain

*Fresh spring water straight from the mountain – right in the heart of Zurich's Old Town. This is "Lokales Wasser 37", which comes from the city's very own Uetliberg mountain and is packaged in flint glass bottles produced by Vetropack Austria.*

Urs Grütter, the man behind "Lokales Wasser 37", found a reference to a water extraction right from the City of Zurich from 1559 in the land register excerpt for his property. This entitles him to draw 10.5 litres of water per minute from a pipeline which leads directly into the city, having been laid in 1429 to supply the Old Town with water.

The water is packaged in various bottles, including a 0.5 litre version made by Vetropack Austria – a standard multi-trip bottle featuring a crown cork mouth. Consumers can enjoy this spring water either still or sparkling, but it is only available within a radius of 10 kilometres. The company strongly advocates environmentally friendly consumption and therefore avoids transporting its product long distances. All profits go towards development projects dedicated to providing water in places all over the world.

**PREMIUM WATER**

## A drop-shaped water bottle

*The new mineral water bottle for Kropla Délice, which is sold in Poland and produced by Vetropack Moravia Glass in the Czech Republic, echoes the simplicity, minimalism, clarity and elegance of a crystal-clear drop of water.*

Kropla Délice lightly sparkling mineral water is a highly popular premium product from the unspoiled Beskids region in Poland. Customers can buy it in a 0.33 litre bottle or a 0.75 litre version, the larger of which is produced at Vetropack's Croatian plant. The shape of the 0.33 litre flint glass bottle is inspired by a drop of water, creating an attractively simple and elegant design. Kropla Délice is a product of Coca-Cola HBC Polska.





## TREASURE TROVE

## A healthy burst of freshness from Poland

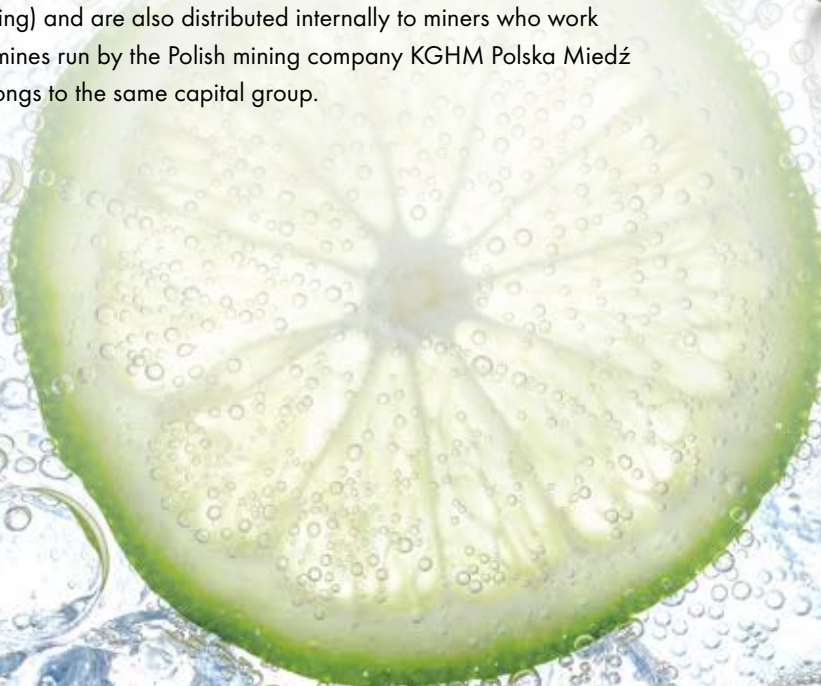
*Vetropack Nemšová in the Slovak Republic produces the new flint glass bottle for the Polish mineral water brand Staropolanka. The bottle's design features a clever play on the use of dots.*

"Kłodzkie SA – Grupa PGU", is reputable producer of natural mineral water with more than 100 years tradition. Rich in minerals, trace elements and ions, this water is said not only to quench thirst, but also to combat tiredness. Fans of Staropolanka swear by it and fondly describe it as a "treasure trove of minerals". Even as far back as in the 17<sup>th</sup> century, the Jesuits who settled in this region set great store by the energising power of Staropolanka.

### Pure freshness

Staropolanka has recently been repackaged and is now sold in the trendy 0.33 litre "Obus" mineral water bottle, which is made of flint glass. The Obus is produced at Vetropack's Slovak plant and replaces the old "Witold" bottle of the same size. The fresh new design is distinguished by an array of countless raised dots in various sizes, which appear to bubble up like droplets of water, symbolising its energy and vitality. This impression is accentuated by the bright green label and equally green crown cork. The engraved dots also ensure that the bottle always sits comfortably and securely in your hand.

The number of bottles produced for the Polish market each year ranges between 600,000 and 700,000. They are sold via the HORECA network (hotels, restaurants, cafés and catering) and are also distributed internally to miners who work mainly in the copper mines run by the Polish mining company KGHM Polska Miedź S.A. Kłodzkie SA belongs to the same capital group.



## TWICE THE IMPACT

## Bottles that make a clear impression

*This year, Serbian mineral water producer and distributor Knjaz Miloš has come up with not one, but two innovative bottle designs, with both the eponymous Knjaz Miloš water and Aqua Viva mineral water sporting brand new glass packaging.*

The sophisticated, high-quality design of the Knjaz Miloš green 0.75 litre mineral water bottle makes an impression thanks to its clean lines, accentuated by the label in silver, red and green. The calcium and magnesium content of this water is perfectly balanced, making it a favourite with fans of strongly carbonated drinks. It is therefore hardly surprising that the name "Knjaz Miloš" has now become synonymous with mineral water in general. This is reflected in the sense of self-assurance and sturdiness conveyed by the new glass bottle – fully in keeping with the rich history of Knjaz Miloš as a company, which is outlined on the label, and supported by the popularity of its products amongst consumers.

### Pure nature

Aqua Viva water represents nature in its purest form: it comes from Bukulja, a volcanic mountain in Serbia, where its deep source – 500 metres underground – is protected by layers of clay and granite.

The volume of the new 1 litre flint glass bottle with a screw cap is not obvious at first glance. An embossed band of waves rises up from the slim base, narrowing as it goes before its sweeping lines grow wider and open out into an elegant, slightly larger cylinder with a slender recess for the all-round label. The silvery-blue oscillating shapes depict a stylised mountain landscape, with Bukulja right in the middle. If you concentrate on the bottle's silhouette, the tapering then widening form creates the impression of water springing up from the rock – which is exactly what the designers intended.

Both bottles are produced at Vetropack's Croatian plant in Hum na Sutli.







VIVA!

## A unique Merlot bottled in Vetropack glass

*It may have produced a “tunnel wine”, but no one could accuse the Ticinowine umbrella organisation of tunnel vision when it joined forces with the Coop winery to launch a vinicultural project to mark the opening of the Gotthard Base Tunnel. The result is an exceptionally fine wine, packaged in Vetropack bottles.*

Switzerland celebrated the official opening of the Gotthard Base Tunnel in early June 2016, with more than 80,000 people from all over the country and beyond flocking to the festival sites around the Gotthard massif to join in the fun. At 57.1 kilometres, the Gotthard Base Tunnel is the longest rail tunnel in the world.

And since such a unique once-in-a-lifetime feat of construction ought to be toasted with an equally distinctive drink, an official celebratory wine was produced. Under the slogan “Merlot per la porta del Ticino” (“Merlot for the gate to Ticino”), ten Ticino-based wineries banded together under the auspices of the Ticinowine umbrella organisation, pooling their expertise to create a Merlot and a Bianco di Merlot, which were bottled by the Coop winery.

Neither of these wines come from a particular winery – instead they reflect the terroir of the Ticino region as a whole. The two special wines were therefore based on a blend of exquisite crus from ten different producers, symbolising the entire range produced by around 70 local winemakers.

The 0.75 litre Bordeaux Europea cuvée wine bottles are made at Vetropack’s Swiss plant in St-Prex. The label on these celebratory bottles, which was designed by Gottschalk+Ash International in Zurich, invites people to visit Ticino and benefit from the shorter distance they now have to travel to get there thanks to the new tunnel. The red and blue colour scheme matches the Ticino coat of arms.



## CAMPAIGNS

## Awards and talking bottles

*The Friends of Glass organisation has been working actively to promote glass since 2008. Now they are even using talking bottles to tell consumers about glass recycling in a fun way. The #MapYourTaste campaign that has already come to an end recently won the International & European Association Award in the social media category.*



Last year, Friends of Glass worked with well-known taste experts to develop a culinary map of Europe, based on the #MapYourTaste campaign. In an online quiz, consumers were asked to identify the unmistakable flavour that characterised their own country. Over 29,000 people completed the taste quiz. A great success! The campaign was just as successful when it came to the presentation of the "International & European Association Awards", scooping first prize in the social media category.

Since, as everyone knows, it is important not to rest on one's laurels, a follow-up campaign has been under way since the start of 2016: Endless Lives of Glass. As the name suggests, the theme is the never-ending life of glass. In a fun yet instructive way, it is all about glass recycling. Videos were made in various European supermarkets using hidden cameras. A glass bottle on the shelf would address individual customers directly and engage them in conversation. Six videos were made which can be seen on the Friends of Glass website and on social media. They show how glass



The QR code takes you to the “best of” video of the campaign.



can be recycled into new bottles and jars an unlimited number of times. Well-known European comedians and actors gave the bottles their voices. In the German version it is Kaya Yanar, in the French version Christophe Beaugrand and in the Italian one Diego Abatantuono.

The campaign was based on the results of an independent Europe-wide survey that was carried out by the research in-

stitute ResponDi on behalf of Friends of Glass. According to the study, 94 per cent of the Europeans who were surveyed recycle their household packaging, and 82 per cent said they always recycle their glass packaging. Older people are more aware of the importance for the environment of reusable food packaging than younger people.

#### Results from the countries in which Vetropack has a production facility

	Switzerland	Austria	Czech Republic	Slovakia	Croatia	Italy
<b>General recycling rate</b>	99,6 %	99,1 %	94,6 %	96,2 %	97,8 %	99,0 %
<b>Glass recycling</b>	93,1 %	89,9 %	79,1 %	75,3 %	67,3 %	90,8 %







MISCELLANEA

## Fascinating and curious facts about glass

*Glass is very versatile and its uses seem to be virtually unlimited. There is furniture made out of glass, for example, or board games such as chess or nine men's morris, as well as plates, cups, glasses, bottles and jars, not to mention pictures and mosaics – but it doesn't end there.*

In the summer issue of Vetrotime, we explore some fascinating and curious facts about glass. You may be surprised by one or two of them – the Vetrotime editorial team certainly was.

### Architecture and glass bottles

There is no question that the Austrian artist Friedensreich Hundertwasser raised the bar with his distinctive architectural style. His buildings are characterised by their deliberate irregularities and curved forms with no corners or edges, and by the use of unconventional building materials – including glass bottles. Structures with walls that let light flood into the interior through colourful glass bottles rather than windows can be found all over the world. Examples include the Hundertwasser-designed public toilets in Kawakawa, New Zealand, the famous Hundertwasser houses in Vienna and Magdeburg and the Altenrhein market hall in Switzerland.

Somewhat less artificial in appearance, but much more fragile-looking, are the countless buildings whose walls are made almost entirely out of glass bottles. One of these is in Cape Egmont on Canada's Prince Edward Island. More than 20,000 bottles had to be emptied and collected to

construct this house, which was built in the 1980s. It is unoccupied and forms part of a museum, which also features a tavern and a chapel built along the same lines using multi-coloured glass bottles. The museum brochure highlights the colourful symphony of light this creates inside the rooms.

### Glass tears wept by no-one

Glass teardrops have been made famous the world over – in two very different ways. On the one hand, they were brought to prominence by the Russian-Jewish Dadaist and photographer Man Ray, whose real name was Emmanuel Radnitzky, while on the other hand they came to the fore through a physical phenomenon. Let's start with the photographer: Man Ray was a master of surreal alienation. His works always have something enigmatic about them. One of the pieces that made his name was a photograph entitled "Tears" from around 1930, which depicts the expressive eyes of a beautiful woman, who is not showing any emotion but is "weeping" artificially strewn tears made of glass.

Striking though Man Ray's pictures are, they do not have quite the penetrative force – in the truest sense of the word – as the glass objects known as "Prince Rupert's



drops", which are also sometimes called "Dutch tears". These "teardrops" are created by heating up glass and then letting it drip into a container of water. As the drops fall into the water, the surface of the glass solidifies, encasing the still-molten glass inside. The slow process of cooling from the outside inwards generates a great deal of mechanical stress. The teardrops can therefore withstand evenly distributed pressure easily, but even the slightest damage to the surface is enough to destroy their fragile balance and shatter the drops into tiny pieces.

These glass tears are known to have been made in glass-works in Mecklenburg as far back as around 1625. They were then reinvented in Bologna in 1642 along with the "Bologna bottle", which has similar properties. These spherical, thick-walled bottles, which look rather like glass chemistry flasks, are strong enough to hammer a nail into a piece of wood without any difficulty. However, as soon as a nail scratches one of these bottles it smashes into fragments, as the tip of the nail penetrating the surface "releases" the powerful tension inside the glass.

### **Glass water in medicine and witchcraft**

Staying in the Middle Ages, this was a time when glass was also used for medicinal purposes. "Glass water" was produced by suspending glass dust, made from Prince Rupert's drops, on water. Crushed and ground glass mixed with tasty food is also believed to have brought a premature end to the lives of many gullible men taken in by the charms of a witch.

### **Glass water and water glass in chemistry**

"Glass water" is a term describing a specific state reached by water, deviating from its usual form, when it is exposed to temperatures of around -200°C and high pressure. "Water glass", meanwhile, is a name used to refer to water-soluble alkali silicate, an amorphous, non-crystalline compound that can be solid, liquid or gelatinous. Water glass is a versatile substance. It can be used as an adhesive or bonding agent, for example, as a bleach in the paper industry, for protection against corrosion or for sealing masonry. Before refrigerators were invented, it was also used in the kitchen, where eggs were preserved in water glass to keep them fresh for longer. To do this, people would mix the

alkali silicate solution with water (at a ratio of 1:9) and beat the mixture with a whisk until it reached a semi-solid state, then place the eggs in it. The water glass would seal off the eggs' pores, giving them a longer shelf life.

### **Jablonec glass jewellery**

In the mid-19<sup>th</sup> century, an informal association of small and medium-sized enterprises specialising in the production of costume jewellery and glass smallwares was formed in the Bohemian town of Jablonec nad Nisou (formerly known as Gablonz). Hollow blown-glass beads and polished glass buttons were amongst their best-selling products. Glass cutter Daniel Swarovski also laid the foundations for the now world-famous Swarovski crystal company in this region in 1895. Jablonec glass jewellery flourished in the run-up to the Second World War, but afterwards the companies were nationalised. Circumstances then changed again in 1989 and the now reprivatised businesses are returning once more to the prosperity they enjoyed in their heyday in the 1920s.



Picture: [dawanda.com/shop/jungferzart](http://dawanda.com/shop/jungferzart)

Incidentally, hard-working glassmakers also used to produce Jablonec-style glass jewellery by hand at what is now Vetropack's plant in Kremsmünster before industrial glass packaging production began there in 1955.

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