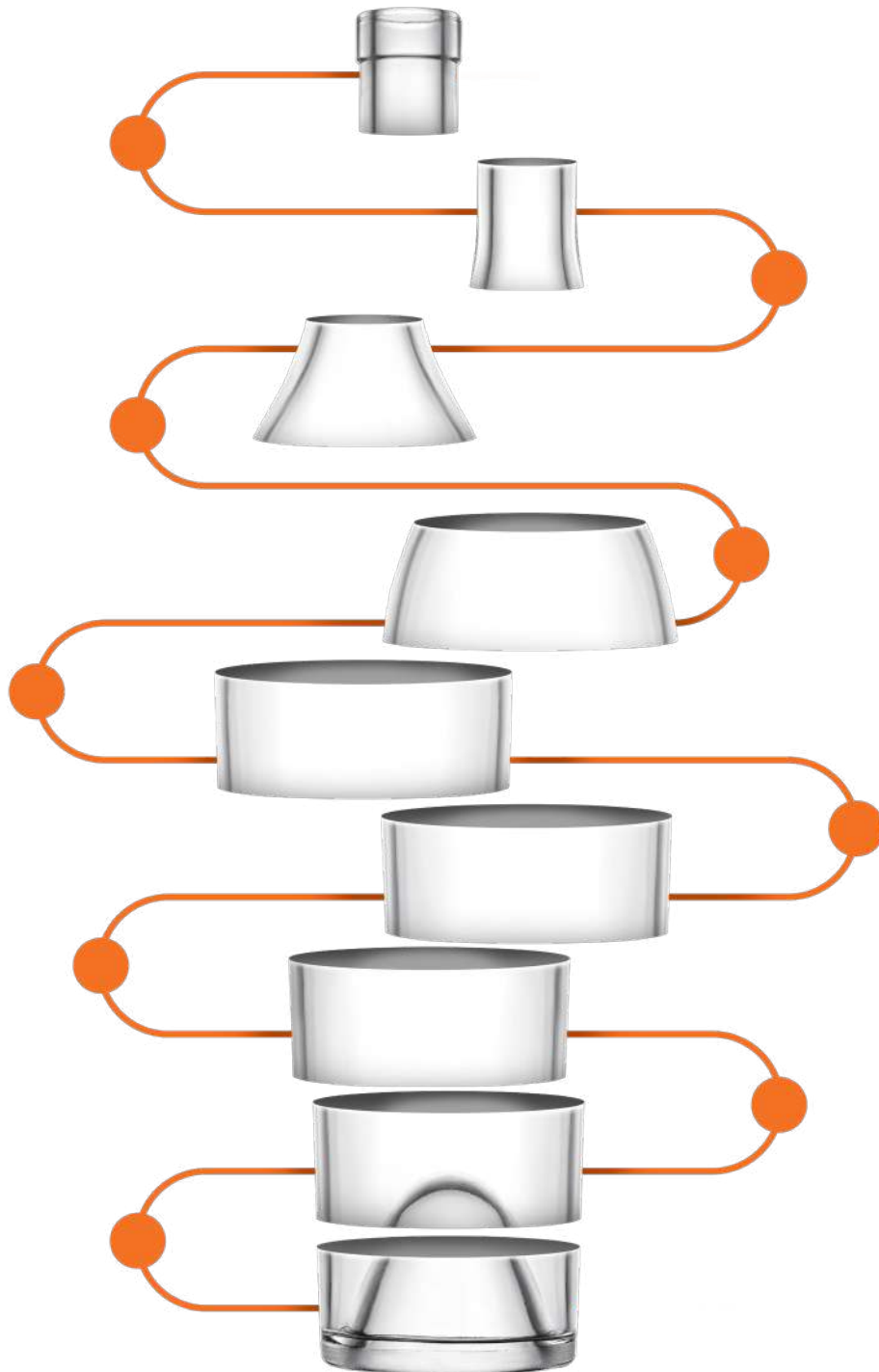


HOW TO CHOOSE THE RIGHT GLASS BOTTLE FOR YOUR BRAND?



I have a great spirit and I want to launch it on the market.

WHAT NOW?

When it comes to packaging your product in a glass bottle, it's important to select a bottle that is both visually appealing and functional. After all, the glass bottle will be the first thing potential customers see and their initial reaction will likely influence the success of your product.

To make this process easier for you, we have created

A 9-STEP CHECKLIST

to guide you.

Making a lasting impression



We will take you through all the essential steps, from considering the needs of your product to complying with market regulations.

Our guide will help you select the perfect glass bottle by understanding its anatomy, choosing the appropriate size, design, colour, and closure, and exploring decoration options.

We will also assist you in selecting the appropriate secondary packaging to ensure your product's safe arrival.

Are you ready to learn more about selecting the perfect glass bottle for your product?

Let's get started!

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1 ANATOMY OF THE BOTTLE

Do you know bottles have shoulders?

To select the right bottle for your product, it is essential to understand the various components and features that make up a bottle. This will help you allocate space for decoration and select the appropriate closure type. That way you can ensure that your bottle is functional, durable, and visually appealing.

Here are some key parts of a bottle that you should be familiar with:

• FINISH:

The opening of the container is shaped to accommodate a specific closure, and it reflects the outside diameter of the bottle's neck in millimetres. The term "finish" comes from the days when glass bottles were hand-blown, and the top was the last part of the bottle to be completed.

• NECK:

Part of the bottle where the cross section decreases to form the finish.

• SEALING SURFACE:

This is the portion of the finish that contacts the interior liner of the cap to create a seal.

• THREAD:

The curved section of the cap on the skirt that engages and matches the thread of the container for screw-fit purposes. The thread may be continuous or interrupted.

• TRANSFER BEAD:

A projecting bead on the outer surface of threaded containers, usually just below the finish. It provides a surface for the jaws of handling devices during manufacture.

• SHOULDER:

Part of the bottle between the main body and the neck, and it's usually sloped.

• HEEL:

The lower portion of the bottle that starts with the bearing surface of the bottom and includes a small portion of the lower sidewall.



- | | |
|--------------------------|-------------------------|
| 1 MOUTH DIAMETER | 8 FINISH |
| 2 SEALING SURFACE | 9 THREAD |
| 3 TRANSFER BEAD | 10 BOTTLE NECK DIAMETER |
| 4 NECK | 11 SHOULDER ROUNDING |
| 5 NECK SHOULDER JUNCTION | 12 PUNT |
| 6 SHOULDER | 13 HEEL |
| 7 BODY | 14 STANDING BASE |

2

COLOUR OF GLASS

Clear glass for spirits, amber or green for wine

Clear glass bottles are an excellent option for liquors such as scotch or whiskey, while blue, green, and amber bottles are commonly used for wine.

CLEAR GLASS BOTTLES FOR SPIRITS

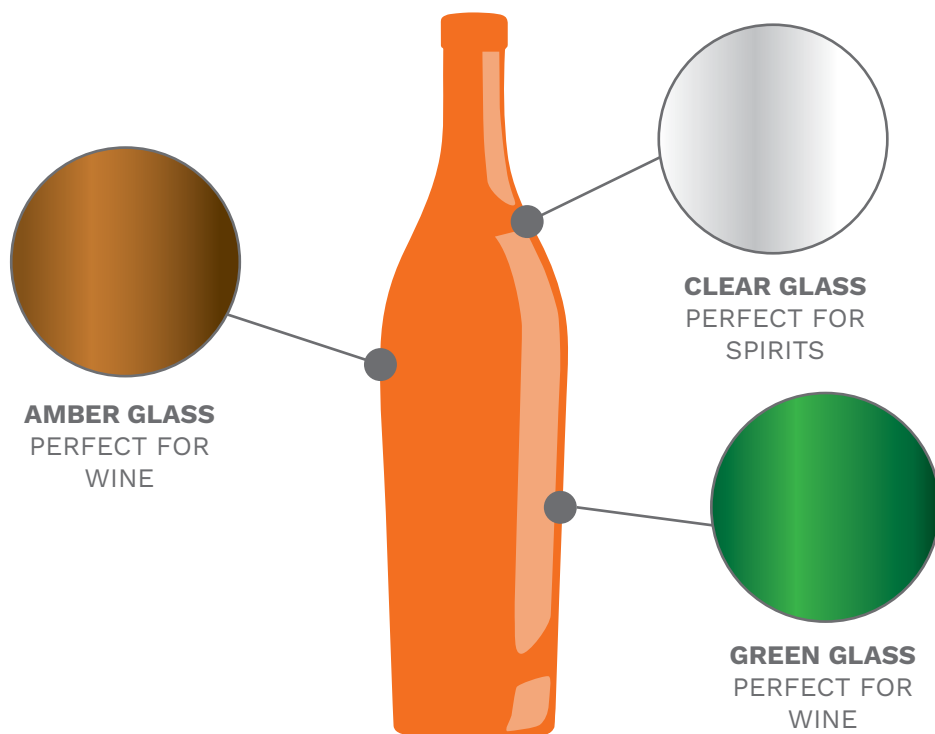
For bottling liquor and spirits, different colours of glass bottles offer various benefits. Clear glass bottles are an excellent option for liquors, whiskey, gin, or vodka, while blue, green, and amber bottles are popular for wine.

Thicker glass bottles are suitable for luxury or more viscous products like syrups. Amber glass bottles are perfect for protecting liquids from UV and blue light, which can reduce their potency. Tall cylindrical bottles are visually appealing and work well for food.

THE BOTTLING METHOD MATTERS

One of the benefits of glass bottles is their ability to withstand low or high-heat sterilization methods, making them easy to clean and ideal for a variety of products. Glass bottles are also durable enough to endure both hot and cold high-pressure packaging methods.

Thinner clear glass bottles may be less suitable for high-pressure bottling or processing methods, and thicker clear glass bottles can be a better choice to prevent cracking or breaking. Short-neck bottles may not be the best option for water-rich liquids since there is little room for liquid expansion during processing.



3

CAPACITY

Nip, pint, split, fifth?

Standard bottle sizes for spirits include pint, half-litre, and litre. The most commonly used size is the 700 ml bottle, but unique sizes such as the split and magnum are also available.

NOMINAL AND BRIM CAPACITY

The capacity of a container can be measured in different ways. The nominal capacity refers to the amount of liquid that the container is designed to hold, as specified by the customer. On the other hand, the brim capacity is the total technical capacity of the bottle, which considers the volume of air that remains in the container after it has been filled up to the fill level. This additional volume of air, which usually amounts to around 4 % of the nominal capacity, is added to the nominal capacity to obtain the brim capacity.

The fill level is the point on the neck of the bottle where the liquid inside will reach once the container has been filled. There is usually some air space between the fill level and the top of the bottle, which can vary depending on factors such as the closing system used, the filling process, and the properties of the product being contained. This air space is often necessary for fitting a cork or other type of closure onto the bottle.

THE GLASS WEIGHT FOR BOTTLES

The weight of a glass bottle is dependent on several factors, such as its shape, capacity, and the total quantity to be produced. Bottles with unique shapes typically require more glass, resulting in a higher weight. The production volume can also affect the design of the mould set used to create the bottles.

It is worth noting that non-round bottles generally require more glass weight than round bottles to enhance their strength in critical areas such as sharp edges at the bottom and flat shoulders. This extra glass weight serves to reinforce these vulnerable areas.

NOMINAL CAPACITY ml	GLASS WEIGHT g
	
200/250	220 - 300
350/375	300 - 400
500	400 - 500
700/750	500 - 600
1000	650+

STANDARD CAPACITY

The most frequently used bottle sizes in the industry include miniature or nip (50 ml), half a pint (200 ml), 0,7 L, fifth (750 ml), litre, and half a gallon (1,750 ml).

Standard bottle sizes for vodka include miniature, split, pint, half-litre, litre, and magnum, with the most used size being the half-litre. Whiskey is commonly sold in standard bottle sizes such as pint, half-litre, 0,7 litre and litre, but there are also unique sizes available like the split and the magnum. Similarly, gin is typically packaged in standard sizes such as pint, half-litre, and litre, but some less common sizes like the magnum are also available. In the wine industry, the most common bottle size is 750 ml.

RARELY USED BOTTLE SIZES

Uncommon liquor bottle sizes, like magnum, jeroboam, and rehoboam, are typically reserved for special events, and promotional purposes. These bottles have a capacity of 1,500 to 4,500 ml, making them ideal for creating large cocktail recipes or serving multiple cocktail pours.



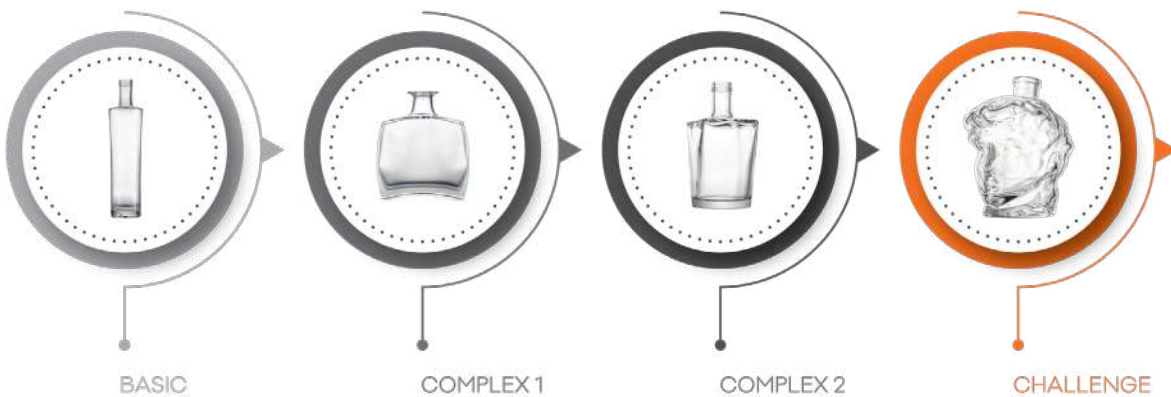
4

DESIGN

Sharp and tall or curvy and short?

While good product quality is vital for a brand's reputation, exceptional packaging and a strong brand image are necessary to convince customers to try the product in the first place.

The perfect packaging design boosts revenue without the need for additional information and stands out from the competition.



THE BOTTLE REPRESENTS THE ESSENCE OF THE DRINK

Glass bottles can be designed in extravagant styles that exude sophistication, classic flair, or vintage appeal. But to capture consumers' attention, the bottle shape must be distinctive. The Hrastnik1860 collection offers extreme versatility, with one bottle model that can accommodate all types of spirits.

In recent years, the trend indicates a preference for non-classic bottle choices for certain beverages. However, it is important to emphasize that you can choose any bottle that you feel is suitable for your brand. However, some shapes may complement certain drinks better than others.

• COGNAC:

Cognac bottles tend to be curvy, round, tall, or short. Classic styles often feature a pouch or small round shape.

• GIN:

Gin bottles are usually short with a round or square finish.

• TEQUILA:

Although tequila bottle shapes vary, a popular design features a medium height with a red or blue cap finish.

• VODKA/RUM:

The most popular bottle shape is tall, round, and classic with curved shoulders (aged rum is more likely to be found in a cognac bottle).

• WHISKEY:

Whiskey bottles come in an array of sizes and shapes but always look sophisticated.

5

DECORATION OPTIONS

Precious metals, UV colours?

The decoration depends on the product design specifications and the use of various decoration techniques, such as screen printing, hot stamping, the use of precious metals, or UV colours.

Ensure that your exceptional content catches the eye of customers on the shelves by selecting state-of-the-art decorations that speak louder than words. Depending on product design specifications and techniques, decoration is possible on most bottle shapes.

At Hrastnik1860, we provide direct screen printing options that guarantee printing resistance and a photorealistic look. Additionally, we can create relief decorations in transparent or coloured versions using our inorganic colours (burned at high temperatures ranging from 540 to 680 °C) and organic colours (burned at lower temperatures ranging from 160 to 200 °C) that comply with REACH regulations.

DECORATION METHODS

• SCREEN PRINTING:

The combination of quality and simplicity makes screen printing the most popular method of decoration. Our modern automatic printing machines enable screen printing in one single process with up to 8 colours. Screen printing can also be combined with other decoration methods on most bottle shapes.

• HOT STAMPING:

Hot stamping guarantees a premium touch to your bottle decoration. A sophisticated hot stamping process can be applied to small or large parts of your product decoration. It can be applied to flat, cylindrical, and conically shaped bottles in a combination of up to 7 colours

(+ hot stamping). An attractive high-end quality finish will guarantee your product a stylish and premium outlook.

• PRECIOUS METALS:

Gold is the money of kings and silver is the money of gentlemen. These precious metals will never wear out and have been popular in all ages. Precious metals can be applied directly on transparent glass and will guarantee a spectacular and Super premium feel of the bottle.

• UV COLOURS:

With our fully automated modern machines, we can print up to 8 UV colours on most bottle shapes. UV colour has its character and sends a strong statement to ensure your bottle will stand out.

• SPRAYING:

Spraying solution enables us to coat bottles of almost all shapes and sizes with up to two colours at the same time. We can spray the entire bottle, or we can just partially spray the bottle to apply additional decoration techniques in the next step. To achieve stunning effects, we can spray a variety of innovative substances.

• SAT IMITATION:

Unlike acid etching, sat imitation is an eco-friendly decoration method. Because of its smoothness and satin-like surface, we can get very close to the frosted result. We can print sat imitation on all bottle shapes, on the entire bottle or just partially. Sat imitation will provide a luxurious effect and is ideal for any additional decoration.

• TAMPO PRINT:

Tampo printing is the best solution for printing in areas where decoration with other methods is not possible. There are almost no limitations regarding the shape of the bottle. Tampo printing is done with only one colour, which you can choose from all Pantone colours, to give your bottle decoration a special touch.

• DECAL APPLICATION:

Decal applications are a possible alternative to screen printing and are applied manually on transparent glass. This process is used for bottles that are of too irregular shape to be automatically screen printed. They are mostly used for small series and limited editions. There are no limitations on colours.

• METALLIZATION:

Metallization is a coating process that gives a mirror-like, shiny finish to your bottle. It can be done partially or on the entire bottle and it's possible in a variety of colours. The result is a surface with a mirror effect that cannot be matched with any other decoration process and will highlight the uniqueness of your bottle.



SCREENPRINTING



HOT STAMPING

PRECIOUS
METALS

UV COLOURS



SPRAYING



SAT IMITATION



TAMPO PRINT

DECAL
APPLICATION

METALLIZATION

6

CLOSURES

A big part of the overall design and aesthetics

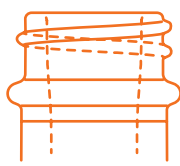
The overall design and aesthetics of packaging are important, and closures play a crucial role. They affect the product's look and feel.

THE FINISH

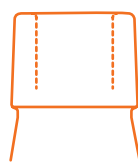
In most instances, finishes for glass bottlenecks are standardized on an international level.



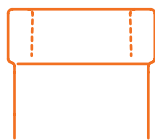
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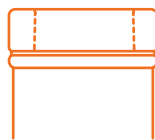
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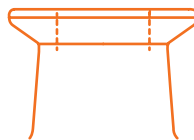
CORK FINISH



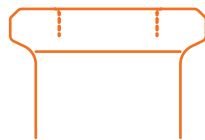
FASCETTA



OMNIBUS



BP CARNETTE



SPECIAL

CLOSURES ADD BEAUTY AND SOPHISTICATION

Glass packaging closures contribute to the overall design and aesthetics of glass containers, adding to their beauty and sophistication. With our assistance, you can choose the perfect glass packaging closure that complements your product and enhances your brand. The finishing touch of a luxury closure gives meaning to the entire design.

The most common closure for glass bottles for spirits is a cork or a screw cap. Both provide an airtight seal to preserve the quality of the spirits and protect

against oxidation. Choose from options like wood, plastic, glass screw cap, glass cap, bar top, premium cork closures, and more.

DIFFERENCE BETWEEN A NATURAL CORK AND A SYNTHETIC CORK

Spirit closures can be made from a variety of materials, including aluminium, wood, plastic, and other synthetic materials. Screw-tops are simple and easy to use, while bar-top closures offer more decorative options that showcase a spirit's brand and distinguish the bottle on the retail shelf. We can provide comprehensive advice on which closure and design to choose for your optimal solution. We can even help you create your own closure design.

SCREW TOP is perhaps the simplest closure option, as it is self-explanatory. The cap unscrews, usually breaking from the ring on the neck of the bottle, and can be easily screwed back on if the consumer wants to provide a basic reseal on the leftover product.

BAR-TOP closures consist of a flat or domed cap and stopper, which can be made from natural or technical/synthetic cork. These closures are typically treated to facilitate the insertion and extraction of the cork from the bottle. The cap can be made from various materials, including glass, wood, plastic, and metal.

GLASS CLOSURES are made of pure glass, which does not affect the aroma or taste of the contents inside the bottle. These elegant closures are ideal for wines, spirits, bottled water, and oils, as they offer a sophisticated and luxurious finish to the bottles.

7 CERTIFICATES

Safety of glass packaging containers

It is essential to choose a glass manufacturer that not only meets but exceeds quality and performance standards, has the necessary certifications and is a reliable business partner you can trust.

Hrastnik1860 is a company committed to obtaining certifications to have credentials for its evaluation as well as for other companies to see that we meet a certain standard of competence.



• ISO 9001:

Hrastnik1860 is compliant with the ISO 9001:2015 standard for quality management systems. With this internationally recognised standard, we are proving to our customers, consumers, employees, and owners that we constantly strive toward achieving the highest possible quality of our products and services, while constantly improving the processes



• ISO 14001:

ISO 14001 is the international standard for organizations that monitor the environmental impact of their operations. Following the successive steps of the Plan-Do-Check-Act cycle, ISO 14001 details the most important requirements for identifying, managing, and monitoring the environmental aspects of each organization.



• HACCP:

Hrastnik1860 is a holder of the HACCP certificate. Certifying good manufacturing practices, good hygiene practices and compliance with the principles for risk management and for ensuring product safety.



• SMETA:

Hrastnik1860 passed the fourth social system audit for Sainsbury's, a chain of supermarkets, according to the principles of SMETA 5 (Sedex Members Ethical Trade Audit or social audit). The successful audit further confirms that Steklarna Hrastnik is an excellent, reliable supplier of high-quality glass products.

After finalizing the selection and decoration of your glass bottle and filling it with your spirit, what are the subsequent steps that need to be taken?

8

SECONDARY PACKAGING

Protect your product during transportation

To protect your product during transportation, it's important to consider the packaging's purpose, the bottle and packaging material, as well as the tertiary packaging. The secondary packaging material can include plastic shells, corrugated cases, paperboard cartons, and other options.

SECONDARY PACKAGING SHOULD BE SUITABLE FOR YOUR BUSINESS

The purpose of the packaging is a crucial factor to consider when choosing the appropriate substrate. The packaging purpose can determine the type of material used, with an economical solution like plastic rings ideal for unitizing several bottles. On the other hand, a paperboard carton or sleeve is better suited for marketing a multipack, given the printing capabilities and marketing space available. If the primary goal is shipping or e-commerce, a corrugated substrate is best due to its protective characteristics.

STANDARD PACKAGING SCHEME

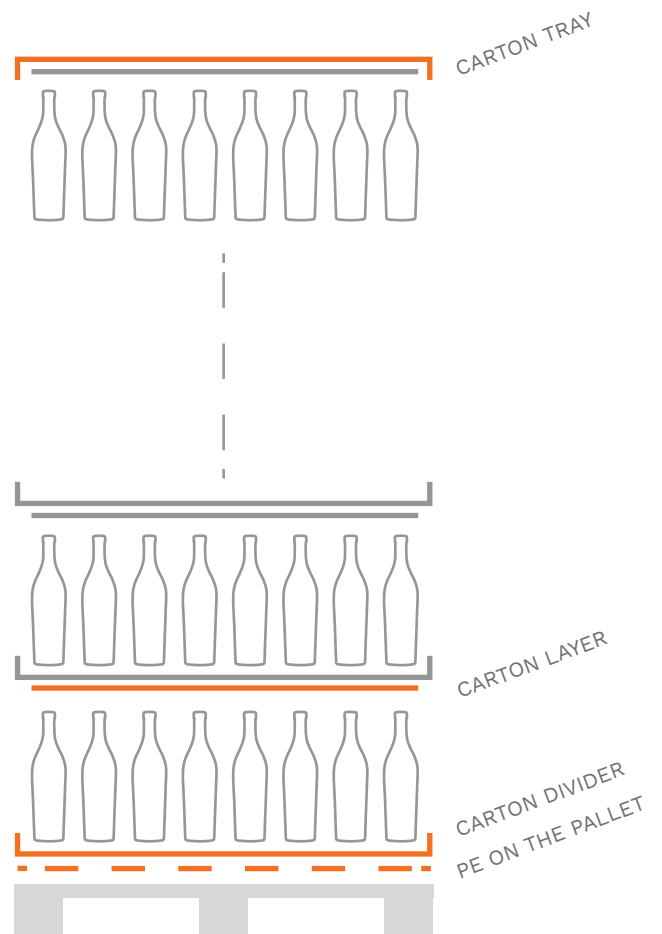
Our typical packaging scheme is designed based on the scheme for a bottle with a capacity of 700 ml, ensuring maximum protection for your products. Here are the key components of our packaging solution:

- Carton trays of varying hardness, depending on the weight of the bottle. We use thicker cartons for heavier bottles to ensure their safety.
- Carton layers are partitions between different levels of stacked bottles, which we can replace with plastic trim upon request.
- Carton dividers are partitions for bottles on the plateau.

Pallets with products are wrapped with PVC foil to protect them from external influences that could damage or dirty the packaging. With foil, the products are also more stable and immovable on the

pallet. The packaging is automated with a palletizer. The pallets can be folded to optimize transport and make maximum use of the truck's space.

We understand that every bottle has unique characteristics, which is why we adapt our packaging scheme to meet their specific needs. We take into account the weight, volume, and shape of the bottle, and always prioritize buyer conditions of protection during transportation.



9 REGULATIONS

Do you know your obligations?

After selecting the perfect bottle for your spirit, it's time to enter the market. However, it's important to remember that regulations and legislation may vary by country. To ensure a successful launch of your unique spirit, it's essential to comply with these regulations.

COMPLIANCE WITH MARKET REGULATIONS



Most countries have regulations for hazardous waste management, handling, and transboundary movement that apply to the importation of glass and glass packaging.

The containers for food packaging comply with the following EU regulations:

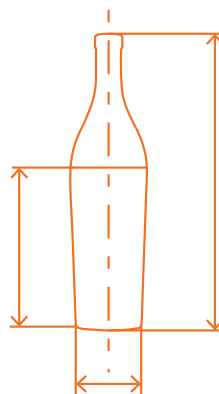
- Point 1a, Art 3 of Regulation No. 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directive 80/590/EEC and 89/109/EEC; Regulation (EC) No 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food.
- Art 11 of Directive 94/62/EC on packaging and packaging waste, regarding the provisions of Art 3 of Commission Decision 2001/171/EC of 19 February 2001, amended by Commission Decision 2006/340/EC of 8 May 2006, establishing the conditions for a derogation for glass packaging in relation to heavy metal concentration

levels established in Directive 94/62/EC on packaging and packaging waste.

- Art 33 of the European REACH Regulation 1907/2006/EC about the duty to provide the relevant information about substances in articles in order to allow the safe use of the article.

We are following the new Directives concerning glass containers for beverage and food packaging & imperatively recommending respect for the limited characteristics of the use of products. The non-observance of these operational limit characteristics can involve breakages, and provoke problems of conditioning.

TECHNICAL DRAWINGS



The dimensions of the items are defined in a technical drawing prepared by us and approved by the Customer. Any changes to the dimensional characteristics, whether requested by Customer or proposed by Steklarna Hrastnik, must be documented in a new Technical Drawing which, following approval by Customer will supersede the preceding one.

The Technical Drawing contains the following information:

- Item code,
- General dimensions with allowed tolerances,
- Dimensions subject to inspection,
- Glass weight,
- Level and/or Brimful capacity with tolerances under DIN 6129,
- Verticality, under DIN 6129,
- Approval signature and date. The dimensions subject to inspection are those, which show the tolerances that must be respected by STEKLARNA HRASTNIK.

PACKING



The items have an associated Packing Sheet detailing their packing and palletising characteristics. In particular, it includes the following information:

- Item code,
- Pallet type,
- Total number of pieces per pallet,
- Gross and net weight of the complete package,
- Number of pieces per packing unit,
- Any special packing characteristic - which differs from the standard ones (labels etc.),
- Pieces per layer or packing unit,
- Dimensions of the complete package,
- Quantity and type of inner dividers.

Due to their significant impact on transport and on the (de) palletising lines, any changes to the packing sheet must be agreed upon between us and the customer or duly reported by the customer in advance.

TRACEABILITY



A label is to be stuck onto the two adjacent sides. The labels are detachable so that they can be kept and allow the traceability of the product. To limit the consequences for the customer and for STEKLARNA HRASTNIK of isolation or return of the product, we recommend that the traceability of the filled product be linked with the pallet label that accompanies each pallet.

CLEANLINESS OF THE GOODS



Our proposal is to warehouse the goods in closed, covered and without-humidity places. We do recommend that goods should not be exposed to big temperature differences. The maximum time of warehousing is one year.

We recommend washing, rinsing or blowing the goods before use. This recommendation is supported by the European regulation 852/2004 of 29/04/04 concerning the hygiene of foodstuffs.

