

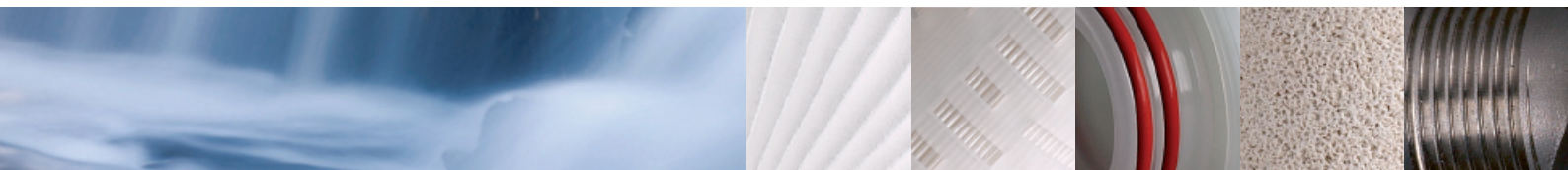


FILTRATION SOLUTIONS FOOD AND BEVERAGE INDUSTRIES



FILTRATION SPECIALISTS

Delivering quality filtration products...



As one of Europe's leading manufacturers of filters specifically designed for Food & Beverage industries, Amazon Filters is able to offer a solution to meet all your filtration needs.

Amazon Filters understanding and knowledge of Food & Beverage processes and applications is our strength. This industry experience enables us to provide you with optimum filtration solutions for your particular process.

We design and manufacture an extensive range of liquid filtration systems, providing one of the widest selections of filtration vessels, depth filters and pleated cartridges available today. Manufactured in clean room conditions using materials that meet Food Contact requirements, all products come with detailed Product Validation Guides and Technical Support documentation. Many of our filters can be regenerated using hot water or a variety of chemical treatments to ensure production costs are minimised

Customer Commitment

Delivering quality filtration products to our customers is only one of the major factors in Amazon Filters success. Another is in providing a level of customer service that few, if any, competitors can match. Recognised as a reliable and trustworthy supplier, Amazon targets first class service performance in terms of on-time deliveries; same-day dispatch; quick response to enquiries and answering 95% of telephone calls within two rings. These are some of the factors that make Amazon stand out from the rest.

Quality Approval

Amazon Filters is accredited to ISO9001:2000 by one of the worlds most prestigious and respected accreditation bodies, the British Standards Institute. Our certificate number is FM 39584. To support and complement the Company's quality systems, Amazon Filters is also actively engaged in gaining approvals for its products in specific industries. This includes approval for use in public water supplies under Regulation 31 of the UK Water Supply (Water Quality) Regulations 2000, one of very few companies to achieve this high standard of approval. Our products have also been independently tested and verified for the effective removal of Cryptosporidium. We also have ability to carry out in house testing on products and processes to provide a complete service for all clients.

Wine Production

Filtration is critical to a successful wine production process and the use of Amazon SupaSpun II, SupaPleat II, and SupaPore filters has proven reliable and cost effective in this demanding process. These products are well established in wineries across the world, providing the ideal answer for a deep-bodied red or light, bright white wine.

Amazon Filters products have proven reliable in all areas of the wine making process including roughing filters, haze reduction, crystal removal, microbiological stabilization as well as in utilities such as water, steam and CO₂.

Clarifying or Trap Filtration

The purpose of Trap Filtration is to remove any kieselguhr/diatomaceous earth powder, other finings material or particles and to 'polish' the wine. For most applications we would recommend Amazon SupaPore PPG cartridges rated at 10 µm absolute. This can be used with backwashing to increase throughput and lower the operating costs. Where backwashing is not used Amazon SupaSpun II or SupaPleat II are the preferred options.

Fine Filtration

In Fine Filtration filters are used to remove yeast and for bio-burden reduction, either as a final stage on more robust wines or more typically



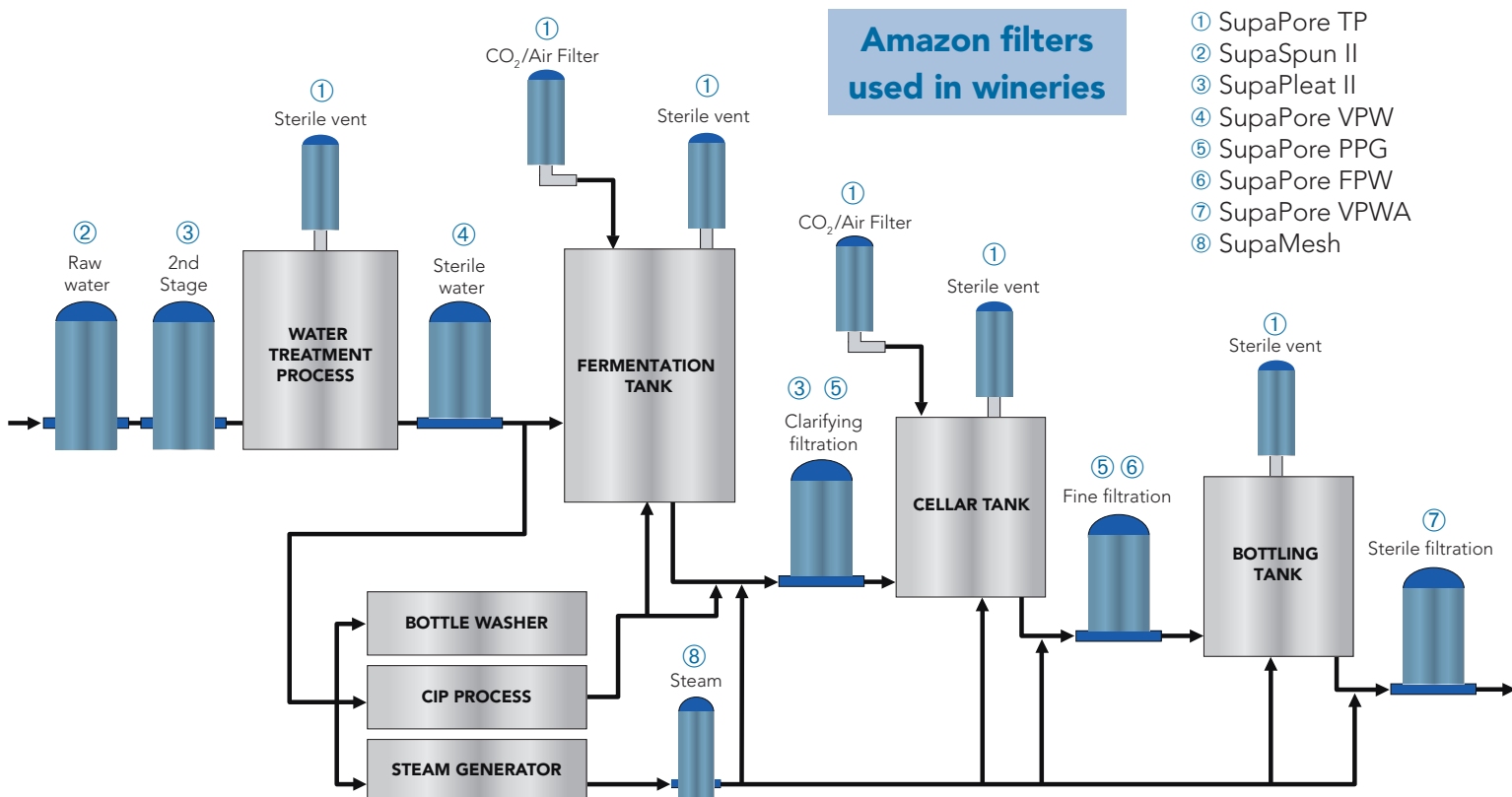
as a prefiltration stage prior to 'sterile filtration'. For this application we recommend Amazon SupaPore FPW cartridges. These offer long life, significant bioburden reduction and excellent protection for 'sterilising' filters.

Sterile Filtration

'Sterile Filtration' is designed to remove all spoilage organisms from the wine. For this application, Amazon SupaPore VPW and SupaPore VPWA cartridges are ideal, typically rated at 0.45 µm or 0.65 µm. Where integrity testing of the filters is not required producers may use SupaPore FPW filters.

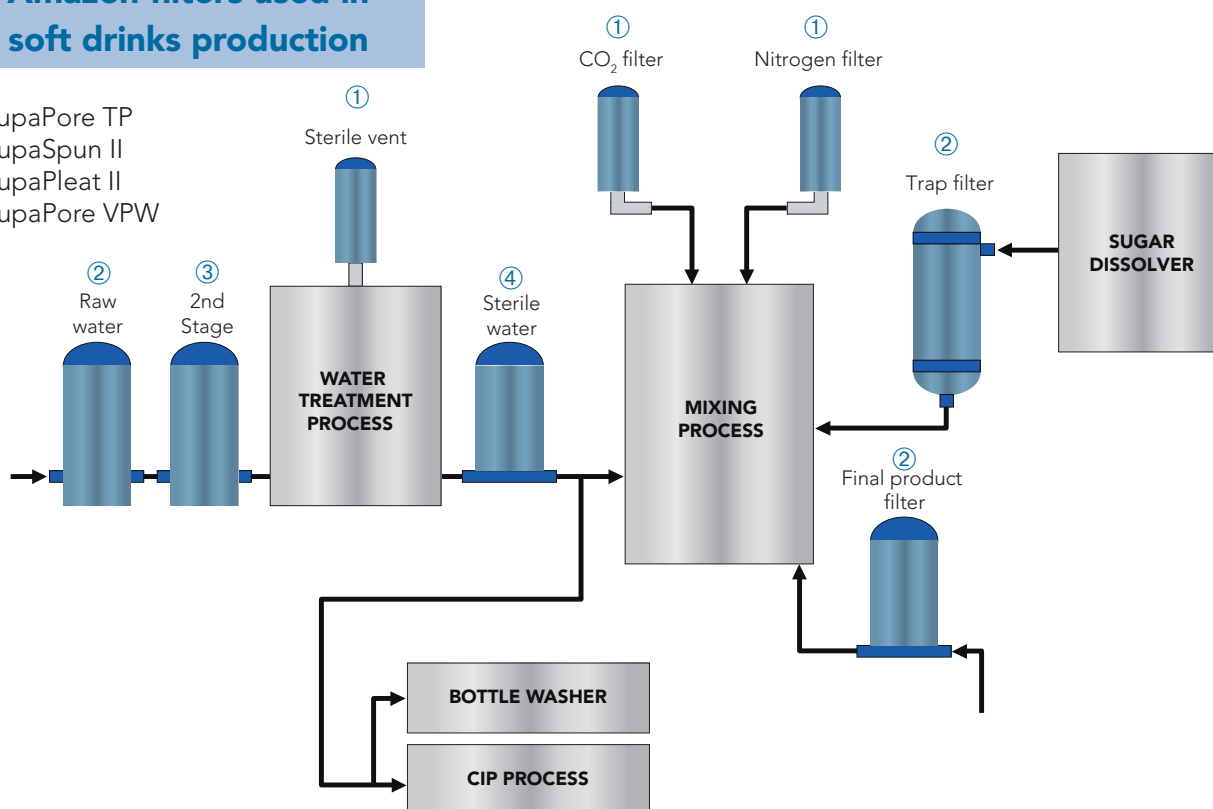
Where 'crossflow' filtration is used (also known as membrane filtration, microfiltration or ultrafiltration), cartridge filters can be used downstream as a 'policing' filter to ensure that bottled wine quality is not compromised, should bypass occur in the crossflow system.

Housings used for these applications should be fully flowed, fully draining and suitable for CIP (Clean In Place) and/or steaming. The Amazon 51 Series, 62 Series, 64 Series or 70 Series housings are ideal for meeting these requirements.



Amazon filters used in soft drinks production

- ① SupaPore TP
- ② SupaSpun II
- ③ SupaPleat II
- ④ SupaPore VPW



Soft Drinks

Amazon Filters products are used by the worlds leading soft drinks manufacturers at every stage of the process to ensure sparkling, bright products. Typical applications include raw water filtration, de-chlorination, product/ingredient clarification and control of microorganisms such as *Cryptosporidium*.

Amazon has a range of filter products that can provide the ideal solution to your process requirements.

Primary Filtration

Some of the raw materials used in soft drink production may contain particles that can affect final product quality. Filtration can remove both visible particles and the very fine contaminants that can cause background haze (polishing filtration). Typically Amazon **SupaSpun II** cartridges are used for water filtration and Amazon **SupaSpun II** or **SupaPleat II** cartridges for the filtration of syrup or other viscous additives. Where coloured impurities are present **SupaCarb** activated carbon modules can provide a clean simple method to remove these contaminants.

Fine Filtration and Micro-organism Control

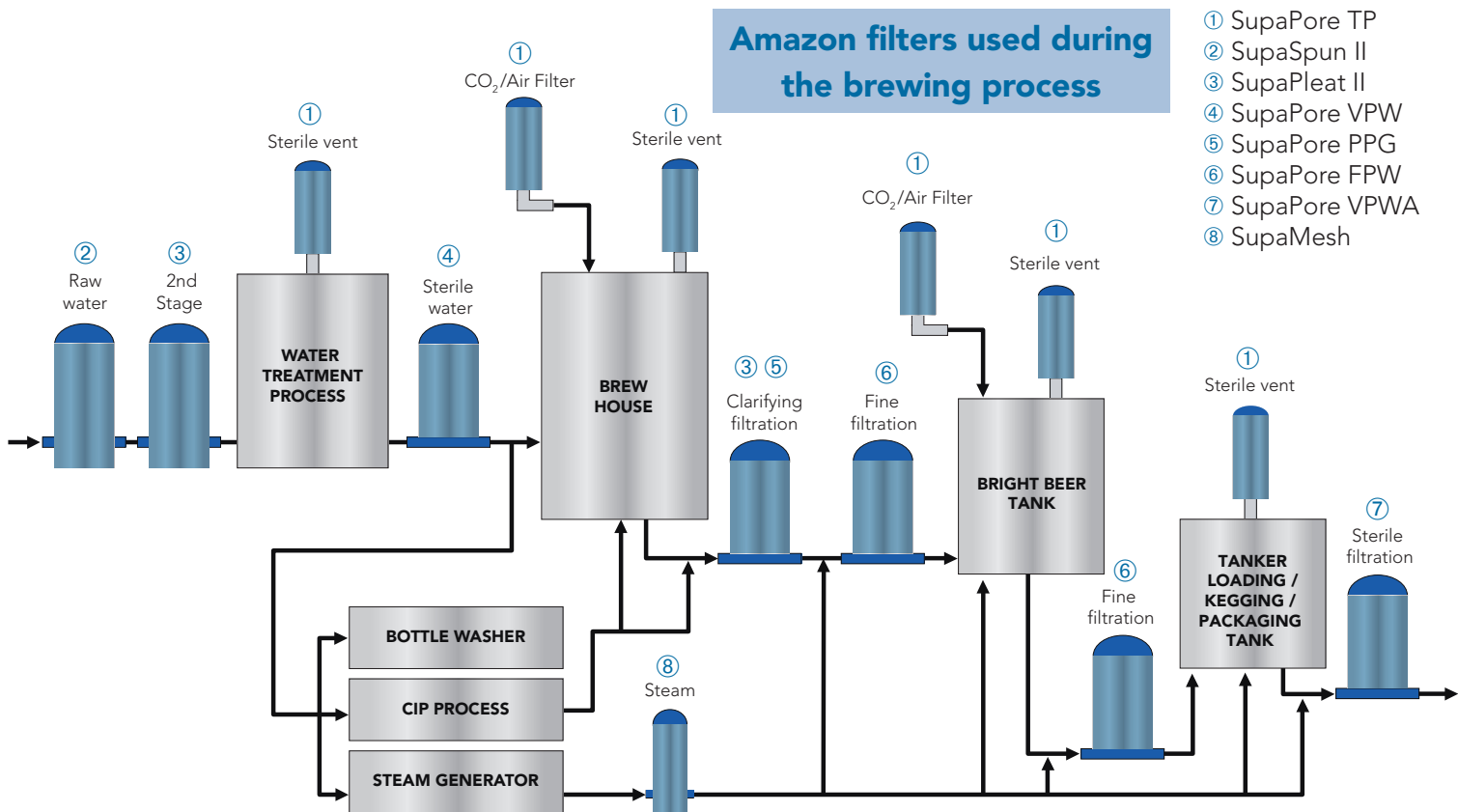
Fine Filtration can be used for final polishing to produce a bright product or for the removal of microorganisms such as yeasts, *Cryptosporidium* oocysts and *Giardia lamblia*.

For this application we recommend Amazon **SupaPleat II** or **SupaSpun II** cartridges. Where *Cryptosporidium* removal is required we can offer special 'Crypto' grade filters which have been qualified for this application.

Where sterile filtration of bottled water is required prior to bottling we recommend the use of 0.45 or 0.2 μm **SupaPore VPW** filters

For most of these applications the Amazon **61 Series** and **63 Series** housings offer an ideal low cost solution. Where a fully draining leg mounted housing design is preferred e.g. for steaming, hot CIP duty, filtration of syrup, sugary or viscous additives, the Amazon **62 Series**, **64 Series** or **70 Series** housings should be considered.





Brewing

Amazon Filters products have a proven pedigree in all areas of the brewing process and are an essential resource to the Master Brewer. Trap filtration, haze reduction and microbiological stabilization are just a few of applications where Amazon products can be relied upon.

Utilities such as steam, CO₂ gas supplies and CIP processes also rely on effective quality filtration from Amazon to assure the products final quality.

Trap Filtration (Post KG and/or PVPP)

Removal of any Kieselguhr or diatomaceous earth powder and other particles is vital to 'polish' the beer. For most applications we would recommend Amazon **SupaPore PPG** cartridges rated at 10 µm absolute. This can be used with backwashing to increase throughput and lower the operating costs. Where backwashing is not used Amazon **SupaSpun II** or **SupaPleat II** can provide the optimum solution.

Fine Filtration

Typically fine filtration involves the removal of yeast and to provide bio-burden reduction prior to cold stabilisation or 'sterile filtration'. For this application we recommend Amazon **SupaPore FPW** cartridges. These offer long life, significant bioburden reduction and excellent protection for 'sterilising' filters.

Generally fine filtration is used for protection of downstream cold stabilisation or sterile filters. Some manufacturers use filtration for reduction of bio-burden prior to pasteurisation. This can reduce the energy requirement for the pasteuriser and reduce the degradation of the beer that excess heat may cause.

Sterile Filtration or 'Cold Stabilisation'

Cold Stabilisation, also called 'Sterile Filtration', is used to remove all spoilage organisms from the beer. It offers a viable alternative to pasteurisation, particularly in the medium sized or small breweries where it's considerably lower capital costs will be a major advantage. It is also used in any brewery where taste is paramount (filtration will not adversely affect the taste of beer). Where flash pasteurisation is or has been used it offers a simple replacement (as the hygienic handling and filling protocols and equipment will already be in place).

For this application, Amazon **SupaPore VPW** and **SupaPore VPWA** cartridges rated at 0.45 µm absolute would typically be used.

Choosing the most appropriate filter housing is vital and for brewing applications the housing should be fully flowed, fully draining and suitable for CIP (Clean In Place) and/or steaming. The Amazon **62 Series**, **64 Series** or **70 Series** housings are ideal for meeting these requirements.



Food

Food processing is no less demanding in its quest for high quality filtration products to support the increasing value of the products processed, to ensure consumer protection and customer satisfaction. With a host of special applications, our products are successfully used on Dairy products, Edible Oils, Sugars and Vinegars as well as Fermentation and a host of other food production processes.

Amazon **SupaSpun II** depth cartridges, the **DuoLine** range of filter bags and **DuoMesh** strainer baskets offer a cost effective solution for a range of

applications including particle removal from edible oils, syrups, flavourings or sauces and for water filtration. Where cyst removal e.g. *Cryptosporidium* oocysts, *Giardia lamblia* etc is required we would recommend Amazon special 'Crypto' grade **SupaPleat II** or **SupaSpun II** cartridges which have been specifically qualified for this application.

For gases supplied to product contact areas and packaging machines **SupaPore TP** or **SupaPleat II** filters are typically used for control of particulates, bioburden reduction or complete removal of microorganisms.



Production Support Utilities

Water Filtration

Water is an important part of the process whether used for cleaning and rinsing or in the production process. Food and beverage manufacturers around the world have come to rely on **SupaPore**, **SupaSpun II** and **SupaPleat** premium quality filter cartridges for removal of particulates and microorganisms.

Housings should be fully flowed, fully draining and suitable for CIP (Clean In Place) and/or steaming. The Amazon **62 Series**, **64 Series** or **70 Series** housings are ideal for meeting these requirements.

Gases (Compressed air, CO₂ and N₂)

Gases that come into contact with the product should be filtered to prevent recontamination. Critical gas applications include blanketing gases (N₂ or CO₂ used to blanket tanks or pipework), carbonation and nitrogenisation.

For these applications we recommend Amazon **SupaPleat II** or **SupaPore PP** cartridges for general particulate control and **SupaPore TP** for sterile filtration duties. Recommended housing options for particulate control applications are Amazon **52 Series** or **53 Series** and Amazon **72 Series** or **74 Series** housings for more critical applications.

Steam

Filtration systems used in manufacturing may be steam sterilised in-situ and the steam used to do this should be filtered to prevent it causing premature blockage of, or damage to, the process filter.

For this application we recommend Amazon **SupaMesh** stainless steel mesh cartridges (10 µm absolute) housed in Amazon **52 Series** or **53 Series** housings.



Distributed by:

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