



Filtration In The Hard Seltzer Industry

The hard seltzer market has had a substantial growth over the last few years. This has been caused by an increase in consumer demand. Specifically for beverages with lesser calories, varying flavors, and varying amounts of alcohol content. Brewers across the world continue to expand their product offerings to include hard seltzers. It's not only the big breweries, smaller craft and microbreweries are also expanding into hard seltzer production.

- We operate on three key stages of seltzer production: First, after fermentation, bulk filtration retains all unwanted large particles (coarse filtration), making the hard seltzer visually clear. We recommend using a pressure leaf filter offered by Filtration Group, Process Systems for this step.
- For the clarification step, depending on the hard seltzer composition (solid content, turbidity, micro-organisms contents), we recommend using Global Filter's [pleated microglass cartridges](#) (FG & HFFG series) and/or [pleated polypropylene cartridges](#) (PP & HFPP series) with a pore size rating of 1 to 3 microns. The FG-Series cartridge offers a low-pressure drop, high load capacity, and efficiency while assisting in haze retention due to the media's inherent positive charge. This step also protects the membrane filter from being overloaded with particles and prematurely clogging.
- Before packaging, the third and final filtration step provides clarity to the hard seltzer while retaining residual yeasts, haze, and microbial contaminants that can potentially induce packaged fermentation and haze reformation, and interfere with seltzer preservation. For microbial contaminant retention, 0.45 or 0.8 micron-rated PES membrane cartridges are recommended. Retaining microorganisms is essential to providing a stable product, free from harmful contaminants.

- Global Filter's products can ensure sterile effluent free of microbial contaminants, providing cleanliness to wash/ rinse water and fluid utility lines.
- Fermentation and holding tank vents should utilize filtration to remove contaminants from the ambient and process air.

Typical Seltzer Process Flow

Yeast & Solid Removal



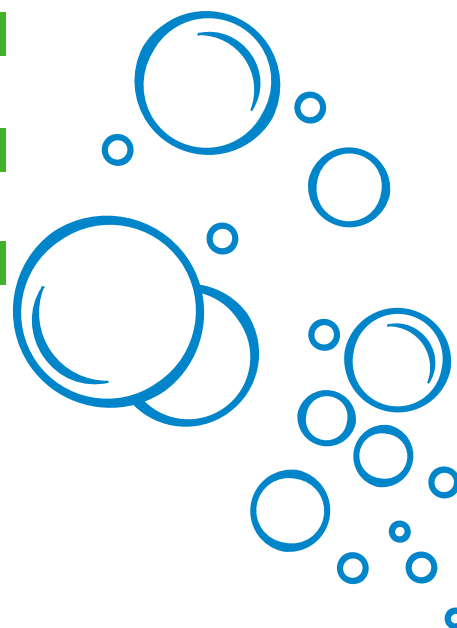
Color & Aroma Removal



Sterile Filtration



Final Package Stability





Our Solutions For Hard Seltzer Filtration

Global Filter designs innovative and efficient filtration solutions. Since our founding in 1999, we've grown our product offerings to meet the ever-advancing needs of various filtration markets. From modest beginnings as a family home-based business, Global Filter now serves customers (as our name implies) around the globe. Some of the largest companies in the world trust their filtration requirements to Global Filter because of our world-class service and industry-best lead times. With manufacturing plants in the USA, Europe (France), and Japan, we are available when you need us the most.

Filters for clarification:

For coarse particulate retention, fiberglass pleated cartridges are an optimal choice. With a pore size rating from 0.2µm to 40µm, our **FG-Series** is suitable for colloid filtration, and food contact and does not interfere with the organoleptic properties of hard seltzer. The FG-Series elements also protect membrane cartridges. As a result, they promote less maintenance and production downtime. In addition, Global Filter's short lead times limit the amount of on-hand inventory required by the user.

Filters for tank vents and utilities:

We provide optimal solutions that limit the contamination of your products by offering filtration solutions to service process fluid lines. Global Filter's **WCPES** filter cartridges can retain sub-micron particulate from process water. Our range of **PTFE** membrane cartridges allows for the retention of microbial contaminants by filtering tank vents and process air/gas.

Filters for microbial filtration:

Our solutions are designed to ensure performance and quality. Our range of **PES membrane cartridges**, such as GFPES, GBPES, and GDPES, are 100% integrity tested before leaving the manufacturing facility to ensure they adhere to bacterial retention standards. A validation guide can also be provided to convey operating and performance specifications. The end-user's process and operating requirements will often dictate which Global Filter PES product and what micron rating is most optimal. This is typically determined by the type of hard seltzer produced.

Global Filter Main Advantages:

- Industry-leading delivery times
- Manufacturing facilities in North America, Europe, and Japan
- Competitive prices and the highest value in the industry
- The design, development, and manufacture of all our products meet the construction standards D.E.S.P 2014/68/EU, NSF, USP, FDA, CE 1935/2004
- Technical support from initial conversations to implementation and continued process assistance
- Our solutions are based on our expertise as well as laboratory and industrial certified testing
- We can offer products for small-scale production as well as higher volume operations

Product Advantages:

- Production in North America, Europe (France), and Japan
- Short Lead-Times
- Micron ratings down to 0.01
- Product range from prefiltration to sterilizing-grade
- Manufactured according to EU and US standards
- Large choice of media for a wide range of applications

