



Filtration Solutions for the Soft Drinks Industry

In the soft drinks industry, proper filtration systems are critical in ensuring the biological safety, quality, and shelf-life of the product, as well as protecting downstream equipment. Global Filter's product solutions help protect the process from contaminants while extending service life and reducing operations costs. Global Filter designs and manufactures filter elements and vessels that are widely used in the soft drinks industry and our decades of industry expertise will help to optimize your manufacturing process.

Proper filtration systems are critical in ensuring the biological safety, quality, and shelf-life of the product, as well as protecting downstream equipment. To meet required water quality standards and remain competitive, systems must integrate several filtration processes to reduce particulates, remove microorganisms, and protect equipment. When a proper filter system is not installed, bacteria and particulate can impact flavor and overall quality which can be potentially harmful for human consumption.



- There are two key stages of soft drink filtration: First, a clarification step, to remove all unwanted large particles (coarse filtration) that the water or syrup may contain, making the liquid visually clear.
- For the clarification step, depending on the beverage composition (solid content, microorganisms 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 10 microns. The microglass media offers a low pressure drop, high dirt loading capacity and efficiency while assisting in haze removal due to the media's inherent positive charge. This step also protects the downstream membrane filter from being overloaded with particles and prematurely clogging.
- If carbonic acid (gas) is added to the beverage for the purpose of providing a bubbly mouth feel, the carbonic acid should also be filtered to remove any potential microbial contaminant. For this step, we recommend using a hydrophobic [PTFE](#) or [PS](#) (PSH-Series) membrane.
- Before bottling, the second and final filtration step will retain residual microbial contaminants that can potentially induce taste alteration and that could interfere with the beverage's preservation. Microorganisms can enter the soft drink process through contaminated carbon/sand beds, air/gas supply and damaged piping/valves. Removing these microbial contaminants from the product stream is crucial to ensuring quality and making the beverage safe for human consumption. For microbial contaminant retention, 0.45 or 0.65 micron rated [PES membrane cartridges](#) are recommended. Removing the microorganisms from the final product stream provides a stable soft drink, free from microbial contaminants.
- Global Filter's products can ensure sterile effluent free of microbial contaminants, providing cleanliness to wash/rinse water and fluid utility lines.
- Storage tank vents should utilize filtration to retain microbial contaminants from ambient and process air. For this step, we recommend using hydrophobic [PTFE](#) or [PS](#) (PSH-Series) membrane filters.





Filtration For The Soft Drink Industry

Global Filter designs innovative and efficient filtration solutions. The quality of our products combined with our industry expertise, allows you to optimize your process and the filter life cycle. This helps promote a reduction in waste material while increasing productivity. Moreover, the quality and consistency of our products is an important factor to consider for maintaining process reliability.

Choosing Filter Cartridges

Filters For the Clarification:

For coarse particulate retention, fiberglass pleated cartridges are an optimal choice. With available pore sizes from 0.2µm to 40µm, our [FG-Series](#) is suitable for colloid filtration, food contact and does not interfere with the organoleptic properties of the beverage. Our 100% polypropylene [PP-Series](#) pleated cartridges can be used as well. The pleated elements protect membrane cartridges and, as a result, promote less maintenance and production downtime. In addition, Global Filter's USA-based manufacturing allows for shorter lead-times which limits 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 products to service process fluid lines. Global Filter's [WCPES](#) filter cartridges are able to retain sub-micron particulate from process water. Also, our range of [PTFE](#) and [PSH](#) membrane cartridges allow for retention of microbial contaminants by filtering tank vents and process air/gas.

Filters for microbial filtration

Our solutions are designed to ensure process performance and product quality. Our range of PES membrane cartridges, such as, [GFPES](#), and [GDPES](#), are 100% integrity tested to ensure they adhere to bacteria retention standards. The end-user's process and operating requirements dictate which Global Filter PES product and what micron rating is most optimal.

Advantages of Working With Us

- Manufacturing facilities in Europe, North America and Japan
- Competitive prices and highest value in the industry
- The design, development and manufacture of all our products meet the construction standards PED 2014/ 68/EU, FDA, CE 1935/ 2004
- Technical support from initial conversations to implementation and post-use support
- Our solutions are based on our expertise, experience, and laboratory validation testing
- Product offering for both small scale applications and larger production capacities

