Filtration Solutions for the Fine Chemical Industry

In the chemical industry, it is critical to filter process components to prevent particulate and microbial contamination, helping ensure product sterility and quality. 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 chemical industry and our years of industry expertise will help to optimize your manufacturing process.

In the chemical industry, many of the finished goods are made using the same process equipment. As a result, impurities from one process stream could negatively impact neighboring systems which can lead to unwanted contamination, additional Clean-in-Place (CIP) measures, product loss and decreased revenue. Efficient filtration systems positioned in critical locations in these chemical processes can help mitigate risks by increasing particulate removal efficiency while improving effluent quality and reducing unnecessary maintenance.

Filtration of Process Ingrédients

- Typically, there are three key filtration steps of any fine chemical process. First, a filtration of process ingredients to purify solvents and remove unwanted particulates or pollutants from organic and inorganic products which could reduce the chemical reaction's efficiency. This filtration step will also reduce the production of sub-products. When filtering organic and inorganic process ingredients, we recommend using our polypropylene pleated depth cartridge (PP-Series) in a 0.2 micron rating to remove particulate and a PES membrane cartridge for microbial retention. In case of high solids loading, Global Filter recommends a pre-filtration step to prevent the pleated membrane cartridges from clogging too quickly.

- For solvent filtration, we recommend using our PTFE or Nylon 6,6 pleated membrane cartridges depending on the aggressiveness of the solvent and chemical compatibility with the materials of construction.

Filtration of Sub-products / after Chemical Reaction

- During the chemical reaction, sub-products are often genarated and need to be retained. The retention of these sub-products will help improve the purity of the final product. For this step, we recommend using Global Filter's pleated depth cartridge (GHLS-Series) to remove what are often deformable particles. Also, the microglass pleated cartridge (FG-Series) is an ideal solution for removing colloids due to an inherent positive charge within the filter media.

Final Filtration

- Before conditioning and preparing for packaging, a final filtration step is recommended to ensure product purity and quality. For this stage, we recommend using our High Flow pleated cartridge (HFB - Series). Due to the inside-to-outside flow design, all contaminants are captured on the inside of the element, avoiding potential contamination of filtered product during change-out. With up to 48.5 ft² of media, the HFB-Series reduces change-out frequency and employee exposure to chemicals.

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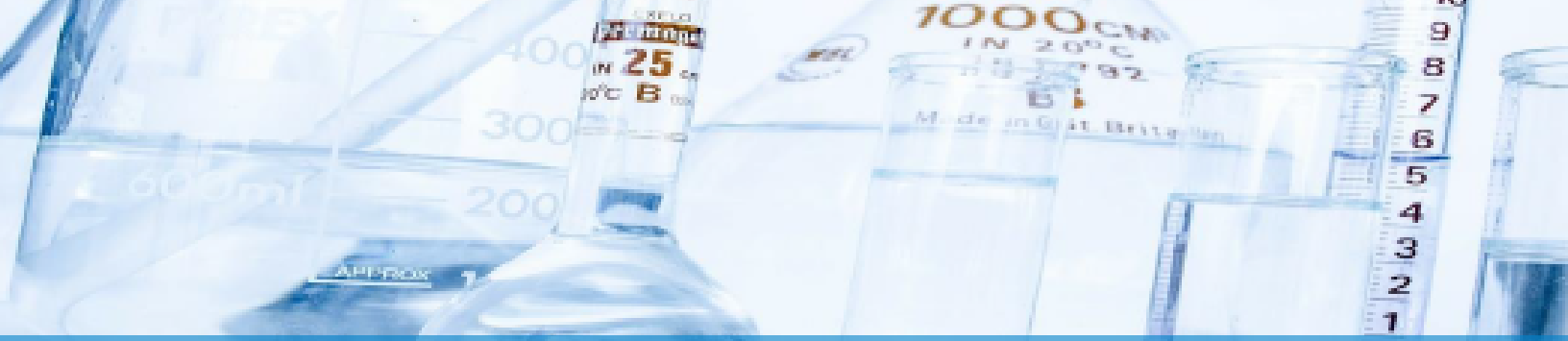

Filtration For The Fine Chemical Industry

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 Filtration of Process Ingredients

We offer innovative and efficient solutions to purify chemical process ingredients. Our range of polypropylene pleated cartridges (PP-Series) offer an excellent solution for particulate capture of organic and inorganic process components in fine chemical applications due to its 100% polypropylene construction and food safety compliance. For solvent filtration, we recommend using our PTFE pleated membrane cartridge (EPTFE-Series). With retention ratings as fine as 0.01µ (10 nanometers), our EPTFE membrane cartridge enables consistent contaminant removal in aggressive solvents.

Filters For Sub-products / After Reaction

Our 100% polypropylene pleated depth filter (GHLS-Series) offers an excellent solution for particulate capture of gels and deformable particles. With its thicker pleats and added loft, the GHLS is an ideal combination of both depth and pleated depth functionality. This allows for high retention of deformable particles and increased holding capacity without inhibiting throughput and service life. For colloid removal, we recommend using our (FG-Series) microglass pleated cartridge that utilizes an inherent positive charge in the media to assist in particulate retention of negatively-charged contaminants.

Filters For Final Filtration

As a final filtration step, we recommend using our pleated High-Flow cartridge (HFB-Series). With up to 48.5 ft² of media offered in both polypropylene and microglass, the HFB-series reduces change-out frequency and employee exposure to chemicals.

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 D.E.S.P 2014/ 68/EU, NSF, USP, 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 verification testing
- Product offering for both small scale applications and larger production capacities

Advantages of Our Pleated Products

- Ratings down to 0.01 micron
- Range from prefiltration to sterilizing-grade
- Manufactured according to widely accepted EU and US regulatory standards
- Wide range of available filter medias and product configurations for a wide range of applications

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