



Filter Products C O M P A N Y

Case Study

FPC Engineers Aquarium Replacement Filter Bags

The Aquarium of Niagara is a non-profit aquarium based in upstate New York and is home to a variety of fish, invertebrates, and marine mammals, as well as a colony of Humboldt penguins. They needed a cost-effective, custom-designed filtration bag for their marine mammals' environment and turned to Filter Products Company for help. After only two iterations, Filter Products Company had developed a bag that appropriately filtered the marine mammals' water, resulted in a cost reduction relative to other alternatives, and satisfied the other needs of the aquarium.

Customer Issue

The Aquarium of Niagara had a custom-designed filtration system that relied on non-standard knit fabric filtration bags with gathered tops and bottoms. They also used diatomaceous earth as a filter aid to keep the aquarium clean and healthy. The aquarium needed replacement bags, but the original supplier was no longer able to provide them.

They found a supplier who produced replacement bags from a synthetic mesh. Unfortunately, the filtration efficiency of this mesh was not as high as the original fabric material and the fit of the bag to the filtration equipment was relatively poor. To make matters worse, the cost of these sub-adequate filter bags was extremely high.

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– Gary Siddall,
Executive
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With the aquarium filtration performance suffering, the Aquarium Director turned to Filter Products Company to provide a better solution.

Filter Products Company Solution

Filter Products Company worked with the aquarium to review samples of both bags, and were able to replicate the bag design and narrow down the suitable filtration media for bag construction. They provided two material options to the customer: a knit cotton canvas and a felted polyester. The knit canvas closely resembled the original material, but was only available in one filtration efficiency. The synthetic felt was available in a wide array of filtration efficiencies, which would allow for fine-tuning of the filter, if needed. The aquarium decided to try out the polyester felt bags with a sample order of 15 bags for a single filter bank in their filtration system.

The initial test was positive. The felt captured the diatomaceous earth much more effectively than the woven replacement bags. They could also wash the felt multiple times to extend the useful life of the filters. However, the system backpressure was marginally higher with the new felt bags. Upon close inspection, the aquarium staff determined that the new filters may have been capturing particles that should have remained in the aquarium environment to promote a healthy habitat for the marine life. To correct this, Filter Products Company constructed a second set of filtration bags using a filtration felt with slightly lower efficiency. This media successfully retained the diatomaceous earth and target particles, but reduced the backpressure in the filtration system.



Customer Result

The filtration process expertise at Filter Products Company, in conjunction with their ability to efficiently make trial production runs, allowed the Aquarium of Niagara to find an optimal solution without risking a large order on untested products.

With the proper filtration media and configuration determined, the aquarium was able to safely invest in hundreds of filter bags to maintain the habitat of their marine life. Today the aquarium has an effective, high-value filtration solution that satisfies the complex needs of their animal collection, and their operation is running smoothly.

Testimonial

“Filter Products Company was a tremendous resource to the Aquarium of Niagara.” said Gary Siddall, Executive Director. “We were very impressed by the interest they took in our specialized project and were extremely satisfied by the responsiveness and reactivity to the needs of our system. Our water systems haven’t run this efficiently in years, and that is in large part due to the product supplied to us by our friends at Filter Products Company.”

More About the Aquarium of Niagara

The mission of the Aquarium of Niagara is to broaden the public’s awareness of aquatic ecosystems through innovative and stimulating exhibits, displays, and educational and recreational programs that promote conservation and support research. The Aquarium’s animal collection includes a diverse range of over 120 species, including sharks, invertebrates, penguins, reptiles, and amphibians. Most notably, the Aquarium is also home to 11 marine mammals, of which 8 are rescued and have been deemed non-releasable.

Presently the Aquarium does not offer hands-on interactive encounters as part of the experience included with general admission.

For more information about the Aquarium of Niagara, visit www.aquariumofniagara.org.

Service Used

Contact us to learn more about FPC’s custom strainer bag manufacturing:



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