



Pump protection and suction filters in surface water applications

In surface water applications, pumps may not provide sufficient flow and pressure due to the heavy pollution load coming from the suction line. This situation can lead to performance degradation and potential pump failures. To prevent this issue and ensure the system's efficient operation, integrating suction filters into existing systems is critically important.

The importance of pump protection filters

During the pumping of surface waters, algae, mussels, small fish, sand, and other particles can mix into the pump's suction line. Clogging and mechanical damage may occur when the pumps' fans are not wide enough to pass such materials, which is generally not possible except for submersible pumps. In surface waters, especially in marine environments, pollution can accumulate densely on the surface due to daily and seasonal changes, creating an additional load on the pumps.

The most effective solution to protect your pump

The most effective method to prevent damage to the pump is the integration of automatic suction filters into existing systems. These filters:

- They are placed deep and away from the shore to ensure optimum performance.
- Filter only the water passing through the perforated water intake system thanks to their completely isolated structure.
- They can automatically clean themselves using the pressurized water from the pump's discharge line.

In these filters, with an automatic backwashing system, a hydraulic nozzle mechanism that operates with a specific rotation pushes the dirt that adheres to the filter surface out into the environment. This way, the filter continues to operate efficiently for a long time without clogging.

Filternox® expertise for correct filtration selection

Each pump and suction system should be specially designed according to its environment and application conditions. Since it is not always possible to determine a standard size or model, you can contact Filternox® experts to achieve the most efficient and trouble-free pump system. By leveraging our expertise in selecting the right suction filtration, you can determine the most suitable solution for your system.

When should they be used?

These suction filters are designed for all pump protection applications and do not have restrictive design criteria regarding flow or pressure, which facilitates system integration.

The SPT-WBV-MR and SPT-PBV-MR models developed by Filternox®, which have a dual-acting backwashing system in a single sieve, can effectively filter particles up to 3" in size through backwashing without the need for an additional suction filter when used with suitable non-clogging fan pumps. Thus, Filternox's patented dual-acting filters can be safely used in newly designed systems with appropriate water intake structures and pump selection.

Material selection and durability

In seawater applications, the longevity of painted carbon steel materials cannot be guaranteed. Therefore, at Filternox®, we prefer stainless steel materials in our suction filters. Depending on the application's needs, duplex and super duplex stainless steel are also possible. In freshwater applications, we have experience indicating that a minimum of 304L stainless steel should be used.

Please visit our website for operating principle videos of our suction filter models.



www.filternox.com/filters/bfs

