



**FILTERNOX® IS LEADING  
THE NEXT ERA OF FILTRATION.**

**ARE YOU  
ONBOARD?**

## **OUR VISION FOR THE FUTURE OF FILTRATION**

Filternox® is committed to shaping the future of filtration automation with cutting-edge innovations that redefine efficiency, sustainability, and reliability. As we look ahead, our vision includes:

### **THE FUTURE OF FILTRATION SYSTEMS AND TESTING PROCESSES**

Today, companies demand much more complex systems that offer internet connectivity, remote monitoring, and operational capabilities. These advancements necessitate that automation systems are well-designed and guaranteed to operate smoothly.

Given that filters consist of many different components and are applied in mass production, they are generally reliable machines. However, it is crucial that they meet production standards and quality requirements. While large-scale manufacturing plants conduct quality control by testing randomly selected filters, we believe this is insufficient. Every complex automation system should be tested with its filter each time it is manufactured.

At Filternox®, we adhere to this testing principle 100%, and we reap significant benefits from the results. We emphasize once again that for high-quality and reliable filtration systems, automation must be carefully and precisely designed and tested at every stage.

#### **AI-DRIVEN OPTIMIZATION**

Smart algorithms to enhance filtration precision and adaptability.



#### **ENHANCED PREDICTIVE MAINTENANCE**

Advanced diagnostics to anticipate and prevent system failures.



#### **IMPROVED SUSTAINABILITY FEATURES**

Eco-friendly solutions that align with global environmental goals.

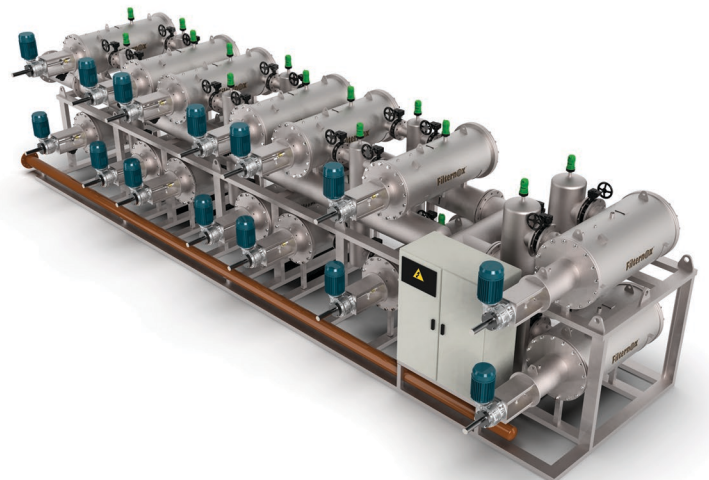


#### **PLUG & PLAY SKID SYSTEMS**

Establishing plug-and-play skid systems as a common standard and widely accepted norm.



By embracing these advancements, Filternox® continues to lead the way in next generation filtration technology, delivering smarter, sustainable, greener, and more efficient solutions for the industries of tomorrow.

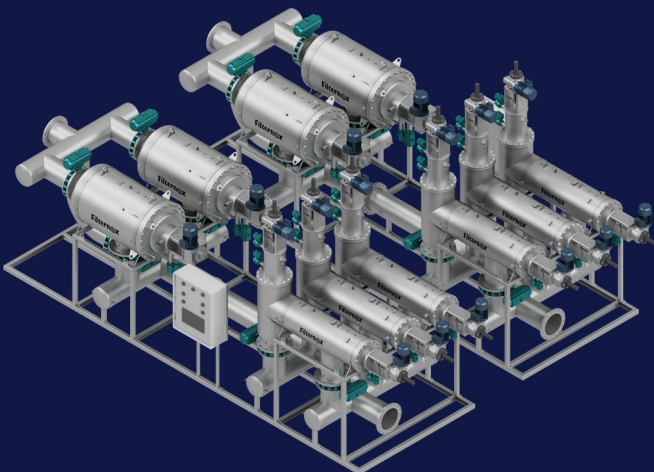


**Can you imagine the automation of this skid system?**

*1st Stage: 2 filters for coarse filtration*

*2nd Stage: 6 filters for fine filtration*

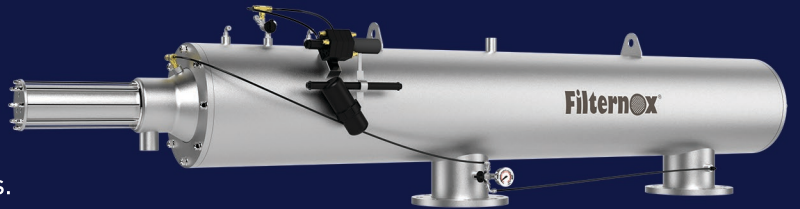
*3rd Stage: 6 filters for fine filtration connected serially*



## THE IMPORTANCE OF AUTOMATION IN MECHANICAL SELF-CLEANING FILTERS

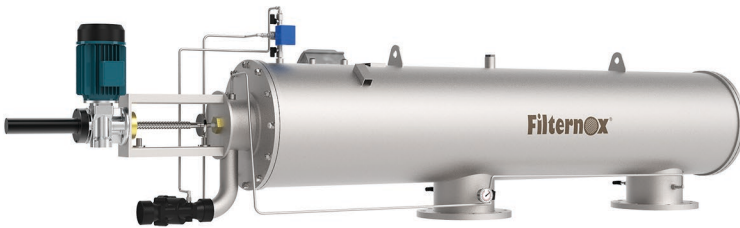
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In the world of filtration technology, the role of automation has become increasingly significant. When automatic backflush filters were first developed, automation was not as crucial as it is today. Initially, these filters relied on a simple spring system that utilized pressurized water for backflushing, primarily aimed at preventing clogging in drip irrigation systems. However, as technology advanced, the need for more complex systems in industrial applications became apparent.



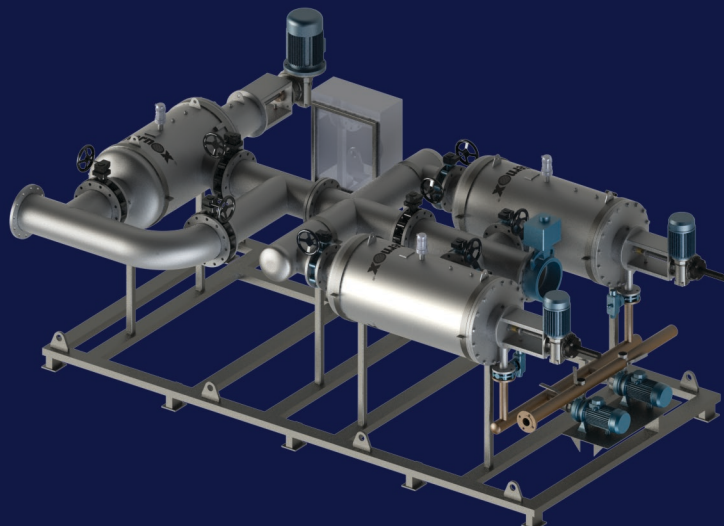
## THE EVOLUTION OF FILTRATION SYSTEMS

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One of the most common applications of filtration in industrial processes is cooling water filtration. This has made it essential to prevent clogging in heat exchangers and nozzles. Given the variability in the composition of water from different sources, the success rate of simple filters was quite low, necessitating the development of more complex filtration systems.

The first step in this evolution was the introduction of filters with electric motor-driven systems. However, these systems emerged new challenges to control mechanical switch and limit sensors.

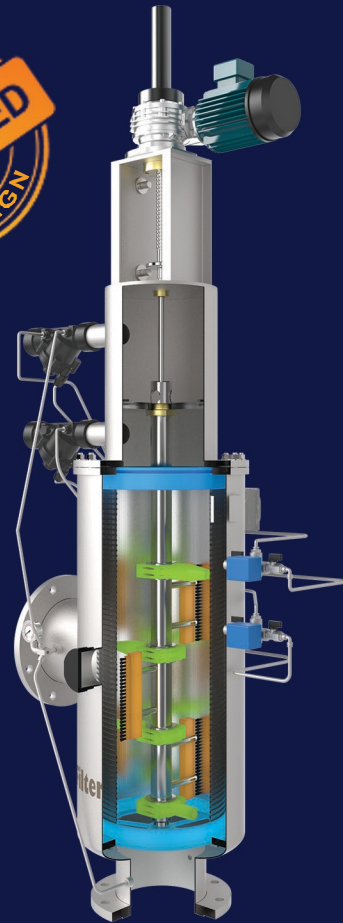
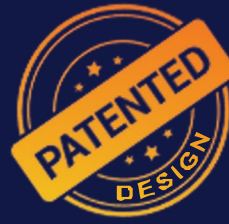


As recovery processes and the diversity of industrial applications increased, there arose a need to lower filtration levels. This development, however, brought new challenges. For instance, when attempting to filter seawater at a 200-micron level, larger particles of 1 cm or more could still enter the system. Since it was impossible to filter different particle sizes simultaneously with a single filter, solutions were developed using two serially connected filter systems.

## EFFICIENT FILTRATION WITH ADVANCED AUTOMATION

Two-filter systems, while offering a solution, also brought challenges like pressure loss, mutual interference, and the need to prevent simultaneous backflushing. This inadequacy of conventional control panels prompted the adoption of advanced automation systems managed by PLC software. Also, the industry started pursuing more sophisticated solutions for monitoring filters and managing backflush requests via main control panels or centralized PLC systems.

Alternatively at Filternox®, we have developed an innovative system that eliminates the need for two serially connected filters, allowing a single filter to effectively filter both large particles and micron-sized particles. This achievement has been internationally patented and marks the dawn of a new era in filtration systems.



Filternox® Dual Stage Filter, SPT-WBV-MR

## FILTERNOX'S GAME-CHANGING INNOVATIONS

- ❖ **Elimination of Serial Filter Systems** – One advanced system replaces the need for multiple filters.
- ❖ **Enhanced Operational Efficiency** – Maximizes performance while minimizing resource consumption.
- ❖ **Lower Maintenance Requirements** – Reduces downtime and operational costs for long-term reliability.
- ❖ **PLC-Controlled Operations** – Intelligent automation for precise and efficient filtration management.
- ❖ **Remote Capabilities of Monitoring and Operations** – Real-time access to system performance from anywhere.
- ❖ **Internet Connectivity** – Seamless integration with digital networks for smarter control.
- ❖ **Real-Time Performance Analytics** – Continuous data tracking for optimal system efficiency and predictive maintenance.
- ❖ **Data Logging and Analysis** – Comprehensive insights for performance optimization.
- ❖ **Automated Maintenance Alerts** – Proactive notifications to prevent downtime.
- ❖ **Continuous Operation Capability** – Designed for non-stop performance in demanding environments.

With these innovations, Filternox® ensures that filtration systems are smarter, more connected, and more efficient than ever, setting new standards in automated filtration technology.

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*We are living in a bubble —  
The past lies within,  
and the future awaits outside.  
We are onboard to create that future.*

**Filternox®**



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