

Model 4613

Automatic Tubular Backwash Filter System with 1-to-1500-micron Filter Elements



Sigma Design Company's Model 4613 Automatic Tubular Backflush Filter System is designed specifically to filter particulates from the fluid stream. Each filter housing contains a filter element with multiple tubes. To achieve finer filtration levels, each tube can be fitted with a 1-micron (1μ) up to 200-micron polymer filter sleeve. Multiplex units consist of anywhere from 2-20 individual tubular filters piped and valved in parallel to common inlet, outlet, and drain headers.

Sigma Design's advanced controls system includes motor control and protection circuitry, and constantly monitors the flow rate and differential pressure across the entire system. When it is turned on, the motor and system timers will start.

An intuitive 7" color HMI (Human-Machine Interface) touch screen displays operating parameters such as differential pressure and flow rate as well as timers and setpoints for timed backwash and differential pressure backwash.

The system can monitor and manage multiple filters to match the flowrate requirements of the application and can be programmed to backwash each filter separately. Backwashes can be set to occur based on a timer, differential pressure, or both. When a backwash occurs, the system will automatically trigger the corresponding backwash valves to change position, causing the flow from two of the filters to flow in reverse through the third filter.

Put another way, once the first filter completes its backwash sequence, the valves will change in position and start backwashing the next filter in the sequence. The process continues until the last filter completes the process. The amount of time between backwashes and the duration of the backwash for each filter can be set through the HMI.

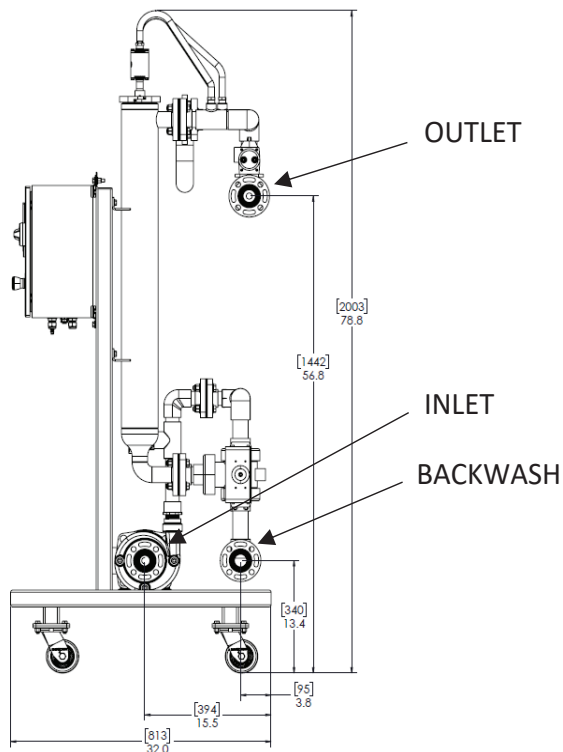


Backwashing filters separately offer several advantages:

- Continuous filtration capable of removing fine particles, depending on the filter's mesh size.
- Automated systems reduce reliance on manual intervention and eliminate the need for manual cleaning, reducing maintenance time and labor costs and reducing the frequency of replacing filter media. While each filter is cleaned, the other filter tubes continue operation.
- Efficient use of water and energy as staggered backwashing reduces peak water and energy demand.
- Consistent quality of filtered water output.

In addition, tubular filters significantly contribute to reducing process risk in industrial operations and are often more compact than other industrial filtration solutions.

TURNING SMART IDEAS INTO PRODUCT SOLUTIONS



About Sigma Design Company

Sigma Design is a leading one-stop design, engineering, and manufacturing resource for the development of specialty equipment and engineered systems. Our mission is to provide clients with creative, affordable and easily manufactured designs and manufacturing assembly solutions that achieve their product, business and revenue goals. Our clients have included hundreds of leading global brands and manufacturing firms across a wide array of industries. Based in New Jersey for more than 20 years, we have transformed more than 1,000 design and design/build projects into successful products and specialty equipment in use across the world.

SERVICES INCLUDE:

- Design and engineering
- Testing
- Manufacturing

Your trusted one-stop resource for end-to-end product development and commercialization solutions, on time and on budget.

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