Spiral Water™
Technologies, Inc.

Visit Us At

weftec 2023

Booth #8439

October 2-4, 2023, McCormick Place, Chicago!

Register now with this Evite code EXGU40626 for a complimentary Exhibition Only registration (a $125 value)!

Spiral Water invites you to join us at WEFTEC 2023, Booth #8439, Oct. 2-4 at McCormick Center in Chicago, Illinois. We will be showcasing our line of advanced automated self-cleaning filters at this show, one of the year's most important and best-attended water quality events.

Learn what differentiates Spiral Water filtration products from any other self-cleaning filters on the market. Explore why they provide an ideal solution for industries ranging from RNG/biogas to indoor agriculture and vertical farming, aquaculture, food & beverage processing and more.

Then discover why our patented filtration technology is uniquely suited for process systems that require finer than 75 µm filtration that are also affected by variable TSS and high solids loading – and how it keeps our filters online and working when other filters would overload and fail.

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We look forward to seeing you at WEFTEC!

Spiral Water Filters: Conditioning Feedstocks for Higher Yield Gas Production and Lower OpEx

There's no question that the g lobal market for Renewable Natural Gas (RNG) – also called biogas – continues to grow. Some industry experts predict a sharp increase in its size to more than US$ 130 billion by 2033.

As the market grows, so does the opportunity for superior water filtration and separation technology to positively impact the sustainability and economic vitality of biogas production systems. At the same time, our proprietary technology offers significant advantages when it comes to conditioning feedstocks for higher yield gas production and lower OpEx.

Biogas results from decomposition of organic matter in anaerobic conditions. This organic matter comes from various sources, including farm animal waste products (e.g., manure). Water filtration and separation play critical roles in ensuring efficient operations, maintaining the quality of the biogas, and managing the byproducts effectively. Here are some examples:

- **Substrate Pretreatment for Gas Quality Improvement and Reduced OpEx**. Proper water filtration and separation are essential to remove solid impurities such as organic matter and non-digestible materials like sand, stones, and plastics, before they enter the digester. Filtration also helps prevent clogging of pipes and equipment, which can disrupt the digestion process and increase maintenance costs.

- **Digestate Management.** Digestate is a nutrient-rich byproduct produced after anaerobic digestion. Separation of water from digestate helps manage its consistency and nutrient content. Separated water can be reused in the process or discharged, while the solid digestate can be used as a valuable organic fertilizer.

- **Preventing Corrosion and Contamination**. Water in biogas can lead to equipment corrosion and contamination issues. Effective separation prevents these problems, prolonging the life of the equipment and ensuring the quality of the biogas.

- **Environmental Compliance.** Water filtration and separation help confirm compliance with environmental standards by treating and managing water used in the biogas production process.

Engineered with our patented technology, Spiral Water's filters offer a suite of design features that provide powerful and reliable performance for producers of biogas.

Our high solids conditioning/filtration takes soft and deformable 500 µm + volatile suspended solids (VSS) particles and shears/conditions them, creating more particles in the proper size range and making a more nutrient-rich influent liquor to the digester. In addition, our ability to concentrate solids enables us to remove larger, unwanted "non-digestible" particles with minimum process liquor loss.

Our filters offer numerous benefits to RNG including:

- Production of more methane from 10%-30% on existing anaerobic digester systems.
- Potentially smaller digester footprint on future systems.
- Less dwell time required.
- No chemicals.
- Less energy than a DAF with electro flotation.
- Less maintenance and labor cost to run than centrifuges, meaning lower OpEx.
- Green energy or carbon credits/rebates/incentives.

Contact us to learn more.

The Spiral Water Difference

We're often asked, "What makes Spiral Water filters different from the rest?" Here are five reasons why.

- Spiral Water's patented automated filtration systems provide security for process systems that require finer than 75 µm filtration that are also affected by variable TSS and high solids loading (i.e., unexpected increases in normal TSS solids caused by storms and/or system upsets).

- What differentiates us from other "self-cleaning backwash filters" is our ability to manage TSS above 500+ ppm.

- Our patented internal mechanical cleaning mechanism spins off tip vortices, creating a unique hydrodynamic agitation that more effectively keeps the filter clean while maintaining a constant differential pressure across the filter. This keeps our filters online and working where other filters would overload and fail.

- Spiral Water filters automatically manage upset conditions as high as 10,000 ppm without the need of operator assistance.

- In multi-filter processes, Spiral Water Filter Systems are the best first line of defense. Our innovative filters and control systems provide end-users' peace of mind.

Contact us now and ask how our next generation filters can solve your filtration and separation challenges – and we'll provide a free filtration audit!

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