



Toasting Distilleries

Water plays a critical role in the production of bourbon and other spirits, both as an ingredient and for various processes within the distillery. The type and extent of water filtration required can vary depending on several factors including the specific distillery's needs, the source water quality, and the desired characteristics of the final product. Additionally, local regulations and water quality standards may influence the filtration methods used.

Water filtration in spirit production serves many purposes. The filtration protocol used in the production process is based on the characteristics of the source water.

For example, many distilleries prefer to use natural spring water or well water, which can already be relatively pure and free from impurities. Others may turn to sources of "natural water" including rivers, lakes and ponds, which may be affected by variable TSS and upset conditions. In such cases, pre-filtration with an advanced technology such as Spiral Water's automatic self-cleaning filters offers an ideal solution.

Filtration is also important in other aspects of production, such as cooling water, which often requires some level of filtration to prevent fouling and maintain equipment efficiency. Distilleries may also have specific filtration steps tailored to their processes.

Distilleries must also consider the environmental impact of their water usage. Depending on their location, distilleries are also challenged by the scarcity of water and municipal water costs. When pulling water from natural sources, proper filtration and treatment of intake feed streams and discharge of wastewater are essential to meet regulatory requirements and minimize environmental harm.

How are Spiral Water filters used?

Our filters are an ideal solution for:

- Protecting plant processes from upset conditions due to variable TSS natural water intake – something at which we excel. Our filters control TSS intake due to variable TSS river water and upset conditions.
- Processes in other aspects of production, such as cooling water.
- Enabling water conservation.
- Removing spent grain.
- Dealing with high and variable TSS.

About Spiral Water Advanced Automatic Self-cleaning Filters

Our next-generation automatic self-cleaning filters are widely used for industrial and organic wastewater treatment, pretreatment for microfiltration, ultrafiltration and reverse osmosis, water recycling and reuse across a variety of industries. Engineered with our patented high solids filtration and concentration technologies, they can be used as a pre-filter, primary filter or for reclamation from existing filter backwash of centrifuge overflow.

They are known for their ability to handle wastewater TSS removal and to process bulk solids removal up to 15,000 mg/l TSS (15% by volume), providing continuous 15 to 1500 micron filtration. (Removal of TSS typically also removes a percentage of BOD and COD.) In addition, our proprietary one-pass filtration process eliminates backwash of cross flow, thus conserving water, increasing uptime, and reducing Capex.



The Spiral Water Difference

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.



Free Filtration Audit

Ask us about how Spiral Water's next generation filters can solve your filtration and separation challenges – and we'll provide a free filtration audit!