



Whisky distillery blends automation and industrial heritage with a Self-Cleaning Russell Eco Filter®

English whisky producer achieves significant time savings and payback in 12 months.



White Peak Distillery is one of a handful of English single malt whisky distilleries. Its key product, Wire Works whisky, takes its name from the distillery's location in a 19th Century former wire works. The business has strong links to the industrial heritage of this area of Derbyshire, U.K. which is a UNESCO World Heritage site.

While the craft distillery is a young business it has partnered with a local brewery to make use of spent brewing yeast, which connects it to the area's 300-years of brewing history. These ingredients help the distillery create flavors rooted in the local area. Alongside whisky, the business also produces Shining Cliff gin and White Peak rum too.

As most British whisky distilleries are based in Scotland, White Peak Distillery's English base makes it a more unusual brand. The business sells spirits direct to consumers through its shop and website. It also supplies independent spirit specialists and whisky shops across the U.K as well as the largest whisky website in Europe, Master of Malt, and Selfridges of London.

Whisky production starts with the malting and mashing of English barley in hot water to release its sugars. At the fermentation stage, the local brewery yeast is added to convert the sugars to alcohol. The liquid produced is then ready for distillation.



Figure 1: Whisky Application

Distillation raises the alcohol content, removes unwanted aromas, and improves the flavor. The liquid is heated in copper pot stills so the alcohol vapors reach the condenser. To turn these vapors back into liquid, the condenser has to be constantly cooled.

Instead of using a glycol chiller, the distillery opted for a more sustainable approach. As it is based on the banks of the River Derwent, the distillery gained permission to use river water to cool the condensers. The river water is pumped into a large outdoor water tank, while a 50-micron filter bag (sometimes known as a sock) captures leaves, twigs, and other sediments. However, the filter bag/sock had to be frequently changed. In the winter, this could be as often as every five minutes because of the volume of debris in the river.

Due to the constant need to change the filter bag/sock, distillers spent many hours on this manual activity. As a result, they were prevented from working on other production activities where their skills and expertise could be better used.

White Peak Distillery used the filter bag/sock method for three years since it began in 2018. While the distillery was aware of filtering technology it did not have the capital to invest in this equipment. However, in 2021 the distillery secured investment to remove bottlenecks in production and save manpower in the process.

This led the business to discover Russell Finex through internet research. The Russell Finex team visited the distillery and talked through how a self-cleaning filter could work. A Self-Cleaning Russell Eco Filter® was then installed as a trial to prove the concept and so the distillery could see how the filter performed with different volumes of sediment. The trial was a success and so the distillery purchased a Self-Cleaning Russell Eco Filter® with a 50-micron stainless steel screen to replace the filter bag/sock permanently.

Instead of a bag/sock, the Self-Cleaning Russell Eco Filter® uses a reusable stainless steel screen that is continuously



cleaned by a wiper. This SpiroKlene™ system allows the Self-Cleaning Russell Eco Filter® to give constantly high flow rates of clean water without stopping for cleaning.

“Our experience of working with Russell Finex has been absolutely first class. We’ve had people make long journeys to come and help us find the best setup. They installed the test equipment and helped us understand what was the most suitable type of filter cartridge.”

- Max Vaughan, Founder of White Peak Distillery

Vaughan continued, “It was a very dynamic process for us because we still had to continue making whisky during the switch over. The Russell Finex team was really helpful. And with hindsight, I wish we’d made the change two years ago. The Russell Finex filter has been invaluable to us as a business. We have certainly recouped the cost of the system within a 12-month period.”

The Self-Cleaning Russell Eco Filter® has made significant time savings for the business. The distillers no longer have to spend time changing the filter bag/sock. This has allowed them to add value elsewhere in the distillery process. For example, through cask sampling and improving their understanding of the whisky inventory. Tasks they did not have as much time to do previously.

The distillery has also seen the financial benefits of automating its filtering process. In addition to the efficiency savings of automation, the growing business has had a swift return on its investment. The Self-Cleaning Russell Eco Filter® has delivered payback within 12 months of use.

Above all, the Self-Cleaning Russell Eco Filter® has allowed the craft distillery to become more efficient while still using a sustainable method for cooling its condensers.

About Russell Finex

Founded in 1934, Russell Finex designs and manufactures sieving machines for a range of industries. With its head office in the U.K. and subsidiaries in Belgium, the U.S.A., India, Brazil, and China the company supplies to over 140 countries. [Contact Russell Finex](#) today to find out more about its range of sieves, separators, and filtration equipment.

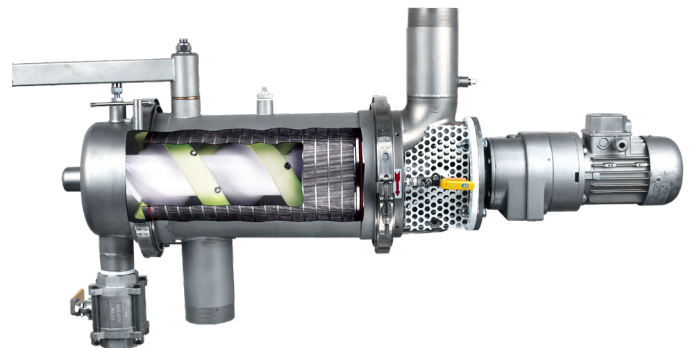


Figure 2: The Self-Cleaning Russell Eco Filter®

The key benefits of using the self-Cleaning Russell Eco Filter® are:

- **Allows continuous operation** - Removes the need to change filter bags/socks
- **Reliable filtration** - Benefits from the unique SpiroKlene™ cleaning system
- **Automation of manual activities** - Operators are freed up for other activities