

Russell Finex helps to improve productivity while going green

A major food company was experiencing screen blockage problems when filtering rapeseed oil. They turned to separation and filtration specialists Russell Finex and purchased a Self-Cleaning Russell Eco Filter®. They enjoyed many benefits from the installation of the machine, including increased productivity and enhanced product quality.

As environmental concerns gain unprecedented levels of attention worldwide, businesses and consumers alike are seeking out renewable fuel sources. Biodiesel, a clean burning fuel derived from biological sources, is quickly being adopted as an alternative to traditional fossil fuel. Being biodegradable, non-toxic, and producing significantly less net lifecycle carbon dioxide emissions than petroleum diesel, biodiesel can be used on its own or blended with petroleum diesel. As a result of its many benefits, it is being made available by fuel stations worldwide and transportation companies are starting to use it as an additive to their fuel supply.

In Europe, rapeseed oil is the most common source for biodiesel as rapeseed crop grows in abundance. However, soybean oil, vegetable oil, recycled cooking oil or animal fat can also be used to produce biodiesel. This flexibility means that biodiesel can be sourced from virtually any agricultural country.

A major international food company was supplying rape seed oil to biodiesel producers and had to ensure their oil was free of any contaminants. At their site in Belgium, they were originally using two self-cleaning filters using piston-cleaning systems and wedgewire screens to remove small particles from their oil, but the machines were experiencing numerous problems with screen blockage. This damaged their material and meant stopping production to manually clean the filter and replace parts.

A source at the company explains, 'With our old filters, there was essentially too much foreign material passing through. This included sticks, debris and other large particles. Our spare parts costs were extremely high as a result. We needed a more powerful solution to handle our material in an efficient way'. In order to improve productivity and ensure optimum product quality, the company selected the revolutionary Self-Cleaning Russell Eco Filter®, made by Russell Finex. The unit's large filtration surface and unique self-cleaning wiping system minimises blockage and results in less wasted product.

The unique design of the Eco Filter ensures that flow of material goes from the inside to the outside of the filter element. The screen is then automatically cleaned using a rotating wiper inside the element. Unlike most other breeds of self-cleaning filters, the Russell Eco Filter's wipers work on a continuous basis, cleaning the filter element at all times. This ensures the screen remains clear of blockages, which in turn gives consistent throughput rates and prevents a build up of differential pressure.



The Russell Eco Filter® installed at the company's site.

- Eliminates filter blockage and results in less wasted product
- Dramatically reduces spare parts costs
- Automated lifting system makes the filter easy to assemble and dis-assemble

Using the unique 600µm Russell microscreen and spiral wipers made from a special polymer material, which is high temperature resistant and FDA approved, the Self-Cleaning Russell Eco Filter® achieves great results. Removing particles with a density between 0.85 and 0.90 kg/l at 90 degrees Celsius, the unit allows the company to successfully filter their rapeseed oil without having to continuously interrupt production to clean the machine and replace parts. To satisfy stringent health and safety requirements, the filter is also fitted with an automated lifting system, attached to the main body of the filter to support the weight of the end cap and valves, making the filter virtually effortless to assemble and dis-assemble. Achieving a capacity of 35 cubic metres per hour, the filter easily meets the company's throughput requirements.

According to a manager at the plant, 'The new Eco Filter works very well, it is an extremely strong filter well-suited for our application. Running the machine is very easy for operators as well, and our spare parts costs have decreased dramatically.'

The company was so satisfied with results obtained from the Eco Filter at their site, that they are rolling them out across other sites in Belgium and France. 'Whenever we had a problem or question, we could count on Russell Finex to deliver a response within just a couple of hours. Our decision to order additional units of the Eco Filter for our other plants is a testament to the quality and performance of the filter itself, but also to the very high level of service we enjoyed from the company' says the source.

Russell Finex are recognised worldwide as being leaders and originators in sieving and filtration solutions. With their award-winning Self-Cleaning Russell Eco Filter®, Russell Finex have effectively helped a major company help pave the way for a greener, more sustainable future.

For over 70 years, Russell Finex has manufactured and supplied screeners, filters, and separators to improve product quality, enhance productivity, safeguard worker health, and ensure powders and liquids are contamination-free. Throughout the world, Russell Finex serves a variety of industries with applications including pharmaceuticals, food, chemicals, adhesives, plastisols, paint, coatings, metal powders and ceramics.



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