



Belgian chemical company reduces filtering time by 83% with a Self-Cleaning Russell Eco Filter®

Switching to a self-cleaning filter from Russell Finex helped Emulco to improve the productivity of its renewable emulsions manufacturing.



Belgian chemical company, Emulco produces a range of elastomeric and plant-based wax emulsions. From its Ghent Seaport plant, Emulco carries out research and development and upscaling of these emulsions. The flexible three-tier production facility also has a manufacturing capacity for industrial volumes.

Emulco's products are in demand by the paper and packaging industries. Manufacturers use wax emulsions to create a water barrier in technical and food contact paper. Plant-based emulsions are also increasingly important as they provide a renewable alternative to polymers.

Emulco's production process begins by mixing plant-based materials with water and additives in a reactor. This conditions the mixture at the right temperature. The next step is to pump



the liquid into a blending tank along with extra ingredients for further conditioning. After a quality check, the emulsified products are ready for packaging into intermediate bulk containers.

At this stage, filtration is essential to remove any unmixed material and contamination as once the products are in the containers they are shipped to customers. Emulco tried different filtering solutions and chose bag filters as a low-cost method.

However, the chemical company hit several challenges. Firstly, the bag filter had to be replaced regularly because it became blocked after filtering 500 to 700 kilograms of products. This meant disposing of and replacing many filter bags, which was not sustainable and added to the production costs.

The constant replacement of filter bags slowed down production as each batch size was between 12,000 and 14,000 kilograms. Changing the bag filter meant the filtering process had to stop. As a result, it took 10 to 12 hours to empty a 12-metric ton rack into the intermediate bulk containers.

The bag filters also produced a mess each time the filter housing was removed as the emulsion went onto the operators and the production line. This created extra effort to clean up the equipment and made the filtering process more complex for workers. It also led to significant product wastage.

Emulco discovered Russell Finex while searching for alternative products. The Russell Finex sales engineer suggested options to solve the filtering problems and also organized the loan of a machine. After successful testing with a Self-Cleaning Russell

"It used to take 10 to 12 hours to empty a 12-metric ton rack into the intermediate bulk containers. With the Russell Finex filter, we now do that in 2 hours. So we are extremely satisfied."

Patrick Haerens, Plant Manager



Eco Filter® 502 model, Emulco decided to switch to a Russell Finex filter.

Emulco purchased a Self-Cleaning Russell Eco Filter® 802 model to meet its production requirements of filtering at 150 microns. This allowed the chemical producer to filter and fill the intermediate bulk containers 83% faster. Without production stoppages to change the filter, the packaging process only took 2 hours with flow rates of 11,000 to 12,000 liters per hour.

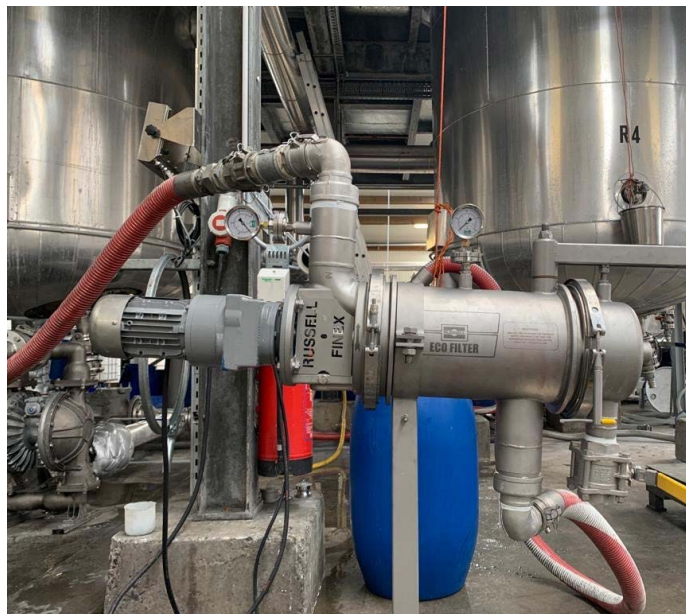
As well as improved productivity, the Self-Cleaning Russell Eco Filter® improved the quality of the finished product. The enclosed system allowed Emulco to pump liquids without the interruptions and the risk of messing up the working environment. Its mobile stand and quick fit connections made it easy to fit into the Emulco production line.

“The big advantage with the Russell Finex filter is the ease of operation, the convenience, and the multifunctional use”

Patrick Haerens, Plant Manager

With a reusable filter element, Emulco also avoided the expensive disposal and replacement costs of bag filters. The Self-Cleaning Russell Eco Filter® uses a ‘defined hole’ reusable microscreen media. The unique SpiroKlene™ cleaning system continuously cleans the inside surface of the filter element to prevent blockages.

Founded in 1934, Russell Finex designs and manufactures filtration machines for a range of industries. With its head office in the U.K. and subsidiaries in Belgium, the U.S.A., India, 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.



Advantages of the Self-Cleaning Russell Eco Filter®:

- **Improved productivity** - Self-cleaning filter allows non-stop operation
- **Less contamination** - Prevents product spills and wastage with a closed system
- **Lower ongoing costs** - Avoids filter disposal and replacement costs with a reusable filter