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RUSSELL FINEX

Global Sieving & Filtration Specialists

Russell Finex sieve delivers smoother milk and improves production efficiency for organic producer

Non-dairy milk producer benefits from 50% faster separation time and improved milk quality.

ReRooted
ORGANIC • DAIRY-FREE • DELIVERED

Rerooted Organic is a low-impact producer of organic milk based in Devon, U.K. With a strong focus on sustainability, the business carries out every step of plant milk production, bottling, distribution, and retail.

Unlike most plant-milk producers, Rerooted Organic supplies all its milk in glass bottles. The bottles are returned, washed, sterilized, and reused as part of its production loop, rather than a production process. The circular business uses minimal labeling and relies on renewable energy to power its production.

Rerooted Organic has a wide product range including almond, coconut, hazelnut, oat, and oat barista milk. The milk is sold through three main channels - retail to shops, wholesale to nationwide suppliers, and home delivery to customers across the southwest of England.

Figure 1: Oat milk application

Milk production begins with the sourcing of ethical ingredients, including from Fairtrade suppliers and worker cooperatives. Ingredients like almonds are roasted to release their flavor and then blended. This produces a slurry that needs to be pressed to separate the pulp from the liquid. After the milk is sieved, it's pressed, bottled, and pasteurized at 63.5 degrees Celsius. This extends the shelf life of the milk while protecting its nutrients.

Rerooted Organic used a pneumatic press with a 150-micron bag filter to sieve out the pulp from the milk. However, as the scale of production grew, the milk producer hit a number of challenges. The pneumatic press had a limited capacity which slowed down production.

A further challenge was that the slurry had to be poured by hand into the press using 20-liter buckets. This made it a slow and laborious process as well as being physically intensive for the operator.

Milk produced in this way often had a grainy texture. This was due to inefficiencies of the bag filter, causing residue ingredients passing through the 150-micron filter media and ending up in the milk. The bag filter could also stretch over time allowing even larger pulp through into the product.

The ethical milk producer tried a number of different filters to improve its process but these were not successful. Rerooted Organic then searched the internet for a workable solution for its scale of production. This led the company to discover Russell Finex. After discussing its challenges with a sales engineer, Russell Finex recommended the Finex 22" Sieve.

"The Russell Finex machine was pretty much the only solution that ticked all of the boxes after extensive searching."

- Dan Dawson, Founder of Rerooted Organic

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Dawson continued, "It's been a great help to our production. We've improved our efficiency and the extra time saved from the Finex 22" Sieve has enabled us to do that. And the 50-micron mesh has given us smoother milk too."

Once the Finex 22" Sieve was installed, Rerooted Organic could pump the slurry into the Russell Finex machine. The operator no longer needed to manually add the mixture. As a result, this halved the separation time for a batch of plantbased milk.

The automation of this production stage delivered time savings by reducing manual handling. The operator was freed up to work on other production activities as the Finex 22" Sieve allows continuous separation.

A further benefit for Rerooted Organic is the change in product quality. The company uses a 50-micron stainless steel mesh with the Finex 22" Sieve which removes a greater volume of oversized pulp from the milk compared to the bag filter. This creates a smoother texture to the plant-based milk.

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: Installation of the Finex 22"

The key benefits of using the Finex 22" are:

- **Continuous Separation -** Reduced processing time for each batch
- **Less manual input -** Product is pumped rather than added by hand
- **Stainless steel mesh -** Improved consistency and quality of product
- **Low noise level -** Ensures quiet operation while running
- **Reduced downtime -** Design includes quick release clamps and easy to clean

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