

CASE STUDY

Cold pressed rapeseed oil

Optimisation of the Versis® pressure leaf filter system increased production capacity by 50% and reduced energy consumption



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Cold pressed rapeseed oil

Customer:

Skeby Gadar

Industry:

Food & Beverages

Application:

Cold pressed rapeseed oil

Product:

Versis® pressure leaf filter system

Location:

Sweden



THE CHALLENGE

Skeby Gadar is a cold pressed rapeseed oil producer based in Sweden. The company was satisfied with the quality of their cold pressed rapeseed oil but needed to overcome a number of challenges. They wanted to increase their production capacity of cold pressed rapeseed oil by around 50% per year. Another key challenge was that the cake layer formed was not dense enough and nor evenly levelled, causing issues when drying and discharging the cake. Finally, the existing Versis® pressure filter leaf system had an automated programme which did not work efficiently and included steps in the process which caused unnecessary delays.

THE SOLUTION

An Amafilter® service engineer visited Skeby Gadar to carry out a site inspection which included a complete review of the filtration cycle. This assisted in identifying the correct process steps required to optimise the filtration system.

Amafilter® advised Skeby Gadar that there were a number of unnecessary steps programmed into the system which made the process inefficient. A series of recommendations were made to:

- Increase the filtration time to achieve a thicker cake
- Install a new pump which would deliver a higher flow rate, from 20 to 30m³ and from 25 to 30m³. The higher flow rate in combination with the crossflow will immediately stop the sediment of the heavy particles. This creates a better and more evenly spread cake layer across the elements.
- Reduce the existing cake drying time of 1-4 hours to 30 minutes cycles, reducing energy costs and improving the process efficiencies.
- Introduce a higher flow to avoid sedimentation.

THE RESULT

Skeby Gadar met their objectives as production capacity increased by just over 50%. Skeby Gadar increased production capacity brought new commercial opportunities for their cold pressed rapeseed oil, allowing them to expand their business and increase their customers base. The new pump delivered higher flow rates and shorter cycle times by drying out the cake at less lengthy intervals (1-4hrs v 30min), leading to substantial reductions in energy costs. Furthermore, the improved quality of the dry cake enabled the company to expand into new markets by selling the dry cake as a second Versis® pressure leaf filter system to



OUR PRODUCT

The Versis® vertical pressure leaf filter system

- Proven technology
- Fully automated, ensures safety.
- Requires only a small footprint, maximises space.
- Easy access to the filter leaves for removal of the cake.
- Full automation means limited maintenance and lower operational costs.
- A closed filtration system for complete safety when in use.
- Short regeneration time between filtration cycles, reducing operating costs as the filter can filtrate for longer periods without disruptions.
- Easy to clean pressure filter leaves.
- No rotating parts, keeping maintenance to a minimum.
- Reinforced pressure filter leaves provide extended lifetime.
- Specifically designed self sealing cover gaskets for a perfect sealing solution and maximum safety.

