

# Kaul GmbH and Russell Finex solve screening problems in the confectionary industry.

Kaul GmbH is known world-wide as a supplier of glazing and anti-sticking agents for the confectionary industry. Their head office in Elmshorn (Germany) is also the production site. Kaul products are sold through their subsidiary in Great Britain and agents in more than 60 countries world wide.

In addition to a few standard products Kaul produces mainly tailor-made solutions to meet specific customer needs. All products are marketed under their global brands; CAPOL®, CAPOLEX®, CAPOLOAN® and FIX GUM®.

Quality is vitally important to Kaul. Managing Director Klaus D. Haupt, stated that 'we are only satisfied when our customers are able to shine with success in their market place'.

In order to achieve this, Kaul contacted world-wide leaders in separation technology – Russell Finex N.V. to find a solution to a quality problem they were having with a food-additive powder.

Kaul have been using Russell Self-Cleaning Filters to improve the quality of their liquid ingredients for a considerable period of time and were confident that Russell Finex would have the separation equipment and expertise to also solve their powder problems.

Kaul needed to screen and separate their powder into 2000µ, 1500µ and 1000µ (alternatively 800µ) fractions. Their existing tumbler screener was operating with a maximum throughput of only 500 kg/h. In order to increase productivity Kaul needed to screen the powder at a far greater rate.

The problem with the existing machine was escalated by the powder blinding the mesh screen. This resulted in throughput falling further and downtime increasing as the machine and mesh needed regular disassembly and cleaning.



- Improved product quality with accurate oversize particle removal
- up to four screen surfaces, providing up to five predetermined fractions in a single operation.
- High capacities offer increased productivity compared to other separator designs

After discussions with engineers from Russell Finex a series of on site tests with a 1200 mm diameter Finex Separator were conducted.

The results were staggering; the screening time for 500kg of the powder was reduced from one hour to just three minutes. The Finex Separator's adjustable weight system created a more vigorous action than the tumbler screener. This raised screening and separation efficiency.

The Finex Separator has been designed to handle high throughput applications and can accommodate up to four screen surfaces, providing up to five predetermined fractions in a single operation.

Russell Finex promote their Finex Separator by stating that 'extensive performance trials have shown that at least twice the capacity can be achieved with most materials when compared with standard separator designs'. In this case their point was proved.

The nature of Kaul's powder was still causing some mesh blinding. Russell Finex quickly identified the problem and suggested an effective solution.

For the coarse mesh screens deblinding discs were used to clear blocked mesh apertures. These discs bounce on the mesh, hitting the screen and freeing blocked material.

Russell's Vibrasonic Deblinding System (VDS) was used for the finer mesh screens. The VDS uses an acoustically developed transducer to apply an ultrasonic frequency directly to the mesh, breaking down surface tension and eliminating mesh blinding.

Eliminating blinding presented other benefits including an increase in production output. Sieving capacities increased because all the apertures remained clear allowing powder to pass through them.

Eliminating blinding also reduced costs. Cleaning mesh which has become blocked can damage the screen shortening its useful life. By eliminating blinding regular disassembly and cleaning were no longer necessary, dramatically cutting downtime and increasing the life of the mesh screen.

Kaul ordered the Finex Separator and both deblinding systems immediately after the trials and are now benefiting from improved product quality, increased productivity and lower costs.

By using Russell Self Cleaning Filters to screen their liquids and Finex Separators to screen their powders, Kaul are able to maintain the highest standards in the sweets industry and meet the demands of their customers

