



## Russell Compact Sieve® used for bulk screening of pulverized marble powder during tanker loading

### Francis Flower applies vibratory sieve for check-screening marble powder during bulk loading of delivery tankers from loading silos

Formed in 1953, Francis Flower is a family business which has grown over 60 years to become a specialist in minerals management, storage and processing. Originally a quarrying and lime-burning business, Francis Flower now provides a range of high-quality powdered minerals, limestone powders, super-fine white marble powders and other products for the agricultural and construction industries, as well as paints, plastics, food and pharmaceutical manufacturers.

A key feature of Francis Flower's business ethos is sustainability. The company recovers, reclaims and recycles mineral by-products from other industrial processes. This reduces the need for mineral extraction and landfill, helping to deliver sustainable environmental solutions for the future. For example, the super-white marble powder used in Francis Flower's Fordacal range of fillers and extenders is made with 100% recycled marble.

Using marble offcuts from Northern Italy, these exceptionally white, pure calcium carbonate fillers and extenders are used in a range of applications, where the purest white colour is of paramount importance. However, the recycled marble must be processed to achieve this quality, and a key factor in guaranteeing a consistent particle size is sieving the powder to remove oversize contamination and ensure accurate sizing. Francis Flower utilizes Russell Finex separation equipment for this part of its process.

The marble by-product is imported from Italy via Avonmouth Docks, near Bristol, UK. It is then transported to Francis Flower's Gurney Slade site, Somerset, U.K, where the marble is pulverized and processed before being shipped for use in a range of applications. Having already applied a Russell Compact Sieve® to check-screen powders during big-bag filling in another production line, Francis Flower decided a further sieving system would be needed to quality-check the marble powders during tanker loading.

Lee Dursley, Plant Manager at Francis Flower said, "Following the successful application of Russell Finex equipment in our bag-filling line, we decided to employ a Russell



**Figure 1.** The Russell Compact Sieve® used to check-screen marble powder during loading of delivery tankers

-  **Ensure product quality** – Eliminate oversize contamination and guarantee a consistent powder quality
-  **Increase production output** - Achieve a higher throughput per unit mesh area compared to conventional screeners
-  **Compact and mobile design** – Easy to use in existing production and filling lines and areas of limited headroom

sieving machine to screen selected silos of powder during tanker loading. It was important to find a solution that would be compact and mobile due to the nature of lifting into position above the tanker. The sieve also needed to meet the high capacity demands of tanker loading."

Francis Flower required a sieve capable of meeting the desired 30-minute loading time for a 28 tonne tanker. With its considerable screening capacity, the company was confident that the **Russell Compact Sieve®** was the smart choice for this application.



The 1200mm-diameter Russell Compact Sieve® is applied between the loading silos and delivery tankers to screen the marble powder before it is shipped. However, to allow for easier connection and loading to each tanker, the sieve unit is transported and elevated into position above the tanker using a telescopic handler.

The Russell Compact Sieve® range is used in various industries to remove oversized contamination from bulk powders and granulates. These industrial screeners are ideal for high-capacity screening where space is limited, or in instances where a mobile solution is necessary. The units fit neatly into production and filling lines to check-screen

than meets our required throughput, and the sieving accuracy allows us to ensure a consistent quality of powder for our customers.”

Established in 1934, Russell Finex has over 80 years of experience in providing powder classification and sieving solutions for a range of bulk solids. The company’s longevity and reputation sees it regarded as a global market leader, supporting a variety of industries including pharmaceuticals, chemicals, food and beverage, coatings, metal powders and ceramics.



**Figure 2.** The Russell Compact Sieve® guarantees the quality of powders during tanker loading

incoming or outgoing materials. An innovative design means these screeners are less than half the height of a traditional sieving machine, and a wide range of sizes and customizations are available to meet specific requirements.

Mr Dursley continued, “The Russell sieve proved the ideal solution for our requirements. The unit is quick and easy to setup and transport into position when needed. It more