



RUSSELL FINEX

Global Sieving & Filtration Specialists

Russell Compact Sieve® provides solution to high-capacity containment sieving

Engineering house combines high containment isolator with hygienic and efficient pharmaceutical sieving solution to provide customized unit

With a reputation as one of the original pioneers of containment technology, Powder Systems Limited (PSL) hold a wealth of experience designing and engineering advanced containment processes, supplying customized process equipment to the pharmaceutical, chemical, and laboratory industries worldwide. The company has a reputation for providing high quality solutions for the exact needs of their customers, and embrace the expertise of other equipment manufacturers to meet specific requirements.

When a leading pharmaceutical producer sought a totally contained sieving machine, PSL combined their expertise with Russell Finex, global leaders in separation technology, to provide a customized solution. With a customer base including Pfizer, GSK, Wyeth and Sanofi-Aventis and many others around the world, Russell Finex's reputation for providing **high-quality pharmaceutical screeners** was an important factor behind its selection.

Sylvain Querol, PSL Tendering Manager Europe said "The pharmaceutical industry is one that requires the most accurate, reliable and hygienic equipment, and Russell's ability to combine these requirements with a design customized to our technology was key for the end user."

A contained screening solution was required to enable the customer to manufacture potent compounds to CGMP standards. With this in mind, PSL combined its own high containment isolator with the **Russell Compact Sieve®**. This unique isolation system provides a safe, usable solution to safely sieve hazardous material. The device is capable of processing compounds with an occupational exposure limit of less than 1.0µg/m3, meeting the needs of the customer whose material is being processed as part of their High Hazard Tablet Facility Project.

PSL's isolator has a half-body suit which allows unrestricted access to the interior of the chamber, whilst ensuring the operator remains safely clear of direct contact with the product. A contained drum loading mechanism helps load



Figure 1. Installation of the Russell Compact Sieve® within the high containment isolator

- Ensure product quality - Eliminate oversize contamination and guarantee product hygiene
- Enclosed screening - Eliminates dusts and fumes, safeguarding operators
- Compact design - Easy to install in existing production lines or enclosed areas such as containment isolators

the product, transferring it from various storage drums into the sieve. Also, to allow Clean-In-Place draining, the isolator is fitted with a sloping base.

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Due to its compact design, the Russell Compact Sieve® was the smart choice for this application, perfectly suited to installation inside a high containment isolator. This vibratory sieve provides accurate, high capacity screening at less than half the size of traditional industrial sieves, accurately removing all contamination.



Figure 2. The PSL high containment isolator

The Russell Compact Sieve® is available in a wide range of sizes and options, and Russell Finex offers customization of its full range of products, meaning every machine can be tailored to suit exact requirements. For this specific application, the sieve motor needed to be outside of the isolator, for explosion risk purposes, and was therefore placed in a control cabinet with a plate separating the motor from the sieve.

Russell Finex was able to engineer a solution to meet these unique specifications, without any effect on the sieve's performance. Christian Parker, PSL Head of Engineering comments "We were very pleased with the combination of these unique requirements. As a provider of engineering solutions, we must be able to rely on the expertise of suppliers to provide an option that meets our demands, which the Russell Compact Sieve® does."

Other benefits of the Russell Compact Sieve® include its easy-clean and strip-down design, all-stainless steel contact parts, and no bug-trap areas, making it the most hygienic sieve of its kind. The mesh screen can be easily accessed and cleaned, and the additional upgrade of a magnetic separator eliminates ferrous contamination, guaranteeing the quality and purity of the final product. In addition, the standard oversize outlet option can be removed from the design, as it was on this occasion, to achieve total containment.

Querol comments "In order to meet the demands of the modern pharmaceutical industry, it is important to meet the highest standards of good manufacturing practice. The combination of our high containment isolator and the Russell Compact Sieve®, meets these standards, enabling our customers to guarantee high quality pharmaceutical products".

Established in 1934, Russell Finex has a wealth of experience in supplying engineering houses and OEMs with customized sieving and filtration equipment. Its longevity and reputation sees it regarded as one of the top three global market leaders, supporting a variety of industries including **pharmaceutical, chemical, food and beverage, coatings, metal powders and ceramics**.



Figure 3. The all-stainless steel Russell Compact Sieve®