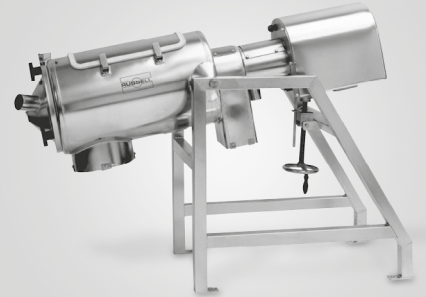


# PURITY THROUGH INNOVATION



Global sieving and filtration specialists



INNOVATING  
SINCE 1934

# RUSSELL FINEX. YOUR REPUTATION IS OUR CONCERN.



## Customer trust... a Russell must.

We continually seek to innovate, driving the industry forward by developing our range of sieving and filtration equipment, whilst advancing manufacturing methods to satisfy a diverse and constantly changing market.

For over 80 years, we have been working in partnership with global manufacturers such as Nestlé, Akzo Nobel and many others to ensure we meet the highest standards of design, usability and performance. We carry out extensive market research, listening to our customers and working with you to provide innovative new products that satisfy your unique requirements.

We provide aftermarket support of the highest standard via our own people and subsidiaries strategically placed around the world. We also hold a network of agents and distributors, ensuring the highest level of customer service is maintained across the globe.

*Ray Singh*

Ray Singh  
Managing Director

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## Global sieving and filtration specialists

- **Global coverage** – offices covering 140 countries across the world.
- **Customized solutions** - applying innovation to meet your requirements.
- **Comprehensive customer service** – technical support and global stock holding.
- **Specialized testing facilities** – trial your products for total peace of mind.

## State-of-the-art screening and filtration equipment for a wide range of industries



Food &  
Beverage



Pharmaceuticals



Chemicals



Coatings



Ceramics



Metal  
Powders



Water  
Processing



Recycling

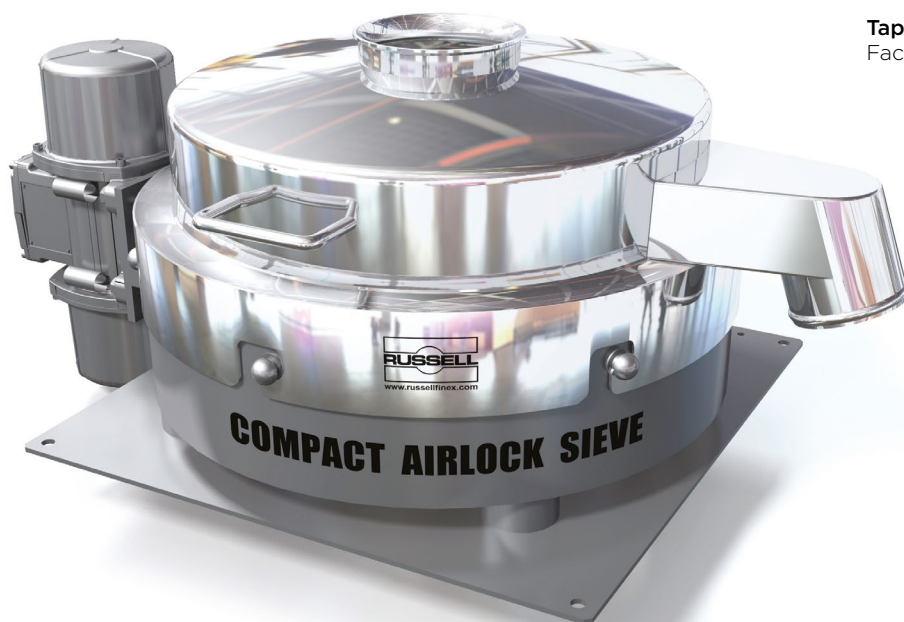
# CHECK- SCREENERS

These high capacity control sieves are used for both powders and liquid slurries to safeguard product quality by removing oversized contamination. Russell Finex offer the widest range of check-screeners on the market allowing for installation at any part of the production process, from incoming ingredients right through to the finished products.

## RUSSELL COMPACT AIRLOCK SIEVE™

Minimize operator involvement and maximize productivity.

This unique screener combines Russell Compact Sieve® suspension technology and a revolutionary patented TLI (Twist, Lock, Inflate) pneumatic clamping system. This results in a check-screener with significantly higher throughputs compared to conventional units as well as providing a fast, reliable and repeatable dust-tight seal without the need for fine adjustment; eliminating reliance on operators to adjust clamps correctly and maximizing screening performance.



### ULTRASONICS (see p8-9)

Prevents blinding and blocking of mesh when screening difficult powders, enabling continuous screening at a consistent capacity using finer meshes.

### MESHING (see p13)

High quality low tolerance mesh screens to improve screening accuracy, increase productivity and expand mesh life.

### UPGRADES (see p14)

**Russell Gated Outlet™** – Controls the flow of material from the oversize outlet, improving productivity by ensuring the product is screened efficiently.

**Russell Easy-Clean Magnetic Separator™** – Unique open-ended design removes ferrous contamination easily and effectively.

**Russell Vibrastop™** – Uses the latest in starter technology to eliminate excessive movement during start up and shut down.

*“Due to the Airlock clamping system, it is extremely easy to dismantle when compared to conventional clamping methods.”*

**Tapas Datta**

Factory Manager of Cipla plant in Goa, India

- **Improve product purity**  
Eliminate oversized contamination from your powders and liquids.
- **Reduce maintenance costs**  
Reduces wear on components due to optimal clamping every time.
- **Improves operators health and safety**  
Offers reduced noise (typically as low as 65 dBA) and excellent product containment, reducing OEL levels.
- **Eliminates reliance on skills of operator**  
Simple to disassemble in seconds without the need for tools. Just deflate, twist and unlock.

## RUSSELL COMPACT SIEVE®

Double your throughput with half the size.

First invented by Russell Finex, this screener has become the most renowned unit for check-screening powders and liquids across the world. With the widest range of models, this unit can be installed almost anywhere within a production process.

The Russell Compact Sieve® fits neatly into production lines, providing considerable screening capacity without requiring excessive headroom. Its innovative design means that the screener is less than half the height of a traditional sieving machine.

- **Increase production capacity**

Achieve higher throughput per unit mesh area compared to conventional screeners.

- **Fits into smaller spaces**

Fits easily into existing installations and areas of limited headroom.

- **Reduce downtime**

Easy to strip down and clean without the need for tools.

- **Lower noise levels**

A solid rubber suspension gives the machine a quiet operation - typically as low as 70dBA.



## RUSSELL BLOW THRU SIEVE™

Dust-free screening during positive pressure conveying.

Removes oversize contamination from powders during dilute phase pneumatic conveying, and is ideal for screening incoming ingredients, in process and before dispatch.



## RUSSELL COMPACT 3IN1 SIEVE™

Screen hand-fed raw ingredients from bags.

Designed specifically for safety screening products with low-level bag emptying; integrating an ergonomic tipping platform, magnetic separator and sieve within one system.





## RUSSELL COMPACT AIRSWEPT SIEVE™

Check-screen and convey powders and granules in one operation.

Pneumatic conveying and check-screening of material from storage locations to the next process stage. The Russell Compact Airswept Sieve™ ensures powders can be check-screened and conveyed in one dust-tight operation, minimizing the risk of product inhalation.



## RUSSELL COMPACT SELF-LOADING SIEVE™

Dust-free fully automated screening of powders and granules.

A complete standalone system which conveys, screens and discharges material in one easy operation. Incorporating features of the Russell Compact Sieve®, powders and granules can be screened and conveyed up to five meters with minimal operator involvement.



## RUSSELL MINI SIFTER™

Small batch powder and liquid sieving.

Ideal for small bakeries, pilot plants and start-up companies looking to remove contamination from small batches of powders or liquids.



### *Other related models*

#### FINEX 22™ SIEVE

A unique, multi-purpose mobile screener for liquids and powders. (see p7)



#### TURBO SIEVE

A non-vibratory high capacity rotary sieve for check-screening powders.



# GRADING SEPARATORS

These high performance separators are used for a wide range of applications across all industries. Typically, they are used for grading wet or dry materials on up to five fractions in one operation. However, these versatile units can be used for many other separation methods such as dewatering, dedusting or product recovery.

## FINEX SEPARATOR™

A revolutionary high performance separator for accurate separation.

The Finex Separator™ benefits from major advances in separation technology, providing large improvements in sieving accuracy, capacity, noise levels and upgradeability compared with traditional spring suspension separators.

### Benefits compared to spring mounted units:

- **Increase your productivity**  
Large improvements in screening capacities compared to standard screeners obtained through the use of a specially engineered vibrator assembly.
- **Greater accuracy**  
Full material flow on all four mesh screens provides accurate grading and separation.
- **Reduced noise**  
Patented rubber suspension instead of springs produces much lower noise, down to 69dBA.
- **Lower maintenance**  
The design of the vibrator housing allows for standard motors to be used, keeping maintenance costs to a minimum.



### ULTRASONICS (see p8-9)

Prevents blinding and blocking of mesh when screening difficult powders, enabling continuous screening at a consistent capacity using finer meshes.

### MESHING (See p13)

High quality low tolerance mesh screens to improve screening accuracy, increase productivity and expand mesh life.

### UPGRADES (see p14)

**Russell Gated Outlet™** – Controls the flow of material from the oversize outlet, improving productivity by ensuring the product is screened efficiently.

**Russell Vibrastop™** – Uses the latest in starter technology to eliminate excessive movement during start up and shut down.

**Russell Screen Changer™** – Assists operators with routine inspection and replacement of mesh screens, keeping labor costs and production downtime to a minimum.

## RUSSELL ECO SEPARATOR®

A versatile separator for those seeking a cost effective solution to meet their screening requirements.

Utilizing a conventional spring mounted suspension system, this has the largest range available, from 600mm up to 2m in diameter.



**Tom Oldaker**  
Plant Manager of Zemex Corporation's attapulgit operations.



*“After we replaced five original separators with the new Finex Separators we increased throughput by almost 50%. Per each screen, we can now get about 4 to 4.5 tons per hour.”*

## FINEX 22™ SIEVE

A unique multi-purpose mobile screening solution.

This 600mm diameter screener is capable of safety screening, as well as accurate grading of powders or granules. A high-speed version is also available for screening difficult powders and high viscosity liquids.

- **High capacity screener**

Will outperform conventional 48” spring mounted separators in many viscous liquid applications.

- **Ease of maneuverability**

A fully portable unit for use in various locations across your plant.

- **Easy to strip down and clean**

Quick-release, hand operated clamps enable fast screen changes and easy clean down.

- **Low maintenance**

Suspension system uses a standard motor, keeping running costs down.





# ULTRASONIC DEBLINDING

Russell Finex is the originator of the application of ultrasonics to screen meshes. Designed to overcome problems associated with screening difficult powders, Russell Finex ultrasonic solutions eliminate mesh blinding and keep the screen area clear. This ensures screening equipment is kept running at its optimum performance by ensuring throughput rates are upheld, mesh life is maximized and all good product passes through the mesh, preventing costly rework.

## RUSSELL VIBRASONIC® DEBLINDING SYSTEM

Eliminate mesh blinding and increase screening capacity.

Russell Vibrasonic® Systems enable powders to be sieved on finer meshes with more accuracy than ever before. This improves the quality of final products as well as their value.

- **Improve your product quality**

Screens powders on finer meshes (down to 20 micron).

- **Increase production output**

There is no downtime to clean the mesh as screens stay clear from blockage.

- **Reduce cost**

Reduces the amount of good product that needs to be re-screened.



### PROBE UPGRADES

**Explosion proof probes** – Certified probes for all ATEX explosion ratings including Zone 20, as well as meeting NEC standards.

**Food/Pharmaceutical** – Brushed or mirror polished fully stainless steel cover with a fixed stainless steel or FDA approved flexible silicone conduit.

### GENERATOR UPGRADES

**EX/ATEX** – Certified for operation within Zone 21 and 22 ATEX environments as well as NEMA 4 standards.

#### Communications and integration

– Connect your ultrasonic system into your factory PLC system using Profibus or Modbus comms.

#### Stainless steel control boxes –

Suitable for the food and pharmaceutical industries.

*“The new Vibrasonic system works extremely well – it has increased our productivity levels and is a great improvement on the older design of machines that we used before – it gives us much greater control, we can ‘tune’ the Vibrasonic system to the products.”*

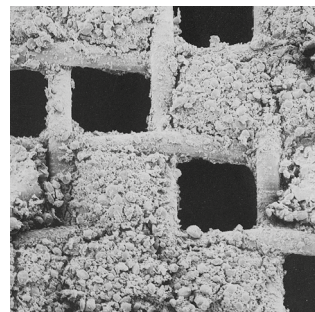
**Production Supervisor**  
GlaxoSmithKline





## HOW IT WORKS

An ultrasonic frequency is applied to the sieve mesh using an acoustically developed transducer. The frequency of the vibration breaks down surface tension, effectively making the stainless steel wires friction-free and preventing particles that are slightly greater and smaller than the apertures from blinding or blocking the screen.

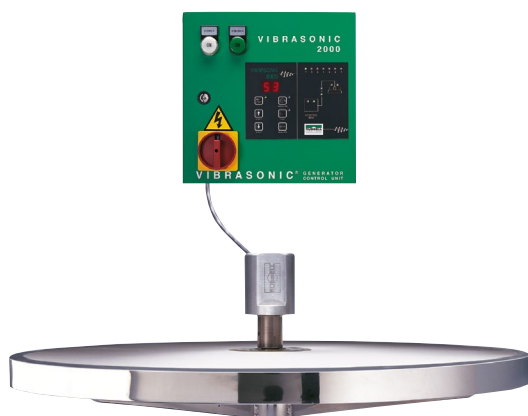


## OPTIONS

### BX FRAME

**Ideal for machines 700mm and smaller**

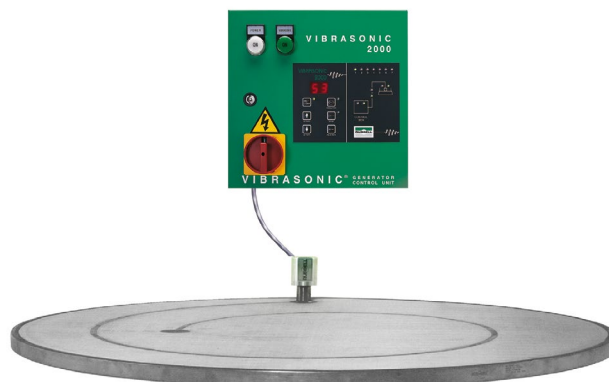
The BX system consists of a self-supported screen and Velocity Transfer Plate (VTP), providing even activity throughout the screen and a solid connection for the probe.



### SPIROSCREEN™

**Ideal for machines 900mm and larger**

This patented design is especially suited to larger diameter mesh frames and ensures maximum capacities are achieved on screens up to 2m in diameter.



## ULTRASONIC MESHING

**Keeping the ultrasonic system in tune.**

The mesh screen is the most critical component on any sieve, but it is even more important when ultrasonics are being used.

The mesh, the bonding method and frame design all play a critical role in ensuring the ultrasonic debinding system is kept running at its optimum performance. This maximizes productivity and safeguards the quality of the final product.



# SELF-CLEANING LIQUID FILTERS

This range of enclosed liquid filters is based on the high performance Self-Cleaning Russell Eco Filter® and is designed to provide effective and continuous removal of contamination down to 10 microns. Available in various options, these filters fit neatly into new and existing production lines to protect up stream equipment and safeguard the quality of final products.

## UPGRADES (see p15)

**Filter Management System™** – Continually monitors and controls the liquid filter to eliminate operator involvement and minimize product waste.

**Russell End Cap Supports** – Assists operators in the safe assembling and disassembling of filters during cleaning and maintenance.

**Temperature Controlled Filtration** – Heating/cooling jackets can be included to maintain product temperature during filtration.

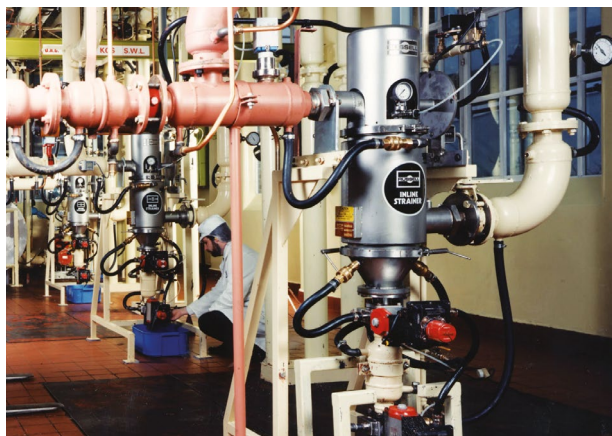
*There's not a lot of preventative maintenance involved with the filter. It's a really good, solid system.*

**Bill Black**  
Plant Engineer at Inx International

## SELF-CLEANING RUSSELL ECO FILTER®

Increase productivity with high capacity enclosed filtration.

The Self-Cleaning Russell Eco Filter® is the perfect alternative to traditional bag filters. Fitted with the unique Russell SpiroKlene™ wiper system and reusable filter element, this self-cleaning filter allows for positive oversize removal with minimal operator involvement. This also allows for higher production rates compared to other filtration methods as there are no production stoppages to change filter bags or cartridges.



- **Increase productivity**

No stoppages to change filter elements and no slowing of throughput as filter elements are continually cleaned.

- **Improve product quality**

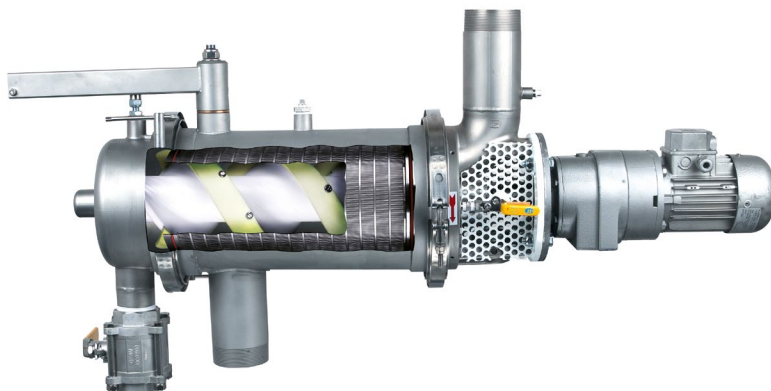
Totally enclosed filtration eliminates risk of product contamination.

- **Reduce costs**

No continual costs of replacing filter media and no disposal costs. This also reduces product wastage, labor costs and downtime.

- **Improves operators health and safety**

Protects against hazardous products, fumes and spillages.



## RUSSELL HYGIENE FILTER™

### Self-cleaning liquid filter for sanitary applications.

Delivering all the benefits provided by the Russell Eco Filter®, this unit has also been specifically designed for optimum cleaning, meeting the demands of the food and pharmaceutical industries, where product quality cannot be compromised.

- **Sanitary design**

Crevice-free design allows superior cleaning, eliminating bug traps and risk of contamination.

- **High specification finish**

All product contact parts are crevice-free and polished to less than 0.6Ra as standard.

- **Meets industry standards**

Designed in accordance with BS EN ISO 14159:2008 and EU1935/2004 regulations.

- **Dismantles completely**

Designed to completely dismantle, enabling a rapid and thorough clean down.



*The Self-Cleaning Russell Eco Filter is not only able to filter high viscosity pastes whilst keeping the product in a liquid state, but is also easy to maintain. With the added benefit of not needing to replace the filter media, this has been the filter we have been searching for.*

**Alex Pardon**

Continuous Improvement Facilitator  
at Mondelēz International

## HIGH TEMPERATURE FILTER

Removes the danger and mess from high temperature filtration up to 250°C (480°F).

Fully enclosed filtration of high temperature liquids such as resins and cooking oil to safeguard operators. Fitted with an offset drive, self-cleaning wiper system and heating jacket.



## HIGH FLOW FILTER

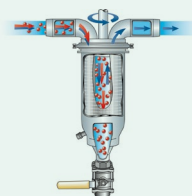
Achieves flow rates of up to 200,000 l/hr (50,000 g/hr).

The largest filter in the range suited for high-flow applications such as effluent or water filtration. Available in horizontal or vertical versions with flanged inlet and outlet connections in 4", 6" and 8" diameters.

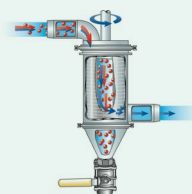


### EASY INSTALLATION - WHATEVER YOUR PROCESS

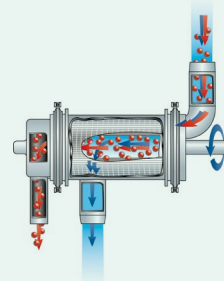
**In-line design** - This unit is easy to fit into existing pipework without the need for a specialist pipe fitter.



**On-line design** - Operates on a unique flow-through principle, which eliminates any dead spots, giving you continuous, high volume production.



**Horizontal on-line design** - Strip-down and cleaning time is reduced further. It is even easier to fit into production lines where headroom is limited.



**Operating pressure** - The filters are designed to operate at pressures up to 15 bar (220 psi). Higher pressures available upon request.

# LIQUID SOLID SEPARATION

## RUSSELL LIQUID SOLID SEPARATOR™

A high capacity separator for the continuous removal of solids from liquids.

A unique high performance separator for continuous removal of soft or fibrous materials for a wide range of applications. With its centrifugal action, this machine will achieve flow rates up to 100,000 l/hour on fine meshes down to 20 microns.

- **Increase productivity**

Capable of handling high flow rates of liquid slurries up to 100,000 liters/hour.

- **Reduce costs**

Minimizes the loss of good product and disposal costs of effluent streams.

- **Operator friendly**

Totally enclosed and simple to operate and tune for optimum separation quality.

### OPTIONS

**Spray bars** – Keeps the mesh clear of oversize particles, maximizing liquid flow.

**Heavy duty mesh sleeves** – Ideal for the processing of viscous liquids and slurries.

**Variable speed** – Adjustable speed to meet specific separation requirements.

**Bearings** – Lubricated or water purged to meet your requirements.



## RUSSELL FINES SAVER

A sanitary standard liquid solid separator for the food industry.

This USDA approved unit will provide ultimate protection of downstream equipment, such as membranes or centrifuges, as well as recovering curd or butter grains which would otherwise be lost.



- **Small footprint**

Small footprint limits the amount of valuable floor space required and is capable of replacing up to 3 off 60" vibratory separators.

- **Increased profits**

Recovered curds can be recovered for use in other products and prevent damage to downstream process equipment.

- **Reduced downtime**

Reduced sludge build up compared to other separation equipment allows for quick clean up and shorter stoppages.

### *Other related models*

#### **RUSSELL COMPACT SIEVE®**

High performance vibratory sieve for liquids. (see p4)

#### **FINEX 22™**

Multi-purpose mobile screener for viscous liquids. (see p7)



# AFTERMARKET SUPPORT

After purchasing a Russell machine, aftermarket support of the highest standard will be provided to ensure product quality remains at its optimum for years to come.

Russell Finex provides customers with a fast, responsive and reliable service to keep production lines running. This means full technical support from experienced representatives along with a complete range of spares available off-the-shelf.

All spare parts supplied are of the highest quality. Correct fit, superior wear-resistance and long life can be guaranteed, ensuring equipment will perform at optimal levels at all times.



## MESHING SERVICES

Maximize screen life and improve product quality.

Russell Finex only uses mesh of the highest quality which has undergone the strictest quality assurance procedures. This results in precise mesh apertures, ensuring consistent and repeatable product quality. In addition, all mesh screens are manufactured using state-of-the-art bonding methods to ensure optimum mesh tension is obtained without compromising screen life. This ensures maximum screening capacities are upheld while reducing running and maintenance costs by minimizing the frequency of mesh replacement.



**Meshing techniques available include:**

- **Vibrasonic meshing**

Acoustically tested screens with optimum bonding and mesh tension ensures your ultrasonic debinding system operates at optimum and maximum throughput.

- **Durable bonding for sizes up to 2m**

Manufacture and remesh of a wide variety of mesh screens.

- **Food and pharmaceutical suitable**

A safe, white adhesive tested to FDA 175.300 for high quality food and pharmaceutical applications.

- **High temperature/solvent resistant bonding**

Bonding methods suitable to withstand many different hostile environments which can cause problems for conventional bonding.

# MACHINE UPGRADES

Russell Finex offers a number of upgrades for Russell equipment, providing the flexibility to adapt machines to meet future requirements of production processes.

## UPGRADES FOR SIEVES AND SEPARATORS

### RUSSELL SCREEN CHANGER™

Change mesh frames quickly and safely.

**Improves operator safety** – No manual lifting and reduces risk of injury.

**Increases productivity** – Reduces downtime with no additional tools required.

**Reduces costs** – Protects screens and other equipment from damage.



### RUSSELL GATED OUTLET™

Control the flow of product from the oversize outlet.

**Increase productivity** – Reduced downtime to remove oversize.

**Improve screening efficiency** – Allows product to be sieved before ejecting out of the outlet.

**Increase profitability** – Loss of good product is reduced.



## OTHER UPGRADES

### RUSSELL EASY-CLEAN MAGNETIC SEPARATOR™

A unique open-ended design for easy removal of ferrous contamination when screening dry powders.



### RUSSELL VIBRASTOP™

A starter eliminating excessive vibration and movement during start up and shutdown of sieves.



### RUSSELL FRAME GUARD™

A high quality, durable storage system to protect mesh screens from damage and potential contaminants when not in use.



# UPGRADES FOR SELF-CLEANING RUSSELL ECO FILTERS

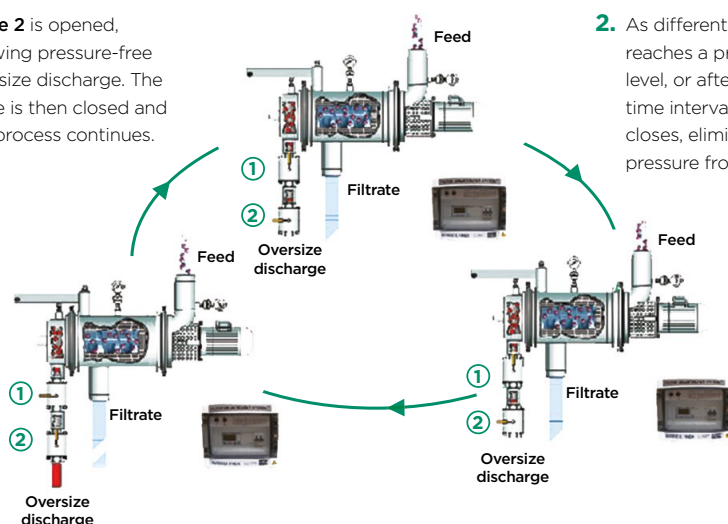
## RUSSELL FILTER MANAGEMENT SYSTEM™

Continually monitor and control a liquid filter efficiently without operator involvement. Two pressure transmitters, mounted on both inlet and outlet connections, allow the system to monitor the differential pressure across the filter element as well as the upstream line pressure. The system can also be set on a timed basis and is retrofittable to all types of filters.

1. During normal running **Valve 1** is open while **Valve 2** is closed, allowing oversize material to be collected in the downpipe.

3. **Valve 2** is opened, allowing pressure-free oversize discharge. The valve is then closed and the process continues.

2. As differential pressure reaches a pre-determined level, or after a specified time interval, **Valve 1** closes, eliminating line pressure from downpipe.



**Reduce time and labor** – No need to monitor filter and open oversize discharge valve.

**Increases safety** – Reduces exposure to potentially harmful products and materials.

**Protects your filter element** – Prevents filter element damage and extends life of filter element.

**Minimizes product wastage** – Provides complete control of oversize discharge without the need for operator involvement.



## OTHER UPGRADES

### SELF-CLEANING WIPER SYSTEMS

Available in a range of designs to suit all manufacturing processes.

**Spiral wiper system** – Continuously cleans the surface of the filter element for optimum filtration efficiency.



**Straight wiper system** – Suited for more heavy duty, viscous products.



**Sanitary wiper system** – Completely disassembles, allowing for superior cleaning.



### TEMPERATURE CONTROLLED FILTRATION

Heating/cooling jackets can be included to maintain product temperature during filtration.



### FILTER END CAP SUPPORTS

Assist operators with improved safety and handling of the filter during cleaning and maintenance.



or visit your personalized Customer Portal at  
[WWW.RUSSELLFINEX.COM/EN/CUSTOMER-PORTAL](http://WWW.RUSSELLFINEX.COM/EN/CUSTOMER-PORTAL)

Your authorized Russell Finex representative:



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