ScreenX

SCREEN THE IMPOSSIBLE

MULTI-FREQUENCY VIBRATING SIEVES

RECTANGULAR SCREENERS FOR LIQUIDS AND POWDERS

virto ScreenX CUCCOLINI®

ScreenX - RECTANGULAR

WHAT IS SCREENX?

The ScreenX product-line is Virto Group's revolutionary Multi-Frequency Vibration (MFV) patented sieving technology. It consistently outperforms other screening equipment in its ability to significantly increase capacity and particle separation efficiency (over 99% efficiency in particle size) for problematic materials that are coarse, fine and ultra-fine (down to 5 µm), wet or dry, sticky and abrasive. ScreenX offers simple and cost effective mesh change-over, with minimal tools and only takes minutes. It achieves unprecedented results on difficult materials without the need for mesh cleaning systems due to its MFV technology. This technology is based on accelerating the working mesh up to 500G - a 10,000% increase on the mesh acceleration achieved with standard sieving equipment.

SCREENX - RECTANGULAR MACHINES FOR LIQUIDS AND POWDERS

The rectangular multi-frequency ScreenX line specialises in providing high volume separation (1" down to less than 5 µm) for difficult materials that are slurry based, wet, dry, sticky, abrasive or agglomerative. It can be used for classification, scalping, safety screening, de-dusting, de-watering, de-sliming and solid/liquid separation. It has a proven track record in screening a large range of powders and liquid based materials including metal, glass, chemicals, plastics, recycling, aggregates, mining, petroleum, agricultural and many others.

ScreenX has achieved great success for previously "un-screenable" material due to its MFV technology that applies up to 500G of acceleration directly to the mesh. This generates unprecedented capacity and efficiency in particle size separation at coarse, fine and ultra-fine cut points. The rectangular machines can be manufactured in either carbon or stainless steel, provided with covers, flexible connections, stands, varying outlet type and Clean In Place (CIP) systems. There are three types of rectangular ScreenX sieves:

- **RS (single deck) with one vibrating motor for screening powders:** Perfect for screening difficult (e.g. sticky, fine or abrasive) materials for powder applications requiring screening/separation at large volumes. Its uses cover heavy dry or liquid based industrial applications for chemicals, mining, petroleum, aggregates, fertilizers, recycled/crushed/burnt waste and lighter or more delicate materials such as metal powders.
- **RD (double deck) with one vibrating motor for screening powders:** This screener is used for grading powders using two decks for the same industries as the RS (see above) at high efficiency and throughput for screen two cut points simultaniously.
- **RS (single deck) with two vibrating motors for screening liquids:** This product line has been designed for screening liquids/slurries and dewatering materials (down to 5 µm) in a high dilution state.

SIZES AND CONFIGURATION

The ScreenX MFV rectangular vibrating sieve for powders is offered in three models, two for powders and one for liquids.

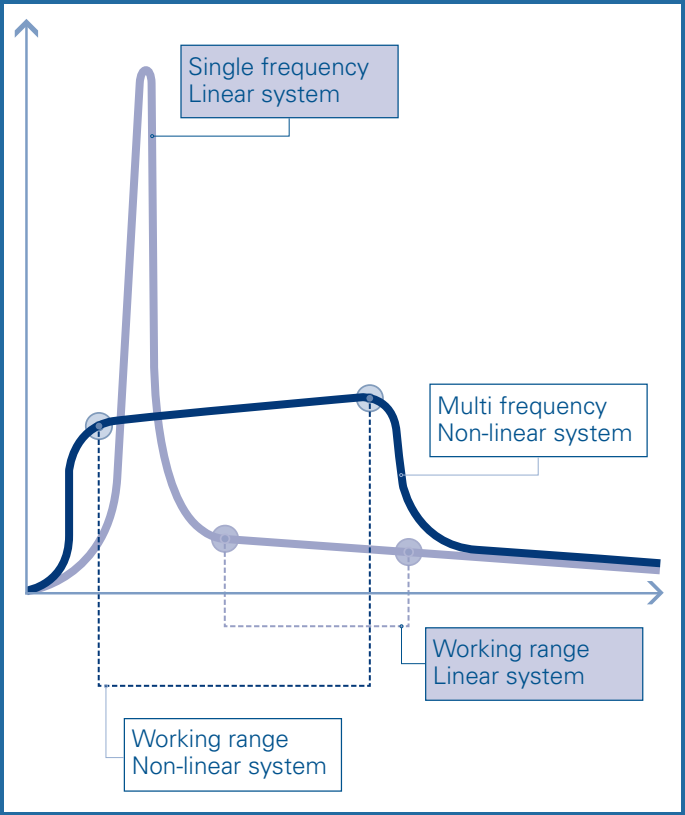
For powders they are:

- Single deck: RS 1506.1, RS 2310.1 and RS 2814.1 (see above for more details); and,
- Double deck: RD 2814 (see above for more details).

For liquids they are:

- RS 2010.2 manufactured in 364 grade stainless steel. (see above for more details).

SCREENX MFV TECHNOLOGY VERSUS TRADITIONAL SIEVES



- **Traditional vibrating sieves use single frequency systems** with low amplitude and a low range of frequency to vibrate the machine frame and apply up to 5G of acceleration in to both the machine and the screening mesh.
- **ScreenX uses multi-frequency vibration (MFV)** with a very high amplitude that delivers an infinite range of multi vibrational frequencies directly in to the mesh while avoiding energy waste by minimising the vibration of the frame.
- **ScreenX vibrates the mesh with acceleration of up to 500G** (10,000% increase over standard sieves) which enables it to break agglomerates, stop mesh blinding and maximise capacity at cut points down to 5 µm.
- **ScreenX's MFV causes every particle to reach optimum travel & dispersion** which enables 99.9% efficiency in separation of particles according to the size of the mesh.
- **ScreenX creates a fluidized bed of oversize material** to vibrate across the mesh which is efficiently cleared, thereby allowing a new vibration process to commence for the new feed.

WHAT ARE THE BENEFITS OF SCREENX?

- **Unprecedented Results In Coarse, Fine And Ultra-Fine Screening:** ScreenX separates at a cut point range from 1" to as small as 5 µm or difficult materials that are wet or dry, sticky, abrasive, agglomerative or prone to blinding the mesh.
- **Eliminates Mesh Pegging/Blinding And Breaks Agglomerates:** ScreenX self cleans the mesh, overcomes blinding of the mesh and easily breaks agglomerates.
- **High Capacity:** ScreenX's ability to eliminate mesh blinding, mesh pegging and to quickly break agglomerates enables it to deliver a throughputs that are 20% - 400% increase on standard screeners.
- **Cut Size Precision:** ScreenX's 500G of MFV acceleration improves the purity level of the oversize material removing contamination with an efficiency greater than 99%.
- **User Friendly:** ScreenX is designed for quick and effective cleaning, maintenance and mesh changing (20 minutes).
- **Creates Valuable Products From Waste:** ScreenX screens ultrafine and difficult materials with high efficiency and specialises in turning low margin/waste products in to valuable products.
- **Reduction Of Energy Consumption:** ScreenX creates an increase in capacity and efficiency which equates to a greater output, less screening time and less energy consumption.

WHAT ARE THE USES OF SCREENX?

ScreenX's rectangular line specialises in high volume particle separation of coarse, fine and ultra-fine (1" – 5 µm) materials that are difficult to screen due to them being in a liquid/slurry or they are humid, sticky or abrasive. It has a proven track record in screening all forms of powders and liquids including mining and petroleum applications, metal powders, glass, plastics, recycled/crushed/burnt waste, aggregates, agricultural and many other applications. The RS machine can be used for classification, scalping, safety screening, de-dusting, solid/liquid separation, de-sliming and dewatering and is particularly well known for classification and scalping of all quarry and mining products.

DESIGN CHARACTERISTICS

- Single and double deck rectangular machines range in size from 4.9 x 2 feet to 9.2 x 4.6 feet
- Multi-frequency vibration (MFV).
- Up to 500G of acceleration passed to mesh eliminating clogging and agglomeration.
- Carbon-steel structure, also available in stainless steel on request.
- Fitted with one or two vibrating motors, depending on size and application.

Technical Specification	RS 1506.1	RS 2010.1 (for powders)	RS 2010.2 (for liquids)	RS 2310.1	RS 2814.1	RD 2814.1
Electrical power (Hp)	1.48	1.74 + 1.74	2.55 + 2.55	4.56	5.5	5.5
Sieving decks	1	1	1	1	1	2
Mesh surface area (ft^2)	9.69	21.53	17.76	23.69	38.75	2 x 36.60
L x W (feet)	6 x 4	8.5 x 5.5	7.5 x 5	10.8 x 7.8	11 x 7	11 x 7

SCREENX - A PROVEN SEPARATION TECHNOLOGY

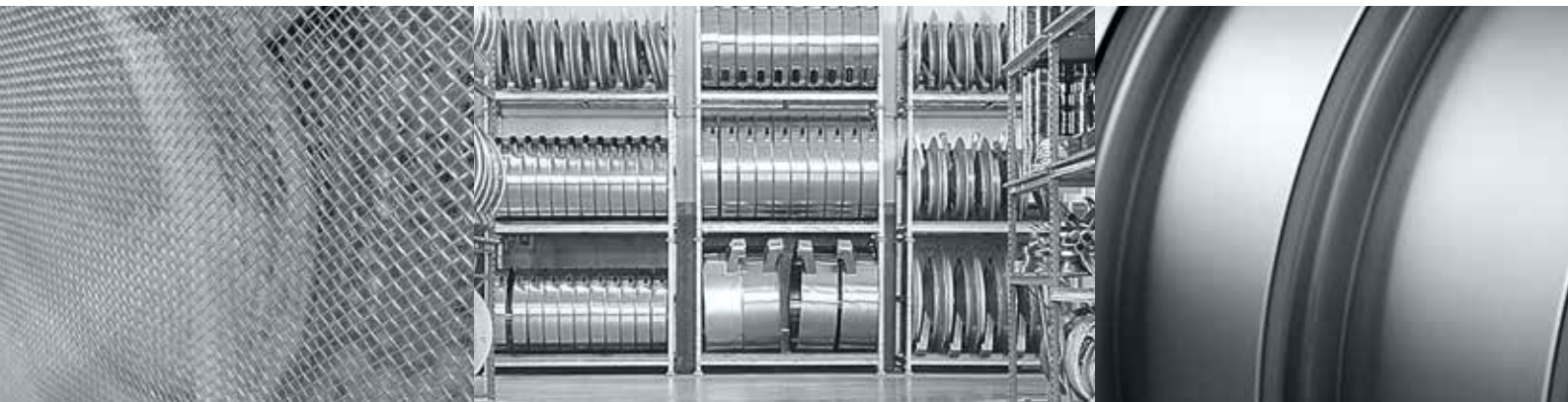
Example Industries: Aggregates, Mining, Oil & Gas, Chemicals, Metal Powders, Recycling.

Example Application: Dolomite, Basalt, Drilling Mud, Tungsten Powder, Ground Pumice, Limestone, Coal Slurry, Silica Sand Slurry, Rubber Powder, Crushed/Burnt Waste, Coal Powder/Slurries, Crushed Slag Slurries, Fertilizers, etc.

ACCESSORIES AND MODIFICATIONS

Virto group offers a wide range of product variations and accessories to meet the requirements of customers.

- **Inspection Ports**
  Inspection ports can be modified to suit application requirements.
- **Flexible Connections**
  All major industry-standard flexible connections can be incorporated into the equipment.
- **AISI 316 Stainless Steel Manufacturing**
  Virto specializes in making AISI 316 stainless steel screeners for the food and pharmaceutical industries and has provided the same machines for many other sectors.
- **Stands**
  This equipment can be mounted on mobile or stationary stands.
- **Outlets And Connection Types**
  We offer a wide range of outlet types and connections to accommodate existing installations.
- **CIP Systems**
  CIP (Clean In Place) system is offered for all rectangular ScreenX models.



EXAMPLE CASE STUDIES - PROVING THE IMPOSSIBLE IS POSSIBLE

Material	Model Size	Mesh Size	Density (Kg/lt)	Capacity (lb/h)
For Powders				
Gypsum	RS 2814.1	1 mm (18 mesh)	1	55,000
Limestone	RS 2814.1	2 mm (10 mesh)	1.7	43,000
Tungsten Powder	RS 2814.1	30 µm	7	2,000
Crushed Limestone	RS 2310.1	800 µm (20 mesh)	1	55,000
Ground Pumice	RS 2310.1	70 µm (200 mesh)	0.6	1,000
Glass Powder	RS 2310.1	1 mm (18 mesh)	1.2	13,000
Ash	RS 2814.1	400 µm (40 mesh)	1.1	6,000
Dolomite	RS 2310.1	1.6 mm (12 mesh)	0.9	88,000
Silica Sand	RS 2310.0	1.5 mm (14 mesh)	1	19,000
Marble Powder	RS 1506.1	105 µm (140 mesh)	1.2	3,000
Foundry Slag	RS 1506.1	5 mm (4 mesh)	1.9	27,000
For Liquids				
Silica Slurry	RS 2010.1	250 µm (60 mesh)	n/a	882 ft^3 /hour
Coal Dewatering	RS 2010.1	100 µm (140 mesh)	n/a	2,119 ft^3 /hour
Crushed Slag Slurry	RS 2010.1	45 µm (325 mesh)	n/a	847 ft^3 /hour

USA 2016

Virto Group:
Cuccolini S.r.l.
Via Raffaello Sanzio, 2 - 42124 - Reggio Emilia, Italy
+39 0522 238632
info@virtogroup.com