

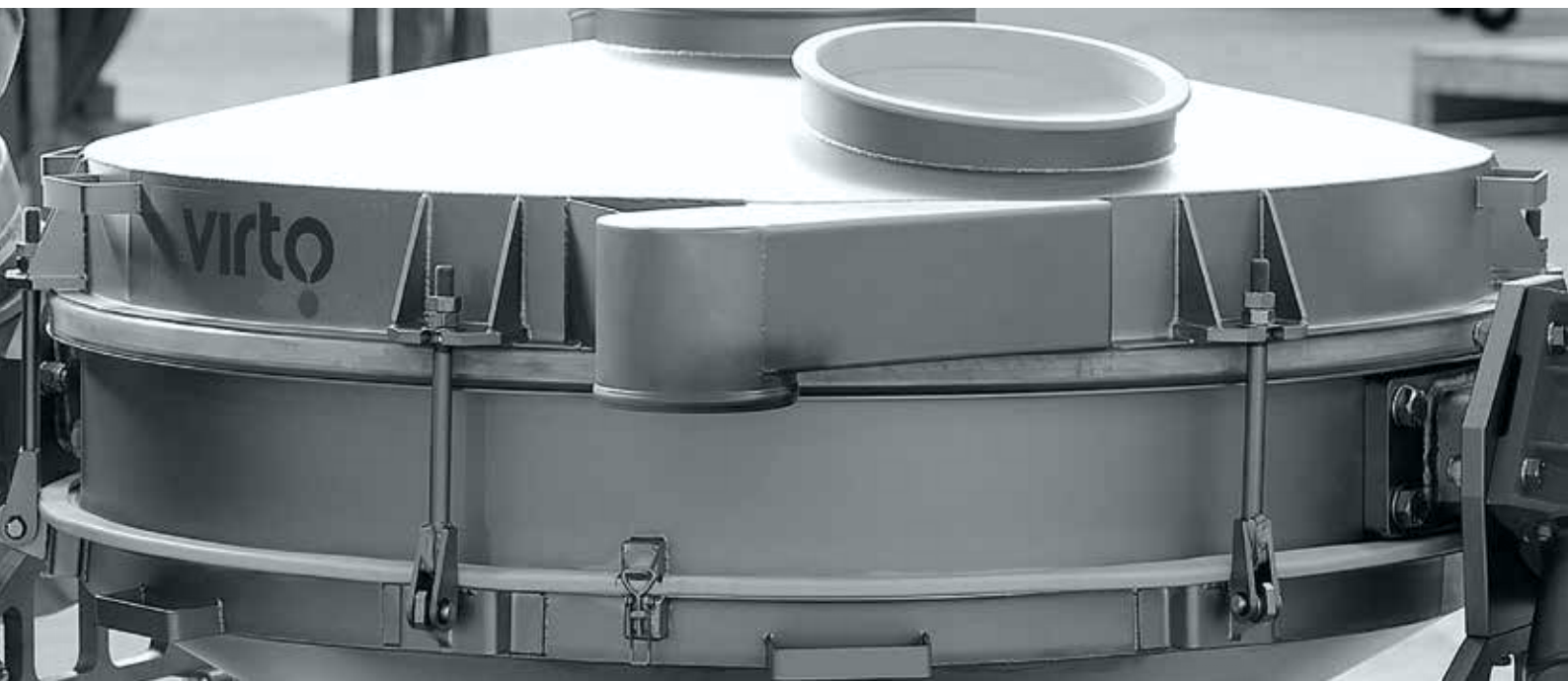
ScreenX

# SCREEN THE IMPOSSIBLE

**MULTI-FREQUENCY VIBRATING SIEVES**

CIRCULAR SCREENERS FOR POWDERS

**virto**  
ScreenX CUCCOLINI®



# ScreenX - CIRCULAR

## 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% purity in particle size) for problematic materials that are fine (down to 6µm), wet or dry, sticky and abrasive. ScreenX offers simple and cost effective mesh change-over, with minimal tools, that 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 - CIRCULAR MACHINES

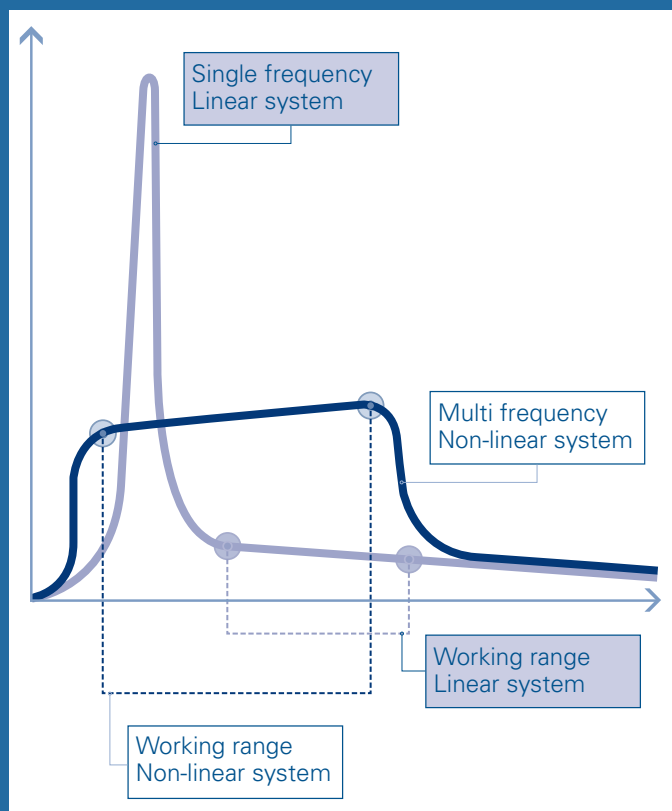
ScreenX sieves are available in rectangular and in circular configuration. The circular line is offered with a single deck (CS) or double deck (CD) for separating particles (3mm down to less than 6µm) in difficult materials that are wet or dry, sticky, abrasive or agglomerative. It can be used for classification, scalping, safety screening, de-dusting and solids separation. It has a proven track record in screening all forms of powders including metal powders, glass, chemicals, plastics, recycled/crushed/burnt waste, aggregates, food, agricultural and many more applications. Circular ScreenX is tailored to suit your specific requirements and is offered in three distinct size models ranging from 650 mm diameter to 1,200 mm diameter. Manufactured to high quality standards, ScreenX is offered in stainless steel with many accessories such as motor covers, flexible connections, stands, varying spigots, CIP systems and with gas purging.

## SIZES AND CONFIGURATION

The ScreenX MFV circular vibrating sieve is available with a diameter in three dimensions: 650 mm, 950 mm and 1,200 mm in a single deck (CS line) or double deck (CD line) configuration. The double deck is only offered with a diameter of 950 mm or 1,200 mm.



## 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 6 micron.
- **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 Ultra-Fine Screening:** ScreenX separates at a cut point as small as 6  $\mu\text{m}$  for difficult materials that are wet or dry, sticky, abrasive, agglomerative or prone to pegging.
- ▶ **Eliminates Mesh Pegging/Blinding And Breaks Agglomerates:** ScreenX self cleans the mesh, overcomes particle pegging 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 throughput that is a 20% - 400% increase on standard screeners.
- ▶ **Cut Size Precision:** ScreenX's 500G of MFV acceleration improves the purity level of the oversize/undersize 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?

The ScreenX circular line's strengths are fine and ultra-fine (3mm - 6 $\mu\text{m}$ ) particle size separation of materials that are difficult to screen due to them being wet/dry, humid, irregular shape, sticky or abrasive. It has a proven track record in screening all forms of powders including metal powders, glass, chemicals, plastics, recycled/crushed/burnt waste, aggregates, food, agricultural and many other applications. The single deck or double deck machines can be used for classification, scalping, safety screening, de-dusting and solid/liquid separation.





## DESIGN CHARACTERISTICS

- Single or double deck circular machines ranging in size from 650 to 1,200 mm in diameter.
- Multi-frequency vibration (MFV).
- Up to 500G of acceleration passed to the mesh eliminating pegging, blinding and agglomeration.
- FDA compliant (upon request).
- ATEX compliant (upon request).
- Fitted with two vibrating motors.
- Manufactured in stainless steel.

| Technical Characteristics | CS 065.1  | CS 095.1    | CS 120.1    | CD 095.2    | CD 120.2    |
|---------------------------|-----------|-------------|-------------|-------------|-------------|
| Electrical power (KW)     | 0.5 + 0.5 | 0.52 + 0.52 | 0.52 + 0.52 | 0.52 + 0.52 | 0.85 + 0.85 |
| Sieving decks             | 1         | 1           | 1           | 2           | 2           |
| Mesh surface (m²)         | 0.33      | 0.68        | 1.1         | 0.68 x 2    | 1.1 x 2     |

## 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 specialises in making AISI 316 stainless steel screeners for the food and pharmaceutical industries and has provided the same machines for many other sectors. All contact parts can be offered with a mirror polish finish inside and outside.

### ► Stands

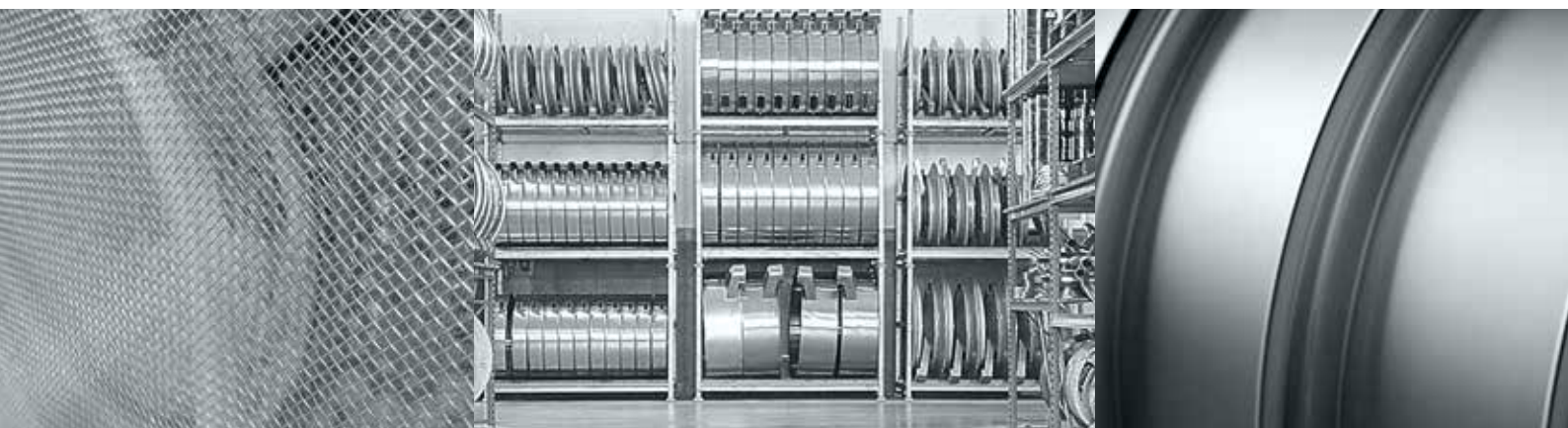
This equipment can be mounted on mobile or static stands.

### ► Spigot And Connection Types

We offer a wide range of spigots and connections to accommodate existing installations.

### ► Gas Purging

This is offered for all Circular ScreenX models to enable inert atmospheres within the process line.

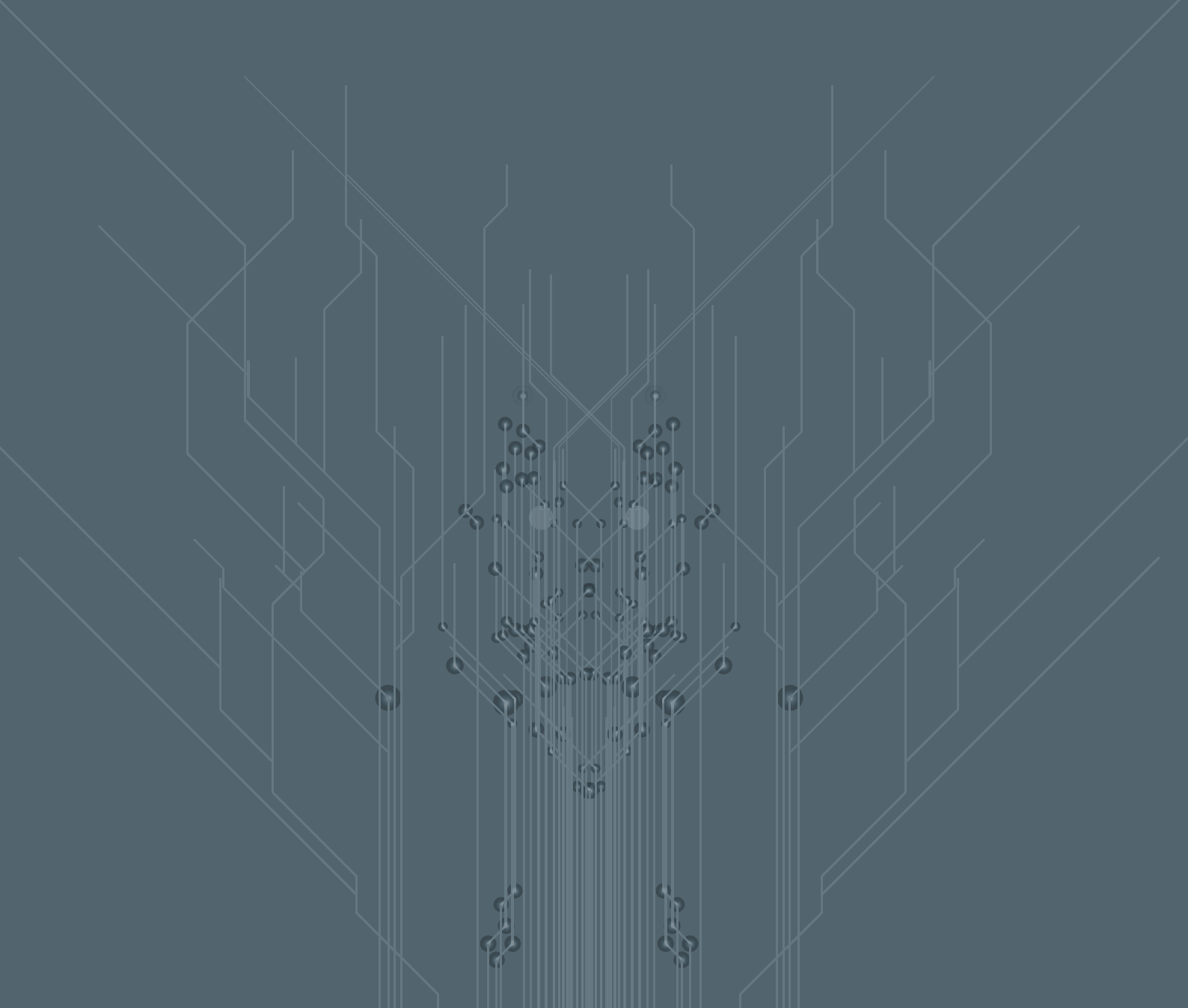


EXAMPLE CASE STUDIES - PROVING THE IMPOSSIBLE IS POSSIBLE

| Material                     | Model Size | Mesh Size (mi-cron) | Density (Kg/ltr) | Capacity (Kg/h)   |
|------------------------------|------------|---------------------|------------------|-------------------|
| Mica Powder                  | CS 120     | 100µm               | 0.70             | 250               |
| Silicon Carbide              | CS 095     | 300µm               | 0.75             | 196               |
| Tin/Silver/Copper Powder Mix | CS 065     | 6µm                 | 7.4              | 60                |
| Gold                         | CD 095     | 7µm                 | n/a              | Efficiency at 95% |
| Silver                       | CD 095     | 15µm                | n/a              |                   |
| Titanium                     | CS 095     | 15µm                | 1.5              | 70                |
| Carbide/Cobalt               | CS 095     | 15µm                | n/a              | 10                |
| Tungsten Powder              | CS 120     | 25µm                | 7                | 355               |
| Atomised Aluminium Oxide     | CS 095     | 25µm                | n/a              | 100               |
| Aluminium                    | CS 120     | 44µm                | 1315             | 235               |
| Dry Ash                      | CS 120     | 82µm                | 0.88             | 1,000             |
| Salt                         | CS 095     | 200µm               | 0.6              | 495               |
| PVC Powder                   | CS 095     | 300µm               | 0.64             | 2,500             |







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