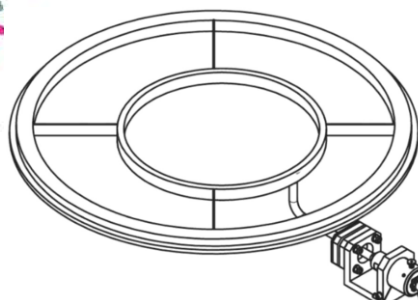


# *High Efficiency*

## *Ultrasonic Sieving Technology*



# Ultrasonic Powder Screening



With RTUL'S high tech ultrasonic sieving attachment we have transformed conventional sieving procedures. In addition to the conventional method, "ULTRASCREEN" ultrasonic supported sieving technology evenly transmits as oscillating motion, in the micro range, onto the screen surface reducing the friction between the sieve mesh and bulk material. This enhances the throughput and quality of your present vibratory screener, sieve or shifter.

RTUL's revolutionary ultrasonic powder sieving system can be applied to your existing sieve, screener, or sifter to eliminate blockage and improve wire mesh while sieving powder products such as powdered metals, ceramics, powder coatings, pharmaceuticals, or food additives.



## Unique benefits & features:

- RTUL's ring resonators produce an even distribution of mechanical oscillations, even for larger sieving frame sizes
- Rigid, explosion-proof & waterproof design
- Significant reduced risk of screen mesh blockage, ensuring accurate particle size distribution throughput
- Achieve the same or higher throughput, by using a smaller shifter size
- New boost mode for stubborn sieving
- Better selectivity and optimal utilization of space
- Enhances the degradation of agglomerates, resulting in increased yield and a decrease in the oversize particle fraction
- The best price-to-performance ratio ensures fast amortization
- Only minor upkeep is needed
- Proprietary cool sieve technology which keeps the mesh cool



- Mechanical devices & auxiliary devices are no longer needed in screening machines, meaning that the screened content is free of foreign matter
- The service life of screen mesh is extended
- Without local warm zones, the operating temperature is kept at a low constant level
- Can be retrofitted to every vibration or wobble screening machine
- Optional ATEX Certification

## Significant advantages in powder screening processes:

**Cost-effective:** Powder screening is expedited with the use of ultrasonics. Compared to conventional methods wastage is reduced, which ensures higher output with maximum production at minimum cost.

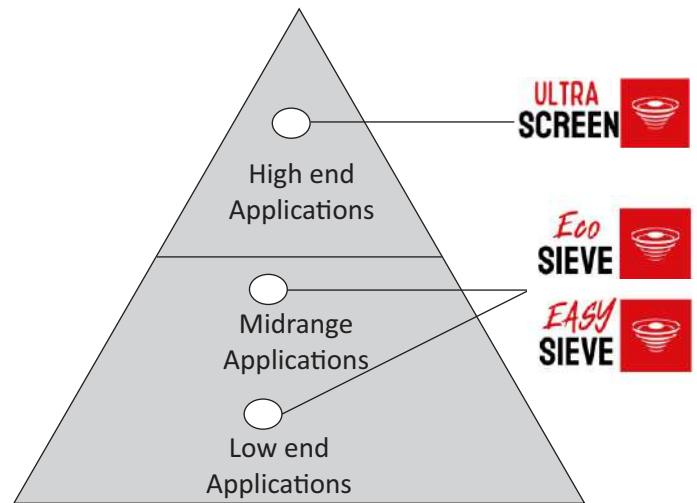
**Faster:** Ultrasonics is helpful to combine many processes into a single production process in operations, which leads to significantly increasing the product life cycle. Mechanical cleaning or auxiliary installations can be eliminated with reduced man power.

**Economical:** Productivity increases as systems become faster and more streamlined. Furthermore, the sonically active components experience limited wear, lowering service and maintenance costs.

ULTRASCREEN deblinding attachment facilitates in increasing output and efficiency in powder sieving through vibroscreens. Due to increased throughput, process speed can also be increased and cost of vibroscreens, spares, labour, power can be reduced. This system shows its true capability where other screening systems are pushed to their limits.

## Technical Specifications

Specifications	UltraScreen
Input Supply	90V-265V AC by 50Hz/60Hz
Ultrasonic Power Output	200 Watts, Continuous and pulse mode
Frequency	34-37 kHz
Ultrasonic Generator	ASG-36-200
Detachable Converter	Screwed to the ring resonator
Ambient Temperature	0-40°C (45°C at max. 50W)
HF Cable length	5m & 10m long
Space requirement	280 x 180 x 110 mm
Operation modes	Resonance, boost, linear hopping, random hopping, frequency modulated, amplitude modulated
Certificates	Optional ATEX Dust
Protection Class	IP 65
PLC Interface	US-On, job selection, fault messages Analog input and Analog output 0-10 v



## Features & Benefits:

- Suitable for almost all applications both high end and low end because of resonance excitation
- Current screening devices can be advanced & retrofitted without difficulty
- High throughput & maintenance free operation
- Operating mode indicated on TFT display
- Up to 4 times greater screening performance when processing metal powders, 2 times higher for ceramics
- When processing acrylic powder, throughput will increase by up to 50%, and cleaning cycles can be increased
- It can be used for both wet & dry screening
- Extended intervals between screen cleaning
- Energy input is adjustable
- Optional ATEX Certification
- PLC Interface & PC controlled
- Easy operation via touchscreen
- Customized modes for customers

Eco  
SIEVE



EASY  
SIEVE



## Technical Specifications

Frequency	33-37 kHz
Output	1x100W or dual output 2x100W max for screens > 1000cm <sup>2</sup> 1x60W or dual output 2x60W max for screens > 600cm <sup>2</sup>
Electrical connection	90V - 265V AC by 50Hz/60Hz
Ambient temperature	0-45° c
Output current	max. 1x (2x) 0.5 A
Output voltage	max. 500 V
Operation modes	8
Space Requirements	280 x 180 x 110
Protection class	IP 65
Certificate	ATEX dust
PLC Interface	US-On, job selection, fault messages, RS-485 interface, PC software



*The space-saving basic version Easy Sieve was developed specifically for installation in a control cabinet.*

## Technical Specifications

Frequency	33-37 kHz
Output	1x100W or 2x100W max for screens > 1000cm <sup>2</sup> 1x60W or 2x60W max for screens > 600cm <sup>2</sup>
Electrical connection	90V - 265V AC by 50Hz/60Hz
Ambient temperature	0-45° c
Output current	max. 0,5 A
Output voltage	max. 500 V
Operation modes	8
Space Requirements	370 x 80 x 70
Protection class	IP 65
PLC	US-On, fault messages, RS-485 interface, PC software

### Unique benefits & features:

- Excellent performance ratio & cost effective
- Dual Output possible
- Can be retrofitted to existing screening machines or hoppers
- High throughput & user friendly
- 8 different operating modes and intensities for the materials to be screened
- Effortless screen cleaning
- Causes almost every metal structure to vibrate, e.g. filter cartridges, container walls etc. From the smallest screens to screens with a diameter of 1600 mm
- Multi-frequency system
- Ideal for PE/PU and hybrid colorant powders or acrylic waxes.
- Gentle on screen mesh
- Customer build resonators



# Feeding & Dosing

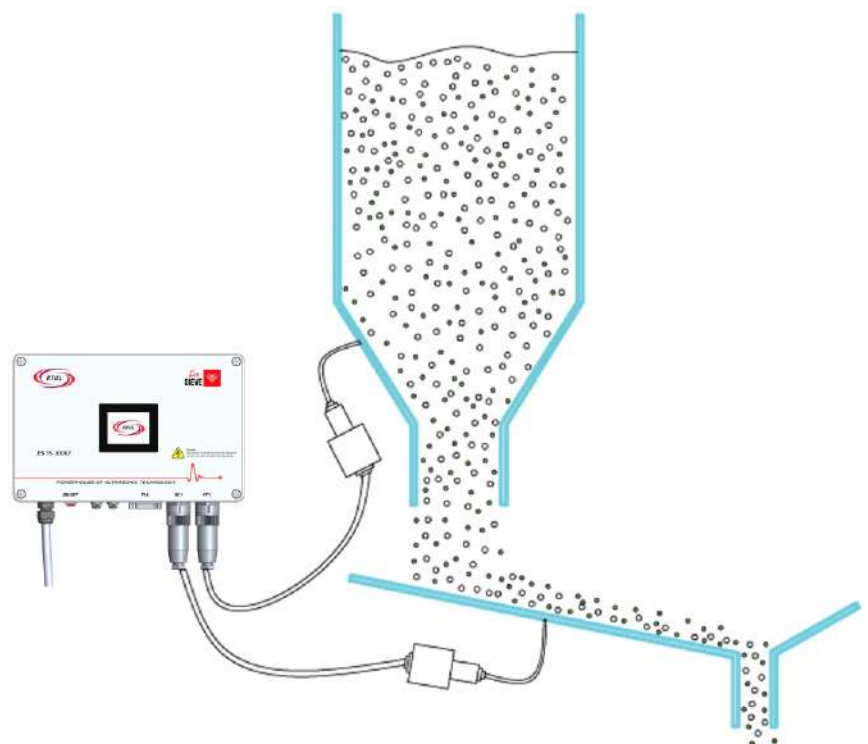
Micro dosing of fine powders can be applied in the additive manufacturing. The composition has an effect on the performance of composite products made from various fine powders, such as ceramic sensors and toners. To maintain the high quality of these composite products, mass control of raw materials is critical; therefore, in industrial processes, a micro-feeding system of fine powders is necessary.

Continuous mechanical vibrations put a stress on the machinery, raising the risk of failure and increasing the cost of service. The systematic use of ultrasonic is an unconventional technique that seeks to mitigate these impacts. Although ultrasonic technology is well-known for powder screening, ultrasonic reduces static and dynamic friction between moving parts and equipment in bulk material handling.



## Advantages & Benefits:

- Dust proof & low noise
- The bulk solids are not compacted or unmixed
- Highly reliable with maximum output
- Bridge construction of particulates is reduced, and agglomerates are destroyed
- High accuracy feeding & dosing of powders
- Easy assembly and disassembly
- Amplitude & frequency are adjusted individually to the application and machine type
- Simple, cost efficient and yet robust solution
- Powder distribution on the feeding tray is more uniform
- Continuous production process with less interruptions
- Ensure efficiency & flexibility in thin or small products
- Minimum maintenance requirements
- Burst mode for wall stuck material
- Fast tapping to the surface
- ATEX Certification



## Fields of applications:

Hoppers, Silos, Mixing Chambers, Dosing units, Pipelines, Conveyers, Containers and many more

## Major industries we cater to:

Pharmaceuticals & Medical, Agriculture, Biology, Chemical, Engineering & Electronics, Food & ingredients, Geology & metallurgy, Ceramics, Paints, and many more

# SieveSoft Software For Screening System



The RTUL software is used to control the ultrasonic processes with the changing process parameters. The results of measurements are easily be documented for quality assurance purposes and can be introduced within the software into statistics and reports. The innovative visualization both reduces the complexity of operation and allows efficiency enhancing functions to be adjusted intuitively due to the complex data processing.

## Unique Features & benefits:

- User Friendly GUI
- PC to Device USB Connectivity
- Continuously Synchronized with Online Device
- One Click Connect & Disconnect Facility
- Real Time Graph for Power, Maximum Power, Frequency, Temperature & Phase
- Independent Parameters Trend Selection Option
- 10 – 100 Minutes Selectable Visualization Time Span
- Real Time Gauge Meters for Power, Maximum Power & Amplitude
- Simple and precise reports
- Smooth graphical display with and detailed documentation
- All Device Parameters monitored and controlled in Real Time
- Configuration Parameters Setup with Load & Save Options
- 100 Recipe Programs Storage on Local PC Database
- Real Time Parameters Storage on Local PC Database with Settable Storage Time
- 3 Time Channels for Ultrasonic On Trigger in Day, Ultrasonic On/Off & PLC Connectivity Monitoring
- Options for Different Devices Connectivity on Same GUI Platform
- Well Structured & Detailed Reports Generation to PDF, Word & Excel Files
- Intuitive user operation
- Standardized system security & ensure confidentiality & integrity
- Fully automatic system with user interfaces
- Data can easily be stored, analyzed & interpreted
- Result driven & faster support through remote access
- Easy to evaluate the particle sizes and monitoring continuous processes



## ROOP ULTRASONIX LIMITED

Regd. Off: A/41, Nandkishore Industrial Estate, Off Mahakali Caves Road, Andheri (E), Mumbai - 400 093.  
 Corporate Office: 803, C Wing, 32 Corporate Avenue, Off Mahakali Caves Road, Andheri (E), Mumbai - 400 093.  
 Tel: 022-42111500, Fax: 42111505, Email: support@rtulgroup.com, Web: www.rtulgroup.com