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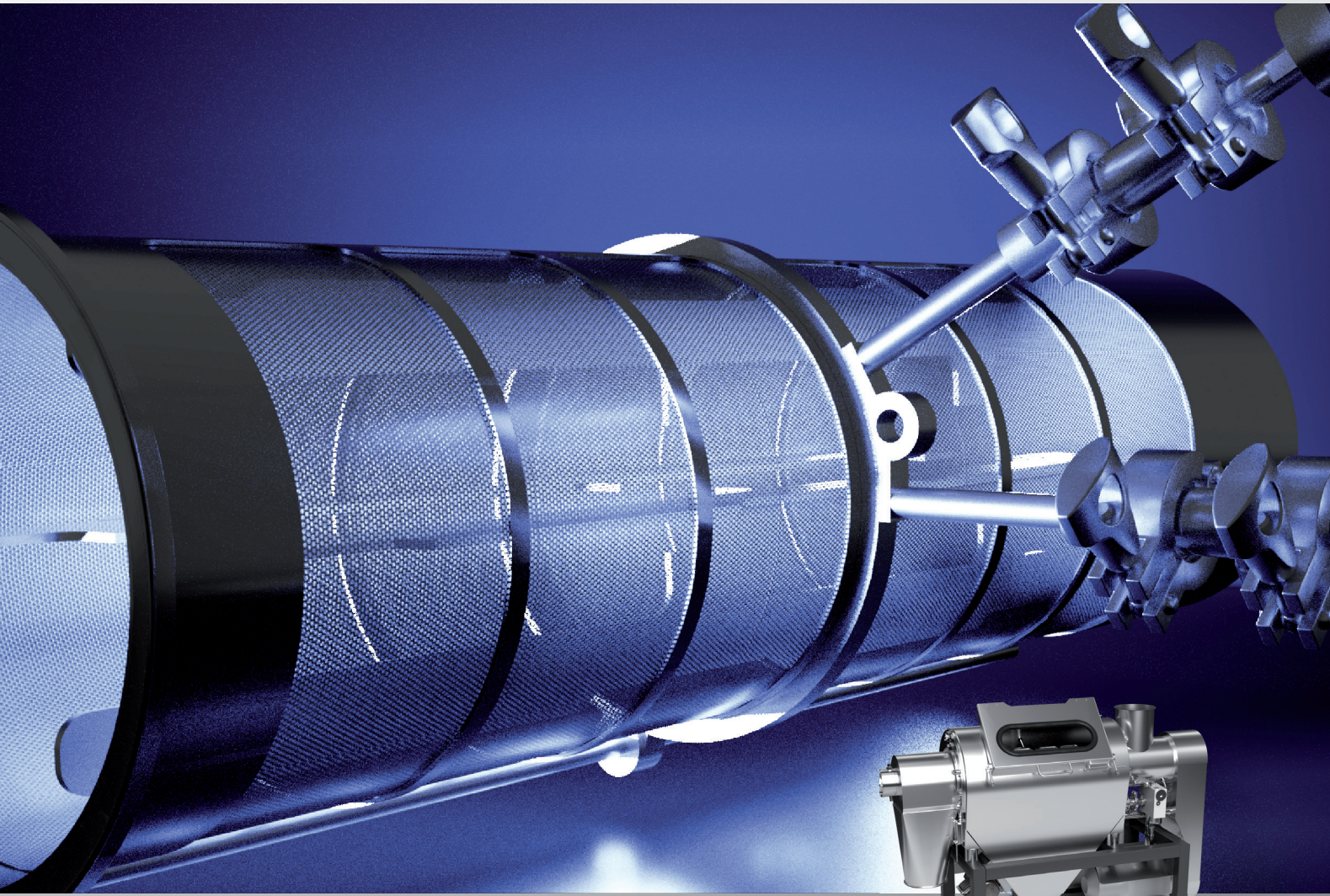


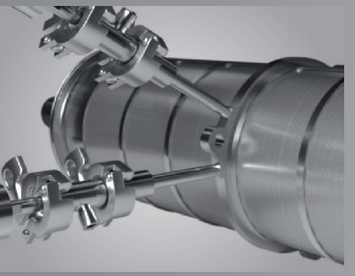
SONIC SPEED SCREEN /// RoSM 700

HIGH PERFORMANCE CENTRIFUGAL SCREENING MACHINE WITH ULTRASONIC EXCITATION

SONIC SPEED SCREEN RoSM700-C/F-UK

High performance centrifugal screener with ultrasonic excitation for effective sifting of organic and inorganic powders.

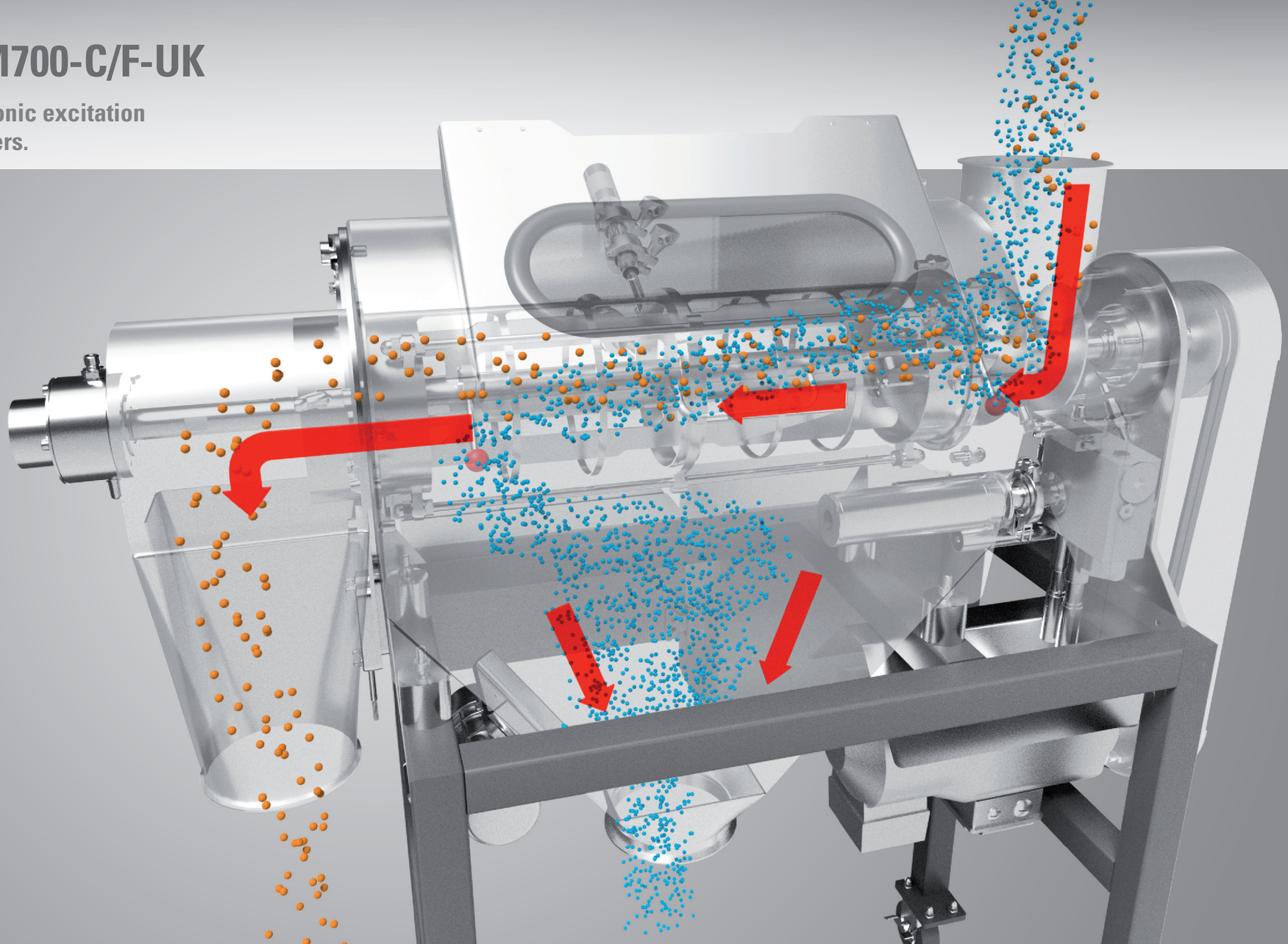
Screening and sizing are necessary processes in many industries to produce classified, clean and safe quality products. Being capable of doing this for fine powders with a high capacity was the motivation to develop the SONIC SPEED SCREEN RoSM700 centrifugal screener.



At a glance – a few reasons for the new technology

- Stainless steel sintered laminate or woven mesh screen baskets in conjunction with ultrasound optimize the capacity for fine products in the range from 20 - 5.000 µm.
- Reduction of the boundary layer resistance between the screening media and powder to a minimum.
- Self cleaning effect caused by the combination of the high ultrasonic with low mechanical frequencies.
- Possible increase of throughput by a factor of 1,5 - 10 due to the use of the SONIC SPEED SCREEN technology.
- Minimization of agglomerates can lead to a substantial reduction of the coarse grain fraction.
- Adjusting the low frequency and ultrasonic vibrators, the paddle geometry and speed to the rheology of the powder leads to incredible sifting results.
- Easy and fast change of screen baskets.
- Small footprint – easy integration in existing production lines.
- Flexible electronic control units store different recipes.
- Food Grade (EHEDG) and ATEX versions available.

Separation, Classification, Protective Screening and Dedusting with Highest Performance.



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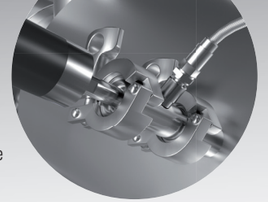
The new stainless steel centrifugal screen basket is ultrasonically optimized. Depending on the process requirements we use stainless steel sintered mesh laminates or woven wire mesh screening media.
The Screen is firmly bonded to the stainless basket and allows optimal ultrasonic wave transportation for great sifting from 20 - 5.000 µm.

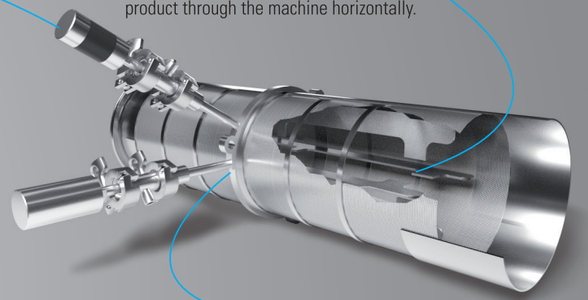
The RoSM 700 can be delivered with a semiautomatic basic control system or with a complete programmable automatic control system.



Special clamps allow an air sealed insertion of the ultrasonic exciters into the stainless steel (AISI 304) machine housing.

Controlled feed using external feeding devices – such as screw conveyers, rotary feed valves or oscillating conveyers (inlet 150 mm).

The specially designed rotor paddle (0 - 1000 rpm) produces the necessary centrifugal forces for a high capacity sifting. It also transports the product through the machine horizontally.



SONIC SPEED SCREEN TECHNOLOGY
The high frequency, low amplitude ultrasound vibration of the screening media reduces the friction between media and powder. The powder starts to “flow”.

The additional mechanical low frequency stimulation of the screen renews the boundary layer between the screening media and the product. It avoids “clogging”.

This combination of ultrasonic high frequency and low frequency vibration of the screen achieves a high throughput, even with the relatively small screening area.

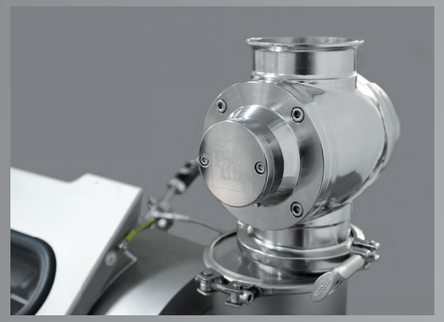
The outlet for the coarse particles or dedusted product is 150 mm in diameter. It can be easily adapted to customer specific containers or processes.

Vibrator for easy conveying of the fines.

The fine powder flows through the cone to the 150 mm outlet. It is then being filled into containers or transported to other machines. For easier cleaning the cone can (optional) be opened.

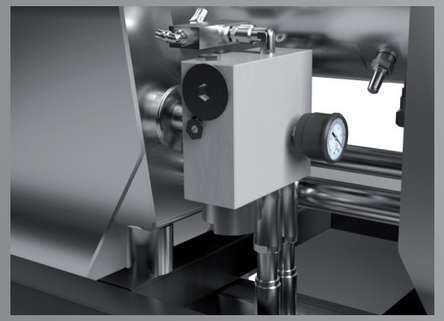
OPTIONS

EHEDG ATEX Options
- EDHGD food conformity
- ATEX – compliant version (zone 20 – 22) certified



Product feed devices
Depending on the bulk density, fineness, grain structure, moisture content etc. of the product different feed devices, e.g. oscillating conveyers or rotary feed valves are available.

Vacuum feed system
A vacuum feed system with hopper, vacuum feed pump, filter and vacuum lance is available for use with the screening unit.
The system can be built as a mobile “stand alone” unit to for example to rescreen lost production lots or also in line with other equipment.



Negative pressure system
To keep the machine housing free of dust or to dedust certain products we can provide a pneumatic system for low negative pressure in the machine.

TECHNICAL DATA

Ultrasonic system

Type:	digital generator with frequency variation
Frequency:	30.000 - 38.000 Hz digitally modulated
Power:	max. 100 W
Converter:	ATEX (Zone 22) compliant, IP 65

Low frequency system

Type:	pneumatically controlled
Frequency:	0 - 1.000 Hz

Screen baskets

Screen capacity:	the capacity depends on many factors (product data, opening, environment) and needs to be tested for every application.
Material:	sintered multilayer mesh laminate or single layer woven AISI 304 stainless steel (other materials upon request)
Openings:	from 20 µm, 25 µm, 40 µm, 45 µm, 63 µm, 90 µm, 100 µm, 120 µm, 150 µm, 300 µm up to 5.000 µm

Electrical data:

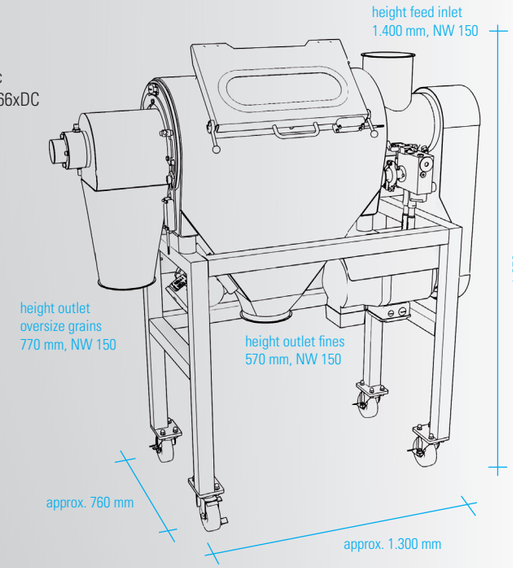
Rotor motor:	1,5 KW, 400V/230V, 6,10/3,50A, EX:II3D ExtC IIIB T 120 °C Dc
Ventilation motor:	0,1 KW, 400V/230V, 0,38/0,22A, EX:II3D Ex t IIIC T 120 °C, IP66xDC
Vibrator motor:	0,1 KW, 400V/230V, 0,33/0,19A, EX: II3D Ex tD A22 Tx IP66

Control system (complete)

Cabinet size: 760*760*300 mm
- main switch 25 A / 400V / 24V
- emergency stop
- rotor motor control 0 - 1000 rpm
- vibrator motor control
- control ultrasonic generator
- SPS-Siemens S7-1200 (14 in, 10 out)
- prepared for external control option
- prepared for sensors for ATEX option

Control system (basic)

Manual control of inverter for rotor motor, ultrasound and pneumatics



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