Engelsmann Long-stroke Sieves:
Gentle, selective, versatile.

- JEL Freischwinger
- JEL Phoenix
- JEL Regula Standard
- JEL Freischwinger for granulate material

J. ENGELSMANN AG

The Experts for bulk solids processes

Welcome to the Experts for Bulk Solids Processes

Founded over 140 years ago, J. Engelsmann AG focused on the specific needs of the bulk solids industry very early on. Whether machines for screening appliances or plants for filling and emptying big bags, Engelsmann designs, manufactures and distributes process solutions for almost all kinds of bulk solids across the world.

The state-of-the-art manufacturing technologies and a quality management system that complies with ISO 9001:2008 ensure that all Engelsmann products are highly safe and of an excellent quality.

„We make short work of your bulk solids“, is our motto. By specializing on our key business screening technology and big bag plants, we combine years of experience with our expertise in planning, manufacturing and assembling process plants for screening, mixing, conveying, dosing and weighing. High quality product solutions in laboratory technology and drum hoop mixing systems complete our product portfolio.

Your safety is our priority

A comprehensive range of services complements our portfolio and provides you with a solution that is tailored to your needs and from a single source. Our fast, local replacement parts service means that we avoid long periods of inactivity and help to reduce breakdown costs.

However, our range of services is not limited purely to „managing emergencies“. An extensive service portfolio accompanies the operating life of our machines and plants, from putting them into service right up until the end of their service life.

Small-scale testing for large-scale applications

We use our pilot station to optimize procedural parameters in downscaled plants so that they can later be used in production processes in larger plants.

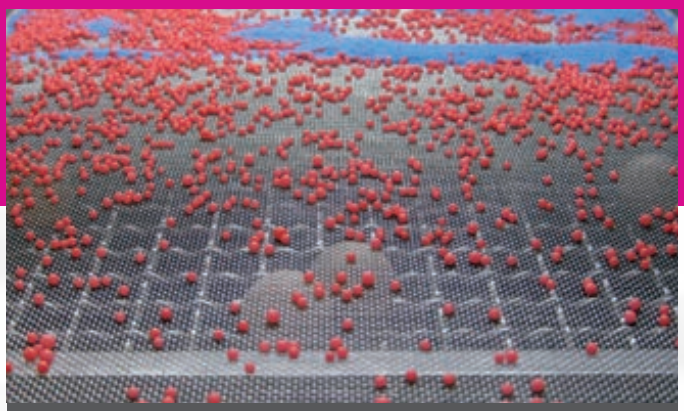
Upstream tests are used to certify bulk solids processes and to compile production processes and throughput rates efficiently. We would be happy to run tests together with you upon request.

Gently Beautiful: The Long-stroke Sieve Family

Engelsmann screening machines are used all over the world. The product portfolio ranges from vibration and centrifugal screening machines to long-stroke sieves. In all areas where a combination of precise and product-protecting screening and high throughput rates is required, there is no getting around the advantages of the Engelsmann brand long-stroke screening machines.

Convincing facts

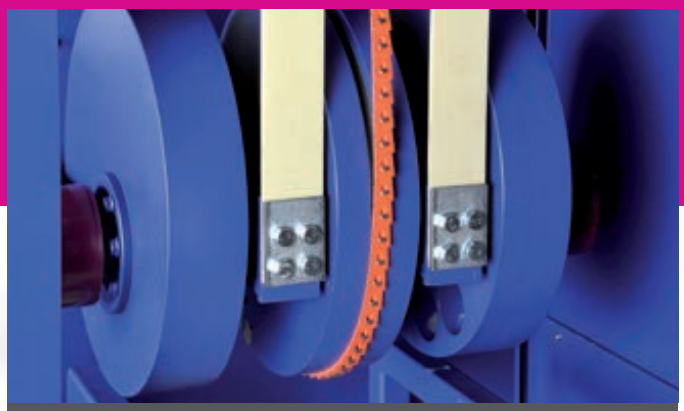
- High levels of selectivity of up to 98 %
- Product-protecting screening process
- Low energy consumption (e.g. 0.75 kW at a screening surface of 1.5 m²)
- Easy sieve replacement and quick cleaning
- Long service life with low input and maintenance effort



High Levels of Selectivity

Best possible product quality targeted

As protective, control, or classifying sieves for dry and pourable bulk solids, Engelsmann long-stroke sieves are known for their high levels of selectivity. The horizontal movement of the sieve ensures the best possible stratification of the screened product. The fine grain share is directly above the sieve fabric, resulting in the very high levels of selectivity of up to 100 % (granulate material screening machine).



Convincing Energy Efficiency

Let`s swing: drive in power save mode

The machines of the long-stroke sieve family are driven by means of an electric motor transmitting its force to the flywheel mass by means of a V-shaped belt, with the flywheel mass being adapted exactly to the mass of the sieve tray. The push rods attached to the flywheel mass convert the rotary movement into a horizontal movement of the sieve. Thanks to the flywheel drive, only low amounts of energy are required, because the movement of the mass is maintained with only 10–20 percent of the rated power already after 15 seconds.

Low Noise Emission

Because it also runs smoothly quieter

Vibrations emitted by the machine are largely avoided by means of the mass balancing-based drive. At low-vibration operation with a noise level of less than 79 dB(A), the long-stroke screening machines work comparatively quietly.

Gentle Screening Process

Ideal for sensitive products

The long-stroke screening process is particularly gentle on the product, making it ideal for sensitive products. Thanks to the consistent linear movement, even fragile materials can be screened without being damaged.

JEL Freischwinger: One Sieve for any Eventuality

The Freischwinger long-stroke sieve is designed for a broad field of applications. Thanks to its exact and gentle classification and the high specific throughput rate per square metre of screening surface, the JEL Freischwinger is used as control or classifying sieve in the production of virtually all bulk solids.

Efficiency in both form and function

The interior of the JEL Freischwinger is designed for an efficient and economic screening process. For instance, a baffle plate attached transversally to the screening surface ensures an all-over distribution of the product flow and an ideal utilisation of the entire screening surface when the screened product rushes in.

Minimising downtimes, extending the productive times

For easy and quick cleaning, the sieve decks of the JEL Freischwinger are freely accessible from the top. If required, additional inspection and assembly apertures allowing for easy access to all areas of the sieve tray can be created.

Convincing facts

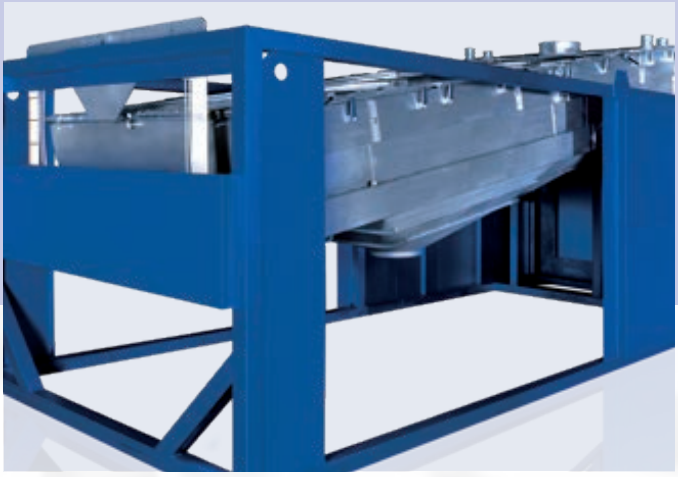
- Single- and double-deck designs available
- 2 – 10 fractions with only one sieve deck
- 0.18 – 24 m² screening surface per sieve deck
- Grain spectrum 40 µm – 20 mm
- Different sieve cleaning systems can be used (ball, triangle, and ultrasound)

single-deck	insert width	smallest type	largest type	number of inserts	screening surface
A – Breite	250	E.A.24	E.A.48	2 – 4	0.24 m² – 0.48 m²
B – Breite	500	E.B.50	E.B.150	2 – 6	0.50 m² – 1.50 m²
C – Breite	750	E.C.75	E.C.225	2 – 6	0.75 m² – 2.25 m²
D – Breite	1000	E.D.150	E.D.500	3 – 10	1.50 m² – 5.00 m²
E – Breite	1500	E.E.600	E.E.750	8 – 10	6.00 m² – 7.50 m²
F – Breite	2000	E.F.800	E.F.1600	8 – 16	8.00 m² – 16.0 m²

double-deck	insert width	smallest type	largest type	number of inserts	screening surface
A – Breite	250	Do.A.48	Do.A.96	4 – 8	0.48 m² – 0.96 m²
B – Breite	500	Do.B.100	Do.B.300	4 – 12	1.00 m² – 3.00 m²
C – Breite	750	Do.C.150	Do.C.450	4 – 12	1.50 m² – 4.50 m²
D – Breite	1000	Do.D.300	Do.D.1000	6 – 20	3.00 m² – 10.0 m²
E – Breite	1500	Do.E.1200	Do.E.1500	16 – 20	12.0 m² – 15.0 m²
F – Breite	2000	Do.F.1600	Do.F.3200	16 – 32	16.0 m² – 32.0 m²

Practical: Off the Shelf, but Nevertheless Tailored

The long-stroke sieves of the Freischwinger series are characterised by a broad field of application. Whether as protective, control, or classifying sieve, they are used in all industries processing dry and pourable bulk solids. According to the requirements, the JEL Freischwinger design is tailored to the respective screening assignment.



Coarse and fine screening of different types of tea

Classification screening of fertilizers (KAS)

Detailed requirements

- Separation of different tea leaf sizes
- Elimination of foreign matter (e.g. wooden stalks)
- Precise and gentle screening of the brittle tee components

Machine design

- Double-deck with two screening surfaces with a size of 8 m² arranged on top of each other
- Sieve parameters can be adjusted to the individual types of tea
- Product baffle plate in order to distribute the product flow to the entire screening surface
- Ball cleaning of the sieve fabric
- Replacement of the lower sieve insert possible without any disassembly of the upper sieve insert
- Inspection and assembly apertures with access to all areas of the sieve tray

Convincing facts

- Implementation of all required work processes with one machine unit
- Classification with high levels of selectivity (98 %)
- Ideal utilisation of the existing screening surface
- Easy cleaning and/or replacement of the sieve inserts

Detailed requirements

- Grain spectrum 2.0 – 4.0 mm
- High levels of selectivity
- Throughput rates of up to 170 t/h
- Protection against abrasive wear caused by the product

Machine design

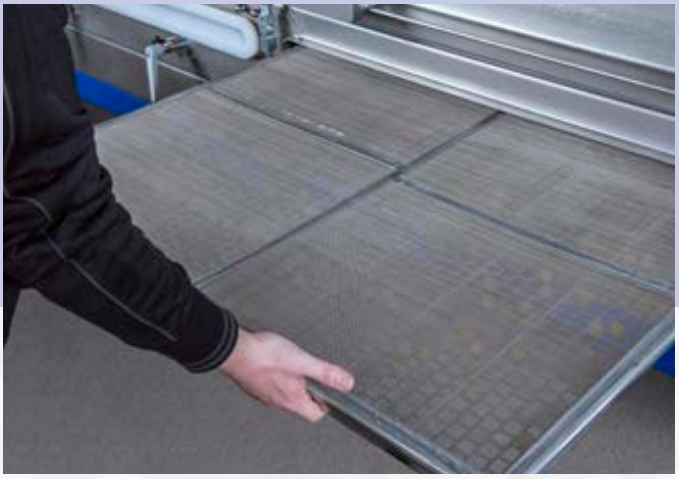
- Sieve inserts made of hard-drawn fabric covered with high-strength wire
- Product baffle plate in order to distribute the product flow to the entire screening surface
- Wear-resistant lining of deflection spots and of the discharge hoppers
- Removable tarpaulin
- Easy-to-replace sieve inserts
- Adjustable sieve inclination from 3 – 5°
- Ball cleaning of the sieve fabric

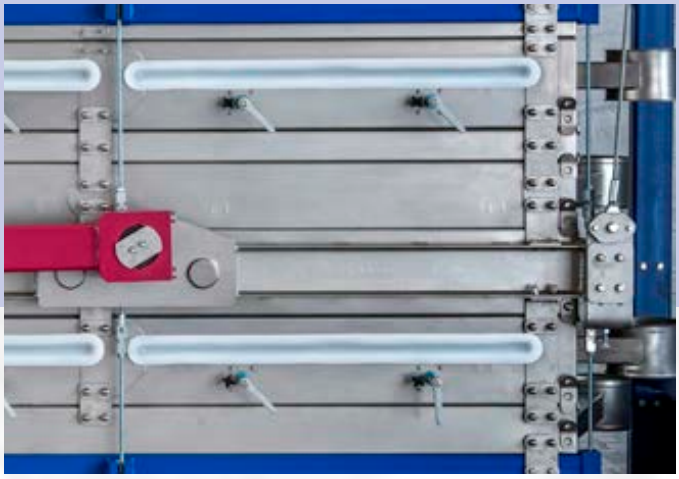
Convincing facts

- Gentle classification with high levels of selectivity
- Ideal utilisation of the existing screening surface
- Longer service life due to wear protection
- Shorter downtimes due to simple and quick cleaning of the sieve inserts

Versatility in Screening: JEL Phoenix

The Freischwinger version JEL Phoenix stands for more flexibility, resource efficiency and profitability when using screening technology. As a long-stroke screening machine, it combines a particularly gentle product handling during the screening process and highest selectivity with optimum screening and energy efficiency. Thanks to the modular cassette design, the JEL Phoenix can be retrofitted to different screening surfaces and tasks.





Comfortable handling – efficient maintenance

The sieve inserts are inserted laterally into the cassettes so that a screen change can be carried out in no time. Lifting the single cassettes is not necessary.

The cassette module is suspended from steel ropes in the rack frame and can be tilted. In combination with the stroke adjustment on the oscillating drive, the JEL Phoenix can be configured in such a way that even products with poor flow characteristics can be screened perfectly. The stroke and tilt adjustments are continuously variable and equipped with a display scale for the fast reproduction of single machine settings.

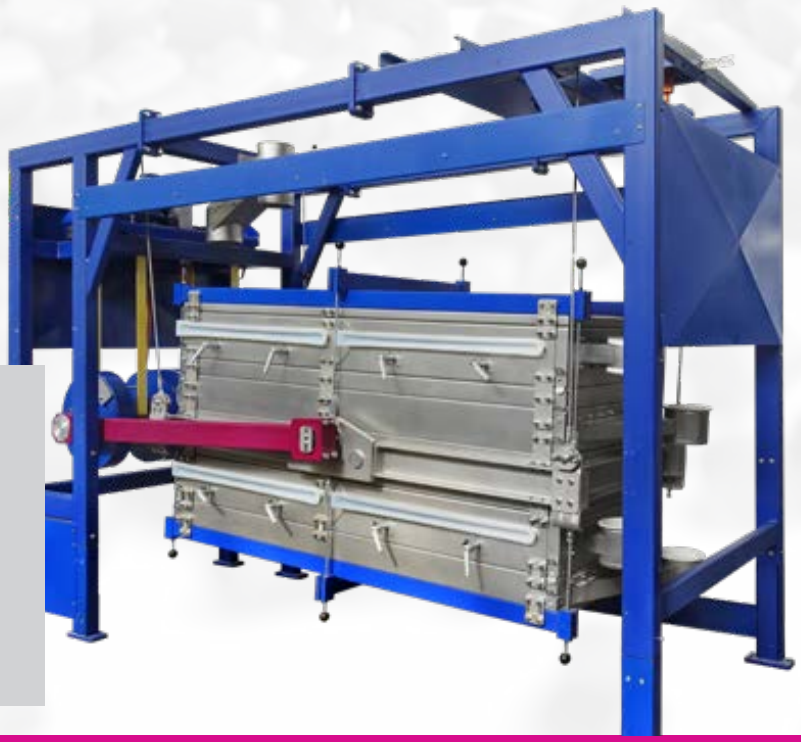
Long maintenance cycles, a small number of wear parts and a free access keep maintenance costs and downtimes to a minimum.

Cassette design: Extended range of applications with the same footprint

Through stacking of up to four screen cassettes, the cassette system of the JEL Phoenix enables you to convert the machine for different tasks. Inside the cassettes, there is a screen insert and, as required, a cleaning device (bouncing rubber balls or ultrasound system).

When used as a protection or control screen, the product flow can be distributed on several decks by mounting additional screen cassettes in order to increase the screening capacity while keeping the same footprint. When configured as classification screen, the JEL Phoenix separates up to five fractions.

The outlets of the cassettes are positioned on the face end opposite the drive and can be flexibly adapted to the respective plant situation.



Convincing facts

- Particularly gentle screening process
- Can be retrofitted to other screening applications
- Particle size range: 40 µm – 20 mm
- Screening surface: 1.5 – 6 m²
- Variable screening surface - same footprint
- Classification of up to 5 fractions
- Tool-free replacement of the screen insert in no time

Examples of application

The JEL Phoenix has been specifically developed for the use with chemicals and plastics. Thanks to various possible applications, the long-stroke screening version is particularly interesting for operators who are confronted with changing requirements regarding products, screening processes and/or production volumes.

Sifting off oversized particles in the production of detergents

Detailed requirements

- Screening of different product volumes (short-term production peaks of up to 40 % above average possible)
- Possibility of adaptation of the screening process to changing recipes and/or products
- High selectivity, particle size: 1 mm
- Minimum downtime

Machine design

- Increase of the screening surface to up to 6 m^2 by mounting additional screen decks (according to required throughput capacity)
- Product flow division to the corresponding screen cassettes
- Cleaning system with bouncing rubber balls
- Stroke and tilt adjustable to fit the different product characteristics
- Fast replacement of screen inserts
- Wear parts are easily accessible and quickly replaceable

Convincing facts

- Adjustment of the throughput capacity by mounting additional screen cassettes
- Optimal adjustment of stroke and tilt for optimal screening results, even with changing products
- Selectivity of more than 98 %
- Tool-free replacement of screen inserts in less than 30 seconds
- Minimum maintenance cycles/downtimes

Combined sifting of oversized and undersized catalysts

Detailed requirements

- Gentle screening process to reduce product damage
- Sifting of oversized catalysts
- Sifting of small fragments
- High selectivity
- Minimum changeover times

Machine design

- Feed-in via cascade supply
- Cassette module with 3 screening decks: Ejection of coarse and fine material as well as good product
- Screening decks with return flow plate for longer retention times of the product on the screen mesh
- Wear-protected screen mesh

Convincing facts

- Significant reduction of reject and/or less proportion of undersized particles
- Two screening applications in one machine
- Low costs for acquisition, operation and maintenance
- Longer service life of the screen inserts
- Fast replacement of screen inserts

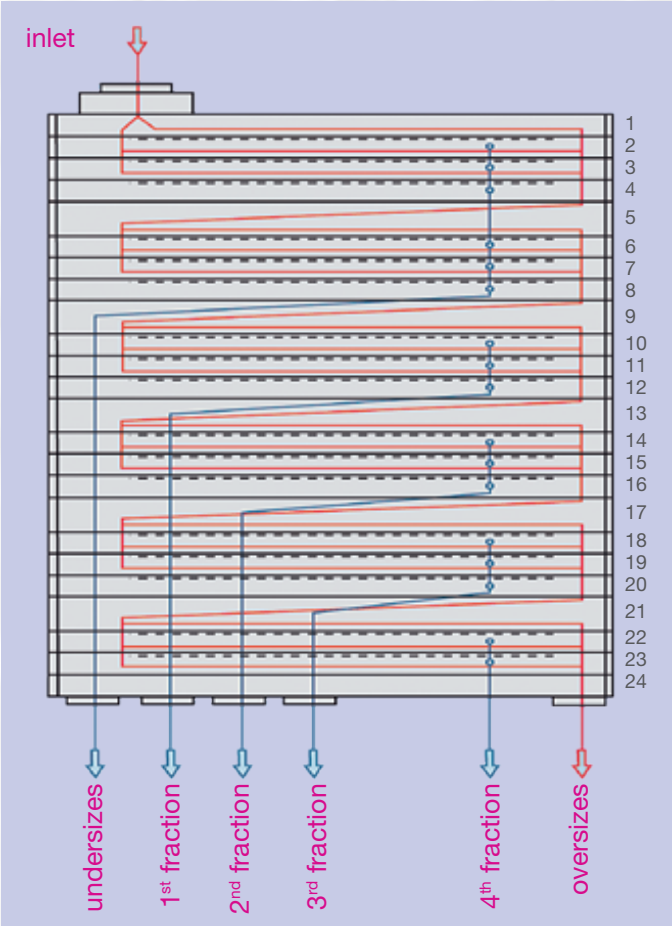
Regula Standard: The No. 1 for EPS

The Regula Standard long-stroke screening machine is designed specifically for classification screening of expandable polystyrene (EPS). EPS can be found in many plastic products. The requirements regarding the required grain sizes are accordingly diverse. No problem when using the Regula Standard: up to eight different fractions can be separated in one screening process.

With the sieve decks positioned on top of each other, resulting in low space requirements at a large screening surface, the Regula Standard is the multi-deck machine among the Engelsmann screening machines.

Impressive performance, ingenious cleaning

A lifting mechanism driven by an electric motor renders the process of replacing a sieve as simple as for a single-deck design even in the event of several fractions. The mechanism can be attached to every sieve frame and the sieve stack above can be lifted. This way, every sieve insert can be replaced, checked, or cleaned without having to disassemble further frames.



Simple and clever regarding design and function

The Regula Standard convinces by its simple design:

along with the base frame and the integrated sieve stack, the flywheel drive, including its push rods, ensures a continuous screening process. Since screening is performed from fine to coarse, the screening machine is equipped with coarser and coarser sieve inserts from top to bottom.

In this, the coarse material remains in the overall screened product until the end of the sieve fabric and therefore serves as screening aid.

In order to achieve the best possible screening results, the layer height of the product on the sieve can be adjusted individually from the outside and checked consistently through sight glasses. The adjustable sieve inclination in connection with the used product distribution plates and the ball cleaning of the sieve fabric ensure an ideal degree of screening.

Convincing facts

- Up to 8 fractions in one screening process
- Classification range 0.02 mm – 10 mm
- 4 – 22 sieve decks with a maximum screening surface of 20 m²
- Simple modular system in dust-free design
- Simple and quick adaptation of the screening surface for the individual fractions
- Low space requirements at the installation location
- Ideal adaptation of speed and sieve inclination
- Low energy consumption
- Motor-supported sieve replacement available
- Short downtimes thanks to quick cleaning

Practically Proven

The Regula Standard screening machine is mainly used for classification screening of EPS, but is also used in other fields of the industry. The Regula Standard is a practical solution when several fractions must be classified within one screening process at a low installation surface area.

Classification screening of EPS

Detailed requirements

- Classification of different grades
- Selective classification
- High throughput rate

Machine design

- Classification of 6 fractions in one screening process
- Motor-driven lifting mechanism for sieve replacement
- Product distribution gates adjustable from the outside
- Inline ioniser in order to minimise the electrostatic charge during the screening process

Convincing facts

- Quick and simple adaptation to the screening surface
- Six classifications with one machine unit
- 75 % less total cost of operation when compared to round screening machines with the same screening surface and / or output
- Short downtimes due to simple and quick cleaning of the sieve inserts

Classification of citric acid

Detailed requirements

- Selective classification at fine mesh width
- Several fractions in one screening process
- Low installation surface area

Machine design

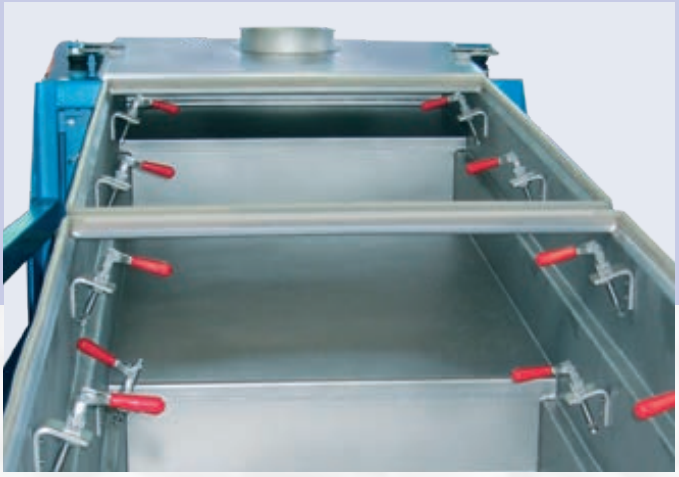
- Classification range 37 – 280 µm
- 4.2 m² screening surface
- Product distribution gates adjustable from the outside
- Five discharges

Convincing facts

- Vertical continuation of the product flow
- Quick and simple adaptation of the screening surface
- Short downtimes due to simple cleaning and quick replacement of the sieve inserts
- Low space requirements

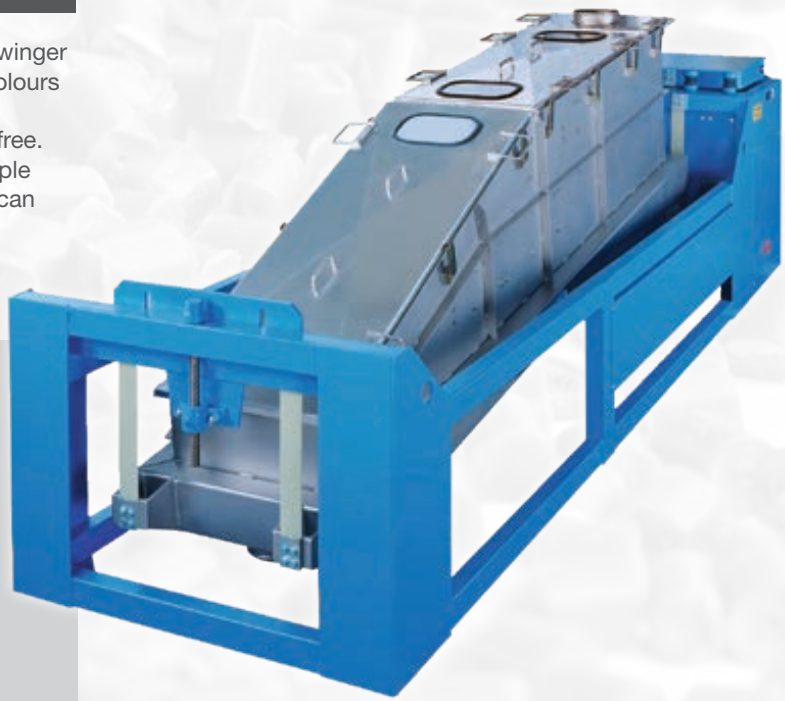
JEL Freischwinger Granulat: Mr. 100 %

The granulate material screening machine of the Freischwinger product range has been designed for ideal excess length separation of all established plastic granulate materials in the production. Sieve inserts arranged in stages on top of each other allow for multiple screening of the granulate material and therefore outsize-free screening of excess lengths and/or multiples. The granulate material screening machine is equipped with up to five sieve decks.



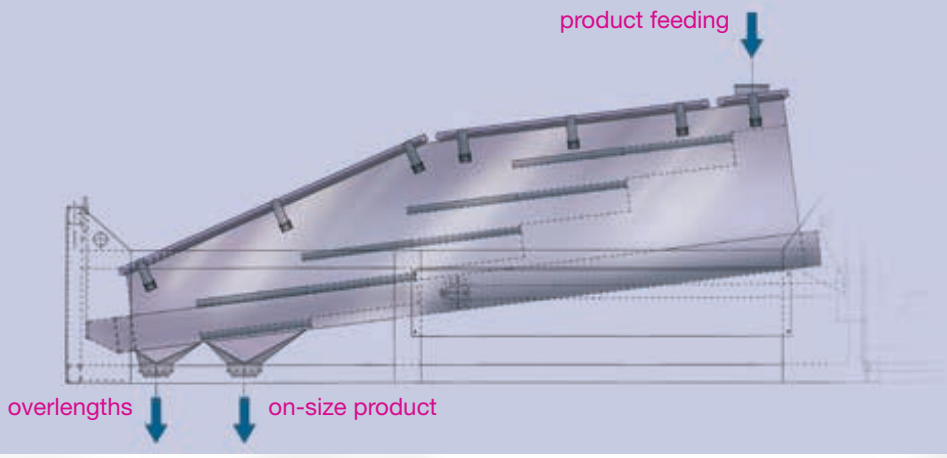
Prepared for high flexibility

The sieves can be replaced and the specialised Freischwinger machine can be retrofitted to other granulate material colours with very little effort. The used ball cleaning mechanism ensures that the sieve cloth does not clog and remains free. Due to the free access to the sieve inserts and their simple disassembly, the product compartment of the machine can be cleaned without leaving any residues.



Convincing facts

- 100 % selectivity between good products and excess lengths and/or multiples
- Quick retrofitting to other granulate material colours by means of easy sieve replacement
- Freischwinger granulate material sieves as 1- to 5-deck designs
- Short downtimes thanks to direct access to the sieve inserts
- No-residue cleaning option

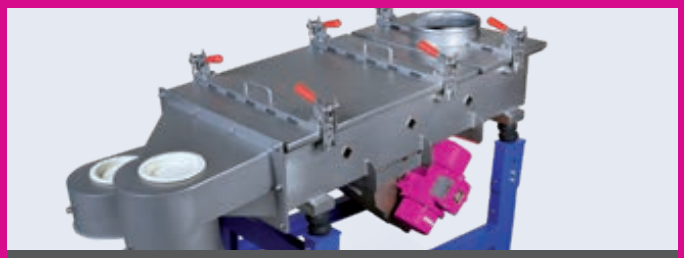


The Siblings of the Long-stroke Sieve Family at one Glance

Along with the long-stroke screening machines, the vibration and centrifugal sieve series complete the product portfolio of Engelsmann screening machines. From the grading screening machine for multiple sorting to the strainer for straining oversized products – we have the right solution for you.

JEL VibSpeed | Vibration Screening Machine

Used for coarse and fine separation, as well as for the classification of powdery and/or granulated bulk solids, the JEL VibSpeed convinces with many cleaning options.



JEL EasyVib | Vibration Screening Machine

Designed for screening tasks where machines are required to be used in an easy and cost-effective way.

JEL Konti | Vibration Screening Machine

With dead-space-free design for strict hygiene requirements. The sieve inserts can be pulled out from the front in just a few easy steps.

JEL Fix | Vibration Screening Machine

With its low design height, the JEL Fix can easily be integrated in existing plants.

JEL TWS | Vibration Screening Machine

As a control screening machine, the silo truck sieve is installed into the delivery line during tank drainage. Mounted to a carriage, it is usable at different locations.

JEL Palafix | Centrifugal Screening Machine

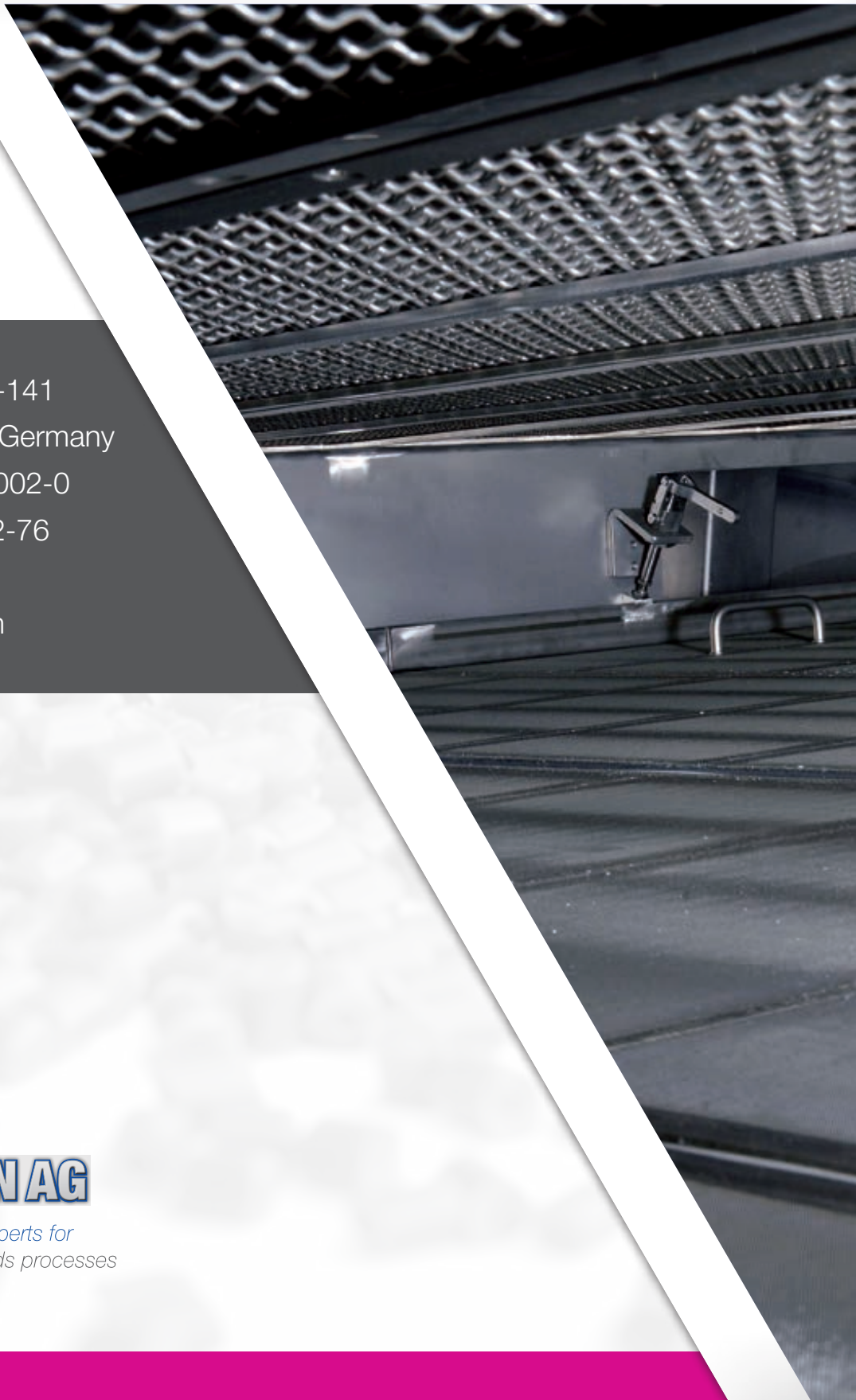
The JEL Palafix is used as a protective or control sieve for loosening, dusting, or straining powdery and/or granulated bulk solids.

JEL PS | Centrifugal Screening Machine

The straining sieve can be used for straining oversive-free product as well as for loosening agglomerates of stuck together bulk solids.

JEL Viro | Centrifugal Screening Machine

Used as a control or protective sieve, the JEL Viro is the right choice for difficult-to-pour and difficult-to-screen bulk solids.



- Frankenthaler Str. 137-141
- 67059 Ludwigshafen, Germany
- Phone: +49 (0)621 59002-0
- Fax: +49 (0)621 59002-76
- info@engelsmann.de
- www.engelsmann.com

J. ENGELSMANN AG

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