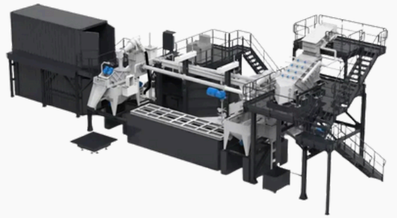
TECHNOLOGY

MOGENSEN

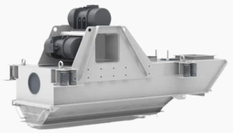
ABOUT US

Sizers

Densimetric Tables



Sand-washing Plants



Feeders

A member of the JOEST group | MOGENSEN

OUR STORY

MOGENSEN's journey began with a revolutionary breakthrough in 1947, when Fredrik Mogensen, Ph.D., developed the first Mogensen Sizer, based on the principle that particles of different sizes have varying probabilities of passing through screen cloth. By sloping the screen decks and overlaying them with progressively smaller mesh openings, both efficiency and separation accuracy were significantly improved, laying the foundation for MOGENSEN’s innovative approach to material classification.

Over the years, the brand expanded globally, and in 2023, joined the JOEST Group, merging local expertise with global reach.

Today, MOGENSEN leads in advanced screening and separation technologies, offering efficient, energy-saving solutions for industries like mining, recycling, and bulk material processing, supported by a comprehensive aftersales program to ensure long-term productivity.

MOGENSEN

UNLIMITED APPLICATIONS

STONES & SOIL

- sand
- gravel
- chalk
- basalt
- limestone

METALLURGY

- nickel ore
- manganese
- steel scrap
- ferroalloys
- sinter

FOOD & FEED

- sugar
- cocoa beans
- grain
- dry food
- powders
- protein meal
- salt

ANIMAL FEED

- pellets
- Mash
- premixes
- mineral
- additives
- feed screening

CHEMICALS

- fertilizer
- titanium
- dioxide
- zinc sulfate
- cupric sulfate
- silica

MINING

- coal
- coke
- anthracite,
- bauxite
- barite
- iron ore

CERAMICS

- siliconcarbide
- kaolin
- alumina
- feldspa

WASTE & RECYCLING

- glass
- residual waste
- plastic
- granules
- compost

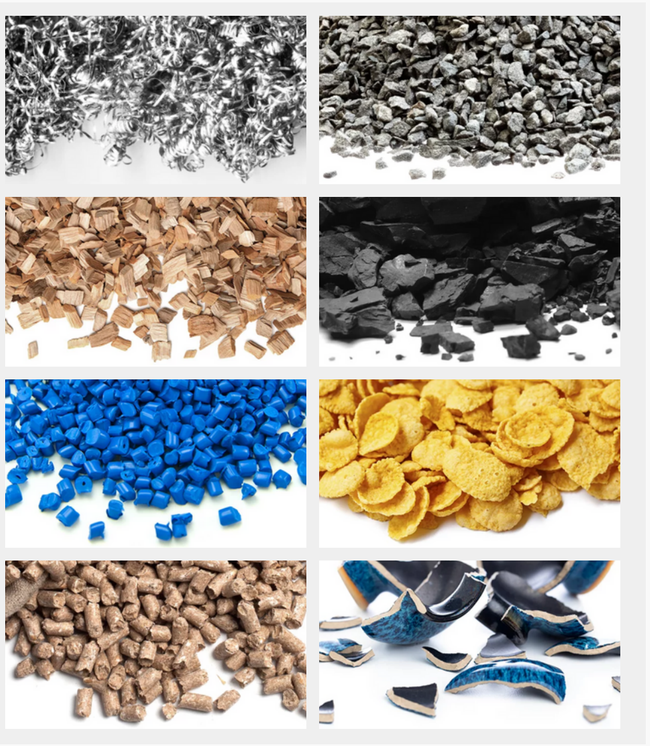
WOOD/ PARTICLEBOARDS

- wood
- shavings
- wood flour
- sawdust

OTHER

- plastics
- pharma
- biofuels/pellets

... and more!



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MSizer SCREENING TECHNOLOGY

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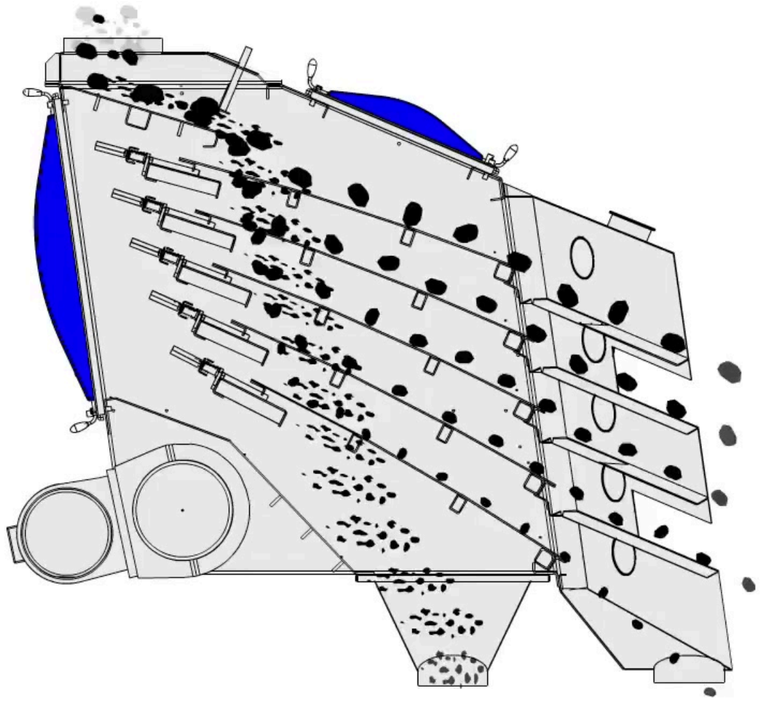
MOGENSEN SCREENING PRINCIPLE



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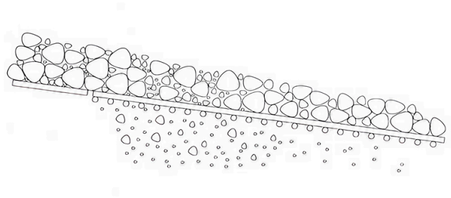
THE SCREENING PRINCIPLE MAKES THE DIFFERENCE

CONVENTIONAL



- Slow separation by higher layer thickness
- High wear on screen deck
- High material clogging of mesh
- 1 - 2 screen decks
- 2 - 3 product fractions
- Larger footprint
- Higher energy consumption

MULTI-DECK

- Fast separation by lower layer thickness
- Less wear on screen decks
- Less material clogging of mesh
- Up to 6 screen decks
- Up to 7 product fractions
- Smaller footprint
- Lower energy consumption

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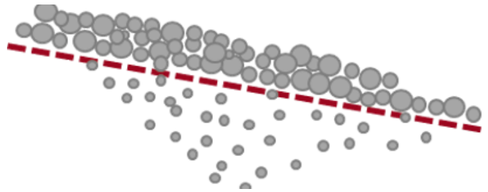
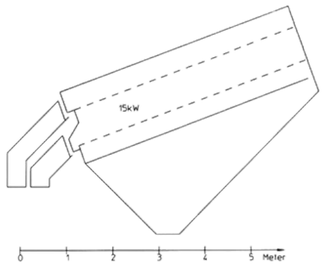
MOGENSEN TECHNOLOGY vs CONVENTIONAL SCREENING TECHNOLOGY

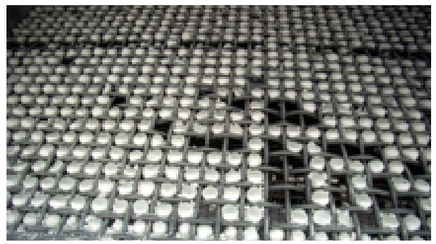
Single deck thick layer



Higher footprint

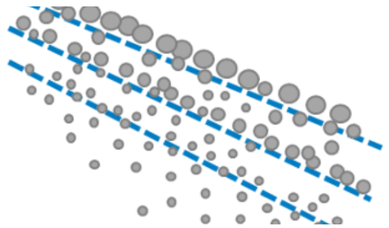


Clogging

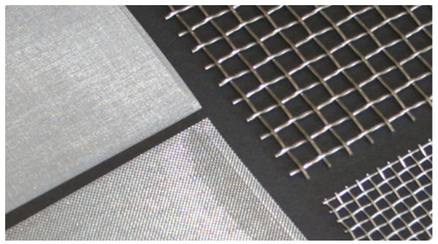


CONVENTIONAL

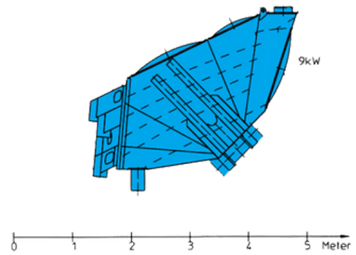
Multi deck thin layer



Clean screens



Compact design



MSizer

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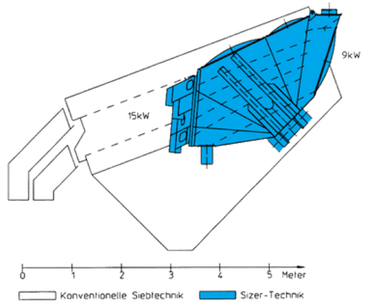
ULTIMATE SCREENING

MSizer NEW GEN

MSizer is a multi-deck screen with up to 6 screen decks for high throughput rates and upto 7 material fractions within defined over- and undersize limits



MSizer FAMILY

The inclined screen deck design enables a fast seperation and reduces the risk of mesh clogging.

The compact design requests only a smallfootprint and low energy consumption.

The MSizer product range is adapted to different sizes and thus enables the selection of machines optimally adapted to customer requirements and applications.

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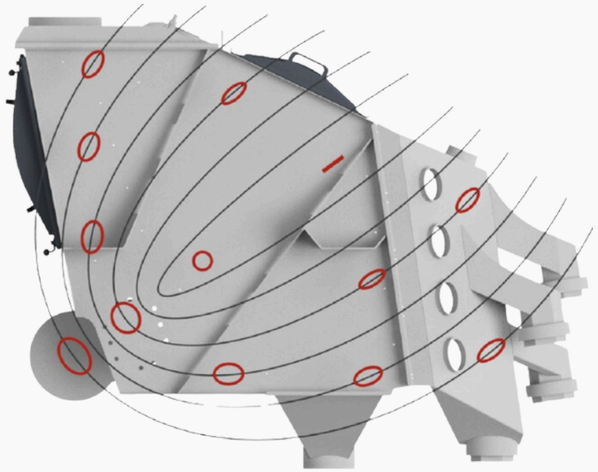
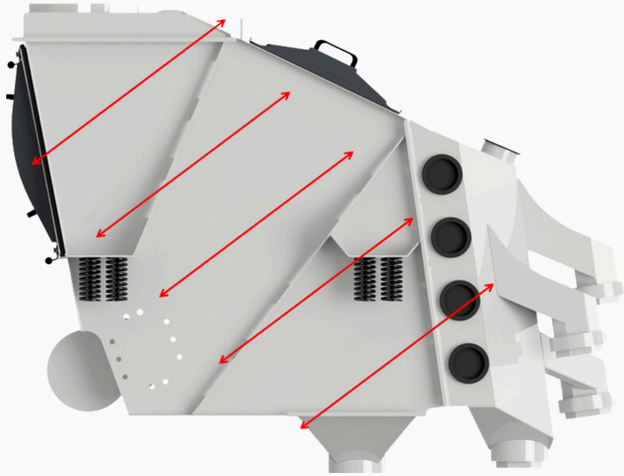
MOTION THAT MATCHES THE MATERIAL



Screening efficiency depends on how material moves across the screen. That's why the MSizer offers two motion types, each suited to specific process needs:

Elliptical motion creates a rolling flow, gentle, stable, and effective for finer materials or those prone to sticking. It keeps product in motion while avoiding screen blinding.

Linear motion produces a strong, directional force, ideal for coarser feedstocks and high-capacity intake screening where rapid forward movement is needed.



Selecting the right motion ensures clean separation, steady throughput, and longer screen life, especially under the demands of modern feed production.

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MSizer MODELS

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MSizer COMPACT

- Single motor
- High capacity, small footprint
- Avoiding screen blinding
- Safety
- Low energy consumption
- Modular design
- Screen area/ deck 1,3m² / m width
- Widths 0,5-2,0m
- 1-5 deck

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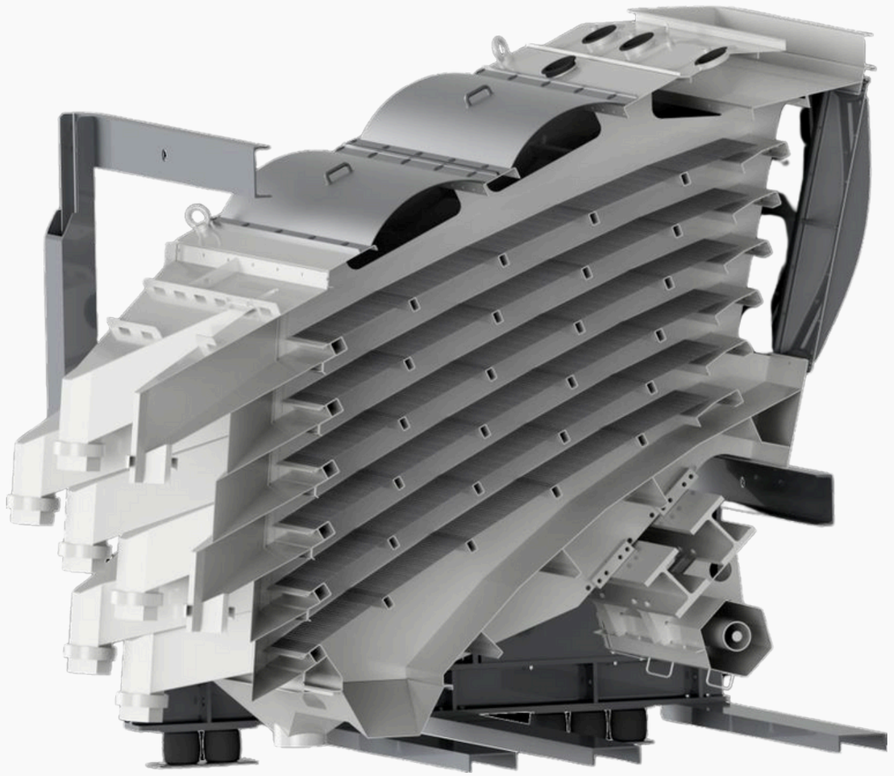

MSizer EXTEND

- Dual vibrators
- Linear motion
- High capacity
- Modular design
- Low energy consumption
- Screen area/deck 2,4m² /1 m width
- Width 1,0-3,0m
- 2-6 decks

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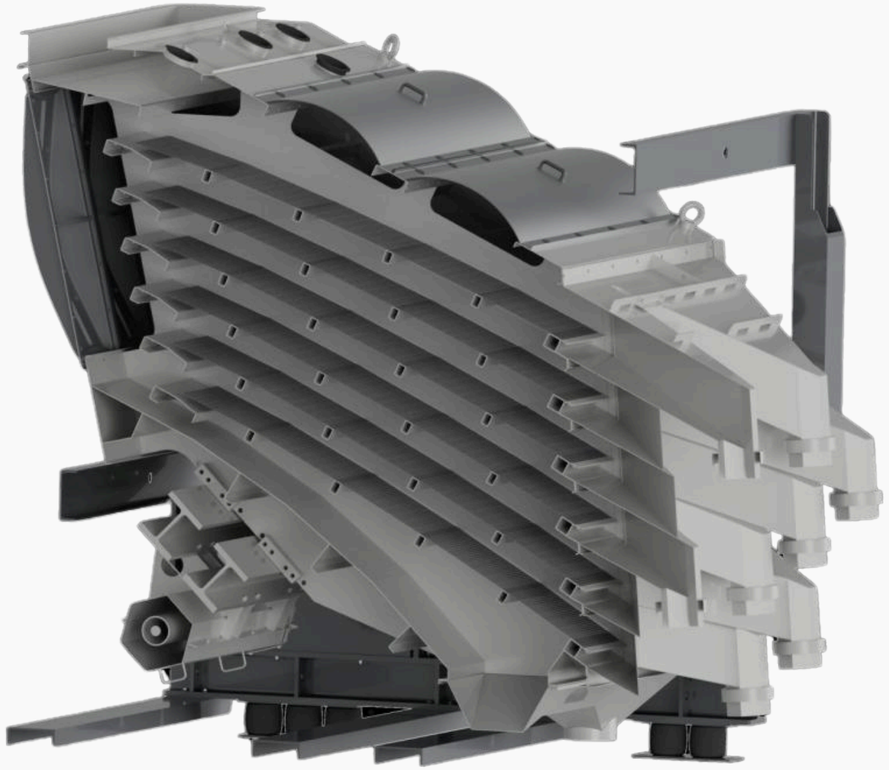

MSizer GIANT

- Exciter drive
- Linear motion
- High capacity
- Modular design
- Screen area/deck 10m² /3 m width
- Widths 3,0m
- 4 & 6 deck

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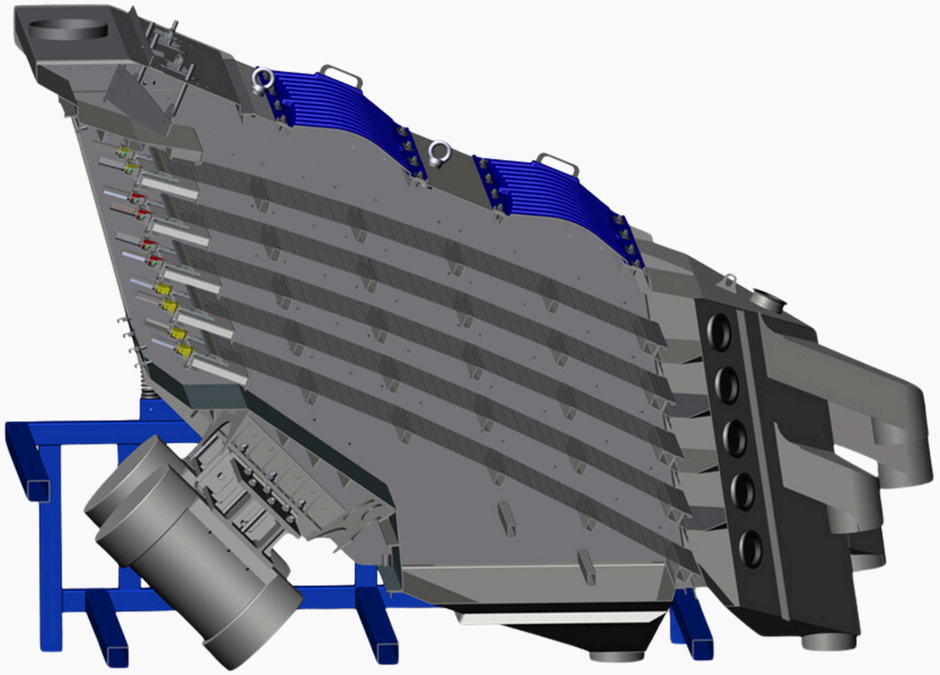
MSizer SEL



- Dual motors
- Linear motion
- High capacity
- Modular design
- Low energy consumption
- Screen area/deck 2,4m² /1 m width
- Widths 1,0-2,0m
- 2-5 deck

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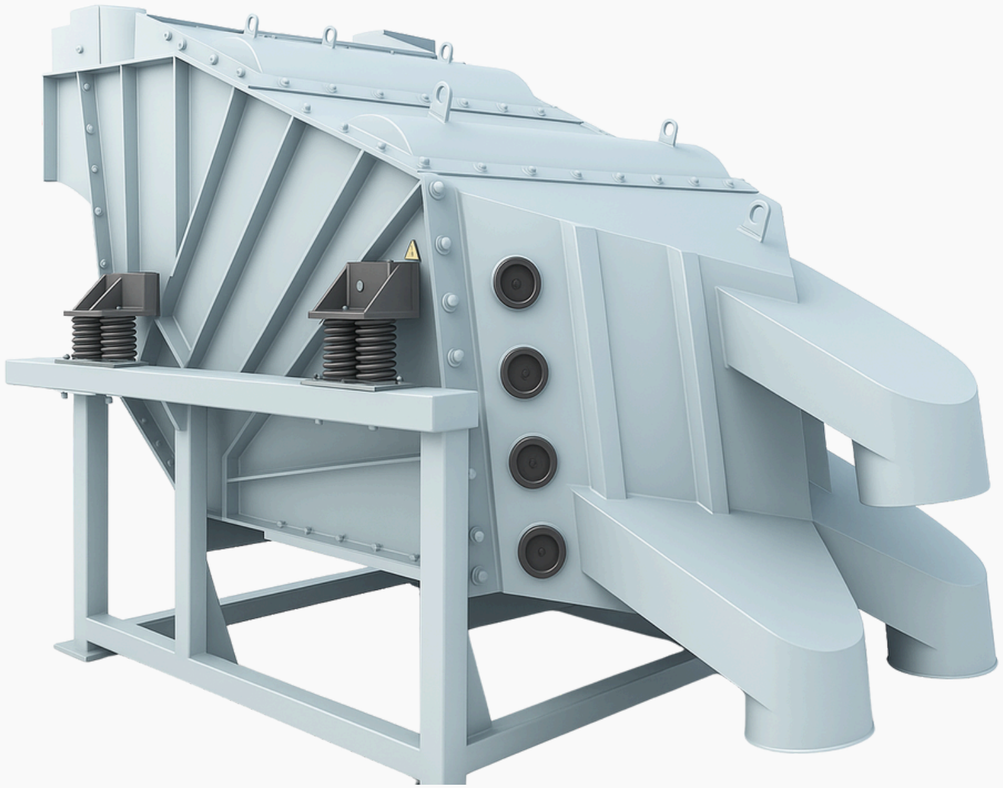

MSizer DOUBLE CAPACITY

- Rectangular mesh configuration
- Distributor with chute-based design and internal mechanical elements
- Drive: 2 × 10 kW motors
- Electrical cabinet
- Master control unit

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GSort DRY DENSITY SEPARATION

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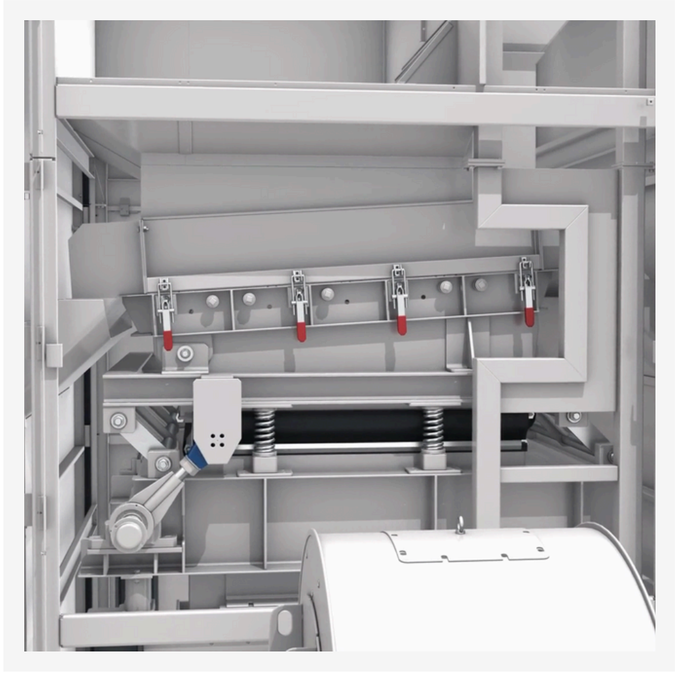
DESIGNED FOR SUPERIOR ADAPTABILITY & PERFORMANCE



- The GSort model offers improved adaptability to changing inlet properties and processing of materials due to its multiple operating levers in the new design.
- It works well with highly abrasive mineral materials like manganese and provides exceptional purity compared to other market separation equipment.
- GSort is the leading solution for dry separation, featuring enhanced dimensioning for its vibratory mechanism, suspension frame, and wall.
- Additionally, it has a user-friendly mechanical maintenance design with side openings on the vibratory box.

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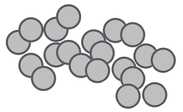
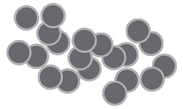
WORKING PRINCIPLE

Comminution products

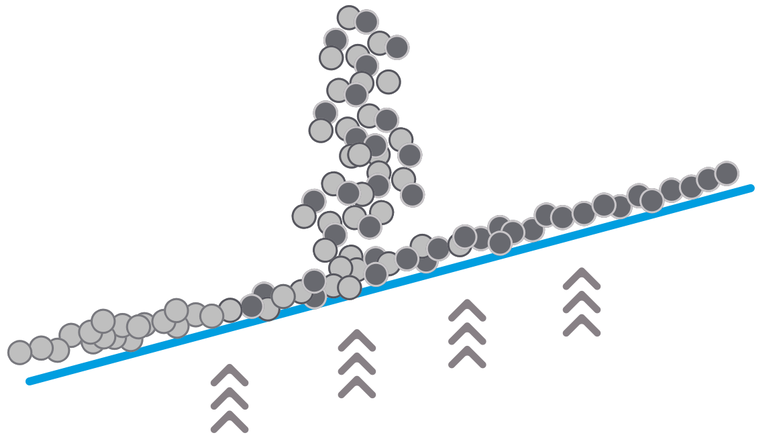


Light Fraction



Heavy Fraction

Continuous flow



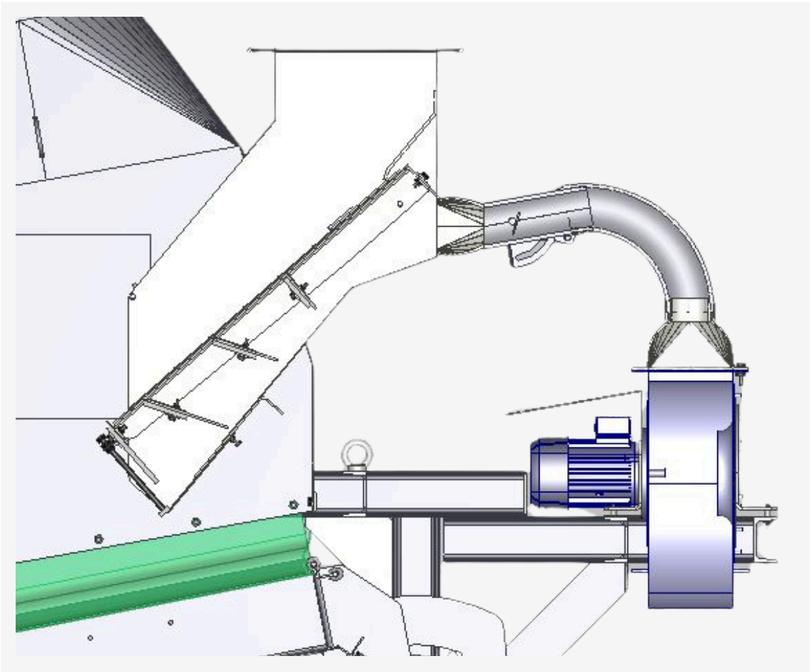
Heavy Fraction Outlet

Light Fraction Outlet

Air

MOGENSEN

NEW FLUIDIZED INPUT



GSort R combines fly speed and fluidized speed in the feeding chute leading to an increase in the tables' capacity with a significant benefit as it is possible to load more inlet material (Ton/hour per meter width of the table) while reducing the kWh/t.

- **More material per table meter (direct CAPEX). t/(h*m*EUR)**
- **OPEX reduction (kWh/t)**

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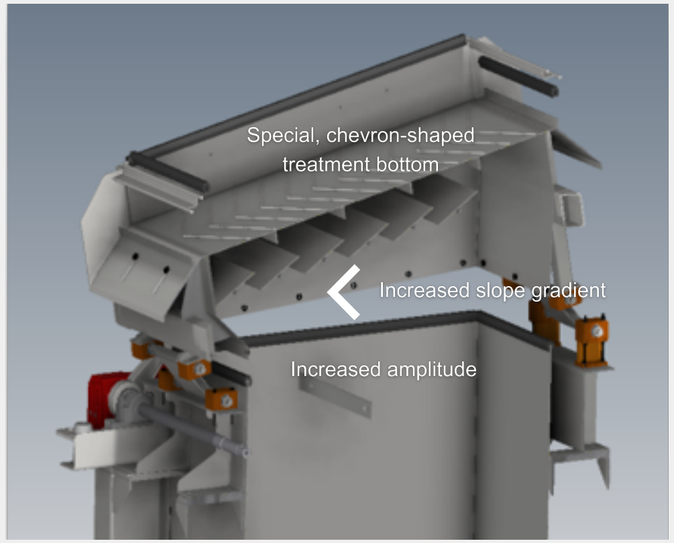
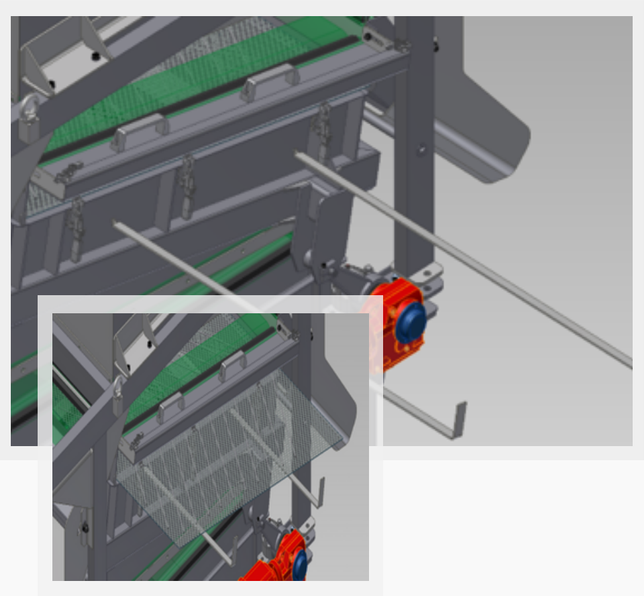
ENHANCED MACHINE BASE AND INCREASED INCLINATION



GSort R’s innovative design features unique advancements and improvements to the machines inlet, treatment deck design, and air distribution system. These upgrades provide many benefits and provide an optimum sorting experience.

EASY MAINTENANCE

The new air distribution system in the GSort R & M models provides greater flexibility as it's easily adjustable, reducing maintenance time associated with conventional methods.
The treatment bottom can quickly and easily be replaced laterally instead of servicing it through in-/outlet openings.



MOGENSEN

ADVANTAGES OF GSORT VERSUS STANDARD TABLES: KPIS

PARAMETER/MODEL	GSORT R	STANDARD DENSIMETRIC TABLE
T/h*m width compost 35% humidity	13	6.5
Compost purity %	99	98
Compost losses %	2 to 3	3 to 5
Consumption kw/ton compost	1.75	2.5
% compost extracted by the filter in a specific case of moisture compost 35%	>40	<25
Cleaning interval of the treatment bottom	>3 days (sandwich deck)	8h
Machine downtime for exchanging the Treatment Bottom	5 min	40 min
Cost reduction in direct investment measured in t/(h*m*EUR) vs standard versions	30%	0

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A WORLD OF POSSIBILITIES

Table width: 50 cm — **R50**
Table width: 100cm — **R100**
Table width: 150 cm — **R150**

GSort R

Light applications

For fluidization speed < 4 m/s

For densities < 1.7 t/m3 and particle sizes < 35 mm

GSort M

Heavy-duty applications

For fluidization speed > 3 m/s

For densities > 1.3 t/m3 and particle sizes > 25 mm

Table width: 50 cm — **M50**
Table width: 100cm — **M100**
Table width: 150 cm — **M150**

*The fluidization speed is determined by the material's density and the size or particle size distribution.

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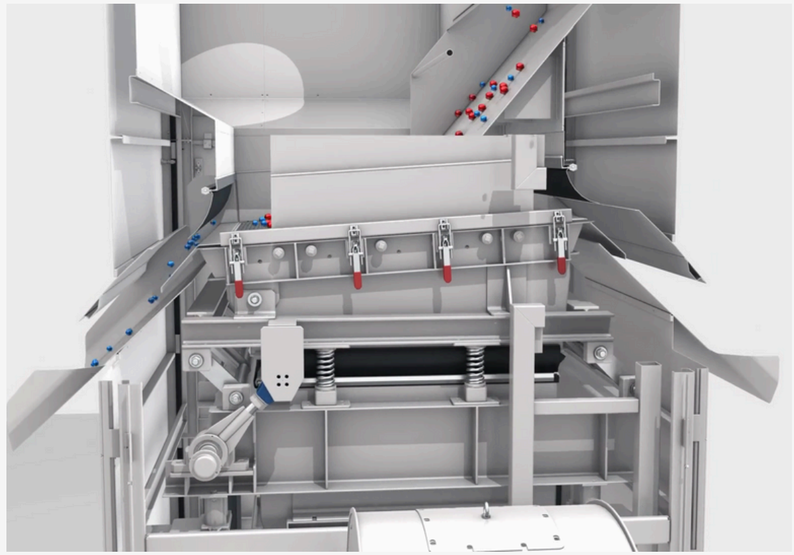
PROCESS ROBUSTNESS & TOLERANCE



Moisture:
The GSort R and GSort M are machines that can operate with moisture as long as there is no adhesion between the particles and free flow between them.

Feed Composition:
The GSort R and GSort M offer great stability against variations in feed composition.

Granulometry:
The general processing range is between 0.50 and 80 mm fed in optimal fractions. For minerals, the range is between 1 and 40 mm fed in optimal fractions.

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BEST SUITED FOR

GSort R

Compost MSW (0 - 10 mm)
Oversized compost MSW (10 - 40 mm)
Glass + organics (0 - 20 mm)
RDF (0-40 mm)
Vermiculite
Anthracite coal
PET-film
Rubber and textile
Fine manganese ore




GSort M

Coal
Magnesite
Hematite
Barite
Celestite
Attapulgite
Manganese ore
Ferrum-manganese
Aluminum recycling
Crusted cables
Crusted demolition waste

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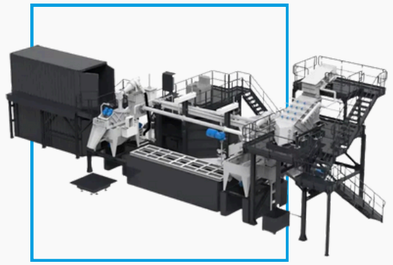
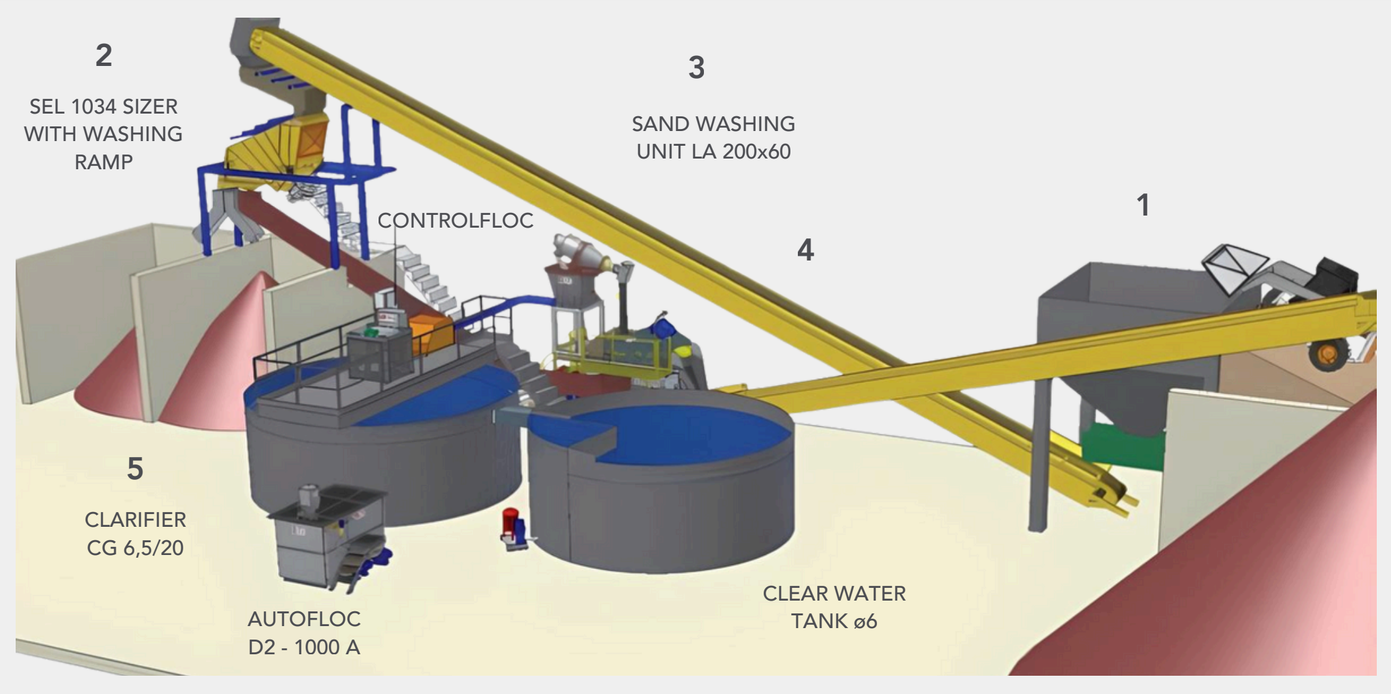


SAND WASHING PLANTS

A member of the JOEST group | MOGENSEN

STRUCTURE OF AN AGGREGATE PLANT



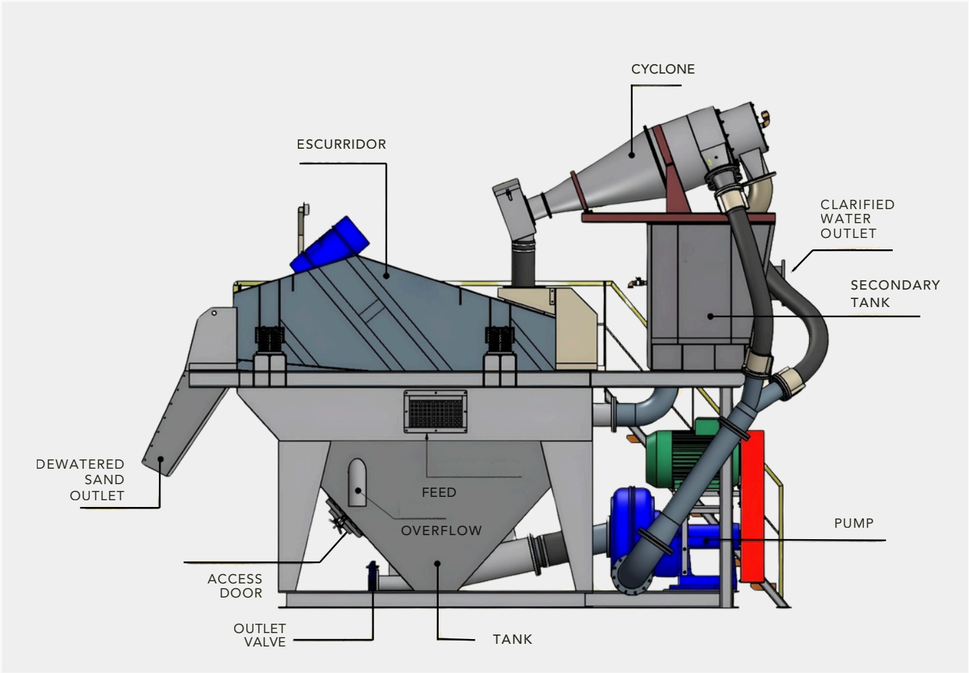
1) **Material collection**: Infeed controlled via chute and feeder.
2) **Wet screening**: Grain size separation in Mogensen sizer with irrigation; oversize fractions conveyed to stockpile.
3) **Sand washing**: Fines from sizer passed to hydro-cyclone and dewatering screen for washing and drainage.
4) **Stockpiling**: Clean, dewatered sand discharged via conveyor (e.g. gyratory stacker).
5) **Water clarification**: Dirty water treated in clarifier with flocculant to recover process water and minimize sludge volume.

MOGENSEN

COMPACT SAND WASHING UNITS

The use of sand washing machines equipped with hydro-cyclones is the most effective method for producing well-washed sand. This process efficiently removes particles in the 63–106 µm range (250–140 mesh).

Performance exceeds that of conventional equipment such as water wheels or screw washers. The result is high-quality sand with minimal content of particles smaller than 75 µm, while preserving the valuable fine sand fraction.

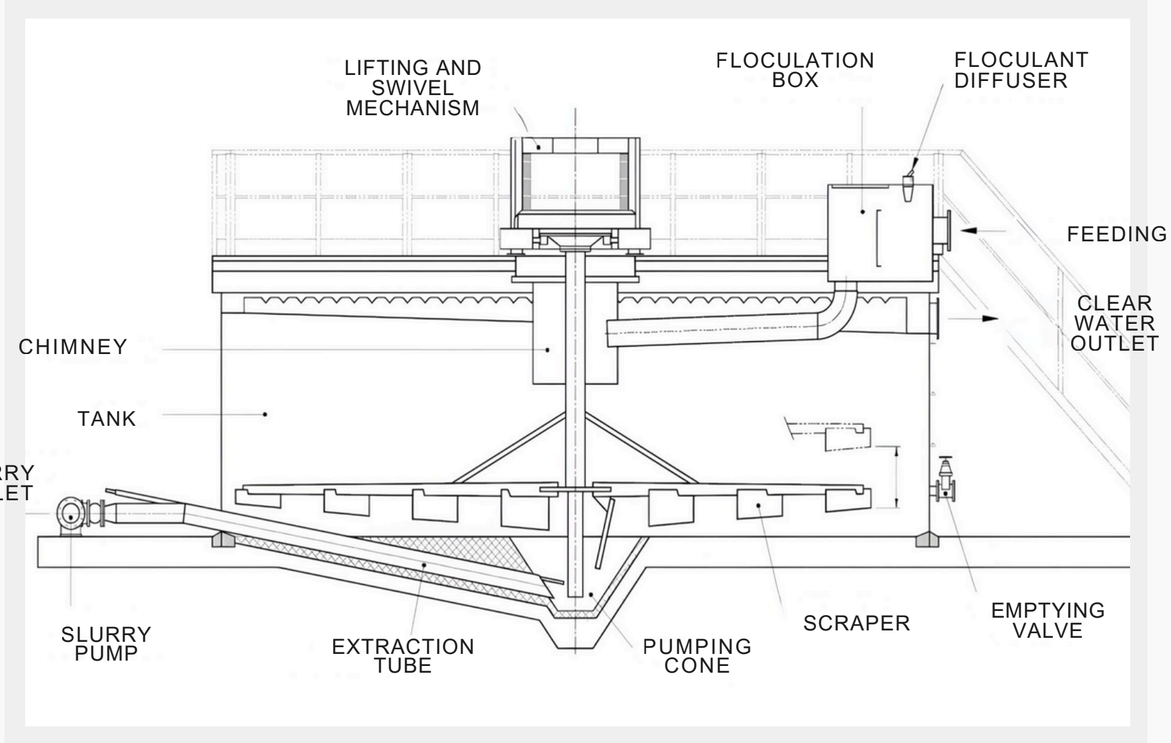


Each unit's components (pumps, motors, dewatering screens, hydro-cyclones, etc.) are selected according to project specifications. A wide range of configuration options allows for designing tailored machines that optimize investment in each production facility.

Depending on the amount of ultrafine material to be removed and the required final sand quality, multi-stage washing may be necessary. In such cases, the underflow or overflow from the first hydro-cyclone is directed to the next stage, continuing the process until the target cleanliness is achieved.

MOGENSEN

SLUDGE TREATMENT AND WATER RECYCLING | CLARIFIER



Dirty water containing ultrafines is directed to the clarifier through a mixing box, where it is blended with a flocculant solution. Proper dosage and concentration are critical to ensure effective floc formation. The flow path within the box promotes optimal mixing, forming flocs of the desired size and density. The mixture then enters a central pipe, where sludge quickly settles to the bottom of the clarifier.

A sludge pump located in the clarifier's central cone automatically extracts the settled material and transfers it to the discharge point, operating at up to 3 bar (45 psi). The pump activates when the rake torque increases, indicating optimal sludge consistency, and stops when concentration decreases. To prevent overload from excess solids, a rake lifting system is included and is automatically controlled via torque monitoring.

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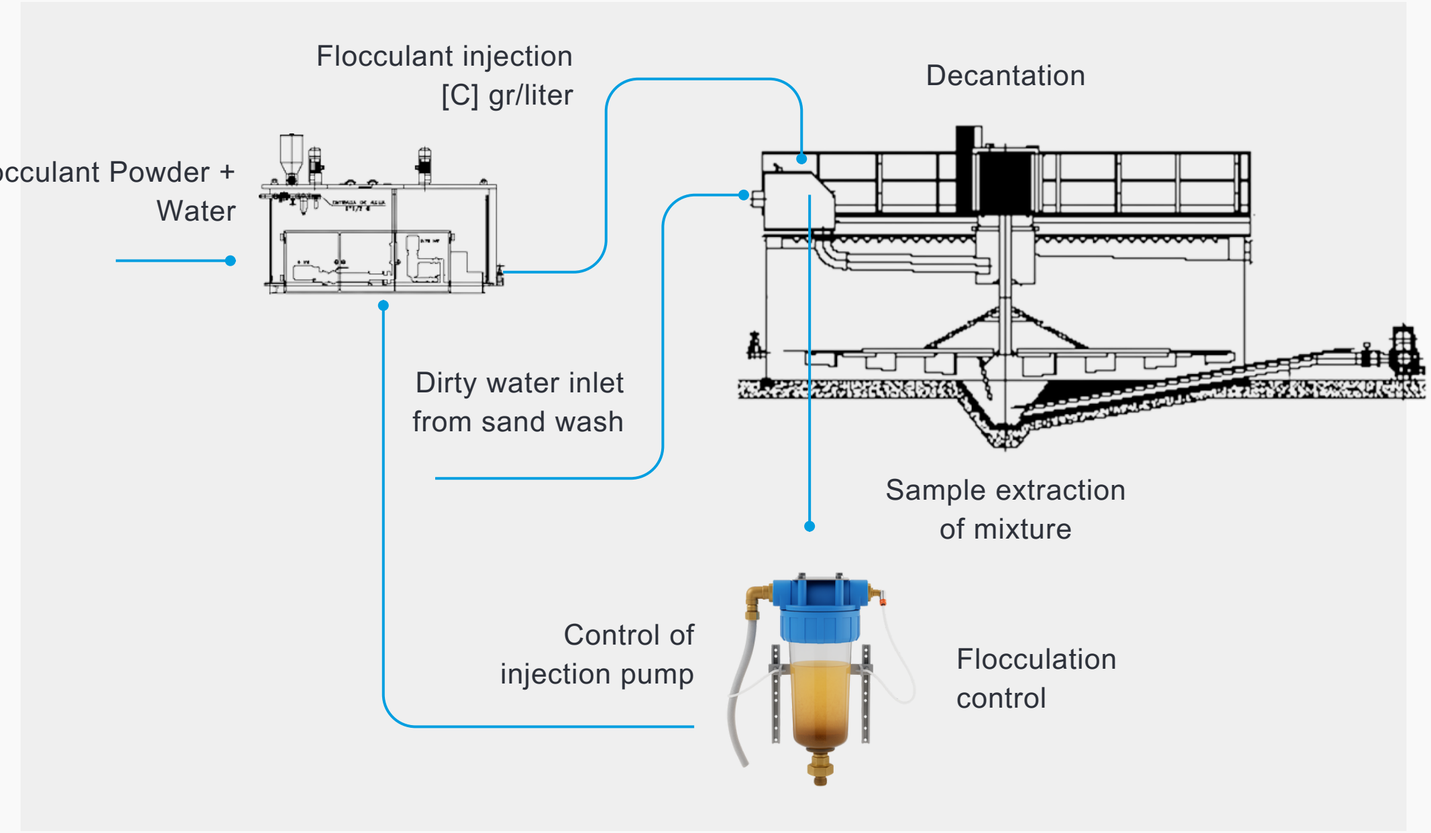
FLOCCULANT PREPARATION & DOSAGE



Proper flocculant preparation is essential for effective sludge treatment. MOGENSEN sand washing units integrate an automatic system for managing this process. Depending on the volume of ultrafine particles in the 60–105 µm range, different AUTOFLOC models are used to suit varying material loads.

Flocculant dosing is controlled by a pump regulated via frequency converter, adapting flow rates to the contamination level of the inlet water. The CONTROLFLOC system automates this task, continuously sampling the mixture and analyzing flocculation time and water clarity. Based on real-time data, it adjusts dosing to ensure consistent water quality while minimizing reagent use and operational costs.

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DESANDERS, HYDROCYCLONES & DEWATERING SCREENS

Desanders, manufactured by Mogensen, are primarily used for bentonite recovery in foundation drilling. They separate rock and sand particles from the slurry, enabling the reuse of bentonite and water. These units are also suitable for processes requiring finer separation than standard sand washers—such as concrete mixer cleaning or soil remediation.

Two configurations are available:

A) Single-stage hydro-cyclones for soils with low sand or fine content, with flow rates from 50 to 400 m^3/h.

B) Double-stage hydro-cyclones for sandy soils, ensuring effective sand removal in all soil types, with flow rates from 40 to 220 m^3/h.

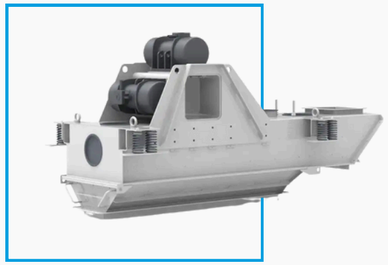
MOGENSEN

DESANDERS, HYDROCYCLONES & DEWATERING SCREENS

The use of hydro-cyclones in industrial applications, such as processing silica sand, feldspar, or kaolin, offers excellent performance, particularly when precise cut points are required. These processes are more complex than standard sand washing, as they demand careful selection of cyclone diameter, quantity, and configuration. Depending on the target cut size and feed rate, multi-stage systems or micro-cyclone arrangements may be necessary to achieve the desired separation efficiency.

Dewatering screens are primarily used to remove excess water from materials discharged by washing equipment, but they are also effective in any process requiring concentration of solid-liquid mixtures. Equipped with two vibratory motors, they generate linear motion to transport the drained material toward the outlet. Water is filtered through high-quality polyurethane screens designed to resist blinding and maintain consistent performance.

MOGENSEN



FEEDERS

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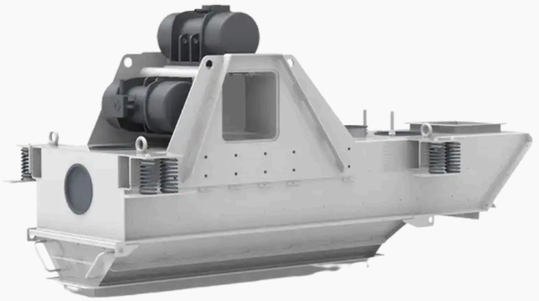
DISTRIBUTING FEEDERS

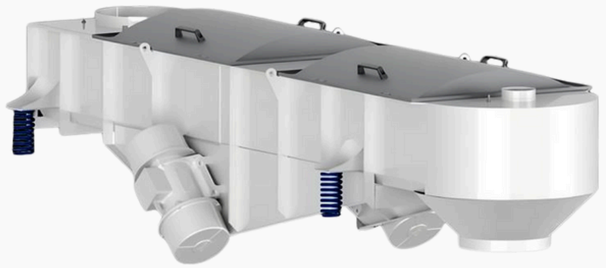
FEATURES

Distributing Feeders RV evenly distribute the incoming material flow across the full width of screening machines or densimetric separation equipment, enhancing overall processing efficiency.

FUNCTIONALITY

Vertical Distributing Feeders RV are designed to divert a central infeed into one or two equal outlet flows over a larger span.
They are driven by motovibrators mounted directly on the base, eliminating the need for mechanical couplings or transmissions.
Flow capacity is adaptable, depending on the requirements of downstream equipment within the process line.

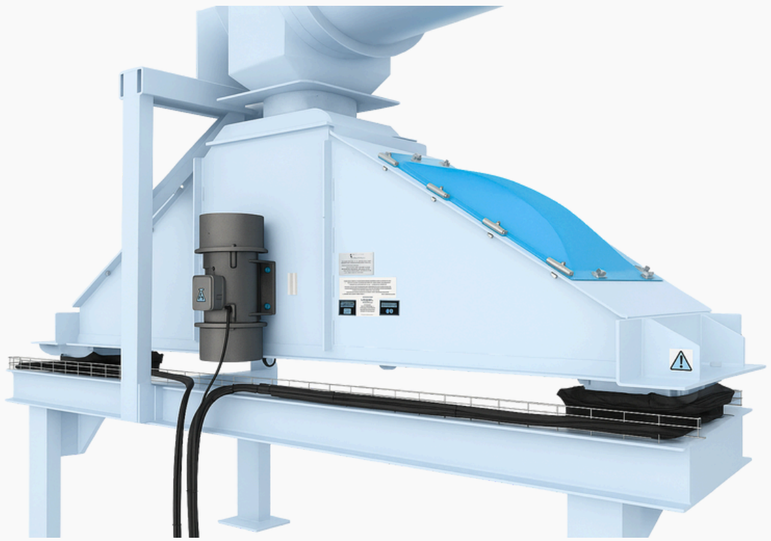




- Distributes central material flow to one or two equal outlets
- Optimizes efficiency of screening and density separation systems
- Suitable for medium to high flow rates
- Capacity up to 1,000 t/h depending on material density and particle size
- Low energy consumption
- Sturdy carbon steel construction

MOGENSEN

TECHNICAL SPECIFICATIONS



Capacities: Up to 1000 t/h (model-dependent)

MOGENSEN distribution feeders handle up to 1000 t/h, depending on model and application—suitable for both light and heavy-duty material flows.

Materials: Stainless Steel or Steel with Wear Protection

Available in stainless or carbon steel with optional replaceable wear plates for extended service life and reduced maintenance costs.

Length: Up to 8 Meters

Available in lengths up to 8 m, offering layout flexibility for integration into both new and existing plants.

Drives: Powerful Unbalanced Motors

Equipped with robust unbalanced motors for adjustable amplitude and frequency. Designed for high efficiency, with ATEX versions available for demanding environments.

MOGENSEN

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TECHNICAL RESOURCES

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