GERICKE CENTRIFUGAL SIFTING AND SIZE CONTROL

High efficiency, high capacity
Particle size separation
SIFTER APPLICATIONS

START OF A PROCESS

- Screening after a Sack-tip station
- Screening after an FIBC Big-Bag discharger
- Deagglomeration
- Silo discharge screening
- Tanker un-loading

Applications

- Policing and scalping of Raw Materials after discharge from sacks or boxes
- Two part classification and separation
- De-dusting: removal of fine particles from main product mass
- Re-claiming materials after de-packing
- Final security screening before packing or bulk out-loading
- De-watering: separating solids and liquids
- Inline sifting in vacuum or positive pressure conveying lines

GERICKE sifters are utilized to guarantee product quality within the processing of powdery products, granules, or fiber. Our ATEX certified sifters provide three main operations of the sifting processes:

1. Particle Separation; the separation of two different product fractions with varying particle size, typically within the range of 40μm to 5 mm.
2. Safety sifting; removal of foreign parts and tramp material prior to product entering the production process or to secure product quality before filling processes.
3. Conditioning; to separate foreign bodies and condition the bulk density of the product prior to entering production or immediately before packing.

END OF A PROCESS

- Final screening before bulk out-loading
- Final product screening before packing machines
- Calibration of bulk density
- Classification prior to downstream process
IN-LINE SIFTER APPLICATIONS

Advantages

• High capacity / high efficiency
• Robust and reliable construction
• 360 degree in-situ rotating screen inspection
• Quick change-over of screens without special tooling
• Ease of maintenance
• Pressure rated design for in-line applications
• Dust tight construction
• Low levels of vibration: no need for flexible connections to inlet or outlet

ATEX

Full ATEX type certification available for safe area, Zone 22 and 21 external and Zone 20 internal.

The full range of screens can be adapted for use within ATEX applications, including; HD Nylon, Polypropylene, Carbon Fiber, Perforated plate and Wedge Wire, taking into account risks such as propagating brush discharge.
Gericke sifters have been designed and developed for the optimization of these sifting tasks. The basic principles of centrifugal sifting provides high level performance and optimum separation with a minimal footprint.

The high throughput capability of sifters justifies them as the effective choice for bulk sifting requirements prior to the filling of silos from tankers.

Sifting capacities from; 2-3 kg/hr guaranteeing product quality of high value small batch operations, up to 120 te/hr, minimizing the time-frame for filling of road tankers, a preferred method utilized throughout the milling industry and the production and processing of sugar and starch.
For more than 50 years Gericke has provided Centrifugal sifting solutions to the solids and powder handling industry, gaining unrivalled experience handling a multitude of materials in many applications, catering for a wide range of industries including; food, chemical, pet food, beverages, dairy processing; infant formula and pharmaceutical.

Our ability to supply complete turnkey systems ensures that Gericke can optimize the interfaces between the sifter and other essential process components which is a critical factor in ensuring a successful installation.

The Gericke range of centrifugal sifters is specifically designed to separate particles of different sizes into two distinct product streams. The rotation of paddles within a fixed screen is a time proven process and makes centrifugal sifters the most efficient equipment for high efficiency and high capacity product screening and classification.

Gericke sifters offer an economic solution for securing food safety, size control and gentle de-agglomeration.
FEATURES OF THE GERICKE GS CENTRIFUGAL SIFTER

Interlocked hinged door access

Time delay interlock ensures operator safety. Balanced hinged door for single hand operation and access.

360 degree basket and screen inspection

Basket and screen can be fully rotated within the casing, allowing ease of inspection and reduced maintenance timeframes.

Maximized access for set-up and maintenance

The new range of Gericke sifters provides excellent access for service and maintenance via large removable covers with a single captive fixing.

Maximize efficiency, reduce down-time and increase productivity

The process of centrifugal sifting remains mostly unchanged from the first machine concepts, whereby a paddle assembly rotating within a static hose is used to create a centrifugal force to push material against the sieve mesh and through pre-determined holes.

Whilst the concept is well-proven, the demands of modern processes are ever increasing and the new range of Gericke GS sifters has been specifically designed to remain one-step ahead of these demands.

The new range of sifting machine provides time-proven application technology, yet allows for rapid inspection, cleaning, change-over, repeatability, access and maintenance.
Basket design sets new standards for minimizing clean down time and set-up

The sieve hose is arguably the most critical component of every sifting operation.

To perform effectively the sieve hose is tensioned on the basket and correctly positioned within the machine casing.

The evolved design of the Gericke sifter basket allows the sieve to be tensioned correctly without affecting the overall basket length.

Handles on the basket end ring provides ease of removal and replacement, and the orientation of the basket assembly is clearly identified on the end ring plate.

The location and securing of the basket is directly off the machine casing ensuring correct installation repeatability following clean down or change over.

Positive basket location and screen positioning

Basket location points and robust fixing studs ensure the basket & screen assembly is returned to the optimum position every time.

Maximized access for cleaning

With both end and side doors open, basket and shaft removed, the GS sifters offer class leading access for dry cleaning and inspection.

Quick release shaft option

A quick release shaft is available for applications where regular shaft removal is necessary for frequent strip down and cleaning.
Centrifugal sifting is a process for separating bulk material into two streams of product.

- Centrifugal Sifters are designed for use with a controlled in-feed
- Gericke recommend fitting a level probe to the outlet hoppers
- Sifters are most efficient with an unrestricted air-flow through the machine
- Restricted end plates are available to improve efficiency and reduce over-tails
- Gericke will work with you to advise the optimum Sifter set-up to suit your application

### Sifter capacities

<table>
<thead>
<tr>
<th>Products</th>
<th>Capacity Range</th>
<th>Typical Mesh size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flour</td>
<td>130 – 80000 kg/hr</td>
<td>400 – 6000 μ</td>
</tr>
<tr>
<td>Starch</td>
<td>300 – 20000 kg/hr</td>
<td>100 – 2000 μ</td>
</tr>
<tr>
<td>Spices</td>
<td>500 – 8000 kg/hr</td>
<td>600 – 3000 μ</td>
</tr>
<tr>
<td>Milk Powder</td>
<td>400 – 20000 kg/hr</td>
<td>100 – 3800 μ</td>
</tr>
<tr>
<td>Cosmetics</td>
<td>500 – 8000 kg/hr</td>
<td>630 – 1000 μ</td>
</tr>
<tr>
<td>PVC</td>
<td>130 – 8000 kg/hr</td>
<td>125 – 3000 μ</td>
</tr>
<tr>
<td>Detergent / Soap powder</td>
<td>1100 – 2700 kg/hr</td>
<td>500 – 1700 μ</td>
</tr>
<tr>
<td>Phosphates</td>
<td>1200 – 7000 kg/hr</td>
<td>125 – 4000 μ</td>
</tr>
<tr>
<td>Gypsum</td>
<td>1000 – 20000 kg/hr</td>
<td>200 – 500 μ</td>
</tr>
<tr>
<td>Sugar</td>
<td>100 – 9800 kg/hr</td>
<td>215 – 4000 μ</td>
</tr>
</tbody>
</table>

Figure shown are based on trials using GS722 sifter.
TEST CENTER

Tests on an industrial scale reduce planning time and increase process safety!

Test centers in Switzerland, France, England, Brazil, USA and Singapore are available for customer tests under near-production conditions. The test centers are equipped with original machines. Experienced specialists design the test layout according to your wishes and perform the tests.

- Testing of machines and prototypes with original products
- Checking of performance ranges and accuracies
- Testing of the interaction of multiple machines
- Gaining of experience for product processing
- Sampling for laboratory tests and market response
- Customer training

SERVICE

Worldwide support for commissioning, maintenance and service.

We highly value punctual delivery, reliable assembly and thorough assembly monitoring. With well-planned commissioning and intensive on-site training we create the prerequisites for a smooth production start-up. Our service team and the global spare parts service combine to ensure long service life and high availability of systems with consistent product quality.

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