

CLASSIFICATION OF LARVAE IN INSECT FARMS

ALLGAIER is at the top of the new food revolution: insect proteins for food and feed.



INSECT EQUIPMENT: DENSIMETRIC TABLES

ALLGAIER Process Technology, in cooperation with a consolidated client in Europe, has adapted its densimetric table for dry density separation, **GSort**, to classify live larvae from dead ones, as well as their substrate, which includes larval residues and meal for their food.

This process is carried out for both large larvae and small larvae. The ALLGAIER MOGENSEN Spain division has been responsible for the development of this innovative solution, which has been combined with screening solutions from the MOGENSEN (Wedel, Germany) and ALLGAIER (Uhingen, Germany) divisions from ALLGAIER Process Technology (Germany), allowing us to offer a complete solution for our clients.

Separation carried out at Madrid (Spain) test plant with a densimetric table. Both flows return to one belt only for testing purposes:



Live insects exit through the upper mouth.



Separated substrate, before discharging the live and dead insects on the belt.

The demand for sustainable alternatives has opened a very large field to the use of insect-based proteins for animal feed. The proteins obtained are of high quality and have a lower environmental footprint.

Separating live animals from dead ones implies a very delicate process, since it is necessary to avoid injuring the living ones, which implies a very delicate selection process, maintaining a high efficiency in this process.

GSort



How it works.

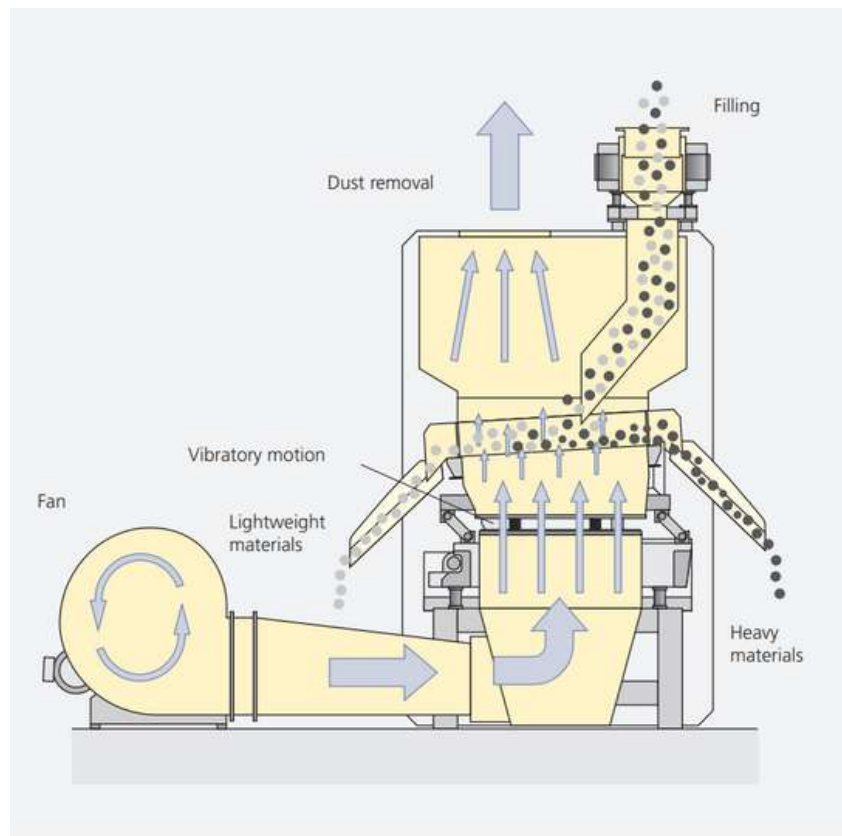
The **GSort**'s density separation process is based on a tilted, vibrating deck. An upward stream of air passes through this deck, having two important effects on the materials being separated:

- Materials with a lower density will move downwards, without any contact with the deck, as a result of the inclination.
- Materials with a higher density will stay in contact with the deck and be conveyed upwards by the vibration.

The **GSort** makes it possible to adjust parameters individually, quickly, and easily, ensuring that the machine is always perfectly tuned for the materials being separated. This high precision is achieved by adjusting the following parameters:

- Flow and air speed distribution
- Overflow flap height
- Inclination of the table
- Vibration frequency

After installation and adjustment of the needed air flow, the air flow distribution is adjusted by an efficient mechanism within the table.



INSECT EQUIPMENT: MOGENSEN SIZERS

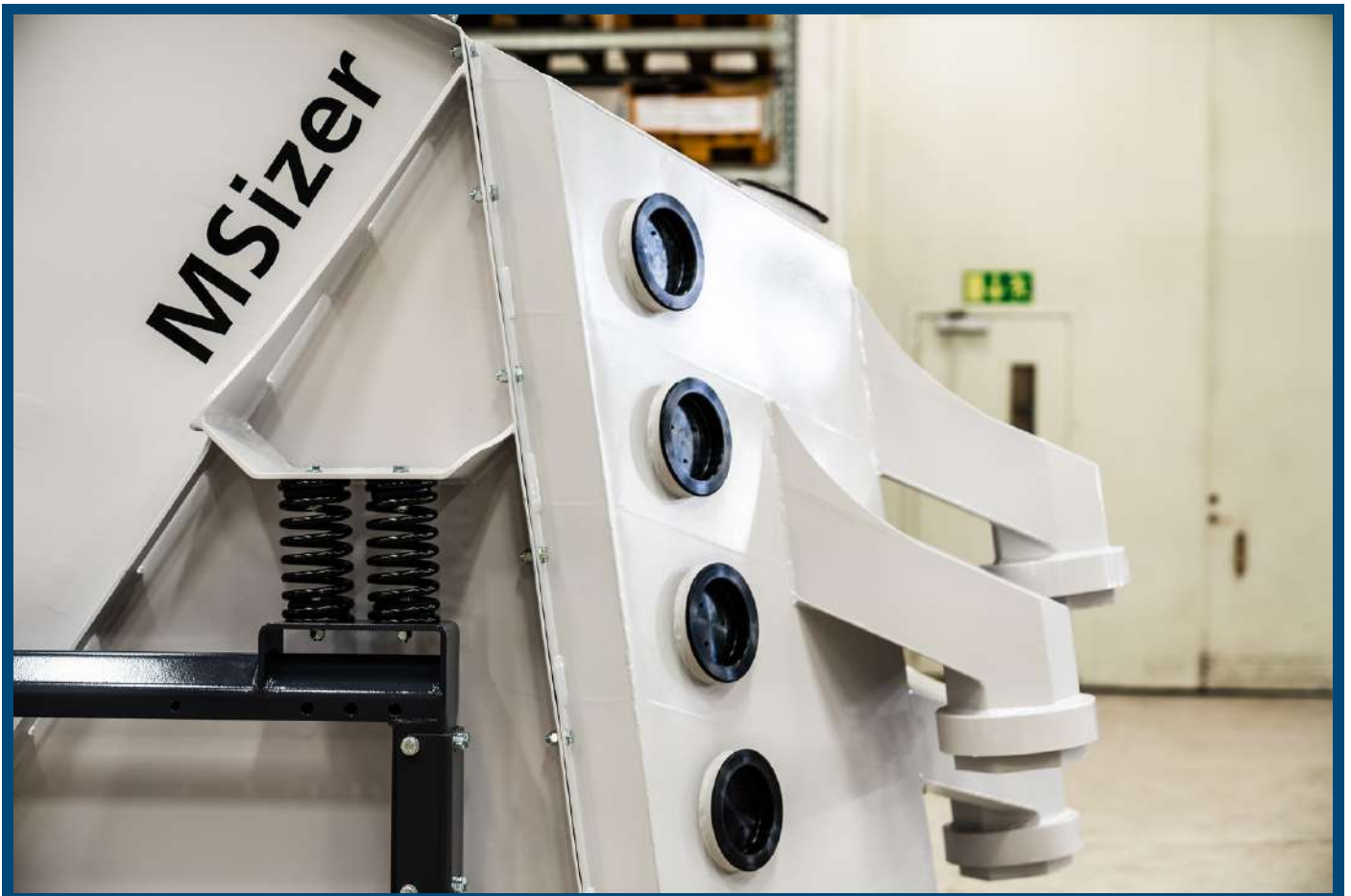
Economical. Efficient. Environmentally friendly.

With the new **MSizer**, ALLGAIER Group pushes insect screening into a new era.

One of the main functions of our MOGENSEN Sizer is to effectively separate the grown larvae from the smaller ones in different decks.

The **MSizer** models are based on the same Sizer principle developed and proven by Fredrik Mogensen more than five decades ago. They combine state-of-the-art technology with decades of extensive knowledge and expertise.

The result is an even more accurate screening process with increased throughput in a smaller footprint. With only one screen, this powerful machine is able to separate larvae, eggs, dung, and other insects of different sizes.





INSECT EQUIPMENT: VIBRATION SCREENING MACHINES

ALLGAIER vibration screening machines, Vibrall, are used for screening larvae food.

These vibration screening machines are driven by 2 vibration motors with unbalance vectors that are offset opposite to each other. A circular motion that starts from the inside and moves outwards ensures that foreign matter is efficiently separated and that safety screening is effective.

The fact that the material infeed and the fine material outlet on Vibrall vibration screening machines are centrally positioned makes these machines ideal for use in vertical conveyor systems with high flow rates.



WHO WE ARE

Custom-Tailored and Innovative Solutions for the Bulk Material Processing Industry

Extensive experience makes the ALLGAIER Process Technology division the preferred partner when it comes to anything related to process engineering and technology.

With its ALLGAIER, MOGENSEN, GOSAG, and MOZER brands and a worldwide presence in over 40 countries, the division supplies both standard and custom-built systems for industrial washing, drying, cooling, screening, and sorting applications for all types of bulk material.

Allgaier Process Technology can look back on 50 years of experience and today is an important supplier for a variety of industries including, but not limited to, the waste, recycling, mining, non-metallic mineral processing, chemical, pharmaceuticals, food, fodder, lumber, ceramic, plastic, and metallurgical industries.

The division supplies more than 30,000 worldwide customers from the processing industry with custom-tailored and innovative solutions that are based on industry-leading experience derived from well over 45,000 series of tests.

One-of-a-kind teamwork between the individual companies that make up the division guarantees that all processes run smoothly and benefit from synergistic effects. Intercultural expertise and continuous process and workflow organization improvement ensure that quality is kept consistent, production grows, and resources are conserved.

Integrated thinking and acting – that is how we stay one step ahead of the competition at all times.



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