

## POWDER PROCESSING SOLUTIONS FOR PET FOOD

Sifting and size reduction of raw and reworked material, gentle pneumatic conveying and feeding of extruders and mixers in the pet food industry: Gericke offers a broad range of solutions, based on our experience from many installations around the world.



# BENEFIT FROM OUR EXPERTISE

Gericke, with its innovative solutions and commitment to excellence, emerges as an ideal partner for the pet food industry.

We bring extensive expertise in processing technology, ensuring that pet food manufacturers can optimize their production processes. This includes precision in ingredient handling, mixing, and homogenization – critical aspects in creating high-quality pet food products.

The pet food industry is dynamic, with evolving consumer preferences and regulatory landscapes. Gericke's commitment to innovation and adaptability means that its partners can stay ahead of the curve. This includes incorporating the latest technological advancements to enhance production efficiency and meet changing market demands.

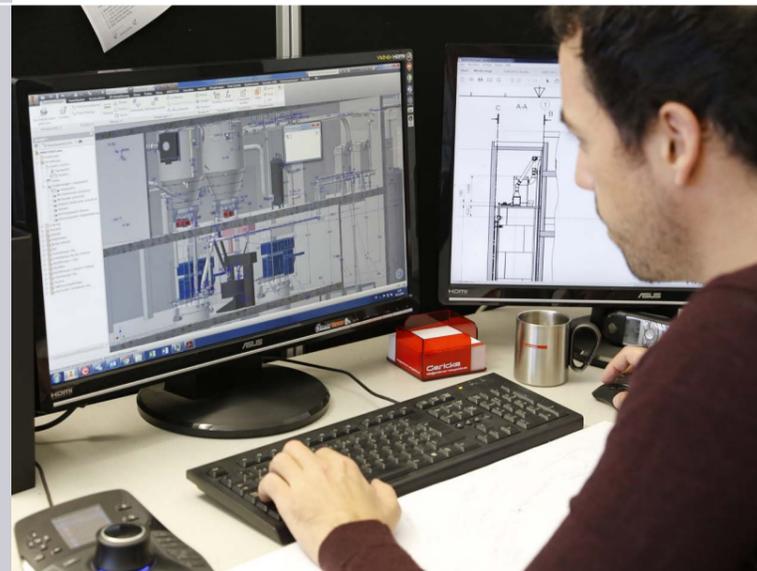
## THE EXPERTS IN POWDER HANDLING

Benefit from our wealth of experience in powder handling, dosing, pneumatic conveying systems and mixing technology. We know how to handle very fine or cohesive powders, as well as abrasive, sensitive, toxic and explosive materials.



## YOUR ENGINEERING PARTNER

Save time and money with competent engineering and project management. This also covers risk assessment, data integration and energy efficiency. We are also available to consult with you on a pre-engineering study.



## DESIGNED TO BE HYGIENIC

Gericke places a strong emphasis on hygienic design and compliance with industry standards. In the pet food sector, where quality and safety are paramount, Gericke's equipment and systems are designed to meet the strictest hygiene regulations ensuring the production of safe and wholesome pet food products.



## DO YOU HAVE YOUR ENERGY COSTS UNDER CONTROL?

The reduction of energy consumption is becoming increasingly important, not only for reasons of sustainability. For products with low margins, every cost saving is significant. In many bulk material processes, transport within the plant is an energy guzzler. Often tons of material have to be moved. Here, it is important to choose the right powder transfer technology with the expertise of the system provider, which also takes into account the properties of the bulk material.



## REDUCE WASTE AND LOSSES

There are many reasons for quality fluctuations, out-of-spec batches or even product recalls. Reducing waste and losses starts with proper sifting of incoming material and accurate dosing and feeding of ingredients. Gentle conveying technologies and deagglomerators maintain product characteristics. If you have something that is out of specification, we have the right equipment to bring the material back into your process.



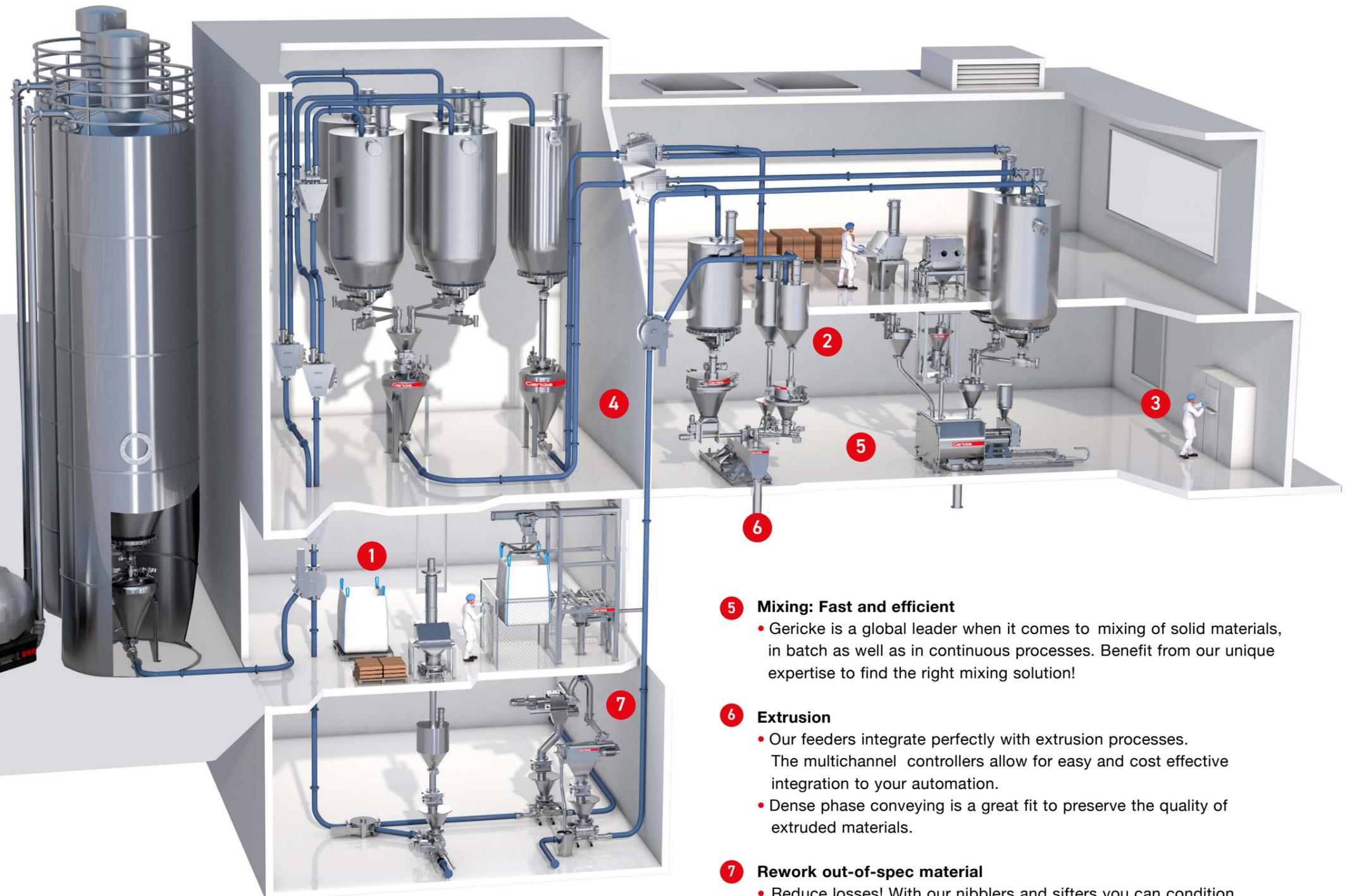
# YOUR GLOBAL PARTNER FOR ALL ASPECTS OF POWDER PROCESSING

- 1 Bulk handling: Safe and dustfree**
- Our handling and material reception systems combine key needs: avoid dust, preserve material quality, remove impurities and save energy

- 2 Accurate feeding into mixing and extrusion**
- Reliable and accurate, Gericke covers a broad range of feeding and dosing requirements.
  - Extruders and mixers require accurate control of several material streams. Our multichannel controllers offer a cost effective solution.

- 3 Automation: Integrated and preconfigured**
- Our understanding of the fundamental processes of bulk handling, feeding, mixing and conveying, together with our competence in electrical engineering and automation makes us the ideal partner to supply you with complete turn-key systems.

- 4 Conveying: Gentle, energy saving, inert**
- Our dense phase pneumatic conveying systems are suitable for the gentle and reliable transportation of raw materials.
  - They perfectly preserve material quality, avoid breakage and even work with fatty material.



- 5 Mixing: Fast and efficient**
- Gericke is a global leader when it comes to mixing of solid materials, in batch as well as in continuous processes. Benefit from our unique expertise to find the right mixing solution!

- 6 Extrusion**
- Our feeders integrate perfectly with extrusion processes. The multichannel controllers allow for easy and cost effective integration to your automation.
  - Dense phase conveying is a great fit to preserve the quality of extruded materials.

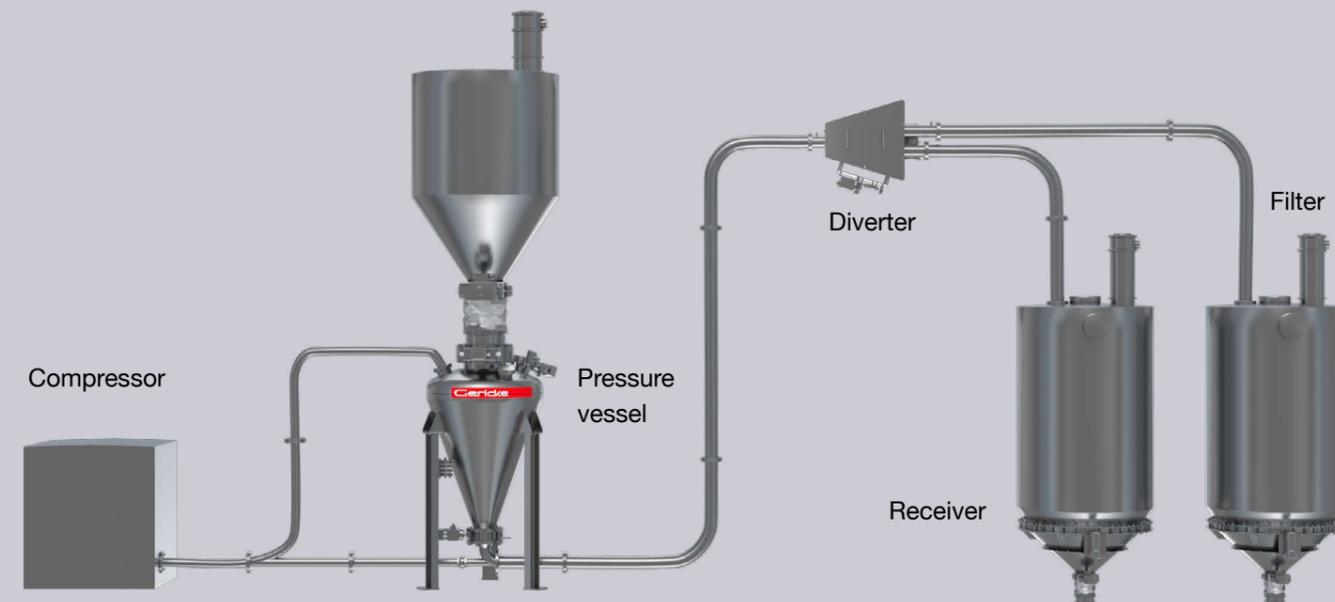
- 7 Rework out-of-spec material**
- Reduce losses! With our nibblers and sifters you can condition bulk material and bring back into your process.

# DENSE PHASE PNEUMATIC CONVEYING

Efficient, gentle, energy saving and no moving parts

For gentle and energy efficient product transfer with no demixing, dense phase conveying is the perfect solution to preserve your materials.

- Low velocity convey speeds give reduced wear and lessen the chance of metal contamination
- Gas and dust tight systems that result in no pollution - protecting the local environment and system operators
- High solids concentration with low gas consumption leads to reduced operation costs
- Utilising dried pressurised air or inert gases with low air humidity (<1g/m<sup>3</sup>) prevents problems with moisture / humidity
- Additional wear protection and coating solutions available
- Best in class availability with long operating life is combined with minimal maintenance



# DILUTE PHASE PNEUMATIC CONVEYING

Easy to implement and versatile

Lean or dilute phase conveying can be the perfect solution for many nonsensitive powders and bulk materials.

- Gericke lean phase conveying systems are economical and reliable solutions
- Systems can be set up in vacuum or overpressure configurations
- Simple setup of the system
- Little headroom necessary for installation
- The throughput can be varied by controlling the rotational speed of the rotary valve
- Gericke RotaVal rotary valves are available as easy to clean extractable units, with reinforced replaceable blade inserts or with special coatings



## Need for easy cleaning?

Our USDA Dairy and EHEDG qualified fast clean rotary valves provide users with increased productivity through a design that realises minimal down time for frequent cleaning of valve internals.

The non-drive end cover incorporates the Rota-lign™ bearing assembly. Coupled with the taper bore feature, this makes the design operator friendly and eliminates process and product risk.



# FEEDING AND DOSING

## MAKE NO COMPROMISE IN ACCURACY AND HYGIENE!

Gericke is an expert in accurate feeding and dosing of many different bulk materials. With our test centres we can verify different setups and find the best fit for your specific process.

### Precision and accuracy

In pet food production, precise control over ingredient proportions is crucial to ensure the nutritional quality and consistency of the final product, reducing overdosing and saving money. Our feeders offer the accurate dosing and feeding capabilities required. With a complete range of volumetric and gravimetric devices we handle even the trickiest materials such as silicas, wet granules or sensitive pellets.

### Hygiene and cleanliness

Gericke Feeders are designed with easy cleaning features, sanitary construction materials, and minimised product contamination risk. They must comply with industry regulations and standards to ensure the safety and quality of pet food products. This includes considerations for food safety, traceability, and adherence to regional regulatory requirements.

### Flexibility and adaptability

Pet food formulations can vary widely. Gericke feeders handle a diverse range of ingredients, from powders to granules, and can easily adapt to changes in production requirements.

## MULTIPLE FEEDERS NEED?

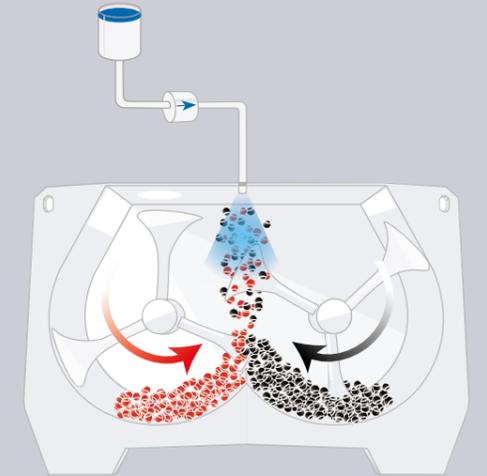
Take control of your feeding processes: the GERICKE GUC-F Controller is a multichannel control solution for all feeding, dosing and weighing tasks in powder handling applications. Using a flexible and modular design concept it can be integrated into your automation environment and supports the secure logging of all process data and parameter settings through OPC-UA support.



# CONTINUOUS AND BATCH MIXERS

Highest homogeneity, even with microingredients. Hygienic and easy to clean, fast and effective but nevertheless gentle, energy efficient and space saving. Fully integrated with feeders and with your entire process: that is mixing technology from Gericke.

The GERICKE GMS Multiflux® batch mixer achieves a maximum degree of homogeneity and preserves high-quality ingredients during the mixing process, with batch sizes from 40 up to 4000 litres. When your challenges are the mixing of fragile products, the efficient distribution of micro ingredients, the optimal dispersion of liquids onto particles or the highest hygienic requirements, then the GMS Multiflux batch blender is your best choice.



## Continuous mixing of powders, granules and liquids

The continuous GCM mixer is suitable for mixing a wide range of powders, flakes, granulates and viscous products, as well as in combination with spraying of liquids. The GCM family covers a wide range of capacities (1 – 100,000 kg/h). The GCM mixers are also used for premixes before extrusion. For the pet food industries, special models have been developed which enable short cleaning times. The continuous gravimetric supply of the starting materials into the GCM mixers is realised using loss in weight feeders.



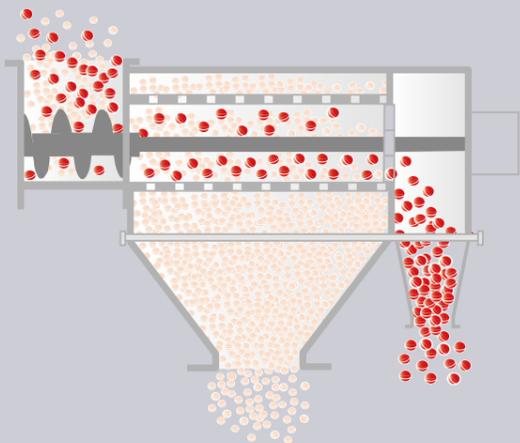
## Compact double shaft mixer

The GMS twin-rotor laboratory mixer provides excellent mixing quality and the low speed typical of the GMS family of mixers, with useable volumes ranging from 1 to 20 litres. Its industrial design also makes it perfect for pilot plants and small production batches.



# QUALITY PROBLEMS DUE TO IMPURITIES?

Raw materials can contain foreign bodies. These can damage machines, but also have a strong impact on the quality of the end product. In the worst case this can lead to costly product recalls. With suitable deagglomerators or sifting machines, you have a guarantee that your raw materials enter the process with the right quality.

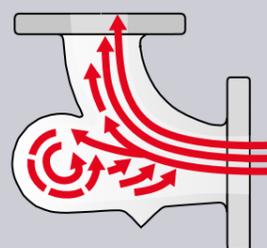


### Questions to consider:

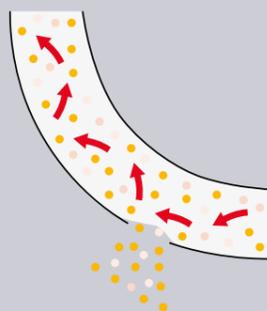
- ✓ Do your starting materials often contain lumps or impurities?
- ✓ Have you already taken measures to remove contamination?
- ✓ Have batches already had to be reworked or even recalled because of quality issues?
- ✓ Are accurate product specifications important for your customers?

# ABRASIVE MATERIALS TO CONVEY?

Increase the lifetime of bends for pneumatic conveying of abrasive materials with the Gericke Bend GB. Due to the special vortex chamber, the wear rate of bends for pneumatic conveying is drastically reduced. The lifetime cycle will be extended and your maintenance and downtime costs will be reduced.



With Gericke Elbow



Without Gericke Elbow

# REDUCE WASTE – SAVE MONEY

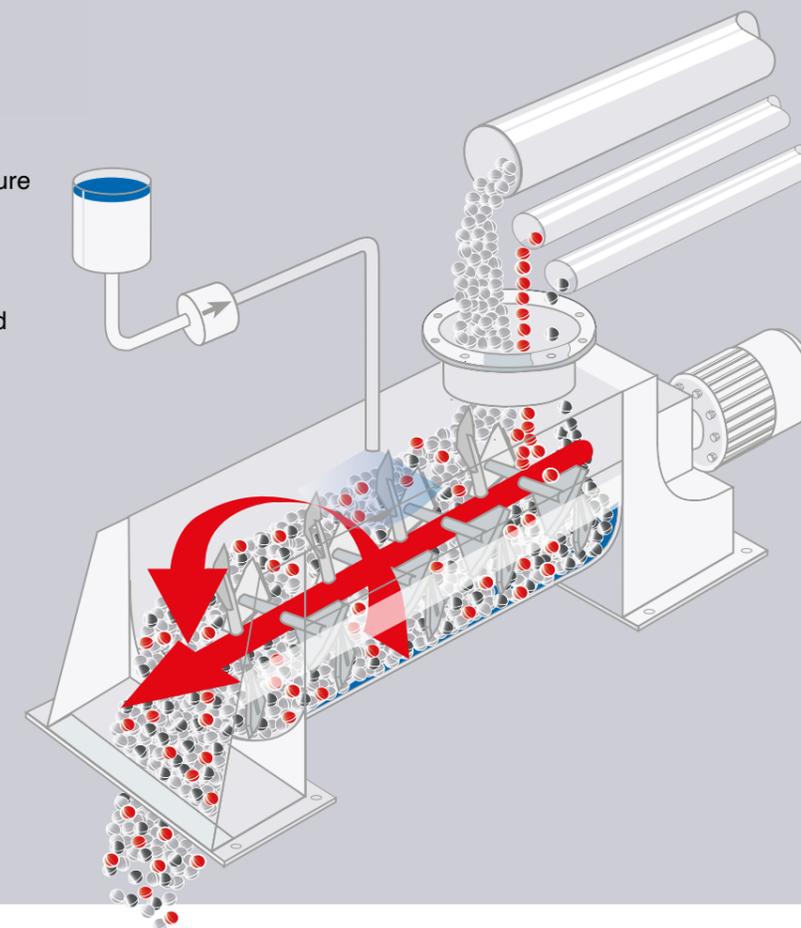
It happens. Part of the production does not meet the standards. Often this contains valuable material that should not go to waste.

With the Gericke Nibbler, kibbles and other bulk materials can be crushed again and fed back into the process in precise doses.



With a continuous mixer, a homogeneous mixture of rework with other materials can be created quickly and reliably.

Such processes can also be tested and verified in one of our test centres.





## TEST CENTRE

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

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