

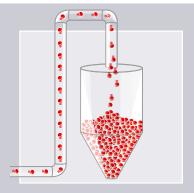
## YOUR GLOBAL PARTNER FOR THE CHEMICAL INDUSTRY

Systems and components for the bulk processing industry.



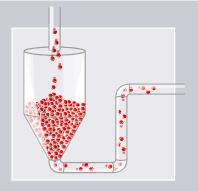
### COMPETENCE IN YOUR APPLICATION

Profit from decades of experience in the most demanding applications:



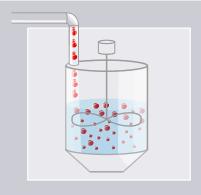
### MATERIAL RECEPTION AND STORAGE

Safe, emission-free and efficient material reception and internal distribution of bulk solids is a prerequisite for economic processing and production.



#### CONVEYING

The quality-preserving conveying of bulk goods is an economic factor that creates decisive competitive advantages. Our systems transport your products in a highly product-protecting and reliable manner using minimal carrier gas and reduced energy costs.



#### REACTOR FEEDING

The dispersion or dissolving of products is actually improved by conveying directly into the stirrer vessel, while additional receiving tanks, valves and other plant parts can be omitted.

# COMPETENCE IN ALL SYSTEM-CRITICAL COMPONENTS

Gericke develops and manufactures all key components in-house, for example:







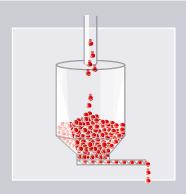
Bulk bag emptying stations



Sack tipping stations

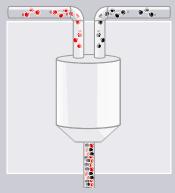


Pneumatic conveying systems



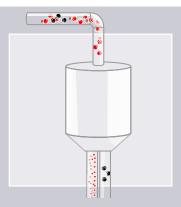
#### **FEEDING**

When feeding, value creation takes place via the precise feeding, measuring and control of the product flow, while recipe management, traceability and quality control are guaranteed at all times.



## DOSING AND MIXING SYSTEMS

Gericke technologies have been setting benchmarks in mixing since 1894. Our mixers produce intermediate and end products of the highest possible homogeneity while ensuring maximum care of the product. They can be used continuously or in batch processes.



## SIFTING AND SIZE REDUCTION

Correct and efficient preparation of products improves the production results and ensures uniform constant quality.
Essential for optimized bulk material processes are the correct particle distribution, freedom from foreign substances and ease of handling.



Gravimetric dosing systems



Batch mixers



**Nibblers** 



Feeders

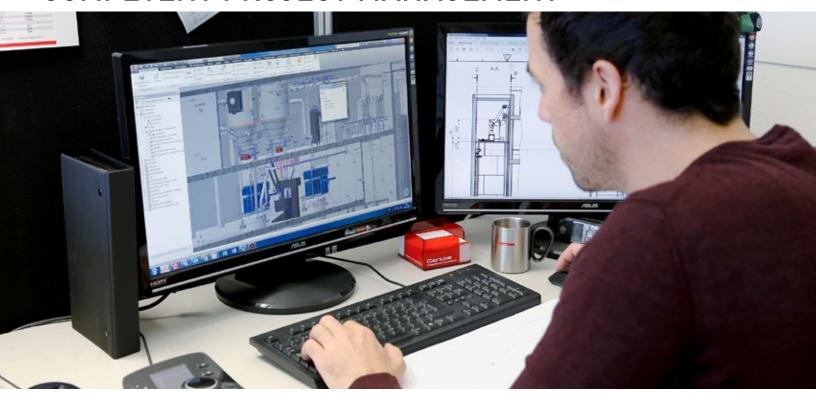


Continuous mixers



Centrifugal sifters

## SAVE TIME AND MONEY WITH COMPETENT PROJECT MANAGEMENT



#### Planning phase

In this phase the focus is on elaboration of the correct process solution and selection of appropriate machinery.

- New systems or modernization and expansion of existing systems
- Search for solutions and evaluation of variants
- Performance of tests in our test centers
- Specification of the process technology and output statement
- Costing and time planning
- Determination of the cost basis for investment calculations



#### **Engineering phase**

In detailed layout planning, we develop 3D models including installation and assembly drawings. Risk assessments in the planning, implementation and operation phase play an important part.

- Project management
- Risk analysis
- EX concept
- Automation, control
- · Qualification, validation
- Documentation



#### Implementation phase

During the assembly phase, the service team takes over the lead on the construction site. Assembly and installation supervision, leadership of the assembly teams, coordination of logistics and implementation of safety on construction site are the key tasks.

During commissioning of the system, trials and test runs of the individual units and the control are performed, then the automation is checked in a system test, followed by a test with product and finally testing of the complete process.

- Site supervision
- Assembly
- Commissioning
- Maintenance concepts
- Training of local personnel
- Maintenance concepts



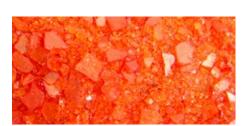
- Plastics
- Petrochemicals
- Master batches
- Alternative fuels
- Rubber



- Pesticides
- Fertilizers



- Composite materials
- Ceramic products
- SAP
- Mineral fibers



- Speciality chemicals
- Additives
- Silica
- Intermediate products
- Catalysts



- · Colors, pigments and resins
- Paper and textile chemistry
- Building chemicals
- Adhesives
- Cleaning agents



- Vitamins
- Enzymes
- Flavors
- Antioxidants

## MATERIAL RECEPTION AND DISTRIBUTION



#### **Applications**

- Delivery of raw materials using tankers
- Bulk bag emptying
- Quality sifting and product calibration
- Silo storage
- Inventory control

- Automatic plant management
- · Surface protection with inert gas overlay
- Safe operation thanks to Ex conformity
- Lower maintenance expense
- High level of operational reliability and plant availability



Unloading of railway trucks

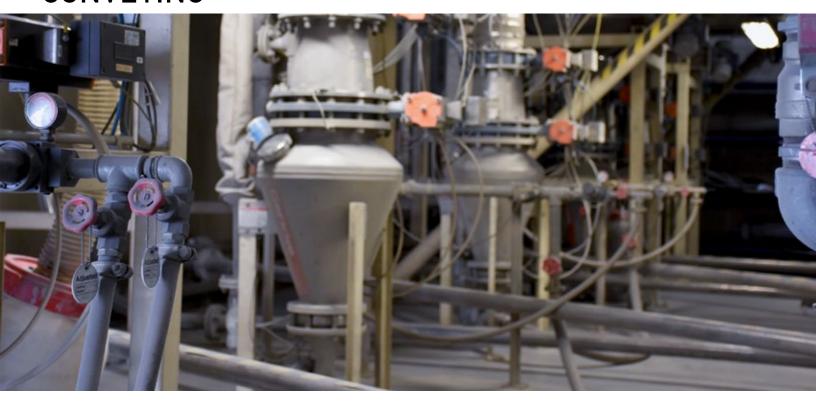


Truck delivery for paint manufacturing



Safe handling of bulk bags

## ECONOMIC AND PROTECTIVE CONVEYING



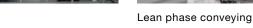
#### **Applications**

- Material removal
- Inline sifting
- Conveying of weighed batches
- Vacuum scales
- Internal supply raw materials
- Forwarding of semi-finished and finished products
- Airlock and flame barriers
- Material management

Sender for process feeding

- Minimum increase in bulk density and fine fraction
- Surface protection with inert gas overlay
- Increased plant safety with ATEX conformity
- Space-saving installation of piping using Gericke pipe elbows
- Lower maintenance expense
- · High level of operational reliability and plant availability







Wear-resistant, space-saving pipe elbows

## AUTOMATIC REACTOR DOSING



#### **Applications**

- Safe docking of vessels
- Process controlled feeding of reactors
- Batch processes
- Feeding below the liquid level
- Pressurized conveying into a reactor

- Safe product handling with minimum emissions
- Reliable vapor barriers
- Complete insertion of products and quick wetting of the particles
- · High safety due to inert gas overlay



Safe tipping of sack goods

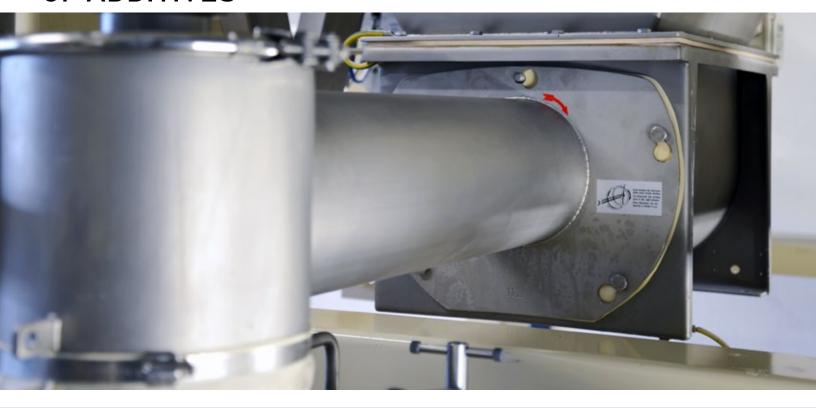


Direct dosing into the reactor



Batch process in paint manufacturing

## FEEDING OF ADDITIVES



#### **Applications**

- Feeding of additives
- Introduction of fuel
- · Continuous gravimetric dosing
- Batch weighing
- Filling of vessels
- Multi-component dosing

- High product quality thanks to accurate dosing
- Traceability of batches
- Simple control integration
- Very low sensitivity to external interference
- Flexible use due to dynamic range



Dosing of liquids



Highly precise and traceable



Integrated control of weighing and dosing processes

### DOSING AND MIXING SYSTEMS



#### **Applications**

- · Continuous mixing processes
- Batch processes
- Extruder feeding
- Master batch production
- Liquid addition
- Suspension mixing
- Premixing

- Space saving due to compact design
- Seamless integration with few interfaces
- Maximum throughput saves time and energy
- Modular design for maximum application flexibility, quick recipe change possible
- · Homogeneous mixing including micro-components
- Optimized start-up and shut-down procedures reduce waste
- Full traceability of process parameters



Hygienic mixing in batch process



Continuous mixing system



Mixing in a mechanical fluid bed

## SIZE REDUCTION AND CALIBRATION



#### **Applications**

- Grain size reduction after bulk bags, dryers, spray agglomeration or mixers
- Recycling
- Control sifting
- Dedusting
- · Processing of recycled material
- Grinding of filter cake
- Size reduction before grinding processes
- Increase in surface area of products prior to heating, cooling and melting processes

- High throughput performance
- Energy saving and low-noise operation
- Helps to protect material because there is no heating of the products
- Minimum dust formation
- Easy maintenance by simple replacement of grater sieves
- Flexible thanks to different hole sizes
- · Space-saving due to low overall height
- Adjustable paddle distance for optimum process adaptation



Maceration of agglomerates



Removal of contaminants

Reduction of filter cake



### **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.

### YOUR PARTNER WORLDWIDE

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