

# YOUR GLOBAL PARTNER FOR THE CHEMICAL INDUSTRY

System and components for bulk handling and powder processing: Safe, efficient and designed to fit the needs of the chemical industry.



# YOUR GLOBAL PARTNER FOR TURNKEY SOLUTIONS IN THE CHEMICAL INDUSTRY

A sound investment: Turnkey projects incorporating planning, manufacture, installation and commissioning are fully customised to meet specific requirements. Total confidence, supreme reliability, plus ease of use and the highest standards of safety are all part of the design specification for every Gericke system in all key industries.

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# **ENGINEERING**

Save time and money with competent engineering and project management. This also includes risk assessment, product safety and energy efficiency.

# **AUTOMATION SOLUTIONS**

We enable lean operation of your powder processes: full process integration, PLC programming, visualisation, recipe management and communication to your MES and ERP environment.



- Pesticides
- Fertilisers



- Composite materials
- Ceramic products
- SAP
- Mineral fibres



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



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



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



- Vitamins
- Enzymes
- Flavours
- Antioxidants

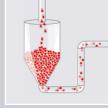


Benefit from decades of experience in the most demanding power handling and processing applications.





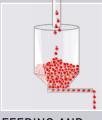
**MATERIAL RECEPTION** AND STORAGE



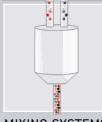
**PNEUMATIC** CONVEYING



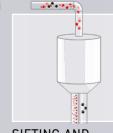
REACTOR FEEDING



**FEEDING AND DOSING** 







MIXING SYSTEMS SIFTING AND SIZE REDUCTION

# MAXIMISING VALUE. MINIMISING RISK.

# HAZARDOUS AREAS?

When handling organic or other flammable powders, the equipment must be designed to address the potential risks and certified to the applicable legal standards.

Gericke equipment is available in various executions to meet the requirements in the chemical industry, including dust and gas approvals.





# DUST EMISSIONS AND CONTAINMENT

Many bulk material processes are susceptible to dust generation. Dust is a risk for the employees and the environment. Dust deposits can also lead to machine breakdowns and even dust explosions!

To avoid dust, the transfer points in a process are particularly important. How is a bag emptied? How is a big bag connected? We will be happy to advise you.

# COST EFFICIENT PROCESSES

Not all industries have the luxury of large margins. This makes it all the more important to design manufacturing processes that are efficient and energy-saving and to ensure the reliability of the plant.





# DO YOU HAVE YOUR ENERGY COSTS UNDER CONTROL?

Energy consumption is becoming increasingly important, and 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. 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.

# FLUCTUATING PRODUCT QUALITY?

Whether you produce in batches or continuously, the ingredients must be added at the right time and in the right quantity. The use of automation also helps to achieve consistent quality.

The key to product quality is, above all, sufficiently accurate metering of the components and homogeneous mixing.

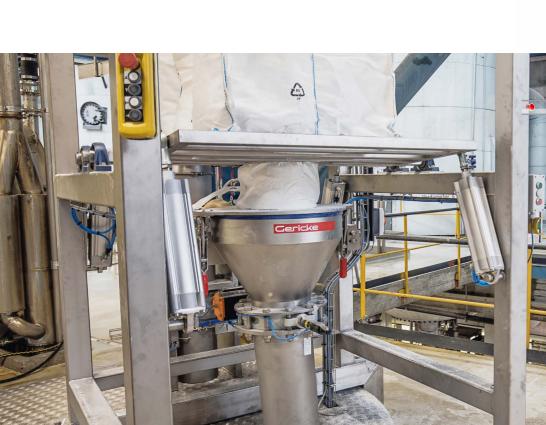


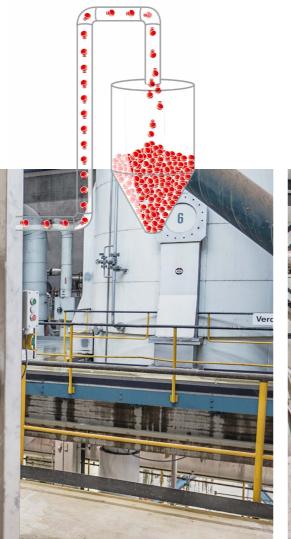


# DATA AND AUTOMATION INTEGRATION

Access to data, seamless integration of automation systems, preventive and predictive maintenance, IoT, ERP and EMS systems, data security: the IT and automation environment has never been so complex before. However, it also offers many opportunities to produce more efficiently and safely. Gericke is not only an expert in powder processing, but also a specialist in automation and integration into your existing automation architecture.

# 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.



# **Applications**

- Delivery of raw materials using trucks and rail cars
- Big bag and sack emptying
- Silo storage and inventory control

# Your benefits

- Automatic plant management
- Safe intake and handling of raw materials



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.

# Applications

- Conveying of weighed batches
- Vacuum scales
- Internal transport of raw materials
- Forwarding of semi-finished and finished products
- · Airlocks and flame barriers

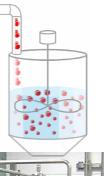


# Your benefits

- Minimum increase in bulk density and fines
- Surface protection possible with inert gas overlay
- Space-saving installation of piping using Gericke pipe elbows
- Energy efficient techology
- High level of operational reliability and low maintenance



# REACTOR FEEDING





# FEEDING AND DOSING



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.

# **Applications**

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



# Your benefits

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



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.

# Applications

- Continuous gravimetric dosing
- Batch weighing
- Multi-component dosing and feeding with one controller

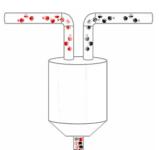


# Your benefits

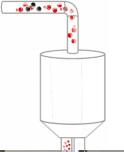
- Improved product quality due to accurate dosing
- Traceability of batches
- Simple control integration
- Very low sensitivity to external interference
- Flexible use due to high dynamic range



# MIXING SYSTEMS



# SIFTING AND SIZE REDUCTION







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.

# **Applications**

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



# Your benefits

- Space saving due to compact design
- Seamless integration with few interfaces
- Maximum throughput saves time and energy
- Homogeneous mixing including micro-components
- Optimised start-up and shut-down procedures reduce waste
- Full traceability of process parameters



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

# **Applications**

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



# Your benefits

- High throughput performance
- Energy saving and low-noise operation
- Helps to protect material because there is no heating of the products
- Minimum dust formation





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

Test centres in Europe, Asia and the Americas are available for customer tests under near-production conditions with original machines.

It is also possible to test all types of pneumatic conveying setups, even with distances exceeding 200 metres! Experienced specialists design the test layout according to your needs 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
- Remote test monitoring available



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