

High-performance turnkey powder handling systems





Complex handling made easy

Powder handling can be a rather complex issue. With all of the dosing, sifting, mixing and other processing involved – not to mention conveying, storage and packing – it takes considerable expertise to get the job done right. And to make it easy, safe and cost-efficient.

We offer you that expertise. For just about any kind of powder process for the food and beverage industries, we can provide customized installation that is fully automated for simplified, reliable operation.

Based in France, we are a part of the worldwide Tetra Pak Group. With our know-how in powder handling, in combination with reliable processes, high quality and strong innovation, we can enable you to achieve the best solution. No matter how complex your project is. Anywhere in the world.

Name your powder

Cheese

- Whey powder
- Whey protein concentrate
- Processed cheese

Beverage

- Juices and nectars
- Carbonated soft drinks
- Flavoured drinks
- Energy drinks
- Coffee (3 in 1)
- Tea
- Instant drinks

Dairy

- Yoghurts
- Recombined milk
- Sweetened condensed milk
- Dairy powders (skimmed milk powder, whole milk powder, milk protein concentrate, cream powder)

Ice cream

- Mix preparation

Prepared food

- Baby food (infant formula, cereals, porridge)
- Sweets, candies and gums
- Biscuits, wafers
- Bread and flour/starch mixes
- Noodles
- Breakfast cereals
- Instant soups
- Sauces, bouillons and spices
- Non-dairy creamers
- Cocoa and chocolate

Also for non-food products

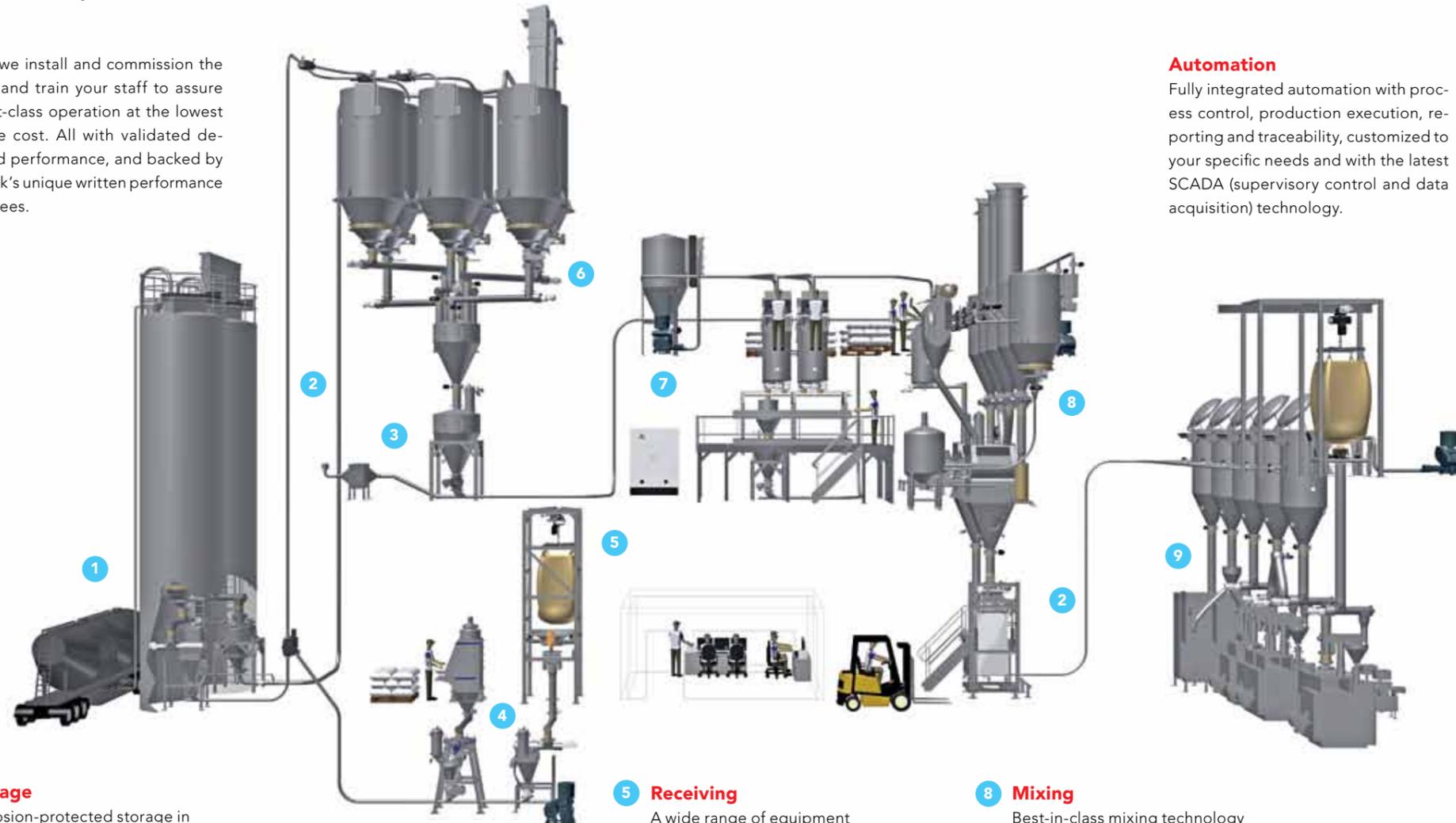
- Pipes
- Electric cables
- Floor tiles
- Health and beauty products
- Detergents



Turnkey excellence

For us, the first step is always to understand your needs – your products, your production requirements, your markets – everything that must be taken into consideration to customize the solution that is right for you. From raw material intake to your final packing process, we then deliver the best engineering, equipment, processes and automated control to suit your needs.

Finally, we install and commission the system and train your staff to assure you first-class operation at the lowest possible cost. All with validated design and performance, and backed by Tetra Pak's unique written performance guarantees.



1 Storage

Explosion-protected storage in indoor or outdoor silos with easy extraction systems.

2 Conveying

Complete powder transport systems using dense, semi-dense, dilute, vacuum or pressure conveying.

3 Ingredient processing

Controlled air conditions to grind, dry or cool your ingredients.

4 Sifting

All kinds of sifting and cleaning processes, including metal detection and magnetic separation.

5 Receiving

A wide range of equipment designed to receive ingredients in any kind of packaging.

6 Dosing

Accurate dosing, either by batch or continuous processing.

7 Micro-dosing

Manually or automatically, with high accuracy.

8 Mixing

Best-in-class mixing technology to meet your requirements.

9 Packing

Any kind of packing technology (big-bags, bags, cans, sachets...).

Automation

Fully integrated automation with process control, production execution, reporting and traceability, customized to your specific needs and with the latest SCADA (supervisory control and data acquisition) technology.

DosaVision® automation

Our DosaVision software is a modular solution that includes recipe management, production scheduling, production reports and traceability. This tool is also a gateway to ERP (enterprise resource planning), to receive production orders and to report consumption data.

Process control solutions are based on world standard hardware & software, such as Siemens WinCC, Rockwell FTView, Wonderware InTouch or Schneider. Our experience in automation for powder handling ensures reliable performance.

Three reasons to choose us

Reliability

- Based on 25 years' experience in automation for powder handling

Efficiency

- The result of design by automation engineers who are experts in powder processes

Flexibility

- Using our own extensive libraries to match each customer's standards



Dedicated to your project

Together with you, we review your entire project to ensure that we fully understand your needs and demands. Once this is clear, our team of experts incorporates extensive know-how into each step of your turnkey project, to ensure that the quality meets all your expectations.

Your project will have a dedicated engineer to coordinate all actions and provide you with all the information you need during the work.

Design

Mechanical and electrical design is done to match your requirements and meet your standards, as well as all relevant legislation, safety and environmental requirements. All drawings are done in 2D or 3D to assure fast, trouble-free installation, and to provide the best design in terms of quality and safety.

Automation / SCADA

A specialized team handles the complete automation programming of your installation so you can visualize and execute different recipes, print your production reports and prepare your maintenance plan.

Training and installation

We are also involved during the entire installation of the equipment and at the commissioning stage. Our engineers train your operators so that they can confidently operate your new plant with the greatest efficiency.

Quality and safety

We are certified in accordance with ISO 9001 and our equipment is all atex-compliant. The manufacturing process follows very strict quality controls.

Unique testing opportunities

The Process Development Centre (PDC) of Tetra Pak Cheese and Powder Systems in France – also known as the Powder Institute – offers you a unique way to simulate any kind of powder handling process, test many sensitive products and validate your future production line. So why lose time and money by stopping your production in order to conduct trials at your own plant?

Powders do not behave like other materials, which is why characterizations and trials are necessary for every new product application. Our team of engineers works closely with you for optimum development. Tetra Pak's extensive experience in processing dairy products has proved effective in achieving this goal. Segregation, density variation and wettability are product values that have to be clearly understood in order to assure the success of your dry recipes.

The Powder Institute, located in Le May, France, includes a pilot plant and laboratory, where we encourage you to submit your products and requirements to achieve a safe, optimized industrial solution.

The lab

In our lab we can determine powder properties and characteristics, e.g. using laser granulometry measurements as well as ring shear testing. The results are then used as input data in our engineering calculations for all projects. Here we also analyse powder results from trials conducted in the pilot plant.

To date, we've analysed some 4000 products, dairy to baby food and sugar, flour and mixed recipes...

The pilot plant

The pilot plant is mainly dedicated to validating process solutions and checking the feasibility of new settings, as well as developing new equipment and process solutions for R&D purposes.

The pilot plant is organized around pneumatic conveying systems using different technologies, vacuum or pressure, dilute or dense phase. Then, individual flexible functions, e.g. mixing, sifting, dosing, big bag unloading etc, are added according to your process.

Process functions are used as modules for reproducing real situations with machine combinations. This small-scale validation testing has proven to be highly reliable when translating to the final plant design.



Built to last

Like all Tetra Pak companies, we place high demands on the life-cycle quality of what we deliver, in order to assure you long and trouble-free operation and the lowest possible cost of ownership. Our goal is to get you up and running, without delay and without snags, and to assure user-friendly, trouble-free operation. That's why we deliver turnkey plants that are built to last.

Manufacture and pre-assembly

Our pre-assembly workshop is an extra guarantee of quality control. All equipment is assembled, then thoroughly tested and checked in our workshop before shipment. This preassembly offers a number of key benefits:

- Significantly reduced onsite installation time
- In-house quality control (ISO 9001) of manufacture
- Flexibility to customize to special requirements.

On-site operations

Mechanical and electrical installation

Our highly qualified installation teams, consisting of mechanical/electrical engineers and supervisors, with the help of carefully chosen local qualified subcontractors, ensure that we provide complete turnkey service, including whatever lifting and handling equipment, welding units etc that may be needed. Our installation crews comply fully with all necessary site safety legislation and specifications.

Commissioning

Following the electrical tests, our commissioning teams fully test the entire system, without and with the product, before handing it to you. They also train your staff on-site.

Save money – and the environment

Our development work is driven by the natural link between economy and ecology. By constantly finding new ways to reduce the consumption of water, energy and other resources, you not only save a considerable amount of money, you also reduce the environmental impact of your operations – truly a win-win proposition!



Tetra Guerin Sifter

Tetra Guerin Paddle Mixer



Tetra Guerin Homogenizer



Tetra Guerin Glove Box



Tetra Guerin Bag Dumping Station



Tetra Guerin Tank Conveyor

With you all the way

When we have completed your turnkey project, we don't just say thanks and good-bye. With the long-term support of our Technical Sales & Service team, you can benefit from our experience and technical support, long after the start-up of your production line, both during the warranty period and throughout the life of your plant.

Spare parts

To ensure the smooth running of your installation, we keep major spare parts in stock in our warehouse in case of emergency. We can send them to you by express mail.

Expansions and upgrades

If your needs change and you need extended capacity, we're on hand to help you. Moreover, as part of our continuous improvement programme, it is normally possible to retrofit new features into existing plants. We enable you to do so with a minimum of downtime.

Components

Based on our experience on turnkey engineering, we have designed a wide range of equipment to meet our high quality requirements. We are able to provide this range to you as components that you can integrate into your installation yourself.

Services

Preventive maintenance

Rising productivity demands place added pressure on equipment availability and performance, which makes preventive maintenance even more important in today's competitive environment. Tailor-made to maintain and improve your processing operation, a maintenance contract ensures that your equipment performs as intended. We offer a structured way of designing and implementing scheduled preventive.

Maintenance, based upon jointly defined scope, level and frequency.

Visits

Upon request, we can dispatch a mechanical, electrical or automation expert to service your equipment or help restart your production line in the shortest time possible.

On-line support

Using VPN or modem support, we can connect to your production PC online and work in real time with your system to solve any breakdowns quickly.

The powder institute

Guerin Systems can make its test centre and the know-how of its experts available to you in order to conduct full-scale pneumatic conveying or mixing trials (see page 7).

Training

Although training of your operators and maintenance staff is covered by the scope of our delivery at the time of installation, later staff turnovers can be a problem. To prevent this, Guerin Systems offers customized training to enable all your operators to make the best use of your production line and minimize downtime.

Audits

If you want to increase understanding or improve the performance of your installation, we can carry out an audit (mechanical, IT or PLC) of your production line. During this audit, settings will be adjusted and minor repairs carried out on all or part of the installation. The auditor's details recommended adjustments for improving your installation.

The Tetra Pak promise

As a member of the Tetra Pak Group, Guerin Systems is a company that protects what's good – the quality of your powdered products, the environment, your business and your profits. Tetra Pak's commitment to making food safe and available everywhere is your assurance that our dedication to quality and food safety, as well as cost-efficiency. And we don't just say this. We guarantee it.



Milestones in our history

1880 The original company is founded.

1977 Acquired by Pierre-Marie Guerin, the company is now called Guerin Systems.

Resources are focused on technical development of powder handling systems for the food industry.

1999 Guerin Systems is acquired by the Sidel Group.

The Powder Institute is created.

2003 Sidel is acquired by Tetra Laval.

2010 Guerin Systems is now part of Tetra Pak.

The Global Powder Materials Handling Group is created.

About Tetra Pak

Tetra Pak is the world's leading food processing and packaging solutions company. Working closely with our customers and suppliers, we provide safe, innovative and environmentally sound products that each day meet the needs of hundreds of millions of people around the world. With over 20,000 employees and operations in more than 150 countries, we believe in responsible industry leadership and a sustainable approach to business. Our motto, "PROTECTS WHAT'S GOOD," reflects our vision to make food safe and available, everywhere.

More information about Tetra Pak is available at www.tetrapak.com.

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