



COMPANY PROFILE

Manufacturing of systems  
for powders, liquids and  
combined processes

Bulk material handling specialist



COMPANY PROFILE



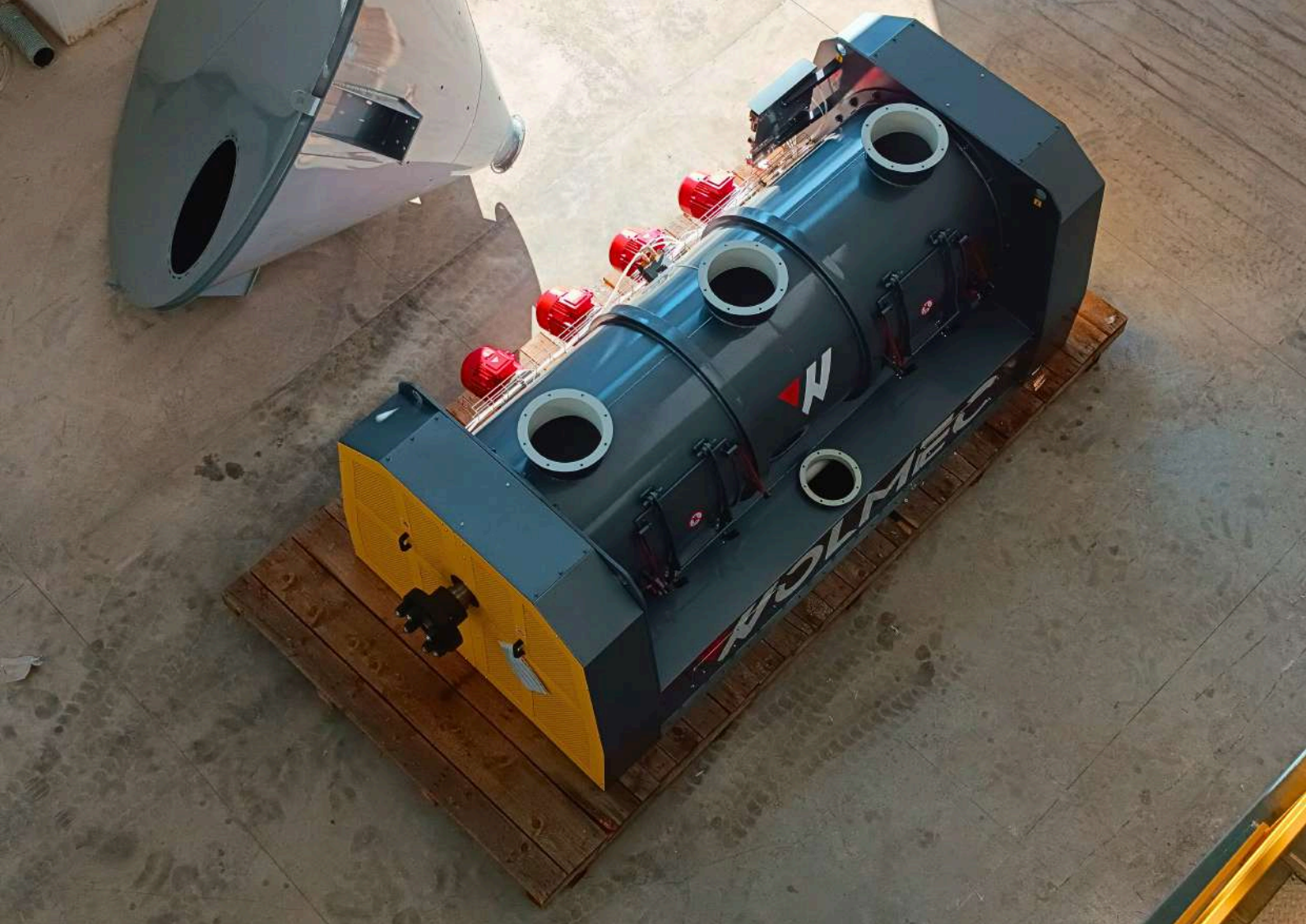
[www.wolmecgroup.com](http://www.wolmecgroup.com)

A grayscale photograph of industrial machinery, featuring large cylindrical tanks, complex piping, and funnels, serving as the background for the text.

# Innovation and industrial sectors

▶ Wolmec is a dynamic engineering company specialized in customized systems for handling and processing powders, liquids and their combination.

We design and build complete industrial plants – from storage to dosing, from mixing to automation – turning raw materials into reliable, high-quality finished products.



# Know-how that comes from afar

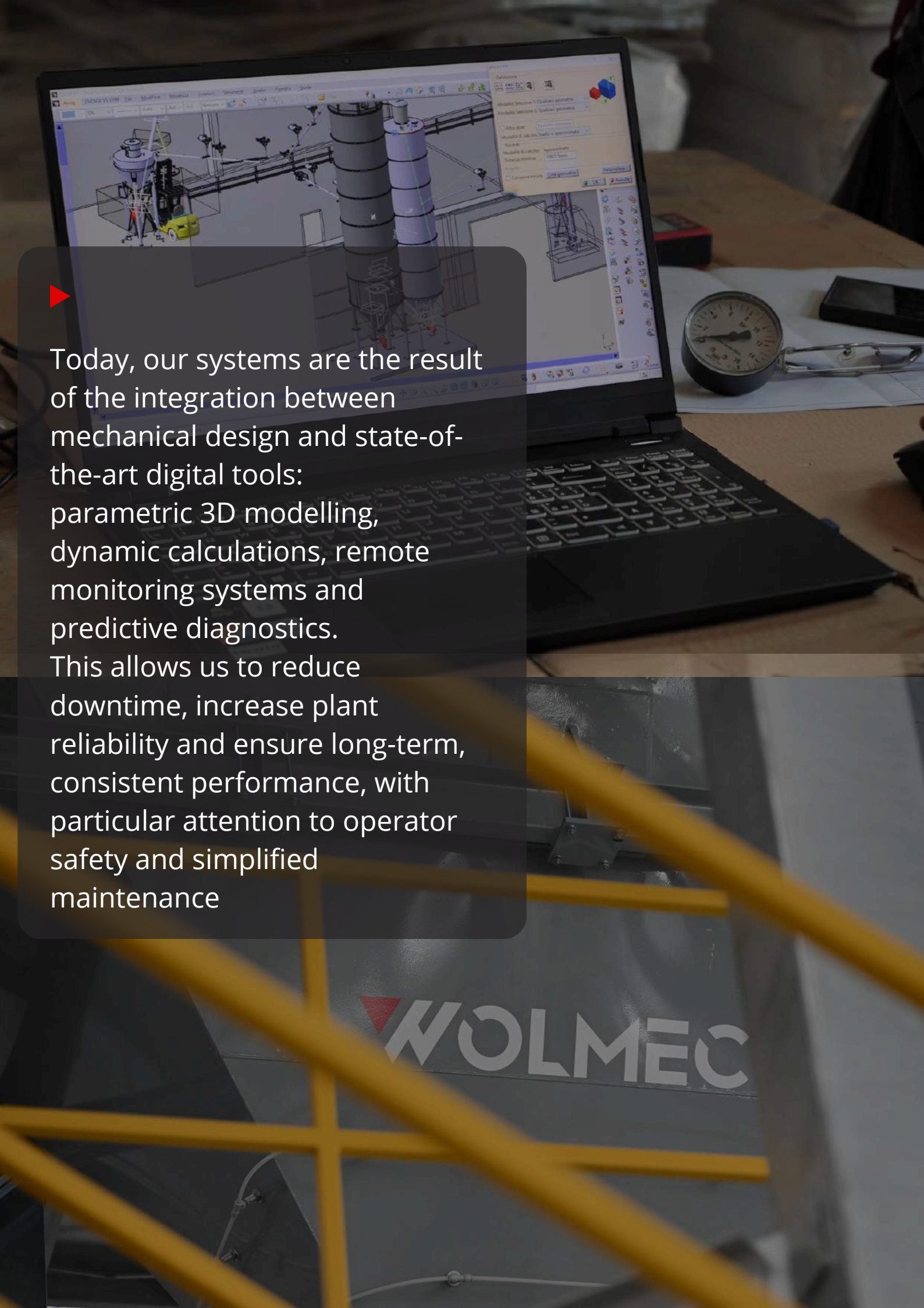


Rooted in Italian industrial expertise since the early Nineties, our company was born from the fusion of traditional mechanical engineering and the most advanced digital technologies. Over the years, we have transformed this experience into a true systemic competence: we design and build integrated solutions capable of operating efficiently, safely and intuitively, even in the most complex and demanding environments.




From the very beginning, we have stood out for a rigorous engineering approach:

- advanced structural analysis and mechanical sizing,
- careful selection of materials based on lifecycle requirements,
- integration of electronic components, sensors and control systems,
- development of user-friendly human-machine interfaces, even for non-specialist operators.



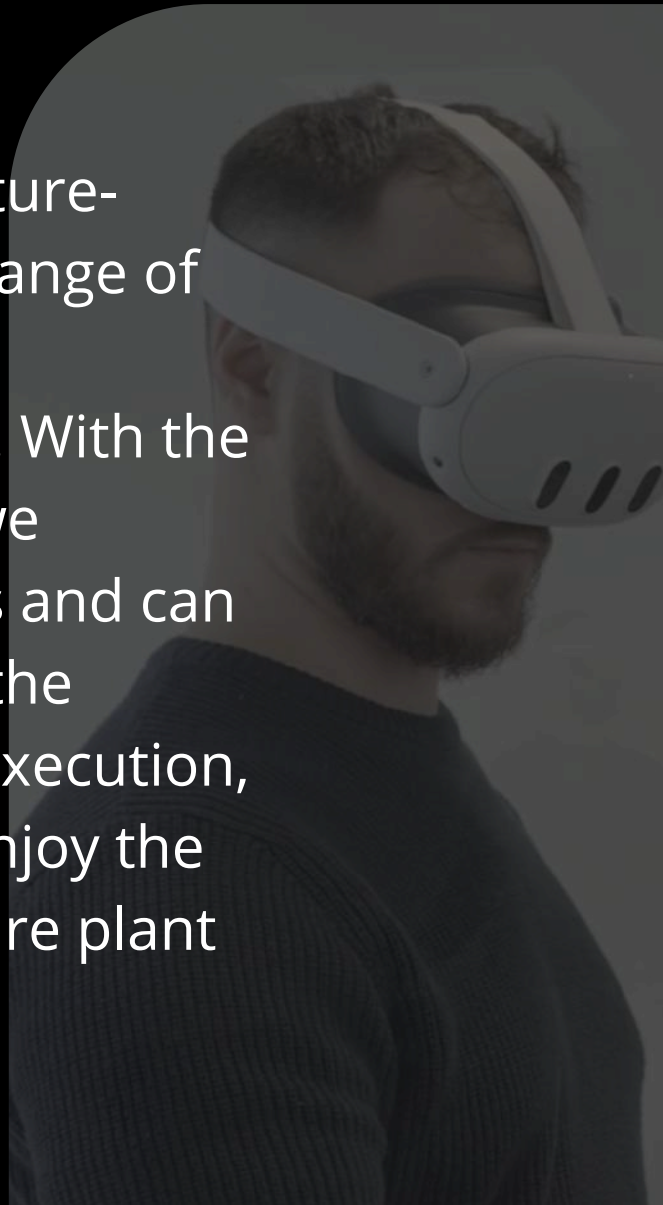
▶ Today, our systems are the result of the integration between mechanical design and state-of-the-art digital tools: parametric 3D modelling, dynamic calculations, remote monitoring systems and predictive diagnostics. This allows us to reduce downtime, increase plant reliability and ensure long-term, consistent performance, with particular attention to operator safety and simplified maintenance

 WOLMEC



# Our character

Is defined by a proactive, future-oriented approach. A wide range of technologies is the principal constituent of our solutions. With the help of virtual reality tools we predetermine the processes and can early detect critical issue in the design phase. Even before execution, the customer will virtually enjoy the experience of seeing its future plant and observing details.



## ▶ **POWDER SYSTEMS**

- Storage silos and bins
- Mechanical and pneumatic conveying
- Dosing, weighing and batching of powders and granules
- Mixing, blending and conditioning
- Solutions for dust control, product protection and traceability

## ▶ **LIQUID SYSTEMS**

- Storage tanks and preparation vessels
- Transfer, dosing and flow control
- Heating, cooling and temperature control
- Additive and chemical handling
- Skids and modules for liquid preparation and dosing

## ▶ **COMBINED POWDER + LIQUID SYSTEMS**

We design and build integrated plants where powders and liquids are processed together through:

- synchronized dosing of powders and liquids
- controlled mixing and dispersion
- automated recipe management
- cleaning cycles and changeover strategies
- unified supervision and control system

**OUR PROCESS EXPERTISE**

WHAT WE DELIVER:

**NEW PLANTS**

**EXPANSIONS**

**REVAMPING**

**Wolmec** supports customers in different project scenarios – from completely new plants to the modernization of existing facilities.



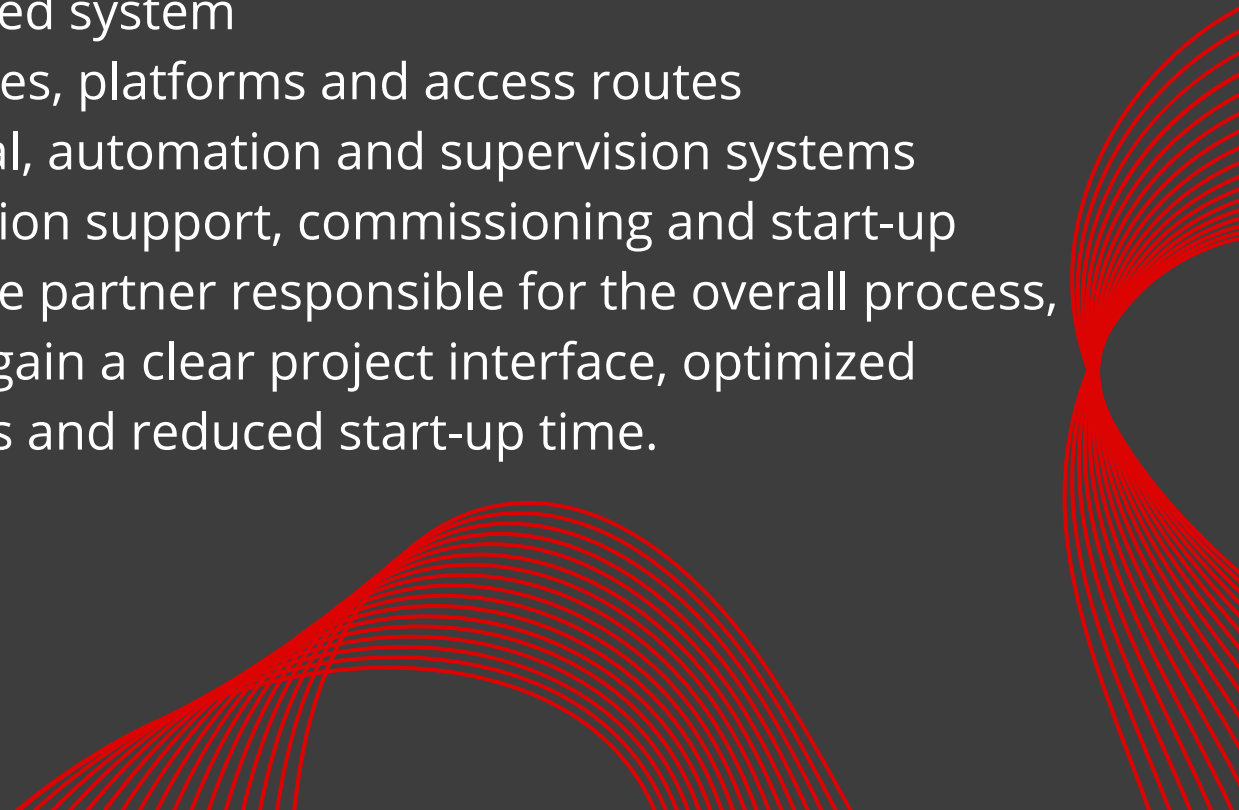
# NEW PLANTS

(greenfield projects)

We design and build complete plants from scratch:

- concept definition and plant layout
- selection and sizing of silos, tanks, mixers, conveyors and process equipment
- design of powder, liquid and combined sections as one integrated system
- structures, platforms and access routes
- electrical, automation and supervision systems
- installation support, commissioning and start-up

With a single partner responsible for the overall process, customers gain a clear project interface, optimized investments and reduced start-up time.



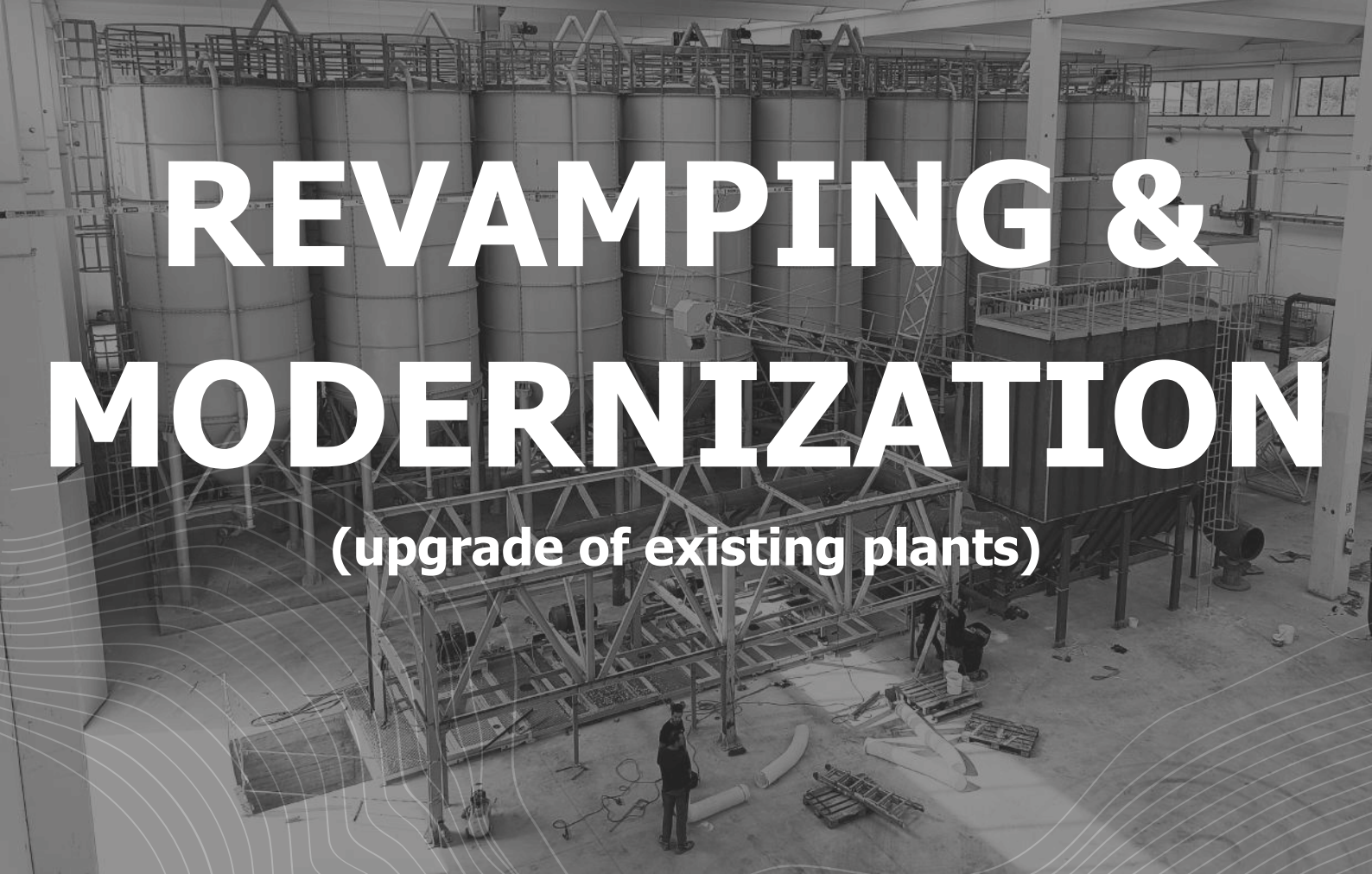
# PLANT EXPANSION

(capacity and functionality increase)

When production needs grow, we expand existing plants by adding new lines, modules or functionalities:

- additional silos, tanks, dosing and mixing units
- parallel or series lines to increase capacity
- new raw materials or product families integrated into the plant
- debottlenecking of critical areas (conveying, dosing, mixing, packing)
- integration of new equipment into existing automation and layouts

Our approach minimizes disruption to ongoing production and ensures that the new sections work seamlessly with the existing plant.




# REVAMPING & MODERNIZATION

(upgrade of existing plants)

We also perform revamping projects to modernize and extend the life of existing installations:

- replacement of obsolete machines with modern, efficient equipment
- upgrade of automation, control panels and software
- improvement of safety, ergonomics and environmental performance
- energy efficiency improvements and reduction of operating costs
- introduction of recipe management, traceability and data logging

Revamping can be a very effective way to increase performance and reliability without the investment required for a completely new plant.



# FROM IDEA TO START-UP: A clear project roadmap

We follow a structured approach from the first idea to the full operation of the plant.

## **1 Needs analysis**

We study the required capacity, available utilities, local constraints and maintenance capabilities, as well as existing installations when present.

## **2 Concept & budget proposal**

We prepare a layout and a concept solution – new plant, expansion or revamping – including a first cost estimate and possible options.

## **3 Detailed design**

Mechanical, electrical and software engineering are developed together to guarantee the integration of powders, liquids, structures and automation.

## **4 Manufacturing & pre-assembly**

Key components are built and, where possible, pre-assembled and tested in our workshop to minimize surprises on site.

## **5 Installation & supervision**

Our specialists support local teams during erection, ensuring correct assembly, alignment and integration with existing equipment.

## **6 Cold tests & fine-tuning**

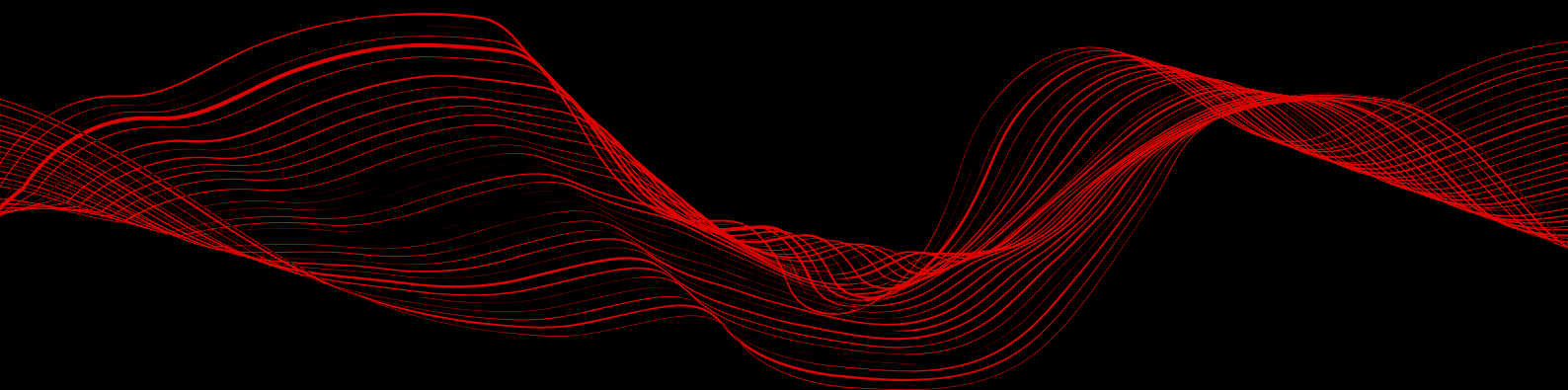
First “empty” tests, then functional tests with product, until the plant reaches the targeted performance and product quality.

## **7 Training & documentation**

We train operators and maintenance teams, providing manuals, spare parts lists and remote support tools.

## **8 After-sales & upgrades**

Long-term support, spare parts, troubleshooting and future capacity or automation upgrades – for both new and existing plants.



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# SOLUTIONS DESIGNED FOR GROWING INDUSTRIES WORLDWIDE

Growing markets require robust, modular and easy-to-maintain plants. Wolmec designs solutions that match these needs.

▶ **Robust design for harsh conditions**

Structures and components suitable for high temperatures, dust, humidity and unstable power supply.

▶ **Modular and scalable plants**

Start with a basic capacity and expand the plant step by step, re-using silos, mixers, liquid systems and automation infrastructure.

▶ **Energy-efficient processes**

Optimization of conveying, dosing and mixing systems to reduce energy consumption and operating costs.

▶ **Local partnerships**

Cooperation with local installers, panel builders and service companies, coordinated by Wolmec to ensure quality and timing.

▶ **Remote monitoring and support**

Our automation systems allow remote diagnostics and assistance, minimizing downtime and travel time.

# Main application sectors



## **CHEMICALS INDUSTRY**

Masterbatch, water-based paints, additives, resins, sealants and glue, ecc..



## **BUILDING MATERIALS:**

Dry mortar, plaster, tile adhesives, cement additives, special binders.



## **AGRIFOOD**

Flour blends, premixes, edible oils and additives, animal feed components.



## **PLASTICS INDUSTRY**

Technical compounds, engineering plastics, and blends.



## **WASTE & RECYCLING**

Powders and liquids for waste treatment and environmental applications.



Driven by passion for plant engineering and innovation, we offer customized solutions to meet specific needs. Our systems, thanks to their design and components performing the necessary processes, allow the transformation of raw materials or semi-finished products into finished products. From dosing to transport, from mixing to transformation, every process is efficient and effective.



The chemical, construction, agri-food and waste treatment fields, to just name those that most need our solutions, normally require customized applications carefully chosen. Each of our projects is planned in detail and aims to meet and exceed the customer's expectation.

**WOLMEC**

# Portfolio







# TECNOLOGY FOR SIMPLIFYING WORLD

Automation, information technology and artificial intelligence are the basic ingredients for maximizing efficiency, improving safety and optimizing production. For this reason we invest in technology every day.

# SUCCESS STORIES

## DESIGN AND CONSTRUCTION OF A CHEMICAL INDUSTRY PRODUCTION PLANT

### The Project

### • NEW PLANTS •

Our company has designed and built a **cutting-edge chemical production plant**, the result of careful planning and meticulous attention to every detail. The plant stands out for its high **production capacity** and its **optimized space utilization**, which allowed for installation without structural interventions on the client's production site.

The plant integrates **advanced technological solutions** for the storage and handling of powders, resins, and liquid additives, with stainless steel silos and tanks, BigBag emptying stations, and high-precision dosing systems. Raw materials are conveyed to **large mixers**, ensuring a homogeneous, high-quality mix.

The production cycle is **fully automated** and includes all operational phases: storage, transport, dosing, and mixing. Flexible dosing and a dedicated system for liquid additives ensure **extremely high quality standards**, reducing waste and improving overall efficiency.



The heart of the system is **customized control software**, developed based on the customer's specific needs, which **ensures precision, repeatability, and complete process control**.

This project represents a clear example of excellence and innovation, confirming our company's ability to transform complex needs into successful production solutions in the chemical industry.

# WE HAVE DESIGNED A COMPACT AND FULLY AUTOMATED RESIN PRODUCTION PLANT

## The Project

### • NEW PLANTS •

We designed and built a compact, **fully automated resin production system**, custom-built to meet the client's specific needs. The project was born from the goal of ensuring **efficiency, precision, and complete process control**, starting with raw materials stored in IBCs.

Thanks to a thorough analysis of operational needs, we developed a system capable of handling **highly viscous raw materials**, ensuring precise automatic dosing and production continuity. The solutions adopted overcome critical issues related to the physical and chemical characteristics of the materials, maintaining **high quality standards**. The plant is equipped with **high-precision pumping and mixing systems**, advanced sensors, and integrated control software, which allow us to monitor and optimize every phase of the process, reducing waste and operating costs.



The fully automated control, supported by an **intuitive operator interface**, ensures **repeatability, reliability, and maximum production flexibility**, allowing rapid adaptation to different formulations.

This project represents an **advanced technological solution**, confirming our company's ability to transform complex needs into efficient, reliable, and future-proof systems.

# DESIGN AND CONSTRUCTION OF ATEX PRODUCTION PLANT.

## The Project • EXPANSIONS •

A chemical company entrusted us with the design and construction of a complete system for powder storage, conveying, and dosing, to be integrated into their existing production cycle. The goal was to improve process efficiency while ensuring full compliance with ATEX regulations. The system was designed to operate in an ATEX environment, using only certified components and materials. Every element, from the silos to the receiving stations, was developed to ensure maximum safety, reliability, and ease of integration.

The heart of the system is dense-phase pneumatic conveying, which allows for efficient and gentle transfer of powders, reducing energy consumption, component wear, and maintenance requirements. The material is delivered over distances of more than 70 meters without loss of performance.

The process begins in the storage silos and ends at the receiving stations, where the powders are separated from the air, dosed with high-precision weighing systems, and sent to the mixing machines via inverter-controlled screws.

Each station is equipped with a touchscreen operator panel for real-time monitoring and traceability of doses, simplifying use and reducing training time.

Designed for the chemical industry, the system is also suitable for the food, construction, and plastics sectors, offering a versatile, safe, and efficient solution for powder management.



# RETROFITTING PROJECT FOR PRE-MIXED POWDER PRODUCTION PLANTS

## • REVAMPING •



### The Project

In the bulk material handling sector, Wolmec Group stands out for its development of customized, **high-tech solutions**. One example is **the complete revamping of a premixed powder plant**, completed during the client's production site relocation. The project stemmed from an in-depth analysis of the existing plant, which identified critical issues and opportunities for improvement. This led to a complete redesign using 3D modeling and the adaptation to a new two-level structure, resulting in a seamless installation with no unexpected issues.

The renovated plant integrates advanced technologies for sand grinding and conveying, particle size selection, silo storage, BigBag emptying, high-precision micro-dosing, and high-performance mixing, ensuring consistent finished product quality. The system is managed by **customized software** with an advanced graphical interface and a direct connection to the customer's chemical laboratory, allowing for complete and flexible production control.

Thanks to this project, productivity reached approximately **150 tons in 8 hours**, with a significant reduction in energy consumption and operating costs. The **turnkey approach**, from design to staff training, ensured a reliable and long-lasting result, confirming Wolmec Group's expertise in transforming existing plants into modern, efficient, and competitive systems.

The logo for WOLMEC features a red downward-pointing triangle to the left of the word "WOLMEC" in a bold, white, sans-serif font.



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**WOLMEC**

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